YAMAWA
GENERAL CATALOG (JIS·ANSI·DIN)

2015-2016

"Reliable screw threads" is YAMAWA'S theme.

Think threads with YAMAWA

On the occasion of publishing new Yamawa General Catalog

Yamawa categorizes our innovation history into 3 stages, namely original foundation of 1923, second being after-the-war (1945) period and now, third one. On the occasion of each foundation & reflecting the original foundation spirit, we renewed our innovation mind and have been answering the market needs which are developing day by day. We aim to contribute to the technology of globally developing industries, from JAPAN with the most modern supplier country of industrial goods in the world. As a specialist & by using the newest manufacturing technology, Yamawa has been manufacturing high quality and high performance TAPs, DIEs and CENTER DRILLs, and wants be a reliable supplier. Yamawa is also paying special attention to our environment while efficiently using the limited natural resources. Based on our company philosophy "Reliable Screw Threads", we keep on making our PROPOSALs related to TAPPING to the market. Yamawa has just built up new product system to meet with flexibility of the market demand and is going to more fulfill our support system in the market. Any of your contact, that is, questions, requests and others, is always welcome.

YAMAWA Manufacturing Co., Ltd.
President **Yoshio Watanabe**

Company Background (Company Outline)

November 1923 : Founded by Jokichi Watanabe in Shibuya-ku, Tokyo.
December 1937 : Company incorporated.
May 1945 : Factory established in Yonezawa City in Yamagata prefecture.
January 1953 : Spun off Yonezawa Factory into a separate company as YAMAWA TAP Co., Ltd.
June 1955 : All products certified to Japanese Industrial Standard (JIS) categories.
October 1956 : Awarded by the Department of Trade and Industry for superiority in industrial standardization.
October 1963 : Awarded by the Institute of Industrial Technology for superiority in industrial standardization.
April 1964 : Newly constructed Fukushima Factory began operation.
November 1973 : Awarded from the Department of Trade and Industry as superiority in industrial standardization.
October 1983 : Established YAMAWA ENGINEERING Co., Ltd.
December 1984 : New machine tool manufacturing shop constructed inside the Fukushima Factory.
October 1986 : Newly completed Aizu Factory began operation.
July 1989 : Newly constructed Taiwan Factory opened.
April 1991 : Spun off Fukushima Factory and Aizu Factory into a separate company, YAMAWA PRECISION Co., Ltd.
November 1995 : Established TC (Total Cutting) CENTER Co., Ltd.
June 1996 : YAMAWA TAP Co., Ltd. obtained ISO 9001 certification
July 2000 : YAMAWA PRECISION Co., Ltd. in Aizu Factory obtained ISO 9001 certification.
October 2000 : YAMAWA PRECISION Co., Ltd. in Fukushima Factory also obtained ISO 9001 certification.
August 2001 : Established YAMAWA TC CENTER Co., Ltd from TC CENTER.
October 2002 : Obtained ISO14001 certification in YAMAWA PRECISION Co., Ltd. at Fukushima Factory.
December 2002 : Obtained ISO14001 certification in YAMAWA PRECISION Co., Ltd. at Aizu Factory.
January 2003 : Obtained ISO14001 certification in YAMAWA TAP Co.,Ltd
October 2003 : Obtained ISO14001 certificaiton in YAMAWA Mfg. Co.,Ltd
April 2006 : Obtained ISO14001 certification in TAIWAN YAMAWA Co.,Ltd
October 2006 : Spun off Export Dept. into a separate company, YAMAWA INTERNATIONAL Co., Ltd
January 2007 : Spun off Taiwan Sales Dept into a separate company, YAMAWA ASIA Co., Ltd.
May 2007 : Obtained ISO14001 certification in YAMAWA ASIA Co.,Ltd.
March 2008 : Newly constructed Tsutsumi Factory of Yamawa Mfg began operation.
September 2008 : Obtained ISO14001certification in YAMAWA ENGINEERING Co.,Ltd.
YAMAWA TC CENTER Co.,Ltd and YAMAWA INTERNATIONAL Co.,Ltd.
June 2011 : Obtained ISO14001 and ISO9001 certification in YAMAWA Tsutsumi Factory.
February 2012 : Obtained ISO9001 certification in TAIWAN YAMAWA and YAMAWA ASIA
October 2012 : Obtained ISO9001 certification in YAMAWA Mfg. Co., Ltd.
December 2013 : Newly constructed Tsutsumi No.2 Factory of Yamawa Mfg. began operation.
October 2014 :YAMAWA TC Center Co., LTD. and YAMAWA Engineering Co., LTD.
were merged into a new company "YAMAWA Engineering Service Co., LTD."

ISO 9001/14001 certitication

http://www.yamawa.com/en

YAMAWA Manufacturing Co., Ltd.

Think threads with YAMAWA

Origin of corporate name, "YA" "MA" "WA".

Mr. Jokichi Watanabe, the founder of the company, decided to use shop name "YA" "MA" "WA", which he had been using in his family business instead of using his personal name. And he gave to his company the name "YA" "MA" "WA" by employing lucky words and the same connotaion "YAMAWA" from ancient Japanese characters, MANYOGANA. The meaning of YAMAWA is "Greater prosperity, More united". In this word, he put a wish "as the company becomes prosperous, the harmony among employees becomes more precious".

GENERAL CATALOG

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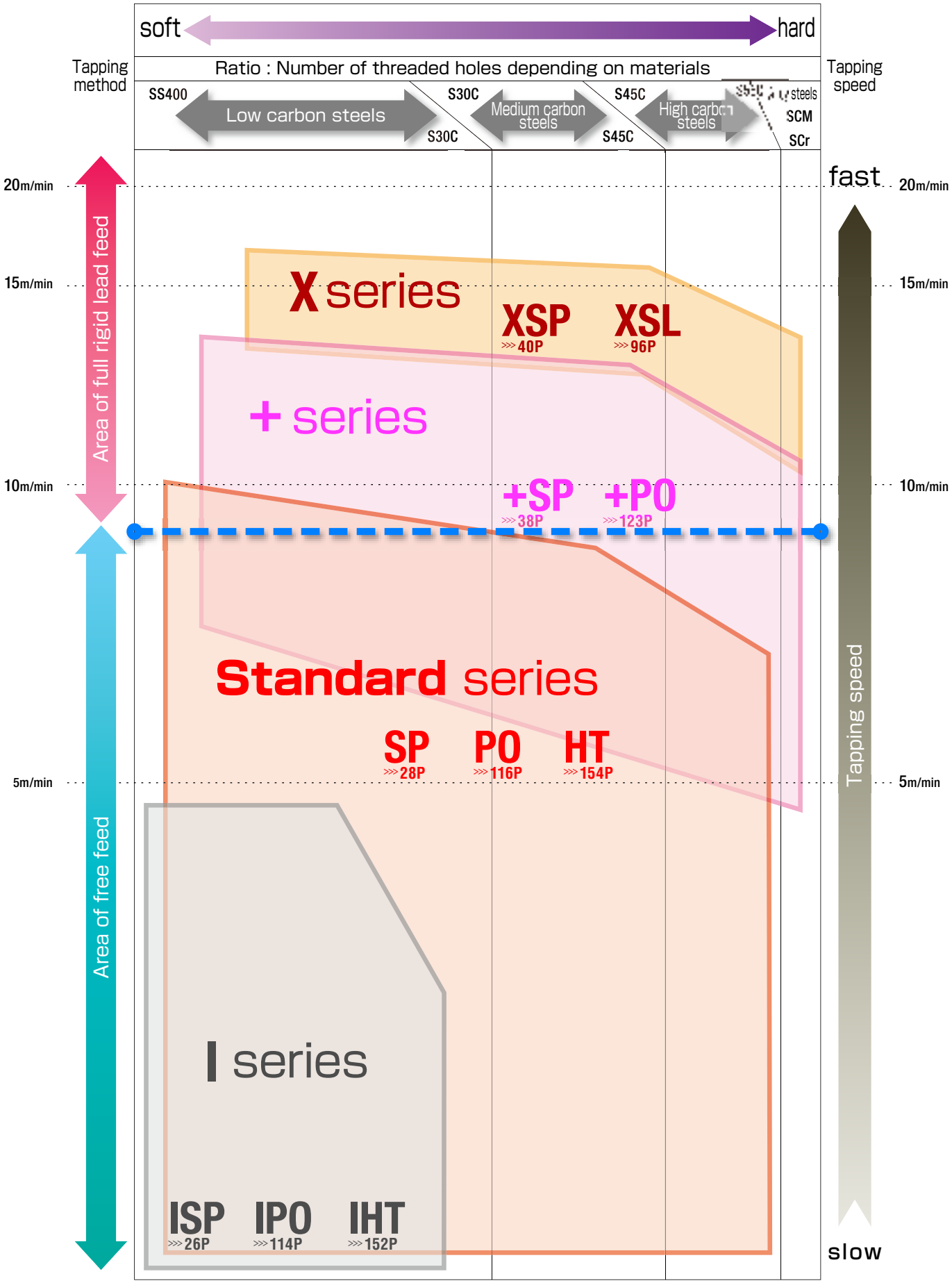
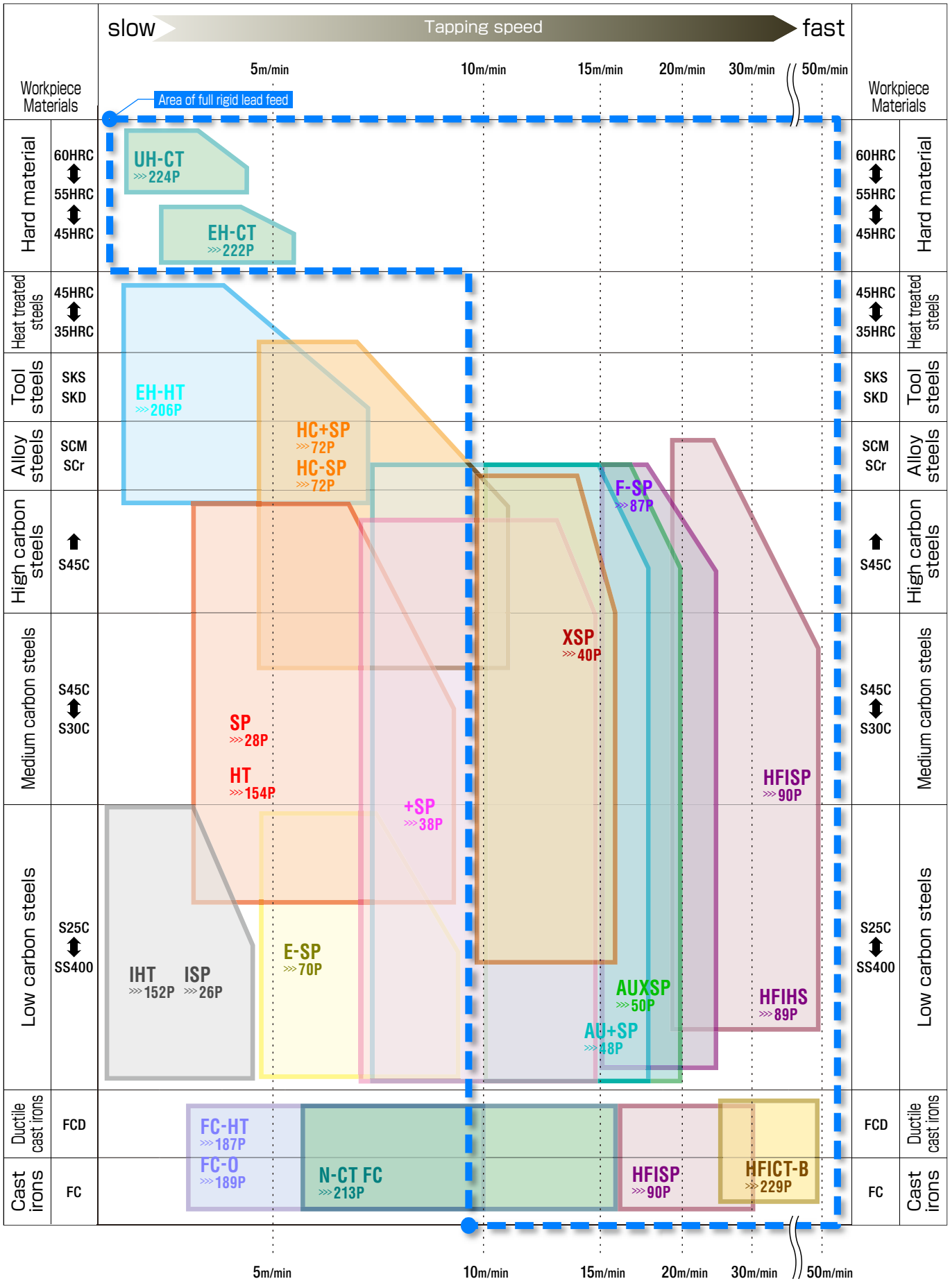
Think threads with YAMAWA

Basic concept of new product system for various steels



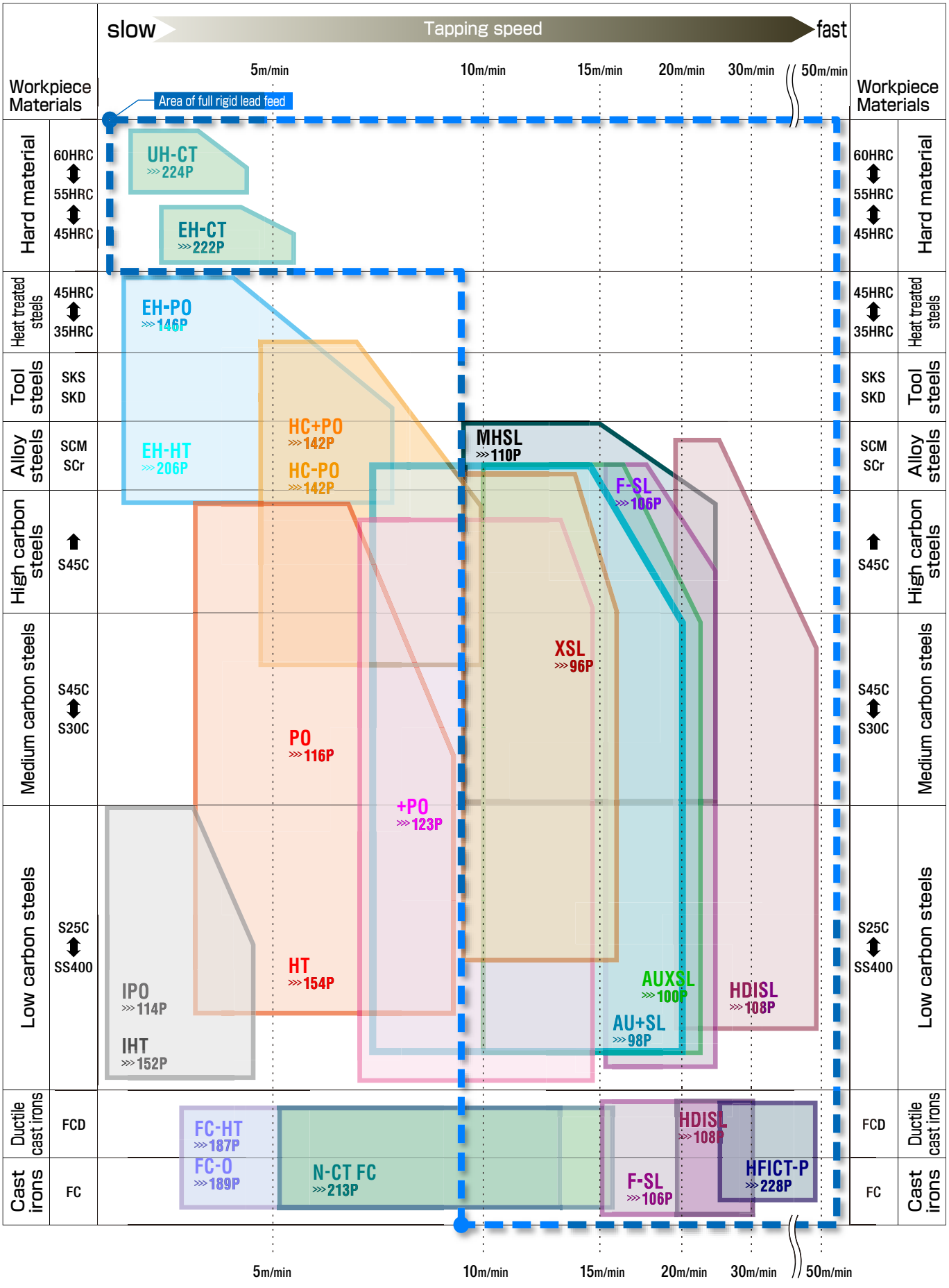
An image telling possible applications

New System table of taps for steels, blind hole use



An image telling possible applications

New System table of taps for steels, through hole use



An image telling possible applications

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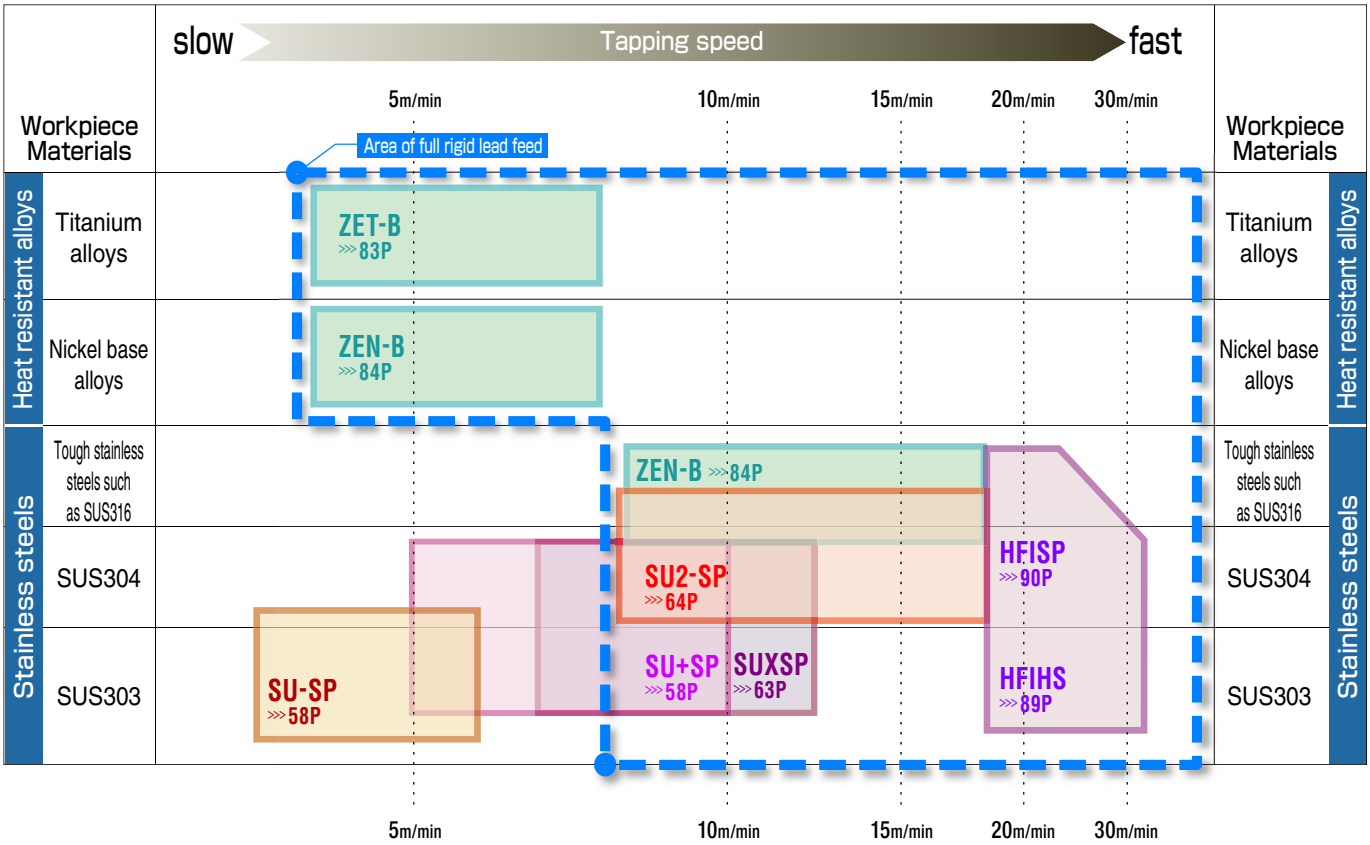
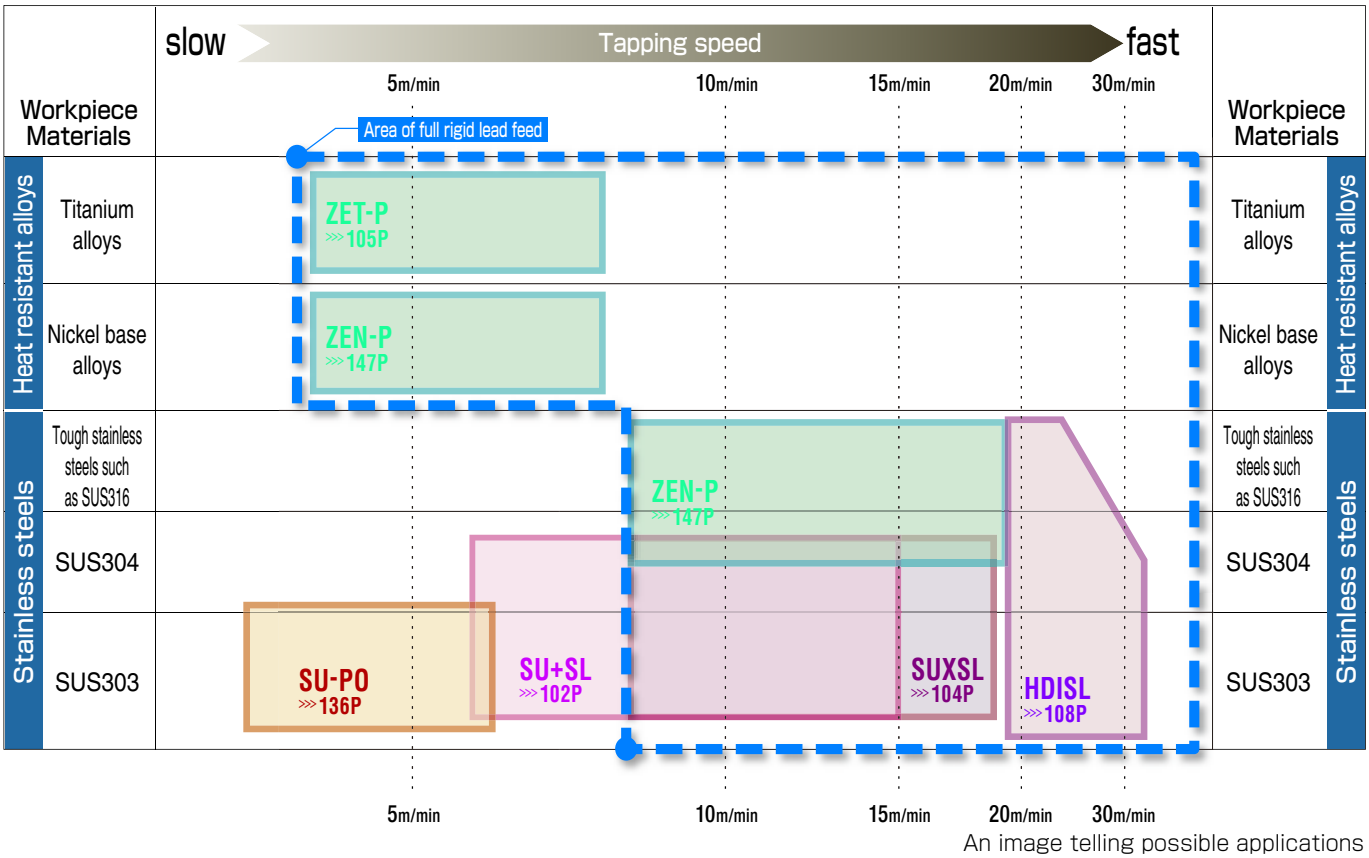
New System table of taps for stainless steels, blind hole use



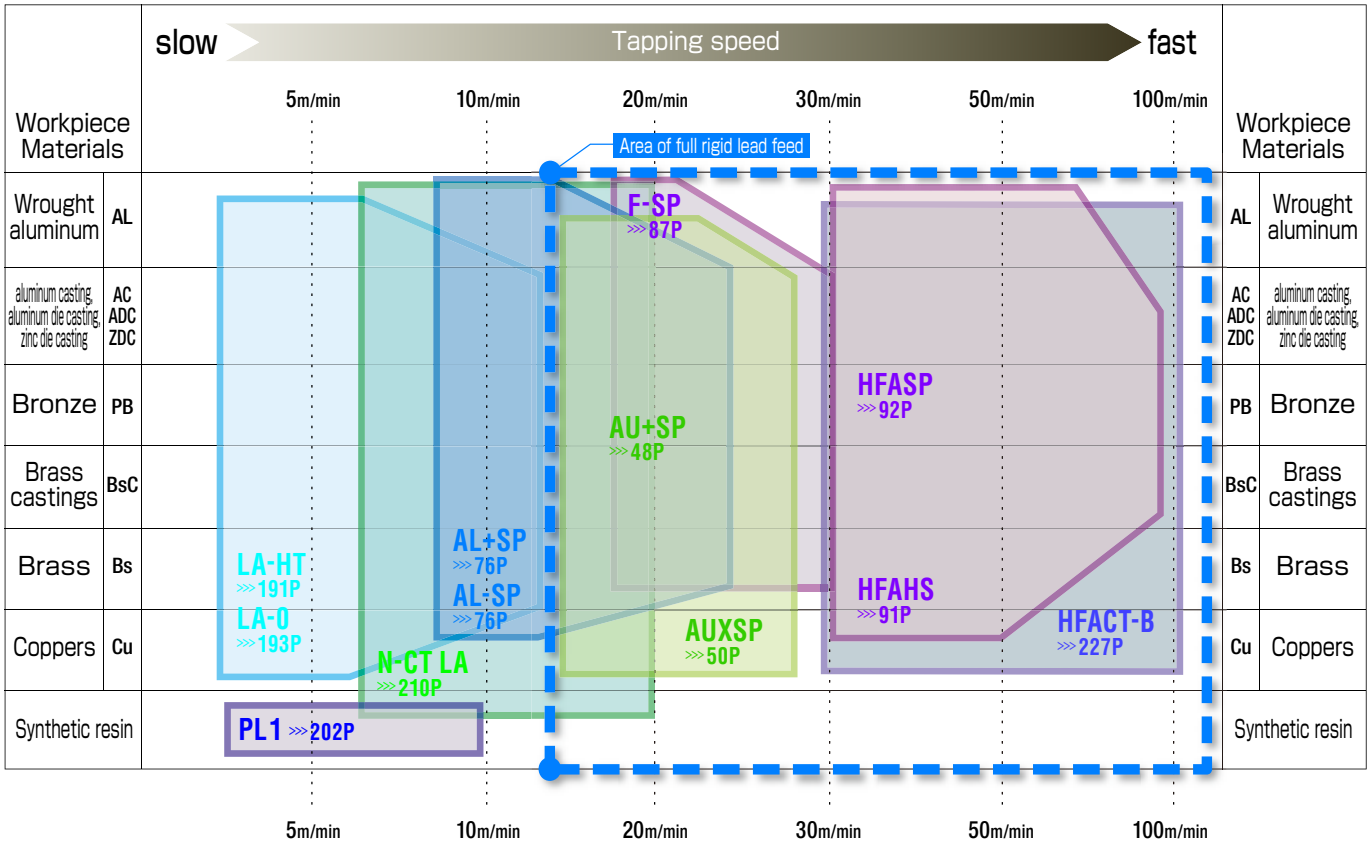
An image telling possible applications

New System table of taps for stainless steels, through hole use



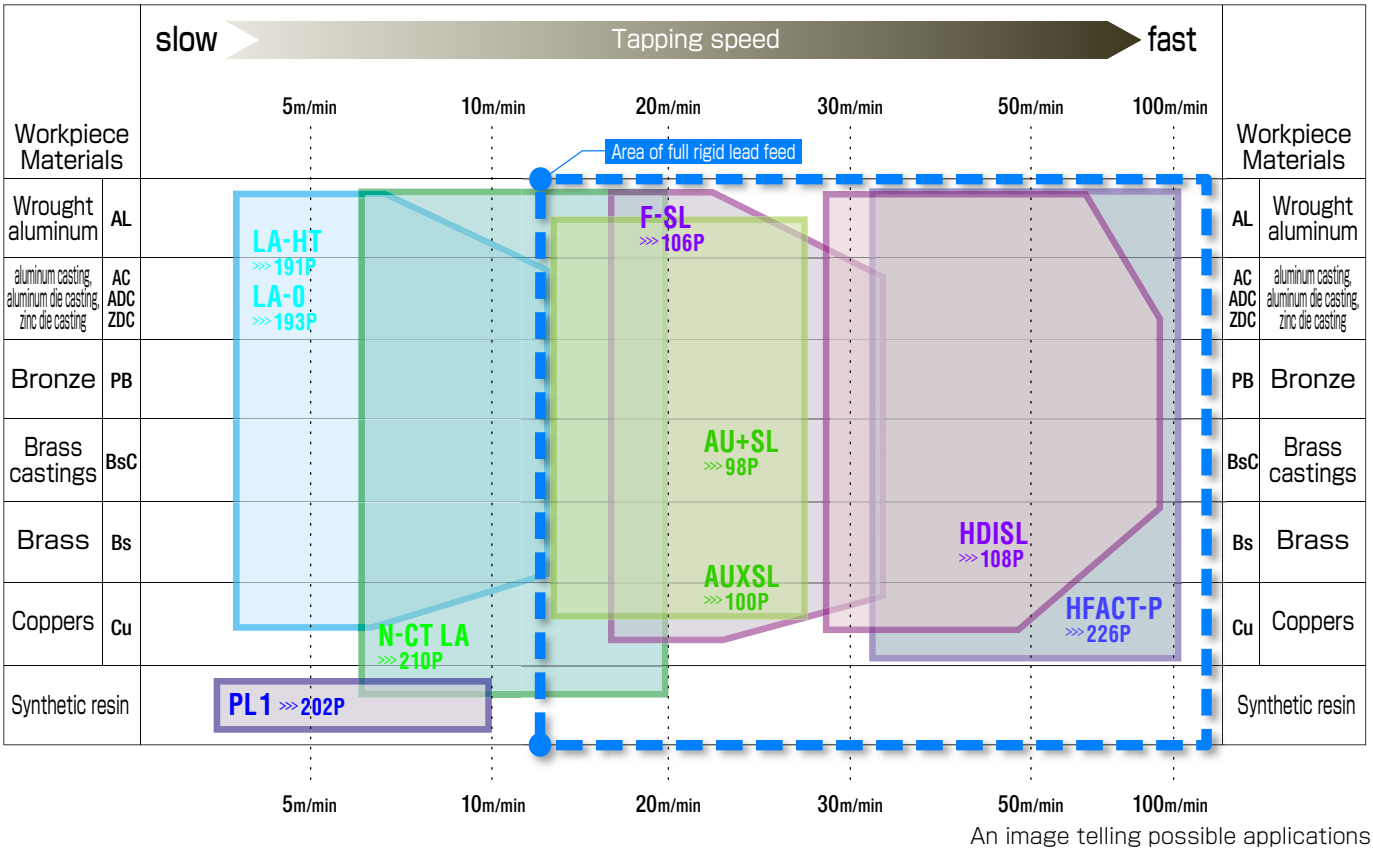
An image telling possible applications

New System table of taps for non-ferrous materials, blind hole use



An image telling possible applications

New System table of taps for non-ferrous materials, through hole use



An image telling possible applications

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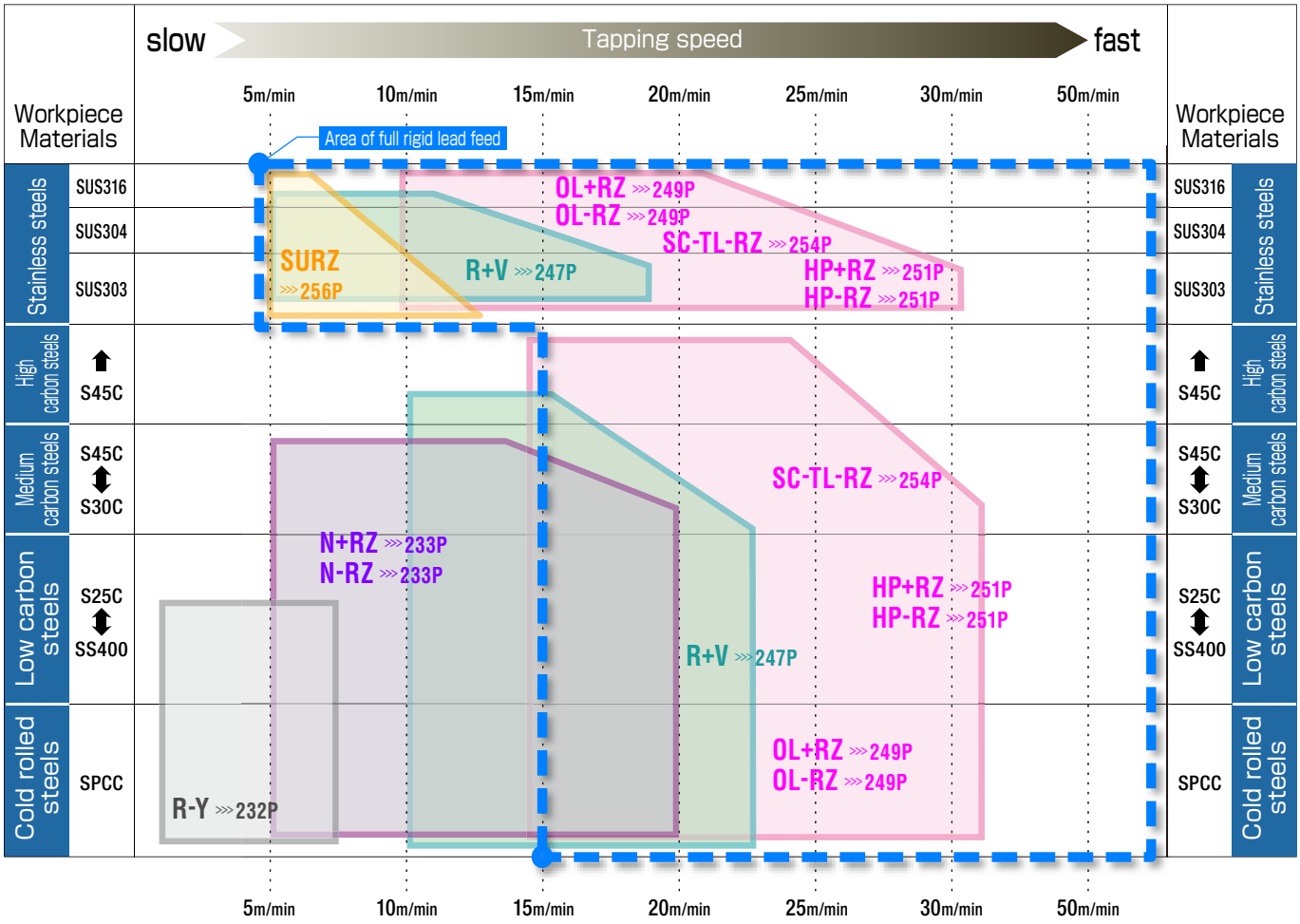
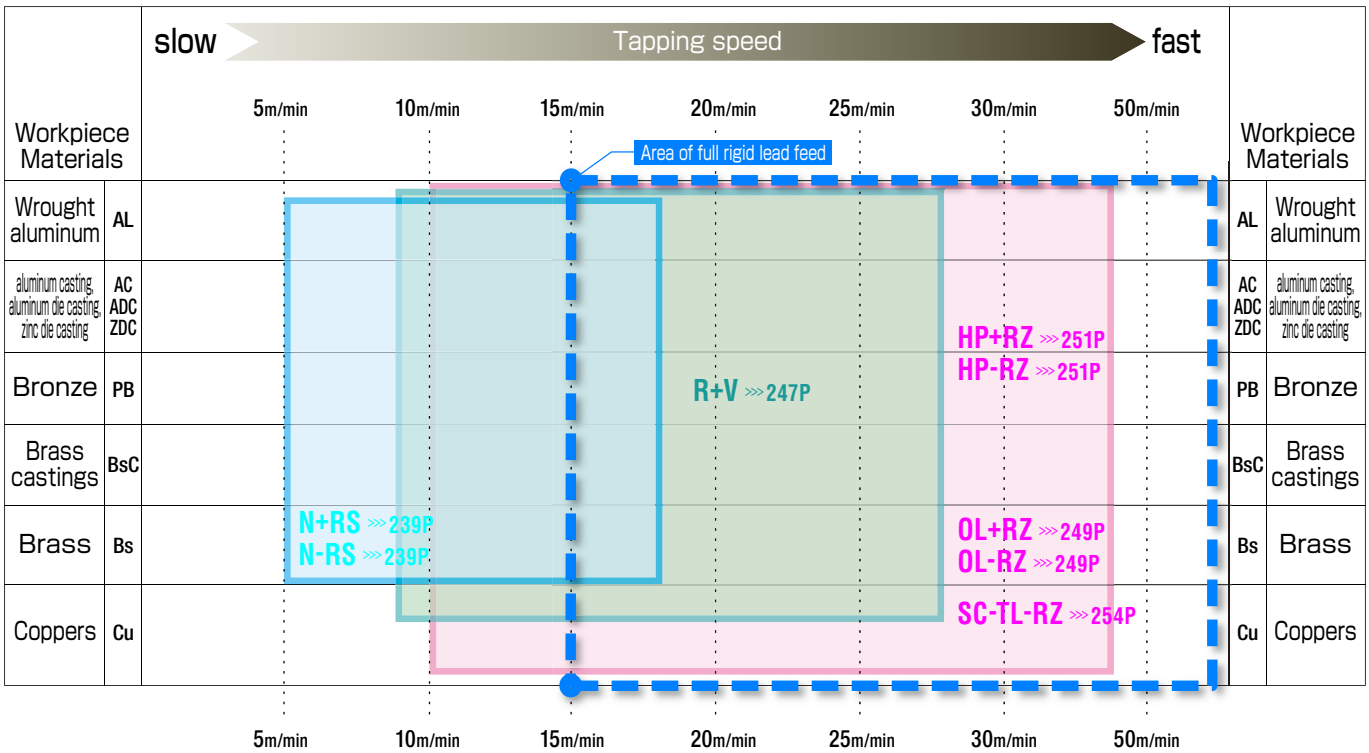
New System table of roll taps for steels



An image telling possible applications

New System table of roll taps for non-ferrous materials



An image telling possible applications

Selection chart of taps

Taps		Product symbol	Surface treatment	Drill hole shape		Feed function		Tapping direction		Page no		
Classification	Application			For blind hole	For through hole	Synchronized Holder Fixing	Non-synchronized Holder Floating	Vertical	Horizontal	Metric	Unified	Whitworth
Spiral Fluted Taps (For Blind Hole) / Full rigid	X Series Spiral Fluted Taps	XSP		◎		◎		◎	○	SP-15		
	X Series Spiral Fluted Taps, Coated	AUXSP	Coating	◎		◎		◎	○	SP-25		
	X Series Spiral Fluted Taps for Stainless Steels	SUXSP	OX	◎		◎		◎	○	SP-38		
	Spiral Fluted Taps for High Speed Tapping	F-SP	Coating	◎		◎		◎	○	SP-62		
	Long Shank Spiral Fluted Taps for High Speed Tapping	LS-F-SP	Coating	◎		◎		◎	○	SP-63		
	For Ultra Fast Tapping, Horizontal Use. Low Spiral Fluted Taps for Carbon Steels	HFISP	Coating	◎		◎			◎	SP-65		
	For Ultra Fast Tapping, Vertical Use. Spiral Fluted Taps for Carbon Steels	HFIHS	Coating	◎		◎		◎		SP-64		
	For Ultra Fast Tapping, Horizontal Use. Low Spiral Fluted Taps for Aluminum	HFASP	Coating	◎		◎			◎	SP-67		
	For Ultra Fast Tapping, Vertical Use. Spiral Fluted Taps for Aluminum	HFAHS	Coating	◎		◎		◎		SP-66		
	For Dry Tapping, Blind Hole Use. Spiral Fluted Taps for Steels	HDISP	Coating	◎		◎		◎	◎	SP-68		
	For Dry Tapping, Blind Hole Use. Spiral Fluted Taps for Aluminum	HDASP	Coating	◎		◎		◎	◎	SP-69		
	Spiral Fluted Taps for Tough Stainless Steels	SU2-SP	OX	◎		◎		◎	○	SP-39		
	Spiral Fluted Taps for Titanium Alloys	ZET-B	NI	◎		◎		○	◎	SP-58		
	Spiral Fluted Taps for Nickel Base Alloys	ZEN-B	OX	◎		◎		◎	○	SP-59		
	Spiral Fluted Taps for General Purpose	ISP	OX	◎			◎	◎	○	SP-2		
	Spiral Fluted Taps	SP		◎		○	◎	◎	○	SP-3	SP-8	SP-9
	Plus Series Spiral Fluted Taps	+SP		◎		◎	○	◎	○	SP-13		
	Spiral Fluted Taps for Left Hand Threads	SP LH		◎		○	◎	◎	○	SP-20	SP-21	SP-21
	Spiral Fluted Taps, Oxided	SP OX	OX	◎		○	◎	◎	○	SP-16	SP-17	SP-18
	Plus Series Spiral Fluted Taps, Oxided	+SP OX	OX	◎		◎	○	◎	○	SP-19		
	Plus Series Spiral Fluted Taps, Coated	AU+SP	Coating	◎		◎	○	◎	○	SP-23		
	Spiral Fluted Taps, Coated	SP V	Coating	◎		○	◎	◎	○	SP-22		
	Long Shank Spiral Fluted Taps	LS-SP		◎		○	◎	◎	○	SP-26	SP-28	SP-29
	Long Shank Spiral Fluted Taps, Coated	LS-SP V	Coating	◎		○	◎	◎	○	SP-31		
	Long Shank Spiral Fluted Taps for Left Hand Threads	LS-SP LH		◎		○	◎	◎	○	SP-30		
	Spiral Fluted Taps for Soft Structural Steels	E-SP	OX	◎		○	◎	◎	○	SP-45		
	Spiral Fluted Taps for Stainless Steels	SU-SP	OX	◎		○	◎	◎	○	SP-33	SP-36	SP-37
		SU+SP	OX	◎		◎	○	◎	○	SP-33	SP-36	SP-37
	Spiral Fluted Taps for Stainless Steels, Deep Hole Use	SU-S-SP	OX	◎		○	◎	◎	○	SP-41		
	Long Shank Spiral Fluted Taps for Stainless Steels, Deep Hole Use	LS-SU-S-SP	OX	◎		○	◎	◎	○	SP-42		
	Spiral Fluted Taps for High Carbon Steels	HC-SP		◎		○	◎	◎	○	SP-47		SP-48
		HC+SP		◎		◎	○	◎	○	SP-47		SP-48
	Spiral Fluted Taps for High Carbon Steels, Oxided	HC-SP OX	OX	◎		○	◎	◎	○	SP-49		
		HC+SP OX	OX	◎		◎	○	◎	○	SP-49		
	Spiral Fluted Taps for Aluminum	AL-SP	NI	◎		○	◎	◎	○	SP-52		
		AL+SP	NI	◎		◎	○	◎	○	SP-52		
	Short Spiral Fluted Taps, Deep Hole Use	S-SP	OX	◎		○	◎	◎	○	SP-43		
	Long Shank Spiral Fluted Taps with Neck	LS-SP-K		◎		○	◎	◎	○	SP-32		
	Spiral Fluted Taps for Hard-to-Machine Materials	PM-SP		◎		○	◎	○	◎	SP-60		
	Long Shank Spiral Fluted Taps for Hard-to-Machine Materials	LS-PM-SP		◎		○	◎	○	◎	SP-61		
	Low Spiral Fluted Taps	LO-SP		◎		○	◎	○	◎	SP-55		
	Long Shank Low Spiral Fluted Taps	LS-LO-SP		◎		○	◎	○	◎	SP-56		
	Spiral Fluted Taps with Internal Coolant Hole	MC-SP		◎		○	◎	◎	○	SP-57		
	Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts	AL-SP		◎		○	◎	◎	○	SP-51		
	Spiral Fluted Carbide Taps	N-CT-SP		◎		◎	○	○	○	CT-9		
Spiral Fluted Taps (For Through Hole) / Full rigid	X Series Spiral Fluted Taps, Through Hole Use (with LH spiral flutes)	XSL			◎	◎		◎	○	SL-1		
	X Series Spiral Fluted Taps for Stainless Steels, Through Hole Use (with LH spiral flutes)	SUXSL	OX		◎	◎		◎	○	SL-9		
	X Series Spiral Fluted Taps, Coated, Through Hole Use (with LH spiral flutes)	AUXSL	Coating		◎	◎		◎	○	SL-5		
	Spiral Fluted Taps for High Speed Tapping, Through Hole Use (with LH spiral flutes)	F-SL	Coating		◎	◎		◎	○	SL-11		
	Long Shank Spiral Fluted Taps for High Speed Tapping, Through Hole Use (with LH spiral flutes)	LS-F-SL	Coating		◎	◎		◎	○	SL-12		
	Spiral Fluted Taps for Steels, for Dry Tapping and for Ultra High Speed Tapping, Through Hole Use (with LH spiral fluted)	HDISL	Coating		◎	◎		◎	○	SL-13		
	Spiral Fluted Taps for Titanium Alloys, Through Hole Use (with LH spiral flutes)	ZET-P	NI		◎	◎		◎	○	SL-10		
	Spiral Fluted Taps for Carbon Steels of middle hardness, Through Hole Use (with LH spiral flutes)	MHSL	Coating		◎	◎		◎	○	SL-15		
	Spiral Fluted Taps, Coated, Through Hole Use (with LH spiral flutes)	AU+SL	Coating		◎	◎	○	◎	○	SL-3		
	Spiral Fluted Taps for Stainless Steels, Through Hole Use (with LH spiral flutes)	SU+SL	OX		◎	◎	○	◎	○	SL-7		
Spiral Pointed Taps / Full rigid	Spiral Pointed Taps for Nickel Base Alloys	ZEN-P	NX		◎	◎		◎	○	PO-34		
	I Series Spiral Pointed Taps for General Purpose	IPO	OX		◎		◎	◎	○	PO-1		
	Spiral Pointed Taps	PO			◎	○	◎	◎	○	PO-3	PO-7	PO-8

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Most suitable	Suitable
◎	○

Low carbon steels	Medium carbon steels	High carbon steels	Alloy steels	Heat treated steel				Stainless steels (SUS)	Tool steels	Cast steels	Cast irons	Ductile cast irons	Copper	Brass	Brass castings	Bronze	Wrought aluminum	Aluminum alloy castings	Magnesium alloy die castings	Zinc alloy die castings	Titanium alloys	Nickel base alloys	Thermosetting plastic	Thermoplastic resin	Product symbol
~ S25C	S25C ~ S45C	S45C ~	SCM	25~35 HRC	35~45 HRC	45~55 HRC	50~63 HRC	SUS	SKD	SC	FC	FCD	Cu	Bs	BsC	PB	AL	AC、ADC	Mg	ZDC					
○	◎	○	○	○						○			○	○	○	○	○	○	○	○					XSP
◎	◎	◎	◎	○				○		○			○	○	○	○	○	○	○	○					AUXSP
○	○	○	◎	○				◎		○															SUXSP
◎	◎	○	○	○				○		○			○	○	○	○	○	○	○	○					F-SP
◎	◎	○	○	○				○		○			○	○	○	○	○	○	○	○					LS-F-SP
◎	◎	◎	◎	○				○	○	○	○	○													HFISP
◎	◎	◎	◎	○				○	○	○	○	○													HFIHS
													○	○	○	○	◎	◎	◎	◎					HFASP
													○	○	○	○	◎	◎	◎	◎					HFAHS
	○	◎	◎	○				○	○	○	○	○													HDISP
													○	○	○	○	◎	◎	◎	◎					HDASP
○	○	○	◎	○				◎		○												○			SU2-SP
		○		○	○				○	○	○	○									◎	○			ZET-B
◎	◎	○	○	○	○			◎		○												◎			ZEN-B
◎	○																								ISP
○	◎	○		○						○			○	○	○	○	○	○	○	○					SP
○	◎	○		○						○			○	○	○	○	○	○	○	○					+SP
○	◎	○		○						○			○	○	○	○	○	○	○	○					SP LH
◎	◎	○	○	○				○		○															SP OX
◎	◎	○	○	○				○		○															+SP OX
◎	◎	◎	◎	○				○	○	○		○	○	○	○	○	○	○	○	○					AU+SP
◎	◎	◎	◎	○				○		○			○	○	○	○	○	○	○	○					SP V
○	◎	○		○						○			○	○	○	○	○	○	○	○					LS-SP
◎	◎	◎	◎	○				○		○			○	○	○	○	○	○	○	○					LS-SP V
○	◎	○		○						○			○		○	○	○	○	○	○					LS-SP LH
◎	○							○																	E-SP
		○	◎					◎																	SU-SP
		○	◎					◎																	SU+SP
		◎	○					◎																	SU-S-SP
		◎	○					◎																	LS-SU-S-SP
○	◎	◎		○						○			○	○	○	○	○	○	○	○					HC-SP
○	◎	◎		○						○			○	○	○	○	○	○	○	○					HC+SP
○	◎	◎		○						○			○	○	○	○	○	○	○	○					HC-SP OX
○	◎	◎		○						○			○	○	○	○	○	○	○	○					HC+SP OX
													○	◎	◎	◎	◎	◎	◎	◎					AL-SP
													○	◎	◎	◎	◎	◎	◎	◎					AL+SP
○	◎	○	◎	○				○		○															S-SP
○	◎	◎		○						○			○	○	○	○	○	○	○	○					LS-SP-K
	○	◎		◎	◎				○			○													PM-SP
	○	◎		◎	◎				○			○													LS-PM-SP
	◎	◎		○						○		○	○	○	○	○	○	○	○	○					LO-SP
	◎	◎		○						○		○	○	○	○	○	○	○	○	○					LS-LO-SP
○	◎	○	○	○						○			○	○	○	○	○	○	○	○					MC-SP
													○	◎	◎	◎	◎	◎	◎	◎					AL-SP
													○	○	○	○	◎	◎	○	◎					N-CT-SP
○	◎	○		○						○			○	○	○	○	○	○	○	○					XSL
◎	◎	○	○	○				◎		○															SUXSL
◎	◎	◎	○	○				○	○	○		○	○	○	○	○	○	○	○	○					AUXSL
◎	◎	○	○					○	○	○		○	○	○	○	○	○	○	○	○					F-SL
◎	◎	○	○					○	○	○		○	○	○	○	○	○	○	○	○					LS-F-SL
◎	◎	○	○	○				○	○	○		○	○	○	○	○	○	○	○	○					HDISL
				○	○				○			○	○	○	○	○	○	○	○	○	◎				ZET-P
○	○	◎	○	◎				○	○																MHSL
◎	◎	◎	◎	○				○	○	○		○	○	○	○	○	○	○	○	○					AU+SL
◎	◎	○	○	○				◎		○															SU+SL
		○	○	○	○			○														◎			ZEN-P
◎	○																								IPO
○	◎	○		○						○			○	○	○	○	○	○	○	○					PO

Selection chart of taps

Taps		Product symbol	Surface treatment	Drill hole shape		Feed function		Tapping direction		Page no		
Classification	Application			For blind hole	For through hole	Synchronized / Non-synchronized Holder: Fixing	Holder: Floating	Vertical	Horizontal	Metric	Unified	Whitworth
Spiral Pointed Taps	Plus Series Spiral Pointed Taps	+PO			◎	◎	○	◎	○	PO-10		
	Spiral Pointed Taps for Left Hand Threads	PO LH			◎	○	◎	◎	○	PO-14	PO-15	PO-15
	Spiral Pointed Taps, Oxided	PO OX	OX		◎	○	◎	◎	○	PO-11		
	Plus Series Spiral Pointed Taps, Oxided	+PO OX	OX		◎	◎	○	◎	○	PO-13		
	Spiral Pointed Taps, Coated	PO V	Coating		◎	○	◎	◎	○	PO-16		
	Long Shank Spiral Pointed Taps	LS-PO			◎	○	◎	◎	○	PO-17	PO-19	PO-20
	Long Shank Spiral Pointed Taps, Coated	LS-PO V	Coating		◎	○	◎	◎	○	PO-21		
	Spiral Pointed Taps for Stainless Steels	SU-PO	OX		◎	○	◎	◎	○	PO-23	PO-25	PO-25
	Spiral Pointed Taps for Stainless Steels	SU+PO	OX		◎	◎	○	◎	○	PO-23	PO-25	PO-25
	Long Shank Short Spiral Pointed Taps for Stainless Steels	LS-SU-S-PO	OX		◎	○	◎	◎	○	PO-26		
	Spiral Pointed Taps for High Carbon Steels	HC-PO			◎	○	◎	◎	○	PO-29		
		HC+PO			◎	◎	○	◎	○	PO-29		
	Short Spiral Pointed Taps for Deep Hole Use	S-PO	OX		◎	○	◎	◎	○	PO-27		
	Long Shank Spiral Pointed Taps with Neck	LS-PO-K			◎	○	◎	◎	○	PO-22		
	Spiral Pointed Taps for Hard-to-Machine Materials	EH-PO			◎	○	◎	◎	○	PO-33		
	Spiral Pointed Taps for Hard-to-Machine Materials	PM-PO			◎	○	◎	◎	○	PO-35		
	Long Shank Spiral Pointed Taps for Hard-to-Machine Materials	LS-PM-PO			◎	○	◎	◎	○	PO-36		
	Spiral Pointed Taps with Internal Coolant	MC-PO			◎	○	◎	◎	○	PO-32		
	Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts	AL-PO			◎	○	◎	◎	○	PO-31		
	Spiral Pointed Carbide Taps	N-CT-PO		◎		◎	○	◎	○	CT-10		
Straight Fluted Taps (Full rigid)	Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Cast Irons	HFICT-B	Coating	◎		◎		◎	○	CT-20		
	Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Aluminum	HFACT-B	Coating	◎		◎		◎	○	CT-18		
	Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Cast Irons	HFICT-P	Coating		◎	◎		◎	○	CT-19		
	Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Aluminum	HFACT-P	Coating		◎	◎		◎	○	CT-17		
	Carbide Taps with Oil Hole	MC-AD-CT	Coating	◎		◎		◎	○	CT-12		
	Carbide Taps for Hard Materials	EH-CT	Coating	○	○	◎		◎	○	CT-13		
	Carbide Taps for Ultra Hard Materials	UH-CT	Coating	○	○	◎		◎	○	CT-15		
Straight Fluted Taps	I Series Hand Taps for General Purpose	IHT	OX	○	○		◎	◎	○	HT-1		
	Hand Taps	HT		○	○	○	◎	◎	○	HT-3	HT-13	
	Hand Taps for Left Hand Threads	HT LH		○	○	○	◎	◎	○	HT-18		
	Long Shank Hand Taps	LS-HT		○	○	○	◎	◎	○	HT-21	HT-27	
	Long Shank Hand Taps for Left Hand Threads	LS-HT LH		○	○	○	◎	◎	○	HT-29		
	Long Shank Hand Taps, Coated	LS-HT V	Coating	○	○	○	◎	◎	○	HT-31		
	Hand Taps for Stainless Steels	SU-HT	OX	○	○	○	◎	◎	○	HT-33	HT-35	HT-35
	Hand Taps for Hard-to-Machine Materials	EH-HT		○	○	○	◎	◎	○	HT-55		
	Hand Taps for Die Cast Materials	LA-HT	NI	○	○	○	◎	◎	○	HT-40		
	Hand Taps for Die Cast Materials	LA-O	NI	○	○	○	◎	◎	○	HT-42		
	AXE Hand Taps	AXE-HT	Coating	○	○	◎	○	◎	○	HT-45		
	Carbide Taps for Light Alloys	N-CT LA		○	○	◎	○	◎	○	CT-1		
	Hand Taps for Cast Irons	FC-HT	NI	○	○	○	◎	◎	○	HT-36		
	Hand Taps for Cast Irons	FC-O	NI	○	○	○	◎	◎	○	HT-38		
	Carbide Taps for Cast Irons	N-CT FC		○	○	◎	○	◎	○	CT-4	CT-7	
	Long Shank Carbide Taps	LS-N-CT		○	○	◎	○	◎	○	CT-8		
	Hand Taps for Plastics	PL1	NI	○	○	○	◎	◎	○	HT-51		
	Hand Taps with Short Chamfer for Magnesium Alloy Castings	MG-HT		○		○	◎	◎	○	HT-47		
	Hand Taps with Internal Coolant Hole	MC-HT		○	○	○	◎	◎	○	HT-52		
	Hand Taps for Helical Coil Wire Screw Thread Inserts	AL-HT		○	○	○	◎	◎	○	HT-48	HT-49	
	Carbide Taps for Helical Coil Wire Screw Thread Inserts	N-CT LA		○	○	◎	○	◎	○	CT-1		
Roll Taps	Thread Forming Taps for Thin Soft Structural Steel Sheets	R-Y		◎	◎	◎	○	◎	◎	RO-1		
	Thread Forming Taps for Non-Ferrous Materials	N+RS／N-RS	NI	◎	◎	◎	○	◎	◎	RO-8	RO-12	
	Thread Forming Taps for Steels	N+RZ／N-RZ	OX	◎	◎	◎	○	◎	◎	RO-2		
	Thread Forming Taps, Coated	R+V	Coating	◎	◎	◎	○	◎	◎	RO-16		
	Long Shank Thread Forming Taps for Non-Ferrous Materials	LS-N-RS	NI	◎	◎	◎	○	◎	◎	RO-14		
	Long Shank Thread Forming Taps for Steels	LS-N-RZ	OX	◎	◎	◎	○	◎	◎	RO-7		
	Thread Forming Taps for Dry Tapping, Coated	OL+RZ／OL-RZ	Coating		◎	◎	○	◎	◎	RO-18	RO-19	
	High Performance Thread Forming Taps, Coated	HP+RZ／HP-RZ	Coating	◎	◎	◎	○	◎	◎	RO-20	RO-22	
	Torqueless Thread Forming Taps with short chamfer	SC-TL-RZ	Coating	◎		◎	○	◎	◎	RO-23		
	SU Thread Forming Taps	SURZ	Coating	◎	◎	◎	○	◎	◎	RO-25	RO-26	
	Thread Forming Taps for Non-Ferrous Materilas for Helical Coil Wire Screw Thread Inserts	N-RS	NI	◎	◎	◎	○	◎	◎	RO-8		

Think threads with YAMAWA

Most suitable ◎ Suitable ○

Low carbon steels	Medium carbon steels	High carbon steels	Alloy steels	Heat treated steel				Stainless steels (SUS)	Tool steels	Cast steels	Cast irons	Ductile cast irons	Copper	Brass	Brass castings	Bronze	Wrought aluminum	Aluminum alloy castings	Magnesium alloy die castings	Zinc alloy die castings	Titanium alloys	Nickel base alloys	Thermosetting plastic	Thermoplastic resin	Product symbol
~ S25C	S25C ~ S45C	S45C ~	SCM	25~35 HRC	35~45 HRC	45~55 HRC	50~63 HRC	SUS	SKD	SC	FC	FCD	Cu	Bs	BsC	PB	AL	AC、ADC	Mg	ZDC					
○	◎	○		○						○			○	○	○	○	○	○	○	○					+PO
○	◎	○		○						○			○	○	○	○	○	○	○	○					PO LH
◎	◎	○	○	○				○																	PO OX
◎	◎	○	○	○				○																	+PO OX
◎	◎	◎	○	○				○	○	○		○	○	○	○	○	○	○	○	○					PO V
○	◎	○		○						○			○	○	○	○	○	○	○	○					LS-PO
◎	◎	◎	○	○				○	○	○		○	○	○	○	○	○	○	○	○					LS-PO V
◎	◎	○	○	○				◎		○															SU-PO
◎	◎	○	○	○				◎		○															SU+PO
◎	◎	○	○	○				◎		○															LS-SU-S-PO
	○	◎		○								○													HC-PO
	○	◎		○								○													HC+PO
○	◎	◎	○	○				○		○															S-PO
○	◎	○		○						○			○	○	○	○	○	○	○	○					LS-PO-K
		○		◎	○				○			○													EH-PO
		○		○	◎				○			○													PM-PO
		○		○	◎				○			○													LS-PM-PO
○	◎	○	○	○						○			○	○	○	○	○	○	○	○					MC-PO
													○	◎	◎	◎	◎	◎	◎	◎					AL-PO
													○	○	○	○	◎	◎	○	○					N-CT-PO
											◎	◎			○										HFICT-B
																		◎		◎					HFACT-B
											◎	◎			○										HFICT-P
																		◎	○	◎					HFACT-P
													○		○		◎	◎	○	◎					MC-AD-CT
						◎																			EH-CT
							◎																		UH-CT
◎	○																								IHT
	◎	○		○					○	○	○	○		○	○			○		○					HT
	◎	○		○					○	○	○	○		○	○			○		○					HT LH
	◎	○		○					○	○	○	○		○	○			○		○					LS-HT
	◎	○		○					○	○	○	○		○	○			○		○					LS-HT LH
	○	◎	○	○					○	○	○	○		○	○	○		○		○					LS-HT V
	○	○	○	○				◎		○															SU-HT
				○	◎				◎			○													EH-HT
													○				◎	◎	○	◎					LA-HT
													○				◎	◎	○	◎					LA-O
											○							◎	○	◎					AXE-HT
													○				○	◎	○	◎					N-CT LA
											◎	○		○	○										FC-HT
											◎	○		○	○										FC-O
						○					◎	◎		○	◎	○									N-CT FC
						○					◎	◎		○	◎	○									LS-N-CT
																							◎	○	PL1
																		◎	◎	◎					MG-HT
	◎	○		○					○	○	○	○		○	○			○		○					MC-HT
													○	○	○	○	○	◎	○	◎					AL-HT
													○	○	○	○	○	◎	○	○					N-CT LA
◎																									R-Y
													○				◎	◎		◎					N+RS／N-RS
◎	◎																								N+RZ／N-RZ
◎	◎	○	○					○					○				○	○		○					R+V／R-V
													○				◎	◎		◎					LS-N-RS
◎	◎																								LS-N-RZ
◎	◎	◎	◎	○				◎									○	○		○					OL+RZ／OL-RZ
◎	◎	◎	◎	○				◎									○	○		○					HP+RZ／HP-RZ
◎	◎	◎	◎	○				◎									○	○		○					SC-TL-RZ
◎	◎	◎	◎	○				◎									○	○		○					SURZ
													○				◎	◎		◎					N-RS

Selection chart of taps

Taps		Product symbol	Surface treatment	Drill hole shape		Feed function			Tapping direction		Page no		
						Synchronized	Non-synchronized						
						Holder							
Classification	Application			For blind hole	For through hole	Fixing	Floating		Vertical	Horizontal	Metric	Unified	Whitworth
Pipe Taps	Hand Taps for Taper Pipe Threads	Rc		○	○	○	◎		◎	○	Pipe-1		
	Hand Taps for Taper Pipe Threads, Long Type	PT		○	○	○	◎		◎	○	Pipe-2		
	X Series Hand Taps for Taper Pipe Threads Short (lg) Type	PT-X		○	○	○	◎		◎	○	Pipe-4		
	Hand Taps for Taper Pipe Threads Long Type for LH Threads	PT LH		○	○	○	◎		◎	○	Pipe-3		
	Long Shank Hand Taps for Taper Pipe Threads Long Type	LS-PT		○	○	○	◎		◎	○	Pipe-7		
	Hand Taps for Taper Pipe Threads, for Low Carbon Steels	LC-PT	OX	○	○	○	◎		◎	○	Pipe-18		
	Hand Taps for Taper Pipe Threads for Stainless Steels	SU-PT	OX	○	○	○	◎		◎	○	Pipe-20		
	Hand Taps for Taper Pipe Threads, Long Type, for Cast Irons	FC-PT	NI	○	○	○	◎		◎	○	Pipe-24		
	Carbide Taps for Taper Pipe Threads, Long Type, for Cast Irons	CT-PT		○	○	○	◎		◎	○	Pipe-26		
	Hand Taps for Taper Pipe Threads Short (lg) Type	S-PT		○	○	○	◎		◎	○	Pipe-5		
	Hand Taps for Taper Pipe Threads Short (lg) Type for LH Threads	S-PT LH		○	○	○	◎		◎	○	Pipe-6		
	Long Shank Hand Taps for Taper Pipe Threads, Short (lg) Type	LS-S-PT		○	○	○	◎		◎	○	Pipe-8		
	Hand Taps for Taper Pipe Threads Short (lg) Type, for Low Cabon Steels	LC-S-PT	OX	○	○	○	◎		◎	○	Pipe-19		
	Hand Taps for Taper Pipe Threads Short (lg) Type, for Stainless Steels	SU-S-PT	OX	○	○	○	◎		◎	○	Pipe-10		
	Hand Taps for Taper Pipe Threads, Short (lg) Type, for Cast Irons	FC-S-PT	NI	○	○	○	◎		◎	○	Pipe-25		
	Carbide Taps for Taper Pipe Threads, Short (lg) Type, for Cast Irons	CT-S-PT		○	○	○	◎		◎	○	Pipe-27		
	Hand Taps for Parallel Pipe Threads	Rp		○	○	○	◎		◎	○	Pipe-28		
	Hand Taps for Parallel Pipe Threads	PS		○	○	○	◎		◎	○	Pipe-29		
	Hand Taps for Parallel Pipe Threads, for LH Threads	PS LH		○	○	○	◎		◎	○	Pipe-30		
	Long Shank Taps for Parallel Pipe Threads	LS-PS		○	○	○	◎		◎	○	Pipe-31		
	Carbide Taps for Parallel Pipe Threads	CT-PS		○	○	◎	○		◎	○	Pipe-34		
	Hand Taps for Parallel Pipe Threads	G		○	○	○	◎		◎	○	Pipe-35		
	Hand Taps for Parallel Pipe Threads	PF		○	○	○	◎		◎	○	Pipe-36		
	Hand Taps for Parallel Pipe Threads, for LH Threads	PF LH		○	○	○	◎		◎	○	Pipe-37		
	Long Shank Hand Taps for Parallel Pipe Threads	LS-PF		○	○	○	◎		◎	○	Pipe-38		
	Taps for Parallel Pipe Threads, for Stainless Steels	SU-PF	OX	○	○	○	◎		◎	○	Pipe-41		
	Hand Taps for Parallel Pipe Threads, for Cast Irons	FC-PF	NI	○	○	○	◎		◎	○	Pipe-42		
	Carbide Taps for Parrallel Pipe Threads	CT-PF		○	○	◎	○		◎	○	Pipe-43		
Spiral Fluted Pipe Taps	Spiral Fluted Taps for Taper Pipe Threads, Long Type	SP-PT		◎		○	◎		◎	○	Pipe-9		
	X Series Spiral Fluted Taps for Taper Pipe Threads Short (lg) Type	SP-PT-X		◎		○	◎		◎	○	Pipe-11		
	Long Shank Spiral Fluted Taps for Taper Pipe Threads, Long Type	LS-SP-PT		◎		○	◎		◎	○	Pipe-12		
	Spiral Fluted Taps for Taper Pipe Threads, Long Type for Stainless Steels	SU-SP-PT	OX	◎		○	◎		◎	○	Pipe-22		
	Spiral Fluted Taps for Taper Pipe Threads Short (lg) Type	SP-S-PT		◎		○	◎		◎	○	Pipe-21		
	Long Shank Spiral Fluted Taps for Taper Pipe Threads, Short (lg) Type	LS-SP-S-PT		◎		○	◎		◎	○	Pipe-13		
	Spiral Fluted Taps for Taper Pipe Threads Short (lg) Type for Stainless Steels	SU-SP-S-PT	OX	◎		○	◎		◎	○	Pipe-23		
	Spiral Fluted Taps for Parallel Pipe Threads	SP-PS		◎		○	◎		◎	○	Pipe-32		
	Long Shank Spiral Fluted Taps for Parallel Pipe Threads	LS-SP-PS		◎		○	◎		◎	○	Pipe-33		
	Spiral Fluted Taps for Parallel Pipe Threads	SP-PF		◎		○	◎		◎	○	Pipe-39		
	Long Shank Spiral Fluted Taps for Parallel Pipe Threads	LS-SP-PF		◎		○	◎		◎	○	Pipe-40		
Interrupted Taps for Pipe Threads	Interrupted Taps for Taper Pipe Threads, Long Type	INT-PT	OX	○	◎	○	◎		◎	○	Pipe-14		
	Long Shank Interrupted Taps for Taper Pipe Threads, Long Type	LS-INT-PT	OX	○	◎	○	◎		◎	○	Pipe-16		
	Interrupted Taps for Taper Pipe Threads, Short (lg) Type	INT-S-PT	OX	○	◎	○	◎		◎	○	Pipe-15		
	Long Shank Interrupted Taps for Taper Pipe Threads, Short (lg) Type	LS-INT-S-PT	OX	○	◎	○	◎		◎	○	Pipe-17		
Taps for American pipe Threads	Hand Taps for American Taper Pipe Threads, Long Type	NPT		○	○	○	◎		◎	○	Pipe-44		
	Long Shank Hand Taps for American Taper Pipe Threads, Long Type	LS-NPT		○	○	○	◎		◎	○	Pipe-46		
	Spiral Fluted Taps for American Taper Pipe Threads, Long Type	SP-NPT		○		○	◎		◎	○	Pipe-47		
	Interrupted Taps for American Taper Pipe Threads, Long Type	INT-NPT	OX	○	◎	○	◎		◎	○	Pipe-49		
	Hand Taps for American Taper Pipe Threads, Short Type	S-NPT		○	○	○	◎		◎	○	Pipe-45		
	Long Shank Hand Taps for American Taper Pipe Threads, Short Type	LS-SP-S-NPT		◎		○	◎		◎	○	Pipe-48		
	Interrupted Taps for American Taper Pipe Threads, Short Type	INT-S-NPT	OX	○	◎	○	◎		◎	○	Pipe-50		
	Hand Taps for American Dryseal Taper Pipe Threads	NPTF		○	○	○	◎		◎	○	Pipe-51		
	Long Shank Hand Taps for American Dryseal Taper Pipe Threads	LS-NPTF		○	○	○	◎		◎	○	Pipe-52		
	Hand Taps for American Parallel Pipe Threads	NPS		○	○	◎	○		◎	○	Pipe-53		
	Hand Taps for American Dryseal Parallel Pipe Threads	NPSF		○	○	◎	○		◎	○	Pipe-54		
Thread Mills	Thread Mills	MC-HLC	Coating	◎	◎	◎			◎	○	MC-4		
	Carbide Thread Mills	MC-CSLC	Coating	◎	◎	◎			◎	○	MC-1		

Think threads with YAMAWA

◎ Most suitable　○ Suitable

Low carbon steels	Medium carbon steels	High carbon steels	Alloy steels	Heat treated steel				Stainless steels (SUS)	Tool steels	Cast steels	Cast irons	Ductile cast irons	Copper	Brass	Brass castings	Bronze	Wrought aluminum	Aluminum alloy castings	Magnesium alloy die castings	Zinc alloy die castings	Titanium alloys	Nickel base alloys	Thermosetting plastic	Thermoplastic resin	Product symbol
~ S25C	S25C ~ S45C	S45C ~	SCM	25~35 HRC	35~45 HRC	45~55 HRC	50~63 HRC	SUS	SKD	SC	FC	FCD	Cu	Bs	BsC	PB	AL	AC, ADC	Mg	ZDC					
○	◎	○	○						○	○	○	○		○	○			○	○	○					Rc
○	◎	○	○						○	○	○	○		○	○			○	○	○					PT
○	◎	○	○						○	○	○	○		○	○			○	○	○					PT-X
○	◎	○	○						○	○	○	○		○	○			○	○	○					PT LH
○	◎	○	○						○	○	○	○		○	○			○	○	○					LS-PT
◎										○															LC-PT
◎	○							◎		○															SU-PT
		○		○					○		◎	◎		○	○										FC-PT
											◎	◎		○	◎	○		○		○					CT-PT
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MEMO

YAMAWA
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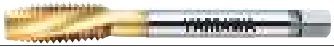
X Series Spiral Fluted Taps, Through Hole Use (with LH spiral flutes)

AU+SL  SL-3
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AUXSL SL-5
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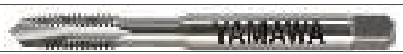
MHSL SL-15
Spiral Fluted Taps for Carbon Steels of middle hardness, Through Hole Use (with LH spiral flutes)

Spiral Pointed Tap Series

IPO PO-1
Spiral Pointed Taps for General Purpose

PO  PO-3
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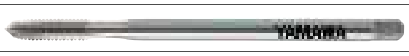
Spiral Pointed Taps, Coated

LS-PO  PO-17
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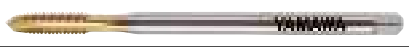
LS-PO V  PO-21
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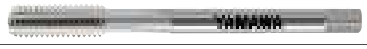
HT LH		HT-18
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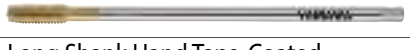
LS-HT V		HT-31
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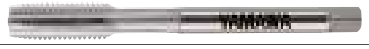
AL-HT		HT-48
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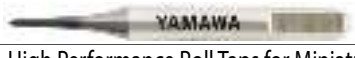
HPsRZ		ST-3
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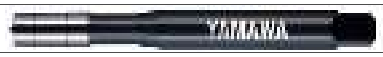
CPC-T		ST-31
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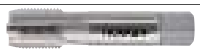
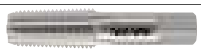
Rp	 Hand Taps for Parallel Pipe Threads	Pipe-28	
PS	 Hand Taps for Parallel Pipe Threads	Pipe-29	
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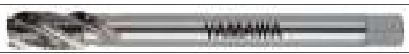
LS-SP-PF	 Long Shank Spiral Fluted Taps for Parallel Pipe Threads	Pipe-40	

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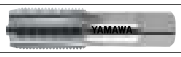
CT-PF		Pipe-43
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NPSF		Pipe-54
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	Carbide Thread Mills	
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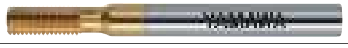
MC-HLC		MC-4
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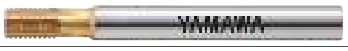
MC-HLC		MC-5
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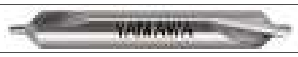
C-CD-Q		CE-21
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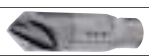
JO-C-PEQ V		CE-40
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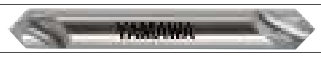
PE-Q		CE-46
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Explanation of icons

HSS — High speed steel

HSS-Co — High speed steel (Cobalt HSS)

HSS-P — Powder HSS

HF — Ultra micro grain cemented carbide

SKS — Alloy tool steels

Alloy steel — Alloy steel

OX Oxide — Oxidizing

NI Nitride — Nitriding

NX Nitride+Oxide — Nitriding/Oxidizing

Coating — Coated

Special toolings

For blind hole with through coolant hole

For through hole with radial coolant hole

For left hand thread

For synchronized feeding

Number of threads on chamfer

Number of threads on chamfer (for Round Die)

Center drills left hand cut

Cutting length

Spiral pointed tap through hole use

Hand tap

Spiral fluted tap through hole use

Spiral fluted tap blind hole use

Low spiral fluted tap blind hole use

Low spiral fluted tap blind hole use specially for horizontal tapping

Specification Tapping Speeds

SPIRAL FLUTED TAP SERIES FOR BLIND HOLE

ISP	SP-1
SP	SP-3
SP 1.5P	SP-11
+SP	SP-13
XSP	SP-15
SP OX	SP-16
+SP OX	SP-19
SP LH	SP-20
SP V	SP-22
AU+SP	SP-23
AUXSP	SP-25
LS-SP	SP-26
LS-SP LH	SP-30
LS-SP V	SP-31
LS-SP-K	SP-32
SU+SP/SU-SP	SP-33
SUXSP	SP-38
SU2-SP	SP-39
SU-S-SP	SP-41
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S-SP	SP-43
E-SP	SP-45
HC+SP/HC-SP	SP-47
HC+SP OX/HC-SP OX	SP-49
AL+SP/AL-SP	SP-51
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MC-SP	SP-57
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ISP

Spiral Fluted Taps for General Purpose

Specification

HSS | OX Oxide | <2D

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

Product features

- ISP is the best tap for blind holes to be used on the lower cutting speed with drilling machines.
- Use for threading of iron (SPC or SS400) products used in our daily life.
- Surface treated. Oxidization, the most suitable surface treatment for iron products.
- Suitable for internal thread cutting in small quantity, such as tapping of test pieces.
- Having spiral flutes, ISP ejects chips backward against the tapping direction and is for blind hole use.

Tapping for blind holes

How to use ISP

- Start tapping after boring holes corresponding to the thread size by using drills.
- In the case of tapping with drilling machines, recommended tapping speed is slower than 5m/min.
- During tapping, please use tapping oil.

When hand tapping, always use tap wrench

Machine tapping with drilling machine

■Table for bored and drilled hole sizes unit:mm

Size	Minor diameter of internal thread size			Drill size	Thread engagement
	Minimum tolerance	Maximum tolerance			
		6H (2nd class)	7H (3rd class)		
M3 × 0.5	2.459	2.599	2.639	2.6 (2.5)	74% (92%)
M4 × 0.7	3.242	3.422	3.466	3.4 (3.3)	79% (92%)
M5 × 0.8	4.134	4.344	4.384	4.3 (4.2)	81% (92%)
M6 × 1	4.917	5.153	5.217	5.1 (5.0)	83% (92%)
M8 × 1.25	6.647	6.912	6.982	6.9 (6.8)	91% (89%)
M10 × 1.5	8.376	8.676	8.751	8.6 (8.5)	86% (92%)

note1) Recommended drill sizes shown in this table are for internal threads of 7H class (3rd class), and are selected from the standard drills available in the market.

note2) Drill sizes shown in brackets in this table are for such case as the drilling has oversize cutting tendency or for internal threads of 6H class (2nd class).

Blister Pack

【Related products】

Shank adjuster

- For deep hole tappings, please use shank adjusters.
- There is only a one touch motion required to detach and attach the I series taps (IHT/ISP/IPO) from or to the shank adjuster.

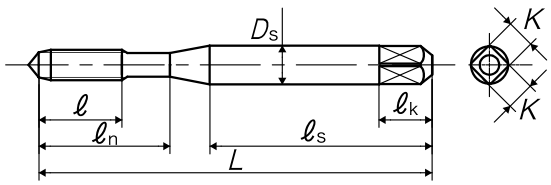
*For details of shank adjuster, refer to P.296

Obtainable from Video site shown in right

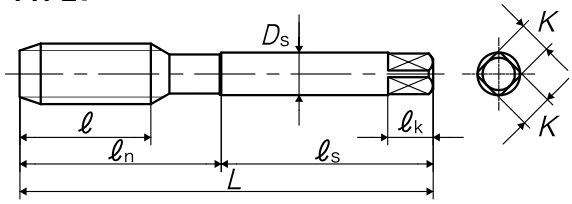
Think threads with YAMAWA
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

TYPE: 1



TYPE: 2



Segment : 1C

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	SI73.0G	2.5P	46	9	14	26	4	3.2	6	3	1	◎
M4 × 0.7	SI74.0I	2.5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	SI75.0K	2.5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	SI76.0M	2.5P	62	15	26	33	6	4.5	7	3	1	◎
M8 × 1.25	SI78.0N	2.5P	70	19	-	36	6.2	5	8	3	2	◎
M10 × 1.5	SI7010O	2.5P	75	23	-	38	7	5.5	8	3	2	◎

Blister Pack

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	SI73.0GBP	2.5P	46	9	14	26	4	3.2	6	3	1	◎
M4 × 0.7	SI74.0IBP	2.5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	SI75.0KBP	2.5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	SI76.0MBP	2.5P	62	15	26	33	6	4.5	7	3	1	◎
M8 × 1.25	SI78.0NBP	2.5P	70	19	-	36	6.2	5	8	3	2	◎
M10 × 1.5	SI7010OBP	2.5P	75	23	-	38	7	5.5	8	3	2	◎

SP

Spiral Fluted Taps

Specification

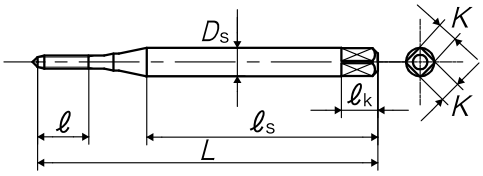
HSS

Recommended Tapping Speeds depending on Materials

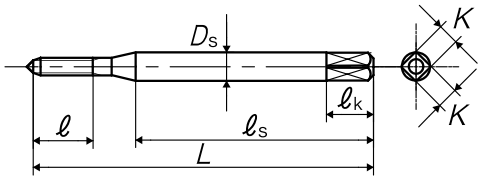
Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

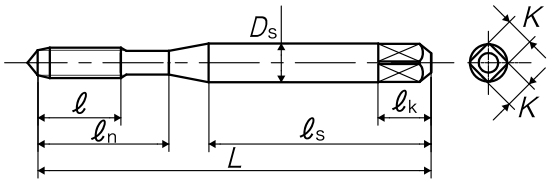
TYPE: 1



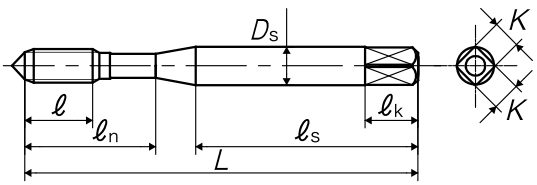
TYPE: 2



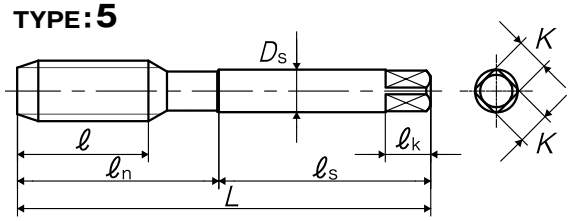
TYPE: 3



TYPE: 4



TYPE: 5



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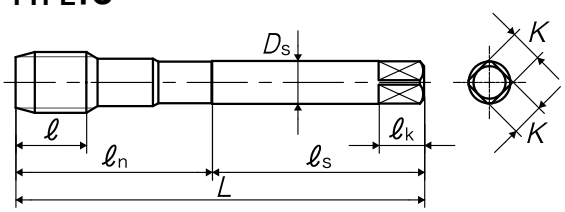
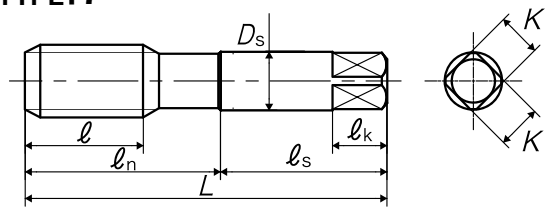


TYPE: 7



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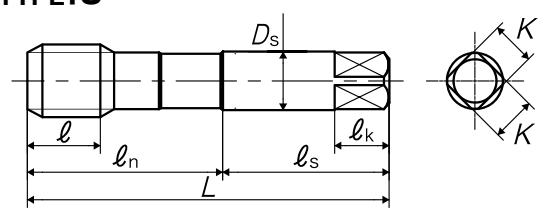

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP Spiral Fluted Taps

Oversize

Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.2 × 0.25	P1	SPP1.2B	2.5P	36	4.5	-	24	3	2.5	5	2	1	○
M1.4 × 0.3	P1	SPP1.4C	2.5P	36	5.4	-	24	3	2.5	5	2	1	◎
M1.6 × 0.35	P1	SPP1.6D	2.5P	36	6.3	-	24	3	2.5	5	2	2	◎
M1.7 × 0.35	P1	SPP1.7D	2.5P	36	6.3	-	24	3	2.5	5	2	2	◎
	P2	SPQ1.7D											○
	P3	SPR1.7D											△
M1.8 × 0.35	P1	SPP1.8D	2.5P	42	6.3	-	27	3	2.5	5	2	2	△
M2 × 0.4	P1	SPP2.0E	2.5P	42	7.2	12	27	3	2.5	5	2	3	◎
	P2	SPQ2.0E											○
	P3	SPR2.0E											◎
	P4	SPS2.0E											△
M2 × 0.25	P1	SPP2.0B	2.5P	42	4.5	12	27	3	2.5	5	2	4	○
M2.2 × 0.45	P1	SPP2.2F	2.5P	42	8.1	12	27	3	2.5	5	2	3	○
	P3	SPR2.2F											△
M2.3 × 0.4	P1	SPP2.3E	2.5P	42	7.2	12	27	3	2.5	5	2	3	○
	P2	SPQ2.3E											△
	P3	SPR2.3E											
	P4	SPS2.3E											
M2.3 × 0.25	P1	SPP2.3B	2.5P	42	4.5	12	27	3	2.5	5	2	4	△
M2.5 × 0.45	P1	SPP2.5F	2.5P	46	8.1	14	29	3	2.5	5	2	3	◎
	P2	SPQ2.5F											○
	P3	SPR2.5F											
	P4	SPS2.5F											
M2.5 × 0.35	P1	SPP2.5D	2.5P	46	6.3	14	29	3	2.5	5	2	4	○
M2.6 × 0.45	P1	SPP2.6F	2.5P	46	8.1	14	29	3	2.5	5	2	3	◎
	P2	SPQ2.6F											○
	P3	SPR2.6F											
	P4	SPS2.6F											△
M2.6 × 0.35	P1	SPP2.6D	2.5P	46	6.3	14	29	3	2.5	5	2	4	△
M3 × 0.5	P1	SPP3.0G	2.5P	46	9	14	26	4	3.2	6	3	3	◎
	P2	SPQ3.0G											○
	P3	SPR3.0G											
	P4	SPS3.0G											
3M0.6	P1	SPP3.0H	2.5P	46	9	14	26	4	3.2	6	3	3	△
M3 × 0.35	P1	SPP3.0D	2.5P	46	6.5	14	26	4	3.2	6	3	4	○
M3.5 × 0.6	P1	SPP3.5H	2.5P	52	11	16	29	5	4	7	3	3	○
	P2	SPQ3.5H											△
	P3	SPR3.5H											
	P4	SPS3.5H											
M3.5 × 0.35	P1	SPP3.5D	2.5P	52	6.5	16	29	5	4	7	3	4	△
M4 × 0.7	P2	SPQ4.0I	2.5P	52	11	17	29	5	4	7	3	3	◎
	P3	SPR4.0I											○
	P4	SPS4.0I											
4M0.75	P2	SPQ4.0J	2.5P	52	11	17	29	5	4	7	3	3	○
M4 × 0.5	P1	SPP4.0G	2.5P	52	9	17	29	5	4	7	3	4	○
M4.5 × 0.75	P2	SPQ4.5J	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
M4.5 × 0.5	P1	SPP4.5G	2.5P	60	9	21	33	5.5	4.5	7	3	4	△
M5 × 0.8	P2	SPQ5.0K	2.5P	60	13	22	33	5.5	4.5	7	3	3	◎

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Think threads with YAMAWA

SP Spiral Fluted Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M5 × 0.8	P3	SPR5.0K	2.5P	60	13	22	33	5.5	4.5	7	3	3	○
	P4	SPS5.0K											
5M0.9	P2	SPQ5.0L	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
M5 × 0.75	P2	SPQ5.0J	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
M5 × 0.5	P1	SPP5.0G	2.5P	60	9	22	33	5.5	4.5	7	3	4	○
M5.5 × 0.9	P2	SPQ5.5L	2.5P	62	15	26	33	6	4.5	7	3	3	△
M5.5 × 0.5	P1	SPP5.5G	2.5P	62	9	26	33	6	4.5	7	3	4	△
M6 × 1	P2	SPQ6.0M	2.5P	62	15	26	33	6	4.5	7	3	3	◎
		SPQ6.0M-T											○
	P3	SPR6.0M											
	P4	SPS6.0M											
M6 × 0.75	P2	SPQ6.0J	2.5P	62	15	26	33	6	4.5	7	3	3	○
	P3	SPR6.0J											△
M6 × 0.5	P1	SPP6.0G	2.5P	62	9	26	33	6	4.5	7	3	4	○
	P2	SPQ6.0G											△
	P3	SPR6.0G											
M7 × 1	P2	SPQ7.0M	2.5P	70	19	-	36	6.2	5	8	3	5	○
	P3	SPR7.0M											△
	P4	SPS7.0M											
M7 × 0.75	P2	SPQ7.0J	2.5P	70	19	-	36	6.2	5	8	3	5	○
M7 × 0.5	P2	SPQ7.0G	2.5P	70	10	-	36	6.2	5	8	3	6	△
M8 × 1.25	P2	SPQ8.0N	2.5P	70	19	-	36	6.2	5	8	3	5	◎
	P3	SPR8.0N											○
	P4	SPS8.0N											
M8 × 1	P2	SPQ8.0M	2.5P	70	19	-	36	6.2	5	8	3	5	○
	P3	SPR8.0M											△
	P4	SPS8.0M											
M8 × 0.75	P2	SPQ8.0J	2.5P	70	19	-	36	6.2	5	8	3	5	○
	P3	SPR8.0J											△
M8 × 0.5	P2	SPQ8.0G	2.5P	70	10	-	36	6.2	5	8	3	6	○
M9 × 1.25	P2	SPQ9.0N	2.5P	75	23	-	38	7	5.5	8	3	5	△
M9 × 1	P2	SPQ9.0M	2.5P	75	23	-	38	7	5.5	8	3	5	○
M9 × 0.75	P2	SPQ9.0J	2.5P	75	13	-	38	7	5.5	8	3	6	○
M9 × 0.5	P2	SPQ9.0G	2.5P	75	11	-	38	7	5.5	8	3	6	△
M10 × 1.5	P2	SPQ010O	2.5P	75	23	-	38	7	5.5	8	3	5	◎
	P3	SPR010O											○
	P4	SPS010O											
M10 × 1.25	P2	SPQ010N	2.5P	75	23	-	38	7	5.5	8	3	5	◎
	P3	SPR010N											○
	P4	SPS010N											
M10 × 1	P2	SPQ010M	2.5P	75	23	-	38	7	5.5	8	3	5	○
	P3	SPR010M											△
	P4	SPS010M											
M10 × 0.75	P2	SPQ010J	2.5P	75	13	-	38	7	5.5	8	3	6	○
M10 × 0.5	P2	SPQ010G	2.5P	75	11	-	38	7	5.5	8	3	6	△
M11 × 1.5	P2	SPQ011O	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
M11 × 1.25	P2	SPQ011N	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
M11 × 1	P2	SPQ011M	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
M11 × 0.75	P2	SPQ011J	2.5P	82	14	-	42	8.5	6.5	9	3	6	△
M12 × 1.75	P2	SPQ012P	2.5P	82	26	-	42	8.5	6.5	9	3	5	◎

※External center is removed

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP Spiral Fluted Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1.75	P3	SPR012P	2.5P	82	26	-	42	8.5	6.5	9	3	5	○
	P4	SPS012P											
M12 × 1.5	P2	SPQ012O	2.5P	82	26	-	42	8.5	6.5	9	3	5	◎
	P3	SPR012O											△
	P4	SPS012O											
M12 × 1.25	P2	SPQ012N	2.5P	82	26	-	42	8.5	6.5	9	3	5	◎
	P3	SPR012N											○
	P4	SPS012N											△
M12 × 1	P2	SPQ012M	2.5P	82	26	-	42	8.5	6.5	9	3	5	○
	P3	SPR012M											△
	P4	SPS012M											
M12 × 0.75	P2	SPQ012J	2.5P	82	14	-	42	8.5	6.5	9	3	6	△
M12 × 0.5	P2	SPQ012G	2.5P	82	12	-	42	8.5	6.5	9	3	6	△
M13 × 1	P2	SPQ013M	2.5P	88	26	-	45	10.5	8	11	3	5	△
M14 × 2	P2	SPQ014Q	2.5P	88	26	-	45	10.5	8	11	3	5	◎
	P3	SPR014Q											△
	P4	SPS014Q											
M14 × 1.5	P2	SPQ014O	2.5P	88	26	-	45	10.5	8	11	3	5	◎
	P3	SPR014O											△
	P4	SPS014O											○
M14 × 1.25	P2	SPQ014N	2.5P	88	26	-	45	10.5	8	11	3	5	○
M14 × 1	P2	SPQ014M	2.5P	88	26	-	45	10.5	8	11	3	5	○
M15 × 2	P2	SPQ015Q	2.5P	95	26	-	48	12.5	10	13	3	5	△
M15 × 1.5	P2	SPQ015O	2.5P	95	26	-	48	12.5	10	13	3	5	△
M15 × 1	P2	SPQ015M	2.5P	95	26	-	48	12.5	10	13	3	5	△
M16 × 2	P2	SPQ016Q	2.5P	95	26	-	48	12.5	10	13	3	5	◎
	P3	SPR016Q											○
	P4	SPS016Q											
	P5	SPT016Q											△
M16 × 1.5	P2	SPQ016O	2.5P	95	26	-	48	12.5	10	13	3	5	◎
	P3	SPR016O											△
	P4	SPS016O											○
M16 × 1	P2	SPQ016M	2.5P	95	26	-	48	12.5	10	13	3	5	○
M17 × 1.5	P2	SPQ017O	2.5P	100	33	-	51	14	11	14	4	5	△
M17 × 1	P2	SPQ017M	2.5P	100	18	-	51	14	11	14	4	6	△
M18 × 2.5	P3	SPR018R	2.5P	100	33	-	51	14	11	14	4	5	◎
	P4	SPS018R											△
M18 × 2	P3	SPR018Q	2.5P	100	33	-	51	14	11	14	4	5	△
M18 × 1.5	P2	SPQ018O	2.5P	100	33	-	51	14	11	14	4	5	◎
	P3	SPR018O											△
	P4	SPS018O											
M18 × 1.25	P2	SPQ018N	2.5P	100	33	-	51	14	11	14	4	5	△
M18 × 1	P2	SPQ018M	2.5P	100	18	-	51	14	11	14	4	6	○
M19 × 1.5	P3	SPR019O	2.5P	105	33	-	50	15	12	15	4	7	△
M19 × 1	P2	SPQ019M	2.5P	105	18	-	50	15	12	15	4	8	△
M20 × 2.5	P3	SPR020R	2.5P	105	33	-	50	15	12	15	4	7	◎
	P4	SPS020R											○
M20 × 2	P3	SPR020Q	2.5P	105	33	-	50	15	12	15	4	7	○
M20 × 1.5	P3	SPR020O	2.5P	105	33	-	50	15	12	15	4	7	◎
	P4	SPS020O											△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

SP Spiral Fluted Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M20 × 1.5	P5	SPT020O	2.5P	105	33	-	50	15	12	15	4	7	△
M20 × 1.25	P2	SPQ020N	2.5P	105	18	-	50	15	12	15	4	8	△
M20 × 1	P2	SPQ020M	2.5P	105	18	-	50	15	12	15	4	8	○
M22 × 2.5	P3	SPR022R	2.5P	115	33	-	55	17	13	16	4	7	◎
	P4	SPS022R											△
M22 × 2	P3	SPR022Q	2.5P	115	33	-	55	17	13	16	4	7	△
M22 × 1.5	P3	SPR022O	2.5P	115	33	-	55	17	13	16	4	7	○
	P4	SPS022O											△
	P5	SPT022O											
M22 × 1	P2	SPQ022M	2.5P	115	19	-	55	17	13	16	4	8	○
M23 × 1.5	P3	SPR023O	2.5P	120	39	-	55	19	15	18	4	7	△
M24 × 3	P3	SPR024S	2.5P	120	39	-	55	19	15	18	4	7	◎
	P4	SPS024S											△
M24 × 2	P3	SPR024Q	2.5P	120	39	-	55	19	15	18	4	7	○
M24 × 1.5	P3	SPR024O	2.5P	120	39	-	55	19	15	18	4	7	○
	P4	SPS024O											△
M24 × 1	P2	SPQ024M	2.5P	120	19	-	55	19	15	18	4	8	○
M25 × 2	P3	SPR025Q	2.5P	125	39	-	58	19	15	18	4	7	△
M25 × 1.5	P3	SPR025O	2.5P	125	39	-	58	19	15	18	4	7	○
M25 × 1	P2	SPQ025M	2.5P	125	20	-	58	19	15	18	4	8	△
M26 × 3	P3	SPR026S	2.5P	130	39	-	60	20	15	18	4	7	△
M26 × 2	P3	SPR026Q	2.5P	130	39	-	60	20	15	18	4	7	△
M26 × 1.5	P3	SPR026O	2.5P	130	39	-	60	20	15	18	4	7	○
M26 × 1	P2	SPQ026M	2.5P	130	20	-	60	20	15	18	4	8	△
M27 × 3	P3	SPR027S	2.5P	130	39	-	60	20	15	18	4	7	○
M27 × 2	P3	SPR027Q	2.5P	130	39	-	60	20	15	18	4	7	○
M27 × 1.5	P3	SPR027O	2.5P	130	39	-	60	20	15	18	4	7	○
M27 × 1	P2	SPQ027M	2.5P	130	20	-	60	20	15	18	4	8	△
M28 × 2	P3	SPR028Q	2.5P	135	46	-	62	23	17	20	4	7	○
M28 × 1.5	P3	SPR028O	2.5P	135	46	-	62	23	17	20	4	7	○
M28 × 1	P2	SPQ028M	2.5P	135	20	-	62	23	17	20	4	8	△
M30 × 3.5	P4	SPS030T	2.5P	135	46	-	62	23	17	20	4	7	◎
M30 × 3	P3	SPR030S	2.5P	135	46	-	62	23	17	20	4	7	○
M30 × 2	P3	SPR030Q	2.5P	135	46	-	62	23	17	20	4	7	○
M30 × 1.5	P3	SPR030O	2.5P	135	46	-	62	23	17	20	4	7	○
M30 × 1	P2	SPQ030M	2.5P	135	21	-	62	23	17	20	4	8	△
M32 × 3	P3	SPMR032S	2.5P	145	46	-	67	24	19	22	4	7	△
M32 × 2	P3	SPMR032Q	2.5P	145	46	-	67	24	19	22	4	7	△
M32 × 1.5	P3	SPMR032O	2.5P	145	46	-	67	24	19	22	4	7	△
M32 × 1	P2	SPMQ032M	2.5P	145	21	-	67	24	19	22	4	8	△
M33 × 3.5	P4	SPMS033T	2.5P	145	46	-	67	25	19	22	4	7	○
M33 × 3	P3	SPMR033S	2.5P	145	46	-	67	25	19	22	4	7	△
M33 × 2	P3	SPMR033Q	2.5P	145	46	-	67	25	19	22	4	7	△
M33 × 1.5	P3	SPMR033O	2.5P	145	46	-	67	25	19	22	4	7	△
M33 × 1	P2	SPMQ033M	2.5P	145	21	-	67	25	19	22	4	8	△
M34 × 3	P3	SPMR034S	2.5P	155	52	-	71	28	21	24	4	7	△
M34 × 2	P3	SPMR034Q	2.5P	155	52	-	71	28	21	24	4	7	△
M34 × 1.5	P3	SPMR034O	2.5P	155	26	-	71	28	21	24	4	8	△
M34 × 1	P2	SPMQ034M	2.5P	155	26	-	71	28	21	24	4	8	△
M35 × 3	P3	SPMR035S	2.5P	155	52	-	71	28	21	24	4	7	△

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Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP Spiral Fluted Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M35 × 2	P3	SPMR035Q	2.5P	155	52	-	71	28	21	24	4	7	△
M35 × 1.5	P3	SPMR035O	2.5P	155	26	-	71	28	21	24	4	8	△
M35 × 1	P2	SPMQ035M	2.5P	155	26	-	71	28	21	24	4	8	△
M36 × 4	P4	SPMS036U	2.5P	155	52	-	71	28	21	24	4	7	◎
M36 × 3	P3	SPMR036S	2.5P	155	52	-	71	28	21	24	4	7	△
M36 × 2	P3	SPMR036Q	2.5P	155	52	-	71	28	21	24	4	7	△
M36 × 1.5	P3	SPMR036O	2.5P	155	26	-	71	28	21	24	4	8	△
M36 × 1	P2	SPMQ036M	2.5P	155	26	-	71	28	21	24	4	8	△
M38 × 3	P3	SPMR038S	2.5P	165	52	-	76	30	23	26	4	7	△
M38 × 2	P3	SPMR038Q	2.5P	165	52	-	76	30	23	26	4	7	△
M38 × 1.5	P3	SPMR038O	2.5P	165	26	-	76	30	23	26	4	8	△
M39 × 4	P4	SPMS039U	2.5P	165	52	-	76	30	23	26	4	7	△
M39 × 3	P3	SPMR039S	2.5P	165	52	-	76	30	23	26	4	7	△
M39 × 2	P3	SPMR039Q	2.5P	165	52	-	76	30	23	26	4	7	△
M39 × 1.5	P3	SPMR039O	2.5P	165	26	-	76	30	23	26	4	8	△
M40 × 3	P3	SPMR040S	2.5P	175	59	-	81	32	26	30	4	7	△
M40 × 2	P3	SPMR040Q	2.5P	175	59	-	81	32	26	30	4	7	△
M40 × 1.5	P3	SPMR040O	2.5P	175	27	-	81	32	26	30	4	8	△
M42 × 4.5	P4	SPMS042V	2.5P	175	59	-	81	32	26	30	4	7	△
M42 × 3	P3	SPMR042S	2.5P	175	59	-	81	32	26	30	4	7	△
M42 × 2	P3	SPMR042Q	2.5P	175	59	-	81	32	26	30	4	7	△
M42 × 1.5	P3	SPMR042O	2.5P	175	27	-	81	32	26	30	4	8	△
M45 × 4.5	P4	SPMS045V	2.5P	180	59	-	83	35	26	30	4	7	△
M45 × 3	P3	SPMR045S	2.5P	180	59	-	83	35	26	30	4	7	△
M45 × 2	P3	SPMR045Q	2.5P	180	59	-	83	35	26	30	4	7	△
M45 × 1.5	P3	SPMR045O	2.5P	180	27	-	83	35	26	30	4	8	△
M48 × 5	P4	SPMS048W	2.5P	185	65	-	85	38	29	32	4	7	△
M48 × 4	P4	SPMS048U	2.5P	185	65	-	85	38	29	32	4	7	△
M48 × 3	P3	SPMR048S	2.5P	185	65	-	85	38	29	32	4	7	△
M48 × 2	P3	SPMR048Q	2.5P	185	65	-	85	38	29	32	4	7	△
M48 × 1.5	P3	SPMR048O	2.5P	185	28	-	85	38	29	32	4	8	△
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
No.1-64UNC	P1	SPPUN1D	2.5P	42	7.2	-	27	3	2.5	5	2	2	△
No.2-56UNC	P1	SPPUN2E	2.5P	42	8.1	12	27	3	2.5	5	2	3	△
No.2-64UNF	P1	SPPUN2D	2.5P	42	8.1	12	27	3	2.5	5	2	3	△
No.3-48UNC	P1	SPPUN3F	2.5P	46	8.1	14	29	3	2.5	5	2	3	△
No.3-56UNF	P1	SPPUN3E	2.5P	46	8.1	14	29	3	2.5	5	2	3	△
No.4-40UNC	P1	SPPUN4H	2.5P	46	9	14	26	4	3.2	6	2	3	○
No.4-48UNF	P1	SPPUN4F	2.5P	46	9	14	26	4	3.2	6	2	3	△
No.5-40UNC	P1	SPPUN5H	2.5P	52	11	16	29	5	4	7	3	3	○
No.5-44UNF	P1	SPPUN5G	2.5P	52	11	16	29	5	4	7	3	3	△
No.6-32UNC	P2	SPQUN6J	2.5P	52	11	16	29	5	4	7	3	3	○
No.6-40UNF	P1	SPPUN6H	2.5P	52	11	16	29	5	4	7	3	3	△
No.8-32UNC	P2	SPQUN8J	2.5P	60	13	21	33	5.5	4.5	7	3	3	○
No.8-36UNF	P2	SPQUN8I	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
No.10-24UNC	P2	SPQUNAM	2.5P	60	13	22	33	5.5	4.5	7	3	3	○
No.10-32UNF	P2	SPQUNAJ	2.5P	60	13	22	33	5.5	4.5	7	3	3	○
No.12-24UNC	P2	SPQUNCM	2.5P	62	15	26	33	6	4.5	7	3	3	△
No.12-28UNF	P2	SPQUNCK	2.5P	62	15	26	33	6	4.5	7	3	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

SP Spiral Fluted Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4-20UNC	P2	SPQU04N	2.5P	62	15	26	33	6	4.5	7	3	3	◎
1/4-28UNF	P2	SPQU04K	2.5P	62	15	26	33	6	4.5	7	3	3	○
1/4-32UNEF	P2	SPQU04J	2.5P	62	15	26	33	6	4.5	7	3	3	△
5/16-18UNC	P2	SPQU05O	2.5P	70	19	-	36	6.2	5	8	3	5	◎
5/16-24UNF	P2	SPQU05M	2.5P	70	19	-	36	6.2	5	8	3	5	○
5/16-32UNEF	P2	SPQU05J	2.5P	70	19	-	36	6.2	5	8	3	5	△
3/8-16UNC	P2	SPQU06P	2.5P	75	23	-	38	7	5.5	8	3	5	◎
3/8-24UNF	P2	SPQU06M	2.5P	75	23	-	38	7	5.5	8	3	5	○
7/16-14UNC	P3	SPRU07Q	2.5P	82	26	-	42	8.5	6.5	9	3	5	○
7/16-20UNF	P2	SPQU07N	2.5P	82	26	-	42	8.5	6.5	9	3	5	○
1/2-13UNC	P3	SPRU08R	2.5P	88	26	-	45	10.5	8	11	3	5	○
1/2-20UNF	P2	SPQU08N	2.5P	88	26	-	45	10.5	8	11	3	5	○
9/16-12UNC	P3	SPRU09S	2.5P	95	26	-	48	12.5	10	13	3	5	△
9/16-18UNF	P2	SPQU09O	2.5P	95	26	-	48	12.5	10	13	3	5	○
9/16-24UNEF	P2	SPQU09M	2.5P	95	26	-	48	12.5	10	13	3	5	△
5/8-11UNC	P3	SPRU10U	2.5P	95	26	-	48	12.5	10	13	3	5	○
5/8-18UNF	P2	SPQU10O	2.5P	95	26	-	48	12.5	10	13	3	5	○
5/8-24UNEF	P2	SPQU10M	2.5P	95	26	-	48	12.5	10	13	3	5	△
3/4-10UNC	P3	SPRU12V	2.5P	105	33	-	50	15	12	15	4	7	○
3/4-16UNF	P3	SPRU12P	2.5P	105	33	-	50	15	12	15	4	7	○
3/4-20UNEF	P2	SPQU12N	2.5P	105	33	-	50	15	12	15	4	7	△
7/8-9UNC	P3	SPRU14W	2.5P	115	33	-	55	17	13	16	4	7	○
7/8-14UNF	P3	SPRU14Q	2.5P	115	33	-	55	17	13	16	4	7	○
7/8-20UNEF	P2	SPQU14N	2.5P	115	33	-	55	17	13	16	4	7	△
1 -8UNC	P3	SPRU16X	2.5P	125	39	-	58	19	15	18	4	7	○
1 -12UNF	P3	SPRU16S	2.5P	125	39	-	58	19	15	18	4	7	△
1 -14UNS	P3	SPRU16Q	2.5P	125	39	-	58	19	15	18	4	7	△
1 -20UNEF	P2	SPQU16N	2.5P	125	39	-	58	19	15	18	4	7	△
1 1/8-7UNC	P4	SPSU18Y	2.5P	135	46	-	62	23	17	20	4	7	△
1 1/8-12UNF	P3	SPRU18S	2.5P	135	46	-	62	23	17	20	4	7	△
1 1/4-7UNC	P4	SPMSU20Y	2.5P	145	46	-	67	24	19	22	4	7	△
1 1/4-8UN	P3	SPMRU20X	2.5P	145	46	-	67	24	19	22	4	7	△
1 1/4-12UNF	P3	SPMRU20S	2.5P	145	46	-	67	24	19	22	4	7	△
1 3/8-6UNC	P4	SPMSU22Z	2.5P	155	52	-	71	28	21	24	4	7	△
1 3/8-8UN	P3	SPMRU22X	2.5P	155	52	-	71	28	21	24	4	7	△
1 3/8-12UNF	P3	SPMRU22S	2.5P	155	52	-	71	28	21	24	4	7	△
1 1/2-6UNC	P4	SPMSU24Z	2.5P	165	52	-	76	30	23	26	4	7	△
1 1/2-12UNF	P3	SPMRU24S	2.5P	165	52	-	76	30	23	26	4	7	△
1 3/4-5UNC	P4	SPMSU280	2.5P	180	59	-	83	35	26	30	4	7	△
1 3/4-12UN	P3	SPMRU28S	2.5P	180	59	-	83	35	26	30	4	7	△

For Whitworth Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/8W40	P1	SPPW02H	2.5P	52	11	17	29	5	4	7	3	3	○
5/32W32	P2	SPQW2HJ	2.5P	52	11	17	29	5	4	7	3	3	△
3/16W24	P2	SPQW03M	2.5P	60	13	21	33	5.5	4.5	7	3	3	○
7/32W24	P2	SPQW3HM	2.5P	62	15	26	33	6	4.5	7	3	3	△
1/4W20	P2	SPQW04N	2.5P	62	15	26	33	6	4.5	7	3	3	○
5/16W18	P2	SPQW05O	2.5P	70	19	-	36	6.2	5	8	3	5	○
3/8W16	P2	SPQW06P	2.5P	75	23	-	38	7	5.5	8	3	5	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP Spiral Fluted Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
7/16W14	P3	SPRW07Q	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
1/2W12	P3	SPRW08S	2.5P	88	26	-	45	10.5	8	11	3	5	○
9/16W12	P3	SPRW09S	2.5P	95	26	-	48	12.5	10	13	3	5	△
5/8W11	P3	SPRW10U	2.5P	95	26	-	48	12.5	10	13	3	5	○
3/4W10	P3	SPRW12V	2.5P	105	33	-	50	15	12	15	4	7	○
7/8W9	P3	SPRW14W	2.5P	115	33	-	55	17	13	16	4	7	○
1 W8	P3	SPRW16X	2.5P	125	39	-	58	19	15	18	4	7	○
1 1/8W7	P4	SPSW18Y	2.5P	135	46	-	62	23	17	20	4	7	△
1 1/4W7	P4	SPMSW20Y	2.5P	145	46	-	67	24	19	22	4	7	△
1 3/8W6	P4	SPMSW22Z	2.5P	155	52	-	71	28	21	24	4	7	△
1 1/2W6	P4	SPMSW24Z	2.5P	165	52	-	76	30	23	26	4	7	△
1 5/8W5	P4	SPMSW260	2.5P	175	59	-	81	32	26	30	4	7	△
1 3/4W5	P4	SPMSW280	2.5P	180	59	-	83	35	26	30	4	7	△
For Screw Threads used on Sewing Machines													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
3/32SM56	P1	SPPS06E	2.5P	46	8.1	14	29	3	2.5	5	2	3	△
1/8SM40	P1	SPPS08H	2.5P	52	11	16	29	5	4	7	3	3	△
1/8SM44	P1	SPPS08G	2.5P	52	11	16	29	5	4	7	3	3	○
9/64SM40	P1	SPPS09H	2.5P	52	11	17	29	5	4	7	3	3	○
11/64SM40	P1	SPPS11H	2.5P	60	13	21	33	5.5	4.5	7	3	3	○
3/16SM28	P2	SPQS12K	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
3/16SM32	P2	SPQS12J	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
7/32SM32	P2	SPQS14J	2.5P	62	15	26	33	6	4.5	7	3	3	△
15/64SM28	P2	SPQS15K	2.5P	62	15	26	33	6	4.5	7	3	3	△
1/4SM24	P2	SPQS16M	2.5P	62	15	26	33	6	4.5	7	3	3	△
1/4SM40	P1	SPPS16H	2.5P	62	8.6	26	33	6	4.5	7	3	4	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

SP 1.5P

Spiral Fluted Taps 1.5P

Specification

HSS 1.5

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

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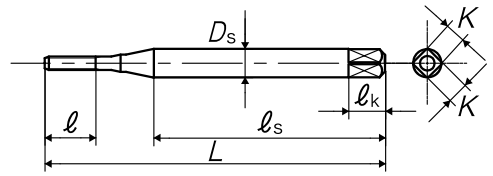

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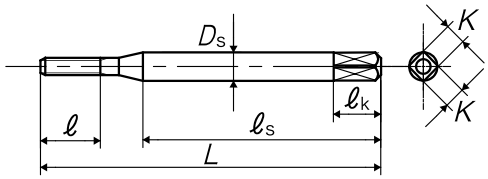

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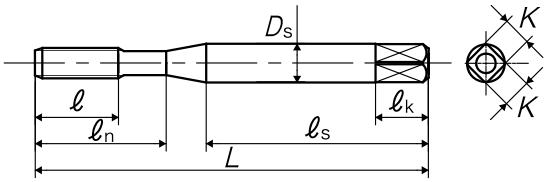

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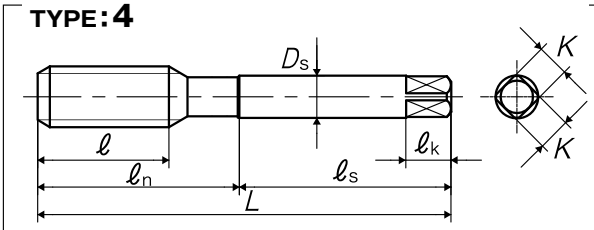

Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.2 × 0.25	P1	SY1.2BPNEBA	1.5P	36	4.5	-	24	3	2.5	5	2	1	△
M1.4 × 0.3	P1	SY1.4CPNEBA	1.5P	36	5.4	-	24	3	2.5	5	2	1	△
M1.6 × 0.35	P1	SY1.6DPNEBA	1.5P	36	6.3	-	24	3	2.5	5	2	2	○
M1.7 × 0.35	P1	SY1.7DPNEBA	1.5P	36	6.3	-	24	3	2.5	5	2	2	△
M1.8 × 0.35	P1	SY1.8DPNEBA	1.5P	42	6.3	-	27	3	2.5	5	2	2	△
M2 × 0.4	P1	SY2.0EPNEBA	1.5P	42	7.2	12	27	3	2.5	5	2	3	○
M2.3 × 0.4	P1	SY2.3EPNEBA	1.5P	42	7.2	12	27	3	2.5	5	2	3	△
M2.5 × 0.45	P1	SY2.5FPNEBA	1.5P	46	8.1	14	29	3	2.5	5	2	3	△
M2.6 × 0.45	P1	SY2.6FPNEBA	1.5P	46	8.1	14	29	3	2.5	5	2	3	△
M3 × 0.5	P1	SY3.0GPNEBA	1.5P	46	9	14	26	4	3.2	6	3	3	○
M3.5 × 0.6	P1	SY3.5HPNEBA	1.5P	52	11	16	29	5	4	7	3	3	△
M4 × 0.7	P2	SY4.0IQNEBA	1.5P	52	11	17	29	5	4	7	3	3	○
M5 × 0.8	P2	SY5.0KQNEBA	1.5P	60	13	22	33	5.5	4.5	7	3	3	○
M6 × 1	P2	SY6.0MQNEBA	1.5P	62	15	26	33	6	4.5	7	3	3	○
M8 × 1.25	P2	SY8.0NQNEBA	1.5P	70	19	-	36	6.2	5	8	3	4	○
M8 × 1	P2	SY8.0MQNEBA	1.5P	70	19	-	36	6.2	5	8	3	4	△
M10 × 1.5	P2	SY010OQNEBA	1.5P	75	23	-	38	7	5.5	8	3	4	○
M10 × 1.25	P2	SY010NQNEBA	1.5P	75	23	-	38	7	5.5	8	3	4	△
M10 × 1	P2	SY010MQNEBA	1.5P	75	23	-	38	7	5.5	8	3	4	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP 1.5P Spiral Fluted Taps 1.5P

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1.75	P2	SY012PQNEBA	1.5P	82	26	-	42	8.5	6.5	9	3	4	○
M12 × 1.5	P2	SY012OQNEBA	1.5P	82	26	-	42	8.5	6.5	9	3	4	△
M12 × 1.25	P2	SY012NQNEBA	1.5P	82	26	-	42	8.5	6.5	9	3	4	△
M14 × 2	P2	SY014QQNEBA	1.5P	88	26	-	45	10.5	8	11	3	4	△
M14 × 1.5	P2	SY014OQNEBA	1.5P	88	26	-	45	10.5	8	11	3	4	△
M16 × 2	P2	SY016QQNEBA	1.5P	95	26	-	48	12.5	10	13	3	4	△
M16 × 1.5	P2	SY016OQNEBA	1.5P	95	26	-	48	12.5	10	13	3	4	△

+SP

Plus Series Spiral Fluted Taps

Specification

HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 10~15 (m/min)

For icon explanation, refer to P.24

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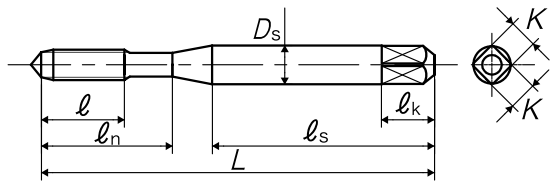

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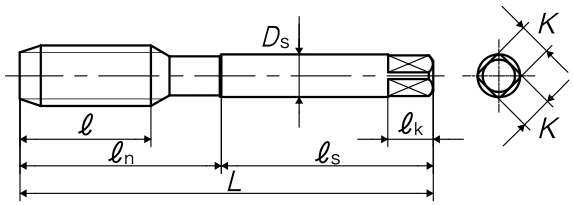


Segment : 1C Oversize

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P1	SNPP2.0E	2.5P	42	7.2	12	27	3	2.5	5	2	1	◎
	P2	SNPQ2.0E											○
	P3	SNPR2.0E											◎
	P4	SNPS2.0E											△
M2.2 × 0.45	P1	SNPP2.2F	2.5P	42	8.1	12	27	3	2.5	5	2	1	○
	P3	SNPR2.2F											△
M2.3 × 0.4	P1	SNPP2.3E	2.5P	42	7.2	12	27	3	2.5	5	2	1	○
	P2	SNPQ2.3E											△
	P3	SNPR2.3E											
	P4	SNPS2.3E											
M2.5 × 0.45	P1	SNPP2.5F	2.5P	46	8.1	14	29	3	2.5	5	2	1	◎
	P2	SNPQ2.5F											○
	P3	SNPR2.5F											
	P4	SNPS2.5F											
M2.6 × 0.45	P1	SNPP2.6F	2.5P	46	8.1	14	29	3	2.5	5	2	1	◎
	P2	SNPQ2.6F											○
	P3	SNPR2.6F											
	P4	SNPS2.6F											△
M3 × 0.5	P1	SNPP3.0G	2.5P	46	9	14	26	4	3.2	6	3	1	◎
	P2	SNPQ3.0G											○
	P3	SNPR3.0G											
	P4	SNPS3.0G											
M3.5 × 0.6	P1	SNPP3.5H	2.5P	52	11	16	29	5	4	7	3	1	○
	P2	SNPQ3.5H											△
	P3	SNPR3.5H											
	P4	SNPS3.5H											
M4 × 0.7	P2	SNPQ4.0I	2.5P	52	11	17	29	5	4	7	3	1	◎

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

+SP Plus Series Spiral Fluted Taps

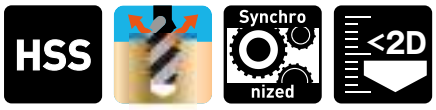
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M4 × 0.7	P3	SNPR4.0I	2.5P	52	11	17	29	5	4	7	3	1	○
	P4	SNPS4.0I											
M5 × 0.8	P2	SNPQ5.0K	2.5P	60	13	22	33	5.5	4.5	7	3	1	◎
	P3	SNPR5.0K											○
	P4	SNPS5.0K											
M6 × 1	P2	SNPQ6.0M	2.5P	62	15	26	33	6	4.5	7	3	1	◎
	P3	SNPR6.0M											○
	P4	SNPS6.0M											
M8 × 1.25	P2	SNPQ8.0N	2.5P	70	19	-	36	6.2	5	8	3	2	◎
	P3	SNPR8.0N											○
	P4	SNPS8.0N											
M10 × 1.5	P2	SNPQ010O	2.5P	75	23	-	38	7	5.5	8	3	2	◎
	P3	SNPR010O											○
	P4	SNPS010O											
M10 × 1.25	P2	SNPQ010N	2.5P	75	23	-	38	7	5.5	8	3	2	◎
	P3	SNPR010N											○
	P4	SNPS010N											
M12 × 1.75	P2	SNPQ012P	2.5P	82	26	-	42	8.5	6.5	9	3	2	◎
	P3	SNPR012P											○
	P4	SNPS012P											
M12 × 1.25	P2	SNPQ012N	2.5P	82	26	-	42	8.5	6.5	9	3	2	◎
	P3	SNPR012N											○
	P4	SNPS012N											

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

XSP

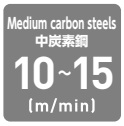
X Series Spiral Fluted Taps

Specification



■Applying the blanks of high toughness and high accuracy, XSP derives the maximum performance from high facility machining centers and high precision toolings. Spiral fluted tap.

Recommended Tapping Speeds depending on Materials



For icon explanation, refer to P.24

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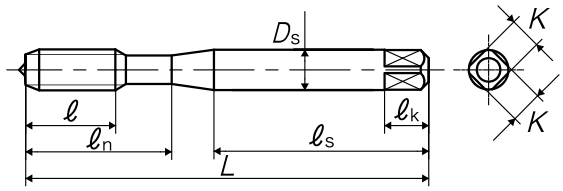
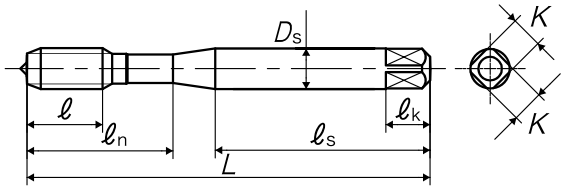


TYPE: 2



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	SNXQ6.0M	2.5P	80	15	30	45	6	4.9	8	3	1	○
M8 × 1.25	P3	SNXR8.0N	2.5P	90	19	35	48	8	6.2	9	3	1	○
M8 × 1	P3	SNXR8.0M	2.5P	90	15	35	48	8	6.2	9	3	2	○
M10 × 1.5	P3	SNXR010O	2.5P	100	23	39	53	10	8	11	3	1	○
M10 × 1.25	P3	SNXR010N	2.5P	100	19	39	53	10	8	11	3	2	○
M10 × 1	P3	SNXR010M	2.5P	100	15	39	53	10	8	11	3	2	○
M12 × 1.75	P3	SNXR012P	2.5P	110	26	45	56	12	9	12	3	1	○
M12 × 1.5	P3	SNXR012O	2.5P	110	23	45	56	12	9	12	3	2	○
M12 × 1.25	P3	SNXR012N	2.5P	110	19	45	56	12	9	12	3	2	○

Note:
- Please use tapping holders suitable for the shank diameter and square of DIN371 for M6～M10 and those of M16 (DIN376) for M12.
- Overall length, shank diameter and square of metric coarse series are adopted for those of metric fine series.

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP OX

Spiral Fluted Taps, Oxided

Specification

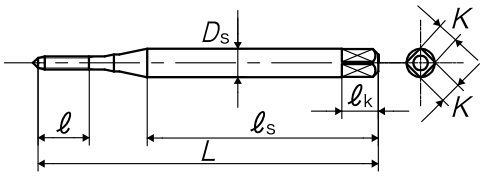
HSS | OX Oxide

Recommended Tapping Speeds depending on Materials

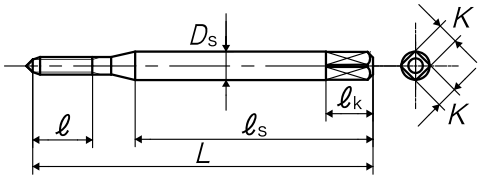
Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

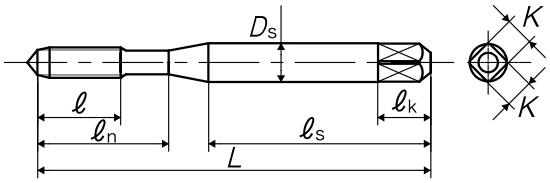
TYPE: 1



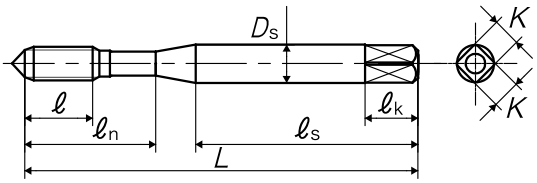
TYPE: 2



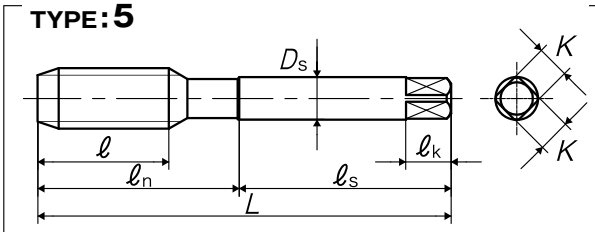
TYPE: 3



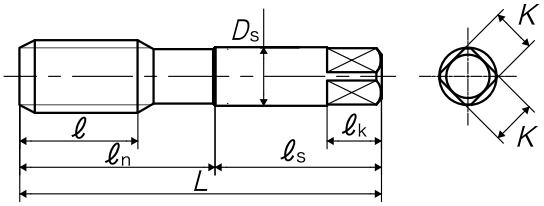
TYPE: 4



TYPE: 5



TYPE: 6



Oversize

Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.4 × 0.3	P1	SPP1.4CX	2.5P	36	5.4	-	24	3	2.5	5	2	1	△
M1.6 × 0.35	P1	SPP1.6DX	2.5P	36	6.3	-	24	3	2.5	5	2	2	△
M1.7 × 0.35	P1	SPP1.7DX	2.5P	36	6.3	-	24	3	2.5	5	2	2	△
M2 × 0.4	P1	SPP2.0EX	2.5P	42	7.2	12	27	3	2.5	5	2	3	△
M2.5 × 0.45	P1	SPP2.5FX	2.5P	46	8.1	14	29	3	2.5	5	2	3	△
M2.6 × 0.45	P1	SPP2.6FX	2.5P	46	8.1	14	29	3	2.5	5	2	3	△
M3 × 0.5	P1	SPP3.0GX	2.5P	46	9	14	26	4	3.2	6	3	3	◎
	P2	SPQ3.0GX											△
	P3	SPR3.0GX											
3M0.6	P1	SPP3.0HX	2.5P	46	9	14	26	4	3.2	6	3	3	△
M3.5 × 0.6	P1	SPP3.5HX	2.5P	52	11	16	29	5	4	7	3	3	△

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

SP OX Spiral Fluted Taps, Oxided

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M4 × 0.7	P2	SPQ4.0IX	2.5P	52	11	17	29	5	4	7	3	3	◎
	P3	SPR4.0IX											△
	P4	SPS4.0IX											
M4 × 0.5	P1	SPP4.0GX	2.5P	52	9	17	29	5	4	7	3	4	△
M4.5 × 0.5	P1	SPP4.5GX	2.5P	60	9	21	33	5.5	4.5	7	3	4	△
M5 × 0.8	P2	SPQ5.0KX	2.5P	60	13	22	33	5.5	4.5	7	3	3	◎
	P3	SPR5.0KX											△
	P4	SPS5.0KX											
M6 × 1	P2	SPQ6.0MX	2.5P	62	15	26	33	6	4.5	7	3	3	◎
	P3	SPR6.0MX											△
	P4	SPS6.0MX											
M6 × 0.75	P2	SPQ6.0JX	2.5P	62	15	26	33	6	4.5	7	3	3	△
M7 × 1	P2	SPQ7.0MX	2.5P	70	19	-	36	6.2	5	8	3	5	△
M8 × 1.25	P2	SPQ8.0NX	2.5P	70	19	-	36	6.2	5	8	3	5	◎
	P3	SPR8.0NX											△
	P4	SPS8.0NX											
M8 × 1	P2	SPQ8.0MX	2.5P	70	19	-	36	6.2	5	8	3	5	△
M10 × 1.5	P2	SPQ010OX	2.5P	75	23	-	38	7	5.5	8	3	5	◎
M10 × 1.25	P2	SPQ010NX	2.5P	75	23	-	38	7	5.5	8	3	5	△
	P3	SPR010NX											
M10 × 1	P2	SPQ010MX	2.5P	75	23	-	38	7	5.5	8	3	5	△
M12 × 1.75	P2	SPQ012PX	2.5P	82	26	-	42	8.5	6.5	9	3	5	◎
M12 × 1.5	P2	SPQ012OX	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
M12 × 1.25	P2	SPQ012NX	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
M12 × 1	P2	SPQ012MX	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
M14 × 2	P2	SPQ014QX	2.5P	88	26	-	45	10.5	8	11	3	5	△
M14 × 1.5	P2	SPQ014OX	2.5P	88	26	-	45	10.5	8	11	3	5	△
M14 × 1	P2	SPQ014MX	2.5P	88	26	-	45	10.5	8	11	3	5	△
M16 × 2	P2	SPQ016QX	2.5P	95	26	-	48	12.5	10	13	3	5	○
M16 × 1.5	P2	SPQ016OX	2.5P	95	26	-	48	12.5	10	13	4	5	△
M18 × 2.5	P3	SPR018RX	2.5P	100	33	-	51	14	11	14	4	5	△
M18 × 1.5	P2	SPQ018OX	2.5P	100	33	-	51	14	11	14	4	5	△
M20 × 2.5	P3	SPR020RX	2.5P	105	33	-	50	15	12	15	4	6	○
M20 × 1.5	P3	SPR020OX	2.5P	105	33	-	50	15	12	15	4	6	△
M22 × 2.5	P3	SPR022RX	2.5P	115	33	-	55	17	13	16	4	6	△
M22 × 1.5	P3	SPR022OX	2.5P	115	33	-	55	17	13	16	4	6	△
M24 × 3	P3	SPR024SX	2.5P	120	39	-	55	19	15	18	4	6	△
M24 × 1.5	P3	SPR024OX	2.5P	120	39	-	55	19	15	18	4	6	△
M27 × 3	P3	SPR027SX	2.5P	130	39	-	60	20	15	18	4	6	△
M30 × 3.5	P4	SPS030TX	2.5P	135	46	-	62	23	17	20	4	6	△
M30 × 1.5	P3	SPR030OX	2.5P	135	46	-	62	23	17	20	4	6	△
M33 × 3.5	P4	SPS033TX	2.5P	145	46	-	67	25	19	22	4	6	△
M36 × 4	P4	SPS036UX	2.5P	155	52	-	71	28	21	24	4	6	△
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
No.2-56UNC	P1	SPPUN2EX	2.5P	42	8.1	12	27	3	2.5	5	2	3	△
No.4-40UNC	P1	SPPUN4HX	2.5P	46	9	14	26	4	3.2	6	2	3	△
No.5-40UNC	P1	SPPUN5HX	2.5P	52	11	16	29	5	4	7	3	3	△
No.6-32UNC	P2	SPQUN6JX	2.5P	52	11	16	29	5	4	7	3	3	△
No.8-32UNC	P2	SPQUN8JX	2.5P	60	13	21	33	5.5	4.5	7	3	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP OX Spiral Fluted Taps, Oxided

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
No.10-24UNC	P2	SPQUNAMX	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
No.10-32UNF	P2	SPQUNAJX	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
1/4-20UNC	P2	SPQU04NX	2.5P	62	15	26	33	6	4.5	7	3	3	△
1/4-28UNF	P2	SPQU04KX	2.5P	62	15	26	33	6	4.5	7	3	3	△
5/16-18UNC	P2	SPQU05OX	2.5P	70	19	-	36	6.2	5	8	3	5	△
5/16-24UNF	P2	SPQU05MX	2.5P	70	19	-	36	6.2	5	8	3	5	△
3/8-16UNC	P2	SPQU06PX	2.5P	75	23	-	38	7	5.5	8	3	5	△
3/8-24UNF	P2	SPQU06MX	2.5P	75	23	-	38	7	5.5	8	3	5	△
7/16-14UNC	P3	SPRU07QX	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
7/16-20UNF	P2	SPQU07NX	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
1/2-13UNC	P2	SPRU08RX	2.5P	88	26	-	45	10.5	8	11	3	5	△
1/2-20UNF	P2	SPQU08NX	2.5P	88	26	-	45	10.5	8	11	3	5	△
5/8-11UNC	P3	SPRU10UX	2.5P	95	26	-	48	12.5	10	13	3	5	△
5/8-18UNF	P2	SPQU10OX	2.5P	95	26	-	48	12.5	10	13	3	5	△
3/4-10UNC	P3	SPRU12VX	2.5P	105	33	-	50	15	12	15	4	6	△
3/4-16UNF	P3	SPRU12PX	2.5P	105	33	-	50	15	12	15	4	6	△
7/8-9UNC	P3	SPRU14WX	2.5P	115	33	-	55	17	13	16	4	6	△
7/8-14UNF	P3	SPRU14QX	2.5P	115	33	-	55	17	13	16	4	6	△
1 -8UNC	P3	SPRU16XX	2.5P	125	39	-	58	19	15	18	4	6	△
1 -12UNF	P3	SPRU16SX	2.5P	125	39	-	58	19	15	18	4	6	△
For Whitworth Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
3/16W24	P2	SPQW03MX	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
1/4W20	P2	SPQW04NX	2.5P	62	15	26	33	6	4.5	7	3	3	△
5/16W18	P2	SPQW05OX	2.5P	70	19	-	36	6.2	5	8	3	5	△
3/8W16	P2	SPQW06PX	2.5P	75	23	-	38	7	5.5	8	3	5	△
7/16W14	P3	SPRW07QX	2.5P	82	26	-	42	8.5	6.5	9	3	5	△
1/2W12	P3	SPRW08SX	2.5P	88	26	-	45	10.5	8	11	3	5	△
5/8W11	P3	SPRW10UX	2.5P	95	26	-	48	12.5	10	13	3	5	△
3/4W10	P3	SPRW12VX	2.5P	105	33	-	50	15	12	15	4	6	△
7/8W9	P3	SPRW14WX	2.5P	115	33	-	55	17	13	16	4	6	△
1 W8	P3	SPRW16XX	2.5P	125	39	-	58	19	15	18	4	6	△

+SP OX

Plus Series Spiral Fluted Taps, Oxided

Specification

HSS | OX Oxide

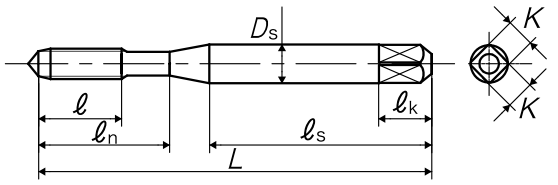
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 10~15 (m/min)

Medium carbon steels 中炭素鋼 10~15 (m/min)

For icon explanation, refer to P.24

TYPE: 1



Oversize

Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P1	SNPP2.0EX	2.5P	42	7.2	12	27	3	2.5	5	2	1	△
	P2	SNPQ2.0EX											
	P3	SNPR2.0EX											
	P4	SNPS2.0EX											
M2.5 × 0.45	P1	SNPP2.5FX	2.5P	46	8.1	14	29	3	2.5	5	2	1	△
	P2	SNPQ2.5FX											
	P3	SNPR2.5FX											
	P4	SNPS2.5FX											
M2.6 × 0.45	P1	SNPP2.6FX	2.5P	46	8.1	14	29	3	2.5	5	2	1	△
	P2	SNPQ2.6FX											
	P3	SNPR2.6FX											
	P4	SNPS2.6FX											
M3 × 0.5	P1	SNPP3.0GX	2.5P	46	9	14	26	4	3.2	6	3	1	◎
	P2	SNPQ3.0GX											
	P3	SNPR3.0GX											△
	P4	SNPS3.0GX											
M3.5 × 0.6	P1	SNPP3.5HX	2.5P	52	11	16	29	5	4	7	3	1	△
M4 × 0.7	P2	SNPQ4.0IX	2.5P	52	11	17	29	5	4	7	3	1	◎
	P3	SNPR4.0IX											△
	P4	SNPS4.0IX											
M5 × 0.8	P2	SNPQ5.0KX	2.5P	60	13	22	33	5.5	4.5	7	3	1	◎
	P3	SNPR5.0KX											△
	P4	SNPS5.0KX											
M6 × 1	P2	SNPQ6.0MX	2.5P	62	15	26	33	6	4.5	7	3	1	◎
	P3	SNPR6.0MX											△
	P4	SNPS6.0MX											

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP LH

Spiral Fluted Taps for Left Hand Threads

Specification

HSS

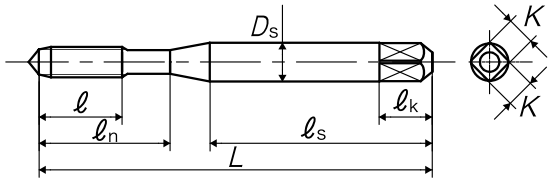
LH Left hand

Recommended Tapping Speeds depending on Materials

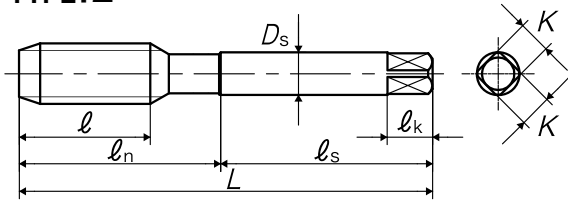
Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

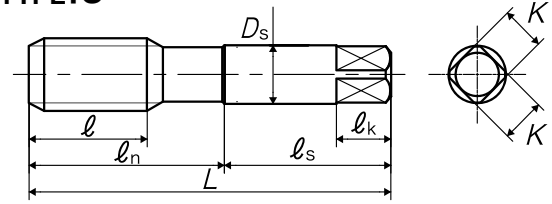
TYPE: 1



TYPE: 2



TYPE: 3



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P1	SPP2.0E--L	2.5P	42	7.2	12	27	3	2.5	5	2	1	△
M2.3 × 0.4	P1	SPP2.3E--L	2.5P	42	7.2	12	27	3	2.5	5	2	1	△
M2.5 × 0.45	P1	SPP2.5F--L	2.5P	46	8.1	14	29	3	2.5	5	2	1	△
M2.6 × 0.45	P1	SPP2.6F--L	2.5P	46	8.1	14	29	3	2.5	5	2	1	△
M3 × 0.5	P1	SPP3.0G--L	2.5P	46	9	14	26	4	3.2	6	3	1	○
M4 × 0.7	P2	SPQ4.0I--L	2.5P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P2	SPQ5.0K--L	2.5P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P2	SPQ6.0M--L	2.5P	62	15	26	33	6	4.5	7	3	1	○
M7 × 1	P2	SPQ7.0M--L	2.5P	70	19	-	36	6.2	5	8	3	2	△
M8 × 1.25	P2	SPQ8.0N--L	2.5P	70	19	-	36	6.2	5	8	3	2	○
M8 × 1	P2	SPQ8.0M--L	2.5P	70	19	-	36	6.2	5	8	3	2	△
M10 × 1.5	P2	SPQ010O--L	2.5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P2	SPQ010N--L	2.5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1	P2	SPQ010M--L	2.5P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P2	SPQ012P--L	2.5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P2	SPQ012O--L	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P2	SPQ012N--L	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1	P2	SPQ012M--L	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M14 × 2	P2	SPQ014Q--L	2.5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.5	P2	SPQ014O--L	2.5P	88	26	-	45	10.5	8	11	3	2	△
M16 × 2	P2	SPQ016Q--L	2.5P	95	26	-	48	12.5	10	13	3	2	○
M16 × 1.5	P2	SPQ016O--L	2.5P	95	26	-	48	12.5	10	13	3	2	△
M18 × 2.5	P3	SPR018R--L	2.5P	100	33	-	51	14	11	14	4	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SP LH Spiral Fluted Taps for Left Hand Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M18 × 1.5	P2	SPQ0180--L	2.5P	100	33	-	51	14	11	14	4	2	△
M20 × 2.5	P3	SPR020R--L	2.5P	105	33	-	50	15	12	15	4	3	○
M20 × 1.5	P3	SPR0200--L	2.5P	105	33	-	50	15	12	15	4	3	△
M22 × 2.5	P3	SPR022R--L	2.5P	115	33	-	55	17	13	16	4	3	△
M22 × 1.5	P3	SPR0220--L	2.5P	115	33	-	55	17	13	16	4	3	△
M24 × 3	P3	SPR024S--L	2.5P	120	39	-	55	19	15	18	4	3	○
M24 × 1.5	P3	SPR0240--L	2.5P	120	39	-	55	19	15	18	4	3	△
M27 × 3	P3	SPR027S--L	2.5P	130	39	-	60	20	15	18	4	3	△
M30 × 3.5	P4	SPS030T--L	2.5P	135	46	-	62	23	17	20	4	3	△
M30 × 2	P3	SPR030Q--L	2.5P	135	46	-	62	23	17	20	4	3	△
M30 × 1.5	P3	SPR0300--L	2.5P	135	46	-	62	23	17	20	4	3	△
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4-20UNC	P2	SPQU04N--L	2.5P	62	15	26	33	6	4.5	7	3	1	△
1/4-28UNF	P2	SPQU04K--L	2.5P	62	15	26	33	6	4.5	7	3	1	△
5/16-18UNC	P2	SPQU050--L	2.5P	70	19	-	36	6.2	5	8	3	2	△
5/16-24UNF	P2	SPQU05M--L	2.5P	70	19	-	36	6.2	5	8	3	2	△
3/8-16UNC	P2	SPQU06P--L	2.5P	75	23	-	38	7	5.5	8	3	2	△
3/8-24UNF	P2	SPQU06M--L	2.5P	75	23	-	38	7	5.5	8	3	2	△
7/16-14UNC	P3	SPRU07Q--L	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
7/16-20UNF	P2	SPQU07N--L	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
1/2-13UNC	P3	SPRU08R--L	2.5P	88	26	-	45	10.5	8	11	3	2	△
1/2-20UNF	P2	SPQU08N--L	2.5P	88	26	-	45	10.5	8	11	3	2	△
For Whitworth Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4W20	P2	SPQW04N--L	2.5P	62	15	26	33	6	4.5	7	3	1	△
5/16W18	P2	SPQW050--L	2.5P	70	19	-	36	6.2	5	8	3	2	△
3/8W16	P2	SPQW06P--L	2.5P	75	23	-	38	7	5.5	8	3	2	△
7/16W14	P3	SPRW07Q--L	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
1/2W12	P3	SPRW08S--L	2.5P	88	26	-	45	10.5	8	11	3	2	△
5/8W11	P3	SPRW10U--L	2.5P	95	26	-	48	12.5	10	13	3	2	△
3/4W10	P3	SPRW12V--L	2.5P	105	33	-	50	15	12	15	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP V

Spiral Fluted Taps, Coated

Specification

HSS Coating

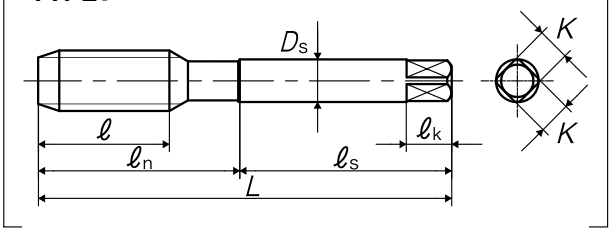
■Adopting the optimum coating for the tapping condition.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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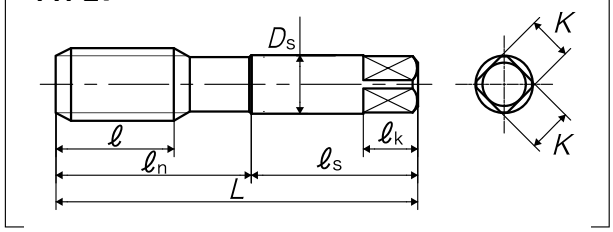


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M14 × 2	P2	VSPQ014Q	2.5P	88	26	-	45	10.5	8	11	3	1	○
M16 × 2	P2	VSPQ016Q	2.5P	95	26	-	48	12.5	10	13	3	1	○
M20 × 2.5	P3	VSPR020R	2.5P	105	33	-	50	15	12	15	4	2	○

AU+SP

Plus Series Spiral Fluted Taps, Optimum Coating for the tapping

Specification

HSS | Coating | <2D

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

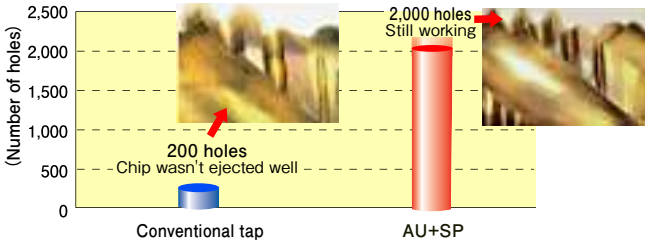
Stainless steels ステンレス鋼	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~10 (m/min)	20~30 (m/min)	20~30 (m/min)

For icon explanation, refer to P.24

Tapping data

Tapping condition (M6×1)

Work material	SCM440
Tapping speed	10m/min
Hole diameter	ϕ5.0
Tapping length	9mm, blind hole
Machine	Machining center vertical type (Floating holder used)
Tapping fluid	Water soluble cutting oil (Chlorine-free,20 fold dilution)



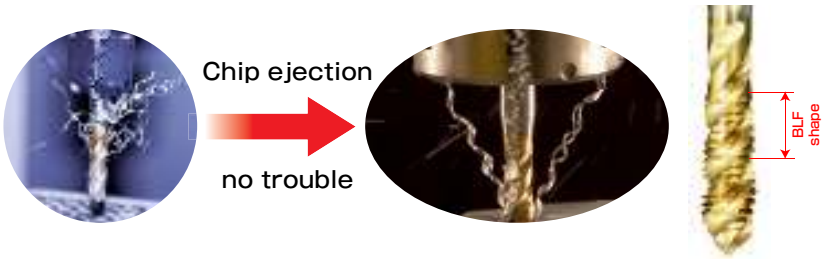
Product features

BLF (thread portion of special design) + proprietary flute design : Great improvement in chip ejection efficiency.

●AU+SP has a special thread portion design with thread crests ground off and a few full threads after chamfer left unchanged.

●Effects of AU+SP are as follows:

・Prevention of chipping trouble at full thread portion
・Reduction of tapping torque and tapping friction
・Good chip ejection



Change of marking position from shank into square portion

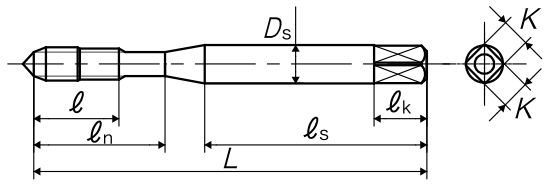
Laser marking can roughen the shank surface.
In order to keep high accuracy of shank circularity and diameter, marking has been transferred from shank to square portion.

For wide range of materials

Adopting the flute of special design which enables the coating (features: wear resistance, heat resistance, and welding resistance) to work most efficiently, AU+SP is suitable for the wide range of materials and is well applicable under water soluble oil.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

TYPE: 1



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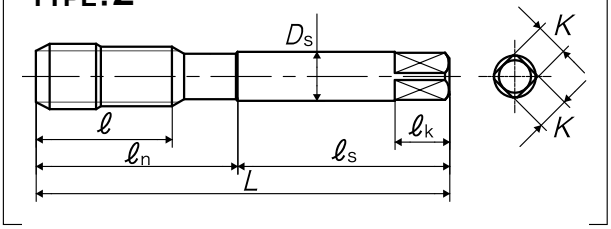


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P2	VSAPQ2.0E	2.5P	42	7.2	12	27	3	2.5	5	2	1	○
M2.5 × 0.45	P2	VSAPQ2.5F	2.5P	46	8.1	14	29	3	2.5	5	2	1	○
M2.6 × 0.45	P2	VSAPQ2.6F	2.5P	46	8.1	14	29	3	2.5	5	2	1	○
M3 × 0.5	P2	VSAPQ3.0G	2.5P	46	9	14	26	4	3.2	6	3	1	◎
M4 × 0.7	P2	VSAPQ4.0I	2.5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	P2	VSAPQ5.0K	2.5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	P2	VSAPQ6.0M	2.5P	62	15	26	33	6	4.5	7	3	1	◎
M8 × 1.25	P3	VSAPR8.0N	2.5P	70	19	-	36	6.2	5	8	3	2	◎
M8 × 1	P3	VSAPR8.0M	2.5P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P3	VSAPR010O	2.5P	75	23	-	38	7	5.5	8	4	2	◎
M10 × 1.25	P3	VSAPR010N	2.5P	75	23	-	38	7	5.5	8	4	2	◎
M10 × 1	P3	VSAPR010M	2.5P	75	23	-	38	7	5.5	8	4	2	○
M12 × 1.75	P3	VSAPR012P	2.5P	82	26	-	42	8.5	6.5	9	4	2	◎
M12 × 1.5	P3	VSAPR012O	2.5P	82	26	-	42	8.5	6.5	9	4	2	◎
M12 × 1.25	P3	VSAPR012N	2.5P	82	26	-	42	8.5	6.5	9	4	2	◎

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

AUXSP

X Series Spiral Fluted Taps, Coated

Specification

HSS | Coating | Synchronized | <2D

■Applying the blanks of high toughness and high accuracy, AUXSP derives the maximum performance from high facility machining centers and high precision toolings. Special thread portion design with thread crests ground off and a few full threads left unchanged. Combination of this design and the special flute geometry maintains good chip ejection and reduces friction. The Spiral Fluted Tap is adopting the optimum coating for the tapping condition.

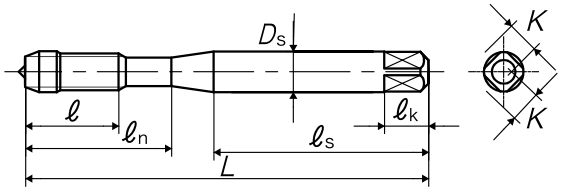
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)

Stainless steels ステンレス鋼	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
10~15 (m/min)	20~30 (m/min)	20~30 (m/min)

For icon explanation, refer to P.24
Use with dedicated toolings is recommended.

TYPE: 1



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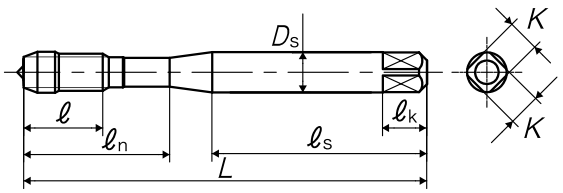

Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	VSAXQ6.0M	2.5P	80	15	30	45	6	4.9	8	3	1	○
M8 × 1.25	P3	VSAXR8.0N	2.5P	90	19	35	48	8	6.2	9	3	1	○
M8 × 1	P3	VSAXR8.0M	2.5P	90	15	35	48	8	6.2	9	3	2	○
M10 × 1.5	P3	VSAXR010O	2.5P	100	23	39	53	10	8	11	4	1	○
M10 × 1.25	P3	VSAXR010N	2.5P	100	19	39	53	10	8	11	4	2	○
M10 × 1	P3	VSAXR010M	2.5P	100	15	39	53	10	8	11	4	2	○
M12 × 1.75	P3	VSAXR012P	2.5P	110	26	45	56	12	9	12	4	1	○
M12 × 1.5	P3	VSAXR012O	2.5P	110	23	45	56	12	9	12	4	2	○
M12 × 1.25	P3	VSAXR012N	2.5P	110	19	45	56	12	9	12	4	2	○

Note:
- Please use tapping holders suitable for the shank diameter and square of DIN371 for M6～M10 and those of M16 (DIN376) for M12.
- Overall length, shank diameter and square of metric coarse series are adopted for those of metric fine series.

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-SP

Long Shank Spiral Fluted Taps

Specification

HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

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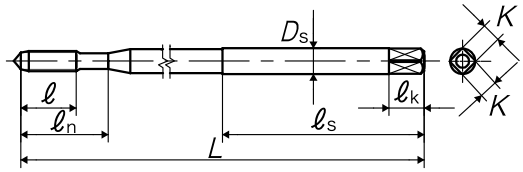

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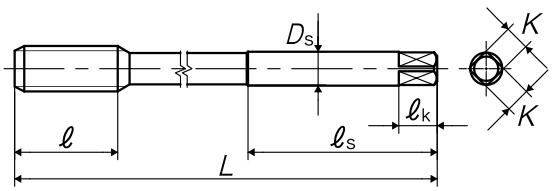

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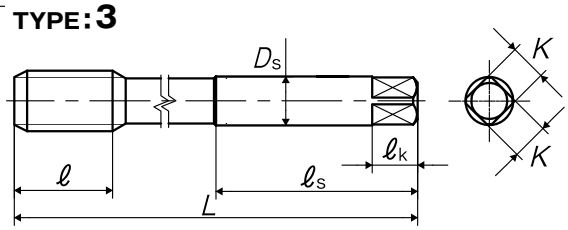


Oversize

Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P1	SPP2.0EL07	2.5P	70	7.2	12	55	3	2.5	5	2	1	△
		SPP2.0EL10		100			85						
M2.3 × 0.4	P1	SPP2.3EL07	2.5P	70	7.2	12	55	3	2.5	5	2	1	△
		SPP2.3EL10		100			85						
M2.5 × 0.45	P1	SPP2.5FL07	2.5P	70	8.1	14	53	3	2.5	5	2	1	△
		SPP2.5FL10		100			83						
M2.6 × 0.45	P1	SPP2.6FL07	2.5P	70	8.1	14	53	3	2.5	5	2	1	△
		SPP2.6FL10		100			83						
M3 × 0.5	P1	SPP3.0GL07	2.5P	70	9	14	50	4	3.2	6	3	1	△
		SPP3.0GL10		100			40						○
		SPP3.0GL12		120									△
		SPP3.0GL15		150									◎
	P2	SPQ3.0GL10		100									
		SPQ3.0GL15		150									△
	P3	SPR3.0GL10		100									
		SPR3.0GL15		150									
M4 × 0.7	P2	SPQ4.0IL07	2.5P	70	11	17	47	5	4	7	3	1	
		SPQ4.0IL10		100			40						△
		SPQ4.0IL12		120									
		SPQ4.0IL15		150									◎
	P3	SPR4.0IL10		100									△
		SPR4.0IL15		150									

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

LS-SP Long Shank Spiral Fluted Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M5 × 0.8	P2	SPQ5.0KL10	2.5P	100	13	22	40	5.5	4.5	7	3	1	◎
		SPQ5.0KL12		120									
		SPQ5.0KL15		150									
	P3	SPR5.0KL10		100									△
		SPR5.0KL15		150									
M6 × 1	P2	SPQ6.0ML10	2.5P	100	15	26	40	6	4.5	7	3	1	◎
		SPQ6.0ML12		120									△
		SPQ6.0ML15		150									◎
		SPQ6.0ML20		200									
	P3	SPR6.0ML10		100									△
		SPR6.0ML15		150									
M6 × 0.75	P2	SPQ6.0JL10	2.5P	100	15	26	40	6	4.5	7	3	1	△
M8 × 1.25	P2	SPQ8.0NL10	2.5P	100	19	-	50	6.2	5	8	3	2	◎
		SPQ8.0NL12		120									
		SPQ8.0NL15		150									
		SPQ8.0NL20		200									
	P3	SPR8.0NL10		100									△
		SPR8.0NL15		150									
M8 × 1	P2	SPQ8.0ML10	2.5P	100	19	-	50	6.2	5	8	3	2	△
		SPQ8.0ML15		150									
M10 × 1.5	P2	SPQ0100L10	2.5P	100	23	-	50	7	5.5	8	3	2	◎
		SPQ0100L12		120									
		SPQ0100L15		150									
		SPQ0100L20		200									
	P3	SPR0100L10		100									△
		SPR0100L15		150									
M10 × 1.25	P2	SPQ010NL10	2.5P	100	23	-	50	7	5.5	8	3	2	○
		SPQ010NL12		120									
		SPQ010NL15		150									
		SPQ010NL20		200									
M10 × 1	P2	SPQ010ML10	2.5P	100	23	-	50	7	5.5	8	3	2	△
		SPQ010ML15		150									
M12 × 1.75	P2	SPQ012PL10	2.5P	100	26	-	50	8.5	6.5	9	3	2	△
		SPQ012PL12		120									◎
		SPQ012PL15		150									△
		SPQ012PL20		200									◎
	P3	SPR012PL15		150									△
M12 × 1.5	P2	SPQ0120L10	2.5P	100	26	-	50	8.5	6.5	9	3	2	△
		SPQ0120L15		150									
		SPQ0120L20		200									
M12 × 1.25	P2	SPQ012NL10	2.5P	100	26	-	50	8.5	6.5	9	3	2	△
		SPQ012NL12		120									○
		SPQ012NL15		150									△
		SPQ012NL20		200									○
M12 × 1	P2	SPQ012ML12	2.5P	120	26	-	50	8.5	6.5	9	3	2	△
		SPQ012ML15		150									
M14 × 2	P2	SPQ014QL12	2.5P	120	26	-	60	10.5	8	11	3	2	△
		SPQ014QL15		150									○
		SPQ014QL20		200									
M14 × 1.5	P2	SPQ0140L12	2.5P	120	26	-	60	10.5	8	11	3	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-SP Long Shank Spiral Fluted Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M14 × 1.5	P2	SPQ0140L15	2.5P	150	26	-	60	10.5	8	11	3	2	△
		SPQ0140L20		200									○
M16 × 2	P2	SPQ016QL15	2.5P	150	26	-	60	12.5	10	13	3	2	◎
		SPQ016QL20		200									△
		SPQ016QL25		250									◎
M16 × 1.5	P2	SPQ0160L15	2.5P	150	26	-	60	12.5	10	13	3	2	○
		SPQ0160L20		200									
M18 × 2.5	P3	SPR018RL15	2.5P	150	33	-	70	14	11	14	4	2	○
		SPR018RL20		200									△
		SPR018RL25		250									
M18 × 1.5	P2	SPQ0180L15	2.5P	150	33	-	70	14	11	14	4	2	○
		SPQ0180L20		200									
M20 × 2.5	P3	SPR020RL15	2.5P	150	33	-	70	15	12	15	4	3	◎
		SPR020RL20		200									△
		SPR020RL25		250									◎
M20 × 1.5	P3	SPR0200L15	2.5P	150	33	-	70	15	12	15	4	3	○
		SPR0200L20		200									
M22 × 2.5	P3	SPR022RL15	2.5P	150	33	-	70	17	13	16	4	3	△
		SPR022RL20		200									
M22 × 1.5	P3	SPR0220L15	2.5P	150	33	-	70	17	13	16	4	3	○
		SPR0220L20		200									
M24 × 3	P3	SPR024SL15	2.5P	150	39	-	80	19	15	18	4	3	○
		SPR024SL20		200									△
		SPR024SL25		250									◎
M24 × 2	P3	SPR024QL20	2.5P	200	39	-	80	19	15	18	4	3	△
M24 × 1.5	P3	SPR0240L15	2.5P	150	39	-	80	19	15	18	4	3	○
		SPR0240L20		200									
M27 × 3	P3	SPR027SL20	2.5P	200	39	-	80	20	15	18	4	3	△
		SPR027SL25		250									
M27 × 2	P3	SPR027QL20	2.5P	200	39	-	80	20	15	18	4	3	△
M27 × 1.5	P3	SPR0270L20	2.5P	200	39	-	80	20	15	18	4	3	△
		SPR0270L25		250									
M30 × 3.5	P4	SPS030TL20	2.5P	200	46	-	80	23	17	20	4	3	△
		SPS030TL25		250									
		SPS030TL30		300									
M30 × 1.5	P3	SPR0300L20	2.5P	200	46	-	80	23	17	20	4	3	△
		SPR0300L25		250									

For Unified Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4-20UNC	P2	SPQU04NL10	2.5P	100	15	26	40	6	4.5	7	3	1	△
		SPQU04NL15		150									
1/4-28UNF	P2	SPQU04KL10	2.5P	100	15	26	40	6	4.5	7	3	1	△
		SPQU04KL15		150									
5/16-18UNC	P2	SPQU050L10	2.5P	100	19	-	50	6.2	5	8	3	2	△
		SPQU050L15		150									
5/16-24UNF	P2	SPQU05ML10	2.5P	100	19	-	50	6.2	5	8	3	2	△
		SPQU05ML15		150									
3/8-16UNC	P2	SPQU06PL10	2.5P	100	23	-	50	7	5.5	8	3	2	△
		SPQU06PL15		150									
		SPQU06PL20		200									

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-SP Long Shank Spiral Fluted Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
3/8-24UNF	P2	SPQU06ML10	2.5P	100	23	-	50	7	5.5	8	3	2	△
		SPQU06ML15		150									
7/16-14UNC	P3	SPRU07QL15	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
7/16-20UNF	P2	SPQU07NL15	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
1/2-13UNC	P3	SPRU08RL15	2.5P	150	26	-	60	10.5	8	11	3	2	△
		SPRU08RL20		200									
1/2-20UNF	P2	SPQU08NL15	2.5P	150	26	-	60	10.5	8	11	3	2	△
5/8-11UNC	P3	SPRU10UL15	2.5P	150	26	-	60	12.5	10	13	3	2	△
		SPRU10UL20		200									
5/8-18UNF	P2	SPQU10OL15	2.5P	150	26	-	60	12.5	10	13	3	2	△
3/4-10UNC	P3	SPRU12VL15	2.5P	150	33	-	70	15	12	15	4	3	△
		SPRU12VL20		200									
3/4-16UNF	P3	SPRU12PL15	2.5P	150	33	-	70	15	12	15	4	3	△
7/8-9UNC	P3	SPRU14WL15	2.5P	150	33	-	70	17	13	16	4	3	△
		SPRU14WL20		200									
1 -8UNC	P3	SPRU16XL15	2.5P	150	39	-	80	19	15	18	4	3	△
		SPRU16XL20		200									
For Whitworth Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4W20	P2	SPQW04NL10	2.5P	100	15	26	40	6	4.5	7	3	1	△
		SPQW04NL15		150									
5/16W18	P2	SPQW05OL10	2.5P	100	19	-	50	6.2	5	8	3	2	△
		SPQW05OL15		150									
3/8W16	P2	SPQW06PL10	2.5P	100	23	-	50	7	5.5	8	3	2	△
		SPQW06PL15		150									
		SPQW06PL20		200									
7/16W14	P3	SPRW07QL15	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
1/2W12	P3	SPRW08SL15	2.5P	150	26	-	60	10.5	8	11	3	2	△
		SPRW08SL20		200									
5/8W11	P3	SPRW10UL15	2.5P	150	26	-	60	12.5	10	13	3	2	△
		SPRW10UL20		200									
3/4W10	P3	SPRW12VL15	2.5P	150	33	-	70	15	12	15	4	3	△
		SPRW12VL20		200									
7/8W9	P3	SPRW14WL15	2.5P	150	33	-	70	17	13	16	4	3	△
		SPRW14WL20		200									
1 W8	P3	SPRW16XL15	2.5P	150	39	-	80	19	15	18	4	3	△
		SPRW16XL20		200									

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-SP LH

Long Shank Spiral Fluted Taps for Left Hand Threads

Specification

HSS

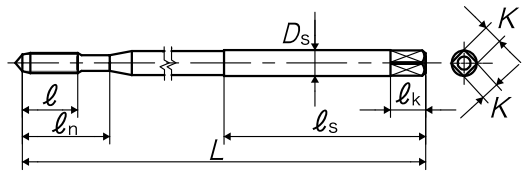
LH Left hand

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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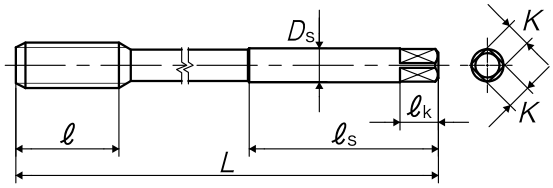


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P1	SPP3.0GL10L	2.5P	100	9	14	40	4	3.2	6	3	1	△
M4 × 0.7	P2	SPQ4.0IL10L	2.5P	100	11	17	40	5	4	7	3	1	△
M5 × 0.8	P2	SPQ5.0KL10L	2.5P	100	13	22	40	5.5	4.5	7	3	1	△
M6 × 1	P2	SPQ6.0ML10L	2.5P	100	15	26	40	6	4.5	7	3	1	△
		SPQ6.0ML15L		150									
M8 × 1.25	P2	SPQ8.0NL15-L	2.5P	150	19	-	50	6.2	5	8	3	2	△
M10 × 1.5	P2	SPQ010OL15-L	2.5P	150	23	-	50	7	5.5	8	3	2	△
M10 × 1.25	P2	SPQ010NL15-L	2.5P	150	23	-	50	7	5.5	8	3	2	△
M12 × 1.75	P2	SPQ012PL15-L	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
M12 × 1.5	P2	SPQ012OL15-L	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
M12 × 1.25	P2	SPQ012NL15-L	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
M14 × 2	P2	SPQ014QL15-L	2.5P	150	26	-	60	10.5	8	11	3	2	△
M14 × 1.5	P2	SPQ014OL15-L	2.5P	150	26	-	60	10.5	8	11	3	2	△
M16 × 2	P2	SPQ016QL15-L	2.5P	150	26	-	60	12.5	10	13	3	2	△
M16 × 1.5	P2	SPQ016OL15-L	2.5P	150	26	-	60	12.5	10	13	3	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-SP V

Long Shank Spiral Fluted Taps, Coated

Specification

HSS Coating

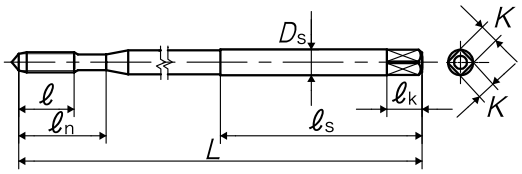
■Adopting the optimum coating for the tapping condition.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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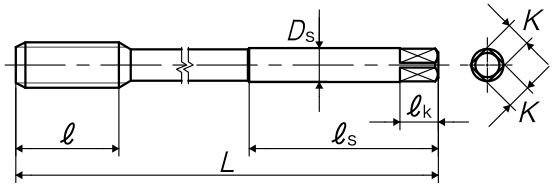


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P1	VSPP3.0GL10	2.5P	100	9	14	40	4	3.2	6	3	1	○
M4 × 0.7	P2	VSPQ4.0IL10	2.5P	100	11	17	40	5	4	7	3	1	○
M5 × 0.8	P2	VSPQ5.0KL10	2.5P	100	13	22	40	5.5	4.5	7	3	1	○
M6 × 1	P2	VSPQ6.0ML10	2.5P	100	15	26	40	6	4.5	7	3	1	○
		VSPQ6.0ML15		150									△
M8 × 1.25	P2	VSPQ8.0NL10	2.5P	100	19	-	50	6.2	5	8	3	2	○
		VSPQ8.0NL15		150									
M10 × 1.5	P2	VSPQ010OL15	2.5P	150	23	-	50	7	5.5	8	3	2	○
M10 × 1.25	P2	VSPQ010NL15	2.5P	150	23	-	50	7	5.5	8	3	2	△
M12 × 1.75	P2	VSPQ012PL15	2.5P	150	26	-	50	8.5	6.5	9	3	2	○
M12 × 1.5	P2	VSPQ012OL15	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
M12 × 1.25	P2	VSPQ012NL15	2.5P	150	26	-	50	8.5	6.5	9	3	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-SP-K

Long Shank Spiral Fluted Taps with Neck

Specification

HSS

■Having long neck design, LS-SP-K is the long shank spiral fluted tap enabling the tapping in rather deep holes.

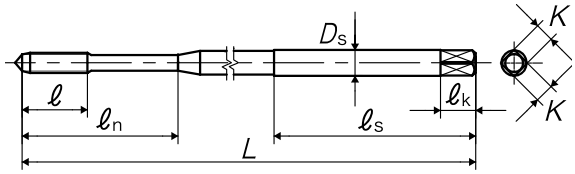
Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

High carbon steels 高炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P1	-	2.5P	100	9	28	40	4	3.2	6	3	1	△
M4 × 0.7	P2	-	2.5P	100	11	31	40	5	4	7	3	1	△
M5 × 0.8	P2	-	2.5P	100	13	38	40	5.5	4.5	7	3	1	△
M6 × 1	P2	-	2.5P	100	15	45	40	6	4.5	7	3	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SU+SP/SU-SP

Spiral Fluted Taps for Stainless Steels

Specification

SU+SP	～M6 (coarse thread)
SU−SP	～M1.7, M8～, all U, all W

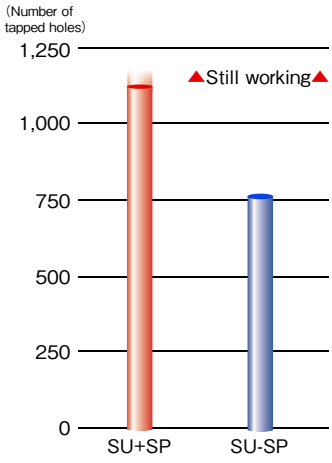
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

Product features

- Most suitable for stainless steels, sticky and tending to work-harden, as well as chrome steels and molybdenum steels, blind hole use.
- Reduction of cutting load on each cutting edge due to optimum design of thread portion.
- Decrease of cutting resistance and increase of tool life.
- Improvement of chip ejection and good thread finish.
- Increase of tool life due to the improvement of tap strength.
- Suitable for both rigid tapping machine and non-rigid tapping machine.

Comparison of tool life

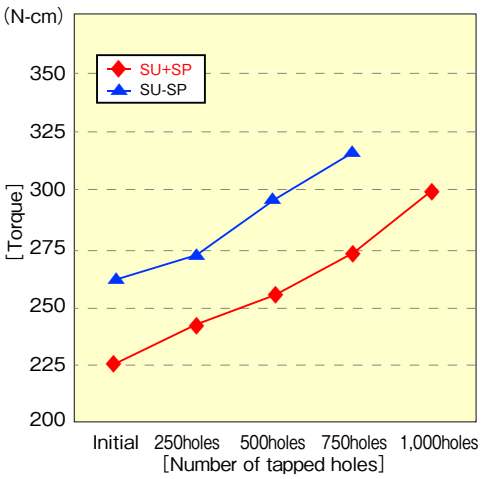


Tapping data

Tapping condition (M6×1)

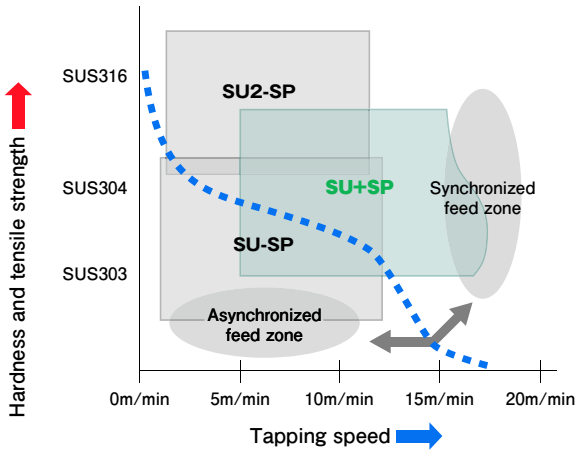
Work material	SUS304(90HRB)
Tapping speed	8m/min
Hole size	ϕ5.0
Tapping length	9mm, blind hole
Machine	Vertical machining center (with rigid feed)
Tapping fluid	Insoluble oil without chlorine

Transition of tapping torque



Products System

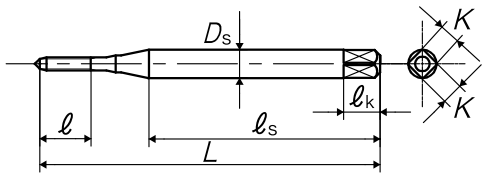
System table of taps for stainless steels, blind hole use



Think threads with YAMAWA
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

TYPE: 1



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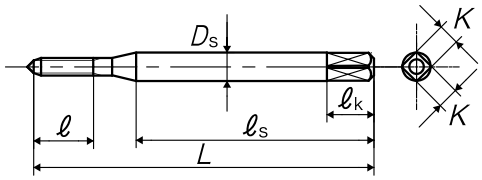

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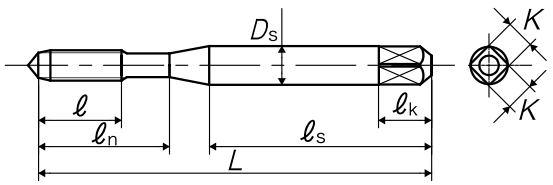

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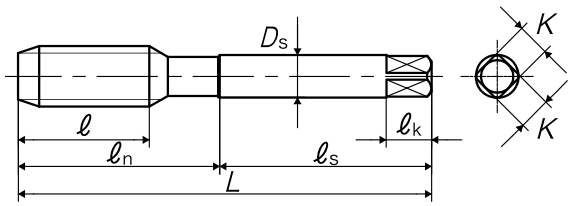

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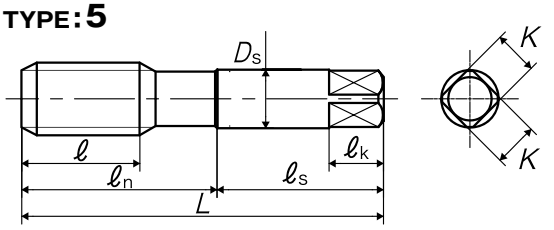


Oversize

Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.4 × 0.3	P1	SUMP1.4C	2.5P	36	5.4	-	24	3	2.5	5	2	1	△
M1.7 × 0.35	P1	SUMP1.7D	2.5P	36	6.3	-	24	3	2.5	5	2	2	△
	P2	SUMQ1.7D											
M2 × 0.4	P1	SUPP2.0E	2.5P	42	7.2	12	27	3	2.5	5	2	3	◎
	P2	SUPQ2.0E											△
	P3	SUPR2.0E											
M2.3 × 0.4	P1	SUPP2.3E	2.5P	42	7.2	12	27	3	2.5	5	2	3	△
	P2	SUPQ2.3E											
	P3	SUPR2.3E											
M2.5 × 0.45	P1	SUPP2.5F	2.5P	46	8.1	14	29	3	2.5	5	2	3	○
	P2	SUPQ2.5F											△
	P3	SUPR2.5F											
M2.6 × 0.45	P1	SUPP2.6F	2.5P	46	8.1	14	29	3	2.5	5	2	3	○
	P2	SUPQ2.6F											△
	P3	SUPR2.6F											
M3 × 0.5	P1	SUPP3.0G	2.5P	46	9	14	26	4	3.2	6	3	3	◎
	P2	SUPQ3.0G											△
	P3	SUPR3.0G											
3M0.6	P1	SUPP3.0H	2.5P	46	9	14	26	4	3.2	6	3	3	△
M3.5 × 0.6	P1	SUPP3.5H	2.5P	52	11	16	29	5	4	7	3	3	△
	P3	SUPR3.5H											
M4 × 0.7	P2	SUPQ4.0I	2.5P	52	11	17	29	5	4	7	3	3	◎
	P3	SUPR4.0I											△
	P4	SUPS4.0I											

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Think threads with YAMAWA

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
4M0.75	P2	SUPQ4.0J	2.5P	52	11	17	29	5	4	7	3	3	△
M5 × 0.8	P2	SUPQ5.0K	2.5P	60	13	22	33	5.5	4.5	7	3	3	◎
	P3	SUPR5.0K											△
	P4	SUPS5.0K											
5M0.9	P2	SUPQ5.0L	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
M6 × 1	P2	SUPQ6.0M	2.5P	62	15	26	33	6	4.5	7	3	3	◎
	P3	SUPR6.0M											△
	P4	SUPS6.0M											
M6 × 0.75	P2	SUMQ6.0J	2.5P	62	15	26	33	6	4.5	7	3	3	△
M8 × 1.25	P2	SUMQ8.0N	2.5P	70	19	-	36	6.2	5	8	3	4	◎
	P3	SUMR8.0N											△
	P4	SUMS8.0N											
M8 × 1	P2	SUMQ8.0M	2.5P	70	19	-	36	6.2	5	8	3	4	△
M8 × 0.75	P2	SUMQ8.0J	2.5P	70	19	-	36	6.2	5	8	3	4	△
M10 × 1.5	P2	SUMQ0100	2.5P	75	23	-	38	7	5.5	8	3	4	◎
	P3	SUMR0100											△
	P4	SUMS0100											
M10 × 1.25	P2	SUMQ010N	2.5P	75	23	-	38	7	5.5	8	3	4	○
	P3	SUMR010N											△
	P4	SUMS010N											
M10 × 1	P2	SUMQ010M	2.5P	75	23	-	38	7	5.5	8	3	4	△
	P4	SUMS010M											
M12 × 1.75	P2	SUMQ012P	2.5P	82	26	-	42	8.5	6.5	9	3	4	◎
	P3	SUMR012P											△
	P4	SUMS012P											
M12 × 1.5	P2	SUMQ012O	2.5P	82	26	-	42	8.5	6.5	9	3	4	○
	P3	SUMR012O											△
	P4	SUMS012O											
M12 × 1.25	P2	SUMQ012N	2.5P	82	26	-	42	8.5	6.5	9	3	4	○
	P3	SUMR012N											△
M12 × 1	P2	SUMQ012M	2.5P	82	26	-	42	8.5	6.5	9	3	4	△
M14 × 2	P2	SUMQ014Q	2.5P	88	26	-	45	10.5	8	11	3	4	○
	P3	SUMR014Q											△
	P4	SUMS014Q											
M14 × 1.5	P2	SUMQ0140	2.5P	88	26	-	45	10.5	8	11	3	4	○
	P4	SUMS0140											△
M14 × 1	P2	SUMQ014M	2.5P	88	26	-	45	10.5	8	11	3	4	△
M16 × 2	P2	SUMQ016Q	2.5P	95	26	-	48	12.5	10	13	3	4	◎
	P3	SUMR016Q											△
	P4	SUMS016Q											
M16 × 1.5	P2	SUMQ0160	2.5P	95	26	-	48	12.5	10	13	3	4	○
	P4	SUMS0160											△
M18 × 2.5	P3	SUMR018R	2.5P	100	33	-	51	14	11	14	4	4	○
	P4	SUMS018R											△
M18 × 1.5	P2	SUMQ0180	2.5P	100	33	-	51	14	11	14	4	4	○
	P4	SUMS0180											△
M20 × 2.5	P3	SUMR020R	2.5P	105	33	-	50	15	12	15	4	5	◎
	P4	SUMS020R											△
M20 × 1.5	P3	SUMR0200	2.5P	105	33	-	50	15	12	15	4	5	○
	P4	SUMS0200											△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M22 × 2.5	P3	SUMR022R	2.5P	115	33	-	55	17	13	16	4	5	○
	P4	SUMS022R											△
	P5	SUMT022R											
M22 × 1.5	P3	SUMR022O	2.5P	115	33	-	55	17	13	16	4	5	△
	P4	SUMS022O											
M24 × 3	P3	SUMR024S	2.5P	120	39	-	55	19	15	18	4	5	○
	P4	SUMS024S											△
	P5	SUMT024S											
M24 × 1.5	P3	SUMR024O	2.5P	120	39	-	55	19	15	18	4	5	△
	P4	SUMS024O											
M27 × 3	P3	SUMR027S	2.5P	130	39	-	60	20	15	18	4	5	△
M27 × 1.5	P3	SUMR027O	2.5P	130	39	-	60	20	15	18	4	5	△
M30 × 3.5	P4	SUMS030T	2.5P	135	46	-	62	23	17	20	4	5	△
M30 × 1.5	P3	SUMR030O	2.5P	135	46	-	62	23	17	20	4	5	△
M33 × 3.5	P4	SUMS033T	2.5P	145	46	-	67	25	19	22	4	5	△
M36 × 4	P4	SUMS036U	2.5P	155	52	-	71	28	21	24	4	5	△
M39 × 4	P4	SUMS039U	2.5P	165	52	-	76	30	23	26	4	5	△
M42 × 4.5	P4	SUMS042V	2.5P	175	59	-	81	32	26	30	4	5	△
M42 × 1.5	P3	SUMR042O	2.5P	175	27	-	81	32	26	30	4	5	△
M45 × 4.5	P4	SUMS045V	2.5P	180	59	-	83	35	26	30	4	5	△

For Unified Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
No.2-56UNC	P1	SUMPUN2E	2.5P	42	8.1	12	27	3	2.5	5	2	3	△
No.3-48UNC	P1	SUMPUN3F	2.5P	46	8.1	14	29	3	2.5	5	2	3	△
No.4-40UNC	P1	SUMPUN4H	2.5P	46	9	14	26	4	3.2	6	2	3	△
No.4-48UNF	P1	SUMPUN4F	2.5P	46	9	14	26	4	3.2	6	2	3	△
No.5-40UNC	P1	SUMPUN5H	2.5P	52	11	16	29	5	4	7	3	3	△
No.5-44UNF	P1	SUMPUN5G	2.5P	52	11	16	29	5	4	7	3	3	△
No.6-32UNC	P2	SUMQUN6J	2.5P	52	11	16	29	5	4	7	3	3	△
No.6-40UNF	P1	SUMPUN6H	2.5P	52	11	16	29	5	4	7	3	3	△
No.8-32UNC	P2	SUMQUN8J	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
No.8-36UNF	P2	SUMQUN8I	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
No.10-24UNC	P2	SUMQUNAM	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
No.10-32UNF	P2	SUMQUNAJ	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
1/4-20UNC	P2	SUMQU04N	2.5P	62	15	26	33	6	4.5	7	3	3	△
1/4-28UNF	P2	SUMQU04K	2.5P	62	15	26	33	6	4.5	7	3	3	△
5/16-18UNC	P2	SUMQU05O	2.5P	70	19	-	36	6.2	5	8	3	4	△
5/16-24UNF	P2	SUMQU05M	2.5P	70	19	-	36	6.2	5	8	3	4	△
3/8-16UNC	P2	SUMQU06P	2.5P	75	23	-	38	7	5.5	8	3	4	△
3/8-24UNF	P2	SUMQU06M	2.5P	75	23	-	38	7	5.5	8	3	4	△
7/16-14UNC	P3	SUMRU07Q	2.5P	82	26	-	42	8.5	6.5	9	3	4	△
7/16-20UNF	P2	SUMQU07N	2.5P	82	26	-	42	8.5	6.5	9	3	4	△
1/2-13UNC	P3	SUMRU08R	2.5P	88	26	-	45	10.5	8	11	3	4	△
1/2-20UNF	P2	SUMQU08N	2.5P	88	26	-	45	10.5	8	11	3	4	△
5/8-11UNC	P3	SUMRU10U	2.5P	95	26	-	48	12.5	10	13	3	4	△
5/8-18UNF	P2	SUMQU10O	2.5P	95	26	-	48	12.5	10	13	3	4	△
3/4-10UNC	P3	SUMRU12V	2.5P	105	33	-	50	15	12	15	4	5	△
3/4-16UNF	P3	SUMRU12P	2.5P	105	33	-	50	15	12	15	4	5	△
7/8-9UNC	P3	SUMRU14W	2.5P	115	33	-	55	17	13	16	4	5	△
7/8-14UNF	P3	SUMRU14Q	2.5P	115	33	-	55	17	13	16	4	5	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1 -8UNC	P3	SUMRU16X	2.5P	125	39	-	58	19	15	18	4	5	△
1 -12UNF	P3	SUMRU16S	2.5P	125	39	-	58	19	15	18	4	5	△
For Whitworth Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
3/16W24	P2	SUMQW03M	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
1/4W20	P2	SUMQW04N	2.5P	62	15	26	33	6	4.5	7	3	3	△
5/16W18	P2	SUMQW05O	2.5P	70	19	-	36	6.2	5	8	3	4	△
3/8W16	P2	SUMQW06P	2.5P	75	23	-	38	7	5.5	8	3	4	△
7/16W14	P3	SUMRW07Q	2.5P	82	26	-	42	8.5	6.5	9	3	4	△
1/2W12	P3	SUMRW08S	2.5P	88	26	-	45	10.5	8	11	3	4	△
9/16W12	P3	SUMRW09S	2.5P	95	26	-	48	12.5	10	13	3	4	△
5/8W11	P3	SUMRW10U	2.5P	95	26	-	48	12.5	10	13	3	4	△
3/4W10	P3	SUMRW12V	2.5P	105	33	-	50	15	12	15	4	5	△
7/8W9	P3	SUMRW14W	2.5P	115	33	-	55	17	13	16	4	5	△
1 W8	P3	SUMRW16X	2.5P	125	39	-	58	19	15	18	4	5	△

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SUXSP

X Series Spiral Fluted Taps for Stainless Steels

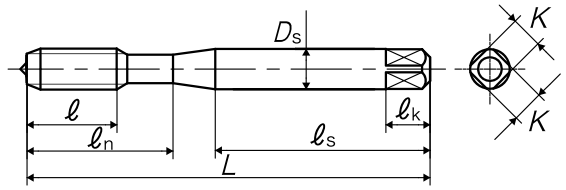
Specification

■Applying the blanks of high toughness and high accuracy, SUXSP derives the maximum performance from high facility machining centers and high precision toolings. Spiral fluted taps for stainless steels.

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE: 1



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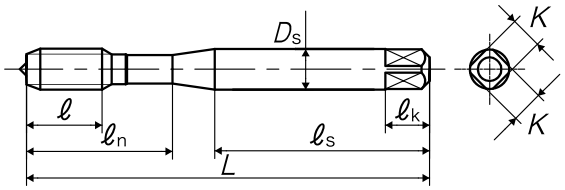

Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	SUXQ6.0M	2.5P	80	15	30	45	6	4.9	8	3	1	○
M8 × 1.25	P3	SUXR8.0N	2.5P	90	19	35	48	8	6.2	9	3	1	○
M8 × 1	P3	SUXR8.0M	2.5P	90	15	35	48	8	6.2	9	3	2	○
M10 × 1.5	P3	SUXR010O	2.5P	100	23	39	53	10	8	11	4	1	○
M10 × 1.25	P3	SUXR010N	2.5P	100	19	39	53	10	8	11	4	2	○
M10 × 1	P3	SUXR010M	2.5P	100	15	39	53	10	8	11	4	2	○
M12 × 1.75	P4	SUXS012P	2.5P	110	26	45	56	12	9	12	4	1	○
M12 × 1.5	P3	SUXR012O	2.5P	110	23	45	56	12	9	12	4	2	○
M12 × 1.25	P3	SUXR012N	2.5P	110	19	45	56	12	9	12	4	2	○

Note:
- Please use tapping holders suitable for the shank diameter and square of DIN371 for M6～M10 and those of M16 (DIN376) for M12.
- Overall length, shank diameter and square of metric coarse series are adopted for those of metric fine series.

SU2-SP

Spiral Fluted Taps for Tough Stainless Steels

Specification

HSS | OX Oxide | Synchro nized

■SU2-SP is the spiral fluted tap most suitable for such tough stainless steels as SUS316 and SUS317, blind hole use

Recommended Tapping Speeds depending on Materials

Alloy steels 合金鋼 5~20 (m/min)

Stainless steels ステンレス鋼 5~15 (m/min)

For icon explanation, refer to P.24

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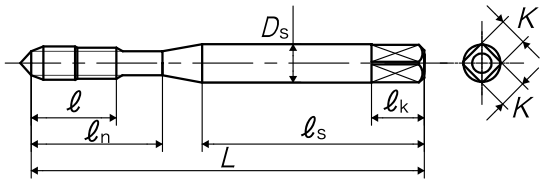

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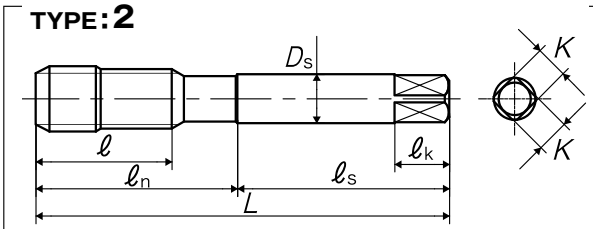

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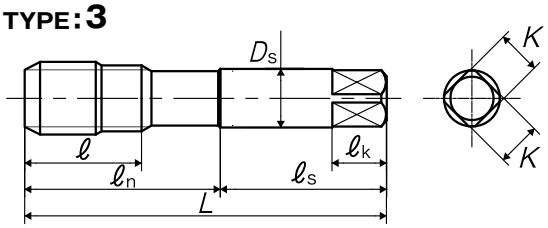


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	SU2MQ3.0G	3P	46	9	14	26	4	3.2	6	3	1	○
M3.5 × 0.6	P2	SU2MQ3.5H	3P	52	11	16	29	5	4	7	3	1	△
M4 × 0.7	P2	SU2MQ4.0I	3P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P2	SU2MQ5.0K	3P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P2	SU2MQ6.0M	3P	62	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P3	SU2MR8.0N	3P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P3	SU2MR010O	3P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P3	SU2MR010N	3P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1	P3	SU2MR010M	3P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P3	SU2MR012P	3P	82	26	-	42	8.5	6.5	9	4	2	○
M12 × 1.5	P3	SU2MR012O	3P	82	26	-	42	8.5	6.5	9	4	2	△
M12 × 1.25	P3	SU2MR012N	3P	82	26	-	42	8.5	6.5	9	4	2	△
M12 × 1	P3	SU2MR012M	3P	82	26	-	42	8.5	6.5	9	4	2	△
M14 × 2	P3	SU2MR014Q	3P	88	26	-	45	10.5	8	11	4	2	△
M14 × 1.5	P3	SU2MR014O	3P	88	26	-	45	10.5	8	11	4	2	△
M16 × 2	P3	SU2MR016Q	3P	95	26	-	48	12.5	10	13	4	2	○
M16 × 1.5	P3	SU2MR016O	3P	95	26	-	48	12.5	10	13	4	2	△
M18 × 2.5	P4	SU2MS018R	3P	100	33	-	51	14	11	14	4	2	△
M18 × 1.5	P3	SU2MR018O	3P	100	33	-	51	14	11	14	4	2	△
M20 × 2.5	P4	SU2MS020R	3P	105	33	-	50	15	12	15	4	3	○
M20 × 1.5	P4	SU2MS020O	3P	105	33	-	50	15	12	15	4	3	△
M22 × 2.5	P4	SU2MS022R	3P	115	33	-	55	17	13	16	4	3	△
M22 × 1.5	P4	SU2MS022O	3P	115	33	-	55	17	13	16	4	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SU2-SP Spiral Fluted Taps for Tough Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M24 × 3	P4	SU2MS024S	3P	120	39	-	55	19	15	18	4	3	△
M24 × 1.5	P4	SU2MS024O	3P	120	39	-	55	19	15	18	4	3	△

SU-S-SP

Spiral Fluted Taps for Stainless Steels, Deep Hole Use

Specification

HSS | OX Oxide

■SU-S-SP is the short spiral fluted tap for stainless steels suitable for stainless steels tending to work-harden and sticky, as well as chrome steels and molybdenum steels. Blind hole use. Deeper hole tapping is attainable.

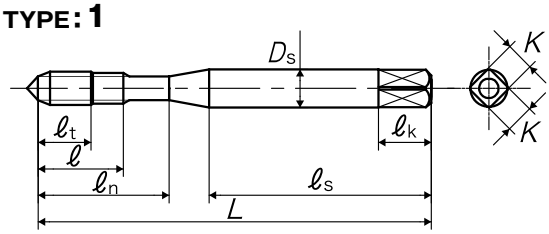
Recommended Tapping Speeds depending on Materials

High carbon steels 高炭素鋼 5~10 (m/min)

Stainless steels ステンレス鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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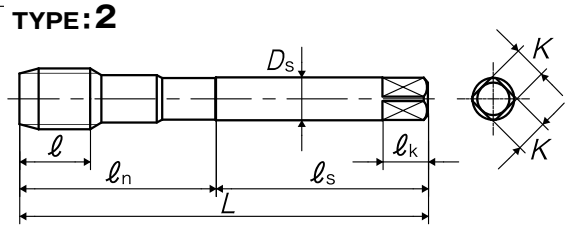
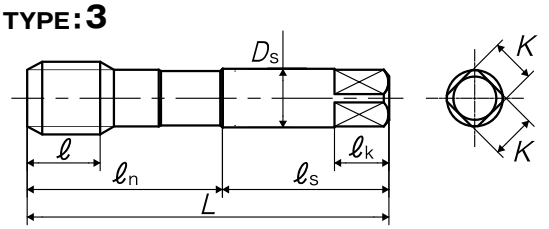


TYPE: 3



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M3 × 0.5	P1	SSMP3.0G-SU	2.5P	46	5	9	14	26	4	3.2	6	3	1	△
M4 × 0.7	P2	SSMQ4.0I-SU	2.5P	52	7	11	17	29	5	4	7	3	1	△
M5 × 0.8	P2	SSMQ5.0K-SU	2.5P	60	9	13	22	33	5.5	4.5	7	3	1	△
M6 × 1	P2	SSMQ6.0M-SU	2.5P	62	11	15	26	33	6	4.5	7	3	1	△
M8 × 1.25	P2	SSMQ8.0N-SU	2.5P	70	-	12	-	36	6.2	5	8	3	2	△
M10 × 1.5	P2	SSMQ010O-SU	2.5P	75	-	13	-	38	7	5.5	8	3	2	△
M12 × 1.75	P2	SSMQ012P-SU	2.5P	82	-	15	-	42	8.5	6.5	9	3	2	△
M14 × 2	P2	SSMQ014Q-SU	2.5P	88	-	18	-	45	10.5	8	11	3	2	△
M16 × 2	P2	SSMQ016Q-SU	2.5P	95	-	18	-	48	12.5	10	13	3	2	△
M18 × 2.5	P3	SSMR018R-SU	2.5P	100	-	20	-	51	14	11	14	4	2	△
M20 × 2.5	P3	SSMR020R-SU	2.5P	105	-	20	-	50	15	12	15	4	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-SU-S-SP

Long Shank Spiral Fluted Taps for Stainless Steels, Deep Hole Use

Specification

HSS | OX Oxide

■LS-SU-S-SP is the long shank short spiral fluted tap for stainless steels suitable for stainless steels tending to work-harden and sticky, as well as chrome steels and molybdenum steels. Blind hole use. Deeper hole tapping is attainable.

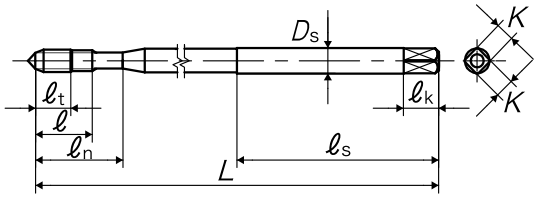
Recommended Tapping Speeds depending on Materials

High carbon steels 高炭素鋼 5~10 (m/min)

Stainless steels ステンレス鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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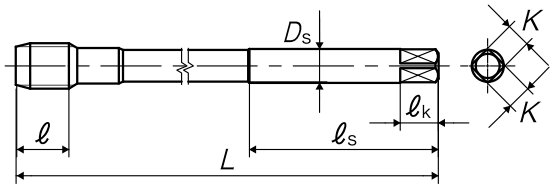
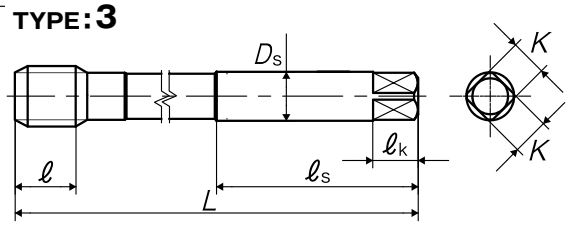


TYPE:3



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M3 × 0.5	P1	-	2.5P	100	5	9	14	40	4	3.2	6	3	1	△
M4 × 0.7	P2	-	2.5P	100 150	7	11	17	40	5	4	7	3	1	△
M5 × 0.8	P2	-	2.5P	100 150	9	13	22	40	5.5	4.5	7	3	1	△
M6 × 1	P2	-	2.5P	100 150	11	15	26	40	6	4.5	7	3	1	△
M8 × 1.25	P2	-	2.5P	100 150	-	12	-	50	6.2	5	8	3	2	△
M10 × 1.5	P2	-	2.5P	100 150	-	13	-	50	7	5.5	8	3	2	△
M12 × 1.75	P2	-	2.5P	150	-	15	-	50	8.5	6.5	9	3	2	△
M14 × 2	P2	-	2.5P	150	-	18	-	60	10.5	8	11	3	2	△
M16 × 2	P2	-	2.5P	150	-	18	-	60	12.5	10	13	3	2	△
M20 × 2.5	P3	-	2.5P	150	-	20	-	70	15	12	15	4	3	△
M24 × 3	P3	-	2.5P	150	-	25	-	80	19	15	18	4	3	△

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Think threads with YAMAWA

S-SP

Short Spiral Fluted Taps, Deep Hole Use

Specification

HSS | OX Oxide

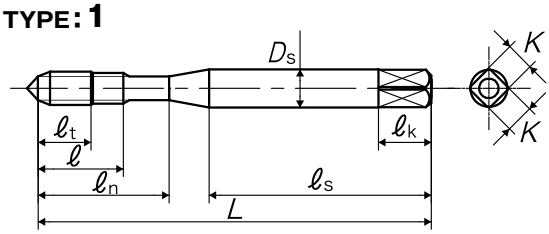
■Due to short thread portion, friction becomes less and lubrication supply becomes better, and S-SP is the spiral fluted tap quite efficient for tapping deep holes that are 2.5 times deeper than the normal dia,

Recommended Tapping Speeds depending on Materials

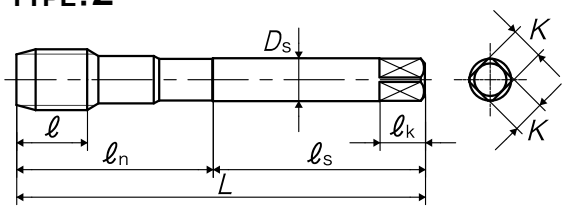
Medium carbon steels 中炭素鋼	Alloy steels 合金鋼
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



TYPE:2



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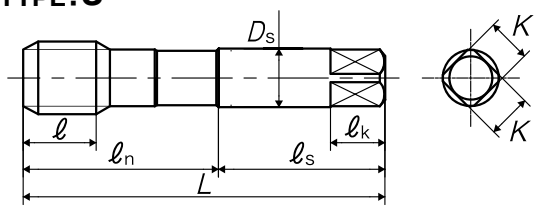


Oversize

Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M2 × 0.4	P1	SSMP2.0E	2.5P	42	4	7.2	12	27	3	2.5	5	2	1	○
M2.3 × 0.4	P1	SSMP2.3E	2.5P	42	4	7.2	12	27	3	2.5	5	2	1	△
M2.5 × 0.45	P1	SSMP2.5F	2.5P	46	4	8.1	14	29	3	2.5	5	2	1	△
M2.6 × 0.45	P1	SSMP2.6F	2.5P	46	4	8.1	14	29	3	2.5	5	2	1	△
M3 × 0.5	P1	SSMP3.0G-3	2.5P	46	5	9	14	26	4	3.2	6	3	1	◎
	P3	SSMR3.0G												△
M3.5 × 0.6	P1	SSMP3.5H-3	2.5P	52	7	11	16	29	5	4	7	3	1	△
M4 × 0.7	P2	SSMQ4.0I	2.5P	52	7	11	17	29	5	4	7	3	1	◎
	P3	SSMR4.0I												△
M5 × 0.8	P2	SSMQ5.0K	2.5P	60	9	13	22	33	5.5	4.5	7	3	1	◎
	P3	SSMR5.0K												△
M6 × 1	P2	SSMQ6.0M	2.5P	62	11	15	26	33	6	4.5	7	3	1	◎
	P3	SSMR6.0M												△
M8 × 1.25	P2	SSMQ8.0N	2.5P	70	-	12	-	36	6.2	5	8	3	2	◎
	P3	SSMR8.0N												△
M8 × 1	P2	SSMQ8.0M	2.5P	70	-	12	-	36	6.2	5	8	3	2	△
M10 × 1.5	P2	SSMQ0100	2.5P	75	-	13	-	38	7	5.5	8	3	2	◎
	P3	SSMR0100												△
M10 × 1.25	P2	SSMQ010N	2.5P	75	-	13	-	38	7	5.5	8	3	2	○
M10 × 1	P2	SSMQ010M	2.5P	75	-	13	-	38	7	5.5	8	3	2	△
M12 × 1.75	P2	SSMQ012P	2.5P	82	-	15	-	42	8.5	6.5	9	3	2	◎
	P3	SSMR012P												△
M12 × 1.5	P2	SSMQ0120	2.5P	82	-	15	-	42	8.5	6.5	9	3	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

S-SP Short Spiral Fluted Taps, Deep Hole Use

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1.25	P2	SSMQ012N	2.5P	82	-	15	-	42	8.5	6.5	9	3	2	○
M12 × 1	P2	SSMQ012M	2.5P	82	-	15	-	42	8.5	6.5	9	3	2	△
M14 × 2	P2	SSMQ014Q	2.5P	88	-	18	-	45	10.5	8	11	3	2	○
M14 × 1.5	P2	SSMQ014O	2.5P	88	-	14	-	45	10.5	8	11	3	2	○
M14 × 1	P2	SSMQ014M	2.5P	88	-	14	-	45	10.5	8	11	3	2	△
M16 × 2	P2	SSMQ016Q	2.5P	95	-	18	-	48	12.5	10	13	3	2	◎
M16 × 1.5	P2	SSMQ016O	2.5P	95	-	14	-	48	12.5	10	13	3	2	○
M16 × 1	P2	SSMQ016M	2.5P	95	-	14	-	48	12.5	10	13	3	2	△
M18 × 2.5	P3	SSMR018R	2.5P	100	-	20	-	51	14	11	14	4	2	○
M18 × 2	P3	SSMR018Q	2.5P	100	-	18	-	51	14	11	14	4	2	△
M18 × 1.5	P2	SSMQ018O	2.5P	100	-	14	-	51	14	11	14	4	2	△
M18 × 1	P2	SSMQ018M	2.5P	100	-	14	-	51	14	11	14	4	2	△
M20 × 2.5	P3	SSMR020R	2.5P	105	-	20	-	50	15	12	15	4	3	◎
M20 × 2	P3	SSMR020Q	2.5P	105	-	18	-	50	15	12	15	4	3	△
M20 × 1.5	P3	SSMR020O	2.5P	105	-	14	-	50	15	12	15	4	3	△
M20 × 1	P2	SSMQ020M	2.5P	105	-	14	-	50	15	12	15	4	3	△
M22 × 2.5	P3	SSMR022R	2.5P	115	-	20	-	55	17	13	16	4	3	○
M22 × 2	P3	SSMR022Q	2.5P	115	-	18	-	55	17	13	16	4	3	△
M22 × 1.5	P3	SSMR022O	2.5P	115	-	14	-	55	17	13	16	4	3	△
M24 × 3	P3	SSMR024S	2.5P	120	-	25	-	55	19	15	18	4	3	○
M24 × 2	P3	SSMR024Q	2.5P	120	-	18	-	55	19	15	18	4	3	△
M24 × 1.5	P3	SSMR024O	2.5P	120	-	18	-	55	19	15	18	4	3	△
M27 × 3	P3	SSMR027S	2.5P	130	-	25	-	60	20	15	18	4	3	△
M27 × 2	P3	SSMR027Q	2.5P	130	-	20	-	60	20	15	18	4	3	△
M27 × 1.5	P3	SSMR027O	2.5P	130	-	20	-	60	20	15	18	4	3	△
M30 × 3.5	P4	SSMS030T	2.5P	135	-	30	-	62	23	17	20	4	3	△
M30 × 3	P3	SSMR030S	2.5P	135	-	28	-	62	23	17	20	4	3	△
M30 × 2	P3	SSMR030Q	2.5P	135	-	20	-	62	23	17	20	4	3	△
M30 × 1.5	P3	SSMR030O	2.5P	135	-	20	-	62	23	17	20	4	3	△
M33 × 3.5	P4	SSMS033T	2.5P	145	-	30	-	67	25	19	22	4	3	△
M33 × 3	P3	SSMR033S	2.5P	145	-	28	-	67	25	19	22	4	3	△
M33 × 2	P3	SSMR033Q	2.5P	145	-	20	-	67	25	19	22	4	3	△
M33 × 1.5	P3	SSMR033O	2.5P	145	-	20	-	67	25	19	22	4	3	△
M36 × 4	P4	SSMS036U	2.5P	155	-	40	-	71	28	21	24	4	3	△
M36 × 3	P3	SSMR036S	2.5P	155	-	30	-	71	28	21	24	4	3	△
M36 × 1.5	P3	SSMR036O	2.5P	155	-	20	-	71	28	21	24	4	3	△
M39 × 4	P4	SSMS039U	2.5P	165	-	40	-	76	30	23	26	4	3	△
M42 × 4.5	P4	SSMS042V	2.5P	175	-	40	-	81	32	26	30	4	3	△
M45 × 4.5	P4	SSMS045V	2.5P	180	-	45	-	83	35	26	30	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

E-SP

Spiral Fluted Taps for Soft Structural Steels

Specification

HSS | OX Oxide

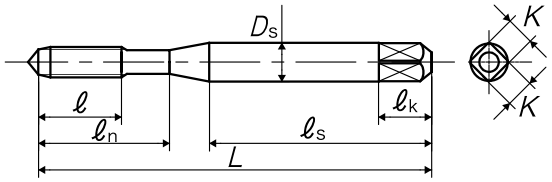
■Suitable particularly for soft steels such as SS41, S25C and the like.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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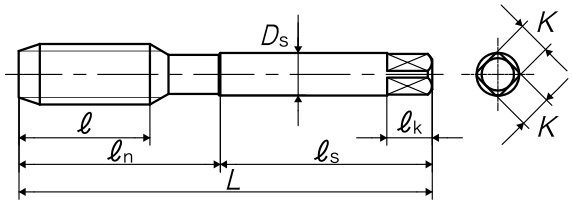

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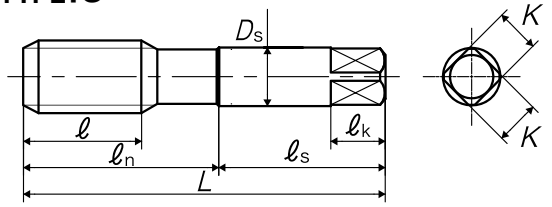


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P1	ESHMP3.0G	2.5P	46	9	14	26	4	3.2	6	2	1	△
		ESHMP3.0G-3									3		○
M3.5 × 0.6	P1	ESHMP3.5H	2.5P	52	11	16	29	5	4	7	3	1	△
M4 × 0.7	P2	ESHMQ4.0I	2.5P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P2	ESHMQ5.0K	2.5P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P2	ESHMQ6.0M	2.5P	62	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P2	ESHMQ8.0N	2.5P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P2	ESHMQ010O	2.5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P2	ESHMQ010N	2.5P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P2	ESHMQ012P	2.5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P2	ESHMQ012O	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P2	ESHMQ012N	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M14 × 2	P2	ESHMQ014Q	2.5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.5	P2	ESHMQ014O	2.5P	88	26	-	45	10.5	8	11	3	2	△
M16 × 2	P2	ESHMQ016Q	2.5P	95	26	-	48	12.5	10	13	3	2	○
M16 × 1.5	P2	ESHMQ016O	2.5P	95	26	-	48	12.5	10	13	3	2	△
M18 × 2.5	P3	ESHMR018R	2.5P	100	33	-	51	14	11	14	4	2	△
M18 × 1.5	P2	ESHMQ018O	2.5P	100	33	-	51	14	11	14	4	2	△
M20 × 2.5	P3	ESHMR020R	2.5P	105	33	-	50	15	12	15	4	3	○
M20 × 1.5	P3	ESHMR020O	2.5P	105	33	-	50	15	12	15	4	3	△
M22 × 2.5	P3	ESHMR022R	2.5P	115	33	-	55	17	13	16	4	3	△
M22 × 1.5	P3	ESHMR022O	2.5P	115	33	-	55	17	13	16	4	3	△
M24 × 3	P3	ESHMR024S	2.5P	120	39	-	55	19	15	18	4	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

E-SP Spiral Fluted Taps for Soft Structural Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M24 × 1.5	P3	ESHMR0240	2.5P	120	39	-	55	19	15	18	4	3	△

HC+SP/HC-SP

Spiral Fluted Taps for High Carbon Steels

Specification

HSS

■Spiral fluted tap suitable for high carbon steels such as S55C and the like.

HC+SP	～M6
HC−SP	M8～, all W

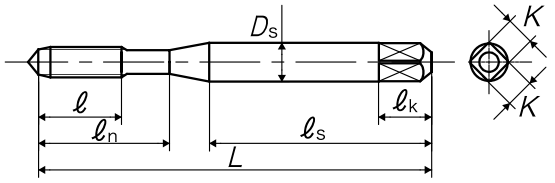
Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

High carbon steels 高炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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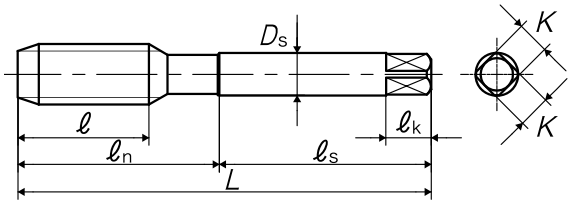
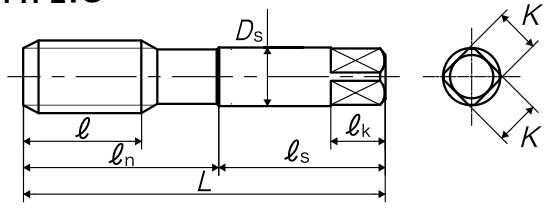


TYPE:3



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P1	SCPP3.0G	2.5P	46	9	14	26	4	3.2	6	3	1	○
M4 × 0.7	P2	SCPQ4.0I	2.5P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P2	SCPQ5.0K	2.5P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P2	SCPQ6.0M	2.5P	62	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P2	SCMQ8.0N	2.5P	70	19	-	36	6.2	5	8	3	2	○
M8 × 1	P2	SCMQ8.0M	2.5P	70	19	-	36	6.2	5	8	3	2	△
M10 × 1.5	P2	SCMQ010O	2.5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P2	SCMQ010N	2.5P	75	23	-	38	7	5.5	8	3	2	△
M10 × 1	P2	SCMQ010M	2.5P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P2	SCMQ012P	2.5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P2	SCMQ012O	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P2	SCMQ012N	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1	P2	SCMQ012M	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M14 × 2	P2	SCMQ014Q	2.5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.5	P2	SCMQ014O	2.5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.25	P2	SCMQ014N	2.5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1	P2	SCMQ014M	2.5P	88	26	-	45	10.5	8	11	3	2	△
M16 × 2	P2	SCMQ016Q	2.5P	95	26	-	48	12.5	10	13	3	2	○
M16 × 1.5	P2	SCMQ016O	2.5P	95	26	-	48	12.5	10	13	3	2	△
M16 × 1	P2	SCMQ016M	2.5P	95	26	-	48	12.5	10	13	3	2	△
M18 × 2.5	P3	SCMR018R	2.5P	100	33	-	51	14	11	14	4	2	△
M18 × 2	P3	SCMR018Q	2.5P	100	33	-	51	14	11	14	4	2	△
M18 × 1.5	P2	SCMQ018O	2.5P	100	33	-	51	14	11	14	4	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

HC+SP/HC-SP Spiral Fluted Taps for High Carbon Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M18 × 1	P2	SCMQ018M	2.5P	100	18	-	51	14	11	14	4	2	△
M20 × 2.5	P3	SCMR020R	2.5P	105	33	-	50	15	12	15	4	3	○
M20 × 2	P3	SCMR020Q	2.5P	105	33	-	50	15	12	15	4	3	△
M20 × 1.5	P3	SCMR020O	2.5P	105	33	-	50	15	12	15	4	3	△
M20 × 1	P2	SCMQ020M	2.5P	105	18	-	50	15	12	15	4	3	△
M22 × 2.5	P3	SCMR022R	2.5P	115	33	-	55	17	13	16	4	3	△
M22 × 2	P3	SCMR022Q	2.5P	115	33	-	55	17	13	16	4	3	△
M22 × 1.5	P3	SCMR022O	2.5P	115	33	-	55	17	13	16	4	3	△
M24 × 3	P3	SCMR024S	2.5P	120	39	-	55	19	15	18	4	3	△
M24 × 2	P3	SCMR024Q	2.5P	120	39	-	55	19	15	18	4	3	△
M24 × 1.5	P3	SCMR024O	2.5P	120	39	-	55	19	15	18	4	3	△
M25 × 1.5	P3	SCMR025O	2.5P	125	39	-	58	19	15	18	4	3	△
M26 × 1.5	P3	SCMR026O	2.5P	130	39	-	60	20	15	18	4	3	△
M27 × 3	P3	SCMR027S	2.5P	130	39	-	60	20	15	18	4	3	△
M27 × 1.5	P3	SCMR027O	2.5P	130	39	-	60	20	15	18	4	3	△
M28 × 1.5	P3	SCMR028O	2.5P	135	46	-	62	23	17	20	4	3	△
M30 × 3.5	P4	SCMS030T	2.5P	135	46	-	62	23	17	20	4	3	△
M30 × 1.5	P3	SCMR030O	2.5P	135	46	-	62	23	17	20	4	3	△
For Whitworth Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4W20	P2	SCMQW04N	2.5P	62	15	26	33	6	4.5	7	3	1	△
5/16W18	P2	SCMQW05O	2.5P	70	19	-	36	6.2	5	8	3	2	△
3/8W16	P2	SCMQW06P	2.5P	75	23	-	38	7	5.5	8	3	2	△
1/2W12	P3	SCMRW08S	2.5P	88	26	-	45	10.5	8	11	3	2	△
5/8W11	P3	SCMRW10U	2.5P	95	26	-	48	12.5	10	13	3	2	△
3/4W10	P3	SCMRW12V	2.5P	105	33	-	50	15	12	15	4	3	△
7/8W9	P3	SCMRW14W	2.5P	115	33	-	55	17	13	16	4	3	△
1 W8	P3	SCMRW16X	2.5P	125	39	-	58	19	15	18	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

HC+SP OX / HC-SP OX

Spiral Fluted Taps for High Carbon Steels, Oxided

Specification

HSS | OX Oxide

■Spiral fluted tap suitable for high carbon steels such as S55C and the like, oxided to avoid welding trouble.

HC+SP OX	～M6
HC−SP OX	M8～

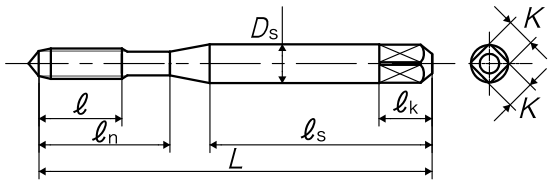
Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

High carbon steels 高炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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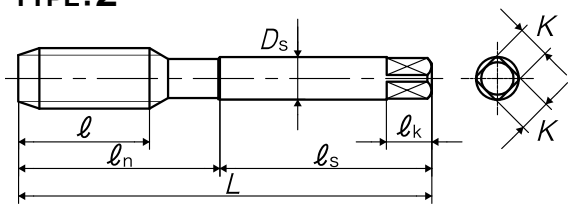


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P1	SCPP3.0GX	2.5P	46	9	14	26	4	3.2	6	3	1	◎
M4 × 0.7	P2	SCPQ4.0IX	2.5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	P2	SCPQ5.0KX	2.5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	P2	SCPQ6.0MX	2.5P	62	15	26	33	6	4.5	7	3	1	◎
M8 × 1.25	P2	SCMQ8.0NX	2.5P	70	19	-	36	6.2	5	8	3	2	◎
M10 × 1.5	P2	SCMQ010OX	2.5P	75	23	-	38	7	5.5	8	3	2	◎
M12 × 1.75	P2	SCMQ012PX	2.5P	82	26	-	42	8.5	6.5	9	3	2	◎
M16 × 2	P2	SCMQ016QX	2.5P	95	26	-	48	12.5	10	13	3	2	◎

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

MEMO

For improvement, spec may change without advance notice.
Think threads with YAMAWA

AL+SP/AL-SP

Spiral Fluted Taps for Aluminum

Specification

AL+SP	～M6
AL−SP	M8～, all STI

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

Product features

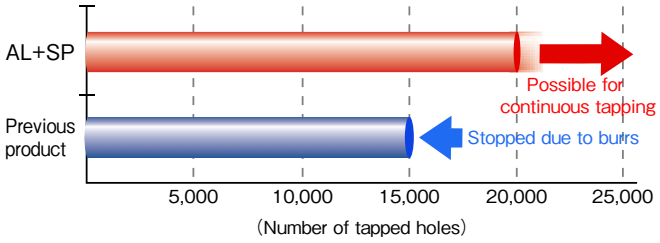
●AL+SP ensures the consistent tapping even in high speed cutting area, in forged workpieces of light alloys such as aluminum die castings and aluminum castings.

●Having optimum cutting edge design, AL+SP does not produce burrs in minor diameter which usually tend to come out during tapping light alloys, and results in cutting of stable and clean internal threads.

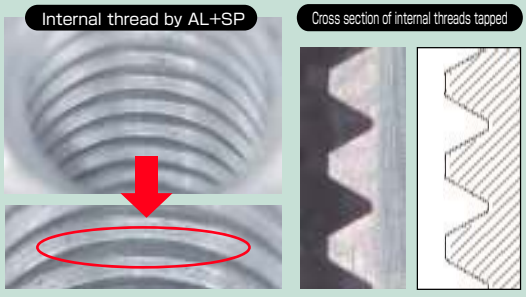
Tapping data

Tapping condition (M6×1)

Work material	AC4C
Tapping speed	20m/min
Hole size	ϕ5.0
Tapping length	9mm, blind hole
Machine	Machining center, vertical type
Tapping fluid	Water soluble oil (chlorine free, 20 fold dilution rate)

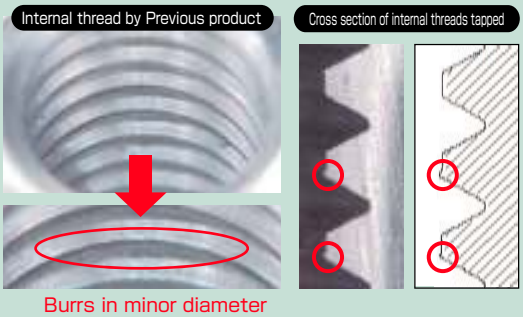


AL+SP



Good finish in minor diameter of little burrs

Previous product



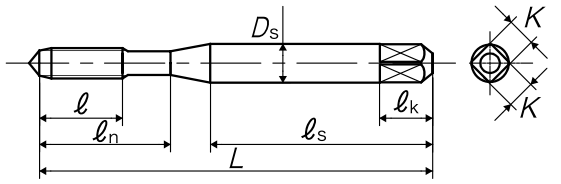
Burrs in minor diameter

●Compared with previous product, AL+SP assures internal threads of better quality and longer tool life.

Think threads with YAMAWA
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

TYPE: 1



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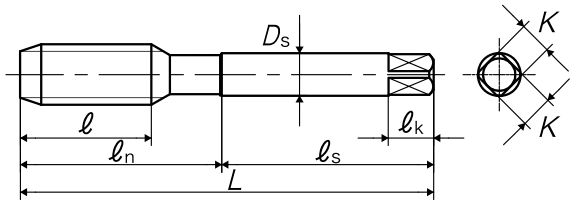

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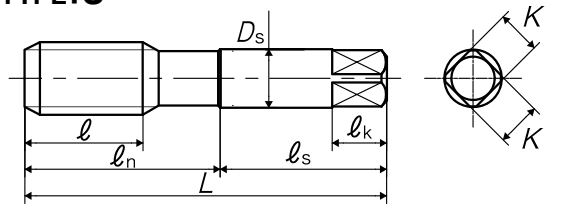

Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P2	ASHPQ2.0E	2.5P	42	7.2	12	27	3	2.5	5	2	1	○
M2.3 × 0.4	P2	ASHPQ2.3E	2.5P	42	7.2	12	27	3	2.5	5	2	1	△
M2.5 × 0.45	P2	ASHPQ2.5F	2.5P	46	8.1	14	29	3	2.5	5	2	1	○
M2.6 × 0.45	P2	ASHPQ2.6F	2.5P	46	8.1	14	29	3	2.5	5	2	1	○
M3 × 0.5	P2	ASHPQ3.0G	2.5P	46	9	14	26	4	3.2	6	3	1	○
M3.5 × 0.6	P2	ASHPQ3.5H	2.5P	52	11	16	29	5	4	7	3	1	△
M4 × 0.7	P3	ASHPR4.0I	2.5P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P3	ASHPR5.0K	2.5P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P3	ASHPR6.0M	2.5P	62	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P3	ASHMR8.0N	2.5P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P3	ASHMR010O	2.5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P3	ASHMR010N	2.5P	75	23	-	38	7	5.5	8	3	2	△
M10 × 1	P3	ASHMR010M	2.5P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P3	ASHMR012P	2.5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P3	ASHMR012O	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P3	ASHMR012N	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1	P3	ASHMR012M	2.5P	82	26	-	42	8.5	6.5	9	3	2	△
M14 × 2	P3	ASHMR014Q	2.5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.5	P3	ASHMR014O	2.5P	88	26	-	45	10.5	8	11	3	2	△
M16 × 2	P3	ASHMR016Q	2.5P	95	26	-	48	12.5	10	13	3	2	△
M16 × 1.5	P3	ASHMR016O	2.5P	95	26	-	48	12.5	10	13	3	2	△

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Helical Coil Wire Screw Thread Inserts, for Metric Threads														
STI M3 × 0.5	1b	SW3.0G1LEN	2.5P	3.65	52	7.5	17	29	5	4	7	3	1	○
STI M4 × 0.7	1b	SW4.0I1LEN	2.5P	4.909	60	13	22	33	5.5	4.5	7	3	1	○
STI M5 × 0.8	1b	SW5.0K1LEN	2.5P	6.039	62	15	26	33	6	4.5	7	3	1	○
STI M6 × 1	1b	SW6.0M1LEN	2.5P	7.299	70	19	-	36	6.2	5	8	3	2	○
STI M8 × 1.25	1b	SW8.0N1LEN	2.5P	9.624	75	23	-	38	7	5.5	8	3	2	○
STI M10 × 1.5	1b	SW01001LEN	2.5P	11.948	82	26	-	42	8.5	6.5	9	3	2	○
STI M10 × 1.25	1b	SW010N1LEN	2.5P	11.624	82	26	-	42	8.5	6.5	9	3	2	△
STI M12 × 1.75	1b	SW012P1LEN	2.5P	14.273	95	26	-	48	12.5	10	13	3	2	○
STI M12 × 1.5	1b	SW01201LEN	2.5P	13.948	88	26	-	45	10.5	8	11	3	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

AL+SP/AL-SP Spiral Fluted Taps for Aluminum

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
STI M12 × 1.25	1b	SW012N1LEN	2.5P	13.624	88	26	-	45	10.5	8	11	3	2	△
STI M14 × 2	1b	SW014Q1LEN	2.5P	16.598	100	33	-	51	14	11	14	3	2	△
STI M14 × 1.5	1b	SW014O1LEN	2.5P	15.948	95	26	-	48	12.5	10	13	3	2	△
STI M16 × 2	1b	SW016Q1LEN	2.5P	18.598	105	33	-	50	15	12	15	4	3	○
STI M16 × 1.5	1b	SW016O1LEN	2.5P	17.948	100	33	-	51	14	11	14	4	3	△
STI M18 × 2.5	1b	SW018R1LEN	2.5P	21.248	115	33	-	55	17	13	16	4	3	△
STI M18 × 1.5	1b	SW018O1LEN	2.5P	19.948	105	33	-	50	15	12	15	4	3	△
STI M20 × 2.5	1b	SW020R1LEN	2.5P	23.248	120	39	-	55	19	15	18	4	3	○
STI M20 × 1.5	1b	SW020O1LEN	2.5P	21.948	115	33	-	55	17	13	16	4	3	△
STI M22 × 2.5	1b	SW022R1LEN	2.5P	25.248	125	39	-	58	19	15	18	4	3	△
STI M24 × 3	1b	SW024S1LEN	2.5P	27.897	135	46	-	62	23	17	20	4	3	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

AL-SP 1.5P

Spiral Fluted Taps for Aluminum 1.5P

Specification

HSS | NI Nitride | <2D

■In aluminum die casting and aluminum casting tapping, AL-SP solves such problems as chip jamming, chip clogging, and torn threads.

Recommended Tapping Speeds depending on Materials

Brass 黄銅	Brass castings 黄銅鋳物	Bronze 青銅	Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Magnesium alloy die castings マグネシウム合金鋳物	Zinc alloy castings 亜鉛合金鋳物
10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

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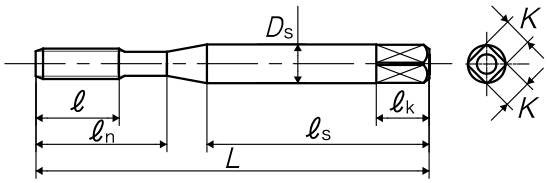

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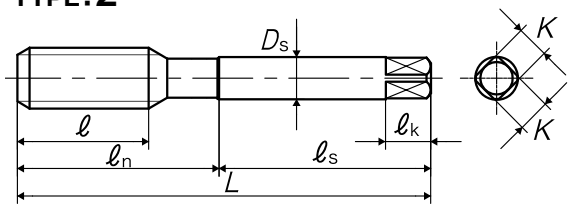


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P2	SY2.0EQLENA	1.5P	42	7.2	12	27	3	2.5	5	2	1	○
M2.3 × 0.4	P2	SY2.3EQLENA	1.5P	42	7.2	12	27	3	2.5	5	2	1	△
M2.5 × 0.45	P2	SY2.5FQLENA	1.5P	46	8.1	14	29	3	2.5	5	2	1	○
M2.6 × 0.45	P2	SY2.6FQLENA	1.5P	46	8.1	14	29	3	2.5	5	2	1	○
M3 × 0.5	P2	SY3.0GQLENA	1.5P	46	9	14	26	4	3.2	6	3	1	○
M3.5 × 0.6	P2	SY3.5HQLENA	1.5P	52	11	16	29	5	4	7	3	1	△
M4 × 0.7	P3	SY4.0IRLENA	1.5P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P3	SY5.0KRLENA	1.5P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P3	SY6.0MRLENA	1.5P	62	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P3	SY8.0NRLENA	1.5P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P3	SY010ORLENA	1.5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P3	SY010NRLENA	1.5P	75	23	-	38	7	5.5	8	3	2	△
M10 × 1	P3	SY010MRLENA	1.5P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P3	SY012PRLENA	1.5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P3	SY012ORLENA	1.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P3	SY012NRLENA	1.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1	P3	SY012MRLENA	1.5P	82	26	-	42	8.5	6.5	9	3	2	△
M14 × 2	P3	SY014QRLENA	1.5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.5	P3	SY014ORLENA	1.5P	88	26	-	45	10.5	8	11	3	2	△
M16 × 2	P3	SY016QRLENA	1.5P	95	26	-	48	12.5	10	13	3	2	△
M16 × 1.5	P3	SY016ORLENA	1.5P	95	26	-	48	12.5	10	13	3	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LO-SP

Low Spiral Fluted Taps

Specification

HSS

■Spiral flutes with low helix can break down chips and can eject them smoothly. Suitable for thermal refined high carbon steels and alloy tool steels. Effective in horizontal tapping.

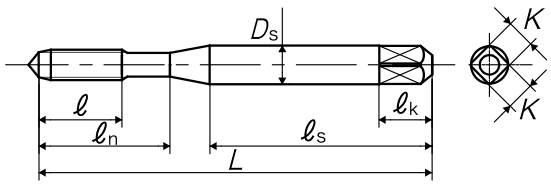
Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

High carbon steels 高炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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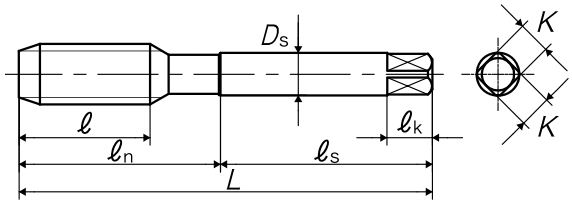


Segment : 1C

Size	Class	Code	Chamfer	Helix angle of spiral flutes	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M3 × 0.5	P1	LSHMP3.0G8	2.5P	8°	46	9	14	26	4	3.2	6	3	1	△
		LSHMP3.0G15		15°										
		LSHMP3.0G20		20°										
M4 × 0.7	P2	LSHMQ4.0I8	2.5P	8°	52	11	17	29	5	4	7	3	1	△
		LSHMQ4.0I15		15°										
		LSHMQ4.0I20		20°										
M5 × 0.8	P2	LSHMQ5.0K8	2.5P	8°	60	13	22	33	5.5	4.5	7	3	1	△
		LSHMQ5.0K15		15°										
		LSHMQ5.0K20		20°										
M6 × 1	P2	LSHMQ6.0M8	2.5P	8°	62	15	26	33	6	4.5	7	3	1	△
		LSHMQ6.0M15		15°										
		LSHMQ6.0M20		20°										
M8 × 1.25	P2	LSHMQ8.0N8	2.5P	8°	70	19	-	36	6.2	5	8	3	2	△
		LSHMQ8.0N15		15°										
		LSHMQ8.0N20		20°										
M10 × 1.5	P2	LSHMQ01008	2.5P	8°	75	23	-	38	7	5.5	8	3	2	△
		LSHMQ010015		15°										
		LSHMQ010020		20°										
M12 × 1.75	P2	LSHMQ012P8	2.5P	8°	82	26	-	42	8.5	6.5	9	3	2	△
		LSHMQ012P15		15°										
		LSHMQ012P20		20°										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-LO-SP

Long Shank Low Spiral Fluted Taps

Specification

HSS

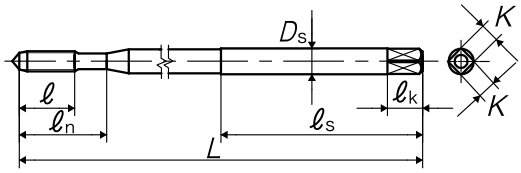
■Spiral flutes with low helix can break down chips and can eject them smoothly. LS-LO-SP is the long shank spiral fluted tap suitable for thermal refined high carbon steels and alloy tool steels. Effective in horizontal tapping.

Recommended Tapping Speeds depending on Materials

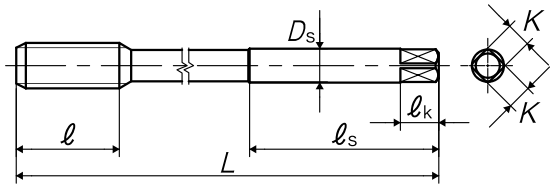
Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



TYPE:2



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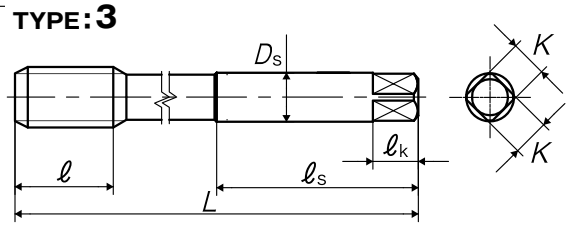


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	LSHMQ6.0ML10	2.5P	100	15	26	40	6	4.5	7	3	1	△
M8 × 1.25	P2	LSHMQ8.0NL10	2.5P	100	19	-	50	6.2	5	8	3	2	△
		LSHMQ8.0NL15		150									
M10 × 1.5	P2	LSHMQ010OL15	2.5P	150	23	-	50	7	5.5	8	3	2	△
M10 × 1.25	P2	LSHMQ010NL15	2.5P	150	23	-	50	7	5.5	8	3	2	△
M12 × 1.75	P2	LSHMQ012PL15	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
M12 × 1.5	P2	LSHMQ012OL15	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
M12 × 1.25	P2	LSHMQ012NL15	2.5P	150	26	-	50	8.5	6.5	9	3	2	△
M14 × 2	P2	LSHMQ014QL15	2.5P	150	26	-	60	10.5	8	11	3	2	△
M14 × 1.5	P2	LSHMQ014OL15	2.5P	150	26	-	60	10.5	8	11	3	2	△
M16 × 2	P2	LSHMQ016QL15	2.5P	150	26	-	60	12.5	10	13	3	2	△
		LSHMQ016QL20		200									
M16 × 1.5	P2	LSHMQ016OL15	2.5P	150	26	-	60	12.5	10	13	3	2	△
		LSHMQ016OL20		200									
M18 × 2.5	P3	LSHMR018RL20	2.5P	200	33	-	70	14	11	14	4	2	△
M18 × 1.5	P2	LSHMQ018OL20	2.5P	200	33	-	70	14	11	14	4	2	△
M20 × 2.5	P3	LSHMR020RL20	2.5P	200	33	-	70	15	12	15	4	3	△
M20 × 1.5	P3	LSHMR020OL20	2.5P	200	33	-	70	15	12	15	4	3	△
M22 × 2.5	P3	LSHMR022RL20	2.5P	200	33	-	70	17	13	16	4	3	△
M22 × 1.5	P3	LSHMR022OL20	2.5P	200	33	-	70	17	13	16	4	3	△
M24 × 3	P3	LSHMR024SL20	2.5P	200	39	-	80	19	15	18	4	3	△
M24 × 1.5	P3	LSHMR024OL20	2.5P	200	39	-	80	19	15	18	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

MC-SP

Spiral Fluted Taps with Internal Coolant Hole

Specification

HSS

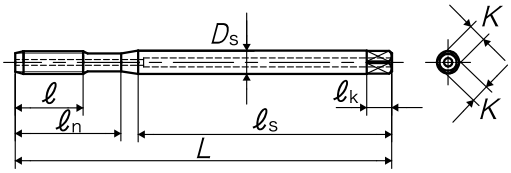
■Through internal coolant hole (center through type), satisfactory amount of oil is supplied to the exact cutting area. MC-SP spiral fluted tap ensures a long tool life as well as cuts high precision threads with good surface finish.

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE: 1



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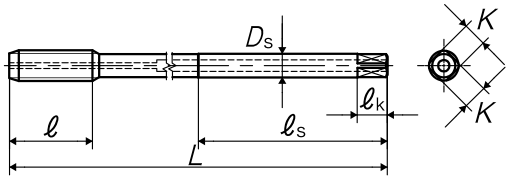


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	MSHQ6.0ML10	2.5P	100	19	28	40	6	4.5	7	3	1	△
		MSHQ6.0ML15		150									
M8 × 1.25	P2	MSHQ8.0NL10	2.5P	100	22	-	50	6.2	5	8	3	2	△
		MSHQ8.0NL15		150									
M10 × 1.5	P2	MSHQ0100L10	2.5P	100	24	-	50	7	5.5	8	3	2	△
		MSHQ0100L15		150									
M10 × 1.25	P2	MSHQ010NL10	2.5P	100	24	-	50	7	5.5	8	3	2	△
M12 × 1.75	P2	MSHQ012PL10	2.5P	100	29	-	50	8.5	6.5	9	3	2	△
		MSHQ012PL15		150									
M12 × 1.5	P2	MSHQ0120L10	2.5P	100	29	-	50	8.5	6.5	9	3	2	△
M12 × 1.25	P2	MSHQ012NL10	2.5P	100	29	-	50	8.5	6.5	9	3	2	△
M14 × 2	P2	MSHQ014QL15	2.5P	150	30	-	60	10.5	8	11	3	2	△
M16 × 2	P2	MSHQ016QL15	2.5P	150	32	-	60	12.5	10	13	3	2	△
M18 × 2.5	P3	MSHR018RL15	2.5P	150	37	-	70	14	11	14	4	2	△
M20 × 2.5	P3	MSHR020RL15	2.5P	150	37	-	70	15	12	15	4	2	△
M22 × 2.5	P3	MSHR022RL15	2.5P	150	38	-	70	17	13	16	4	2	△
M24 × 3	P3	MSHR024SL15	2.5P	150	45	-	80	19	15	18	4	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

ZET-B

Spiral Fluted Taps for Titanium Alloys

Specification

HSS-P | NI Nitride | Synchro nized

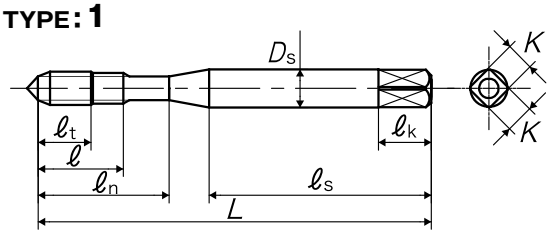
■Spiral Fluted Tap suitable for titanium alloys which, including titanium as the main composition, are tough, light and heat resistant.

Recommended Tapping Speeds depending on Materials

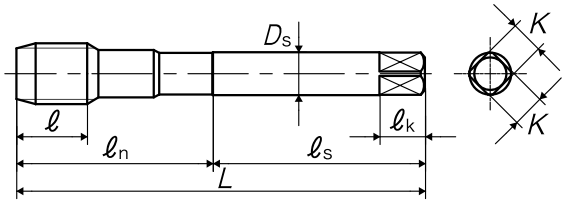
Titanium alloys チタン合金 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



TYPE:2



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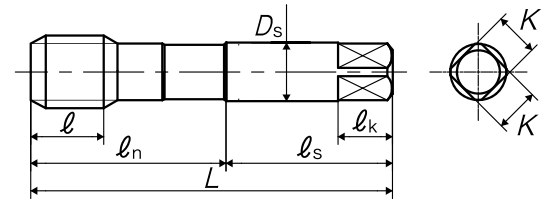


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M3 × 0.5	P2	ZETBMQ3.0G	3P	46	5	9	14	26	4	3.2	6	3	1	○
M4 × 0.7	P3	ZETBMR4.0I	3P	52	7	11	17	29	5	4	7	3	1	○
M5 × 0.8	P3	ZETBMR5.0K	3P	60	9	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P3	ZETBMR6.0M	3P	62	11	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P3	ZETBMR8.0N	3P	70	-	12	-	36	6.2	5	8	3	2	○
M10 × 1.5	P3	ZETBMR010O	3P	75	-	13	-	38	7	5.5	8	3	2	○
M10 × 1.25	P3	ZETBMR010N	3P	75	-	13	-	38	7	5.5	8	3	2	○
M12 × 1.75	P3	ZETBMR012P	3P	82	-	15	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P3	ZETBMR012O	3P	82	-	15	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P3	ZETBMR012N	3P	82	-	15	-	42	8.5	6.5	9	3	2	△
M14 × 2	P3	ZETBMR014Q	3P	88	-	18	-	45	10.5	8	11	3	2	△
M14 × 1.5	P3	ZETBMR014O	3P	88	-	14	-	45	10.5	8	11	3	2	△
M16 × 2	P3	ZETBMR016Q	3P	95	-	18	-	48	12.5	10	13	4	2	△
M16 × 1.5	P3	ZETBMR016O	3P	95	-	14	-	48	12.5	10	13	4	2	△
M18 × 2.5	P4	ZETBMS018R	3P	100	-	20	-	51	14	11	14	4	2	△
M18 × 1.5	P3	ZETBMR018O	3P	100	-	14	-	51	14	11	14	4	2	△
M20 × 2.5	P4	ZETBMS020R	3P	105	-	20	-	50	15	12	15	4	3	△
M20 × 1.5	P4	ZETBMS020O	3P	105	-	14	-	50	15	12	15	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

ZEN-B

Spiral Fluted Taps for Nickel Base Alloys

Specification

HSS-P | OX Oxide | Synchro nized

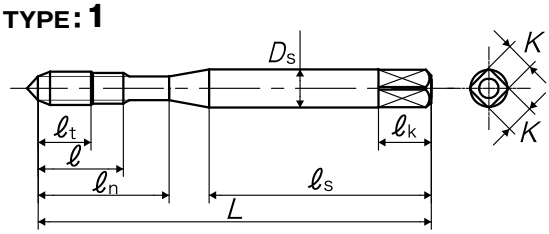
■ZEN-B is the spiral fluted tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and much higher heat resistance than steels.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼	Nickel base alloys ニッケル基合金
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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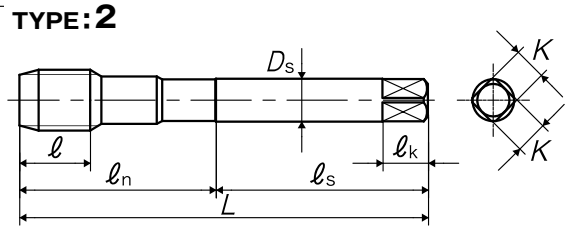
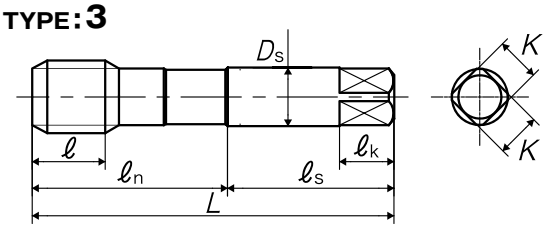


TYPE: 3



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M3 × 0.5	P2	ZENBMQ3.0G	3P	46	5	9	14	26	4	3.2	6	3	1	○
M4 × 0.7	P3	ZENBMR4.0I	3P	52	7	11	17	29	5	4	7	3	1	○
M5 × 0.8	P3	ZENBMR5.0K	3P	60	9	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P3	ZENBMR6.0M	3P	62	11	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P3	ZENBMR8.0N	3P	70	-	12	-	36	6.2	5	8	3	2	○
M10 × 1.5	P3	ZENBMR010O	3P	75	-	13	-	38	7	5.5	8	3	2	○
M10 × 1.25	P3	ZENBMR010N	3P	75	-	13	-	38	7	5.5	8	3	2	○
M12 × 1.75	P3	ZENBMR012P	3P	82	-	15	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P3	ZENBMR012O	3P	82	-	15	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P3	ZENBMR012N	3P	82	-	15	-	42	8.5	6.5	9	3	2	△
M14 × 2	P3	ZENBMR014Q	3P	88	-	18	-	45	10.5	8	11	3	2	△
M14 × 1.5	P3	ZENBMR014O	3P	88	-	14	-	45	10.5	8	11	3	2	△
M16 × 2	P3	ZENBMR016Q	3P	95	-	18	-	48	12.5	10	13	3	2	△
M16 × 1.5	P3	ZENBMR016O	3P	95	-	14	-	48	12.5	10	13	3	2	△
M18 × 2.5	P4	ZENBMS018R	3P	100	-	20	-	51	14	11	14	4	2	△
M18 × 1.5	P3	ZENBMR018O	3P	100	-	14	-	51	14	11	14	4	2	△
M20 × 2.5	P4	ZENBMS020R	3P	105	-	20	-	50	15	12	15	4	3	△
M20 × 1.5	P4	ZENBMS020O	3P	105	-	14	-	50	15	12	15	4	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

PM-SP

Spiral Fluted Taps for Hard-to-Machine Materials

Specification

HSS-P

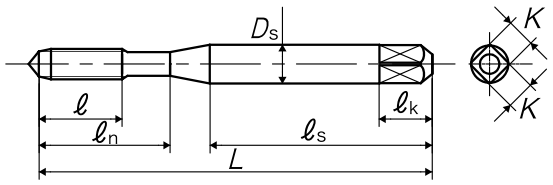
■Spiral Fluted Tap suitable for tapping hard steels with hardness between 35-45HRC such as forgings and thermal refined steels of high carbon steels and alloy steels, and mold steels.

Recommended Tapping Speeds depending on Materials

High carbon steels 高炭素鋼	Thermal refined steels 調質鋼	Thermal refined steels 調質鋼
5~10 (m/min)	~5 (m/min)	~5 (m/min)
	25~35HRC	35~45HRC

For icon explanation, refer to P.24

TYPE:1



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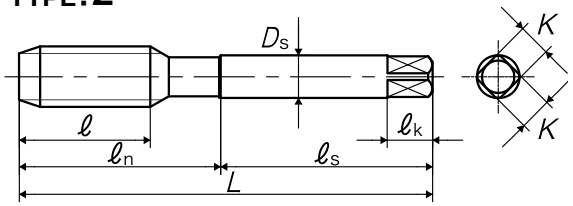

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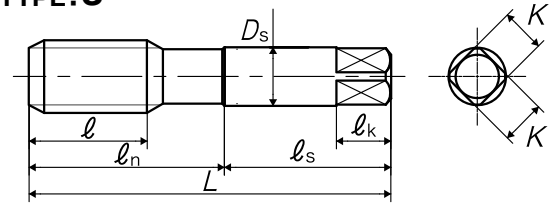


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P3	-	2.75P	46	9	14	26	4	3.2	6	3	1	△
M4 × 0.7	P3	-	2.75P	52	11	17	29	5	4	7	3	1	△
M5 × 0.8	P3	-	2.75P	60	13	22	33	5.5	4.5	7	3	1	△
M6 × 1	P3	-	2.75P	62	15	26	33	6	4.5	7	3	1	△
M8 × 1.25	P3	-	2.75P	70	19	-	36	6.2	5	8	3	2	△
M10 × 1.5	P3	-	2.75P	75	23	-	38	7	5.5	8	3	2	△
M10 × 1.25	P3	-	2.75P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P3	-	2.75P	82	26	-	42	8.5	6.5	9	3	2	△
M16 × 2	P4	-	2.75P	95	26	-	48	12.5	10	13	3	2	△
M16 × 1.5	P3	-	2.75P	95	26	-	48	12.5	10	13	3	2	△
M20 × 2.5	P4	-	2.75P	105	33	-	50	15	12	15	3	3	△
M24 × 3	P4	-	2.75P	120	39	-	55	19	15	18	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-PM-SP

Long Shank Spiral Fluted Taps for Hard-to-Machine Materials

Specification

HSS-P

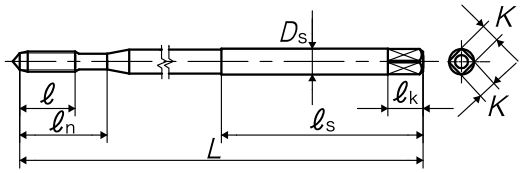
■Long shank spiral fluted tap suitable for tapping hard steels with hardness between 35-45HRC such as forgings and thermal refined steels of high carbon steels and alloy steels, and mold steels.

Recommended Tapping Speeds depending on Materials

High carbon steels 高炭素鋼	Thermal refined steels 調質鋼	Thermal refined steels 調質鋼
5~10 (m/min)	~5 (m/min)	~5 (m/min)
	25~35HRC	35~45HRC

For icon explanation, refer to P.24

TYPE:1



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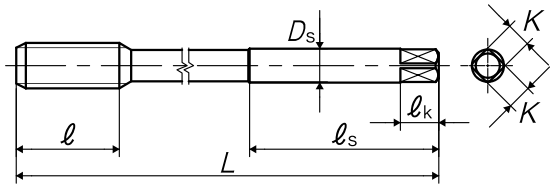
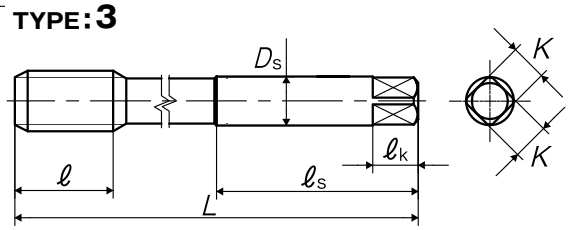


TYPE:3



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M4 × 0.7	P3	-	2.75P	100	11	17	40	5	4	7	3	1	△
M5 × 0.8	P3	-	2.75P	100	13	22	40	5.5	4.5	7	3	1	△
M6 × 1	P3	-	2.75P	100	15	26	40	6	4.5	7	3	1	△
M8 × 1.25	P3	-	2.75P	100 150	19	-	50	6.2	5	8	3	2	△
M10 × 1.5	P3	-	2.75P	150	23	-	50	7	5.5	8	3	2	△
M12 × 1.75	P3	-	2.75P	150	26	-	50	8.5	6.5	9	3	2	△
M16 × 2	P4	-	2.75P	150	26	-	60	12.5	10	13	3	2	△
M20 × 2.5	P4	-	2.75P	150	33	-	70	15	12	15	3	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

F-SP

Spiral Fluted Taps for High Speed Tapping

Specification

HSS Coating Synchro nized

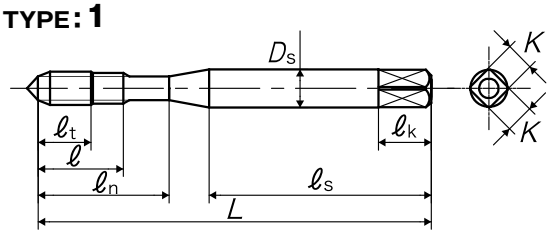
■Spiral Fluted Tap applicable for such high speed tapping as 15m/min to 25m/min. Under low tapping speed, poor chip shape and poor chip ejection may occur and cause tapping troubles.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
15~25 (m/min)	15~25 (m/min)

For icon explanation, refer to P.24

TYPE:1



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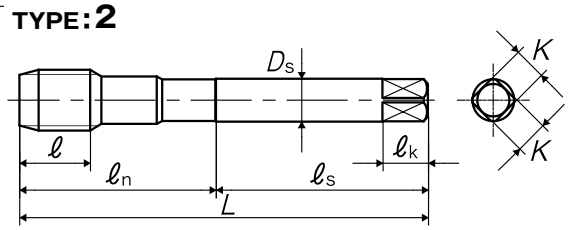
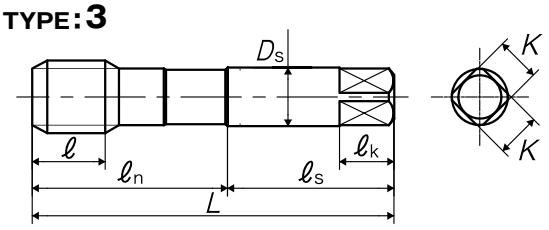


TYPE:3



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M3 × 0.5	P2	VFSHMQ3.0G	2.5P	46	5	9	14	26	4	3.2	6	3	1	○
M4 × 0.7	P2	VFSHMQ4.0I	2.5P	52	7	11	17	29	5	4	7	3	1	○
M5 × 0.8	P2	VFSHMQ5.0K	2.5P	60	9	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P2	VFSHMQ6.0M	2.5P	62	11	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P3	VFSHMR8.0N	2.5P	70	-	12	-	36	6.2	5	8	3	2	○
M10 × 1.5	P3	VFSHMR010O	2.5P	75	-	13	-	38	7	5.5	8	3	2	○
M10 × 1.25	P3	VFSHMR010N	2.5P	75	-	13	-	38	7	5.5	8	3	2	○
M12 × 1.75	P4	VFSHMS012P	2.5P	82	-	15	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P3	VFSHMR012O	2.5P	82	-	15	-	42	8.5	6.5	9	3	2	○
M12 × 1.25	P4	VFSHMS012N	2.5P	82	-	15	-	42	8.5	6.5	9	3	2	○
M16 × 2	P4	-	2.5P	95	-	18	-	48	12.5	10	13	3	2	△
M20 × 2.5	P4	-	2.5P	105	-	20	-	50	15	12	15	3	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-F-SP

Long Shank Spiral Fluted Taps for High Speed Tapping

Specification

HSS Coating Synchronized

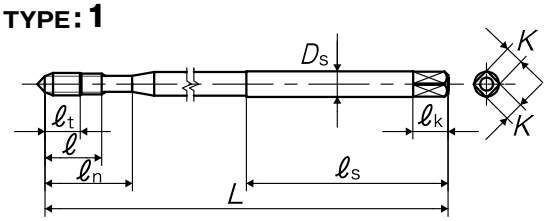
■Long Shank Spiral Fluted Tap applicable for such high speed tapping as 15m/min to 25m/min. Under low tapping speed, poor chip shape and poor chip ejection may occur and cause tapping troubles.

Recommended Tapping Speeds depending on Materials

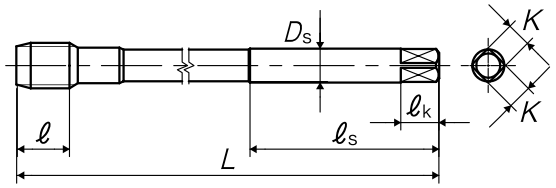
Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
15~25 (m/min)	15~25 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M3 × 0.5	P2	-	2.5P	100	5	9	14	40	4	3.2	6	3	1	△
M4 × 0.7	P2	-	2.5P	100	7	11	17	40	5	4	7	3	1	△
M5 × 0.8	P2	-	2.5P	100	9	13	22	40	5.5	4.5	7	3	1	△
M6 × 1	P2	-	2.5P	100	11	15	26	40	6	4.5	7	3	1	△
M8 × 1.25	P3	-	2.5P	100	-	12	-	50	6.2	5	8	3	2	△
M10 × 1.5	P3	-	2.5P	100	-	13	-	50	7	5.5	8	3	2	△
M12 × 1.75	P4	-	2.5P	150	-	15	-	50	8.5	6.5	9	3	2	△
M16 × 2	P4	-	2.5P	150	-	18	-	60	12.5	10	13	3	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

HFIHS

For Ultra Fast Tapping, Vertical Use. Spiral Fluted Taps for Carbon Steels

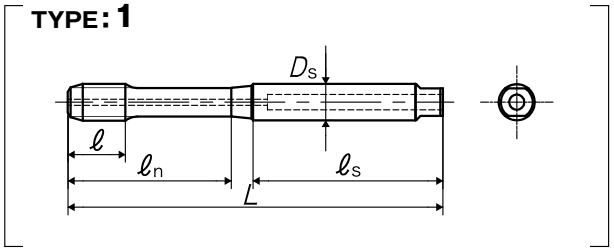
Specification

■Applicable for ultra high speed tapping. Having internal coolant hole(center through type), HFIHS is suitable for carbon steels and alloy steels, blind hole use. Vertical tapping use.

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE : 1



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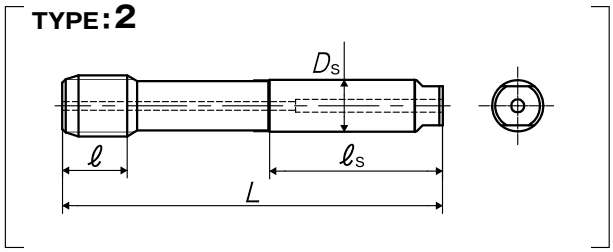


Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P4	HFIHSS6.0M	2.5P	62	11	27	32	6	-	-	3	1	○
M8 × 1.25	P4	HFIHSS8.0N	2.5P	70	12	-	36	8	-	-	3	2	○
M10 × 1.5	P4	HFIHSS010O	2.5P	75	13	-	37	10	-	-	3	2	○
M10 × 1.25	P4	HFIHSS010N	2.5P	75	12	-	37	10	-	-	3	2	○
M12 × 1.75	P4	HFIHSS012P	2.5P	82	15	-	40	12	-	-	3	2	○
M12 × 1.5	P4	HFIHSS012O	2.5P	82	14	-	40	12	-	-	3	2	○
M12 × 1.25	P4	HFIHSS012N	2.5P	82	14	-	40	12	-	-	3	2	○
M14 × 1.5	P4	HFIHSS014O	2.5P	88	14	-	40	12	-	-	3	2	○
M16 × 1.5	P4	HFIHSS016O	2.5P	95	14	-	43	16	-	-	3	2	○
M18 × 1.5	P4	HFIHSS018O	2.5P	100	14	-	45	16	-	-	4	2	○
M20 × 1.5	P5	HFIHST020O	2.5P	105	14	-	45	16	-	-	4	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

HFISP

For Ultra Fast Tapping, Horizontal Use. Low Spiral Fluted Taps for Carbon Steels

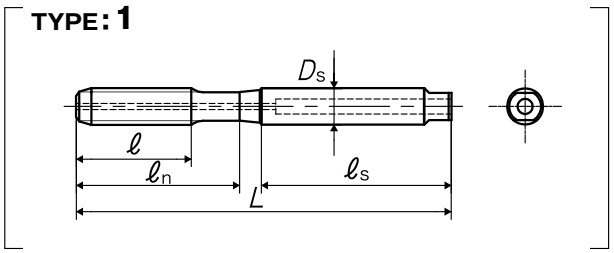
Specification

■Applicable for ultra high speed tapping. Having internal coolant hole(center through hole), HFISP is suitable for carbon steels and alloy steels, blind hole use. Effective in horizontal tapping use.

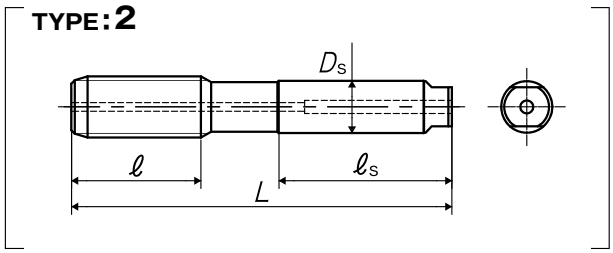
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE : 1



TYPE : 2



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P4	HFISPS6.0M	2.5P	62	19	27	32	6	-	-	3	1	○
M8 × 1.25	P4	HFISPS8.0N	2.5P	70	22	-	36	8	-	-	3	2	○
M10 × 1.5	P4	HFISPS010O	2.5P	75	24	-	37	10	-	-	3	2	○
M10 × 1.25	P4	HFISPS010N	2.5P	75	24	-	37	10	-	-	3	2	○
M12 × 1.75	P4	HFISPS012P	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.5	P4	HFISPS012O	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.25	P4	HFISPS012N	2.5P	82	29	-	40	12	-	-	3	2	○
M14 × 1.5	P4	HFISPS014O	2.5P	88	30	-	40	12	-	-	3	2	○
M16 × 1.5	P4	HFISPS016O	2.5P	95	32	-	43	16	-	-	3	2	○
M18 × 1.5	P4	HFISPS018O	2.5P	100	37	-	45	16	-	-	4	2	○
M20 × 1.5	P5	HFISPT020O	2.5P	105	37	-	45	16	-	-	4	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

HFAHS

For Ultra Fast Tapping, Vertical Use. Spiral Fluted Taps for Aluminum

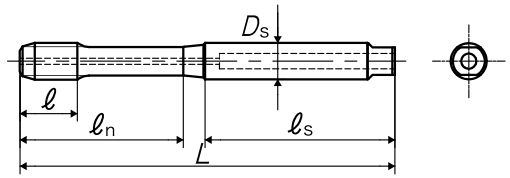
Specification

■Applicable for ultra high speed tapping. Having internal coolant hole(center through hole), HFAHS is suitable for aluminum castings, blind hole use. Effective in vertical tapping use.

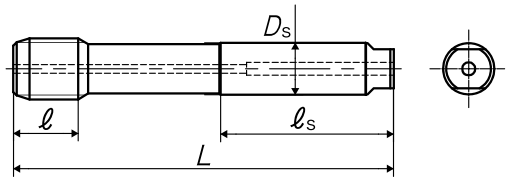
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE : 1



TYPE : 2



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P4	HFAHSS6.0M	2.5P	62	11	27	32	6	-	-	3	1	○
M8 × 1.25	P4	HFAHSS8.0N	2.5P	70	12	-	36	8	-	-	3	2	○
M10 × 1.5	P4	HFAHSS0100	2.5P	75	13	-	37	10	-	-	3	2	○
M10 × 1.25	P4	HFAHSS010N	2.5P	75	12	-	37	10	-	-	3	2	○
M12 × 1.75	P4	HFAHSS012P	2.5P	82	15	-	40	12	-	-	3	2	○
M12 × 1.5	P4	HFAHSS0120	2.5P	82	14	-	40	12	-	-	3	2	○
M12 × 1.25	P4	HFAHSS012N	2.5P	82	14	-	40	12	-	-	3	2	○
M14 × 1.5	P4	HFAHSS0140	2.5P	88	14	-	40	12	-	-	3	2	○
M16 × 1.5	P4	HFAHSS0160	2.5P	95	14	-	43	16	-	-	3	2	○
M18 × 1.5	P4	HFAHSS0180	2.5P	100	14	-	45	16	-	-	3	2	○
M20 × 1.5	P5	HFAHST0200	2.5P	105	14	-	45	16	-	-	3	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

HFASP

For Ultra Fast Tapping, Horizontal Use. Low Spiral Fluted Taps for Aluminum

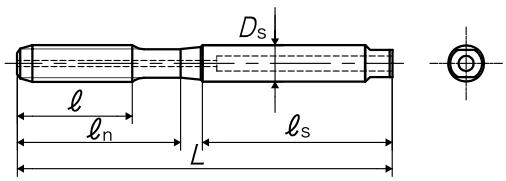
Specification

■Applicable for ultra high speed tapping. Having internal coolant hole(center through type), HFASP is suitable for aluminum castings, blind hole use. Effective in horizontal tapping use.

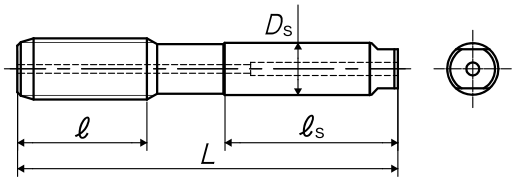
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE : 1



TYPE : 2



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P4	HFASPS6.0M	2.5P	62	19	27	32	6	-	-	3	1	○
M8 × 1.25	P4	HFASPS8.0N	2.5P	70	22	-	36	8	-	-	3	2	○
M10 × 1.5	P4	HFASPS0100	2.5P	75	24	-	37	10	-	-	3	2	○
M10 × 1.25	P4	HFASPS010N	2.5P	75	24	-	37	10	-	-	3	2	○
M12 × 1.75	P4	HFASPS012P	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.5	P4	HFASPS0120	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.25	P4	HFASPS012N	2.5P	82	29	-	40	12	-	-	3	2	○
M14 × 1.5	P4	HFASPS0140	2.5P	88	30	-	40	12	-	-	3	2	○
M16 × 1.5	P4	HFASPS0160	2.5P	95	32	-	43	16	-	-	3	2	○
M18 × 1.5	P4	HFASPS0180	2.5P	100	37	-	45	16	-	-	3	2	○
M20 × 1.5	P5	HFASPT0200	2.5P	105	37	-	45	16	-	-	3	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

HDISP

For Dry Tapping, Blind Hole Use. Spiral Fluted Taps for Steels

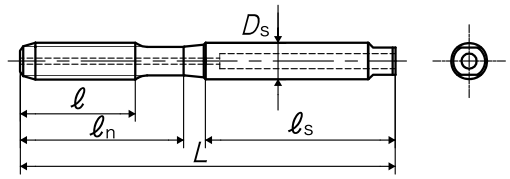
Specification

■Applicable for the tapping under mist or dry condition. Having internal coolant hole(center through type), HDISP is suitable for carbon steels and alloy steels, blind hole use. For both horizontal and vertical tapping use.

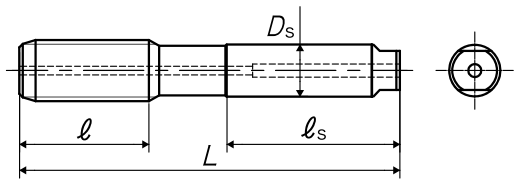
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P4	HDISPS6.0M	2.5P	62	19	27	32	6	-	-	3	1	○
M8 × 1.25	P4	HDISPS8.0N	2.5P	70	22	-	36	8	-	-	3	2	○
M10 × 1.5	P4	HDISPS010O	2.5P	75	24	-	37	10	-	-	3	2	○
M10 × 1.25	P4	HDISPS010N	2.5P	75	24	-	37	10	-	-	3	2	○
M12 × 1.75	P4	HDISPS012P	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.5	P4	HDISPS012O	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.25	P4	HDISPS012N	2.5P	82	29	-	40	12	-	-	3	2	○
M14 × 1.5	P4	HDISPS014O	2.5P	88	30	-	40	12	-	-	3	2	○
M16 × 1.5	P4	HDISPS016O	2.5P	95	32	-	43	16	-	-	3	2	○
M18 × 1.5	P4	HDISPS018O	2.5P	100	37	-	45	16	-	-	4	2	○
M20 × 1.5	P5	HDISPT020O	2.5P	105	37	-	45	16	-	-	4	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

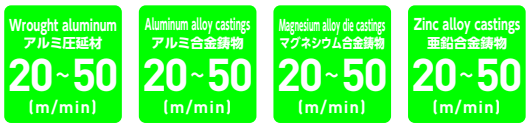
HDASP

For Dry Tapping, Blind Hole Use. Spiral Fluted Taps for Aluminum

Specification

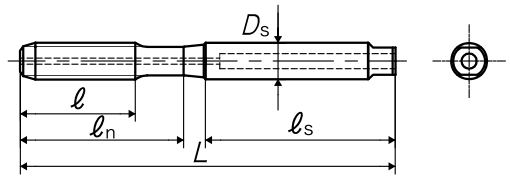
■Applicable for the tapping under mist or dry condition. Having internal coolant hole(center through type), HDASP is suitable for aluminum castings, blind hole use. For both horizontal and vertical tapping use.

Recommended Tapping Speeds depending on Materials



For icon explanation, refer to P.24

TYPE: 1



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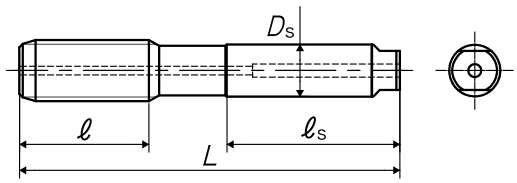


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P4	HDASPS6.0M	2.5P	62	19	27	32	6	-	-	3	1	○
M8 × 1.25	P4	HDASPS8.0N	2.5P	70	22	-	36	8	-	-	3	2	○
M10 × 1.5	P4	HDASPS010O	2.5P	75	24	-	37	10	-	-	3	2	○
M10 × 1.25	P4	HDASPS010N	2.5P	75	24	-	37	10	-	-	3	2	○
M12 × 1.75	P4	HDASPS012P	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.5	P4	HDASPS012O	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.25	P4	HDASPS012N	2.5P	82	29	-	40	12	-	-	3	2	○
M14 × 1.5	P4	HDASPS014O	2.5P	88	30	-	40	12	-	-	3	2	○
M16 × 1.5	P4	HDASPS016O	2.5P	95	32	-	43	16	-	-	3	2	○
M18 × 1.5	P4	HDASPS018O	2.5P	100	37	-	45	16	-	-	3	2	○
M20 × 1.5	P5	HDASPT020O	2.5P	105	37	-	45	16	-	-	3	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

SPIRAL FLUTED TAP SERIES FOR THROUGH HOLE

XSL	SL-1
AU+SL	SL-3
AUXSL	SL-5
SU+SL	SL-7
SUXSL	SL-9
ZET-P	SL-10
F-SL	SL-11
LS-F-SL	SL-12
HDISL	SL-13
MHSL	SL-15

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

XSL

X Series Spiral Fluted Taps, Through Hole Use (with LH spiral flutes)

Specification

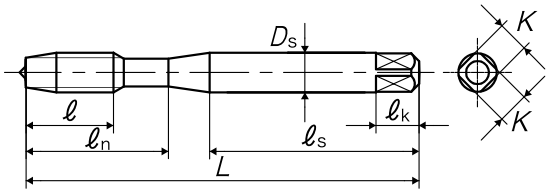
■Applying the blanks of high toughness and high accuracy, XSL, spiral fluted tap for through hole use (with LH spiral flutes), derives the maximum performance from high facility machining centers and high precision toolings.

※Use with dedicated toolings is recommended.

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE:1



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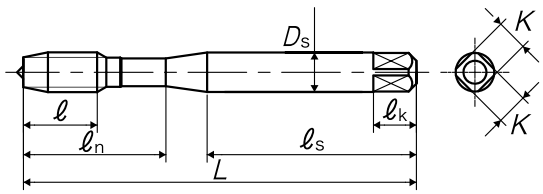


Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	SNXQ6.0ML	5P	80	15	30	45	6	4.9	8	3	1	○
M8 × 1.25	P3	SNXR8.0NL	5P	90	19	35	48	8	6.2	9	3	1	○
M8 × 1	P3	SNXR8.0ML	5P	90	15	35	48	8	6.2	9	3	2	○
M10 × 1.5	P3	SNXR010OL	5P	100	23	39	53	10	8	11	3	1	○
M10 × 1.25	P3	SNXR010NL	5P	100	19	39	53	10	8	11	3	2	○
M10 × 1	P3	SNXR010ML	5P	100	15	39	53	10	8	11	3	2	○
M12 × 1.75	P4	SNXS012PL	5P	110	26	45	56	12	9	12	3	1	○
M12 × 1.5	P3	SNXR012OL	5P	110	23	45	56	12	9	12	3	2	○
M12 × 1.25	P3	SNXR012NL	5P	110	19	45	56	12	9	12	3	2	○

Note:
- Please use tapping holders suitable for the shank diameter and square of DIN371 for M6～M10 and those of M16 (DIN376) for M12.
- Overall length, shank diameter and square of metric coarse series are adopted for those of metric fine series.

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MEMO

For improvement, spec may change without advance notice.
Think threads with YAMAWA

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AU+SL

Spiral Fluted Taps, Coated, Through Hole Use (with LH spiral flutes)

Specification

HSS | Coating | <2D

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

Stainless steels ステンレス鋼	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~10 (m/min)	20~30 (m/min)	20~30 (m/min)

For icon explanation, refer to P.24

Tapping data

Tapping condition (M6×1)

Work material	SCM440
Tapping speed	15m/min
Hole size	ϕ5.0
Tapping length	9mm, through hole
Machine	Vertical machining center
Tapping fluid	Water soluble oil (Chlorine-free, 20 fold dilution)

Chamfer condtion after 3,000 hole tapping

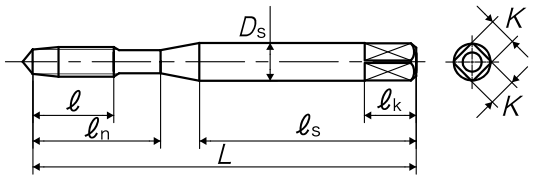
Product features

- Special left hand spiral flute design enables the smooth chip ejection even in high speed tapping area.
- AU+SL ensures the smooth chip ejection in the wide range of work materials from steels to stainless steels.
- Change of marking position from shank into square portion:
  Laser marking can roughen the shank surface. In order to keep high accuracy of shank circularity and diameter, marking has been transferred from shank to square portion.
- AU+SL adopts a special flute design enabling coating features to show their best efficiency, and is applicable to the wide range of work materials. AU+SL also runs well even in water soluble cutting oil.

Smooth chip ejection

Think threads with YAMAWA
For improvement, spec may change without advance notice.

TYPE : 1



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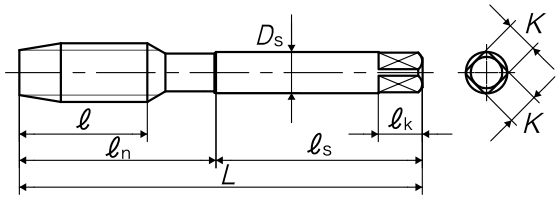


Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	VSAPQ3.0GL	5P	46	9	14	26	4	3.2	6	3	1	◎
M4 × 0.7	P3	VSAPR4.0IL	5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	P3	VSAPR5.0KL	5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	P3	VSAPR6.0ML	5P	62	15	26	33	6	4.5	7	3	1	◎
M8 × 1.25	P3	VSAPR8.0NL	5P	70	19	-	36	6.2	5	8	3	2	◎
M8 × 1	P3	VSAPR8.0ML	5P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P3	VSAPR100L	5P	75	23	-	38	7	5.5	8	3	2	◎
M10 × 1.25	P3	VSAPR010NL	5P	75	23	-	38	7	5.5	8	3	2	◎
M10 × 1	P3	VSAPR010ML	5P	75	23	-	38	7	5.5	8	3	2	○
M12 × 1.75	P4	VSAPS012PL	5P	82	26	-	42	8.5	6.5	9	3	2	◎
M12 × 1.5	P3	VSAPR120L	5P	82	26	-	42	8.5	6.5	9	3	2	◎
M12 × 1.25	P3	VSAPR012NL	5P	82	26	-	42	8.5	6.5	9	3	2	◎

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AUXSL

X Series Spiral Fluted Taps, Coated, Through Hole Use (with LH spiral flutes)

Specification

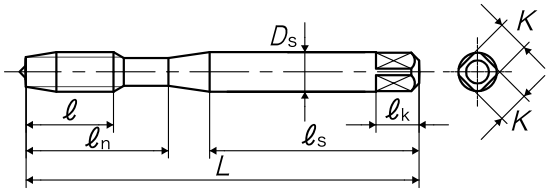
■Applying the blanks of high toughness and high accuracy, AUXSL, spiral fluted tap, coated, for through hole use (with LH spiral flutes), derives the maximum performance from high facility machining centers and high precision toolings. Optimum coating for the tapping condition.

※Use with dedicated toolings is recommended.

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE:1



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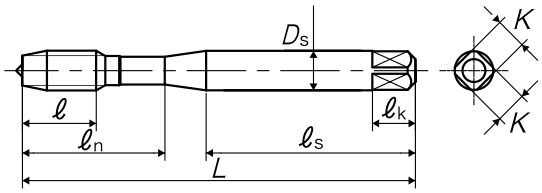


Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	VSAXQ6.0ML	5P	80	15	30	45	6	4.9	8	3	1	○
M8 × 1.25	P3	VSAXR8.0NL	5P	90	19	35	48	8	6.2	9	3	1	○
M8 × 1	P3	VSAXR8.0ML	5P	90	15	35	48	8	6.2	9	3	2	○
M10 × 1.5	P3	VSAXR010OL	5P	100	23	39	53	10	8	11	3	1	○
M10 × 1.25	P3	VSAXR010NL	5P	100	19	39	53	10	8	11	3	2	○
M10 × 1	P3	VSAXR010ML	5P	100	15	39	53	10	8	11	3	2	○
M12 × 1.75	P4	VSAXS012PL	5P	110	26	45	56	12	9	12	3	1	○
M12 × 1.5	P3	VSAXR012OL	5P	110	23	45	56	12	9	12	3	2	○
M12 × 1.25	P3	VSAXR012NL	5P	110	19	45	56	12	9	12	3	2	○

Note:
- Please use tapping holders suitable for the shank diameter and square of DIN371 for M6～M10 and those of M16 (DIN376) for M12.
- Overall length, shank diameter and square of metric coarse series are adopted for those of metric fine series.

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

MEMO

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SU+SL

Spiral Fluted Taps for Stainless Steels, Through Hole Use (with LH spiral flutes)

Specification

HSS | OX Oxide | <2D

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
10~15 (m/min)	10~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

Product features

- Suitable for stainless steels tending to work-harden and sticky, as well as chrome steels and molybdenum steels, through hole use.
- Recommended speed : 5～15m/min
- In tapping SUS304, SU+SL has more than 3 times longer tool life than SU-PO. Even in 2000 tapping holes, the surface of thread finish is good and the shape of threads is clearly stable.
- Adopting left hand spiral flutes, compared with SU-PO, SU+SL improves the chip ejection and realizes longer tool life.

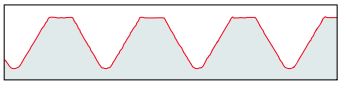
Tapping data

Tapping condition (M5×0.8)

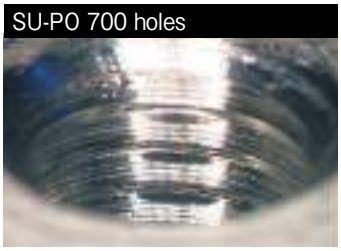
Work material	SUS304(90HRB)
Tapping speed	15m/min
Hole size	ϕ4.2
Tapping length	12mm, through hole
Machine	Vertical machining center
Tapping fluid	Insoluble oil without chlorine

Comparison of internal threads

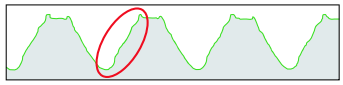
Roughness of thread flank face RA=1.1μm



Shape of internal thread



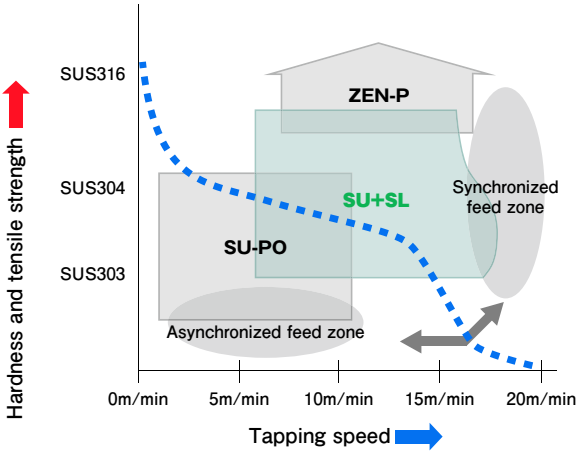
Roughness of thread flank face RA=2.0μm



Shape of internal thread

Product System

System table of taps for stainless steel, through hole use



Obtainable from Video site shown in right

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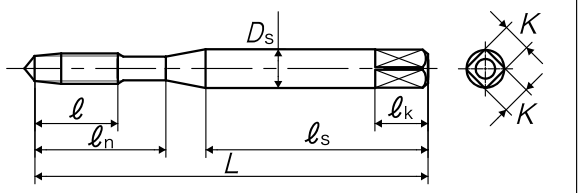


Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	SUPQ3.0GL	5P	46	9	14	26	4	3.2	6	3	1	◎
M4 × 0.7	P2	SUPQ4.0IL	5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	P3	SUPR5.0KL	5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	P2	SUPQ6.0ML	5P	62	15	26	33	6	4.5	7	3	1	◎

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SUXSL

X Series Spiral Fluted Taps for Stainless Steels, Through Hole Use (with LH spiral flutes)

Specification

HSS | OX Oxide | Synchronized | <2D

■Applying the blanks of high toughness and high accuracy, SUXSL, spiral fluted tap for stainless steels, through hole use (with LH spiral flutes), derives the maximum performance from high facility machining centers and high precision toolings.

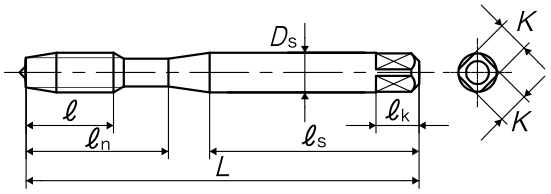
※Use with dedicated toolings is recommended.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

For icon explanation, refer to P.24

TYPE:1



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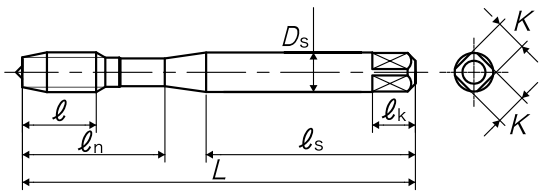


Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	SUXQ6.0ML	5P	80	15	30	45	6	4.9	8	3	1	○
M8 × 1.25	P3	SUXR8.0NL	5P	90	19	35	48	8	6.2	9	3	1	○
M8 × 1	P3	SUXR8.0ML	5P	90	15	35	48	8	6.2	9	3	2	○
M10 × 1.5	P3	SUXR010OL	5P	100	23	39	53	10	8	11	3	1	○
M10 × 1.25	P3	SUXR010NL	5P	100	19	39	53	10	8	11	3	2	○
M10 × 1	P3	SUXR010ML	5P	100	15	39	53	10	8	11	3	2	○
M12 × 1.75	P4	SUXS012PL	5P	110	26	45	56	12	9	12	3	1	○
M12 × 1.5	P4	SUXS012OL	5P	110	23	45	56	12	9	12	3	2	○
M12 × 1.25	P4	SUXS012NL	5P	110	19	45	56	12	9	12	3	2	○

Note:

・Please use tapping holders suitable for the shank diameter and square of DIN371 for M6～M10 and those of M16 (DIN376) for M12.

・Overall length, shank diameter and square of metric coarse series are adopted for those of metric fine series.

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

ZET-P

Spiral Fluted Taps for Titanium Alloys, Through Hole Use (with LH spiral flutes)

Specification

HSS-P | NI Nitride | Synchro nized

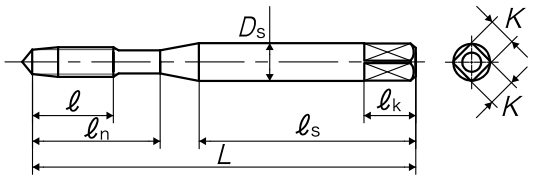
■ZET-P, spiral fluted tap, through hole use (with LH spiral flutes), is suitable for titanium alloys which, having titanium as the main composition, are tough, light, and heat resistant.

Recommended Tapping Speeds depending on Materials

Titanium alloys チタン合金 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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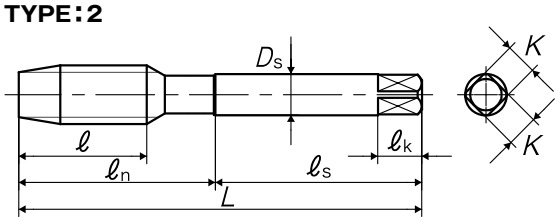

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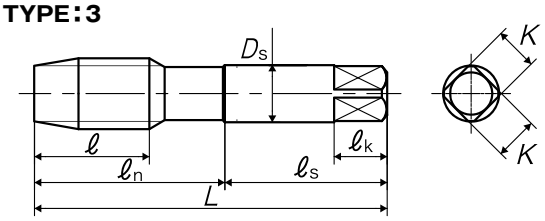


Segment : 1T

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P3	ZETPMR3.0G	5P	46	9	14	26	4	3.2	6	3	1	○
M4 × 0.7	P3	ZETPMR4.0I	5P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P3	ZETPMR5.0K	5P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P3	ZETPMR6.0M	5P	62	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P4	ZETPMS8.0N	5P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P4	ZETPMS010O	5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P4	ZETPMS010N	5P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P5	ZETPMT012P	5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P4	ZETPMS012O	5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P5	ZETPMT012N	5P	82	26	-	42	8.5	6.5	9	3	2	△
M14 × 2	P5	ZETPMT014Q	5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.5	P4	ZETPMS014O	5P	88	26	-	45	10.5	8	11	3	2	△
M16 × 2	P5	ZETPMT016Q	5P	95	26	-	48	12.5	10	13	3	2	△
M16 × 1.5	P4	ZETPMS016O	5P	95	26	-	48	12.5	10	13	3	2	△
M18 × 2.5	P5	ZETPMT018R	5P	100	33	-	51	14	11	14	4	2	△
M18 × 1.5	P5	ZETPMT018O	5P	100	33	-	51	14	11	14	4	2	△
M20 × 2.5	P5	ZETPMT020R	5P	105	33	-	50	15	12	15	4	3	△
M20 × 1.5	P5	ZETPMT020O	5P	105	33	-	50	15	12	15	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

F-SL

Spiral Fluted Taps for High Speed Tapping, Through Hole Use (with LH spiral flutes)

Specification

HSS Coating Synchronized

■F-SL, spiral fluted tap, through hole use (with LH spiral flutes) is applicable for such high speed tapping as 15m/min to 25m/min. Under low tapping speed, chip shape and chip ejection may become poor and cause tapping troubles.

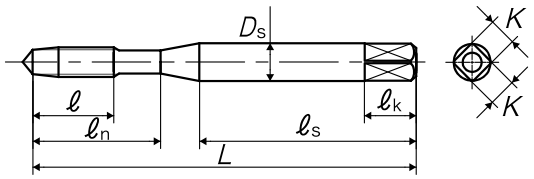
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 15~25 (m/min)

Medium carbon steels 中炭素鋼 15~25 (m/min)

For icon explanation, refer to P.24

TYPE : 1



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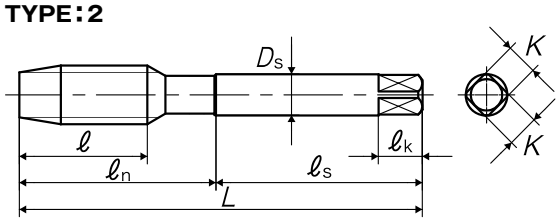


Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	VFSHMQ3.0GL	5P	46	9	14	26	4	3.2	6	3	1	○
M4 × 0.7	P2	VFSHMQ4.0IL	5P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P2	VFSHMQ5.0KL	5P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P2	VFSHMQ6.0ML	5P	62	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P3	VFSHMR8.0NL	5P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P3	VFSHMR010OL	5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P3	VFSHMR010NL	5P	75	23	-	38	7	5.5	8	3	2	○
M12 × 1.75	P4	VFSHMS012PL	5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P3	VFSHMR012OL	5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.25	P4	VFSHMS012NL	5P	82	26	-	42	8.5	6.5	9	3	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

LS-F-SL

Long Shank Spiral Fluted Taps for High Speed Tapping, Through Hole Use (with LH spiral flutes)

Specification

HSS Coating Synchronized

■LS-F-SL, long shank spiral fluted tap, through hole use (with LH spiral flutes) is applicable for such high speed tapping as 15m/min to 25m/min. Under low tapping speed, chip shape and chip ejection may become poor and cause tapping troubles.

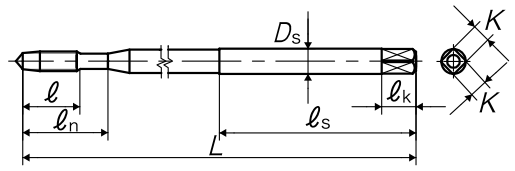
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 15~25 (m/min)

Medium carbon steels 中炭素鋼 15~25 (m/min)

For icon explanation, refer to P.24

TYPE:1



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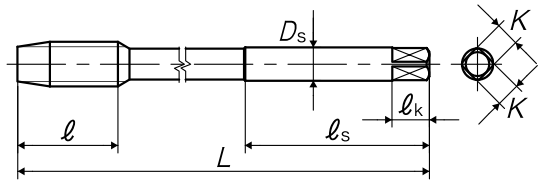


Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	-	5P	100	9	14	40	4	3.2	6	3	1	△
M4 × 0.7	P2	-	5P	100	11	17	40	5	4	7	3	1	△
M5 × 0.8	P2	-	5P	100	13	22	40	5.5	4.5	7	3	1	△
M6 × 1	P2	-	5P	100	15	26	40	6	4.5	7	3	1	△
M8 × 1.25	P3	-	5P	100	19	-	50	6.2	5	8	3	2	△
M10 × 1.5	P3	-	5P	100	23	-	50	7	5.5	8	3	2	△
M12 × 1.75	P4	-	5P	150	26	-	50	8.5	6.5	9	3	2	△

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Think threads with YAMAWA

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HDISL

Spiral Fluted Taps for Steels, for Dry Tapping and for Ultra High Speed Tapping, Through Hole Use (with LH spiral fluted)

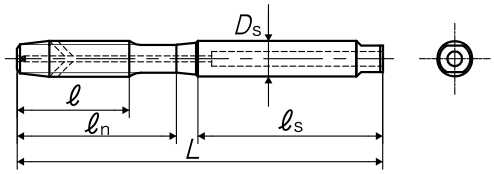
Specification

■Tapping under ultra high speed and under mist and dry, is possible with HDISL. For through hole use (with LH spiral flutes) for both vertical and horizontal use.

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE:1



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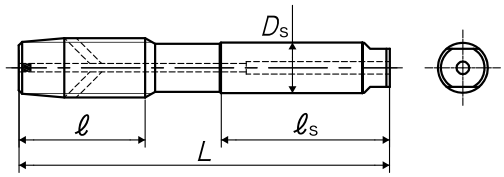


Segment : 1T

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P4	HDISLS6.0M	5P	62	19	27	32	6	-	-	3	1	○
M8 × 1.25	P4	HDISLS8.0N	5P	70	22	-	36	8	-	-	3	2	○
M10 × 1.5	P4	HDISLS0100	5P	75	24	-	37	10	-	-	3	2	○
M10 × 1.25	P4	HDISLS010N	5P	75	24	-	37	10	-	-	3	2	○
M12 × 1.75	P4	HDISLS012P	5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.5	P4	HDISLS0120	5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.25	P4	HDISLS012N	5P	82	29	-	40	12	-	-	3	2	○
M14 × 1.5	P4	HDISLS0140	5P	88	30	-	40	12	-	-	3	2	○
M16 × 1.5	P4	HDISLS0160	5P	95	32	-	43	16	-	-	3	2	○
M18 × 1.5	P4	HDISLS0180	5P	100	37	-	45	16	-	-	4	2	○
M20 × 1.5	P5	HDISLT0200	5P	105	37	-	45	16	-	-	4	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MEMO

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

MHSL

Spiral Fluted Taps for Carbon Steels of middle hardness, Through Hole Use (with LH spiral flutes)

Specification

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

Product features

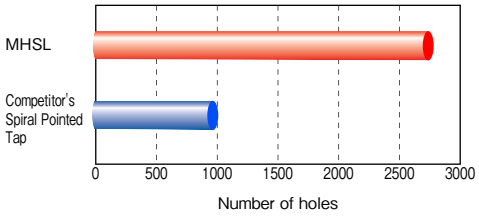
- Most suitable for forgings and thermal refined steels of S48C～S55C (20～30HRC)
- MHSL ensures a long tool life by adopting HSS material of high wear resistance, and special coating.
- Adopting proprietary flute design, MHSL ensures consistent chip ejection in the area of middle tapping speed, and improves surface roughness of internal threads.

Tapping data

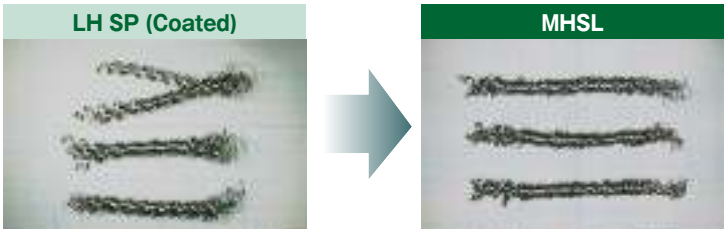
Tapping condition (M12×1.25)

Work material	S53C (forging) / Hub bearing
Tapping speed	30m/min
Hole size	φ10.8mm
Tapping length	12mm, through hole
Machine	Horizontal machining center (Synchronized feed)
Tapping fluid	Water soluble oil

Tapping result (number of holes)

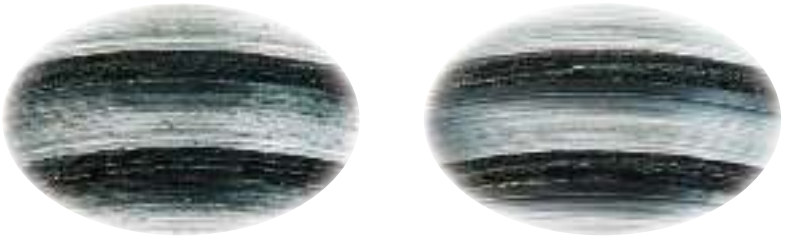


【Smooth chip ejection】



MHSL smoothly pushes out chips.

【Internal Threads】



LH SP (Coated)　　MHSL

Think threads with YAMAWA
For improvement, spec may change without advance notice.

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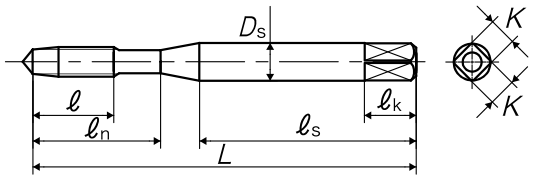

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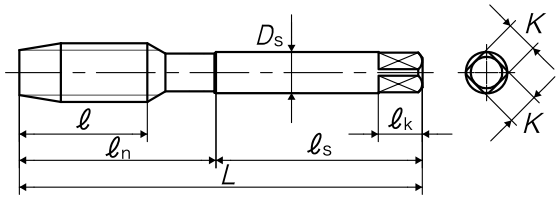

Segment : 1T

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P3	MHSLR6.0M5	5P	62	15	26	33	6	4.5	7	3	1	◎
M8 × 1.25	P4	MHSLS8.0N5	5P	70	19	-	36	6.2	5	8	3	2	◎
M10 × 1.5	P4	MHSLS010O5	5P	75	23	-	38	7	5.5	8	3	2	◎
M10 × 1.25	P4	MHSLS010N5	5P	75	23	-	38	7	5.5	8	3	2	◎
M12 × 1.75	P5	MHSLT012P5	5P	82	26	-	42	8.5	6.5	9	4	2	◎
M12 × 1.5	P5	MHSLT012O5	5P	82	26	-	42	8.5	6.5	9	4	2	◎
M12 × 1.25	P5	MHSLT012N7	7P	82	26	-	42	8.5	6.5	9	4	2	◎
M14 × 1.5	P5	MHSLT014O7	7P	88	26	-	45	10.5	8	11	4	2	◎
M16 × 1.5	P5	MHSLT016O7	7P	95	26	-	48	12.5	10	13	4	2	◎

MEMO

SPIRAL POINTED TAP SERIES

IPO	PO-1
PO	PO-3
+PO	PO-10
PO OX	PO-11
+PO OX	PO-13
PO LH	PO-14
PO V	PO-16
LS-PO	PO-17
LS-PO V	PO-21
LS-PO-K	PO-22
SU+PO/SU-PO	PO-23
LS-SU-S-PO	PO-26
S-PO	PO-27
HC+PO/HC-PO	PO-29
AL-PO	PO-31
MC-PO	PO-32
EH-PO	PO-33
ZEN-P	PO-34
PM-PO	PO-35
LS-PM-PO	PO-36

IPO

Spiral Pointed Taps for General Purpose

Specification

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

Product features

- IPO is the best tap for through holes to be used with lower cutting speed on drilling machines.
- Use for threading of the iron (SPC or SS400) products used in our daily life.
- Surface treated. Oxidization, the most suitable surface treatment for iron products.
- Suitable for internal thread cutting in small quantity, such as tapping of test pieces.
- Having spiral points in the chamfer portion, IPO ejects chips forward in the tapping direction and is for through hole use.

Tapping for through holes

How to use IPO

- Start tapping after boring holes corresponding to the thread size by using drills.
- In the case of tapping with drilling machines, recommended tapping speed is slower than 5m/min.
- During tapping, please use tapping oil.

When hand tapping, always use tap wrench

Machine tapping with drilling machine

■Table for bored and drilled hole sizes

unit:mm

Size	Minor diameter of internal thread size			Drill size	Thread engagement
	Minimum tolerance	Maximum tolerance			
		6H (2nd class)	7H (3rd class)		
M3 × 0.5	2.459	2.599	2.639	2.6 (2.5)	74% (92%)
M4 × 0.7	3.242	3.422	3.466	3.4 (3.3)	79% (92%)
M5 × 0.8	4.134	4.344	4.384	4.3 (4.2)	81% (92%)
M6 × 1	4.917	5.153	5.217	5.1 (5.0)	83% (92%)
M8 × 1.25	6.647	6.912	6.982	6.9 (6.8)	91% (89%)
M10 × 1.5	8.376	8.676	8.751	8.6 (8.5)	86% (92%)

note1) Recommended drill sizes shown in this table are for internal threads of 7H class (3rd class), and are selected from the standard drills available in the market.

note2) Drill sizes shown in brackets in this table are for such case as the drilling has oversize cutting tendency or for internal threads of 6H class (2nd class).

Blister Pack

【Related products】

Shank adjuster

- For deep hole tappings, please use shank adjusters.
- There is only a one touch motion required to detach and attach the I series taps (IHT/ISP/IPO) from or to the shank adjuster.

*For details of shank adjuster, refer to P.296

Think threads with YAMAWA

For improvement, spec may change without advance notice.

Obtainable from Video site shown in right

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

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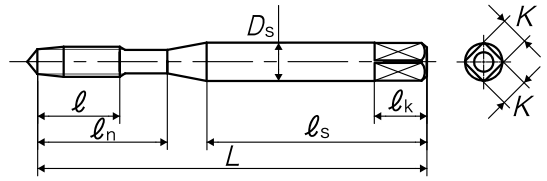

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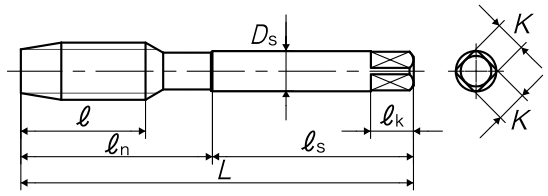


Segment : 1E

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	PI73.0G	5P	46	9	14	26	4	3.2	6	3	1	◎
M4 × 0.7	PI74.0I	5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	PI75.0K	5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	PI76.0M	5P	62	15	26	33	6	4.5	7	3	1	◎
M8 × 1.25	PI78.0N	5P	70	19	-	36	6.2	5	8	3	2	◎
M10 × 1.5	PI70100	5P	75	23	-	38	7	5.5	8	3	2	◎

Blister Pack

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	PI73.0GBP	5P	46	9	14	26	4	3.2	6	3	1	◎
M4 × 0.7	PI74.0IBP	5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	PI75.0KBP	5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	PI76.0MBP	5P	62	15	26	33	6	4.5	7	3	1	◎
M8 × 1.25	PI78.0NBP	5P	70	19	-	36	6.2	5	8	3	2	◎
M10 × 1.5	PI70100BP	5P	75	23	-	38	7	5.5	8	3	2	◎

PO

Spiral Pointed Taps

Specification

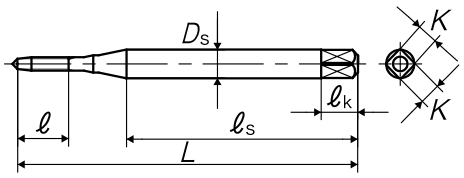
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels
中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE: 1



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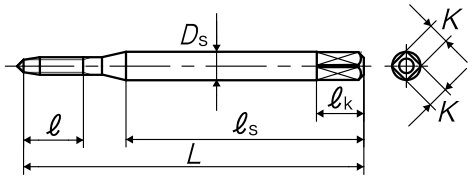

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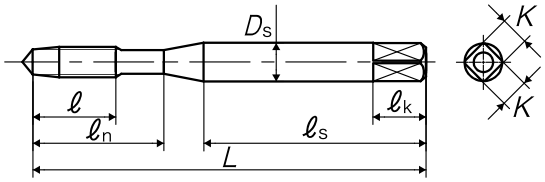

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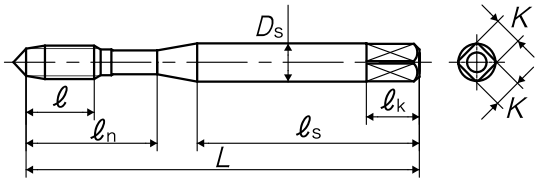

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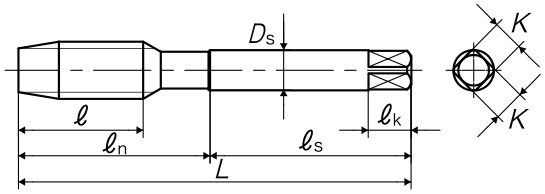

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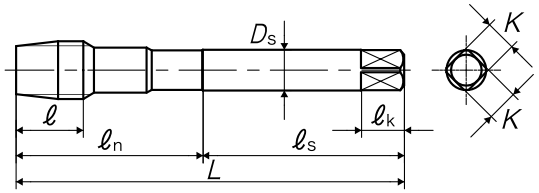
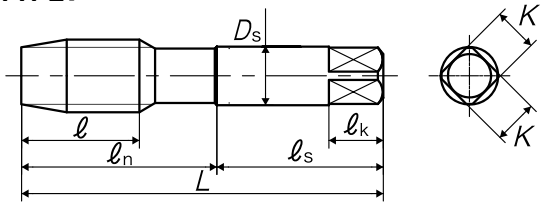


TYPE: 7



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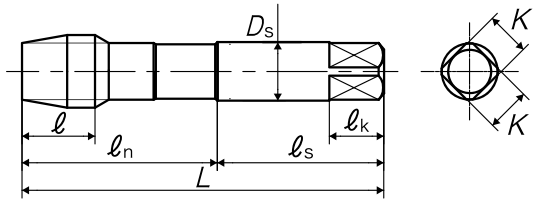

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO Spiral Pointed Taps

Oversize

Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.2 × 0.25	P1	POP1.2B	5P	36	4.5	-	24	3	2.5	5	2	1	○
M1.4 × 0.3	P1	POP1.4C	5P	36	5.4	-	24	3	2.5	5	2	1	◎
	P2	POQ1.4C											○
	P3	POR1.4C											△
M1.6 × 0.35	P2	POQ1.6D	5P	36	6.3	-	24	3	2.5	5	2	2	◎
	P3	POR1.6D											△
M1.7 × 0.35	P2	POQ1.7D	5P	36	6.3	-	24	3	2.5	5	2	2	◎
	P3	POR1.7D											○
	P4	POS1.7D											△
M1.8 × 0.35	P2	POQ1.8D	5P	42	6.3	-	27	3	2.5	5	2	2	△
M2 × 0.4	P2	POQ2.0E	5P	42	7.2	12	27	3	2.5	5	3	3	◎
	P3	POR2.0E											○
	P4	POS2.0E											
M2 × 0.25	P1	POP2.0B	5P	42	4.5	12	27	3	2.5	5	3	4	△
M2.2 × 0.45	P2	POQ2.2F	5P	42	8.1	12	27	3	2.5	5	3	3	○
M2.2 × 0.25	P2	POQ2.2B	5P	42	4.5	12	27	3	2.5	5	3	4	△
M2.3 × 0.4	P2	POQ2.3E	5P	42	7.2	12	27	3	2.5	5	3	3	○
	P3	POR2.3E											
	P4	POS2.3E											△
M2.5 × 0.45	P2	POQ2.5F	5P	46	8.1	14	29	3	2.5	5	3	3	◎
	P3	POR2.5F											○
	P4	POS2.5F											△
M2.5 × 0.35	P2	POQ2.5D	5P	46	6.3	14	29	3	2.5	5	3	4	△
M2.6 × 0.45	P2	POQ2.6F	5P	46	8.1	14	29	3	2.5	5	3	3	◎
	P3	POR2.6F											○
	P4	POS2.6F											△
M2.6 × 0.35	P2	POQ2.6D	5P	46	6.3	14	29	3	2.5	5	3	4	△
M3 × 0.5	P2	POQ3.0G	5P	46	9	14	26	4	3.2	6	3	3	◎
	P3	POR3.0G											○
	P4	POS3.0G											
3M0.6	P2	POQ3.0H	5P	46	9	14	26	4	3.2	6	3	3	△
M3 × 0.35	P2	POQ3.0D	5P	46	6.5	14	26	4	3.2	6	3	4	△
M3.5 × 0.6	P2	POQ3.5H	5P	52	11	16	29	5	4	7	3	3	○
	P3	POR3.5H											△
	P4	POS3.5H											
M3.5 × 0.35	P2	POQ3.5D	5P	52	6.5	16	29	5	4	7	3	4	△
M4 × 0.7	P2	POQ4.0I	5P	52	11	17	29	5	4	7	3	3	◎
	P3	POR4.0I											○
	P4	POS4.0I											
4M0.75	P2	POQ4.0J	5P	52	11	17	29	5	4	7	3	3	△
M4 × 0.5	P2	POQ4.0G	5P	52	9	17	29	5	4	7	3	4	○
M4.5 × 0.75	P2	POQ4.5J	5P	60	13	21	33	5.5	4.5	7	3	3	△
M4.5 × 0.5	P2	POQ4.5G	5P	60	9	21	33	5.5	4.5	7	3	4	△
M5 × 0.8	P2	POQ5.0K	5P	60	13	22	33	5.5	4.5	7	3	3	◎
	P3	POR5.0K											○
	P4	POS5.0K											
5M0.9	P2	POQ5.0L	5P	60	13	22	33	5.5	4.5	7	3	3	△

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Think threads with YAMAWA

PO Spiral Pointed Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M5 × 0.5	P2	POQ5.0G	5P	60	9	22	33	5.5	4.5	7	3	4	○
M5.5 × 0.9	P2	POQ5.5L	5P	62	15	26	33	6	4.5	7	3	3	△
M5.5 × 0.5	P2	POQ5.5G	5P	62	9	26	33	6	4.5	7	3	4	△
M6 × 1	P2	POQ6.0M	5P	62	15	26	33	6	4.5	7	3	3	◎
	P3	POR6.0M											○
	P4	POS6.0M											
M6 × 0.75	P2	POQ6.0J	5P	62	15	26	33	6	4.5	7	3	3	○
	P3	POR6.0J											△
M6 × 0.5	P2	POQ6.0G	5P	62	9	26	33	6	4.5	7	3	4	△
M7 × 1	P2	POQ7.0M	5P	70	19	-	36	6.2	5	8	3	5	○
	P3	POR7.0M											△
M7 × 0.75	P2	POQ7.0J	5P	70	19	-	36	6.2	5	8	3	5	△
	P3	POR7.0J											
M7 × 0.5	P2	POQ7.0G	5P	70	10	-	36	6.2	5	8	3	6	△
M8 × 1.25	P3	POR8.0N	5P	70	19	-	36	6.2	5	8	3	5	◎
	P4	POS8.0N											○
M8 × 1	P3	POR8.0M	5P	70	19	-	36	6.2	5	8	3	5	○
	P4	POS8.0M											△
M8 × 0.75	P3	POR8.0J	5P	70	19	-	36	6.2	5	8	3	5	○
M8 × 0.5	P2	POQ8.0G	5P	70	10	-	36	6.2	5	8	3	6	△
M9 × 1.25	P3	POR9.0N	5P	75	23	-	38	7	5.5	8	3	5	△
M9 × 1	P3	POR9.0M	5P	75	23	-	38	7	5.5	8	3	5	△
M9 × 0.75	P3	POR9.0J	5P	75	13	-	38	7	5.5	8	3	6	△
M9 × 0.5	P2	POQ9.0G	5P	75	11	-	38	7	5.5	8	3	6	△
M10 × 1.5	P3	POR010O	5P	75	23	-	38	7	5.5	8	3	5	◎
	P4	POS010O											○
M10 × 1.25	P3	POR010N	5P	75	23	-	38	7	5.5	8	3	5	◎
	P4	POS010N											△
M10 × 1	P3	POR010M	5P	75	23	-	38	7	5.5	8	3	5	○
	P4	POS010M											△
M10 × 0.75	P3	POR010J	5P	75	13	-	38	7	5.5	8	3	6	△
M10 × 0.5	P2	POQ010G	5P	75	11	-	38	7	5.5	8	3	6	△
M11 × 1.5	P4	POS011O	5P	82	26	-	42	8.5	6.5	9	3	5	△
M11 × 1.25	P3	POR011N	5P	82	26	-	42	8.5	6.5	9	3	5	△
M11 × 1	P3	POR011M	5P	82	26	-	42	8.5	6.5	9	3	5	△
M11 × 0.75	P3	POR011J	5P	82	14	-	42	8.5	6.5	9	3	6	△
M11 × 0.5	P2	POQ011G	5P	82	12	-	42	8.5	6.5	9	3	6	△
M12 × 1.75	P4	POS012P	5P	82	26	-	42	8.5	6.5	9	3	5	◎
	P5	POT012P											△
M12 × 1.5	P3	POR012O	5P	82	26	-	42	8.5	6.5	9	3	5	○
	P4	POS012O											△
	P5	POT012O											
M12 × 1.25	P4	POS012N	5P	82	26	-	42	8.5	6.5	9	3	5	○
	P5	POT012N											△
M12 × 1	P3	POR012M	5P	82	26	-	42	8.5	6.5	9	3	5	○
	P4	POS012M											△
M12 × 0.75	P3	POR012J	5P	82	14	-	42	8.5	6.5	9	3	6	△
M12 × 0.5	P2	POQ012G	5P	82	12	-	42	8.5	6.5	9	3	6	△
M13 × 1.5	P3	POR013O	5P	88	26	-	45	10.5	8	11	3	5	△
M13 × 1	P3	POR013M	5P	88	26	-	45	10.5	8	11	3	5	△

Think threads with YAMAWA

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO Spiral Pointed Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M14 × 2	P4	POS014Q	5P	88	26	-	45	10.5	8	11	3	5	○
	P5	POT014Q											△
M14 × 1.5	P3	POR014O	5P	88	26	-	45	10.5	8	11	3	5	○
	P4	POS014O											△
	P5	POT014O											
M14 × 1.25	P3	POR014N	5P	88	26	-	45	10.5	8	11	3	5	△
M14 × 1	P3	POR014M	5P	88	26	-	45	10.5	8	11	3	5	○
M14 × 0.75	P3	POR014J	5P	88	15	-	45	10.5	8	11	3	6	△
M15 × 2	P4	POS015Q	5P	95	26	-	48	12.5	10	13	3	5	△
M15 × 1.5	P3	POR015O	5P	95	26	-	48	12.5	10	13	3	5	△
M15 × 1	P3	POR015M	5P	95	26	-	48	12.5	10	13	3	5	△
M16 × 2	P4	POS016Q	5P	95	26	-	48	12.5	10	13	3	5	◎
	P5	POT016Q											△
M16 × 1.5	P3	POR016O	5P	95	26	-	48	12.5	10	13	3	5	○
	P4	POS016O											△
	P5	POT016O											
M16 × 1	P3	POR016M	5P	95	26	-	48	12.5	10	13	3	5	○
M18 × 2.5	P4	POS018R	5P	100	33	-	51	14	11	14	3	5	○
	P5	POT018R											△
M18 × 2	P4	POS018Q	5P	100	33	-	51	14	11	14	3	5	△
M18 × 1.5	P4	POS018O	5P	100	33	-	51	14	11	14	3	5	○
	P5	POT018O											△
M18 × 1	P3	POR018M	5P	100	18	-	51	14	11	14	3	6	○
M20 × 2.5	P4	POS020R	5P	105	33	-	50	15	12	15	3	7	◎
	P5	POT020R											△
M20 × 2	P4	POS020Q	5P	105	33	-	50	15	12	15	3	7	△
M20 × 1.5	P4	POS020O	5P	105	33	-	50	15	12	15	3	7	○
	P5	POT020O											△
M20 × 1	P3	POR020M	5P	105	18	-	50	15	12	15	3	8	○
M22 × 2.5	P4	POS022R	5P	115	33	-	55	17	13	16	3	7	○
	P5	POT022R											△
M22 × 2	P4	POS022Q	5P	115	33	-	55	17	13	16	3	7	△
M22 × 1.5	P4	POS022O	5P	115	33	-	55	17	13	16	3	7	○
	P5	POT022O											△
M22 × 1	P3	POR022M	5P	115	19	-	55	17	13	16	3	8	△
M24 × 3	P4	POS024S	5P	120	39	-	55	19	15	18	3	7	◎
	P5	POT024S											△
M24 × 2	P4	POS024Q	5P	120	39	-	55	19	15	18	3	7	○
M24 × 1.5	P4	POS024O	5P	120	39	-	55	19	15	18	3	7	○
	P5	POT024O											△
M24 × 1	P3	POR024M	5P	120	19	-	55	19	15	18	3	8	△
M25 × 2	P4	POS025Q	5P	125	39	-	58	19	15	18	3	7	△
M25 × 1.5	P4	POS025O	5P	125	39	-	58	19	15	18	3	7	○
M26 × 2	P4	POS026Q	5P	130	39	-	60	20	15	18	4	7	△
M26 × 1.5	P4	POS026O	5P	130	39	-	60	20	15	18	4	7	○
M26 × 1	P3	POR026M	5P	130	20	-	60	20	15	18	4	8	△
M27 × 3	P4	POS027S	5P	130	39	-	60	20	15	18	4	7	○
M27 × 1.5	P4	POS027O	5P	130	39	-	60	20	15	18	4	7	○
M27 × 1	P3	POR027M	5P	130	20	-	60	20	15	18	4	8	△
M28 × 2	P4	POS028Q	5P	135	46	-	62	23	17	20	4	7	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

PO Spiral Pointed Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M28 × 1.5	P4	POS028O	5P	135	46	-	62	23	17	20	4	7	△
M30 × 3.5	P5	POT030T	5P	135	46	-	62	23	17	20	4	7	○
M30 × 3	P4	POS030S	5P	135	46	-	62	23	17	20	4	7	△
M30 × 2	P4	POS030Q	5P	135	46	-	62	23	17	20	4	7	○
M30 × 1.5	P4	POS030O	5P	135	46	-	62	23	17	20	4	7	○
M30 × 1	P3	POR030M	5P	135	21	-	62	23	17	20	4	8	△
M32 × 3	P4	POMS032S	5P	145	46	-	67	24	19	22	4	7	△
M32 × 2	P4	POMS032Q	5P	145	46	-	67	24	19	22	4	7	△
M32 × 1.5	P4	POMS032O	5P	145	46	-	67	24	19	22	4	7	△
M33 × 3.5	P5	POMT033T	5P	145	46	-	67	25	19	22	4	7	○
M33 × 3	P4	POMS033S	5P	145	46	-	67	25	19	22	4	7	△
M33 × 2	P4	POMS033Q	5P	145	46	-	67	25	19	22	4	7	△
M33 × 1.5	P4	POMS033O	5P	145	46	-	67	25	19	22	4	7	△
M35 × 2	P4	POMS035Q	5P	155	52	-	71	28	21	24	4	7	△
M35 × 1.5	P4	POMS035O	5P	155	26	-	71	28	21	24	4	8	△
M36 × 4	P5	POMT036U	5P	155	52	-	71	28	21	24	4	7	○
M36 × 3	P4	POMS036S	5P	155	52	-	71	28	21	24	4	7	△
M36 × 2	P4	POMS036Q	5P	155	52	-	71	28	21	24	4	7	△
M36 × 1.5	P4	POMS036O	5P	155	26	-	71	28	21	24	4	8	△
M38 × 2	P4	POMS038Q	5P	165	52	-	76	30	23	26	4	7	△
M38 × 1.5	P4	POMS038O	5P	165	26	-	76	30	23	26	4	8	△
M39 × 4	P5	POMT039U	5P	165	52	-	76	30	23	26	4	7	△
M39 × 2	P4	POMS039Q	5P	165	52	-	76	30	23	26	4	7	△
M39 × 1.5	P4	POMS039O	5P	165	26	-	76	30	23	26	4	8	△
M40 × 3	P4	POMS040S	5P	175	59	-	81	32	26	30	4	7	△
M40 × 2	P4	POMS040Q	5P	175	59	-	81	32	26	30	4	7	△
M40 × 1.5	P4	POMS040O	5P	175	27	-	81	32	26	30	4	8	△
M42 × 4.5	P5	POMT042V	5P	175	59	-	81	32	26	30	4	7	△
M42 × 2	P4	POMS042Q	5P	175	59	-	81	32	26	30	4	7	△
M42 × 1.5	P4	POMS042O	5P	175	27	-	81	32	26	30	4	8	△
M45 × 4.5	P5	POMT045V	5P	180	59	-	83	35	26	30	4	7	△
M45 × 2	P4	POMS045Q	5P	180	59	-	83	35	26	30	4	7	△
M45 × 1.5	P4	POMS045O	5P	180	27	-	83	35	26	30	4	8	△
M48 × 5	P5	POMT048W	5P	185	65	-	85	38	29	32	4	7	△
M48 × 3	P4	POMS048S	5P	185	65	-	85	38	29	32	4	7	△
M48 × 1.5	P4	POMS048O	5P	185	28	-	85	38	29	32	4	8	△
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
No.0-80UNF	P1	POPUN0B	5P	36	6.3	-	24	3	2.5	5	2	2	△
No.1-64UNC	P1	POPUN1D	5P	42	7.2	-	27	3	2.5	5	2	2	△
No.1-72UNF	P1	POPUN1C	5P	42	7.2	-	27	3	2.5	5	2	2	△
No.2-56UNC	P1	POPUN2E	5P	42	8.1	12	27	3	2.5	5	3	3	○
No.2-64UNF	P1	POPUN2D	5P	42	8.1	12	27	3	2.5	5	3	3	△
No.3-48UNC	P1	POPUN3F	5P	46	8.1	14	29	3	2.5	5	3	3	△
No.3-56UNF	P1	POPUN3E	5P	46	8.1	14	29	3	2.5	5	3	3	△
No.4-40UNC	P2	POQUN4H	5P	46	9	14	26	4	3.2	6	3	3	○
No.4-48UNF	P1	POPUN4F	5P	46	9	14	26	4	3.2	6	3	3	△
No.5-40UNC	P2	POQUN5H	5P	52	11	16	29	5	4	7	3	3	△
No.5-44UNF	P1	POPUN5G	5P	52	11	16	29	5	4	7	3	3	△
No.6-32UNC	P2	POQUN6J	5P	52	11	16	29	5	4	7	3	3	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO Spiral Pointed Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
No.6-40UNF	P2	POQUN6H	5P	52	11	16	29	5	4	7	3	3	△
No.8-32UNC	P2	POQUN8J	5P	60	13	21	33	5.5	4.5	7	3	3	○
No.8-36UNF	P2	POQUN8I	5P	60	13	21	33	5.5	4.5	7	3	3	△
No.10-24UNC	P2	POQUNAM	5P	60	13	22	33	5.5	4.5	7	3	3	○
No.10-32UNF	P2	POQUNAJ	5P	60	13	22	33	5.5	4.5	7	3	3	○
No.12-24UNC	P2	POQUNCM	5P	62	15	26	33	6	4.5	7	3	3	△
No.12-28UNF	P2	POQUNCK	5P	62	15	26	33	6	4.5	7	3	3	△
1/4-20UNC	P2	POQU04N	5P	62	15	26	33	6	4.5	7	3	3	○
1/4-28UNF	P2	POQU04K	5P	62	15	26	33	6	4.5	7	3	3	○
1/4-32UNEF	P2	POQU04J	5P	62	15	26	33	6	4.5	7	3	3	△
5/16-18UNC	P3	PORU05O	5P	70	19	-	36	6.2	5	8	3	5	○
5/16-24UNF	P2	POQU05M	5P	70	19	-	36	6.2	5	8	3	5	○
5/16-32UNEF	P2	POQU05J	5P	70	19	-	36	6.2	5	8	3	5	△
3/8-16UNC	P3	PORU06P	5P	75	23	-	38	7	5.5	8	3	5	○
3/8-24UNF	P2	POQU06M	5P	75	23	-	38	7	5.5	8	3	5	○
3/8-32UNEF	P2	POQU06J	5P	75	13	-	38	7	5.5	8	3	6	△
7/16-14UNC	P3	PORU07Q	5P	82	26	-	42	8.5	6.5	9	3	5	△
7/16-20UNF	P3	PORU07N	5P	82	26	-	42	8.5	6.5	9	3	5	○
7/16-28UNEF	P2	POQU07K	5P	82	26	-	42	8.5	6.5	9	3	5	△
1/2-13UNC	P3	PORU08R	5P	88	26	-	45	10.5	8	11	3	5	○
1/2-20UNF	P3	PORU08N	5P	88	26	-	45	10.5	8	11	3	5	○
1/2-28UNEF	P2	POQU08K	5P	88	26	-	45	10.5	8	11	3	5	△
9/16-12UNC	P3	PORU09S	5P	95	26	-	48	12.5	10	13	3	5	△
9/16-18UNF	P3	PORU09O	5P	95	26	-	48	12.5	10	13	3	5	○
5/8-11UNC	P3	PORU10U	5P	95	26	-	48	12.5	10	13	3	5	△
5/8-18UNF	P3	PORU10O	5P	95	26	-	48	12.5	10	13	3	5	△
3/4-10UNC	P4	POSU12V	5P	105	33	-	50	15	12	15	3	7	△
3/4-16UNF	P3	PORU12P	5P	105	33	-	50	15	12	15	3	7	○
3/4-20UNEF	P3	PORU12N	5P	105	33	-	50	15	12	15	3	7	△
7/8-9UNC	P4	POSU14W	5P	115	33	-	55	17	13	16	3	7	△
7/8-14UNF	P3	PORU14Q	5P	115	33	-	55	17	13	16	3	7	△
1 -8UNC	P4	POSU16X	5P	125	39	-	58	19	15	18	3	7	△
1 -12UNF	P4	POSU16S	5P	125	39	-	58	19	15	18	3	7	△
1 -14UNS	P4	POSU16Q	5P	125	39	-	58	19	15	18	3	7	△
1 1/8-7UNC	P4	POSU18Y	5P	135	46	-	62	23	17	20	4	7	△
1 1/4-7UNC	P4	POMSU20Y	5P	145	46	-	67	24	19	22	4	7	△
1 3/8-6UNC	P5	POMTU22Z	5P	155	52	-	71	28	21	24	4	7	△
1 1/2-6UNC	P5	POMTU24Z	5P	165	52	-	76	30	23	26	4	7	△
For Whitworth Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/8W40	P2	POQW02H	5P	52	11	17	29	5	4	7	3	3	△
5/32W32	P2	POQW2HJ	5P	52	11	17	29	5	4	7	3	3	△
3/16W24	P2	POQW03M	5P	60	13	21	33	5.5	4.5	7	3	3	○
7/32W24	P2	POQW3HM	5P	62	15	26	33	6	4.5	7	3	3	△
1/4W20	P3	PORW04N	5P	62	15	26	33	6	4.5	7	3	3	○
5/16W18	P3	PORW05O	5P	70	19	-	36	6.2	5	8	3	5	○
3/8W16	P3	PORW06P	5P	75	23	-	38	7	5.5	8	3	5	○
7/16W14	P3	PORW07Q	5P	82	26	-	42	8.5	6.5	9	3	5	△
1/2W12	P3	PORW08S	5P	88	26	-	45	10.5	8	11	3	5	○
9/16W12	P3	PORW09S	5P	95	26	-	48	12.5	10	13	3	5	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

PO Spiral Pointed Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
5/8W11	P3	PORW10U	5P	95	26	-	48	12.5	10	13	3	5	○
3/4W10	P4	POSW12V	5P	105	33	-	50	15	12	15	3	7	○
7/8W9	P4	POSW14W	5P	115	33	-	55	17	13	16	3	7	△
1 W8	P4	POSW16X	5P	125	39	-	58	19	15	18	3	7	△
1 1/8W7	P4	POSW18Y	5P	135	46	-	62	23	17	20	4	7	△
1 1/4W7	P4	POMSW20Y	5P	145	46	-	67	24	19	22	4	7	△
1 3/8W6	P5	POMTW22Z	5P	155	52	-	71	28	21	24	4	7	△
1 1/2W6	P5	POMTW24Z	5P	165	52	-	76	30	23	26	4	7	△
For Screw Threads used on Sewing Machines													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
3/32SM56	P1	POPS06E	5P	46	8.1	14	29	3	2.5	5	3	3	△
1/8SM40	P2	POQS08H	5P	52	11	16	29	5	4	7	3	3	△
1/8SM44	P2	POQS08G	5P	52	11	16	29	5	4	7	3	3	△
9/64SM40	P2	POQS09H	5P	52	11	17	29	5	4	7	3	3	△
11/64SM40	P2	POQS11H	5P	60	13	21	33	5.5	4.5	7	3	3	△
3/16SM28	P2	POQS12K	5P	60	13	21	33	5.5	4.5	7	3	3	△
3/16SM32	P2	POQS12J	5P	60	13	21	33	5.5	4.5	7	3	3	△
7/32SM32	P2	POQS14J	5P	62	15	26	33	6	4.5	7	3	3	△
15/64SM28	P2	POQS15K	5P	62	15	26	33	6	4.5	7	3	3	△
1/4SM24	P2	POQS16M	5P	62	15	26	33	6	4.5	7	3	3	△
1/4SM40	P2	POQS16H	5P	62	8.6	26	33	6	4.5	7	3	4	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

+PO

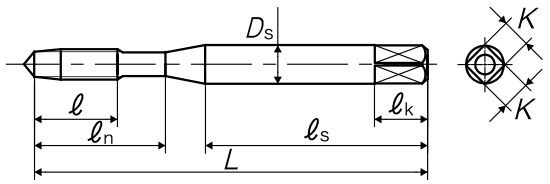
Plus Series Spiral Pointed Taps

Specification

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE : 1



Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	PNPQ3.0G	5P	46	9	14	26	4	3.2	6	3	1	◎
M3.5 × 0.6	P2	PNPQ3.5H	5P	52	11	16	29	5	4	7	3	1	○
M4 × 0.7	P2	PNPQ4.0I	5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	P2	PNPQ5.0K	5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	P2	PNPQ6.0M	5P	62	15	26	33	6	4.5	7	3	1	◎

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

PO OX

Spiral Pointed Taps, Oxided

Specification

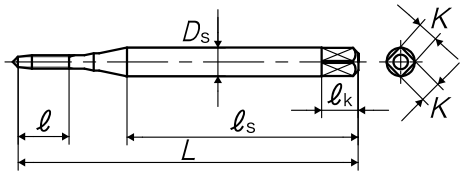
HSS | OX Oxide

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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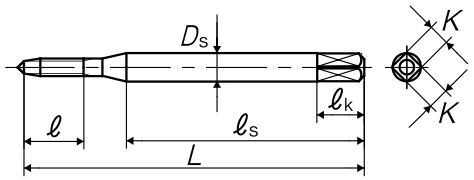

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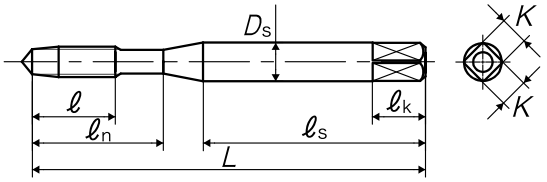

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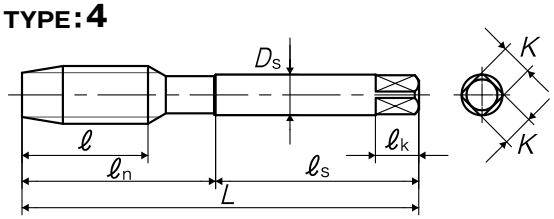
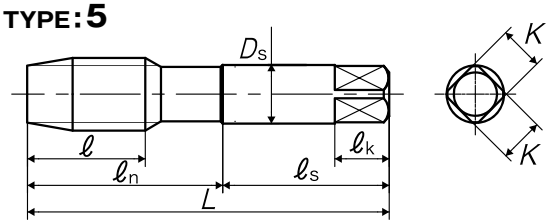


TYPE: 5



Oversize

Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.4 × 0.3	P1	POP1.4CX	5P	36	5.4	-	24	3	2.5	5	2	1	△
	P2	POQ1.4CX											
M1.6 × 0.35	P2	POQ1.6DX	5P	36	6.3	-	24	3	2.5	5	2	2	△
M1.7 × 0.35	P2	POQ1.7DX	5P	36	6.3	-	24	3	2.5	5	2	2	△
M2 × 0.4	P2	POQ2.0EX	5P	42	7.2	12	27	3	2.5	5	3	3	○
	P3	POR2.0EX											△
M2.3 × 0.4	P2	POQ2.3EX	5P	42	7.2	12	27	3	2.5	5	3	3	△
M2.5 × 0.45	P2	POQ2.5FX	5P	46	8.1	14	29	3	2.5	5	3	3	△
	P3	POR2.5FX											
M2.6 × 0.45	P2	POQ2.6FX	5P	46	8.1	14	29	3	2.5	5	3	3	△
	P3	POR2.6FX											
M3 × 0.5	P2	POQ3.0GX	5P	46	9	14	26	4	3.2	6	3	3	◎
	P3	POR3.0GX											△
	P4	POS3.0GX											

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO OX Spiral Pointed Taps, Oxided

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
3M0.6	P2	POQ3.0HX	5P	46	9	14	26	4	3.2	6	3	3	△
M3.5 × 0.6	P2	POQ3.5HX	5P	52	11	16	29	5	4	7	3	3	△
M4 × 0.7	P2	POQ4.0IX	5P	52	11	17	29	5	4	7	3	3	◎
	P3	POR4.0IX											△
4M0.75	P2	POQ4.0JX	5P	52	11	17	29	5	4	7	3	3	△
M5 × 0.8	P2	POQ5.0KX	5P	60	13	22	33	5.5	4.5	7	3	3	◎
	P3	POR5.0KX											△
5M0.9	P2	POQ5.0LX	5P	60	13	22	33	5.5	4.5	7	3	3	△
M6 × 1	P2	POQ6.0MX	5P	62	15	26	33	6	4.5	7	3	3	◎
	P3	POR6.0MX											△
M8 × 1.25	P3	POR8.0NX	5P	70	19	-	36	6.2	5	8	3	4	◎
	P4	POS8.0NX											△
M8 × 1	P3	POR8.0MX	5P	70	19	-	36	6.2	5	8	3	4	△
M10 × 1.5	P3	POR010OX	5P	75	23	-	38	7	5.5	8	3	4	○
	P4	POS010OX											△
M10 × 1.25	P3	POR010NX	5P	75	23	-	38	7	5.5	8	3	4	△
M10 × 1	P3	POR010MX	5P	75	23	-	38	7	5.5	8	3	4	△
	P4	POS010MX											
M12 × 1.75	P4	POS012PX	5P	82	26	-	42	8.5	6.5	9	3	4	○
M12 × 1.5	P3	POR012OX	5P	82	26	-	42	8.5	6.5	9	3	4	△
M12 × 1.25	P4	POS012NX	5P	82	26	-	42	8.5	6.5	9	3	4	△
M14 × 2	P4	POS014QX	5P	88	26	-	45	10.5	8	11	3	4	△
M14 × 1.5	P3	POR014OX	5P	88	26	-	45	10.5	8	11	3	4	△
M14 × 1	P3	POR014MX	5P	88	26	-	45	10.5	8	11	3	4	△
M16 × 2	P4	POS016QX	5P	95	26	-	48	12.5	10	13	3	4	○
M16 × 1.5	P3	POR016OX	5P	95	26	-	48	12.5	10	13	3	4	△
M18 × 2.5	P4	POS018RX	5P	100	33	-	51	14	11	14	3	4	△
M18 × 1.5	P4	POS018OX	5P	100	33	-	51	14	11	14	3	4	△
M20 × 2.5	P4	POS020RX	5P	105	33	-	50	15	12	15	3	5	○
M20 × 1.5	P4	POS020OX	5P	105	33	-	50	15	12	15	3	5	△
M22 × 2.5	P4	POS022RX	5P	115	33	-	55	17	13	16	3	5	△
M22 × 1.5	P4	POS022OX	5P	115	33	-	55	17	13	16	3	5	△
M24 × 3	P4	POS024SX	5P	120	39	-	55	19	15	18	3	5	△
M27 × 3	P4	POS027SX	5P	130	39	-	60	20	15	18	4	5	△
M30 × 3.5	P5	POT030TX	5P	135	46	-	62	23	17	20	4	5	△
M33 × 3.5	P5	POMT033TX	5P	145	46	-	67	25	19	22	4	5	△
M36 × 4	P5	POMT036UX	5P	155	52	-	71	28	21	24	4	5	△
M42 × 4.5	P5	POMT042VX	5P	175	59	-	81	32	26	30	4	5	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

+PO OX

Plus Series Spiral Pointed Taps, Oxided

Specification

HSS | OX Oxide

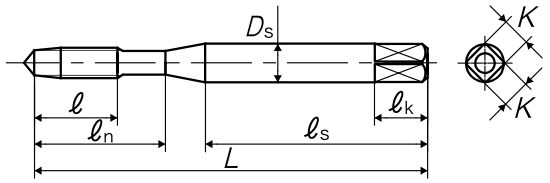
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 10~15 (m/min)

Medium carbon steels 中炭素鋼 10~15 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Oversize

Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	PNPQ3.0GX	5P	46	9	14	26	4	3.2	6	3	1	◎
	P3	PNPR3.0GX											△
	P4	PNPS3.0GX											
M3.5 × 0.6	P2	PNPQ3.5HX	5P	52	11	16	29	5	4	7	3	1	△
M4 × 0.7	P2	PNPQ4.0IX	5P	52	11	17	29	5	4	7	3	1	◎
	P3	PNPR4.0IX											△
	P4	PNPS4.0IX											
M5 × 0.8	P2	PNPQ5.0KX	5P	60	13	22	33	5.5	4.5	7	3	1	◎
	P3	PNPR5.0KX											△
	P4	PNPS5.0KX											
M6 × 1	P2	PNPQ6.0MX	5P	62	15	26	33	6	4.5	7	3	1	◎
	P3	PNPR6.0MX											△
	P4	PNPS6.0MX											

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO LH

Spiral Pointed Taps for Left Hand Threads

Specification

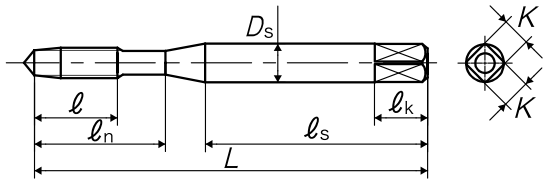
HSS | LH Left hand

Recommended Tapping Speeds depending on Materials

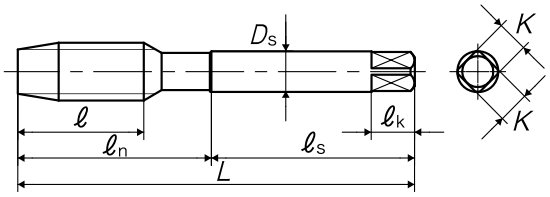
Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

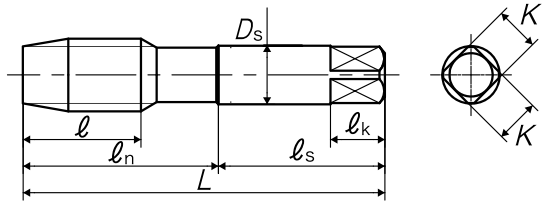
TYPE: 1



TYPE: 2



TYPE: 3



Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	POQ3.0G--L	5P	46	9	14	26	4	3.2	6	3	1	△
M4 × 0.7	P2	POQ4.0I--L	5P	52	11	17	29	5	4	7	3	1	△
M5 × 0.8	P2	POQ5.0K--L	5P	60	13	22	33	5.5	4.5	7	3	1	△
M6 × 1	P2	POQ6.0M--L	5P	62	15	26	33	6	4.5	7	3	1	△
M8 × 1.25	P3	POR8.0N--L	5P	70	19	-	36	6.2	5	8	3	2	△
M8 × 1	P3	POR8.0M--L	5P	70	19	-	36	6.2	5	8	3	2	△
M10 × 1.5	P3	POR010O--L	5P	75	23	-	38	7	5.5	8	3	2	△
M10 × 1.25	P3	POR010N--L	5P	75	23	-	38	7	5.5	8	3	2	△
M10 × 1	P3	POR010M--L	5P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P4	POS012P--L	5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.5	P3	POR012O--L	5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P4	POS012N--L	5P	82	26	-	42	8.5	6.5	9	3	2	△
M14 × 2	P4	POS014Q--L	5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.5	P3	POR014O--L	5P	88	26	-	45	10.5	8	11	3	2	△
M16 × 2	P4	POS016Q--L	5P	95	26	-	48	12.5	10	13	3	2	△
M16 × 1.5	P3	POR016O--L	5P	95	26	-	48	12.5	10	13	3	2	△
M18 × 2.5	P4	POS018R--L	5P	100	33	-	51	14	11	14	3	2	△
M18 × 1.5	P4	POS018O--L	5P	100	33	-	51	14	11	14	3	2	△
M20 × 2.5	P4	POS020R--L	5P	105	33	-	50	15	12	15	3	3	△
M20 × 1.5	P4	POS020O--L	5P	105	33	-	50	15	12	15	3	3	△
M22 × 2.5	P4	POS022R--L	5P	115	33	-	55	17	13	16	3	3	△
M22 × 1.5	P4	POS022O--L	5P	115	33	-	55	17	13	16	3	3	△
M24 × 3	P4	POS024S--L	5P	120	39	-	55	19	15	18	3	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

PO LH Spiral Pointed Taps for Left Hand Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M24 × 1.5	P4	POS0240--L	5P	120	39	-	55	19	15	18	3	3	△
M27 × 3	P4	POS027S--L	5P	130	39	-	60	20	15	18	4	3	△
M27 × 1.5	P4	POS027O--L	5P	130	39	-	60	20	15	18	4	3	△
M30 × 3.5	P5	POT030T--L	5P	135	46	-	62	23	17	20	4	3	△
M30 × 1.5	P4	POS030O--L	5P	135	46	-	62	23	17	20	4	3	△
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4-20UNC	P2	POQU04N--L	5P	62	15	26	33	6	4.5	7	3	1	△
1/4-28UNF	P2	POQU04K--L	5P	62	15	26	33	6	4.5	7	3	1	△
5/16-18UNC	P3	PORU05O--L	5P	70	19	-	36	6.2	5	8	3	2	△
5/16-24UNF	P2	POQU05M--L	5P	70	19	-	36	6.2	5	8	3	2	△
3/8-16UNC	P3	PORU06P--L	5P	75	23	-	38	7	5.5	8	3	2	△
3/8-24UNF	P2	POQU06M--L	5P	75	23	-	38	7	5.5	8	3	2	△
7/16-14UNC	P3	PORU07Q--L	5P	82	26	-	42	8.5	6.5	9	3	2	△
7/16-20UNF	P3	PORU07N--L	5P	82	26	-	42	8.5	6.5	9	3	2	△
1/2-13UNC	P3	PORU08R--L	5P	88	26	-	45	10.5	8	11	3	2	△
1/2-20UNF	P3	PORU08N--L	5P	88	26	-	45	10.5	8	11	3	2	△
For Whitworth Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4W20	P3	PORW04N--L	5P	62	15	26	33	6	4.5	7	3	1	△
5/16W18	P3	PORW05O--L	5P	70	19	-	36	6.2	5	8	3	2	△
3/8W16	P3	PORW06P--L	5P	75	23	-	38	7	5.5	8	3	2	△
1/2W12	P3	PORW08S--L	5P	88	26	-	45	10.5	8	11	3	2	△
5/8W11	P3	PORW10U--L	5P	95	26	-	48	12.5	10	13	3	2	△
3/4W10	P4	POSW12V--L	5P	105	33	-	50	15	12	15	3	3	△

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO V

Spiral Pointed Taps, Coated

Specification

HSS Coating

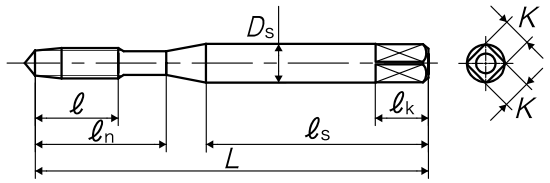
■Adopting the optimum coating for the tapping condition.

Recommended Tapping Speeds depending on Materials

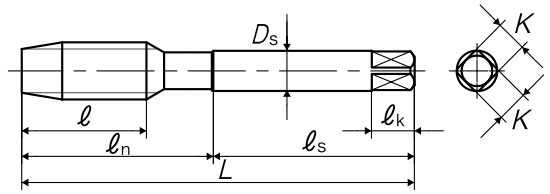
Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

For icon explanation, refer to P.24

TYPE : 1



TYPE : 2



Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	VPOQ3.0G	5P	46	9	14	26	4	3.2	6	3	1	◎
M4 × 0.7	P2	VPOQ4.0I	5P	52	11	17	29	5	4	7	3	1	◎
M5 × 0.8	P2	VPOQ5.0K	5P	60	13	22	33	5.5	4.5	7	3	1	◎
M6 × 1	P2	VPOQ6.0M	5P	62	15	26	33	6	4.5	7	3	1	◎
M8 × 1.25	P3	VPOR8.0N	5P	70	19	-	36	6.2	5	8	3	2	◎
M10 × 1.5	P3	VPOR010O	5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P3	VPOR010N	5P	75	23	-	38	7	5.5	8	3	2	○
M12 × 1.75	P4	VPOS012P	5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P3	VPOR012O	5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.25	P4	VPOS012N	5P	82	26	-	42	8.5	6.5	9	3	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-PO

Long Shank Spiral Pointed Taps

Specification

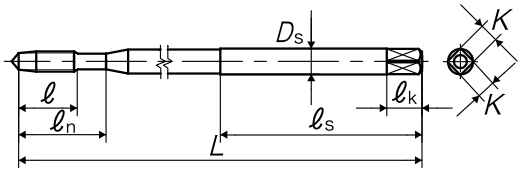
HSS

Recommended Tapping Speeds depending on Materials

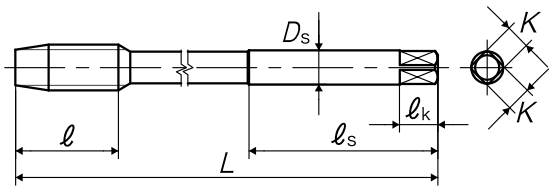
Medium carbon steels 中炭素鋼
5~10 (m/min)

For icon explanation, refer to P.24

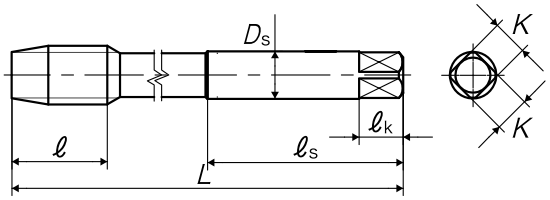
TYPE : 1



TYPE : 2



TYPE : 3



Oversize

Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P2	POQ2.0EL07	5P	70	7.2	12	55	3	2.5	5	3	1	△
		POQ2.0EL10		100			85						
M2.3 × 0.4	P2	POQ2.3EL07	5P	70	7.2	12	55	3	2.5	5	3	1	△
		POQ2.3EL10		100			85						
M2.5 × 0.45	P2	POQ2.5FL07	5P	70	8.1	14	53	3	2.5	5	3	1	△
		POQ2.5FL10		100			83						
M2.6 × 0.45	P2	POQ2.6FL07	5P	70	8.1	14	53	3	2.5	5	3	1	△
		POQ2.6FL10		100			83						
M3 × 0.5	P2	POQ3.0GL07	5P	70	9	14	40	4	3.2	6	3	1	△
		POQ3.0GL10		100									◎
		POQ3.0GL12		120									△
		POQ3.0GL15		150									○
	P3	POR3.0GL10		100									△
		POR3.0GL15		150									
M4 × 0.7	P2	POQ4.0IL07	5P	70	11	17	40	5	4	7	3	1	△
		POQ4.0IL10		100									◎
		POQ4.0IL12		120									△
		POQ4.0IL15		150									○
	P3	POR4.0IL10		100									△
		POR4.0IL15		150									

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-PO Long Shank Spiral Pointed Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M5 × 0.8	P2	POQ5.0KL10	5P	100	13	22	40	5.5	4.5	7	3	1	◎
		POQ5.0KL12		120									△
		POQ5.0KL15		150									○
	P3	POR5.0KL10		100									
		POR5.0KL15		150									△
	P4	POS5.0KL15											
M6 × 1	P2	POQ6.0ML10	5P	100	15	26	40	6	4.5	7	3	1	◎
		POQ6.0ML12		120									△
		POQ6.0ML15		150									○
		POQ6.0ML20		200									
	P3	POR6.0ML10		100									
		POR6.0ML15		150									△
	P4	POS6.0ML15											
M8 × 1.25	P3	POR8.0NL10	5P	100	19	-	50	6.2	5	8	3	2	◎
		POR8.0NL12		120									△
		POR8.0NL15		150									◎
		POR8.0NL20		200									△
	P4	POS8.0NL15		150									
M8 × 1	P3	POR8.0ML10	5P	100	19	-	50	6.2	5	8	3	2	△
		POR8.0ML15		150									
M10 × 1.5	P3	POR010OL10	5P	100	23	-	50	7	5.5	8	3	2	◎
		POR010OL12		120									△
		POR010OL15		150									◎
		POR010OL20		200									△
	P4	POS010OL15		150									
M10 × 1.25	P3	POR010NL10	5P	100	23	-	50	7	5.5	8	3	2	○
		POR010NL15		150									
		POR010NL20		200									△
M10 × 1	P3	POR010ML10	5P	100	23	-	50	7	5.5	8	3	2	△
		POR010ML15		150									
M12 × 1.75	P4	POS012PL10	5P	100	26	-	50	8.5	6.5	9	3	2	△
		POS012PL12		120									
		POS012PL15		150									◎
		POS012PL20		200									○
	P5	POT012PL15		150									△
M12 × 1.5	P3	POR012OL10	5P	100	26	-	50	8.5	6.5	9	3	2	△
		POR012OL15		150									
		POR012OL20		200									
M12 × 1.25	P4	POS012NL10	5P	100	26	-	50	8.5	6.5	9	3	2	△
		POS012NL15		150									
		POS012NL20		200									
M12 × 1	P3	POR012ML10	5P	100	26	-	50	8.5	6.5	9	3	2	△
		POR012ML15		150									
M14 × 2	P4	POS014QL12	5P	120	26	-	60	10.5	8	11	3	2	△
		POS014QL15		150									○
		POS014QL20		200									
	P5	POT014QL15		150									△
M14 × 1.5	P3	POR014OL15	5P	150	26	-	60	10.5	8	11	3	2	△
		POR014OL20		200									

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

LS-PO Long Shank Spiral Pointed Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M16 × 2	P4	POS016QL15	5P	150	26	-	60	12.5	10	13	3	2	◎
		POS016QL20		200									○
		POS016QL25		250									△
	P5	POT016QL15		150									
M16 × 1.5	P3	POR016QL15	5P	150	26	-	60	12.5	10	13	3	2	○
		POR016QL20		200									△
M18 × 2.5	P4	POS018RL15	5P	150	33	-	70	14	11	14	3	2	○
		POS018RL20		200									△
	P5	POT018RL15		150									
M18 × 1.5	P4	POS018QL15	5P	150	33	-	70	14	11	14	3	2	△
		POS018QL20		200									
M20 × 2.5	P4	POS020RL15	5P	150	33	-	70	15	12	15	3	3	◎
		POS020RL20		200									○
		POS020RL25		250									△
	P5	POT020RL15		150									
M20 × 1.5	P4	POS020QL15	5P	150	33	-	70	15	12	15	3	3	○
		POS020QL20		200									△
M22 × 2.5	P4	POS022RL15	5P	150	33	-	70	17	13	16	3	3	△
		POS022RL20		200									
M22 × 1.5	P4	POS022QL15	5P	150	33	-	70	17	13	16	3	3	○
		POS022QL20		200									△
M24 × 3	P4	POS024SL15	5P	150	39	-	80	19	15	18	3	3	○
		POS024SL20		200									△
		POS024SL25		250									
M24 × 1.5	P4	POS024QL15	5P	150	39	-	80	19	15	18	3	3	△
		POS024QL20		200									
M27 × 3	P4	POS027SL20	5P	200	39	-	80	20	15	18	4	3	△
M27 × 1.5	P4	POS027QL20	5P	200	39	-	80	20	15	18	4	3	△
		POS027QL25		250									
M30 × 3.5	P5	POT030TL20	5P	200	46	-	80	23	17	20	4	3	△
		POT030TL25		250									
		POT030TL30		300									
M30 × 1.5	P4	POS030QL20	5P	200	46	-	80	23	17	20	4	3	△
		POS030QL25		250									

For Unified Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4-20UNC	P2	POQU04NL10	5P	100	15	26	40	6	4.5	7	3	1	△
		POQU04NL15		150									
1/4-28UNF	P2	POQU04KL10	5P	100	15	26	40	6	4.5	7	3	1	△
		POQU04KL15		150									
5/16-18UNC	P3	PORU05QL10	5P	100	19	-	50	6.2	5	8	3	2	△
		PORU05QL15		150									
5/16-24UNF	P2	POQU05ML10	5P	100	19	-	50	6.2	5	8	3	2	△
		POQU05ML15		150									
3/8-16UNC	P3	PORU06PL10	5P	100	23	-	50	7	5.5	8	3	2	△
		PORU06PL15		150									
3/8-24UNF	P2	POQU06ML10	5P	100	23	-	50	7	5.5	8	3	2	△
		POQU06ML15		150									
7/16-14UNC	P3	PORU07QL15	5P	150	26	-	50	8.5	6.5	9	3	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-PO Long Shank Spiral Pointed Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
7/16-20UNF	P3	PORU07NL15	5P	150	26	-	50	8.5	6.5	9	3	2	△
1/2-13UNC	P3	PORU08RL15	5P	150	26	-	60	10.5	8	11	3	2	△
		PORU08RL20		200									
1/2-20UNF	P3	PORU08NL15	5P	150	26	-	60	10.5	8	11	3	2	△
		PORU08NL20		200									
5/8-11UNC	P3	PORU10UL15	5P	150	26	-	60	12.5	10	13	3	2	△
		PORU10UL20		200									
5/8-18UNF	P3	PORU10OL15	5P	150	26	-	60	12.5	10	13	3	2	△
		PORU10OL20		200									
3/4-10UNC	P4	POSU12VL15	5P	150	33	-	70	15	12	15	3	3	△
		POSU12VL20		200									
3/4-16UNF	P3	PORU12PL15	5P	150	33	-	70	15	12	15	3	3	△
		PORU12PL20		200									
7/8-9UNC	P4	POSU14WL20	5P	200	33	-	70	17	13	16	3	3	△
7/8-14UNF	P3	PORU14QL20	5P	200	33	-	70	17	13	16	3	3	△
1 -8UNC	P4	POSU16XL20	5P	200	39	-	80	19	15	18	3	3	△
1 -12UNF	P4	POSU16SL20	5P	200	39	-	80	19	15	18	3	3	△

For Whitworth Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4W20	P3	PORW04NL10	5P	100	15	26	40	6	4.5	7	3	1	△
		PORW04NL15		150									
5/16W18	P3	PORW05OL10	5P	100	19	-	50	6.2	5	8	3	2	△
		PORW05OL15		150									
3/8W16	P3	PORW06PL10	5P	100	23	-	50	7	5.5	8	3	2	△
		PORW06PL15		150									
7/16W14	P3	PORW07QL15	5P	150	26	-	50	8.5	6.5	9	3	2	△
1/2W12	P3	PORW08SL15	5P	150	26	-	60	10.5	8	11	3	2	△
		PORW08SL20		200									
5/8W11	P3	PORW10UL15	5P	150	26	-	60	12.5	10	13	3	2	△
		PORW10UL20		200									
3/4W10	P4	POSW12VL15	5P	150	33	-	70	15	12	15	3	3	△
		POSW12VL20		200									
7/8W9	P4	POSW14WL15	5P	150	33	-	70	17	13	16	3	3	△
		POSW14WL20		200									
1 W8	P4	POSW16XL15	5P	150	39	-	80	19	15	18	3	3	△
		POSW16XL20		200									

LS-PO V

Long Shank Spiral Pointed Taps, Coated

Specification

HSS Coating

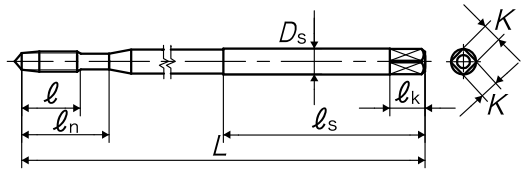
■Adopting the optimum coating for the tapping condition.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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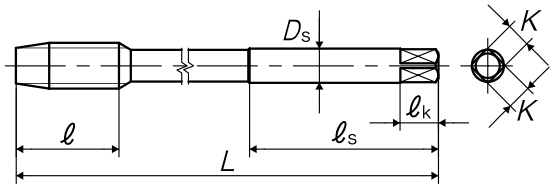


Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	VPOQ3.0GL10	5P	100	9	14	40	4	3.2	6	3	1	○
M4 × 0.7	P2	VPOQ4.0IL10	5P	100	11	17	40	5	4	7	3	1	○
M5 × 0.8	P2	VPOQ5.0KL10	5P	100	13	22	40	5.5	4.5	7	3	1	○
M6 × 1	P2	VPOQ6.0ML10	5P	100	15	26	40	6	4.5	7	3	1	○
		VPOQ6.0ML15		150									△
M8 × 1.25	P3	VPOR8.0NL10	5P	100	19	-	50	6.2	5	8	3	2	○
		VPOR8.0NL15		150									
M10 × 1.5	P3	VPOR010OL15	5P	150	23	-	50	7	5.5	8	3	2	○
M10 × 1.25	P3	VPOR010NL15	5P	150	23	-	50	7	5.5	8	3	2	△
M12 × 1.75	P4	VPOS012PL15	5P	150	26	-	50	8.5	6.5	9	3	2	○
M12 × 1.5	P3	VPOR012OL15	5P	150	26	-	50	8.5	6.5	9	3	2	△
M12 × 1.25	P4	VPOS012NL15	5P	150	26	-	50	8.5	6.5	9	3	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-PO-K

Long Shank Spiral Pointed Taps with Neck

Specification

HSS

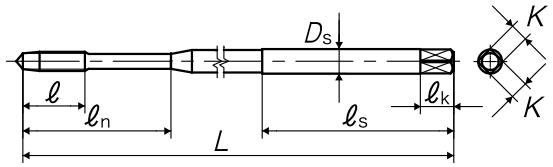
■LS-PO-K is the long shank spiral pointed tap and, having long neck, enables the tapping of rather deep holes.

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P2	-	4.5P	100	9	28	40	4	3.2	6	3	1	△
M4 × 0.7	P2	-	4.5P	100	11	31	40	5	4	7	3	1	△
M5 × 0.8	P2	-	4.5P	100	13	38	40	5.5	4.5	7	3	1	△
M6 × 1	P2	-	4.5P	100	15	45	40	6	4.5	7	3	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SU+PO/SU-PO

Spiral Pointed Taps for Stainless Steels

Specification

HSS | OX Oxide

■Suitable for stainless steels tending to work harden and sticky, as well as chrome steels and molybdenum steels. Through hole use.

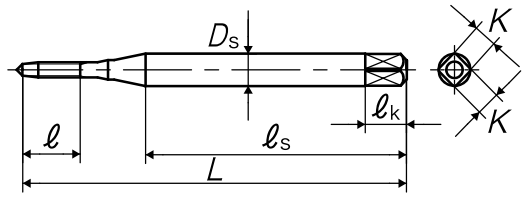
SU+PO	~M2.6
SU−PO	M3~, all U, all W

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
~10 (m/min)	~10 (m/min)	~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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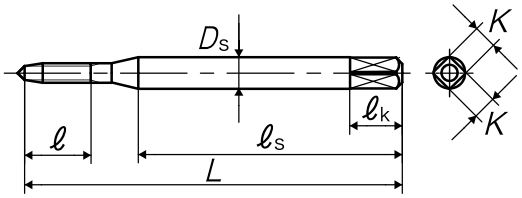
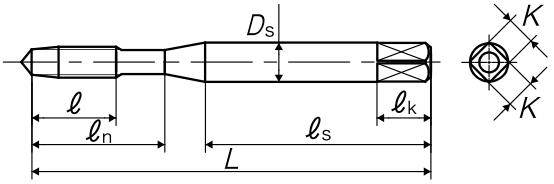


TYPE: 3



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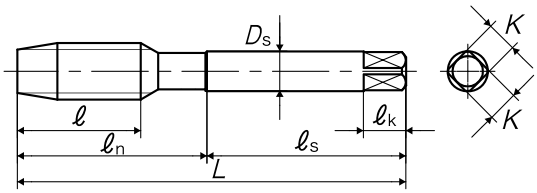
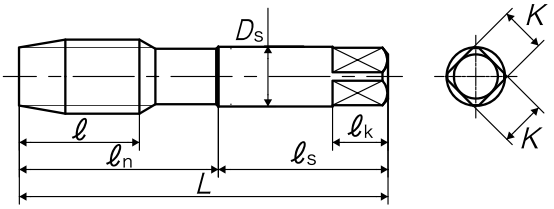


TYPE: 5



Oversize

Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.4 × 0.3	P1	PUPP1.4C	5P	36	5.4	-	24	3	2.5	5	2	1	△
M1.6 × 0.35	P2	PUPQ1.6D	5P	36	6.3	-	24	3	2.5	5	2	2	△
M1.7 × 0.35	P2	PUPQ1.7D	5P	36	6.3	-	24	3	2.5	5	2	2	△
M2 × 0.4	P2	PUPQ2.0E	5P	42	7.2	12	27	3	2.5	5	2	3	◎
	P3	PUPR2.0E											△
M2.3 × 0.4	P2	PUPQ2.3E	5P	42	7.2	12	27	3	2.5	5	2	3	○
	P3	PUPR2.3E											△
M2.5 × 0.45	P2	PUPQ2.5F	5P	46	8.1	14	29	3	2.5	5	2	3	○
	P3	PUPR2.5F											△
M2.6 × 0.45	P2	PUPQ2.6F	5P	46	8.1	14	29	3	2.5	5	2	3	○
	P3	PUPR2.6F											△
M3 × 0.5	P2	PUMQ3.0G	5P	46	9	14	26	4	3.2	6	3	3	◎
	P3	PUMR3.0G											△
	P4	PUMS3.0G											
3M0.6	P2	PUMQ3.0H	5P	46	9	14	26	4	3.2	6	3	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SU+PO/SU-PO Spiral Pointed Taps for Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M3.5 × 0.6	P2	PUMQ3.5H	5P	52	11	16	29	5	4	7	3	3	○
M4 × 0.7	P2	PUMQ4.0I	5P	52	11	17	29	5	4	7	3	3	◎
	P3	PUMR4.0I											△
	P4	PUMS4.0I											
4M0.75	P2	PUMQ4.0J	5P	52	11	17	29	5	4	7	3	3	△
M5 × 0.8	P2	PUMQ5.0K	5P	60	13	22	33	5.5	4.5	7	3	3	◎
	P3	PUMR5.0K											△
	P4	PUMS5.0K											
5M0.9	P2	PUMQ5.0L	5P	60	13	22	33	5.5	4.5	7	3	3	△
M6 × 1	P2	PUMQ6.0M	5P	62	15	26	33	6	4.5	7	3	3	◎
	P3	PUMR6.0M											△
	P4	PUMS6.0M											
M6 × 0.75	P2	PUMQ6.0J	5P	62	15	26	33	6	4.5	7	3	3	△
M7 × 1	P2	PUMQ7.0M	5P	70	19	-	36	6.2	5	8	3	4	△
M8 × 1.25	P3	PUMR8.0N	5P	70	19	-	36	6.2	5	8	3	4	◎
	P4	PUMS8.0N											△
	P5	PUMT8.0N											
M8 × 1	P3	PUMR8.0M	5P	70	19	-	36	6.2	5	8	3	4	○
M10 × 1.5	P3	PUMR010O	5P	75	23	-	38	7	5.5	8	3	4	◎
	P4	PUMS010O											△
M10 × 1.25	P3	PUMR010N	5P	75	23	-	38	7	5.5	8	3	4	○
	P4	PUMS010N											△
M10 × 1	P3	PUMR010M	5P	75	23	-	38	7	5.5	8	3	4	△
M12 × 1.75	P4	PUMS012P	5P	82	26	-	42	8.5	6.5	9	3	4	◎
	P5	PUMT012P											△
M12 × 1.5	P3	PUMR012O	5P	82	26	-	42	8.5	6.5	9	3	4	△
	P5	PUMT012O											
M12 × 1.25	P4	PUMS012N	5P	82	26	-	42	8.5	6.5	9	3	4	○
	P5	PUMT012N											△
M12 × 1	P3	PUMR012M	5P	82	26	-	42	8.5	6.5	9	3	4	△
M14 × 2	P4	PUMS014Q	5P	88	26	-	45	10.5	8	11	3	4	○
	P5	PUMT014Q											△
M14 × 1.5	P3	PUMR014O	5P	88	26	-	45	10.5	8	11	3	4	○
M16 × 2	P4	PUMS016Q	5P	95	26	-	48	12.5	10	13	3	4	○
	P5	PUMT016Q											△
	P6	PUMU016Q											
M16 × 1.5	P3	PUMR016O	5P	95	26	-	48	12.5	10	13	3	4	○
M16 × 1	P3	PUMR016M	5P	95	26	-	48	12.5	10	13	3	4	△
M18 × 2.5	P4	PUMS018R	5P	100	33	-	51	14	11	14	3	4	△
	P5	PUMT018R											
	P6	PUMU018R											
M18 × 1.5	P4	PUMS018O	5P	100	33	-	51	14	11	14	3	4	△
M20 × 2.5	P4	PUMS020R	5P	105	33	-	50	15	12	15	3	5	○
	P5	PUMT020R											△
	P6	PUMU020R											
M20 × 1.5	P4	PUMS020O	5P	105	33	-	50	15	12	15	3	5	△
M22 × 2.5	P4	PUMS022R	5P	115	33	-	55	17	13	16	3	5	△
	P5	PUMT022R											
	P6	PUMU022R											

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SU+PO/SU-PO Spiral Pointed Taps for Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M22 × 1.5	P4	PUMS022O	5P	115	33	-	55	17	13	16	3	5	△
M24 × 3	P4	PUMS024S	5P	120	39	-	55	19	15	18	3	5	○
	P5	PUMT024S											△
	P6	PUMU024S											
M24 × 1.5	P4	PUMS024O	5P	120	39	-	55	19	15	18	3	5	△
M27 × 3	P4	PUMS027S	5P	130	39	-	60	20	15	18	4	5	△
M27 × 1.5	P4	PUMS027O	5P	130	39	-	60	20	15	18	4	5	△
M30 × 3.5	P5	PUMT030T	5P	135	46	-	62	23	17	20	4	5	△
M30 × 1.5	P4	PUMS030O	5P	135	46	-	62	23	17	20	4	5	△
M33 × 3.5	P5	PUMT033T	5P	145	46	-	67	25	19	22	4	5	△
M36 × 4	P5	PUMT036U	5P	155	52	-	71	28	21	24	4	5	△
M39 × 4	P5	PUMT039U	5P	165	52	-	76	30	23	26	4	5	△
M42 × 4.5	P5	PUMT042V	5P	175	59	-	81	32	26	30	4	5	△
For Unified Threads													
No.2-56UNC	P1	PUMPUN2E	5P	42	8.1	12	27	3	2.5	5	2	3	△
No.4-40UNC	P2	PUMQUN4H	5P	46	9	14	26	4	3.2	6	2	3	△
No.4-48UNF	P1	PUMPUN4F	5P	46	9	14	26	4	3.2	6	2	3	△
No.5-40UNC	P2	PUMQUN5H	5P	52	11	16	29	5	4	7	3	3	△
No.5-44UNF	P1	PUMPUN5G	5P	52	11	16	29	5	4	7	3	3	△
No.6-32UNC	P2	PUMQUN6J	5P	52	11	16	29	5	4	7	3	3	△
No.6-40UNF	P2	PUMQUN6H	5P	52	11	16	29	5	4	7	3	3	△
No.8-32UNC	P2	PUMQUN8J	5P	60	13	21	33	5.5	4.5	7	3	3	△
No.8-36UNF	P2	PUMQUN8I	5P	60	13	21	33	5.5	4.5	7	3	3	△
No.10-24UNC	P2	PUMQUNAM	5P	60	13	22	33	5.5	4.5	7	3	3	△
No.10-32UNF	P2	PUMQUNAJ	5P	60	13	22	33	5.5	4.5	7	3	3	△
1/4-20UNC	P2	PUMQU04N	5P	62	15	26	33	6	4.5	7	3	3	△
1/4-28UNF	P2	PUMQU04K	5P	62	15	26	33	6	4.5	7	3	3	△
5/16-18UNC	P3	PUMRU05O	5P	70	19	-	36	6.2	5	8	3	4	△
5/16-24UNF	P2	PUMQU05M	5P	70	19	-	36	6.2	5	8	3	4	△
3/8-16UNC	P3	PUMRU06P	5P	75	23	-	38	7	5.5	8	3	4	△
3/8-24UNF	P2	PUMQU06M	5P	75	23	-	38	7	5.5	8	3	4	△
7/16-14UNC	P3	PUMRU07Q	5P	82	26	-	42	8.5	6.5	9	3	4	△
7/16-20UNF	P3	PUMRU07N	5P	82	26	-	42	8.5	6.5	9	3	4	△
1/2-13UNC	P3	PUMRU08R	5P	88	26	-	45	10.5	8	11	3	4	△
1/2-20UNF	P3	PUMRU08N	5P	88	26	-	45	10.5	8	11	3	4	△
9/16-18UNF	P3	PUMRU09O	5P	95	26	-	48	12.5	10	13	3	4	△
5/8-11UNC	P3	PUMRU10U	5P	95	26	-	48	12.5	10	13	3	4	△
For Whitworth Threads													
3/16W24	P2	PUMQW03M	5P	60	13	21	33	5.5	4.5	7	3	3	△
1/4W20	P3	PUMRW04N	5P	62	15	26	33	6	4.5	7	3	3	△
5/16W18	P3	PUMRW05O	5P	70	19	-	36	6.2	5	8	3	4	△
3/8W16	P3	PUMRW06P	5P	75	23	-	38	7	5.5	8	3	4	△
7/16W14	P3	PUMRW07Q	5P	82	26	-	42	8.5	6.5	9	3	4	△
1/2W12	P3	PUMRW08S	5P	88	26	-	45	10.5	8	11	3	4	△
5/8W11	P3	PUMRW10U	5P	95	26	-	48	12.5	10	13	3	4	△
3/4W10	P4	PUMSW12V	5P	105	33	-	50	15	12	15	3	5	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-SU-S-PO

Long Shank Short Spiral Pointed Taps for Stainless Steels

Specification

HSS | OX Oxide

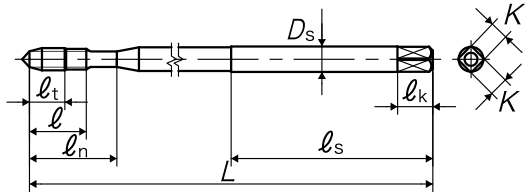
■Long shank spiral pointed tap suitable for stainless steels tending to work harden and sticky, as well as chrome steels and molybdenum steels. Through hole use. Tapping of rather deep holes is possible.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
5~10 (m/min)	5~10 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE:1



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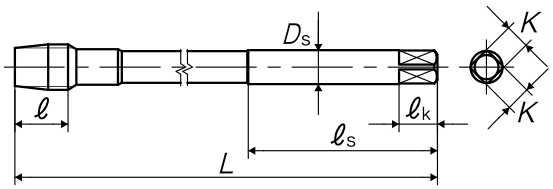

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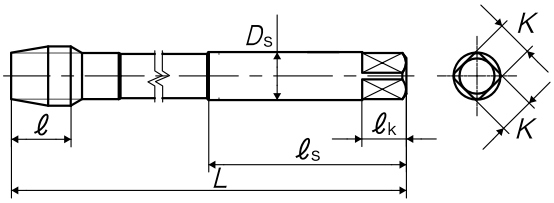


Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M3 × 0.5	P2	-	4.5P	100	5	9	14	40	4	3.2	6	3	1	△
M4 × 0.7	P2	-	4.5P	100 150	7	11	17	40	5	4	7	3	1	△
M5 × 0.8	P2	-	4.5P	100 150	9	13	22	40	5.5	4.5	7	3	1	△
M6 × 1	P2	-	4.5P	100 150	11	15	26	40	6	4.5	7	3	1	△
M8 × 1.25	P3	-	5P	100 150	-	12	-	50	6.2	5	8	3	2	△
M10 × 1.5	P3	-	5P	100 150	-	13	-	50	7	5.5	8	3	2	△
M12 × 1.75	P4	-	5P	150	-	15	-	50	8.5	6.5	9	3	2	△
M16 × 2	P4	-	5P	150	-	18	-	60	12.5	10	13	3	2	△
M20 × 2.5	P4	-	5P	150	-	20	-	70	15	12	15	3	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

S-PO

Short Spiral Pointed Taps for Deep Hole Use

Specification

HSS | OX Oxide

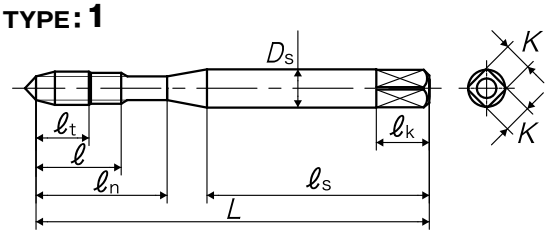
■S-PO is the spiral pointed tap having short thread portion which reduces friction and makes smooth the coolant supply, and is suitable for such deep holes as are deeper than 2.5 times of the nominal dia.

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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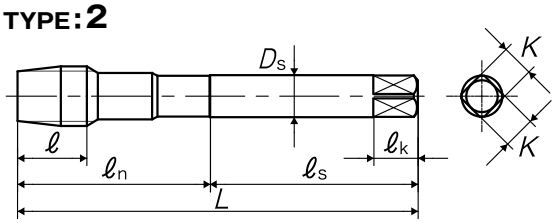

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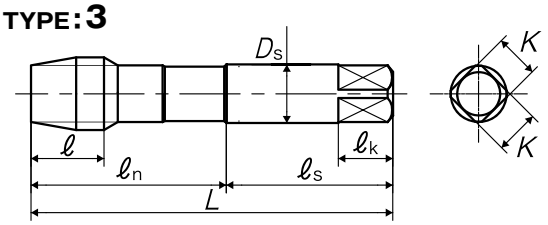


Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads														
M2 × 0.4	P2	PSMQ2.0E	5P	42	4	7.2	12	27	3	2.5	5	2	1	○
M2.3 × 0.4	P2	PSMQ2.3E	5P	42	4	7.2	12	27	3	2.5	5	2	1	△
M2.5 × 0.45	P2	PSMQ2.5F	5P	46	4	8.1	14	29	3	2.5	5	2	1	△
M2.6 × 0.45	P2	PSMQ2.6F	5P	46	4	8.1	14	29	3	2.5	5	2	1	△
M3 × 0.5	P2	PSMQ3.0G	5P	46	5	9	14	26	4	3.2	6	3	1	○
M3.5 × 0.6	P2	PSMQ3.5H	5P	52	7	11	16	29	5	4	7	3	1	△
M4 × 0.7	P2	PSMQ4.0I	5P	52	7	11	17	29	5	4	7	3	1	○
M5 × 0.8	P2	PSMQ5.0K	5P	60	9	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P2	PSMQ6.0M	5P	62	11	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P3	PSMR8.0N	5P	70	-	12	-	36	6.2	5	8	3	2	○
M8 × 1	P3	PSMR8.0M	5P	70	-	12	-	36	6.2	5	8	3	2	△
M10 × 1.5	P3	PSMR010O	5P	75	-	13	-	38	7	5.5	8	3	2	○
M10 × 1.25	P3	PSMR010N	5P	75	-	13	-	38	7	5.5	8	3	2	△
M10 × 1	P3	PSMR010M	5P	75	-	13	-	38	7	5.5	8	3	2	○
M12 × 1.75	P4	PSMS012P	5P	82	-	15	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P3	PSMR012O	5P	82	-	15	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P4	PSMS012N	5P	82	-	15	-	42	8.5	6.5	9	3	2	○
M12 × 1	P3	PSMR012M	5P	82	-	15	-	42	8.5	6.5	9	3	2	△
M14 × 2	P4	PSMS014Q	5P	88	-	18	-	45	10.5	8	11	3	2	○
M14 × 1.5	P3	PSMR014O	5P	88	-	14	-	45	10.5	8	11	3	2	○
M16 × 2	P4	PSMS016Q	5P	95	-	18	-	48	12.5	10	13	3	2	○
M16 × 1.5	P3	PSMR016O	5P	95	-	14	-	48	12.5	10	13	3	2	△
M18 × 2.5	P4	PSMS018R	5P	100	-	20	-	51	14	11	14	3	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

S-PO Short Spiral Pointed Taps for Deep Hole Use

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M18 × 1.5	P4	PSMS018O	5P	100	-	14	-	51	14	11	14	3	2	△
M20 × 2.5	P4	PSMS020R	5P	105	-	20	-	50	15	12	15	3	3	○
M20 × 1.5	P4	PSMS020O	5P	105	-	14	-	50	15	12	15	3	3	△
M22 × 2.5	P4	PSMS022R	5P	115	-	20	-	55	17	13	16	3	3	△
M22 × 1.5	P4	PSMS022O	5P	115	-	14	-	55	17	13	16	3	3	△
M24 × 3	P4	PSMS024S	5P	120	-	25	-	55	19	15	18	3	3	△
M24 × 1.5	P4	PSMS024O	5P	120	-	18	-	55	19	15	18	3	3	△
M27 × 3	P4	PSMS027S	5P	130	-	25	-	60	20	15	18	4	3	△
M27 × 1.5	P4	PSMS027O	5P	130	-	20	-	60	20	15	18	4	3	△
M30 × 3.5	P5	PSMT030T	5P	135	-	30	-	62	23	17	20	4	3	△
M30 × 1.5	P4	PSMS030O	5P	135	-	20	-	62	23	17	20	4	3	△
M33 × 3.5	P5	PSMT033T	5P	145	-	30	-	67	25	19	22	4	3	△
M36 × 4	P5	PSMT036U	5P	155	-	40	-	71	28	21	24	4	3	△
M39 × 4	P5	PSMT039U	5P	165	-	40	-	76	30	23	26	4	3	△
M42 × 4.5	P5	PSMT042V	5P	175	-	40	-	81	32	26	30	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

HC+PO/HC-PO

Spiral Pointed Taps for High Carbon Steels

Specification

HSS

■Spiral pointed tap suitable for high carbon steels such as S55C and the like.

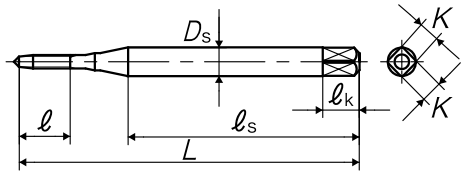
HC+PO	～M2.6
HC−PO	M3～

Recommended Tapping Speeds depending on Materials

High carbon steels 高炭素鋼
5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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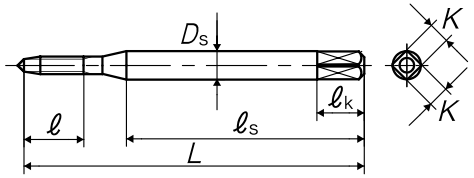

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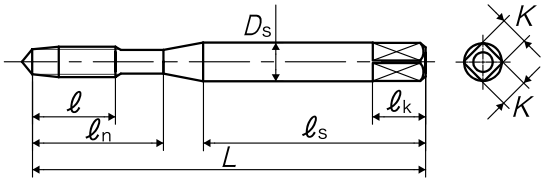

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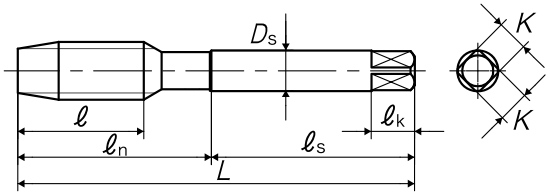

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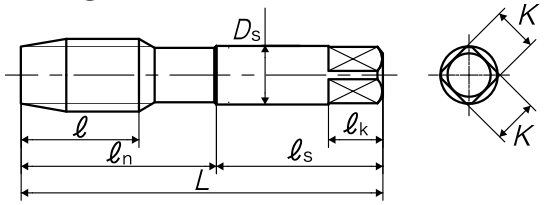


Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.4 × 0.3	P1	PCPP1.4C	5P	36	5.4	-	24	3	2.5	5	2	1	○
M1.6 × 0.35	P2	PCPQ1.6D	5P	36	6.3	-	24	3	2.5	5	2	2	○
M1.7 × 0.35	P2	PCPQ1.7D	5P	36	6.3	-	24	3	2.5	5	2	2	○
M2 × 0.4	P2	PCPQ2.0E	5P	42	7.2	12	27	3	2.5	5	2	3	○
M2.5 × 0.45	P2	PCPQ2.5F	5P	46	8.1	14	29	3	2.5	5	2	3	○
M2.6 × 0.45	P2	PCPQ2.6F	5P	46	8.1	14	29	3	2.5	5	2	3	○
M3 × 0.5	P2	PCMQ3.0G	5P	46	9	14	26	4	3.2	6	3	3	○
M4 × 0.7	P2	PCMQ4.0I	5P	52	11	17	29	5	4	7	3	3	○
M5 × 0.8	P2	PCMQ5.0K	5P	60	13	22	33	5.5	4.5	7	3	3	○
M6 × 1	P2	PCMQ6.0M	5P	62	15	26	33	6	4.5	7	3	3	○
M8 × 1.25	P3	PCMR8.0N	5P	70	19	-	36	6.2	5	8	3	4	○
M10 × 1.5	P3	PCMR010O	5P	75	23	-	38	7	5.5	8	3	4	○
M10 × 1.25	P3	PCMR010N	5P	75	23	-	38	7	5.5	8	3	4	△
M12 × 1.75	P4	PCMS012P	5P	82	26	-	42	8.5	6.5	9	3	4	○
M12 × 1.5	P3	PCMR012O	5P	82	26	-	42	8.5	6.5	9	3	4	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HC+PO/HC-PO Spiral Pointed Taps for High Carbon Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1.25	P4	PCMS012N	5P	82	26	-	42	8.5	6.5	9	3	4	△
M14 × 2	P4	PCMS014Q	5P	88	26	-	45	10.5	8	11	3	4	△
M14 × 1.5	P3	PCMR014O	5P	88	26	-	45	10.5	8	11	3	4	△
M16 × 2	P4	PCMS016Q	5P	95	26	-	48	12.5	10	13	3	4	△
M16 × 1.5	P3	PCMR016O	5P	95	26	-	48	12.5	10	13	3	4	△
M18 × 2.5	P4	PCMS018R	5P	100	33	-	51	14	11	14	3	4	△
M18 × 1.5	P4	PCMS018O	5P	100	33	-	51	14	11	14	3	4	△
M20 × 2.5	P4	PCMS020R	5P	105	33	-	50	15	12	15	3	5	△
M20 × 1.5	P4	PCMS020O	5P	105	33	-	50	15	12	15	3	5	△
M22 × 2.5	P4	PCMS022R	5P	115	33	-	55	17	13	16	3	5	△
M24 × 3	P4	PCMS024S	5P	120	39	-	55	19	15	18	3	5	△

AL-PO

Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts

Specification

HSS

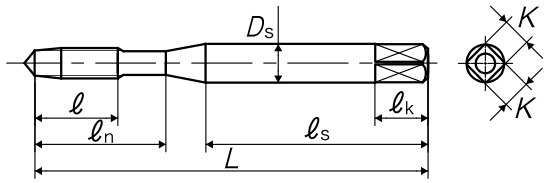
■Spiral pointed tap to cut internal threads for helical coil to enter.

Recommended Tapping Speeds depending on Materials

Brass 黄銅	Brass castings 黄銅鋳物	Bronze 青銅	Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Magnesium alloy die castings マグネシウム合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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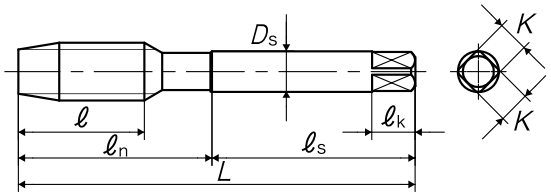


Segment : 1E

Size	Class	Code	Chamfer	Basic major dia	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Helical Coil Wire Screw Thread Inserts, for Metric Threads														
STI M3 × 0.5	1b	-	5P	3.65	52	7.5	17	29	5	4	7	3	1	△
STI M4 × 0.7	1b	-	5P	4.909	60	13	22	33	5.5	4.5	7	3	1	△
STI M5 × 0.8	1b	-	5P	6.039	62	15	26	33	6	4.5	7	3	1	△
STI M6 × 1	1b	-	5P	7.299	70	19	-	36	6.2	5	8	3	2	△
STI M8 × 1.25	1b	-	5P	9.624	75	23	-	38	7	5.5	8	3	2	△
STI M10 × 1.5	1b	-	5P	11.948	82	26	-	42	8.5	6.5	9	3	2	△
STI M12 × 1.75	1b	-	5P	14.273	95	26	-	48	12.5	10	13	3	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

MC-PO

Spiral Pointed Taps with Internal Coolant

Specification

HSS

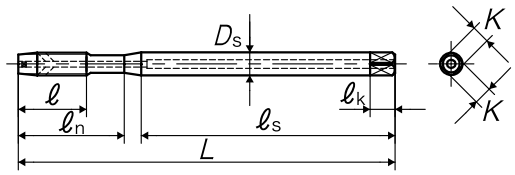
■Adopting internal coolant (radial through type) realizing sufficient coolant supply to the cutting area, MC-PO spiral pointed tap ensures a long tool life and internal threads with good surface finish.

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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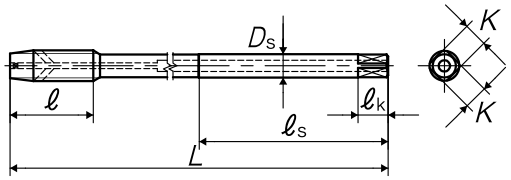


Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	MPHQ6.0ML10	5P	100	19	28	40	6	4.5	7	3	1	△
		MPHQ6.0ML15		150									
M8 × 1.25	P3	MPHR8.0NL10	5P	100	22	-	50	6.2	5	8	3	2	△
		MPHR8.0NL15		150									
M10 × 1.5	P3	MPHR010OL10	5P	100	24	-	50	7	5.5	8	3	2	△
		MPHR010OL15		150									
M10 × 1.25	P3	MPHR010NL15	5P	150	24	-	50	7	5.5	8	3	2	△
M12 × 1.75	P4	MPHS012PL10	5P	100	29	-	50	8.5	6.5	9	3	2	△
		MPHS012PL15		150									
M12 × 1.5	P3	MPHR012OL10	5P	100	29	-	50	8.5	6.5	9	3	2	△
		MPHR012OL15		150									
M12 × 1.25	P4	MPHS012NL10	5P	100	29	-	50	8.5	6.5	9	3	2	△
		MPHS012NL15		150									
M14 × 2	P4	MPHS014QL15	5P	150	30	-	60	10.5	8	11	3	2	△
M14 × 1.5	P3	MPHR014OL15	5P	150	30	-	60	10.5	8	11	3	2	△
M16 × 2	P4	MPHS016QL15	5P	150	32	-	60	12.5	10	13	3	2	△
M16 × 1.5	P3	MPHR016OL15	5P	150	32	-	60	12.5	10	13	3	2	△
M18 × 2.5	P4	MPHS018RL15	5P	150	37	-	70	14	11	14	3	2	△
M18 × 1.5	P4	MPHS018OL15	5P	150	37	-	70	14	11	14	3	2	△
M20 × 2.5	P4	MPHS020RL15	5P	150	37	-	70	15	12	15	3	2	△
M20 × 1.5	P4	MPHS020OL15	5P	150	37	-	70	15	12	15	3	2	△
M22 × 2.5	P4	MPHS022RL15	5P	150	38	-	70	17	13	16	3	2	△
M24 × 3	P4	MPHS024SL15	5P	150	45	-	80	19	15	18	3	2	△

EH-PO

Spiral Pointed Taps for Hard-to-Machine Materials

Specification

HSS-Co

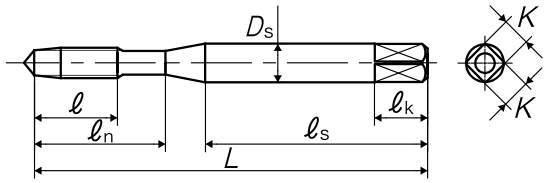
■Spiral pointed tap suitable for high hardness steels of 25～35HRC such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels. Through hole use.

Recommended Tapping Speeds depending on Materials

Thermal refined steels 調質鋼 ~5 (m/min)
25~35HRC

For icon explanation, refer to P.24

TYPE: 1



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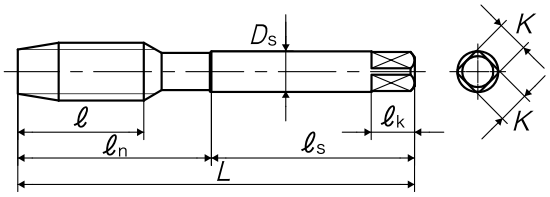

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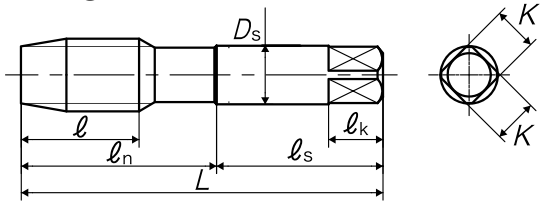


Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P3	EPHMR3.0G	4.5P	46	9	14	26	4	3.2	6	3	1	○
M4 × 0.7	P3	EPHMR4.0I	4.5P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P3	EPHMR5.0K	4.5P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P3	EPHMR6.0M	4.5P	62	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P4	EPHMS8.0N	4.5P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P4	EPHMS010O	4.5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P4	EPHMS010N	4.5P	75	23	-	38	7	5.5	8	3	2	○
M12 × 1.75	P4	EPHMS012P	4.5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P4	EPHMS012O	4.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P4	EPHMS012N	4.5P	82	26	-	42	8.5	6.5	9	3	2	△
M14 × 2	P5	EPHMT014Q	4.5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.5	P4	EPHMS014O	4.5P	88	26	-	45	10.5	8	11	3	2	○
M16 × 2	P5	EPHMT016Q	4.5P	95	26	-	48	12.5	10	13	3	2	○
M16 × 1.5	P4	EPHMS016O	4.5P	95	26	-	48	12.5	10	13	3	2	△
M18 × 2.5	P5	EPHMT018R	4.5P	100	33	-	51	14	11	14	3	2	△
M18 × 1.5	P4	EPHMS018O	4.5P	100	33	-	51	14	11	14	3	2	△
M20 × 2.5	P5	EPHMT020R	4.5P	105	33	-	50	15	12	15	3	3	△
M20 × 1.5	P4	EPHMS020O	4.5P	105	33	-	50	15	12	15	3	3	△
M22 × 2.5	P5	EPHMT022R	4.5P	115	33	-	55	17	13	16	3	3	△
M22 × 1.5	P4	EPHMS022O	4.5P	115	33	-	55	17	13	16	3	3	△
M24 × 3	P5	EPHMT024S	4.5P	120	39	-	55	19	15	18	3	3	△
M24 × 1.5	P4	EPHMS024O	4.5P	120	39	-	55	19	15	18	3	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

ZEN-P

Spiral Pointed Taps for Nickel Base Alloys

Specification

HSS-P | NX Nitride+Oxide | Synchro nized

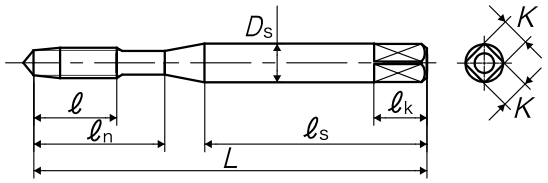
■ZEN-P is the spiral point tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and much higher heat resistance than steels.

Recommended Tapping Speeds depending on Materials

Nickel base alloys ニッケル基合金 5~10 (m/min)

For icon explanation, refer to P.24

TYPE : 1



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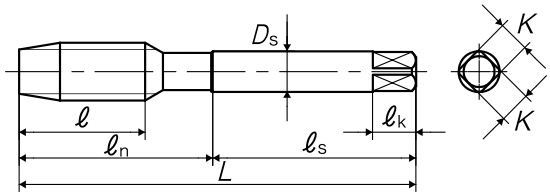

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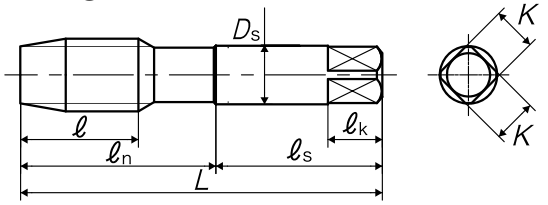


Segment : 1F

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P3	ZENPMR3.0G	4.5P	46	9	14	26	4	3.2	6	3	1	○
M4 × 0.7	P3	ZENPMR4.0I	4.5P	52	11	17	29	5	4	7	3	1	○
M5 × 0.8	P3	ZENPMR5.0K	4.5P	60	13	22	33	5.5	4.5	7	3	1	○
M6 × 1	P3	ZENPMR6.0M	4.5P	62	15	26	33	6	4.5	7	3	1	○
M8 × 1.25	P4	ZENPMS8.0N	4.5P	70	19	-	36	6.2	5	8	3	2	○
M10 × 1.5	P4	ZENPMS010O	4.5P	75	23	-	38	7	5.5	8	3	2	○
M10 × 1.25	P4	ZENPMS010N	4.5P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P5	ZENPMT012P	4.5P	82	26	-	42	8.5	6.5	9	3	2	○
M12 × 1.5	P4	ZENPMS012O	4.5P	82	26	-	42	8.5	6.5	9	3	2	△
M12 × 1.25	P5	ZENPMT012N	4.5P	82	26	-	42	8.5	6.5	9	3	2	△
M14 × 2	P5	ZENPMT014Q	4.5P	88	26	-	45	10.5	8	11	3	2	△
M14 × 1.5	P4	ZENPMS014O	4.5P	88	26	-	45	10.5	8	11	3	2	△
M16 × 2	P5	ZENPMT016Q	4.5P	95	26	-	48	12.5	10	13	3	2	△
M16 × 1.5	P4	ZENPMS016O	4.5P	95	26	-	48	12.5	10	13	3	2	△
M18 × 2.5	P5	ZENPMT018R	4.5P	100	33	-	51	14	11	14	3	2	△
M20 × 2.5	P5	ZENPMT020R	4.5P	105	33	-	50	15	12	15	3	3	△
M20 × 1.5	P5	ZENPMT020O	4.5P	105	33	-	50	15	12	15	3	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

PM-PO

Spiral Pointed Taps for Hard-to-Machine Materials

Specification

HSS-P

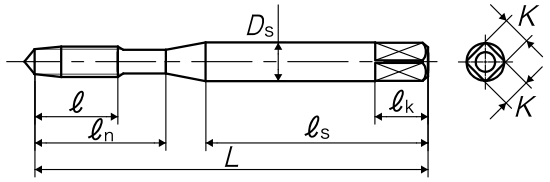
■Spiral pointed tap suitable for high hardness steels of 35～45HRC such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steel. Through hole use.

Recommended Tapping Speeds depending on Materials

Thermal refined steels 調質鋼 ~5 (m/min)
35～45HRC

For icon explanation, refer to P.24

TYPE: 1



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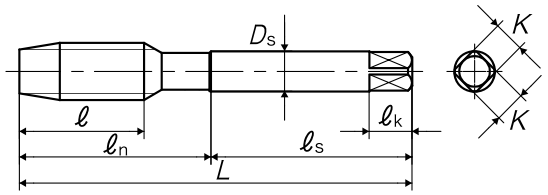


Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P3	-	5.5P	46	9	14	26	4	3.2	6	3	1	△
M4 × 0.7	P3	-	5.5P	52	11	17	29	5	4	7	3	1	△
M5 × 0.8	P3	-	5.5P	60	13	22	33	5.5	4.5	7	3	1	△
M6 × 1	P3	-	5.5P	62	15	26	33	6	4.5	7	3	1	△
M8 × 1.25	P4	-	5.5P	70	19	-	36	6.2	5	8	3	2	△
M10 × 1.5	P4	-	5.5P	75	23	-	38	7	5.5	8	3	2	△
M10 × 1.25	P4	-	5.5P	75	23	-	38	7	5.5	8	3	2	△
M12 × 1.75	P4	-	5.5P	82	26	-	42	8.5	6.5	9	3	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-PM-PO

Long Shank Spiral Pointed Taps for Hard-to-Machine Materials

Specification

HSS-P

■Long shank spiral pointed tap suitable for high hardness steels of 35～45HRC such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steel. Through hole use.

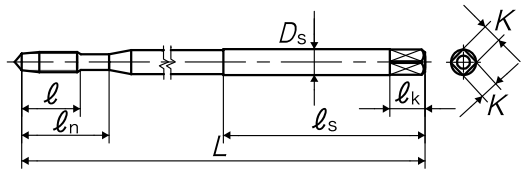
Recommended Tapping Speeds depending on Materials

Thermal refined steels 調質鋼 ~5 (m/min)

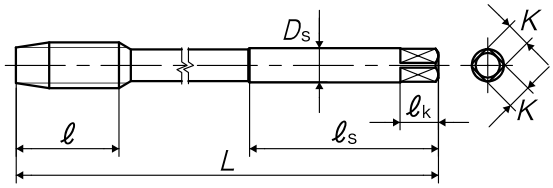
35～45HRC

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1E

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M4 × 0.7	P3	-	5.5P	100	11	17	40	5	4	7	3	1	△
M5 × 0.8	P3	-	5.5P	100	13	22	40	5.5	4.5	7	3	1	△
M6 × 1	P3	-	5.5P	100	15	26	40	6	4.5	7	3	1	△
M8 × 1.25	P4	-	5.5P	100	19	-	50	6.2	5	8	3	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MEMO

HAND TAP SERIES

IHT	HT-1
HT	HT-3
HT LH	HT-18
LS-HT	HT-21
LS-HT LH	HT-29
LS-HT V	HT-31
SU-HT	HT-33
FC-HT	HT-36
FC-O	HT-38
LA-HT	HT-40
LA-O	HT-42
AXE-HT	HT-45
MG-HT	HT-47
AL-HT	HT-48
PL1	HT-51
MC-HT	HT-52
EH-HT	HT-55

IHT

Hand Taps for General Purpose

Specification

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

Product features

- IHT is for hand tapping and for re-threading, and is used for both through hole and blind hole.
- Use for threading of the iron (SPC or SS400) products used in our daily life.
- Surface treated. Oxidization, the most suitable surface treatment for iron products.
- Suitable for internal thread cutting in small quantity, such as tapping of test pieces.
- The 5 thread chamfer is recommended for through holes and 2 thread chamfer is recommeded for blind holes.

Through hole = 5 thread type

Blind hole = 2 thread type

How to use IHT

- Start tapping after boring holes corresponding to the thread size by using drills (note: For drill sizes, refer to drill sizes shown in the bored hole size table.)
- On Hand Tapping, operate tapping in an upright position parallel to bored holes by using tap wrenches.
- During tapping, please use tapping oil.

When hand tapping, always use tap wrench

Machine tapping with drilling machine

■Table for bored and drilled hole sizes

unit:mm

Size	Minor diameter of internal thread size			Drill size	Thread engagement
	Minimum tolerance	Maximum tolerance			
		6H (2nd class)	7H (3rd class)		
M3 × 0.5	2.459	2.599	2.639	2.6 (2.5)	74% (92%)
M4 × 0.7	3.242	3.422	3.466	3.4 (3.3)	79% (92%)
M5 × 0.8	4.134	4.344	4.384	4.3 (4.2)	81% (92%)
M6 × 1	4.917	5.153	5.217	5.1 (5.0)	83% (92%)
M8 × 1.25	6.647	6.912	6.982	6.9 (6.8)	91% (89%)
M10 × 1.5	8.376	8.676	8.751	8.6 (8.5)	86% (92%)

note1) Recommended drill sizes shown in this table are for internal threads of 7H class (3rd class), and are selected from the standard drills available in the market.

note2) Drill sizes shown in brackets in this table are for such case as the drilling has oversize cutting tendency or for internal threads of 6H class (2nd class).

Blister Pack

[Related products]

Shank adjuster

- For deep hole tappings, please use shank adjusters.
- There is only a one touch motion required to detach and attach the I series taps (IHT/ISP/IPO) from or to the shank adjuster.

*For details of shank adjuster, refer to P.296

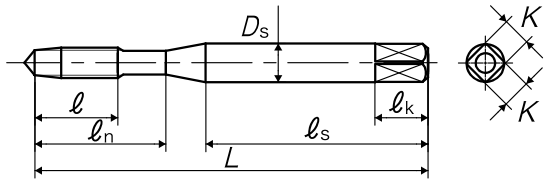
Obtainable from Video site shown in right

Think threads with YAMAWA

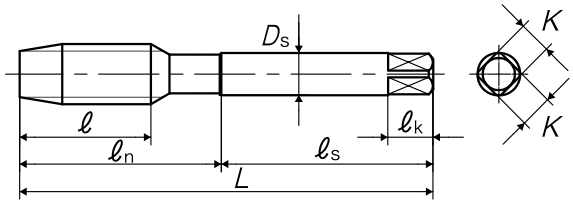
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

TYPE: 1



TYPE: 2



Segment : 1A

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	HI73.0G5	5P	46	9	14	26	4	3.2	6	3	1	◎
	HI73.0G2	2P										
M4 × 0.7	HI74.0I5	5P	52	11	17	29	5	4	7	3	1	◎
	HI74.0I2	2P										
M5 × 0.8	HI75.0K5	5P	60	13	22	33	5.5	4.5	7	3	1	◎
	HI75.0K2	2P										
M6 × 1	HI76.0M5	5P	62	15	26	33	6	4.5	7	3	1	◎
	HI76.0M2	2P										
M8 × 1.25	HI78.0N5	5P	70	19	-	36	6.2	5	8	3	2	◎
	HI78.0N2	2P										
M10 × 1.5	HI701005	5P	75	23	-	38	7	5.5	8	3	2	◎
	HI701002	2P										

Blister Pack

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	HI73.0G5BP	5P	46	9	14	26	4	3.2	6	3	1	◎
	HI73.0G2BP	2P										
M4 × 0.7	HI74.0I5BP	5P	52	11	17	29	5	4	7	3	1	◎
	HI74.0I2BP	2P										
M5 × 0.8	HI75.0K5BP	5P	60	13	22	33	5.5	4.5	7	3	1	◎
	HI75.0K2BP	2P										
M6 × 1	HI76.0M5BP	5P	62	15	26	33	6	4.5	7	3	1	◎
	HI76.0M2BP	2P										
M8 × 1.25	HI78.0N5BP	5P	70	19	-	36	6.2	5	8	3	2	◎
	HI78.0N2BP	2P										
M10 × 1.5	HI701005BP	5P	75	23	-	38	7	5.5	8	3	2	◎
	HI701002BP	2P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

HT

Hand Taps

Specification

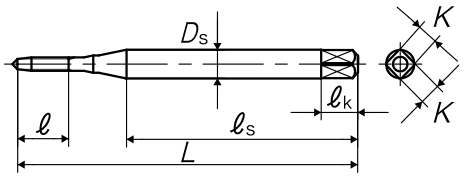
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels
中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE: 1



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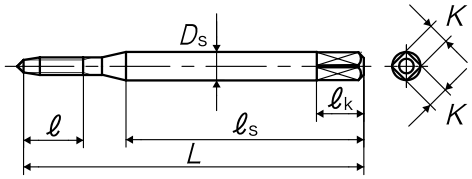

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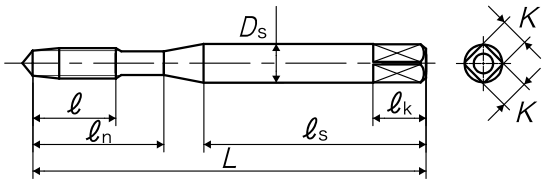
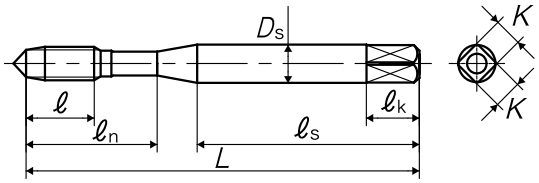


TYPE: 4



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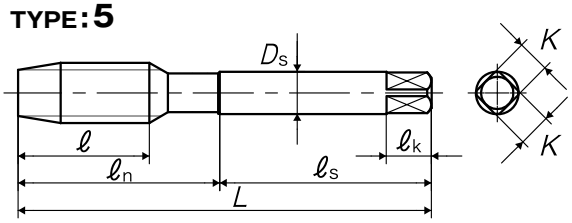
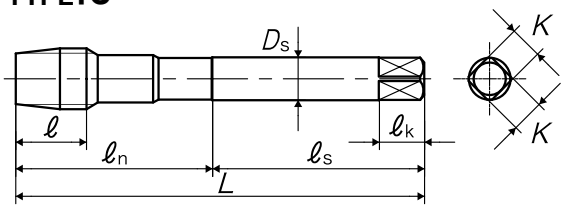
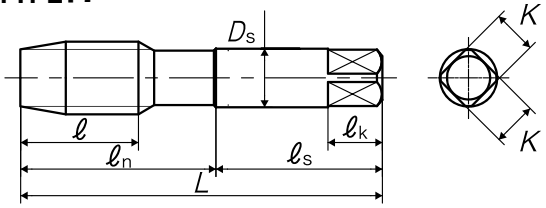


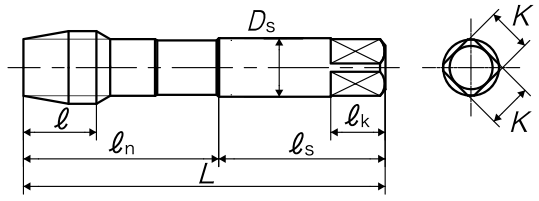
TYPE: 6



TYPE: 7



TYPE: 8



Think threads with YAMAWA

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT Hand Taps

Oversize

Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1 × 0.25	P1	TNMP1.0B5	5P	36	4.5	-	24	3	2.5	5	3	1	○
		TNMP1.0B1	1.5P										
M1 × 0.2	P1	TNMP1.0A5	5P	36	3.6	-	24	3	2.5	5	3	1	△
		TNMP1.0A1	1.5P										
M1.1 × 0.25	P1	TNMP1.1B5	5P	36	4.5	-	24	3	2.5	5	3	1	○
		TNMP1.1B1	1.5P										
M1.1 × 0.2	P1	TNMP1.1A5	5P	36	3.6	-	24	3	2.5	5	3	1	△
		TNMP1.1A1	1.5P										
M1.2 × 0.25	P1	TNMP1.2B5	5P	36	4.5	-	24	3	2.5	5	3	1	○
		TNMP1.2B1	1.5P										
	P3	TNMR1.2B5	5P										△
		TNMR1.2B1	1.5P										
M1.2 × 0.2	P1	TNMP1.2A5	5P	36	3.6	-	24	3	2.5	5	3	1	△
		TNMP1.2A1	1.5P										
M1.4 × 0.3	P1	TNMP1.4C5	5P	36	5.4	-	24	3	2.5	5	3	1	◎
		TNMP1.4C1	1.5P										
	P3	TNMR1.4C5	5P										△
		TNMR1.4C1	1.5P										
M1.4 × 0.2	P1	TNMP1.4A5	5P	36	3.6	-	24	3	2.5	5	3	1	△
		TNMP1.4A1	1.5P										
M1.6 × 0.35	P2	TNMQ1.6D5	5P	36	6.3	-	24	3	2.5	5	3	2	◎
		TNMQ1.6D1	1.5P										
M1.6 × 0.2	P1	TNMP1.6A5	5P	36	3.6	-	24	3	2.5	5	3	2	△
		TNMP1.6A1	1.5P										
M1.7 × 0.35	P1	TNMP1.7D5	5P	36	6.3	-	24	3	2.5	5	3	2	◎
		TNMP1.7D1	1.5P										
	P3	TNMR1.7D5	5P										△
		TNMR1.7D1	1.5P										
M1.7 × 0.2	P1	TNMP1.7A5	5P	36	3.6	-	24	3	2.5	5	3	2	△
		TNMP1.7A1	1.5P										
M1.8 × 0.35	P2	TNMQ1.8D5	5P	42	6.3	-	27	3	2.5	5	3	2	△
		TNMQ1.8D1	1.5P										
M1.8 × 0.2	P1	TNMP1.8A5	5P	42	3.6	-	27	3	2.5	5	3	2	△
		TNMP1.8A1	1.5P										
M2 × 0.4	P1	TNMP2.0E5	5P	42	7.2	12	27	3	2.5	5	3	3	◎
		TNMP2.0E1	1.5P										
	P3	TNMR2.0E5	5P										○
		TNMR2.0E1	1.5P										
	P4	TNMS2.0E5	5P										△
		TNMS2.0E1	1.5P										
M2 × 0.25	P1	TNMP2.0B5	5P	42	4.5	12	27	3	2.5	5	3	4	○
		TNMP2.0B1	1.5P										
M2.2 × 0.45	P2	TNMQ2.2F5	5P	42	8.1	12	27	3	2.5	5	3	3	○
		TNMQ2.2F1	1.5P										
M2.2 × 0.25	P1	TNMP2.2B5	5P	42	4.5	12	27	3	2.5	5	3	4	△
		TNMP2.2B1	1.5P										
M2.3 × 0.4	P1	TNMP2.3E5	5P	42	7.2	12	27	3	2.5	5	3	3	○
		TNMP2.3E1	1.5P										

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HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M2.3 × 0.4	P3	TNMR2.3E5	5P	42	7.2	12	27	3	2.5	5	3	3	△
		TNMR2.3E1	1.5P										
	P4	TNMS2.3E5	5P										
		TNMS2.3E1	1.5P										
M2.3 × 0.25	P1	TNMP2.3B5	5P	42	4.5	12	27	3	2.5	5	3	4	△
		TNMP2.3B1	1.5P										
M2.5 × 0.45	P2	TNMQ2.5F5	5P	46	8.1	14	29	3	2.5	5	3	3	◎
		TNMQ2.5F1	1.5P										
	P3	TNMR2.5F5	5P										○
		TNMR2.5F1	1.5P										
	P4	TNMS2.5F5	5P										△
		TNMS2.5F1	1.5P										
M2.5 × 0.35	P2	TNMQ2.5D5	5P	46	6.3	14	29	3	2.5	5	3	4	△
		TNMQ2.5D1	1.5P										
M2.6 × 0.45	P1	TNMP2.6F5	5P	46	8.1	14	29	3	2.5	5	3	3	◎
		TNMP2.6F1	1.5P										
	P3	TNMR2.6F5	5P										○
		TNMR2.6F1	1.5P										
	P4	TNMS2.6F5	5P										△
		TNMS2.6F1	1.5P										
M2.6 × 0.35	P2	TNMQ2.6D5	5P	46	6.3	14	29	3	2.5	5	3	4	△
		TNMQ2.6D1	1.5P										
M3 × 0.5	P2	TNMQ3.0G5	5P	46	9	14	26	4	3.2	6	3	3	◎
		TNMQ3.0G1	1.5P										
	P3	TNMR3.0G5	5P										○
		TNMR3.0G1	1.5P										
	P4	TNMS3.0G5	5P										△
		TNMS3.0G1	1.5P										
	P5	TNMT3.0G5	5P										
		TNMT3.0G1	1.5P										
3M0.6	P2	TNMQ3.0H5	5P	46	9	14	26	4	3.2	6	3	3	○
		TNMQ3.0H1	1.5P										
M3 × 0.35	P2	TNMQ3.0D5	5P	46	6.5	14	26	4	3.2	6	3	4	○
		TNMQ3.0D1	1.5P										
M3.5 × 0.6	P2	TNMQ3.5H5	5P	52	11	16	29	5	4	7	3	3	○
		TNMQ3.5H1	1.5P										
	P3	TNMR3.5H5	5P										△
		TNMR3.5H1	1.5P										
	P4	TNMS3.5H5	5P										
		TNMS3.5H1	1.5P										
M3.5 × 0.35	P2	TNMQ3.5D5	5P	52	6.5	16	29	5	4	7	3	4	○
		TNMQ3.5D1	1.5P										
M4 × 0.7	P2	TNMQ4.0I5	5P	52	11	17	29	5	4	7	3	3	◎
		TNMQ4.0I1	1.5P										
	P3	TNMR4.0I53	5P										○
		TNMR4.0I13	1.5P										
	P4	TNMS4.0I53	5P										△
		TNMS4.0I13	1.5P										
	P5	TNMT4.0I53	5P										
		TNMT4.0I13	1.5P										

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M4 × 0.7	P5	TNMT4.0I5	5P	52	11	17	29	5	4	7	4	3	△
		TNMT4.0I1	1.5P										
4M0.75	P2	TNMQ4.0J53	5P	52	11	17	29	5	4	7	3	3	△
		TNMQ4.0J13	1.5P										
		TNMQ4.0J5	5P								4		○
		TNMQ4.0J1	1.5P										
M4 × 0.5	P2	TNMQ4.0G5	5P	52	9	17	29	5	4	7	4	4	○
		TNMQ4.0G1	1.5P										
M4.5 × 0.75	P2	TNMQ4.5J5	5P	60	13	21	33	5.5	4.5	7	4	3	○
		TNMQ4.5J1	1.5P										
M4.5 × 0.5	P2	TNMQ4.5G5	5P	60	9	21	33	5.5	4.5	7	4	4	△
		TNMQ4.5G1	1.5P										
M5 × 0.8	P3	TNMR5.0K5	5P	60	13	22	33	5.5	4.5	7	3	3	◎
		TNMR5.0K1	1.5P										
	P4	TNMS5.0K53	5P										△
		TNMS5.0K13	1.5P										
		TNMS5.0K5	5P								4		
		TNMS5.0K1	1.5P										
	P5	TNMT5.0K53	5P								3		
		TNMT5.0K13	1.5P										
		TNMT5.0K5	5P								4		
		TNMT5.0K1	1.5P										
5M0.9	P2	TNMQ5.0L53	5P	60	13	22	33	5.5	4.5	7	3	3	△
		TNMQ5.0L13	1.5P										
		TNMQ5.0L5	5P								4		○
		TNMQ5.0L1	1.5P										
M5 × 0.75	P2	TNMQ5.0J5	5P	60	13	22	33	5.5	4.5	7	4	3	△
		TNMQ5.0J1	1.5P										
M5 × 0.5	P2	TNMQ5.0G5	5P	60	9	22	33	5.5	4.5	7	4	4	○
		TNMQ5.0G1	1.5P										
	P3	TNMR5.0G5	5P										△
		TNMR5.0G1	1.5P										
M5.5 × 0.9	P2	TNMQ5.5L5	5P	62	15	26	33	6	4.5	7	4	3	△
		TNMQ5.5L1	1.5P										
M5.5 × 0.75	P2	TNMQ5.5J5	5P	62	15	26	33	6	4.5	7	4	3	△
		TNMQ5.5J1	1.5P										
M5.5 × 0.5	P2	TNMQ5.5G5	5P	62	9	26	33	6	4.5	7	4	4	△
		TNMQ5.5G1	1.5P										
M6 × 1	P2	TNMQ6.0M5	5P	62	15	26	33	6	4.5	7	3	3	◎
		TNMQ6.0M1	1.5P										
	P3	TNMR6.0M53	5P										○
		TNMR6.0M13	1.5P										
	P4	TNMS6.0M53	5P		19	28							
		TNMS6.0M13	1.5P										
		TNMS6.0M5	5P		15	26					4		
		TNMS6.0M1	1.5P										
	P5	TNMT6.0M53	5P								3		△
		TNMT6.0M13	1.5P										
		TNMT6.0M5	5P								4		
		TNMT6.0M1	1.5P										

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HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M6 × 0.75	P2	TNMQ6.0J5	5P	62	15	26	33	6	4.5	7	4	3	○
		TNMQ6.0J1	1.5P										
	P3	TNMR6.0J5	5P										△
		TNMR6.0J1	1.5P										
	P4	TNMS6.0J5	5P										
		TNMS6.0J1	1.5P										
M6 × 0.5	P2	TNMQ6.0G5	5P	62	9	26	33	6	4.5	7	4	4	○
		TNMQ6.0G1	1.5P										
M7 × 1	P2	TNMQ7.0M5	5P	70	19	-	36	6.2	5	8	4	5	○
		TNMQ7.0M1	1.5P										
	P4	TNMS7.0M5	5P										△
		TNMS7.0M1	1.5P										
M7 × 0.75	P2	TNMQ7.0J5	5P	70	19	-	36	6.2	5	8	4	5	○
		TNMQ7.0J1	1.5P										
M7 × 0.5	P2	TNMQ7.0G5	5P	70	10	-	36	6.2	5	8	4	6	△
		TNMQ7.0G1	1.5P										
M8 × 1.25	P3	TNMR8.0N5	5P	70	19	-	36	6.2	5	8	3	5	◎
		TNMR8.0N1	1.5P										
		TNMR8.0N5F	5P								4		
		TNMR8.0N1F	1.5P										
	P4	TNMS8.0N5F	5P										○
		TNMS8.0N1F	1.5P										
M8 × 1	P2	TNMQ8.0M5	5P	70	19	-	36	6.2	5	8	4	5	○
		TNMQ8.0M1	1.5P										
	P4	TNMS8.0M5	5P										△
		TNMS8.0M1	1.5P										
M8 × 0.75	P2	TNMQ8.0J5	5P	70	19	-	36	6.2	5	8	4	5	○
		TNMQ8.0J1	1.5P										
M8 × 0.5	P2	TNMQ8.0G5	5P	70	10	-	36	6.2	5	8	4	6	○
		TNMQ8.0G1	1.5P										
M9 × 1.25	P3	TNMR9.0N5	5P	75	23	-	38	7	5.5	8	4	5	△
		TNMR9.0N1	1.5P										
M9 × 1	P2	TNMQ9.0M5	5P	75	23	-	38	7	5.5	8	4	5	○
		TNMQ9.0M1	1.5P										
M9 × 0.75	P2	TNMQ9.0J5	5P	75	13	-	38	7	5.5	8	4	6	○
		TNMQ9.0J1	1.5P										
M9 × 0.5	P2	TNMQ9.0G5	5P	75	11	-	38	7	5.5	8	4	6	△
		TNMQ9.0G1	1.5P										
M10 × 1.5	P3	TNMR010O5T	5P	75	23	-	38	7	5.5	8	3	5	○
		TNMR010O1T	1.5P										
		TNMR010O5	5P								4		◎
		TNMR010O1	1.5P										
	P4	TNMS010O5	5P										△
		TNMS010O1	1.5P										
M10 × 1.25	P3	TNMR010N5	5P	75	23	-	38	7	5.5	8	4	5	◎
		TNMR010N1	1.5P										
	P4	TNMS010N5	5P										△
		TNMS010N1	1.5P										
M10 × 1	P3	TNMR010M5	5P	75	23	-	38	7	5.5	8	4	5	◎
		TNMR010M1	1.5P										

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M10 × 1	P4	TNMS010M5	5P	75	23	-	38	7	5.5	8	4	5	△
		TNMS010M1	1.5P										
M10 × 0.75	P3	TNMR010J5	5P	75	13	-	38	7	5.5	8	4	6	○
		TNMR010J1	1.5P										
M10 × 0.5	P2	TNMQ010G5	5P	75	11	-	38	7	5.5	8	4	6	○
		TNMQ010G1	1.5P										
M11 × 1.5	P4	TNMS011O5	5P	82	26	-	42	8.5	6.5	9	4	5	△
		TNMS011O1	1.5P										
M11 × 1.25	P3	TNMR011N5	5P	82	26	-	42	8.5	6.5	9	4	5	△
		TNMR011N1	1.5P										
M11 × 1	P3	TNMR011M5	5P	82	26	-	42	8.5	6.5	9	4	5	○
		TNMR011M1	1.5P										
M11 × 0.75	P3	TNMR011J5	5P	82	14	-	42	8.5	6.5	9	4	6	△
		TNMR011J1	1.5P										
M11 × 0.5	P2	TNMQ011G5	5P	82	12	-	42	8.5	6.5	9	4	6	△
		TNMQ011G1	1.5P										
M12 × 1.75	P3	TNMR012P5	5P	82	26	-	42	8.5	6.5	9	4	5	◎
		TNMR012P1	1.5P										
	P4	TNMS012P5	5P										△
		TNMS012P1	1.5P										
M12 × 1.5	P3	TNMR012O5	5P	82	26	-	42	8.5	6.5	9	4	5	◎
		TNMR012O1	1.5P										
	P4	TNMS012O5	5P										△
		TNMS012O1	1.5P										
M12 × 1.25	P4	TNMS012N5	5P	82	26	-	42	8.5	6.5	9	4	5	◎
		TNMS012N1	1.5P										
M12 × 1	P3	TNMR012M5	5P	82	26	-	42	8.5	6.5	9	4	5	◎
		TNMR012M1	1.5P										
M12 × 0.75	P3	TNMR012J5	5P	82	14	-	42	8.5	6.5	9	4	6	△
		TNMR012J1	1.5P										
M12 × 0.5	P2	TNMQ012G5	5P	82	12	-	42	8.5	6.5	9	4	6	○
		TNMQ012G1	1.5P										
M13 × 1.75	P3	TNMR013P5	5P	88	26	-	45	10.5	8	11	4	5	△
		TNMR013P1	1.5P										
M13 × 1.5	P3	TNMR013O5	5P	88	26	-	45	10.5	8	11	4	5	△
		TNMR013O1	1.5P										
M13 × 1.25	P4	TNMS013N5	5P	88	26	-	45	10.5	8	11	4	5	△
		TNMS013N1	1.5P										
M13 × 1	P3	TNMR013M5	5P	88	26	-	45	10.5	8	11	4	5	○
		TNMR013M1	1.5P										
M13 × 0.75	P3	TNMR013J5	5P	88	14	-	45	10.5	8	11	4	6	△
		TNMR013J1	1.5P										
M13 × 0.5	P2	TNMQ013G5	5P	88	12	-	45	10.5	8	11	4	6	△
		TNMQ013G1	1.5P										
M14 × 2	P3	TNMR014Q5	5P	88	26	-	45	10.5	8	11	4	5	◎
		TNMR014Q1	1.5P										
	P4	TNMS014Q5	5P										△
		TNMS014Q1	1.5P										
M14 × 1.5	P3	TNMR014O5	5P	88	26	-	45	10.5	8	11	4	5	◎
		TNMR014O1	1.5P										

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HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M14 × 1.5	P4	TNMS0140**5**	5P	88	26	-	45	10.5	8	11	4	5	△
		TNMS0140**1**	1.5P										
M14 × 1.25	P4	TNMS014N**5**	5P	88	26	-	45	10.5	8	11	4	5	○
		TNMS014N**1**	1.5P										
M14 × 1	P3	TNMR014M**5**	5P	88	26	-	45	10.5	8	11	4	5	○
		TNMR014M**1**	1.5P										
	P4	TNMS014M**5**	5P										△
		TNMS014M**1**	1.5P										
M14 × 0.75	P3	TNMR014J**5**	5P	88	15	-	45	10.5	8	11	4	6	△
		TNMR014J**1**	1.5P										
M14 × 0.5	P2	TNMQ014G**5**	5P	88	12	-	45	10.5	8	11	4	6	○
		TNMQ014G**1**	1.5P										
M15 × 2	P3	TNMR015Q**5**	5P	95	26	-	48	12.5	10	13	4	5	△
		TNMR015Q**1**	1.5P										
M15 × 1.5	P3	TNMR0150**5**	5P	95	26	-	48	12.5	10	13	4	5	○
		TNMR0150**1**	1.5P										
M15 × 1.25	P4	TNMS015N**5**	5P	95	26	-	48	12.5	10	13	4	5	△
		TNMS015N**1**	1.5P										
M15 × 1	P3	TNMR015M**5**	5P	95	26	-	48	12.5	10	13	4	5	○
		TNMR015M**1**	1.5P										
M15 × 0.75	P3	TNMR015J**5**	5P	95	15	-	48	12.5	10	13	4	6	△
		TNMR015J**1**	1.5P										
M15 × 0.5	P2	TNMQ015G**5**	5P	95	13	-	48	12.5	10	13	4	6	△
		TNMQ015G**1**	1.5P										
M16 × 2	P3	TNMR016Q**5**	5P	95	26	-	48	12.5	10	13	4	5	◎
		TNMR016Q**1**	1.5P										
	P4	TNMS016Q**5**	5P										△
		TNMS016Q**1**	1.5P										
M16 × 1.5	P3	TNMR0160**5**	5P	95	26	-	48	12.5	10	13	4	5	◎
		TNMR0160**1**	1.5P										
	P4	TNMS0160**5**	5P										△
		TNMS0160**1**	1.5P										
M16 × 1.25	P4	TNMS016N**5**	5P	95	26	-	48	12.5	10	13	4	5	△
		TNMS016N**1**	1.5P										
M16 × 1	P3	TNMR016M**5**	5P	95	26	-	48	12.5	10	13	4	5	○
		TNMR016M**1**	1.5P										
	P4	TNMS016M**5**	5P										△
		TNMS016M**1**	1.5P										
M16 × 0.5	P2	TNMQ016G**5**	5P	95	13	-	48	12.5	10	13	4	6	△
		TNMQ016G**1**	1.5P										
M17 × 1.5	P4	TNMS017**05**	5P	100	33	-	51	14	11	14	4	5	△
		TNMS017**01**	1.5P										
M17 × 1	P3	TNMR017M**5**	5P	100	18	-	51	14	11	14	4	6	○
		TNMR017M**1**	1.5P										
M18 × 2.5	P4	TNMS018R**5**	5P	100	33	-	51	14	11	14	4	5	○
		TNMS018R**1**	1.5P										
	P5	TNMT018R**5**	5P										△
		TNMT018R**1**	1.5P										
M18 × 2	P4	TNMS018Q**5**	5P	100	33	-	51	14	11	14	4	5	○
		TNMS018Q**1**	1.5P										

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M18 × 1.5	P3	TNMR018O5	5P	100	33	-	51	14	11	14	4	5	◎
		TNMR018O1	1.5P										
	P4	TNMS018O5	5P										△
		TNMS018O1	1.5P										
M18 × 1	P3	TNMR018M5	5P	100	18	-	51	14	11	14	4	6	○
		TNMR018M1	1.5P										
M18 × 0.5	P2	TNMQ018G5	5P	100	13	-	51	14	11	14	4	6	△
		TNMQ018G1	1.5P										
M19 × 1.5	P3	TNMR019O5	5P	105	33	-	50	15	12	15	4	7	△
		TNMR019O1	1.5P										
M19 × 1	P3	TNMR019M5	5P	105	18	-	50	15	12	15	4	8	△
		TNMR019M1	1.5P										
M20 × 2.5	P4	TNMS020R5	5P	105	33	-	50	15	12	15	4	7	◎
		TNMS020R1	1.5P										
	P5	TNMT020R5	5P										△
		TNMT020R1	1.5P										
M20 × 2	P4	TNMS020Q5	5P	105	33	-	50	15	12	15	4	7	○
		TNMS020Q1	1.5P										
M20 × 1.5	P3	TNMR020O5	5P	105	33	-	50	15	12	15	4	7	◎
		TNMR020O1	1.5P										
	P4	TNMS020O5	5P										△
		TNMS020O1	1.5P										
M20 × 1	P3	TNMR020M5	5P	105	18	-	50	15	12	15	4	8	○
		TNMR020M1	1.5P										
M22 × 2.5	P4	TNMS022R5	5P	115	33	-	55	17	13	16	4	7	○
		TNMS022R1	1.5P										
M22 × 2	P4	TNMS022Q5	5P	115	33	-	55	17	13	16	4	7	○
		TNMS022Q1	1.5P										
M22 × 1.5	P3	TNMR022O5	5P	115	33	-	55	17	13	16	4	7	◎
		TNMR022O1	1.5P										
M22 × 1	P3	TNMR022M5	5P	115	19	-	55	17	13	16	4	8	○
		TNMR022M1	1.5P										
M24 × 3	P4	TNMS024S5	5P	120	39	-	55	19	15	18	4	7	◎
		TNMS024S1	1.5P										
M24 × 2	P4	TNMS024Q5	5P	120	39	-	55	19	15	18	4	7	○
		TNMS024Q1	1.5P										
M24 × 1.5	P3	TNMR024O5	5P	120	39	-	55	19	15	18	4	7	◎
		TNMR024O1	1.5P										
M24 × 1	P3	TNMR024M5	5P	120	19	-	55	19	15	18	4	8	○
		TNMR024M1	1.5P										
M25 × 3	P4	TNMS025S5	5P	125	39	-	58	19	15	18	4	7	△
		TNMS025S1	1.5P										
M25 × 2	P4	TNMS025Q5	5P	125	39	-	58	19	15	18	4	7	○
		TNMS025Q1	1.5P										
M25 × 1.5	P3	TNMR025O5	5P	125	39	-	58	19	15	18	4	7	○
		TNMR025O1	1.5P										
M25 × 1	P3	TNMR025M5	5P	125	20	-	58	19	15	18	4	8	○
		TNMR025M1	1.5P										
M26 × 3	P4	TNMS026S5	5P	130	39	-	60	20	15	18	4	7	△
		TNMS026S1	1.5P										

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HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M26 × 2	P4	TNMS026Q5	5P	130	39	-	60	20	15	18	4	7	△
		TNMS026Q1	1.5P										
M26 × 1.5	P3	TNMR026O5	5P	130	39	-	60	20	15	18	4	7	○
		TNMR026O1	1.5P										
M27 × 3	P4	TNMS027S5	5P	130	39	-	60	20	15	18	4	7	○
		TNMS027S1	1.5P										
M27 × 2	P5	TNMT027Q5	5P	130	39	-	60	20	15	18	4	7	○
		TNMT027Q1	1.5P										
M27 × 1.5	P3	TNMR027O5	5P	130	39	-	60	20	15	18	4	7	○
		TNMR027O1	1.5P										
M27 × 1	P3	TNMR027M5	5P	130	20	-	60	20	15	18	4	8	○
		TNMR027M1	1.5P										
M28 × 3	P4	TNMS028S5	5P	135	46	-	62	23	17	20	4	7	△
		TNMS028S1	1.5P										
M28 × 2	P4	TNMS028Q5	5P	135	46	-	62	23	17	20	4	7	○
		TNMS028Q1	1.5P										
M28 × 1.5	P3	TNMR028O5	5P	135	46	-	62	23	17	20	4	7	○
		TNMR028O1	1.5P										
M28 × 1	P3	TNMR028M5	5P	135	20	-	62	23	17	20	4	8	○
		TNMR028M1	1.5P										
M30 × 3.5	P4	TNMS030T5	5P	135	46	-	62	23	17	20	4	7	◎
		TNMS030T1	1.5P										
M30 × 3	P5	TNMT030S5	5P	135	46	-	62	23	17	20	4	7	○
		TNMT030S1	1.5P										
M30 × 2	P4	TNMS030Q5	5P	135	46	-	62	23	17	20	4	7	◎
		TNMS030Q1	1.5P										
M30 × 1.5	P3	TNMR030O5	5P	135	46	-	62	23	17	20	4	7	◎
		TNMR030O1	1.5P										
M30 × 1	P3	TNMR030M5	5P	135	21	-	62	23	17	20	4	8	○
		TNMR030M1	1.5P										
M32 × 2	P4	TNMS032Q5	5P	145	46	-	67	24	19	22	4	7	△
		TNMS032Q1	1.5P										
M32 × 1.5	P4	TNMS032O5	5P	145	46	-	67	24	19	22	4	7	△
		TNMS032O1	1.5P										
M32 × 1	P3	TNMR032M5	5P	145	21	-	67	24	19	22	4	8	△
		TNMR032M1	1.5P										
M33 × 3.5	P4	TNMS033T5	5P	145	46	-	67	25	19	22	4	7	○
		TNMS033T1	1.5P										
M33 × 3	P5	TNMT033S5	5P	145	46	-	67	25	19	22	4	7	△
		TNMT033S1	1.5P										
M33 × 2	P4	TNMS033Q5	5P	145	46	-	67	25	19	22	4	7	△
		TNMS033Q1	1.5P										
M33 × 1.5	P4	TNMS033O5	5P	145	46	-	67	25	19	22	4	7	△
		TNMS033O1	1.5P										
M33 × 1	P3	TNMR033M5	5P	145	21	-	67	25	19	22	4	8	△
		TNMR033M1	1.5P										
M34 × 2	P4	TNMS034Q5	5P	155	52	-	71	28	21	24	4	7	△
		TNMS034Q1	1.5P										
M34 × 1.5	P4	TNMS034O5	5P	155	26	-	71	28	21	24	4	8	△
		TNMS034O1	1.5P										

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M34 × 1	P3	TNMR034M5	5P	155	26	-	71	28	21	24	4	8	△
		TNMR034M1	1.5P										
M35 × 2	P5	TNMT035Q5	5P	155	52	-	71	28	21	24	4	7	△
		TNMT035Q1	1.5P										
M35 × 1.5	P4	TNMS035O5	5P	155	26	-	71	28	21	24	4	8	△
		TNMS035O1	1.5P										
M36 × 4	P5	TNMT036U5	5P	155	52	-	71	28	21	24	4	7	◎
		TNMT036U1	1.5P										
M36 × 3	P5	TNMT036S5	5P	155	52	-	71	28	21	24	4	7	△
		TNMT036S1	1.5P										
M36 × 2	P4	TNMS036Q5	5P	155	52	-	71	28	21	24	4	7	△
		TNMS036Q1	1.5P										
M36 × 1.5	P4	TNMS036O5	5P	155	26	-	71	28	21	24	4	8	△
		TNMS036O1	1.5P										
M36 × 1	P3	TNMR036M5	5P	155	26	-	71	28	21	24	4	8	△
		TNMR036M1	1.5P										
M37 × 1.5	P4	TNMS037O5	5P	165	26	-	76	30	23	26	4	8	△
		TNMS037O1	1.5P										
M38 × 2	P4	TNMS038Q5	5P	165	52	-	76	30	23	26	4	7	△
		TNMS038Q1	1.5P										
M38 × 1.5	P4	TNMS038O5	5P	165	26	-	76	30	23	26	4	8	△
		TNMS038O1	1.5P										
M38 × 1	P3	TNMR038M5	5P	165	26	-	76	30	23	26	4	8	△
		TNMR038M1	1.5P										
M39 × 4	P5	TNMT039U5	5P	165	52	-	76	30	23	26	4	7	○
		TNMT039U1	1.5P										
M39 × 3	P5	TNMT039S5	5P	165	52	-	76	30	23	26	4	7	△
		TNMT039S1	1.5P										
M39 × 2	P5	TNMT039Q5	5P	165	52	-	76	30	23	26	4	7	△
		TNMT039Q1	1.5P										
M39 × 1.5	P4	TNMS039O5	5P	165	26	-	76	30	23	26	4	8	△
		TNMS039O1	1.5P										
M39 × 1	P3	TNMR039M5	5P	165	26	-	76	30	23	26	4	8	△
		TNMR039M1	1.5P										
M40 × 4	P5	TNMT040U5	5P	175	59	-	81	32	26	30	4	7	△
		TNMT040U1	1.5P										
M40 × 3	P5	TNMT040S5	5P	175	59	-	81	32	26	30	4	7	△
		TNMT040S1	1.5P										
M40 × 2	P4	TNMS040Q5	5P	175	59	-	81	32	26	30	4	7	△
		TNMS040Q1	1.5P										
M40 × 1.5	P4	TNMS040O5	5P	175	27	-	81	32	26	30	4	8	△
		TNMS040O1	1.5P										
M42 × 4.5	P5	TNMT042V5	5P	175	59	-	81	32	26	30	4	7	○
		TNMT042V1	1.5P										
M42 × 4	P6	TNMU042U5	5P	175	59	-	81	32	26	30	4	7	△
		TNMU042U1	1.5P										
M42 × 3	P5	TNMT042S5	5P	175	59	-	81	32	26	30	4	7	△
		TNMT042S1	1.5P										
M42 × 2	P4	TNMS042Q5	5P	175	59	-	81	32	26	30	4	7	△
		TNMS042Q1	1.5P										

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HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M42 × 1.5	P4	TNMS042O5	5P	175	27	-	81	32	26	30	4	8	△
		TNMS042O1	1.5P										
M44 × 4	P6	TNMU044U5	5P	180	59	-	83	35	26	30	4	7	△
		TNMU044U1	1.5P										
M44 × 3	P5	TNMT044S5	5P	180	59	-	83	35	26	30	4	7	△
		TNMT044S1	1.5P										
M44 × 2	P4	TNMS044Q5	5P	180	59	-	83	35	26	30	4	7	△
		TNMS044Q1	1.5P										
M44 × 1.5	P4	TNMS044O5	5P	180	27	-	83	35	26	30	4	8	△
		TNMS044O1	1.5P										
M45 × 4.5	P5	TNMT045V5	5P	180	59	-	83	35	26	30	4	7	○
		TNMT045V1	1.5P										
M45 × 4	P6	TNMU045U5	5P	180	59	-	83	35	26	30	4	7	△
		TNMU045U1	1.5P										
M45 × 3	P5	TNMT045S5	5P	180	59	-	83	35	26	30	4	7	△
		TNMT045S1	1.5P										
M45 × 2	P4	TNMS045Q5	5P	180	59	-	83	35	26	30	4	7	△
		TNMS045Q1	1.5P										
M45 × 1.5	P4	TNMS045O5	5P	180	27	-	83	35	26	30	4	8	△
		TNMS045O1	1.5P										
M45 × 1	P3	TNMR045M5	5P	180	27	-	83	35	26	30	4	8	△
		TNMR045M1	1.5P										
M46 × 1.5	P4	TNMS046O5	5P	185	28	-	85	38	29	32	4	8	△
		TNMS046O1	1.5P										
M48 × 5	P5	TNMT048W5	5P	185	65	-	85	38	29	32	4	7	○
		TNMT048W1	1.5P										
M48 × 4	P6	TNMU048U5	5P	185	65	-	85	38	29	32	4	7	△
		TNMU048U1	1.5P										
M48 × 3	P6	TNMU048S5	5P	185	65	-	85	38	29	32	4	7	△
		TNMU048S1	1.5P										
M48 × 2	P4	TNMS048Q5	5P	185	65	-	85	38	29	32	4	7	△
		TNMS048Q1	1.5P										
M48 × 1.5	P4	TNMS048O5	5P	185	28	-	85	38	29	32	4	8	△
		TNMS048O1	1.5P										

For Unified Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
No.0-80UNF	P1	TNMPUN0B5	5P	36	6.3	-	24	3	2.5	5	3	2	○
		TNMPUN0B1	1.5P										
No.1-64UNC	P1	TNMPUN1D5	5P	42	7.2	-	27	3	2.5	5	3	2	△
		TNMPUN1D1	1.5P										
No.1-72UNF	P1	TNMPUN1C5	5P	42	7.2	-	27	3	2.5	5	3	2	○
		TNMPUN1C1	1.5P										
No.2-56UNC	P1	TNMPUN2E5	5P	42	8.1	12	27	3	2.5	5	3	3	○
		TNMPUN2E1	1.5P										
No.2-64UNF	P1	TNMPUN2D5	5P	42	8.1	12	27	3	2.5	5	3	3	△
		TNMPUN2D1	1.5P										
No.3-48UNC	P1	TNMPUN3F5	5P	46	8.1	14	29	3	2.5	5	3	3	△
		TNMPUN3F1	1.5P										
No.3-56UNF	P1	TNMPUN3E5	5P	46	8.1	14	29	3	2.5	5	3	3	△
		TNMPUN3E1	1.5P										

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
No.4-40UNC	P2	TNMQUN4H5	5P	46	9	14	26	4	3.2	6	3	3	○
		TNMQUN4H1	1.5P										
	P3	TNMRUN4H5	5P										△
		TNMRUN4H1	1.5P										
No.4-48UNF	P1	TNMPUN4F5	5P	46	9	14	26	4	3.2	6	3	3	△
		TNMPUN4F1	1.5P										
	P3	TNMRUN4F5	5P										
		TNMRUN4F1	1.5P										
No.5-40UNC	P2	TNMQUN5H5	5P	52	11	16	29	5	4	7	3	3	△
		TNMQUN5H1	1.5P										
	P3	TNMRUN5H5	5P										
		TNMRUN5H1	1.5P										
No.5-44UNF	P1	TNMPUN5G5	5P	52	11	16	29	5	4	7	3	3	△
		TNMPUN5G1	1.5P										
	P3	TNMRUN5G5	5P										
		TNMRUN5G1	1.5P										
No.6-32UNC	P2	TNMQUN6J5	5P	52	11	16	29	5	4	7	3	3	○
		TNMQUN6J1	1.5P										
	P3	TNMRUN6J5	5P										△
		TNMRUN6J1	1.5P										
No.6-40UNF	P2	TNMQUN6H5	5P	52	11	16	29	5	4	7	3	3	△
		TNMQUN6H1	1.5P										
	P3	TNMRUN6H5	5P										
		TNMRUN6H1	1.5P										
No.8-32UNC	P2	TNMQUN8J5	5P	60	13	21	33	5.5	4.5	7	4	3	○
		TNMQUN8J1	1.5P										
	P3	TNMRUN8J5	5P										△
		TNMRUN8J1	1.5P										
No.8-36UNF	P2	TNMQUN8I5	5P	60	13	21	33	5.5	4.5	7	4	3	△
		TNMQUN8I1	1.5P										
	P3	TNMRUN8I5	5P										
		TNMRUN8I1	1.5P										
No.10-24UNC	P2	TNMQUNAM5	5P	60	13	22	33	5.5	4.5	7	4	3	○
		TNMQUNAM1	1.5P										
	P3	TNMRUNAM5	5P										△
		TNMRUNAM1	1.5P										
No.10-32UNF	P2	TNMQUNAJ5	5P	60	13	22	33	5.5	4.5	7	4	3	○
		TNMQUNAJ1	1.5P										
	P3	TNMRUNAJ5	5P										△
		TNMRUNAJ1	1.5P										
No.12-24UNC	P2	TNMQUNCM5	5P	62	15	26	33	6	4.5	7	4	3	△
		TNMQUNCM1	1.5P										
	P3	TNMRUNCM5	5P										
No.12-28UNF	P2	TNMQUNCK5	5P	62	15	26	33	6	4.5	7	4	3	△
		TNMQUNCK1	1.5P										
	P3	TNMRUNCK5	5P										
		TNMRUNCK1	1.5P										
No.12-32UNEF	P2	TNMQUNCJ5	5P	62	15	26	33	6	4.5	7	4	3	△
		TNMQUNCJ1	1.5P										
1/4-20UNC	P2	TNMQU04N5	5P	62	15	26	33	6	4.5	7	4	3	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4-20UNC	P2	TNMQU04N1	1.5P	62	15	26	33	6	4.5	7	4	3	○
1/4-28UNF	P2	TNMQU04K5	5P	62	15	26	33	6	4.5	7	4	3	○
		TNMQU04K1	1.5P										
1/4-32UNEF	P2	TNMQU04J5	5P	62	15	26	33	6	4.5	7	4	3	△
		TNMQU04J1	1.5P										
5/16-18UNC	P3	TNMRU05O5	5P	70	19	-	36	6.2	5	8	4	5	○
		TNMRU05O1	1.5P										
5/16-24UNF	P2	TNMQU05M5	5P	70	19	-	36	6.2	5	8	4	5	○
		TNMQU05M1	1.5P										
5/16-32UNEF	P2	TNMQU05J5	5P	70	19	-	36	6.2	5	8	4	5	△
		TNMQU05J1	1.5P										
3/8-16UNC	P3	TNMRU06P5	5P	75	23	-	38	7	5.5	8	4	5	○
		TNMRU06P1	1.5P										
3/8-24UNF	P3	TNMRU06M5	5P	75	23	-	38	7	5.5	8	4	5	○
		TNMRU06M1	1.5P										
3/8-32UNEF	P2	TNMQU06J5	5P	75	13	-	38	7	5.5	8	4	6	△
		TNMQU06J1	1.5P										
7/16-14UNC	P3	TNMRU07Q5	5P	82	26	-	42	8.5	6.5	9	4	5	○
		TNMRU07Q1	1.5P										
7/16-20UNF	P3	TNMRU07N5	5P	82	26	-	42	8.5	6.5	9	4	5	○
		TNMRU07N1	1.5P										
7/16-28UNEF	P2	TNMQU07K5	5P	82	26	-	42	8.5	6.5	9	4	5	△
		TNMQU07K1	1.5P										
1/2-13UNC	P3	TNMRU08R5	5P	88	26	-	45	10.5	8	11	4	5	○
		TNMRU08R1	1.5P										
1/2-20UNF	P3	TNMRU08N5	5P	88	26	-	45	10.5	8	11	4	5	○
		TNMRU08N1	1.5P										
1/2-28UNEF	P2	TNMQU08K5	5P	88	26	-	45	10.5	8	11	4	5	△
		TNMQU08K1	1.5P										
9/16-12UNC	P3	TNMRU09S5	5P	95	26	-	48	12.5	10	13	4	5	△
		TNMRU09S1	1.5P										
9/16-18UNF	P3	TNMRU09O5	5P	95	26	-	48	12.5	10	13	4	5	○
		TNMRU09O1	1.5P										
5/8-11UNC	P4	TNMSU10U5	5P	95	26	-	48	12.5	10	13	4	5	○
		TNMSU10U1	1.5P										
5/8-18UNF	P3	TNMRU10O5	5P	95	26	-	48	12.5	10	13	4	5	○
		TNMRU10O1	1.5P										
5/8-24UNEF	P3	TNMRU10M5	5P	95	26	-	48	12.5	10	13	4	5	△
		TNMRU10M1	1.5P										
3/4-10UNC	P4	TNMSU12V5	5P	105	33	-	50	15	12	15	4	7	○
		TNMSU12V1	1.5P										
3/4-16UNF	P3	TNMRU12P5	5P	105	33	-	50	15	12	15	4	7	○
		TNMRU12P1	1.5P										
3/4-20UNEF	P3	TNMRU12N5	5P	105	33	-	50	15	12	15	4	7	△
		TNMRU12N1	1.5P										
7/8-9UNC	P4	TNMSU14W5	5P	115	33	-	55	17	13	16	4	7	○
		TNMSU14W1	1.5P										
7/8-14UNF	P4	TNMSU14Q5	5P	115	33	-	55	17	13	16	4	7	○
		TNMSU14Q1	1.5P										
7/8-20UNEF	P3	TNMRU14N5	5P	115	33	-	55	17	13	16	4	7	△

Think threads with YAMAWA

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
7/8-20UNEF	P3	TNMRU14N1	1.5P	115	33	-	55	17	13	16	4	7	△
1 -8UNC	P4	TNMSU16X5	5P	125	39	-	58	19	15	18	4	7	○
		TNMSU16X1	1.5P										
1 -12UNF	P4	TNMSU16S5	5P	125	39	-	58	19	15	18	4	7	○
		TNMSU16S1	1.5P										
1 -14UNS	P4	TNMSU16Q5	5P	125	39	-	58	19	15	18	4	7	△
		TNMSU16Q1	1.5P										
1 -20UNEF	P3	TNMRU16N5	5P	125	39	-	58	19	15	18	4	7	△
		TNMRU16N1	1.5P										
1 1/8-7UNC	P5	TNMTU18Y5	5P	135	46	-	62	23	17	20	4	7	△
		TNMTU18Y1	1.5P										
1 1/4-7UNC	P5	TNMTU20Y5	5P	145	46	-	67	24	19	22	4	7	△
		TNMTU20Y1	1.5P										
1 1/4-8UN	P5	TNMTU20X5	5P	145	46	-	67	24	19	22	4	7	△
		TNMTU20X1	1.5P										
1 1/4-12UNF	P4	TNMSU20S5	5P	145	46	-	67	24	19	22	4	7	△
		TNMSU20S1	1.5P										
1 3/8-6UNC	P5	TNMTU22Z5	5P	155	52	-	71	28	21	24	4	7	△
		TNMTU22Z1	1.5P										
1 3/8-8UN	P5	TNMTU22X5	5P	155	52	-	71	28	21	24	4	7	△
		TNMTU22X1	1.5P										
1 3/8-12UNF	P4	TNMSU22S5	5P	155	52	-	71	28	21	24	4	7	△
		TNMSU22S1	1.5P										
1 1/2-6UNC	P5	TNMTU24Z5	5P	165	52	-	76	30	23	26	4	7	△
		TNMTU24Z1	1.5P										
1 1/2-12UNF	P4	TNMSU24S5	5P	165	52	-	76	30	23	26	4	7	△
		TNMSU24S1	1.5P										
1 3/4-5UNC	P6	TNMUU2805	5P	180	59	-	83	35	26	30	4	7	△
		TNMUU2801	1.5P										
1 3/4-12UN	P4	TNMSU28S5	5P	180	59	-	83	35	26	30	4	7	△
		TNMSU28S1	1.5P										

For Screw Threads used on Sewing Machines

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/16SM80	P1	TNMPS04B5	5P	36	6.3	-	24	3	2.5	5	3	2	△
		TNMPS04B1	1.5P										
5/64SM64	P1	TNMPS05D5	5P	42	7.2	12	27	3	2.5	5	3	3	△
		TNMPS05D1	1.5P										
3/32SM56	P1	TNMPS06E5	5P	46	8.1	14	29	3	2.5	5	3	3	△
		TNMPS06E1	1.5P										
3/32SM100	P1	TNMPS06A5	5P	46	3.4	14	29	3	2.5	5	3	4	△
		TNMPS06A1	1.5P										
1/8SM40	P2	TNMQS08H5	5P	52	11	16	29	5	4	7	3	3	△
		TNMQS08H1	1.5P										
1/8SM44	P2	TNMQS08G5	5P	52	11	16	29	5	4	7	3	3	△
		TNMQS08G1	1.5P										
9/64SM40	P2	TNMQS09H5	5P	52	11	17	29	5	4	7	3	3	△
		TNMQS09H1	1.5P										
11/64SM40	P2	TNMQS11H5	5P	60	13	21	33	5.5	4.5	7	4	3	△
		TNMQS11H1	1.5P										
3/16SM24	P2	TNMQS12M5	5P	60	13	21	33	5.5	4.5	7	4	3	△

HT Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
3/16SM24	P2	TNMQS12M1	1.5P	60	13	21	33	5.5	4.5	7	4	3	△
3/16SM28	P2	TNMQS12K5	5P	60	13	21	33	5.5	4.5	7	4	3	△
		TNMQS12K1	1.5P										
3/16SM32	P2	TNMQS12J5	5P	60	13	21	33	5.5	4.5	7	4	3	△
		TNMQS12J1	1.5P										
3/16SM40	P2	TNMQS12H5	5P	60	13	21	33	5.5	4.5	7	4	3	△
		TNMQS12H1	1.5P										
15/64SM28	P2	TNMQS15K5	5P	62	15	26	33	6	4.5	7	4	3	△
		TNMQS15K1	1.5P										

Think threads with YAMAWA

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT LH

Hand Taps for Left Hand Threads

Specification

HSS

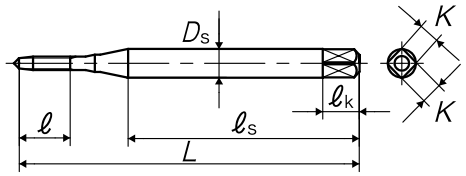
LH Left hand

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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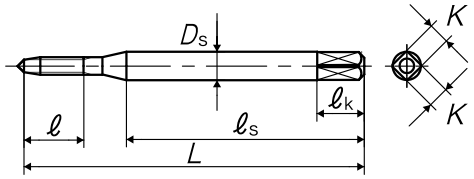

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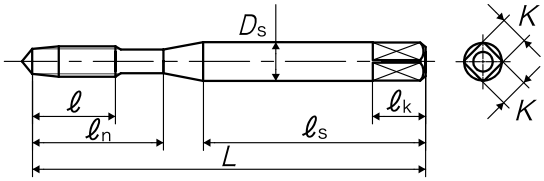

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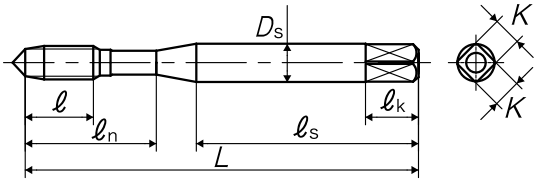

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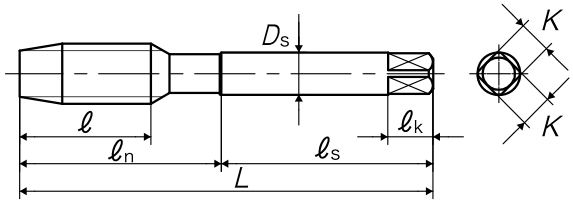

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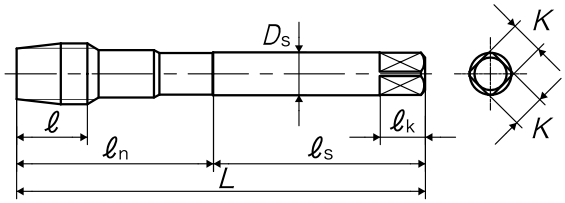

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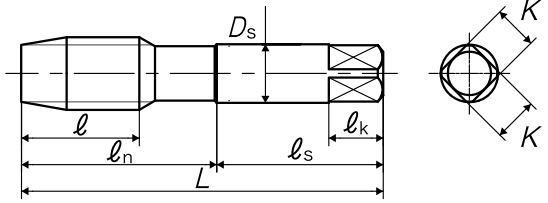

Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1 × 0.25	P1	TNMP1.0B5-L	5P	36	4.5	-	24	3	2.5	5	3	1	△
		TNMP1.0B1-L	1.5P										
M1.2 × 0.25	P1	TNMP1.2B5-L	5P	36	4.5	-	24	3	2.5	5	3	1	△
		TNMP1.2B1-L	1.5P										
M1.4 × 0.3	P1	TNMP1.4C5-L	5P	36	5.4	-	24	3	2.5	5	3	1	△
		TNMP1.4C1-L	1.5P										
M1.6 × 0.35	P2	TNMQ1.6D5-L	5P	36	6.3	-	24	3	2.5	5	3	2	△
		TNMQ1.6D1-L	1.5P										

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For improvement, spec may change without advance notice.

Think threads with YAMAWA

HT LH Hand Taps for Left Hand Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M1.7 × 0.35	P1	TNMP1.7D5-L	5P	36	6.3	-	24	3	2.5	5	3	2	△
		TNMP1.7D1-L	1.5P										
M2 × 0.4	P1	TNMP2.0E5-L	5P	42	7.2	12	27	3	2.5	5	3	3	△
		TNMP2.0E1-L	1.5P										
M2.3 × 0.4	P1	TNMP2.3E5-L	5P	42	7.2	12	27	3	2.5	5	3	3	△
		TNMP2.3E1-L	1.5P										
M2.5 × 0.45	P2	TNMQ2.5F5-L	5P	46	8.1	14	29	3	2.5	5	3	3	△
		TNMQ2.5F1-L	1.5P										
M2.6 × 0.45	P1	TNMP2.6F5-L	5P	46	8.1	14	29	3	2.5	5	3	3	△
		TNMP2.6F1-L	1.5P										
M3 × 0.5	P2	TNMQ3.0G5-L	5P	46	9	14	26	4	3.2	6	3	3	○
		TNMQ3.0G1-L	1.5P										
3M0.6	P2	TNMQ3.0H5-L	5P	46	9	14	26	4	3.2	6	3	3	△
		TNMQ3.0H1-L	1.5P										
M3 × 0.35	P2	TNMQ3.0D5-L	5P	46	6.5	14	26	4	3.2	6	3	4	△
		TNMQ3.0D1-L	1.5P										
M3.5 × 0.6	P2	TNMQ3.5H5-L	5P	52	11	16	29	5	4	7	3	3	△
		TNMQ3.5H1-L	1.5P										
M4 × 0.7	P2	TNMQ4.0I5-L	5P	52	11	17	29	5	4	7	4	3	○
		TNMQ4.0I1-L	1.5P										
4M0.75	P2	TNMQ4.0J5-L	5P	52	11	17	29	5	4	7	4	3	△
		TNMQ4.0J1-L	1.5P										
M4 × 0.5	P2	TNMQ4.0G5-L	5P	52	9	17	29	5	4	7	4	4	△
		TNMQ4.0G1-L	1.5P										
M5 × 0.8	P3	TNMR5.0K5-L	5P	60	13	22	33	5.5	4.5	7	4	3	○
		TNMR5.0K1-L	1.5P										
5M0.9	P2	TNMQ5.0L5-L	5P	60	13	22	33	5.5	4.5	7	4	3	△
		TNMQ5.0L1-L	1.5P										
M5 × 0.5	P2	TNMQ5.0G5-L	5P	60	9	22	33	5.5	4.5	7	4	4	△
		TNMQ5.0G1-L	1.5P										
M6 × 1	P2	TNMQ6.0M5-L	5P	62	15	26	33	6	4.5	7	4	3	○
		TNMQ6.0M1-L	1.5P										
M6 × 0.75	P2	TNMQ6.0J5-L	5P	62	15	26	33	6	4.5	7	4	3	△
		TNMQ6.0J1-L	1.5P										
M6 × 0.5	P2	TNMQ6.0G5-L	5P	62	9	26	33	6	4.5	7	4	4	△
		TNMQ6.0G1-L	1.5P										
M7 × 0.75	P2	TNMQ7.0J5-L	5P	70	19	-	36	6.2	5	8	4	5	△
		TNMQ7.0J1-L	1.5P										
M8 × 1.25	P3	TNMR8.0N5-L	5P	70	19	-	36	6.2	5	8	4	5	○
		TNMR8.0N1-L	1.5P										
M8 × 1	P2	TNMQ8.0M5-L	5P	70	19	-	36	6.2	5	8	4	5	△
		TNMQ8.0M1-L	1.5P										
M8 × 0.75	P2	TNMQ8.0J5-L	5P	70	19	-	36	6.2	5	8	4	5	△
		TNMQ8.0J1-L	1.5P										
M8 × 0.5	P2	TNMQ8.0G5-L	5P	70	10	-	36	6.2	5	8	4	6	△
		TNMQ8.0G1-L	1.5P										
M9 × 1	P2	TNMQ9.0M5-L	5P	75	23	-	38	7	5.5	8	4	5	△
		TNMQ9.0M1-L	1.5P										
M9 × 0.75	P2	TNMQ9.0J5-L	5P	75	13	-	38	7	5.5	8	4	6	△
		TNMQ9.0J1-L	1.5P										

Think threads with YAMAWA

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For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT LH Hand Taps for Left Hand Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M10 × 1.5	P3	TNMR01005-L	5P	75	23	-	38	7	5.5	8	4	5	○
		TNMR01001-L	1.5P										
M10 × 1.25	P3	TNMR010N5-L	5P	75	23	-	38	7	5.5	8	4	5	○
		TNMR010N1-L	1.5P										
M10 × 1	P3	TNMR010M5-L	5P	75	23	-	38	7	5.5	8	4	5	△
		TNMR010M1-L	1.5P										
M11 × 1.25	P3	TNMR011N5-L	5P	82	26	-	42	8.5	6.5	9	4	5	△
		TNMR011N1-L	1.5P										
M11 × 1	P3	TNMR011M5-L	5P	82	26	-	42	8.5	6.5	9	4	5	△
		TNMR011M1-L	1.5P										
M12 × 1.75	P3	TNMR012P5-L	5P	82	26	-	42	8.5	6.5	9	4	5	○
		TNMR012P1-L	1.5P										
M12 × 1.5	P3	TNMR01205-L	5P	82	26	-	42	8.5	6.5	9	4	5	○
		TNMR01201-L	1.5P										
M12 × 1.25	P4	TNMS012N5-L	5P	82	26	-	42	8.5	6.5	9	4	5	○
		TNMS012N1-L	1.5P										
M12 × 1	P3	TNMR012M5-L	5P	82	26	-	42	8.5	6.5	9	4	5	△
		TNMR012M1-L	1.5P										
M14 × 2	P3	TNMR014Q5-L	5P	88	26	-	45	10.5	8	11	4	5	○
		TNMR014Q1-L	1.5P										
M14 × 1.5	P3	TNMR01405-L	5P	88	26	-	45	10.5	8	11	4	5	○
		TNMR01401-L	1.5P										
M14 × 1	P3	TNMR014M5-L	5P	88	26	-	45	10.5	8	11	4	5	△
		TNMR014M1-L	1.5P										
M16 × 2	P3	TNMR016Q5-L	5P	95	26	-	48	12.5	10	13	4	5	○
		TNMR016Q1-L	1.5P										
M16 × 1.5	P3	TNMR01605-L	5P	95	26	-	48	12.5	10	13	4	5	○
		TNMR01601-L	1.5P										
M16 × 1	P3	TNMR016M5-L	5P	95	26	-	48	12.5	10	13	4	5	△
		TNMR016M1-L	1.5P										
M18 × 2.5	P4	TNMS018R5-L	5P	100	33	-	51	14	11	14	4	5	△
		TNMS018R1-L	1.5P										
M18 × 1.5	P3	TNMR01805-L	5P	100	33	-	51	14	11	14	4	5	○
		TNMR01801-L	1.5P										
M20 × 2.5	P4	TNMS020R5-L	5P	105	33	-	50	15	12	15	4	7	○
		TNMS020R1-L	1.5P										
M20 × 1.5	P3	TNMR02005-L	5P	105	33	-	50	15	12	15	4	7	○
		TNMR02001-L	1.5P										
M22 × 2.5	P4	TNMS022R5-L	5P	115	33	-	55	17	13	16	4	7	△
		TNMS022R1-L	1.5P										
M24 × 3	P4	TNMS024S5-L	5P	120	39	-	55	19	15	18	4	7	○
		TNMS024S1-L	1.5P										
M30 × 3.5	P4	TNMS030T5-L	5P	135	46	-	62	23	17	20	4	7	○
		TNMS030T1-L	1.5P										

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LS-HT

Long Shank Hand Taps

Specification

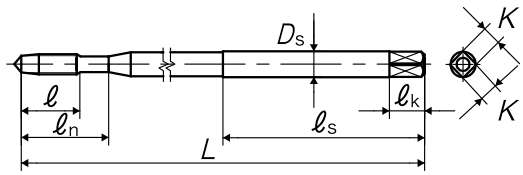
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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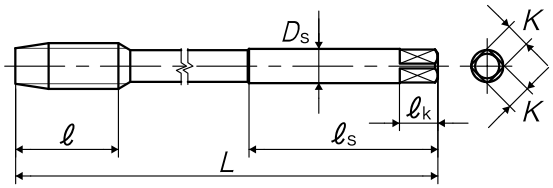

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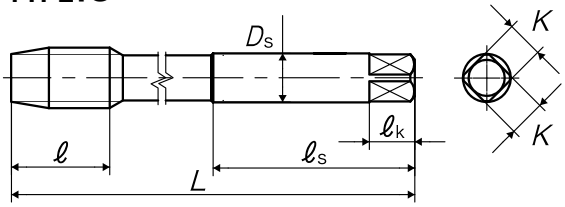

Oversize

Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P1	TNMP2.0E507	5P	70	7.2	12	55	3	2.5	5	3	1	△
		TNMP2.0E107	1.5P										
M2.3 × 0.4	P1	TNMP2.3E507	5P	70	7.2	12	55	3	2.5	5	3	1	△
		TNMP2.3E107	1.5P										
M2.5 × 0.45	P1	TNMP2.5F507	5P	70	8.1	14	53	3	2.5	5	3	1	△
		TNMP2.5F107	1.5P										
M2.6 × 0.45	P1	TNMP2.6F507	5P	70	8.1	14	53	3	2.5	5	3	1	△
		TNMP2.6F107	1.5P										
M3 × 0.5	P1	TNMP3.0G507	5P	70	9	14	50	4	3.2	6	3	1	△
		TNMP3.0G510		100			40						◎
		TNMP3.0G512		120									
		TNMP3.0G515		150									△
		TNMP3.0G107	1.5P	70			50						
		TNMP3.0G110		100									◎
		TNMP3.0G112		120									
		TNMP3.0G115		150									
	P3	TNMR3.0G510	5P	100			40						△
		TNMR3.0G515		150									
		TNMR3.0G110	1.5P	100									
		TNMR3.0G115		150									
M4 × 0.7	P2	TNMQ4.0I507	5P	70	11	17	47	5	4	7	3	1	△
		TNMQ4.0I510		100			40						◎
		TNMQ4.0I512		120									△

Think threads with YAMAWA

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-HT Long Shank Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M4 × 0.7	P2	TNMQ4.0I515	5P	150	11	17	40	5	4	7	3	1	◎
		TNMQ4.0I107	1.5P	70			47						△
		TNMQ4.0I110		100			40						◎
		TNMQ4.0I112		120									△
		TNMQ4.0I115		150									◎
	P3	TNMR4.0I510	5P	100									△
		TNMR4.0I515		150									
		TNMR4.0I110	1.5P	100									
		TNMR4.0I115		150									
M5 × 0.8	P2	TNMQ5.0K507	5P	70	13	22	43	5.5	4.5	7	3	1	△
		TNMQ5.0K510		100			40						◎
		TNMQ5.0K512		120									△
		TNMQ5.0K515		150									◎
		TNMQ5.0K107	1.5P	70			43						△
		TNMQ5.0K110		100			40						◎
		TNMQ5.0K112		120									△
		TNMQ5.0K115		150									◎
	P3	TNMR5.0K510	5P	100									△
		TNMR5.0K515		150									
		TNMR5.0K110	1.5P	100									
		TNMR5.0K115		150									
M6 × 1	P2	TNMQ6.0M510	5P	100	15	26	40	6	4.5	7	3	1	◎
		TNMQ6.0M512		120									○
		TNMQ6.0M515		150									◎
		TNMQ6.0M520		200									△
		TNMQ6.0M110	1.5P	100									◎
		TNMQ6.0M112		120									○
		TNMQ6.0M115		150									◎
		TNMQ6.0M120		200									
	P3	TNMR6.0M510	5P	100									△
		TNMR6.0M515		150									
		TNMR6.0M110	1.5P	100									
		TNMR6.0M115		150									
M8 × 1.25	P2	TNMQ8.0N510	5P	100	19	-	50	6.2	5	8	4	2	◎
		TNMQ8.0N512		120									○
		TNMQ8.0N515		150									◎
		TNMQ8.0N520		200									○
		TNMQ8.0N110	1.5P	100									◎
		TNMQ8.0N112		120									○
		TNMQ8.0N115		150									◎
		TNMQ8.0N120		200									○
	P3	TNMR8.0N510	5P	100									△
		TNMR8.0N515		150									
		TNMR8.0N520		200									
		TNMR8.0N110	1.5P	100									
		TNMR8.0N115		150									
		TNMR8.0N120		200									
M8 × 1	P2	TNMQ8.0M510	5P	100	19	-	50	6.2	5	8	4	2	△
		TNMQ8.0M512		120									
		TNMQ8.0M515		150									

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LS-HT Long Shank Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M8 × 1	P2	TNMQ8.0M110	1.5P	100	19	-	50	6.2	5	8	4	2	△
		TNMQ8.0M112		120									
		TNMQ8.0M115		150									
M10 × 1.5	P2	TNMQ0100510	5P	100	23	-	50	7	5.5	8	4	2	○
		TNMQ0100512		120									
		TNMQ0100515		150									◎
		TNMQ0100520		200									○
		TNMQ0100525		250									△
		TNMQ0100110	1.5P	100									○
		TNMQ0100112		120									
		TNMQ0100115		150									◎
		TNMQ0100120		200									○
		TNMQ0100125		250									
	P3	TNMR0100510	5P	100									
		TNMR0100515		150									
		TNMR0100110	1.5P	100									
		TNMR0100115		150									△
	P4	TNMS0100510	5P	100									
		TNMS0100515		150									
		TNMS0100110	1.5P	100									
		TNMS0100115		150									
M10 × 1.25	P2	TNMQ010N510	5P	100	23	-	50	7	5.5	8	4	2	
		TNMQ010N512		120									○
		TNMQ010N515		150									
		TNMQ010N520		200									△
		TNMQ010N110	1.5P	100									
		TNMQ010N112		120									○
		TNMQ010N115		150									
		TNMQ010N120		200									
	P3	TNMR010N510	5P	100									
		TNMR010N110	1.5P										
	P4	TNMS010N510	5P	100									△
		TNMS010N515		150									
		TNMS010N110	1.5P	100									
		TNMS010N115		150									
M10 × 1	P2	TNMQ010M510	5P	100	23	-	50	7	5.5	8	4	2	
		TNMQ010M512		120									△
		TNMQ010M515		150									
		TNMQ010M110	1.5P	100									
		TNMQ010M112		120									
		TNMQ010M115		150									
M12 × 1.75	P2	TNMQ012P510	5P	100	26	-	50	8.5	6.5	9	4	2	
		TNMQ012P512		120									○
		TNMQ012P515		150									◎
		TNMQ012P520		200									○
		TNMQ012P525		250									△
		TNMQ012P110	1.5P	100									
		TNMQ012P112		120									○
		TNMQ012P115		150									
		TNMQ012P120		200									◎
													○

Think threads with YAMAWA

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-HT Long Shank Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1.75	P2	TNMQ012P125	1.5P	250	26	-	50	8.5	6.5	9	4	2	△
	P3	TNMR012P515	5P	150									
		TNMR012P115	1.5P										
	P4	TNMS012P515	5P										
		TNMS012P520		200									
		TNMS012P115	1.5P	150									
		TNMS012P120		200									
M12 × 1.5	P2	TNMQ0120510	5P	100	26	-	50	8.5	6.5	9	4	2	△
		TNMQ0120512		120									
		TNMQ0120515		150									
		TNMQ0120520		200									
		TNMQ0120110	1.5P	100									
		TNMQ0120112		120									
		TNMQ0120115		150									
		TNMQ0120120		200									
	P4	TNMS0120515	5P	150									
		TNMS0120520		200									
		TNMS0120115	1.5P	150									
		TNMS0120120		200									
M12 × 1.25	P2	TNMQ012N510	5P	100	26	-	50	8.5	6.5	9	4	2	○
		TNMQ012N512		120									△
		TNMQ012N515		150									○
		TNMQ012N520		200									△
		TNMQ012N110	1.5P	100									○
		TNMQ012N112		120									△
		TNMQ012N115		150									○
		TNMQ012N120		200									
	P4	TNMS012N515	5P	150									△
		TNMS012N520		200									
		TNMS012N115	1.5P	150									
		TNMS012N120		200									
M12 × 1	P2	TNMQ012M510	5P	100	26	-	50	8.5	6.5	9	4	2	△
		TNMQ012M515		150									
		TNMQ012M110	1.5P	100									
		TNMQ012M115		150									
M14 × 2	P2	TNMQ014Q512	5P	120	26	-	60	10.5	8	11	4	2	△
		TNMQ014Q515		150									○
		TNMQ014Q520		200									
		TNMQ014Q525		250									△
		TNMQ014Q112	1.5P	120									
		TNMQ014Q115		150									○
		TNMQ014Q120		200									
		TNMQ014Q125		250									△
	P3	TNMR014Q515	5P	150									
		TNMR014Q115	1.5P										
M14 × 1.5	P2	TNMQ0140512	5P	120	26	-	60	10.5	8	11	4	2	△
		TNMQ0140515		150									○
		TNMQ0140520		200									△
		TNMQ0140112	1.5P	120									
		TNMQ0140115		150									○

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Think threads with YAMAWA

LS-HT Long Shank Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M14 × 1.5	P2	TNMQ0140120	1.5P	200	26	-	60	10.5	8	11	4	2	△
M14 × 1	P2	TNMQ014M515	5P	150	26	-	60	10.5	8	11	4	2	△
		TNMQ014M115	1.5P										
M16 × 2	P2	TNMQ016Q515	5P	150	26	-	60	12.5	10	13	4	2	◎
		TNMQ016Q520		200									○
		TNMQ016Q525		250									△
		TNMQ016Q115	1.5P	150									◎
		TNMQ016Q120		200									○
		TNMQ016Q125		250									
	P3	TNMR016Q515	5P	150									△
		TNMR016Q115	1.5P										
M16 × 1.5	P2	TNMQ016O515	5P	150	26	-	60	12.5	10	13	4	2	○
		TNMQ016O520		200									△
		TNMQ016O115	1.5P	150									○
		TNMQ016O120		200									△
M16 × 1	P2	TNMQ016M515	5P	150	26	-	60	12.5	10	13	4	2	△
		TNMQ016M115	1.5P										
M18 × 2.5	P3	TNMR018R515	5P	150	33	-	70	14	11	14	4	2	△
		TNMR018R520		200									
		TNMR018R525		250									
		TNMR018R115	1.5P	150									
		TNMR018R120		200									
		TNMR018R125		250									
	P4	TNMS018R515	5P	150									
		TNMS018R115	1.5P										
M18 × 2	P3	TNMR018Q520	5P	200	33	-	70	14	11	14	4	2	△
		TNMR018Q120	1.5P										
M18 × 1.5	P2	TNMQ018O515	5P	150	33	-	70	14	11	14	4	2	○
		TNMQ018O520		200									△
		TNMQ018O115	1.5P	150									○
		TNMQ018O120		200									△
M20 × 2.5	P3	TNMR020R515	5P	150	33	-	70	15	12	15	4	3	○
		TNMR020R520		200									
		TNMR020R525		250									△
		TNMR020R115	1.5P	150									○
		TNMR020R120		200									
		TNMR020R125		250									
	P4	TNMS020R515	5P	150									△
		TNMS020R115	1.5P										
M20 × 1.5	P3	TNMR0200515	5P	150	33	-	70	15	12	15	4	3	○
		TNMR0200520		200									△
		TNMR0200115	1.5P	150									○
		TNMR0200120		200									
	P4	TNMS0200515	5P	150									△
		TNMS0200115	1.5P										
M22 × 2.5	P3	TNMR022R515	5P	150	33	-	70	17	13	16	4	3	△
		TNMR022R520		200									
		TNMR022R525		250									
		TNMR022R115	1.5P	150									
		TNMR022R120		200									

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-HT Long Shank Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M22 × 2.5	P3	TNMR022R125	1.5P	250	33	-	70	17	13	16	4	3	△
	P4	TNMS022R515	5P	150									
		TNMS022R115	1.5P										
M22 × 1.5	P3	TNMR022O515	5P	150	33	-	70	17	13	16	4	3	△
		TNMR022O520		200									
		TNMR022O115	1.5P	150									
		TNMR022O120		200									
M24 × 3	P3	TNMR024S515	5P	150	39	-	80	19	15	18	4	3	○
		TNMR024S520		200									
		TNMR024S525		250									△
		TNMR024S115	1.5P	150									○
		TNMR024S120		200									
		TNMR024S125		250									
	P4	TNMS024S515	5P	150									△
		TNMS024S115	1.5P										
M24 × 2	P3	TNMR024Q520	5P	200	39	-	80	19	15	18	4	3	△
		TNMR024Q120	1.5P										
M24 × 1.5	P3	TNMR024O515	5P	150	39	-	80	19	15	18	4	3	○
		TNMR024O520		200									△
		TNMR024O115	1.5P	150									○
		TNMR024O120		200									△
M27 × 3	P3	TNMR027S520	5P	200	39	-	80	20	15	18	4	3	△
		TNMR027S525		250									
		TNMR027S120	1.5P	200									
		TNMR027S125		250									
M27 × 2	P3	TNMR027Q525	5P	250	39	-	80	20	15	18	4	3	△
		TNMR027Q125	1.5P										
M27 × 1.5	P3	TNMR027O520	5P	200	39	-	80	20	15	18	4	3	△
		TNMR027O525		250									
		TNMR027O120	1.5P	200									
		TNMR027O125		250									
M30 × 3.5	P4	TNMS030T520	5P	200	46	-	80	23	17	20	4	3	△
		TNMS030T525		250									
		TNMS030T530		300									
		TNMS030T120	1.5P	200									
		TNMS030T125		250									
		TNMS030T130		300									
M30 × 3	P3	TNMR030S525	5P	250	46	-	80	23	17	20	4	3	△
		TNMR030S125	1.5P										
M30 × 2	P3	TNMR030Q520	5P	200	46	-	80	23	17	20	4	3	△
		TNMR030Q525		250									
		TNMR030Q120	1.5P	200									
		TNMR030Q125		250									
M30 × 1.5	P3	TNMR030O520	5P	200	46	-	80	23	17	20	4	3	△
		TNMR030O525		250									
		TNMR030O120	1.5P	200									
		TNMR030O125		250									

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

LS-HT Long Shank Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Unified Threads													
1/4-20UNC	P2	TNMQU04N515	5P	150	15	26	40	6	4.5	7	3	1	△
		TNMQU04N520		200									
		TNMQU04N115	1.5P	150									
		TNMQU04N120		200									
1/4-28UNF	P2	TNMQU04K515	5P	150	15	26	40	6	4.5	7	3	1	△
		TNMQU04K520		200									
		TNMQU04K115	1.5P	150									
		TNMQU04K120		200									
5/16-18UNC	P2	TNMQU05O515	5P	150	19	-	50	6.2	5	8	4	2	△
		TNMQU05O520		200									
		TNMQU05O115	1.5P	150									
		TNMQU05O120		200									
5/16-24UNF	P2	TNMQU05M515	5P	150	19	-	50	6.2	5	8	4	2	△
		TNMQU05M520		200									
		TNMQU05M115	1.5P	150									
		TNMQU05M120		200									
3/8-16UNC	P2	TNMQU06P515	5P	150	23	-	50	7	5.5	8	4	2	△
		TNMQU06P520		200									
		TNMQU06P115	1.5P	150									
		TNMQU06P120		200									
3/8-24UNF	P2	TNMQU06M515	5P	150	23	-	50	7	5.5	8	4	2	△
		TNMQU06M520		200									
		TNMQU06M115	1.5P	150									
		TNMQU06M120		200									
7/16-14UNC	P3	TNMRU07Q515	5P	150	26	-	50	8.5	6.5	9	4	2	△
		TNMRU07Q115	1.5P										
7/16-20UNF	P2	TNMQU07N515	5P	150	26	-	50	8.5	6.5	9	4	2	△
		TNMQU07N520		200									
		TNMQU07N115	1.5P	150									
		TNMQU07N120		200									
1/2-13UNC	P3	TNMRU08R515	5P	150	26	-	60	10.5	8	11	4	2	△
		TNMRU08R520		200									
		TNMRU08R115	1.5P	150									
		TNMRU08R120		200									
1/2-20UNF	P2	TNMQU08N515	5P	150	26	-	60	10.5	8	11	4	2	△
		TNMQU08N520		200									
		TNMQU08N115	1.5P	150									
		TNMQU08N120		200									
9/16-18UNF	P2	TNMQU09O515	5P	150	26	-	60	12.5	10	13	4	2	△
		TNMQU09O115	1.5P										
5/8-11UNC	P3	TNMRU10U515	5P	150	26	-	60	12.5	10	13	4	2	△
		TNMRU10U520		200									
		TNMRU10U115	1.5P	150									
		TNMRU10U120		200									
5/8-18UNF	P2	TNMQU10O515	5P	150	26	-	60	12.5	10	13	4	2	△
		TNMQU10O115	1.5P										
3/4-10UNC	P3	TNMRU12V515	5P	150	33	-	70	15	12	15	4	3	△
		TNMRU12V520		200									
		TNMRU12V115	1.5P	150									

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-HT Long Shank Hand Taps

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
3/4-10UNC	P3	TNMRU12V120	1.5P	200	33	-	70	15	12	15	4	3	△
3/4-16UNF	P3	TNMRU12P515	5P	150	33	-	70	15	12	15	4	3	△
		TNMRU12P115	1.5P										
7/8-9UNC	P3	TNMRU14W520	5P	200	33	-	70	17	13	16	4	3	△
		TNMRU14W120	1.5P										
1 -8UNC	P3	TNMRU16X515	5P	150	39	-	80	19	15	18	4	3	△
		TNMRU16X520		200									
		TNMRU16X115	1.5P	150									
		TNMRU16X120		200									

LS-HT LH

Long Shank Hand Taps for Left Hand Threads

Specification

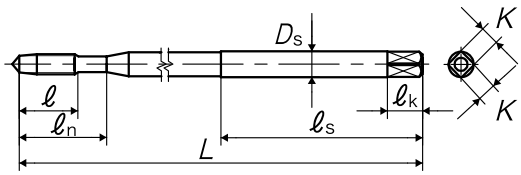
HSS | LH Left hand

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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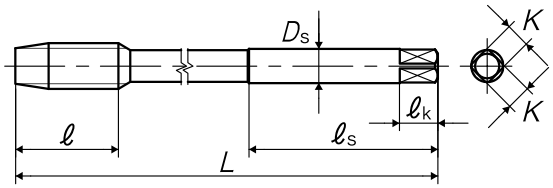

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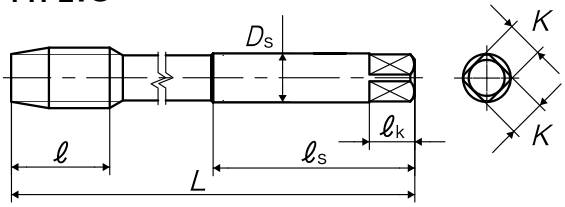


Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P1	TNMP3.0G510L	5P	100	9	14	40	4	3.2	6	3	1	△
		TNMP3.0G110L	1.5P										
M4 × 0.7	P2	TNMQ4.0I510L	5P	100	11	17	40	5	4	7	3	1	△
		TNMQ4.0I110L	1.5P										
M5 × 0.8	P2	TNMQ5.0K510L	5P	100	13	22	40	5.5	4.5	7	3	1	△
		TNMQ5.0K110L	1.5P										
M6 × 1	P2	TNMQ6.0M510L	5P	100	15	26	40	6	4.5	7	3	1	△
		TNMQ6.0M515L		150									
		TNMQ6.0M110L	1.5P	100									
		TNMQ6.0M115L		150									
M8 × 1.25	P2	TNMQ8.0N510L	5P	100	19	-	50	6.2	5	8	4	2	△
		TNMQ8.0N515L		150									
		TNMQ8.0N110L	1.5P	100									
		TNMQ8.0N115L		150									
M10 × 1.5	P2	TNMQ010O510L	5P	100	23	-	50	7	5.5	8	4	2	△
		TNMQ010O515L		150									
		TNMQ010O110L	1.5P	100									
		TNMQ010O115L		150									
M10 × 1.25	P2	TNMQ010N515L	5P	150	23	-	50	7	5.5	8	4	2	△
		TNMQ010N115L	1.5P										
M12 × 1.75	P2	TNMQ012P515L	5P	150	26	-	50	8.5	6.5	9	4	2	△
		TNMQ012P115L	1.5P										
M12 × 1.5	P2	TNMQ0120515L	5P	150	26	-	50	8.5	6.5	9	4	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-HT LH Long Shank Hand Taps for Left Hand Threads

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1.5	P2	TNMQ0120115L	1.5P	150	26	-	50	8.5	6.5	9	4	2	△
M12 × 1.25	P2	TNMQ012N515L	5P	150	26	-	50	8.5	6.5	9	4	2	△
		TNMQ012N115L	1.5P										
M14 × 2	P2	TNMQ014Q515L	5P	150	26	-	60	10.5	8	11	4	2	△
		TNMQ014Q115L	1.5P										
M14 × 1.5	P2	TNMQ0140515L	5P	150	26	-	60	10.5	8	11	4	2	△
		TNMQ0140115L	1.5P										
M16 × 2	P2	TNMQ016Q515L	5P	150	26	-	60	12.5	10	13	4	2	△
		TNMQ016Q520L		200									
		TNMQ016Q115L	1.5P	150									
		TNMQ016Q120L		200									
M16 × 1.5	P2	TNMQ0160515L	5P	150	26	-	60	12.5	10	13	4	2	△
		TNMQ0160115L	1.5P										
M18 × 2.5	P3	TNMR018R515L	5P	150	33	-	70	14	11	14	4	2	△
		TNMR018R115L	1.5P										
M18 × 1.5	P2	TNMQ0180515L	5P	150	33	-	70	14	11	14	4	2	△
		TNMQ0180115L	1.5P										
M20 × 2.5	P3	TNMR020R515L	5P	150	33	-	70	15	12	15	4	3	△
		TNMR020R520L		200									
		TNMR020R115L	1.5P	150									
		TNMR020R120L		200									
M20 × 1.5	P3	TNMR0200515L	5P	150	33	-	70	15	12	15	4	3	△
		TNMR0200520L		200									
		TNMR0200115L	1.5P	150									
		TNMR0200120L		200									
M22 × 2.5	P3	TNMR022R515L	5P	150	33	-	70	17	13	16	4	3	△
		TNMR022R520L		200									
		TNMR022R115L	1.5P	150									
		TNMR022R120L		200									
M24 × 3	P3	TNMR024S515L	5P	150	39	-	80	19	15	18	4	3	△
		TNMR024S520L		200									
		TNMR024S115L	1.5P	150									
		TNMR024S120L		200									
M27 × 3	P3	TNMR027S520L	5P	200	39	-	80	20	15	18	4	3	△
		TNMR027S120L	1.5P										
M30 × 3.5	P4	TNMS030T520L	5P	200	46	-	80	23	17	20	4	3	△
		TNMS030T120L	1.5P										

LS-HT V

Long Shank Hand Taps, Coated

Specification

HSS Coating

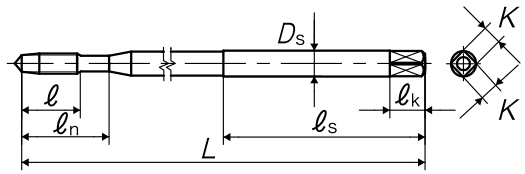
■Adopting the optimum coating for the tapping condition.

Recommended Tapping Speeds depending on Materials

High carbon steels 高炭素鋼
10~20 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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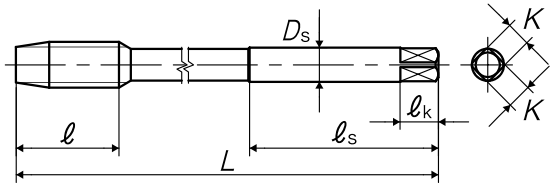


Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P1	TNMP3.0G510V	5P	100	9	14	40	4	3.2	6	3	1	△
		TNMP3.0G110V	1.5P										
M4 × 0.7	P2	TNMQ4.0I510V	5P	100	11	17	40	5	4	7	3	1	△
		TNMQ4.0I110V	1.5P										
M5 × 0.8	P2	TNMQ5.0K510V	5P	100	13	22	40	5.5	4.5	7	3	1	△
		TNMQ5.0K110V	1.5P										
M6 × 1	P2	TNMQ6.0M510V	5P	100	15	26	40	6	4.5	7	3	1	△
		TNMQ6.0M515V		150									
		TNMQ6.0M110V	1.5P	100									
		TNMQ6.0M115V		150									
M8 × 1.25	P2	TNMQ8.0N510V	5P	100	19	-	50	6.2	5	8	4	2	△
		TNMQ8.0N515V		150									
		TNMQ8.0N110V	1.5P	100									
		TNMQ8.0N115V		150									
M10 × 1.5	P2	TNMQ010O510V	5P	100	23	-	50	7	5.5	8	4	2	△
		TNMQ010O515V		150									
		TNMQ010O110V	1.5P	100									
		TNMQ010O115V		150									
M10 × 1.25	P2	TNMQ010N510V	5P	100	23	-	50	7	5.5	8	4	2	△
		TNMQ010N515V		150									
		TNMQ010N110V	1.5P	100									
		TNMQ010N115V		150									
M12 × 1.75	P2	TNMQ012P510V	5P	100	26	-	50	8.5	6.5	9	4	2	△
		TNMQ012P515V		150									
		TNMQ012P110V	1.5P	100									
		TNMQ012P115V		150									
M12 × 1.5	P2	TNMQ012O510V	5P	100	26	-	50	8.5	6.5	9	4	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-HT V Long Shank Hand Taps, Coated

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1.5	P2	TNMQ0120515V	5P	150	26	-	50	8.5	6.5	9	4	2	△
		TNMQ0120110V	1.5P	100									
		TNMQ0120115V		150									
M12 × 1.25	P2	TNMQ012N510V	5P	100	26	-	50	8.5	6.5	9	4	2	△
		TNMQ012N515V		150									
		TNMQ012N110V	1.5P	100									
		TNMQ012N115V		150									

SU-HT

Hand Taps for Stainless Steels

Specification

HSS | OX Oxide

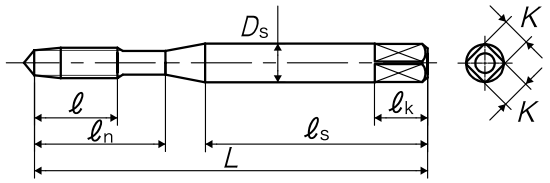
■SU-HT is the hand tap suitable for stainless steels which are sticky and tend to work-harden as well as chrome steel and molybdenum steels.

Recommended Tapping Speeds depending on Materials

Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE:1



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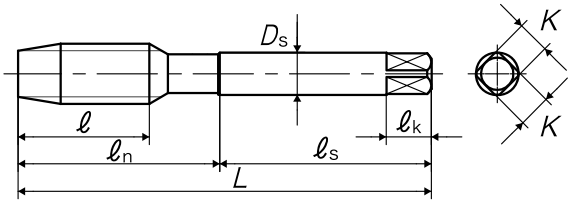

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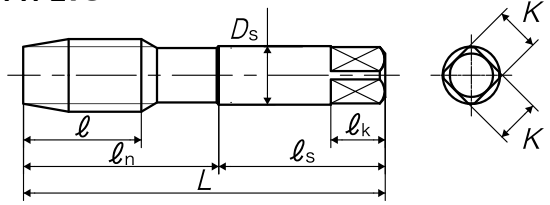

Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P2	TUMQ2.0E4	4P	42	7.2	12	27	3	2.5	5	3	1	○
		TUMQ2.0E1	1.5P										
M2.3 × 0.4	P2	TUMQ2.3E4	4P	42	7.2	12	27	3	2.5	5	3	1	△
		TUMQ2.3E1	1.5P										
M2.5 × 0.45	P2	TUMQ2.5F4	4P	46	8.1	14	29	3	2.5	5	3	1	△
		TUMQ2.5F1	1.5P										
M2.6 × 0.45	P2	TUMQ2.6F4	4P	46	8.1	14	29	3	2.5	5	3	1	△
		TUMQ2.6F1	1.5P										
M3 × 0.5	P2	TUMQ3.0G4	4P	46	9	14	26	4	3.2	6	3	1	◎
		TUMQ3.0G1	1.5P										
M3.5 × 0.6	P2	TUMQ3.5H4	4P	52	11	16	29	5	4	7	3	1	△
		TUMQ3.5H1	1.5P										
M4 × 0.7	P2	TUMQ4.0I4	4P	52	11	17	29	5	4	7	3	1	◎
		TUMQ4.0I1	1.5P										
M5 × 0.8	P2	TUMQ5.0K4	4P	60	13	22	33	5.5	4.5	7	3	1	◎
		TUMQ5.0K1	1.5P										
M6 × 1	P2	TUMQ6.0M4	4P	62	15	26	33	6	4.5	7	3	1	◎
		TUMQ6.0M1	1.5P										
M6 × 0.75	P2	TUMQ6.0J4	4P	62	15	26	33	6	4.5	7	3	1	△
		TUMQ6.0J1	1.5P										
M8 × 1.25	P3	TUMR8.0N4	4P	70	19	-	36	6.2	5	8	3	2	◎
		TUMR8.0N1	1.5P								4		
M8 × 1	P3	TUMR8.0M4	4P	70	19	-	36	6.2	5	8	3	2	△
		TUMR8.0M1	1.5P								4		

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SU-HT Hand Taps for Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M10 × 1.5	P3	TUMR010O4	4P	75	23	-	38	7	5.5	8	3	2	◎
		TUMR010O1	1.5P								4		
M10 × 1.25	P3	TUMR010N4	4P	75	23	-	38	7	5.5	8	3	2	△
		TUMR010N1	1.5P								4		
M10 × 1	P3	TUMR010M4	4P	75	23	-	38	7	5.5	8	3	2	△
		TUMR010M1	1.5P								4		
M12 × 1.75	P4	TUMS012P4	4P	82	26	-	42	8.5	6.5	9	3	2	◎
		TUMS012P1	1.5P								4		
M12 × 1.5	P3	TUMR012O4	4P	82	26	-	42	8.5	6.5	9	3	2	△
		TUMR012O1	1.5P								4		
M12 × 1.25	P4	TUMS012N4	4P	82	26	-	42	8.5	6.5	9	3	2	△
		TUMS012N1	1.5P								4		
M12 × 1	P3	TUMR012M4	4P	82	26	-	42	8.5	6.5	9	3	2	△
		TUMR012M1	1.5P								4		
M14 × 2	P4	TUMS014Q4	4P	88	26	-	45	10.5	8	11	4	2	△
		TUMS014Q1	1.5P										
M14 × 1.5	P3	TUMR014O4	4P	88	26	-	45	10.5	8	11	4	2	△
		TUMR014O1	1.5P										
M14 × 1.25	P3	TUMR014N4	4P	88	26	-	45	10.5	8	11	4	2	△
		TUMR014N1	1.5P										
M14 × 1	P3	TUMR014M4	4P	88	26	-	45	10.5	8	11	4	2	△
		TUMR014M1	1.5P										
M16 × 2	P4	TUMS016Q4	4P	95	26	-	48	12.5	10	13	4	2	○
		TUMS016Q1	1.5P										
M16 × 1.5	P3	TUMR016O4	4P	95	26	-	48	12.5	10	13	4	2	△
		TUMR016O1	1.5P										
M16 × 1	P3	TUMR016M4	4P	95	26	-	48	12.5	10	13	4	2	△
		TUMR016M1	1.5P										
M18 × 2.5	P4	TUMS018R4	4P	100	33	-	51	14	11	14	4	2	△
		TUMS018R1	1.5P										
M18 × 1.5	P4	TUMS018O4	4P	100	33	-	51	14	11	14	4	2	△
		TUMS018O1	1.5P										
M20 × 2.5	P4	TUMS020R4	4P	105	33	-	50	15	12	15	4	3	○
		TUMS020R1	1.5P										
M20 × 1.5	P4	TUMS020O4	4P	105	33	-	50	15	12	15	4	3	△
		TUMS020O1	1.5P										
M22 × 2.5	P4	TUMS022R4	4P	115	33	-	55	17	13	16	4	3	△
		TUMS022R1	1.5P										
M22 × 1.5	P4	TUMS022O4	4P	115	33	-	55	17	13	16	4	3	△
		TUMS022O1	1.5P										
M24 × 3	P4	TUMS024S4	4P	120	39	-	55	19	15	18	4	3	△
		TUMS024S1	1.5P										
M24 × 1.5	P4	TUMS024O4	4P	120	39	-	55	19	15	18	4	3	△
		TUMS024O1	1.5P										
M27 × 3	P4	TUMS027S4	4P	130	39	-	60	20	15	18	4	3	△
		TUMS027S1	1.5P										
M27 × 1.5	P4	TUMS027O4	4P	130	39	-	60	20	15	18	4	3	△
		TUMS027O1	1.5P										
M30 × 3.5	P5	TUMT030T4	4P	135	46	-	62	23	17	20	4	3	△
		TUMT030T1	1.5P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

SU-HT Hand Taps for Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M30 × 1.5	P4	TUMS03004	4P	135	46	-	62	23	17	20	4	3	△
		TUMS03001	1.5P										
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4-20UNC	P2	TUMQU04N4	4P	62	15	26	33	6	4.5	7	3	1	△
		TUMQU04N1	1.5P										
1/4-28UNF	P2	TUMQU04K4	4P	62	15	26	33	6	4.5	7	3	1	△
		TUMQU04K1	1.5P										
5/16-18UNC	P3	TUMRU05O4	4P	70	19	-	36	6.2	5	8	3	2	△
		TUMRU05O1	1.5P								4		
5/16-24UNF	P2	TUMQU05M4	4P	70	19	-	36	6.2	5	8	3	2	△
		TUMQU05M1	1.5P								4		
3/8-16UNC	P3	TUMRU06P4	4P	75	23	-	38	7	5.5	8	3	2	△
		TUMRU06P1	1.5P								4		
3/8-24UNF	P2	TUMQU06M4	4P	75	23	-	38	7	5.5	8	3	2	△
		TUMQU06M1	1.5P								4		
7/16-14UNC	P3	TUMRU07Q4	4P	82	26	-	42	8.5	6.5	9	3	2	△
		TUMRU07Q1	1.5P								4		
7/16-20UNF	P3	TUMRU07N4	4P	82	26	-	42	8.5	6.5	9	3	2	△
		TUMRU07N1	1.5P								4		
1/2-13UNC	P3	TUMRU08R4	4P	88	26	-	45	10.5	8	11	3	2	△
		TUMRU08R1	1.5P								4		
1/2-20UNF	P3	TUMRU08N4	4P	88	26	-	45	10.5	8	11	3	2	△
		TUMRU08N1	1.5P								4		
5/8-11UNC	P3	TUMRU10U4	4P	95	26	-	48	12.5	10	13	4	2	△
		TUMRU10U1	1.5P										
5/8-18UNF	P3	TUMRU10O4	4P	95	26	-	48	12.5	10	13	4	2	△
		TUMRU10O1	1.5P										
3/4-10UNC	P4	TUMSU12V4	4P	105	33	-	50	15	12	15	4	3	△
		TUMSU12V1	1.5P										
3/4-16UNF	P3	TUMRU12P4	4P	105	33	-	50	15	12	15	4	3	△
		TUMRU12P1	1.5P										
For Whitworth Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
1/4W20	P3	TUMRW04N4	4P	62	15	26	33	6	4.5	7	3	1	△
		TUMRW04N1	1.5P										
5/16W18	P3	TUMRW05O4	4P	70	19	-	36	6.2	5	8	3	2	△
		TUMRW05O1	1.5P								4		
3/8W16	P3	TUMRW06P4	4P	75	23	-	38	7	5.5	8	3	2	△
		TUMRW06P1	1.5P								4		
7/16W14	P3	TUMRW07Q4	4P	82	26	-	42	8.5	6.5	9	3	2	△
		TUMRW07Q1	1.5P								4		
1/2W12	P3	TUMRW08S4	4P	88	26	-	45	10.5	8	11	3	2	△
		TUMRW08S1	1.5P								4		
5/8W11	P3	TUMRW10U4	4P	95	26	-	48	12.5	10	13	4	2	△
		TUMRW10U1	1.5P										
3/4W10	P4	TUMSW12V4	4P	105	33	-	50	15	12	15	4	3	△
		TUMSW12V1	1.5P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

FC-HT

Hand Taps for Cast Irons

Specification

HSS | NI Nitride | <2D

■Suitable for hard and abrasive materials such as cast irons. Considering comparatively quick wear, FC-HT is properly oversized.

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄
5~10
(m/min)

For icon explanation, refer to P.24

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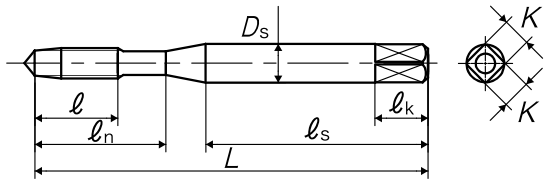

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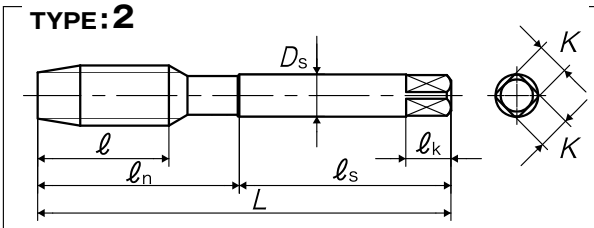


Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P3	TY3.0GRAEN5	5P	46	9	14	26	4	3.2	6	3	1	○
		TY3.0GRAENA	1.5P										
M3.5 × 0.6	P3	TY3.5HRAEN5	5P	52	11	16	29	5	4	7	3	1	△
		TY3.5HRAENA	1.5P										
M4 × 0.7	P3	TY4.0IRAEN5	5P	52	11	17	29	5	4	7	3	1	○
		TY4.0IRAENA	1.5P										
M5 × 0.8	P3	TY5.0KRAEN5	5P	60	13	22	33	5.5	4.5	7	3	1	○
		TY5.0KRAENA	1.5P										
M6 × 1	P3	TY6.0MRAEN5	5P	62	15	26	33	6	4.5	7	3	1	◎
		TY6.0MRAENA	1.5P										
M8 × 1.25	P3	TY8.0NRAEN5	5P	70	19	-	36	6.2	5	8	3	2	◎
		TY8.0NRAENA	1.5P										
M8 × 1	P3	TY8.0MRAEN5	5P	70	19	-	36	6.2	5	8	3	2	△
		TY8.0MRAENA	1.5P										
M10 × 1.5	P4	TY010OSAEN5	5P	75	23	-	38	7	5.5	8	4	2	◎
		TY010OSAENA	1.5P										
M10 × 1.25	P3	TY010NRAEN5	5P	75	23	-	38	7	5.5	8	4	2	◎
		TY010NRAENA	1.5P										
M10 × 1	P3	TY010MRAEN5	5P	75	23	-	38	7	5.5	8	4	2	○
		TY010MRAENA	1.5P										
M12 × 1.75	P4	TY012PSAEN5	5P	82	26	-	42	8.5	6.5	9	4	2	◎
		TY012PSAENA	1.5P										
M12 × 1.5	P4	TY012OSAEN5	5P	82	26	-	42	8.5	6.5	9	4	2	○
		TY012OSAENA	1.5P										
M12 × 1.25	P4	TY012NSAEN5	5P	82	26	-	42	8.5	6.5	9	4	2	○
		TY012NSAENA	1.5P										
M12 × 1	P3	TY012MRAEN5	5P	82	26	-	42	8.5	6.5	9	4	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

FC-HT Hand Taps for Cast Irons

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1	P3	TY012MRAENA	1.5P	82	26	-	42	8.5	6.5	9	4	2	△
M14 × 2	P4	TY014QSAEN5	5P	88	26	-	45	10.5	8	11	4	2	○
		TY014QSAENA	1.5P										
M14 × 1.5	P4	TY014OSAEN5	5P	88	26	-	45	10.5	8	11	4	2	○
		TY014OSAENA	1.5P										
M16 × 2	P4	TY016QSAEN5	5P	95	26	-	48	12.5	10	13	4	2	○
		TY016QSAENA	1.5P										
M16 × 1.5	P4	TY016OSAEN5	5P	95	26	-	48	12.5	10	13	4	2	○
		TY016OSAENA	1.5P										
M18 × 2.5	P5	TY018RTAEN5	5P	100	33	-	51	14	11	14	4	2	○
		TY018RTAENA	1.5P										
M18 × 1.5	P4	TY018OSAEN5	5P	100	33	-	51	14	11	14	4	2	○
		TY018OSAENA	1.5P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

FC-O

Hand Taps for Cast Irons

Specification

HSS | NI Nitride | <2D

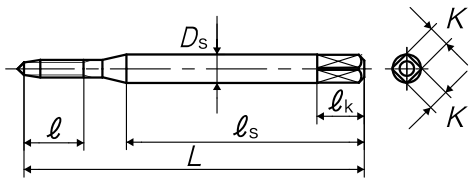
■Suitable for hard and abrasive materials such as cast irons. Considering comparatively quick wear, FC-O is properly oversized.

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄
5~10
(m/min)

For icon explanation, refer to P.24

TYPE:1



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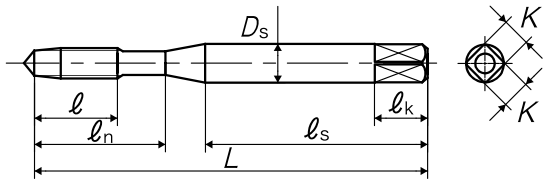

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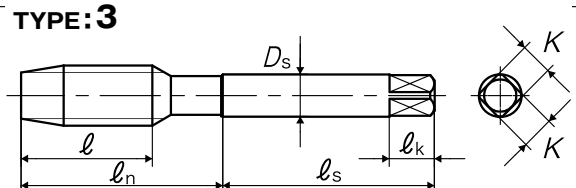

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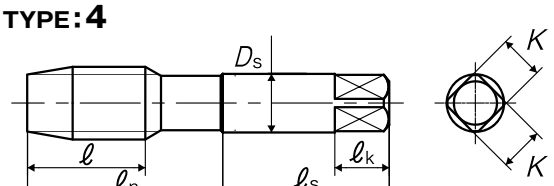

Segment : 1A

Size	Thread limit $\frac{D_2 \cdot To\ell \cdot Z}{(+)}$ (μm)	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.6 × 0.35	40 ~ 25	TFCM1.6D5	5P	36	6.3	-	24	3	2.5	5	3	1	△
		TFCM1.6D1	1.5P										
M2 × 0.4	40 ~ 25	TFCM2.0E5	5P	42	7.2	12	27	3	2.5	5	3	2	△
		TFCM2.0E1	1.5P										
M2.3 × 0.4	40 ~ 25	TFCM2.3E5	5P	42	7.2	12	27	3	2.5	5	3	2	△
		TFCM2.3E1	1.5P										
M2.5 × 0.45	40 ~ 25	TFCM2.5F5	5P	46	8.1	14	29	3	2.5	5	3	2	△
		TFCM2.5F1	1.5P										
M2.6 × 0.45	40 ~ 25	TFCM2.6F5	5P	46	8.1	14	29	3	2.5	5	3	2	△
		TFCM2.6F1	1.5P										
M3 × 0.5	40 ~ 25	TFCM3.0G5	5P	46	9	14	26	4	3.2	6	3	2	○
		TFCM3.0G1	1.5P										
M3.5 × 0.6	40 ~ 25	TFCM3.5H5	5P	52	11	16	29	5	4	7	3	2	△
		TFCM3.5H1	1.5P										
M4 × 0.7	45 ~ 25	TFCM4.0I5	5P	52	11	17	29	5	4	7	4	2	○
		TFCM4.0I1	1.5P										
M5 × 0.8	50 ~ 30	TFCM5.0K5	5P	60	13	22	33	5.5	4.5	7	4	2	○
		TFCM5.0K1	1.5P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

FC-O Hand Taps for Cast Irons

Size	Thread limit $\frac{D_2 \cdot To\ell \cdot Z}{(+)}$ (μm)	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M6 × 1	50 ~ 30	TFCM6.0M5	5P	62	15	26	33	6	4.5	7	4	2	◎
		TFCM6.0M1	1.5P										
M8 × 1.25	60 ~ 35	TFCM8.0N5	5P	70	19	-	36	6.2	5	8	4	3	◎
		TFCM8.0N1	1.5P										
M8 × 1	55 ~ 30	TFCM8.0M5	5P	70	19	-	36	6.2	5	8	4	3	△
		TFCM8.0M1	1.5P										
M10 × 1.5	65 ~ 40	TFCM01005	5P	75	23	-	38	7	5.5	8	4	3	◎
		TFCM01001	1.5P										
M10 × 1.25	60 ~ 35	TFCM010N5	5P	75	23	-	38	7	5.5	8	4	3	◎
		TFCM010N1	1.5P										
M10 × 1	57 ~ 32	TFCM010M5	5P	75	23	-	38	7	5.5	8	4	3	○
		TFCM010M1	1.5P										
M12 × 1.75	70 ~ 40	TFCM012P5	5P	82	26	-	42	8.5	6.5	9	4	3	◎
		TFCM012P1	1.5P										
M12 × 1.5	70 ~ 40	TFCM01205	5P	82	26	-	42	8.5	6.5	9	4	3	○
		TFCM01201	1.5P										
M12 × 1.25	70 ~ 40	TFCM012N5	5P	82	26	-	42	8.5	6.5	9	4	3	○
		TFCM012N1	1.5P										
M12 × 1	65 ~ 35	TFCM012M5	5P	82	26	-	42	8.5	6.5	9	4	3	△
		TFCM012M1	1.5P										
M14 × 2	70 ~ 40	TFCM014Q5	5P	88	26	-	45	10.5	8	11	4	3	○
		TFCM014Q1	1.5P										
M14 × 1.5	70 ~ 40	TFCM01405	5P	88	26	-	45	10.5	8	11	4	3	○
		TFCM01401	1.5P										
M16 × 2	70 ~ 40	TFCM016Q5	5P	95	26	-	48	12.5	10	13	4	3	○
		TFCM016Q1	1.5P										
M16 × 1.5	70 ~ 40	TFCM01605	5P	95	26	-	48	12.5	10	13	4	3	○
		TFCM01601	1.5P										
M18 × 2.5	80 ~ 45	TFCM018R5	5P	100	33	-	51	14	11	14	4	3	○
		TFCM018R1	1.5P										
M18 × 1.5	70 ~ 40	TFCM01805	5P	100	33	-	51	14	11	14	4	3	○
		TFCM01801	1.5P										
M20 × 2.5	80 ~ 45	TFCM020R5	5P	105	33	-	50	15	12	15	4	4	○
		TFCM020R1	1.5P										
M20 × 1.5	75 ~ 40	TFCM02005	5P	105	33	-	50	15	12	15	4	4	○
		TFCM02001	1.5P										
M22 × 2.5	80 ~ 45	TFCM022R5	5P	115	33	-	55	17	13	16	4	4	△
		TFCM022R1	1.5P										
M22 × 1.5	75 ~ 40	TFCM02205	5P	115	33	-	55	17	13	16	4	4	△
		TFCM02201	1.5P										
M24 × 3	90 ~ 50	TFCM024S5	5P	120	39	-	55	19	15	18	4	4	△
		TFCM024S1	1.5P										
M24 × 1.5	75 ~ 40	TFCM02405	5P	120	39	-	55	19	15	18	4	4	○
		TFCM02401	1.5P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LA-HT

Hand Taps for Die Cast Materials

Specification

HSS | NI Nitride | <2D

■LA-HT is the oversized tap, and is suitable for the materials tending to shrink, such as aluminum alloy diecastings (ADC) and zinc alloy diecastings (ZDC).

Recommended Tapping Speeds depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

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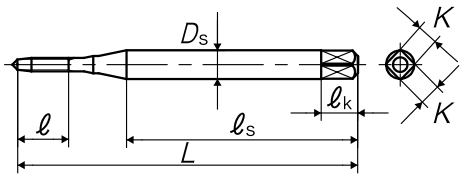

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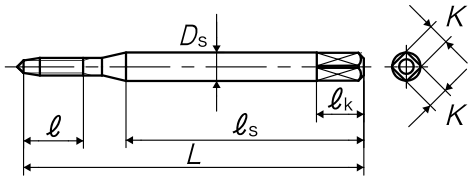

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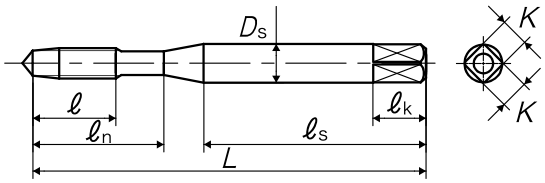

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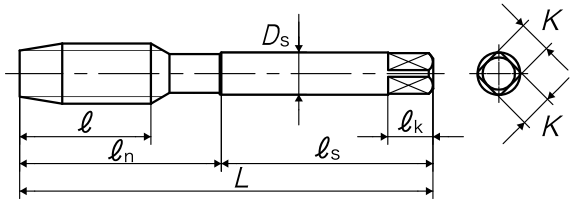


Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.4 × 0.3	P2	TY1.4CQLEN5	5P	36	5.4	-	24	3	2.5	5	3	1	△
		TY1.4CQLENA	1.5P										
M1.6 × 0.35	P2	TY1.6DQLEN5	5P	36	6.3	-	24	3	2.5	5	3	2	△
		TY1.6DQLENA	1.5P										
M2 × 0.4	P2	TY2.0EQLEN5	5P	42	7.2	12	27	3	2.5	5	3	3	◎
		TY2.0EQLENA	1.5P										
M2.3 × 0.4	P2	TY2.3EQLEN5	5P	42	7.2	12	27	3	2.5	5	3	3	△
		TY2.3EQLENA	1.5P										
M2.5 × 0.45	P2	TY2.5FQLEN5	5P	46	8.1	14	29	3	2.5	5	3	3	○
		TY2.5FQLENA	1.5P										
M2.6 × 0.45	P2	TY2.6FQLEN5	5P	46	8.1	14	29	3	2.5	5	3	3	△
		TY2.6FQLENA	1.5P										
M3 × 0.5	P2	TY3.0GQLEN5	5P	46	9	14	26	4	3.2	6	3	3	○
		TY3.0GQLENA	1.5P										
M3.5 × 0.6	P2	TY3.5HQLEN5	5P	52	11	16	29	5	4	7	3	3	△
		TY3.5HQLENA	1.5P										
M4 × 0.7	P3	TY4.0IRLEN5	5P	52	11	17	29	5	4	7	3	3	○
		TY4.0IRLENA	1.5P										
M5 × 0.8	P3	TY5.0KRLEN5	5P	60	13	22	33	5.5	4.5	7	3	3	○
		TY5.0KRLENA	1.5P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LA-HT Hand Taps for Die Cast Materials

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M6 × 1	P3	TY6.0MRLEN5	5P	62	15	26	33	6	4.5	7	3	3	◎
		TY6.0MRLENA	1.5P										
M8 × 1.25	P3	TY8.0NRLEN5	5P	70	19	-	36	6.2	5	8	3	4	○
		TY8.0NRLENA	1.5P										
M8 × 1	P3	TY8.0MRLEN5	5P	70	19	-	36	6.2	5	8	3	4	△
		TY8.0MRLENA	1.5P										
M10 × 1.5	P4	TY010OSLEN5	5P	75	23	-	38	7	5.5	8	4	4	○
		TY010OSLENA	1.5P										
M10 × 1.25	P3	TY010NRLEN5	5P	75	23	-	38	7	5.5	8	4	4	○
		TY010NRLENA	1.5P										
M10 × 1	P3	TY010MRLEN5	5P	75	23	-	38	7	5.5	8	4	4	△
		TY010MRLENA	1.5P										
M12 × 1.75	P4	TY012PSLEN5	5P	82	26	-	42	8.5	6.5	9	4	4	○
		TY012PSLENA	1.5P										
M12 × 1.5	P4	TY012OSLEN5	5P	82	26	-	42	8.5	6.5	9	4	4	△
		TY012OSLENA	1.5P										
M12 × 1.25	P4	TY012NSLEN5	5P	82	26	-	42	8.5	6.5	9	4	4	△
		TY012NSLENA	1.5P										
M12 × 1	P3	TY012MRLEN5	5P	82	26	-	42	8.5	6.5	9	4	4	△
		TY012MRLENA	1.5P										
M14 × 2	P4	TY014QSLEN5	5P	88	26	-	45	10.5	8	11	4	4	△
		TY014QSLENA	1.5P										
M14 × 1.5	P4	TY014OSLEN5	5P	88	26	-	45	10.5	8	11	4	4	○
		TY014OSLENA	1.5P										
M16 × 2	P4	TY016QSLEN5	5P	95	26	-	48	12.5	10	13	4	4	△
		TY016QSLENA	1.5P										
M16 × 1.5	P4	TY016OSLEN5	5P	95	26	-	48	12.5	10	13	4	4	△
		TY016OSLENA	1.5P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LA-O

Hand Taps for Die Cast Materials

Specification

HSS | NI Nitride | <2D

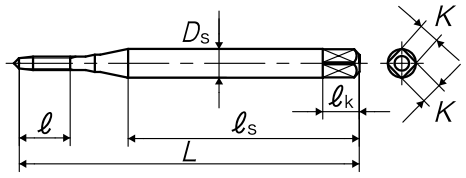
■LA-O is the oversized tap, and is suitable for the materials tending to shrink, such as aluminum alloy die castings (ADC) and zinc alloy die castings (ZDC).

Recommended Tapping Speeds depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE:1



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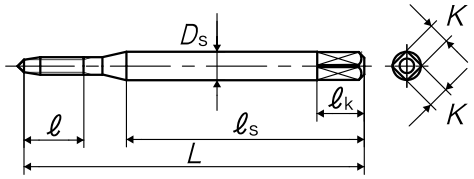

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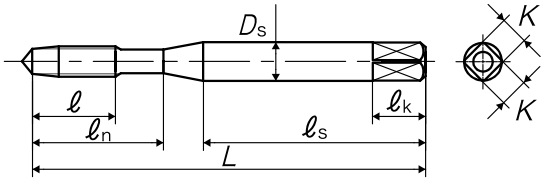

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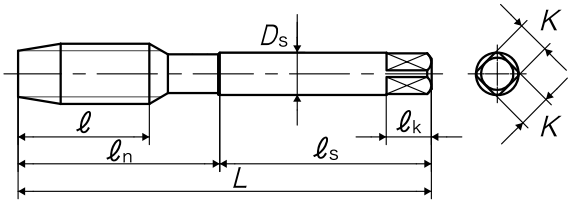

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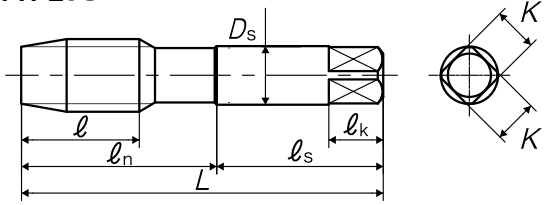


Segment : 1A

Size	Thread limit $\frac{D_2\text{-To}\ell\text{-}Z}{(+)}$ (μm)	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.4 × 0.3	36 ~ 21	TLAM1.4C5	5P	36	5.4	-	24	3	2.5	5	3	1	△
		TLAM1.4C1	1.5P										
M1.6 × 0.35	40 ~ 25	TLAM1.6D5	5P	36	6.3	-	24	3	2.5	5	3	2	△
		TLAM1.6D1	1.5P										
M2 × 0.4	40 ~ 25	TLAM2.0E5	5P	42	7.2	12	27	3	2.5	5	3	3	◎
		TLAM2.0E1	1.5P										
M2.3 × 0.4	40 ~ 25	TLAM2.3E5	5P	42	7.2	12	27	3	2.5	5	3	3	△
		TLAM2.3E1	1.5P										
M2.5 × 0.45	40 ~ 25	TLAM2.5F5	5P	46	8.1	14	29	3	2.5	5	3	3	○
		TLAM2.5F1	1.5P										
M2.6 × 0.45	40 ~ 25	TLAM2.6F5	5P	46	8.1	14	29	3	2.5	5	3	3	△
		TLAM2.6F1	1.5P										
M3 × 0.5	40 ~ 25	TLAM3.0G5	5P	46	9	14	26	4	3.2	6	3	3	○
		TLAM3.0G1	1.5P										
M3.5 × 0.6	40 ~ 25	TLAM3.5H5	5P	52	11	16	29	5	4	7	3	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LA-O Hand Taps for Die Cast Materials

Size	Thread limit $\frac{D_2 \cdot To\ell \cdot Z}{(+)}$ (μm)	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M3.5 × 0.6	40 ~ 25	TLAM3.5H1	1.5P	52	11	16	29	5	4	7	3	3	△
M4 × 0.7	45 ~ 25	TLAM4.0I5	5P	52	11	17	29	5	4	7	3	3	○
		TLAM4.0I1	1.5P										
M5 × 0.8	50 ~ 30	TLAM5.0K5	5P	60	13	22	33	5.5	4.5	7	3	3	○
		TLAM5.0K1	1.5P										
M6 × 1	50 ~ 30	TLAM6.0M5	5P	62	15	26	33	6	4.5	7	3	3	◎
		TLAM6.0M1	1.5P										
M8 × 1.25	65 ~ 40	TLAM8.0N5	5P	70	19	-	36	6.2	5	8	4	4	○
		TLAM8.0N1	1.5P										
M8 × 1	55 ~ 30	TLAM8.0M5	5P	70	19	-	36	6.2	5	8	4	4	△
		TLAM8.0M1	1.5P										
M10 × 1.5	70 ~ 45	TLAM010O5	5P	75	23	-	38	7	5.5	8	4	4	○
		TLAM010O1	1.5P										
M10 × 1.25	65 ~ 40	TLAM010N5	5P	75	23	-	38	7	5.5	8	4	4	○
		TLAM010N1	1.5P										
M10 × 1	57 ~ 32	TLAM010M5	5P	75	23	-	38	7	5.5	8	4	4	△
		TLAM010M1	1.5P										
M12 × 1.75	75 ~ 45	TLAM012P5	5P	82	26	-	42	8.5	6.5	9	4	4	○
		TLAM012P1	1.5P										
M12 × 1.5	75 ~ 45	TLAM012O5	5P	82	26	-	42	8.5	6.5	9	4	4	△
		TLAM012O1	1.5P										
M12 × 1.25	75 ~ 45	TLAM012N5	5P	82	26	-	42	8.5	6.5	9	4	4	△
		TLAM012N1	1.5P										
M12 × 1	65 ~ 35	TLAM012M5	5P	82	26	-	42	8.5	6.5	9	4	4	△
		TLAM012M1	1.5P										
M14 × 2	75 ~ 45	TLAM014Q5	5P	88	26	-	45	10.5	8	11	4	4	△
		TLAM014Q1	1.5P										
M14 × 1.5	75 ~ 45	TLAM014O5	5P	88	26	-	45	10.5	8	11	4	4	○
		TLAM014O1	1.5P										
M16 × 2	75 ~ 45	TLAM016Q5	5P	95	26	-	48	12.5	10	13	4	4	△
		TLAM016Q1	1.5P										
M16 × 1.5	75 ~ 45	TLAM016O5	5P	95	26	-	48	12.5	10	13	4	4	△
		TLAM016O1	1.5P										
M18 × 2.5	85 ~ 50	TLAM018R5	5P	100	33	-	51	14	11	14	4	4	△
		TLAM018R1	1.5P										
M18 × 1.5	75 ~ 45	TLAM018O5	5P	100	33	-	51	14	11	14	4	4	△
		TLAM018O1	1.5P										
M20 × 2.5	85 ~ 50	TLAM020R5	5P	105	33	-	50	15	12	15	4	5	△
		TLAM020R1	1.5P										
M20 × 1.5	80 ~ 45	TLAM020O5	5P	105	33	-	50	15	12	15	4	5	○
		TLAM020O1	1.5P										
M22 × 2.5	85 ~ 50	TLAM022R5	5P	115	33	-	55	17	13	16	4	5	△
		TLAM022R1	1.5P										
M22 × 1.5	80 ~ 45	TLAM022O5	5P	115	33	-	55	17	13	16	4	5	△
		TLAM022O1	1.5P										
M24 × 3	90 ~ 50	TLAM024S5	5P	120	39	-	55	19	15	18	4	5	△
		TLAM024S1	1.5P										
M24 × 1.5	80 ~ 45	TLAM024O5	5P	120	39	-	55	19	15	18	4	5	△
		TLAM024O1	1.5P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MEMO

AXE-HT

AXE Hand Taps

Specification

HSS-P Coating

Recommended Tapping Speeds depending on Materials

Aluminum alloy castings アルミ合金鋳物 10~20 (m/min)

Zinc alloy castings 亜鉛合金鋳物 10~20 (m/min)

For icon explanation, refer to P.24

Product features

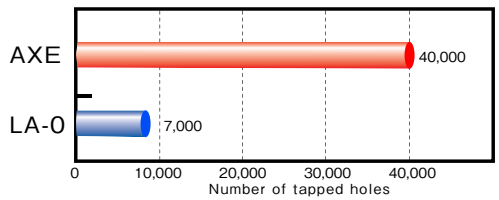
- In tapping Aluminum Alloy Castings and the like, AXE-HT realizes the tremendous improvement in its endurance due to the proprietary flute design.
- Special cutting edge design results in little damage on the cutting edge.
  Combination of premium powder HSS (featuring high wear resistance and heat resistance) and special coating brings out 5 times longer tool life than previous taps designed for aluminum.
- Cutting edge with little damage restricts both the size change of internal threads and the worsening of surface roughness.
- Most preferable combination of negative rake angle and eccentric relief enables AXE taps to be applicable in wider range of cutting speed, from middle speed to high speed.

Tapping data

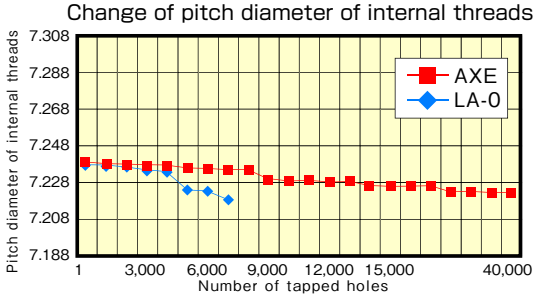
Comparison of tool life between AXE and LA-O (previous product)

Tap M8×1.25

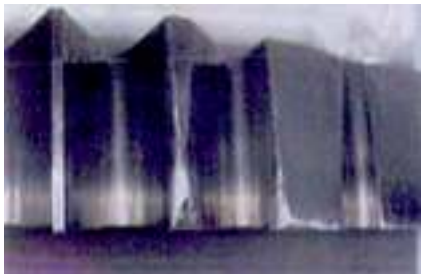
AXE LA-O	HSS-P Special coating HSS-E NI surface treatment
Work material	AC4A-T6 treated
Tapping length	13mm (blind hole)
Tapping speed	10m/min
Machine	Transfer machine
Feed	Lead screw feed
Bored hole	ϕ6.8
Tapping fluid	Water soluble oil (x30)



Change of pitch diameter of internal threads



Damage at cutting edge after 7000 holes tapping



LA-O

AXE

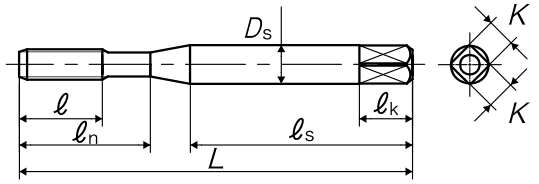
Think threads with YAMAWA

For improvement, spec may change without advance notice.

Obtainable from
Video site shown in right

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

TYPE: 1



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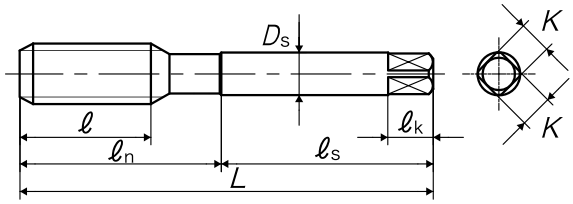


Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P3	TAXEMR6.0M1	1.5P	62	15	26	33	6	4.5	7	3	1	△
M8 × 1.25	P3	TAXEMR8.0N1	1.5P	70	19	-	36	6.2	5	8	4	2	△
M10 × 1.5	P3	TAXEMR010O1	1.5P	75	23	-	38	7	5.5	8	4	2	△
M10 × 1.25	P3	TAXEMR010N1	1.5P	75	23	-	38	7	5.5	8	4	2	△
M10 × 1	P3	TAXEMR010M1	1.5P	75	23	-	38	7	5.5	8	4	2	△
M12 × 1.75	P3	TAXEMR012P1	1.5P	82	26	-	42	8.5	6.5	9	4	2	△
M12 × 1.5	P3	TAXEMR012O1	1.5P	82	26	-	42	8.5	6.5	9	4	2	△
M12 × 1.25	P3	TAXEMR012N1	1.5P	82	26	-	42	8.5	6.5	9	4	2	△

MG-HT

Hand Taps with Short Chamfer for Magnesium Alloy Castings

Specification

HSS

<2D

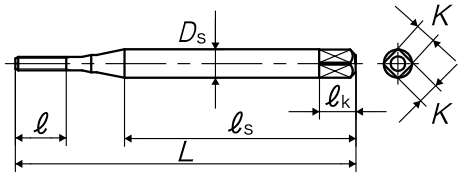
■Having short chamfer length of less than 1thread, MG-HT is most suitable for blind holes with little space in the bottom.

Recommended Tapping Speeds depending on Materials

Aluminum alloy castings アルミ合金鋳物	Magnesium alloy die castings マグネシウム合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE:1



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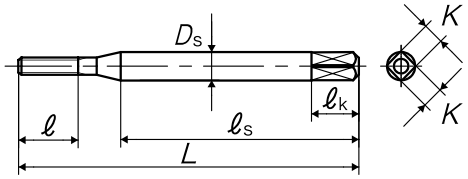

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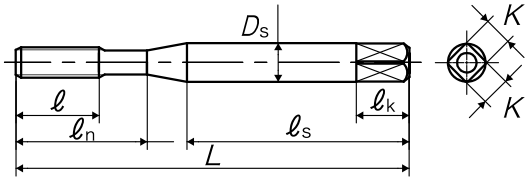


Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.4 × 0.3	P2	TMGMQ1.4C1	1P	36	5.4	-	24	3	2.5	5	3	1	△
M1.6 × 0.35	P2	TMGMQ1.6D1	1P	36	6.3	-	24	3	2.5	5	3	2	△
M1.7 × 0.35	P2	TMGMQ1.7D1	1P	36	6.3	-	24	3	2.5	5	3	2	△
M2 × 0.4	P2	TMGMQ2.0E1	1P	42	7.2	12	27	3	2.5	5	3	3	△
M2.5 × 0.45	P2	TMGMQ2.5F1	1P	46	8.1	14	29	3	2.5	5	3	3	△
M2.6 × 0.45	P2	TMGMQ2.6F1	1P	46	8.1	14	29	3	2.5	5	3	3	△
M3 × 0.5	P2	TMGMQ3.0G1	1P	46	9	14	26	4	3.2	6	3	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AL-HT

Hand Taps for Helical Coil Wire Screw Thread Inserts

Specification

HSS

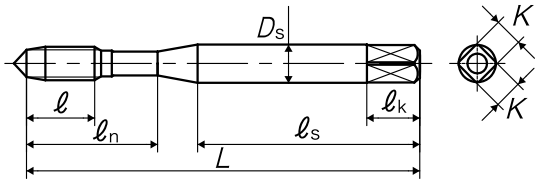
■Hand tap cutting internal threads for helical coil to enter.

Recommended Tapping Speeds depending on Materials

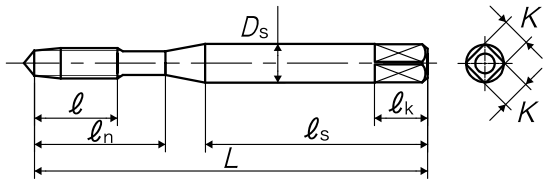
Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

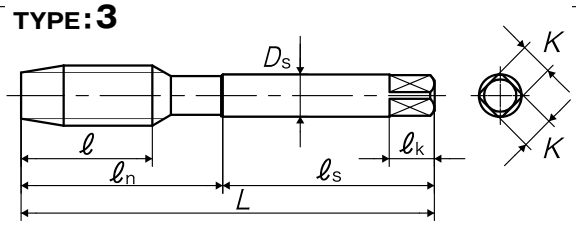
TYPE: 1



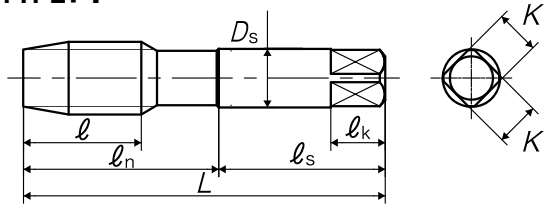
TYPE: 2



TYPE: 3



TYPE: 4



Segment : 1A

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Helical Coil Wire Screw Thread Inserts, for Metric Threads														
STI M2.6 × 0.45	1b	TW2.6F1LEB5	5P	3.185	52	6.8	16	29	5	4	7	3	1	△
		TW2.6F1LEBA	1.5P											
STI M3 × 0.5	1b	TW3.0G1LEB5	5P	3.650	52	7.5	17	29	5	4	7	3	1	◎
		TW3.0G1LEBA	1.5P											
STI M4 × 0.7	1b	TW4.0I1LEB5	5P	4.909	60	13	22	33	5.5	4.5	7	4	2	◎
		TW4.0I1LEBA	1.5P											
STI M5 × 0.8	1b	TW5.0K1LEB5	5P	6.039	62	15	26	33	6	4.5	7	4	2	◎
		TW5.0K1LEBA	1.5P											
STI M6 × 1	1b	TW6.0M1LEB5	5P	7.299	70	19	-	36	6.2	5	8	4	3	◎
		TW6.0M1LEBA	1.5P											
STI M8 × 1.25	1b	TW8.0N1LEB5	5P	9.624	75	23	-	38	7	5.5	8	4	3	◎
		TW8.0N1LEBA	1.5P											
STI M10 × 1.5	1b	TW01001LEB5	5P	11.949	82	26	-	42	8.5	6.5	9	4	3	◎
		TW01001LEBA	1.5P											
STI M10 × 1.25	1b	TW010N1LEB5	5P	11.624	82	26	-	42	8.5	6.5	9	4	3	△
		TW010N1LEBA	1.5P											
STI M10 × 1	1b	TW010M1LEB5	5P	11.299	82	26	-	42	8.5	6.5	9	4	3	△
		TW010M1LEBA	1.5P											
STI M12 × 1.75	1b	TW012P1LEB5	5P	14.273	95	26	-	48	12.5	10	13	4	3	◎

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

AL-HT Hand Taps for Helical Coil Wire Screw Thread Inserts

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
STI M12 × 1.75	1b	TW012P1LEBA	1.5P	14.273	95	26	-	48	12.5	10	13	4	3	◎
STI M12 × 1.5	1b	TW01201LEB5	5P	13.948	88	26	-	45	10.5	8	11	4	3	△
		TW01201LEBA	1.5P											
STI M12 × 1.25	1b	TW012N1LEB5	5P	13.624	88	26	-	45	10.5	8	11	4	3	△
		TW012N1LEBA	1.5P											
STI M14 × 2	1b	TW014Q1LEB5	5P	16.598	100	33	-	51	14	11	14	4	3	△
		TW014Q1LEBA	1.5P											
STI M14 × 1.5	1b	TW01401LEB5	5P	15.948	95	26	-	48	12.5	10	13	4	3	△
		TW01401LEBA	1.5P											
STI M16 × 2	1b	TW016Q1LEB5	5P	18.598	105	33	-	50	15	12	15	4	4	○
		TW016Q1LEBA	1.5P											
STI M16 × 1.5	1b	TW01601LEB5	5P	17.948	100	33	-	51	14	11	14	4	3	△
		TW01601LEBA	1.5P											
STI M18 × 2.5	1b	TW018R1LEB5	5P	21.248	115	33	-	55	17	13	16	4	4	△
		TW018R1LEBA	1.5P											
STI M18 × 1.5	1b	TW01801LEB5	5P	19.948	105	33	-	50	15	12	15	4	4	△
		TW01801LEBA	1.5P											
STI M20 × 2.5	1b	TW020R1LEB5	5P	23.248	120	39	-	55	19	15	18	4	4	○
		TW020R1LEBA	1.5P											
STI M20 × 1.5	1b	TW02001LEB5	5P	21.948	115	33	-	55	17	13	16	4	4	△
		TW02001LEBA	1.5P											
STI M22 × 2.5	1b	TW022R1LEB5	5P	25.248	125	39	-	58	19	15	18	4	4	△
		TW022R1LEBA	1.5P											
STI M22 × 1.5	1b	TW02201LEB5	5P	23.948	120	39	-	55	19	15	18	4	4	△
		TW02201LEBA	1.5P											
STI M24 × 3	1b	TW024S1LEB5	5P	27.897	135	46	-	62	23	17	20	4	4	○
		TW024S1LEBA	1.5P											
STI M24 × 1.5	1b	TW02401LEB5	5P	25.948	130	39	-	60	20	15	18	4	4	△
		TW02401LEBA	1.5P											

For Helical Coil Wire Screw Thread Inserts, for Unified Threads

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
STI No.4-40UNC	1b	TWUN4H1LEB5	5P	3.670	52	11	17	29	5	4	7	3	2	△
		TWUN4H1LEBA	1.5P											
STI No.4-48UNF	1b	TWUN4F1LEB5	5P	3.532	52	11	17	29	5	4	7	3	2	△
		TWUN4F1LEBA	1.5P											
STI No.5-40UNC	1b	TWUN5H1LEB5	5P	4.000	52	11	17	29	5	4	7	3	2	△
		TWUN5H1LEBA	1.5P											
STI No.6-32UNC	1b	TWUN6J1LEB5	5P	4.536	60	13	22	33	5.5	4.5	7	3	2	△
		TWUN6J1LEBA	1.5P											
STI No.6-40UNF	1b	TWUN6H1LEB5	5P	4.330	60	13	22	33	5.5	4.5	7	3	2	△
		TWUN6H1LEBA	1.5P											
STI No.8-32UNC	1b	TWUN8J1LEB5	5P	5.197	62	15	26	33	6	4.5	7	4	2	△
		TWUN8J1LEBA	1.5P											
STI No.8-36UNF	1b	TWUN8I1LEB5	5P	5.083	62	9.5	26	33	6	4.5	7	4	1	△
		TWUN8I1LEBA	1.5P											
STI No.10-24UNC	1b	TWUNAM1LEB5	5P	6.200	62	15	26	33	6	4.5	7	4	2	△
		TWUNAM1LEBA	1.5P											
STI No.10-32UNF	1b	TWUNAJ1LEB5	5P	5.857	62	15	26	33	6	4.5	7	4	2	△
		TWUNAJ1LEBA	1.5P											

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AL-HT Hand Taps for Helical Coil Wire Screw Thread Inserts

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
STI No.12-24UNC	1b	TWUNCM1LEB5	5P	6.861	70	19	-	36	6.2	5	8	4	3	△
		TWUNCM1LEBA	1.5P											
STI 1/4-20UNC	1b	TWU04N1LEB5	5P	8.000	70	19	-	36	6.2	5	8	4	3	△
		TWU04N1LEBA	1.5P											
STI 1/4-28UNF	1b	TWU04K1LEB5	5P	7.528	70	19	-	36	6.2	5	8	4	3	△
		TWU04K1LEBA	1.5P											
STI 5/16-18UNC	1b	TWU05O1LEB5	5P	9.771	75	23	-	38	7	5.5	8	4	3	△
		TWU05O1LEBA	1.5P											
STI 5/16-24UNF	1b	TWU05M1LEB5	5P	9.313	75	23	-	38	7	5.5	8	4	3	△
		TWU05M1LEBA	1.5P											
STI 3/8-16UNC	1b	TWU06P1LEB5	5P	11.587	82	26	-	42	8.5	6.5	9	4	3	△
		TWU06P1LEBA	1.5P											
STI 3/8-24UNF	1b	TWU06M1LEB5	5P	10.900	82	26	-	42	8.5	6.5	9	4	3	△
		TWU06M1LEBA	1.5P											
STI 7/16-14UNC	1b	TWU07Q1LEB5	5P	13.469	88	26	-	45	10.5	8	11	4	3	△
		TWU07Q1LEBA	1.5P											
STI 7/16-20UNF	1b	TWU07N1LEB5	5P	12.762	88	26	-	45	10.5	8	11	4	3	△
		TWU07N1LEBA	1.5P											
STI 1/2-13UNC	1b	TWU08R1LEB5	5P	15.238	95	26	-	48	12.5	10	13	4	3	△
		TWU08R1LEBA	1.5P											
STI 1/2-20UNF	1b	TWU08N1LEB5	5P	14.350	95	26	-	48	12.5	10	13	4	3	△
		TWU08N1LEBA	1.5P											
STI 5/8-11UNC	1b	TWU10U1LEB5	5P	18.875	105	33	-	50	15	12	15	4	4	△
		TWU10U1LEBA	1.5P											
STI 5/8-18UNF	1b	TWU10O1LEB5	5P	17.708	100	33	-	51	14	11	14	4	3	△
		TWU10O1LEBA	1.5P											
STI 3/4-16UNF	1b	TWU12P1LEB5	5P	21.112	115	33	-	55	17	13	16	4	4	△
		TWU12P1LEBA	1.5P											

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

PL1

Hand Taps for Plastics

Specification

HSS | NI Nitride | <2D

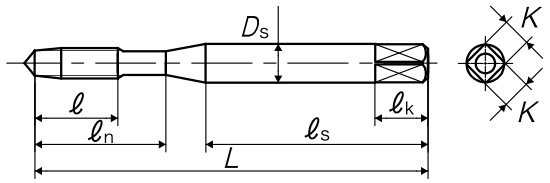
■PL1 is the tap for thermosetting plastic which is specially hard-to-machine material among plastics.

Recommended Tapping Speeds depending on Materials

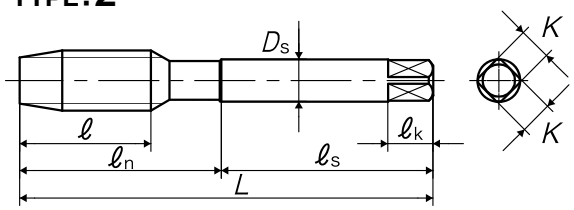
Thermosetting plastic 熱硬化性プラスチック 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M2 × 0.4	P4	TPLM2.0E3	3P	42	7.2	12	27	3	2.5	5	3	1	△
M2.3 × 0.4	P4	TPLM2.3E3	3P	42	7.2	12	27	3	2.5	5	3	1	△
M2.5 × 0.45	P4	TPLM2.5F3	3P	46	8.1	14	29	3	2.5	5	3	1	○
M2.6 × 0.45	P4	TPLM2.6F3	3P	46	8.1	14	29	3	2.5	5	3	1	△
M3 × 0.5	P5	TPLM3.0G3	3P	46	9	14	26	4	3.2	6	4	1	○
M3.5 × 0.6	P5	TPLM3.5H3	3P	52	11	16	29	5	4	7	4	1	○
M4 × 0.7	P5	TPLM4.0I3	3P	52	11	17	29	5	4	7	4	1	○
M5 × 0.8	P5	TPLM5.0K3	3P	60	13	22	33	5.5	4.5	7	4	1	○
M6 × 1	P5	TPLM6.0M3	3P	62	15	26	33	6	4.5	7	4	1	△
M8 × 1.25	P6	TPLM8.0N3	3P	70	19	-	36	6.2	5	8	4	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

MC-HT

Hand Taps with Internal Coolant Hole

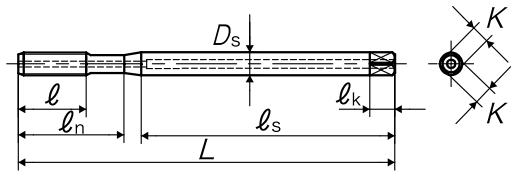
Specification

■Through internal coolant hole, satisfactory amount of oil is supplied to the exact cutting area. MC-HT hand tap ensures a long tool life and internal threads with good surface finish.

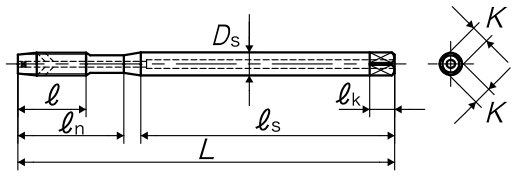
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE:1



TYPE:2



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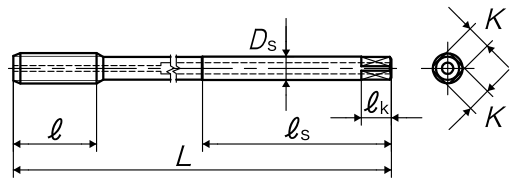
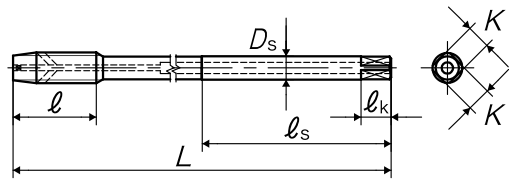


TYPE:4



Segment : 1A

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P2	ML106.0M5-Q	5P	100	19	28	40	6	4.5	7	4	2	△
		ML156.0M5-Q		150									
		ML106.0M1-Q	1.5P	100								1	
		ML156.0M1-Q		150									
M8 × 1.25	P2	ML108.0N5-Q	5P	100	22	-	50	6.2	5	8	4	4	△
		ML158.0N5-Q		150									
		ML108.0N1-Q	1.5P	100								3	
		ML158.0N1-Q		150									
M10 × 1.5	P2	ML10010O5-Q	5P	100	24	-	50	7	5.5	8	4	4	△
		ML15010O5-Q		150									
		ML10010O1-Q	1.5P	100								3	
		ML15010O1-Q		150									
M10 × 1.25	P2	ML10010N5-Q	5P	100	20	-	50	7	5.5	8	4	4	△
		ML15010N5-Q		150									
		ML10010N1-Q	1.5P	100								3	
		ML15010N1-Q		150									
M12 × 1.75	P2	ML10012P5-Q	5P	100	29	-	50	8.5	6.5	9	4	4	△
		ML15012P5-Q		150									
		ML20012P5-Q		200									

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

MC-HT Hand Taps with Internal Coolant Hole

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1.75	P2	ML10012P1-Q	1.5P	100	29	-	50	8.5	6.5	9	4	3	△
		ML15012P1-Q		150									
		ML20012P1-Q		200									
M12 × 1.5	P2	ML1001205-Q	5P	100	29	-	50	8.5	6.5	9	4	4	△
		ML1501205-Q		150									
		ML2001205-Q		200									
		ML1001201-Q	1.5P	100								3	
		ML1501201-Q		150									
		ML2001201-Q		200									
M12 × 1.25	P2	ML10012N5-Q	5P	100	24	-	50	8.5	6.5	9	4	4	△
		ML15012N5-Q		150									
		ML20012N5-Q		200									
		ML10012N1-Q	1.5P	100								3	
		ML15012N1-Q		150									
		ML20012N1-Q		200									
M14 × 2	P2	ML15014Q5-Q	5P	150	30	-	60	10.5	8	11	4	4	△
		ML20014Q5-Q		200									
		ML15014Q1-Q	1.5P	150								3	
		ML20014Q1-Q		200									
M14 × 1.5	P2	ML1501405-Q	5P	150	30	-	60	10.5	8	11	4	4	△
		ML2001405-Q		200									
		ML1501401-Q	1.5P	150								3	
		ML2001401-Q		200									
M16 × 2	P2	ML15016Q5-Q	5P	150	32	-	60	12.5	10	13	4	4	△
		ML20016Q5-Q		200									
		ML15016Q1-Q	1.5P	150								3	
		ML20016Q1-Q		200									
M16 × 1.5	P2	ML1501605-Q	5P	150	32	-	60	12.5	10	13	4	4	△
		ML2001605-Q		200									
		ML1501601-Q	1.5P	150								3	
		ML2001601-Q		200									
M18 × 2.5	P3	ML15018R5-R	5P	150	37	-	70	14	11	14	4	4	△
		ML20018R5-R		200									
		ML15018R1-R	1.5P	150								3	
		ML20018R1-R		200									
M18 × 1.5	P2	ML1501805-Q	5P	150	29	-	70	14	11	14	4	4	△
		ML2001805-Q		200									
		ML1501801-Q	1.5P	150								3	
		ML2001801-Q		200									
M20 × 2.5	P3	ML15020R5-R	5P	150	37	-	70	15	12	15	4	4	△
		ML20020R5-R		200									
		ML15020R1-R	1.5P	150								3	
		ML20020R1-R		200									
M20 × 1.5	P3	ML1502005-R	5P	150	29	-	70	15	12	15	4	4	△
		ML2002005-R		200									
		ML1502001-R	1.5P	150								3	
		ML2002001-R		200									
M22 × 2.5	P3	ML15022R5-R	5P	150	38	-	70	17	13	16	4	4	△
		ML20022R5-R		200									
		ML15022R1-R	1.5P	150								3	

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

MC-HT Hand Taps with Internal Coolant Hole

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M22 × 2.5	P3	ML20022R1-R	1.5P	200	38	-	70	17	13	16	4	3	△
M22 × 1.5	P3	ML1502205-R	5P	150	33	-	70	17	13	16	4	4	△
		ML2002205-R		200									
		ML1502201-R	1.5P	150								3	
		ML2002201-R		200									
M24 × 3	P3	ML15024S5-R	5P	150	45	-	80	19	15	18	4	4	△
		ML20024S5-R		200									
		ML15024S1-R	1.5P	150								3	
		ML20024S1-R		200									
M24 × 1.5	P3	ML1502405-R	5P	150	35	-	80	19	15	18	4	4	△
		ML2002405-R		200									
		ML1502401-R	1.5P	150								3	
		ML2002401-R		200									
M27 × 3	P3	ML20027S5-R	5P	200	45	-	80	20	15	18	4	4	△
		ML20027S1-R	1.5P									3	
M27 × 1.5	P3	ML2002705-R	5P	200	37	-	80	20	15	18	4	4	△
		ML2002701-R	1.5P									3	
M30 × 3.5	P4	ML20030T5-S	5P	200	48	-	80	23	17	20	4	4	△
		ML20030T1-S	1.5P									3	
M30 × 1.5	P3	ML2003005-R	5P	200	37	-	80	23	17	20	4	4	△
		ML2003001-R	1.5P									3	

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

EH-HT

Hand Taps for Hard-to-Machine Materials

Specification

HSS-Co

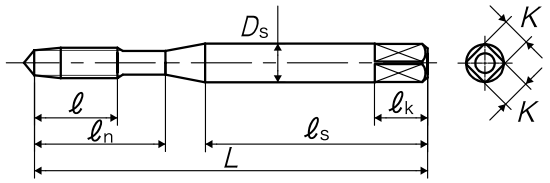
■EH-HT is the hand tap suitable for hard steels of 35-45HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels.

Recommended Tapping Speeds depending on Materials

Thermal refined steels 調質鋼	Tool steels 工具鋼
~5 (m/min)	~5 (m/min)
35~45HRC	

For icon explanation, refer to P.24

TYPE: 1



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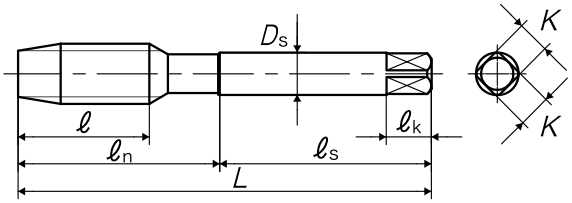

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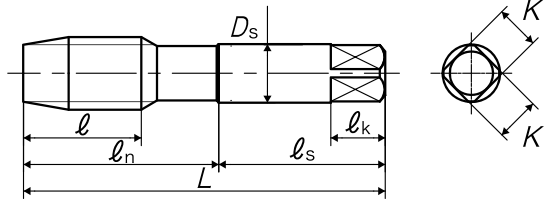


Segment : 1B

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M3 × 0.5	P3	ETHMR3.0G5	5P	46	9	14	26	4	3.2	6	3	1	○
		ETHMR3.0G1	2.5P										
M4 × 0.7	P3	ETHMR4.0I5	5P	52	11	17	29	5	4	7	3	1	○
		ETHMR4.0I1	2.5P										
M5 × 0.8	P3	ETHMR5.0K5	5P	60	13	22	33	5.5	4.5	7	3	1	○
		ETHMR5.0K1	2.5P										
M6 × 1	P3	ETHMR6.0M5	5P	62	15	26	33	6	4.5	7	3	1	○
		ETHMR6.0M1	2.5P										
M8 × 1.25	P4	ETHMS8.0N5	5P	70	19	-	36	6.2	5	8	4	2	○
		ETHMS8.0N1	2.5P										
M10 × 1.5	P4	ETHMS010O5	5P	75	23	-	38	7	5.5	8	4	2	○
		ETHMS010O1	2.5P										
M10 × 1.25	P4	ETHMS010N5	5P	75	23	-	38	7	5.5	8	4	2	△
		ETHMS010N1	2.5P										
M12 × 1.75	P4	ETHMS012P5	5P	82	26	-	42	8.5	6.5	9	4	2	○
		ETHMS012P1	2.5P										
M12 × 1.5	P4	ETHMS012O5	5P	82	26	-	42	8.5	6.5	9	4	2	△
		ETHMS012O1	2.5P										
M12 × 1.25	P4	ETHMS012N5	5P	82	26	-	42	8.5	6.5	9	4	2	△
		ETHMS012N1	2.5P										
M14 × 2	P5	ETHMT014Q5	5P	88	26	-	45	10.5	8	11	4	2	△
		ETHMT014Q1	2.5P										
M14 × 1.5	P4	ETHMS014O5	5P	88	26	-	45	10.5	8	11	4	2	△
		ETHMS014O1	2.5P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

EH-HT Hand Taps for Hard-to-Machine Materials

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M16 × 2	P5	ETHMT016Q5	5P	95	26	-	48	12.5	10	13	4	2	○
		ETHMT016Q1	2.5P										
M16 × 1.5	P4	ETHMS016Q5	5P	95	26	-	48	12.5	10	13	4	2	△
		ETHMS016Q1	2.5P										
M18 × 2.5	P5	ETHMT018R5	5P	100	33	-	51	14	11	14	4	2	△
		ETHMT018R1	2.5P										
M18 × 1.5	P4	ETHMS018Q5	5P	100	33	-	51	14	11	14	4	2	△
		ETHMS018Q1	2.5P										
M20 × 2.5	P5	ETHMT020R5	5P	105	33	-	50	15	12	15	4	3	○
		ETHMT020R1	2.5P										
M20 × 1.5	P4	ETHMS020Q5	5P	105	33	-	50	15	12	15	4	3	△
		ETHMS020Q1	2.5P										
M22 × 2.5	P5	ETHMT022R5	5P	115	33	-	55	17	13	16	4	3	△
		ETHMT022R1	2.5P										
M22 × 1.5	P4	ETHMS022Q5	5P	115	33	-	55	17	13	16	4	3	△
		ETHMS022Q1	2.5P										
M24 × 3	P5	ETHMT024S5	5P	120	39	-	55	19	15	18	4	3	○
		ETHMT024S1	2.5P										
M24 × 1.5	P4	ETHMS024Q5	5P	120	39	-	55	19	15	18	4	3	△
		ETHMS024Q1	2.5P										
M27 × 3	P5	ETHMT027S5	5P	130	39	-	60	20	15	18	4	3	△
		ETHMT027S1	2.5P										
M30 × 3.5	P5	ETHMT030T5	5P	135	46	-	62	23	17	20	4	3	△
		ETHMT030T1	2.5P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MEMO

CEMENTED CARBIDE TAP SERIES

N-CT LA	CT-1
N-CT FC	CT-4
LS-N-CT	CT-8
N-CT-SP	CT-9
N-CT-PO	CT-10
MC-AD-CT	CT-11
EH-CT	CT-13
UH-CT	CT-15
HFACT-P	CT-17
HFACT-B	CT-18
HFICT-P	CT-19
HFICT-B	CT-20

N-CT LA

Carbide Taps for Light Alloys

Specification

HF

■N-CT LA is the carbide tap suitable for tapping aluminum castings (AC), aluminum die castings (ADC), and zinc diecastings (ZDC). For volume production.

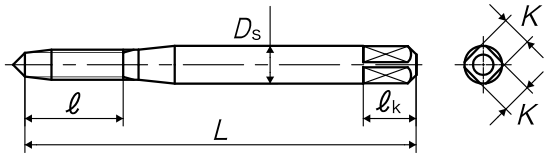
Recommended Tapping Speeds depending on Materials

Aluminum alloy castings アルミ合金鋳物 10~20 (m/min)

Zinc alloy castings 亜鉛合金鋳物 10~20 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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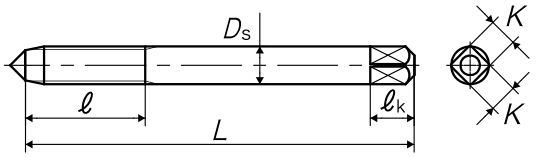

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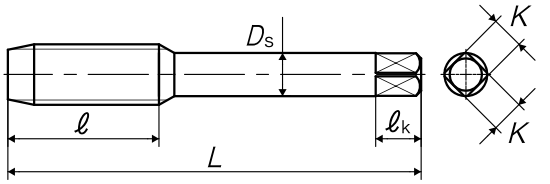


Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M1.4 × 0.3	P3	TCNR1.4C3A	3P	34	7	-	3	2.5	5	3	1	△
		TCNR1.4C1A	1.5P									
M1.6 × 0.35	P3	TCNR1.6D3A	3P	36	8	-	3	2.5	5	3	1	△
		TCNR1.6D1A	1.5P									
M1.7 × 0.35	P3	TCNR1.7D3A	3P	36	8	-	3	2.5	5	3	1	△
		TCNR1.7D1A	1.5P									
M2 × 0.4	P3	TCNR2.0E3A	3P	40	8	-	3	2.5	5	3	1	○
		TCNR2.0E1A	1.5P									
M2.2 × 0.45	P3	TCNR2.2F3A	3P	42	9.5	-	3	2.5	5	3	1	△
		TCNR2.2F1A	1.5P									
M2.3 × 0.4	P3	TCNR2.3E3A	3P	42	8	-	3	2.5	5	3	1	△
		TCNR2.3E1A	1.5P									
M2.5 × 0.45	P3	TCNR2.5F3A	3P	44	9.5	-	3	2.5	5	3	1	△
		TCNR2.5F1A	1.5P									
M3 × 0.5	P3	TCNR3.0G3A	3P	46	11	-	4	3.2	6	3	1	○
		TCNR3.0G1A	1.5P									
M3.5 × 0.6	P3	TCNR3.5H3A	3P	48	11	-	4	3.2	6	3	1	△
		TCNR3.5H1A	1.5P									
M4 × 0.7	P3	TCNR4.0I3A	3P	52	13	-	5	4	7	3	1	○
		TCNR4.0I1A	1.5P									
M4 × 0.5	P3	TCNR4.0G3A	3P	52	11	-	5	4	7	3	1	△
		TCNR4.0G1A	1.5P									

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N-CT LA Carbide Taps for Light Alloys

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M5 × 0.8	P3	TCNR5.0K3A	3P	60	16	-	5.5	4.5	7	3	1	○
		TCNR5.0K1A	1.5P									
M5 × 0.5	P3	TCNR5.0G3A	3P	52	11	-	5.5	4.5	7	3	1	△
		TCNR5.0G1A	1.5P									
M6 × 1	P3	TCNR6.0M3A	3P	62	19	-	6	4.5	7	3	2	○
		TCNR6.0M1A	1.5P									
M6 × 0.75	P3	TCNR6.0J3A	3P	62	13	-	6	4.5	7	3	2	△
		TCNR6.0J1A	1.5P									
M6 × 0.5	P3	TCNR6.0G3A	3P	55	11	-	6	4.5	7	3	2	△
		TCNR6.0G1A	1.5P									
M7 × 1	P3	TCNR7.0M3A	3P	65	19	-	6.2	5	8	3	3	△
		TCNR7.0M1A	1.5P									
M7 × 0.75	P3	TCNR7.0J3A	3P	62	13	-	6.2	5	8	3	3	△
		TCNR7.0J1A	1.5P									
M8 × 1.25	P3	TCNR8.0N3A	3P	70	22	-	6.2	5	8	3	3	○
		TCNR8.0N1A	1.5P									
M8 × 1	P3	TCNR8.0M3A	3P	70	19	-	6.2	5	8	3	3	○
		TCNR8.0M1A	1.5P									
M8 × 0.75	P3	TCNR8.0J3A	3P	62	13	-	6.2	5	8	3	3	△
		TCNR8.0J1A	1.5P									
M10 × 1.5	P3	TCNR010O3A	3P	75	24	-	7	5.5	8	3	3	△
		TCNR010O1A	1.5P									
M10 × 1.25	P3	TCNR010N3A	3P	75	22	-	7	5.5	8	3	3	○
		TCNR010N1A	1.5P									
	P4	TCNS010N3A	3P									△
		TCNS010N1A	1.5P									
M10 × 1	P3	TCNR010M3A	3P	70	19	-	7	5.5	8	3	3	△
		TCNR010M1A	1.5P									
M12 × 1.75	P3	TCNR012P3A	3P	82	30	-	8.5	6.5	9	3	3	△
		TCNR012P1A	1.5P									
M12 × 1.5	P3	TCNR012O3A	3P	82	24	-	8.5	6.5	9	3	3	△
		TCNR012O1A	1.5P									
	P4	TCNS012O3A	3P									
		TCNS012O1A	1.5P									
M12 × 1.25	P3	TCNR012N3A	3P	80	22	-	8.5	6.5	9	3	3	○
		TCNR012N1A	1.5P									
	P4	TCNS012N3A	3P									△
		TCNS012N1A	1.5P									
M12 × 1	P3	TCNR012M3A	3P	70	19	-	8.5	6.5	9	3	3	△
		TCNR012M1A	1.5P									
M14 × 2	P3	TCNR014Q3A	3P	88	30	-	10.5	8	11	4	3	△
		TCNR014Q1A	1.5P									
	P4	TCNS014Q3A	3P									
		TCNS014Q1A	1.5P									
M14 × 1.5	P3	TCNR014O3A	3P	88	24	-	10.5	8	11	4	3	△
		TCNR014O1A	1.5P									
	P4	TCNS014O3A	3P									
		TCNS014O1A	1.5P									
M16 × 2	P4	TCNS016Q3A	3P	95	30	-	12.5	10	13	4	3	△
		TCNS016Q1A	1.5P									

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

N-CT LA Carbide Taps for Light Alloys

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M16 × 1.5	P3	TCNR01603A	3P	95	24	-	12.5	10	13	4	3	△
		TCNR01601A	1.5P									
	P4	TCNS01603A	3P									
		TCNS01601A	1.5P									
M18 × 2.5	P4	TCNS018R3A	3P	100	35	-	14	11	14	4	3	△
		TCNS018R1A	1.5P									
M18 × 1.5	P4	TCNS01803A	3P	95	24	-	14	11	14	4	3	△
		TCNS01801A	1.5P									
M20 × 2.5	P4	TCNS020R3A	3P	105	35	-	15	12	15	4	3	△
		TCNS020R1A	1.5P									
M20 × 1.5	P4	TCNS02003A	3P	95	24	-	15	12	15	4	3	△
		TCNS02001A	1.5P									

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Helical Coil Wire Screw Thread Inserts, for Metric Threads													
STI M3 × 0.5	1b	TW3.0G1LWB5	5P	3.65	52	13	-	5	4	7	3	1	△
		TW3.0G1LWBA	1.5P										
STI M4 × 0.7	1b	TW4.0I1LWB5	5P	4.909	60	16	-	5.5	4.5	7	3	1	△
		TW4.0I1LWBA	1.5P										
STI M5 × 0.8	1b	TW5.0K1LWB5	5P	6.039	62	19	-	6	4.5	7	3	2	△
		TW5.0K1LWBA	1.5P										
STI M6 × 1	1b	TW6.0M1LWB5	5P	7.299	65	19	-	6.2	5	8	4	3	△
		TW6.0M1LWBA	1.5P										
STI M8 × 1.25	1b	TW8.0N1LWB5	5P	9.624	75	24	-	7	5.5	8	4	3	△
		TW8.0N1LWBA	1.5P										
STI M10 × 1.5	1b	TW01001LWB5	5P	11.948	82	30	-	8.5	6.5	9	4	3	△
		TW01001LWBA	1.5P										

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N-CT FC

Carbide Taps for Cast Irons

Specification

HF

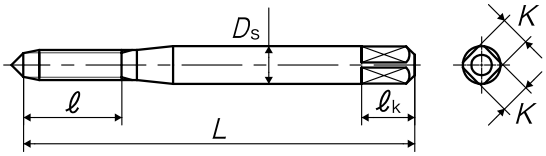
■N-CT FC is the carbide tap suitable for hard and abrasive materials such as cast irons. For volume production.

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄	Brass castings 黄銅鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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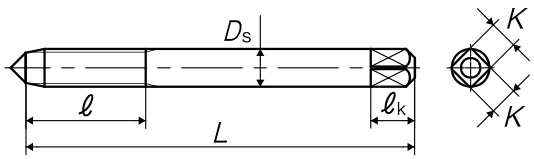

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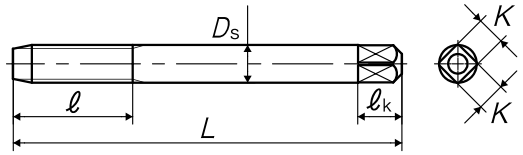

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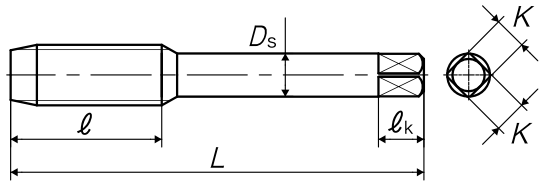


Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M1.4 × 0.3	P3	TCNR1.4C3	3P	34	7	-	3	2.5	5	3	1	△
		TCNR1.4C1	1.5P									
M1.6 × 0.35	P3	TCNR1.6D3	3P	36	8	-	3	2.5	5	3	1	△
		TCNR1.6D1	1.5P									
M1.7 × 0.35	P3	TCNR1.7D3	3P	36	8	-	3	2.5	5	3	1	△
		TCNR1.7D1	1.5P									
M2 × 0.4	P3	TCNR2.0E3	3P	40	8	-	3	2.5	5	3	1	○
		TCNR2.0E1	1.5P									
M2.2 × 0.45	P3	TCNR2.2F3	3P	42	9.5	-	3	2.5	5	3	1	△
		TCNR2.2F1	1.5P									
M2.3 × 0.4	P3	TCNR2.3E3	3P	42	8	-	3	2.5	5	3	1	△
		TCNR2.3E1	1.5P									
M2.5 × 0.45	P3	TCNR2.5F3	3P	44	9.5	-	3	2.5	5	3	1	△
		TCNR2.5F1	1.5P									
M2.6 × 0.45	P3	TCNR2.6F3	3P	44	9.5	-	3	2.5	5	3	1	○
		TCNR2.6F1	1.5P									
M3 × 0.5	P3	TCNR3.0G3	3P	46	11	-	4	3.2	6	3	1	◎
		TCNR3.0G1	1.5P									
M3 × 0.35	P3	TCNR3.0D3	3P	46	8	-	4	3.2	6	3	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

N-CT FC Carbide Taps for Cast Irons

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M3 × 0.35	P3	TCNR3.0D1	1.5P	46	8	-	4	3.2	6	3	1	△
M3.5 × 0.6	P3	TCNR3.5H3	3P	48	11	-	4	3.2	6	3	1	○
		TCNR3.5H1	1.5P									
M4 × 0.7	P3	TCNR4.0I3	3P	52	13	-	5	4	7	4	1	◎
		TCNR4.0I1	1.5P									
M4 × 0.5	P3	TCNR4.0G3	3P	52	11	-	5	4	7	4	1	△
		TCNR4.0G1	1.5P									
M5 × 0.8	P3	TCNR5.0K3	3P	60	16	-	5.5	4.5	7	4	1	◎
		TCNR5.0K1	1.5P									
M5 × 0.5	P3	TCNR5.0G3	3P	52	11	-	5.5	4.5	7	4	1	△
		TCNR5.0G1	1.5P									
M6 × 1	P3	TCNR6.0M3	3P	62	19	-	6	4.5	7	4	2	◎
		TCNR6.0M3F									3	
		TCNR6.0M1	1.5P								2	
		TCNR6.0M1F									3	
M6 × 0.75	P3	TCNR6.0J3	3P	62	13	-	6	4.5	7	4	2	○
		TCNR6.0J1	1.5P									
M6 × 0.5	P3	TCNR6.0G3	3P	55	11	-	6	4.5	7	4	2	△
		TCNR6.0G1	1.5P									
M7 × 1	P3	TCNR7.0M3	3P	65	19	-	6.2	5	8	4	4	○
		TCNR7.0M1	1.5P									
M7 × 0.75	P3	TCNR7.0J3	3P	62	13	-	6.2	5	8	4	4	△
		TCNR7.0J1	1.5P									
M8 × 1.25	P3	TCNR8.0N3	3P	70	22	-	6.2	5	8	4	4	◎
		TCNR8.0N1	1.5P									
	P4	TCNS8.0N3	3P									△
		TCNS8.0N1	1.5P									
M8 × 1	P3	TCNR8.0M3	3P	70	19	-	6.2	5	8	4	4	○
		TCNR8.0M1	1.5P									
M8 × 0.75	P3	TCNR8.0J3	3P	62	13	-	6.2	5	8	4	4	△
		TCNR8.0J1	1.5P									
M10 × 1.5	P3	TCNR010O3	3P	75	24	-	7	5.5	8	4	4	◎
		TCNR010O1	1.5P									
	P4	TCNS010O3	3P									△
		TCNS010O1	1.5P									
M10 × 1.25	P3	TCNR010N3	3P	75	22	-	7	5.5	8	4	4	○
		TCNR010N1	1.5P									
	P4	TCNS010N3	3P									△
		TCNS010N1	1.5P									
M10 × 1	P3	TCNR010M3	3P	70	19	-	7	5.5	8	4	4	○
		TCNR010M1	1.5P									
	P4	TCNS010M3	3P									△
		TCNS010M1	1.5P									
M12 × 1.75	P3	TCNR012P3	3P	82	30	-	8.5	6.5	9	4	4	◎
		TCNR012P1	1.5P									
	P4	TCNS012P3	3P									○
		TCNS012P1	1.5P									
M12 × 1.5	P3	TCNR012O3	3P	82	24	-	8.5	6.5	9	4	4	○
		TCNR012O1	1.5P									
	P4	TCNS012O3	3P									△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N-CT FC Carbide Taps for Cast Irons

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M12 × 1.5	P4	TCNS01201	1.5P	82	24	-	8.5	6.5	9	4	4	△
M12 × 1.25	P3	TCNR012N3	3P	80	22	-	8.5	6.5	9	4	4	○
		TCNR012N1	1.5P									
	P4	TCNS012N3	3P									△
		TCNS012N1	1.5P									
M12 × 1	P3	TCNR012M3	3P	70	19	-	8.5	6.5	9	4	4	△
		TCNR012M1	1.5P									
	P4	TCNS012M3	3P									
		TCNS012M1	1.5P									
M14 × 2	P3	TCNR014Q3	3P	88	30	-	10.5	8	11	4	4	△
		TCNR014Q1	1.5P									
	P4	TCNS014Q3	3P									○
		TCNS014Q1	1.5P									
M14 × 1.5	P3	TCNR014O3	3P	88	24	-	10.5	8	11	4	4	○
		TCNR014O1	1.5P									
	P4	TCNS014O3	3P									△
		TCNS014O1	1.5P									
M14 × 1.25	P3	TCNR014N3	3P	88	22	-	10.5	8	11	4	4	△
		TCNR014N1	1.5P									
	P4	TCNS014N3	3P									
		TCNS014N1	1.5P									
M14 × 1	P3	TCNR014M3	3P	70	19	-	10.5	8	11	4	4	△
		TCNR014M1	1.5P									
	P4	TCNS014M3	3P									
		TCNS014M1	1.5P									
M16 × 2	P4	TCNS016Q3	3P	95	30	-	12.5	10	13	4	4	○
		TCNS016Q1	1.5P									
M16 × 1.5	P3	TCNR016O3	3P	95	24	-	12.5	10	13	4	4	△
		TCNR016O1	1.5P									
	P4	TCNS016O3	3P									○
		TCNS016O1	1.5P									
M16 × 1	P4	TCNS016M3	3P	75	19	-	12.5	10	13	4	4	○
		TCNS016M1	1.5P									
M18 × 2.5	P4	TCNS018R3	3P	100	35	-	14	11	14	4	4	△
		TCNS018R1	1.5P									
M18 × 1.5	P4	TCNS018O3	3P	95	24	-	14	11	14	4	4	○
		TCNS018O1	1.5P									
M20 × 2.5	P4	TCNS020R3	3P	105	35	-	15	12	15	4	4	○
		TCNS020R1	1.5P									
M20 × 1.5	P4	TCNS020O3	3P	95	24	-	15	12	15	4	4	○
		TCNS020O1	1.5P									
M22 × 2.5	P4	TCNS022R3	3P	115	35	-	17	13	16	4	4	△
		TCNS022R1	1.5P									
M22 × 1.5	P4	TCNS022O3	3P	95	24	-	17	13	16	4	4	△
		TCNS022O1	1.5P									
M24 × 3	P4	TCNS024S3	3P	120	35	-	19	15	18	4	4	△
		TCNS024S1	1.5P									
M24 × 1.5	P4	TCNS024O3	3P	95	24	-	19	15	18	4	4	△
		TCNS024O1	1.5P									

N-CT FC Carbide Taps for Cast Irons

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Unified Threads												
No.4-40UNC	P3	TCNRUN4H3	3P	44	9.5	-	3	2.5	5	3	1	△
		TCNRUN4H1	1.5P									
No.4-48UNF	P3	TCNRUN4F3	3P	44	9.5	-	3	2.5	5	3	1	△
		TCNRUN4F1	1.5P									
No.5-40UNC	P3	TCNRUN5H3	3P	46	9.5	-	4	3.2	6	3	1	△
		TCNRUN5H1	1.5P									
No.6-32UNC	P3	TCNRUN6J3	3P	48	11	-	4	3.2	6	3	1	△
		TCNRUN6J1	1.5P									
No.8-32UNC	P3	TCNRUN8J3	3P	52	11	-	5	4	7	4	1	△
		TCNRUN8J1	1.5P									
No.10-24UNC	P3	TCNRUNAM3	3P	60	16	-	5.5	4.5	7	4	1	△
		TCNRUNAM1	1.5P									
No.10-32UNF	P3	TCNRUNAJ3	3P	60	11	-	5.5	4.5	7	4	1	△
		TCNRUNAJ1	1.5P									
1/4-20UNC	P3	TCNRU04N3	3P	62	19	-	6	4.5	7	4	2	△
		TCNRU04N1	1.5P									
1/4-28UNF	P3	TCNRU04K3	3P	62	16	-	6	4.5	7	4	2	△
		TCNRU04K1	1.5P									
5/16-18UNC	P3	TCNRU05O3	3P	70	22	-	6.1	5	8	4	4	△
		TCNRU05O1	1.5P									
5/16-24UNF	P3	TCNRU05M3	3P	70	16	-	6.1	5	8	4	4	△
		TCNRU05M1	1.5P									
3/8-16UNC	P3	TCNRU06P3	3P	75	24	-	7	5.5	8	4	4	△
		TCNRU06P1	1.5P									
3/8-24UNF	P3	TCNRU06M3	3P	75	16	-	7	5.5	8	4	4	△
		TCNRU06M1	1.5P									
7/16-14UNC	P3	TCNRU07Q3	3P	80	24	-	8	6	9	4	4	△
		TCNRU07Q1	1.5P									
7/16-20UNF	P3	TCNRU07N3	3P	80	19	-	8	6	9	4	4	△
		TCNRU07N1	1.5P									
1/2-13UNC	P3	TCNRU08R3	3P	85	30	-	9	7	10	4	4	△
		TCNRU08R1	1.5P									
1/2-20UNF	P3	TCNRU08N3	3P	85	19	-	9	7	10	4	4	△
		TCNRU08N1	1.5P									
5/8-11UNC	P4	TCNSU10U3	3P	95	30	-	12	9	12	4	4	△
		TCNSU10U1	1.5P									
5/8-18UNF	P4	TCNSU10O3	3P	95	22	-	12	9	12	4	4	△
		TCNSU10O1	1.5P									
3/4-10UNC	P4	TCNSU12V3	3P	105	35	-	14	11	14	4	4	△
		TCNSU12V1	1.5P									
3/4-16UNF	P4	TCNSU12P3	3P	95	24	-	14	11	14	4	4	△
		TCNSU12P1	1.5P									

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-N-CT

Long Shank Carbide Taps

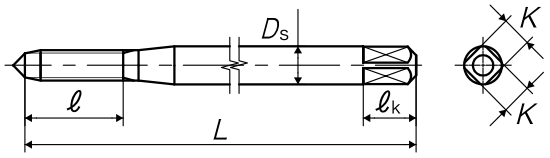
Specification

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄	Brass castings 黄銅鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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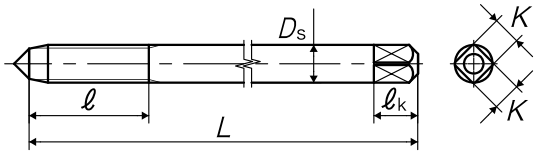

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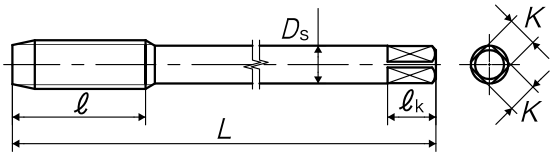


Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	P3	-	3P 1.5P	100	11	-	4	3.2	6	3	1	△
M4 × 0.7	P3	-	3P 1.5P	100	13	-	5	4	7	4	1	△
M5 × 0.8	P3	-	3P 1.5P	100	16	-	5.5	4.5	7	4	1	△
M6 × 1	P3	-	3P 1.5P	100	19	-	6	4.5	7	4	2	△
M8 × 1.25	P3	-	3P 1.5P	100	22	-	6.2	5	8	4	3	△
M10 × 1.5	P3	-	3P 1.5P	100	24	-	7	5.5	8	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

N-CT-SP

Spiral Fluted Carbide Taps

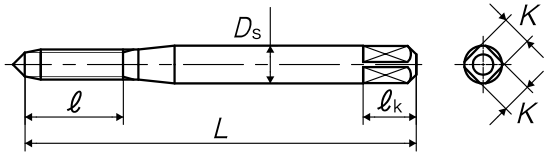
Specification

HF

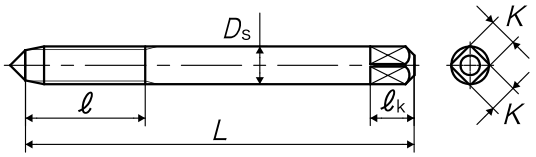
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



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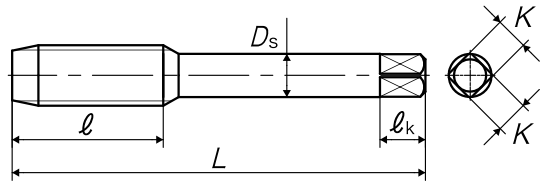


Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	P3	-	2.5P	46	11	-	4	3.2	6	3	1	△
M4 × 0.7	P3	-	2.5P	52	13	-	5	4	7	3	1	△
M5 × 0.8	P3	-	2.5P	60	16	-	5.5	4.5	7	3	1	△
M6 × 1	P3	-	2.5P	62	19	-	6	4.5	7	3	2	△
M8 × 1.25	P3	-	2.5P	70	22	-	6.2	5	8	3	3	△
M10 × 1.5	P3	-	2.5P	75	24	-	7	5.5	8	3	3	△
M10 × 1.25	P3	-	2.5P	75	22	-	7	5.5	8	3	3	△
M12 × 1.75	P4	-	2.5P	82	30	-	8.5	6.5	9	3	3	△
M12 × 1.25	P4	-	2.5P	80	22	-	8.5	6.5	9	3	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N-CT-PO

Spiral Pointed Carbide Taps

Specification

HF

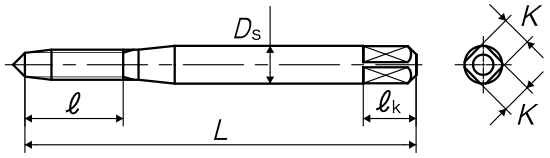
Recommended Tapping Speeds depending on Materials

Wrought aluminum アルミ圧延材 10~20 (m/min)

Aluminum alloy castings アルミ合金鋳物 10~20 (m/min)

For icon explanation, refer to P.24

TYPE:1



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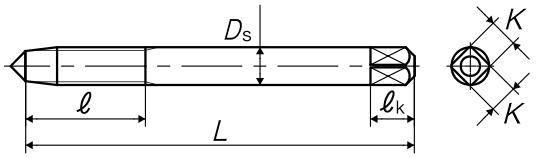

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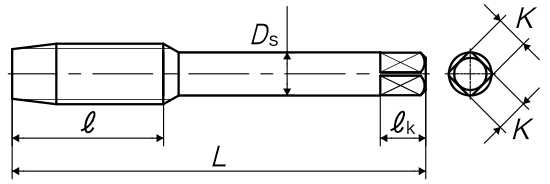


Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	P3	PCNR3.0G	5P	46	11	-	4	3.2	6	3	1	△
M4 × 0.7	P3	PCNR4.0I	5P	52	13	-	5	4	7	3	1	△
M5 × 0.8	P3	PCNR5.0K	5P	60	16	-	5.5	4.5	7	3	1	△
M6 × 1	P3	PCNR6.0M	5P	62	19	-	6	4.5	7	3	2	△
M8 × 1.25	P3	PCNR8.0N	5P	70	22	-	6.2	5	8	3	3	△
M10 × 1.5	P4	PCNS010O	5P	75	24	-	7	5.5	8	3	3	△
M12 × 1.75	P4	PCNS012P	5P	82	30	-	8.5	6.5	9	3	3	△

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

MC-AD-CT

Carbide Taps with Oil Hole

Specification

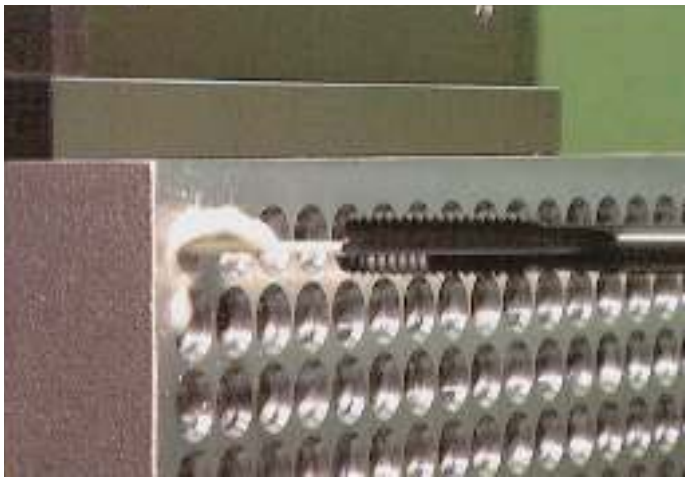
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

Product features

- Carbide Taps with Oil Hole suitable for tapping the blind holes of Aluminum alloy castings and Aluminum die castings.
- The combination of unique cutting edge design enabling less damage, ultra fine grain carbide alloys with superior wear resistance and optimal coating results in 5 times longer tool life than the life of conventional special purpose tap for aluminum.
- Having center through hole design to correspond with such cutting condition as inner coolant supply, mist coolant supply and cryogenic dry, MC-AD-CT works quite well in removing remaining chips after boring and in avoiding welding trouble.

Tapping data



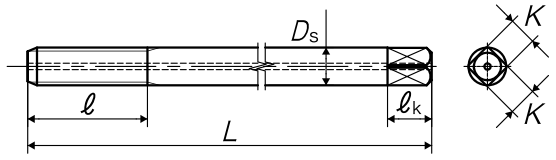
Tapping condition [M6×1]

Work material	ADC12
Hole shape	Blind
Hole depth	14mm
Tapping length	12mm
Machine	Machining center (Horizontal)
Feed	Synchronized feed
Tapping speed	57m/min
Tapping fluid	Water soluble oil
Tool life	240,000 hole～

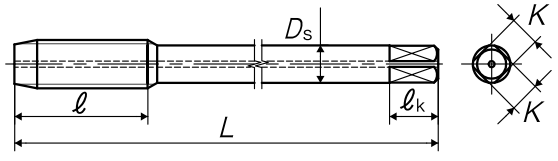
Think threads with YAMAWA
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

TYPE : 1



TYPE : 2



Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M6 × 1	P3	MCADR6.0M1	1.5P	100	19	-	6	4.5	7	3	1	△
M8 × 1.25	P3	MCADR8.0N1	1.5P	100	22	-	6.2	5	8	3	2	△
M10 × 1.5	P4	MCADS01001	1.5P	100	24	-	7	5.5	8	3	2	△
M10 × 1.25	P4	MCADS010N1	1.5P	100	22	-	7	5.5	8	3	2	△
M10 × 1	P4	MCADS010M1	1.5P	100	19	-	7	5.5	8	3	2	△
M12 × 1.75	P4	MCADS012P1	1.5P	100	30	-	8.5	6.5	9	3	2	△
M12 × 1.5	P4	MCADS01201	1.5P	100	24	-	8.5	6.5	9	3	2	△
M12 × 1.25	P4	MCADS012N1	1.5P	100	22	-	8.5	6.5	9	3	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

EH-CT

Carbide Taps for Hard Materials

Specification

Recommended Tapping Speeds depending on Materials

45~55HRC

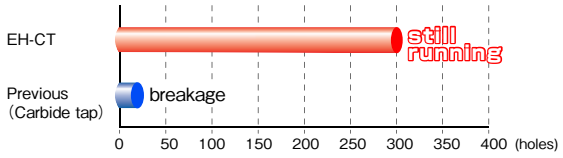
For icon explanation, refer to P.24

Product features

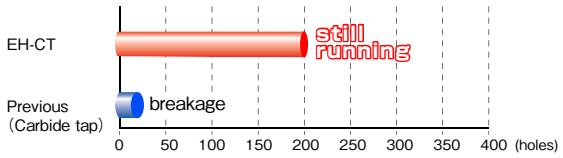
- Most suitable for tapping high hardness steels of 45-55HRC such as steels for hot-forging die (SKS3, SKD11, etc.)
- Ultra fine grain carbide alloys with superior wear resistance and shock resistance are adopted.
- By using the tap blanks in which both the run-out tolerance and the shank concentricity are improved, the high accuracy in screw threads can be obtained.
- For bored hole diameter, maximum of minor diameter tolerance of 6H internal threads is recommended.

Tapping data [M8×1.25]

Tapping data

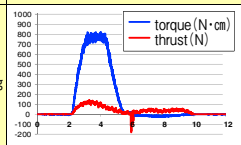
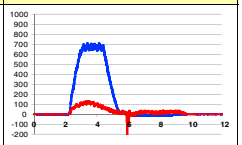
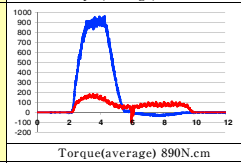
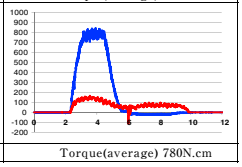


Work material	Type	Hot forged die steel (SKD61)
	Hardness	50HRC
Tapping speed		6m/min
Feed		Full rigid
Tappig fluid		Insoluble oil



Work material	Type	Stainless steel for plastic die (SUS420J2)
	Hardness	52HRC
Tapping speed		6m/min
Feed		Full rigid
Tappig fluid		Insoluble oil

〈Torque line in the different bored hole size〉

Bored hole size	6.8mm(Actual 6.79mm)	6.9mm(Actual 6.89mm)
Thread engagement ratio	89%	81%
Torque and thrust lines — Beginning		
	Torque(average) 770N.cm	Torque(average) 680N.cm
Torque and thrust lines — After 50 holes tapping		
	Torque(average) 890N.cm	Torque(average) 780N.cm

Tapping condition

Work material	DAC (equivalent to SKD61) 50HRC
Tapping speed	6m/min
Feed	Rigid
Tappig fluid	Insoluble oil

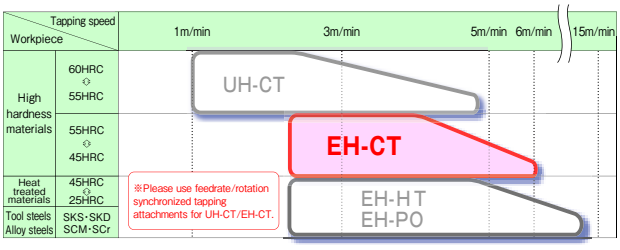
Bored hole size enlarged by 0.1mm can reduce the tapping resistance torque by 10%.
In tapping the material of high hardness, it is recommendable to make the bored hole size as large as possible.

Recommended bored hole size (for reference)

unit : mm

Size	Recommended bored hole size	Minor dia. of JIS 6H class internal screw thread	
		Max. tolerance	Min. tolerance
M3 X0.5	2.55	2.599	2.459
M4 X0.7	3.4	3.422	3.242
M5 X0.8	4.3	4.334	4.134
M6 X1	5.1	5.153	4.917
M8 X1.25	6.9	6.912	6.647
M10X1.5	8.6	8.676	8.376
M12X1.75	10.4	10.441	10.106

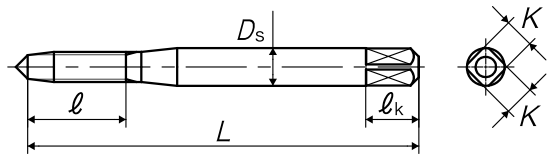
Application



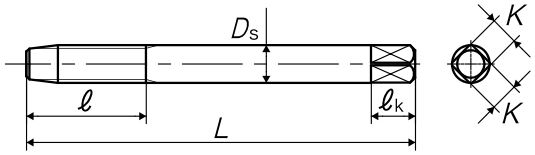
Think threads with YAMAWA
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

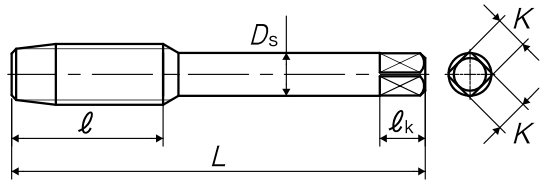
TYPE : 1



TYPE : 2



TYPE : 3



Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M3 × 0.5	P3	EHCR3.0G5	5P	46	11	-	4	3.2	6	4	1	○
M4 × 0.7	P3	EHCR4.0I5	5P	52	13	-	5	4	7	4	1	○
M5 × 0.8	P3	EHCR5.0K5	5P	60	16	-	5.5	4.5	7	4	1	○
M6 × 1	P3	EHCR6.0M5	5P	62	19	-	6	4.5	7	5	2	○
M8 × 1.25	P4	EHCS8.0N5	5P	70	22	-	6.2	5	8	5	3	○
M10 × 1.5	P4	EHCS0100S	5P	75	24	-	7	5.5	8	5	3	○
M12 × 1.75	P4	EHCS012P5	5P	82	30	-	8.5	6.5	9	5	3	○

UH-CT

Carbide Taps for Ultra Hard Materials

Specification

HF | Coating | Synchronized | ≤1.5D

Recommended Tapping Speeds depending on Materials

Thermal refined steels 調質鋼 ~5 (m/min)

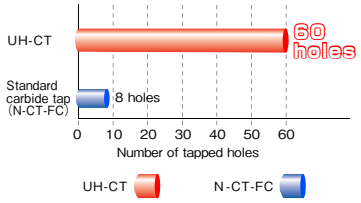
50~63HRC

For icon explanation, refer to P.24

Product features

- Ultra fine grain carbide alloys with superior wear resistance and shock resistance are adopted.
- By using the tap blanks in which both the run-out tolerance and the shank concentricity are improved, the high accuracy in screw threads can be obtained.
- Possible for tapping SKD die steels and pre-hardened steels which hardness ranges in 55-60HRC (Maximum hardness 63HRC).
- Thread length should be less than 1.5D. Considering the tool life, the number of chamfer threads is 5.
- For bored hole diameter, maximum of the minor diameter tolerance of 6H internal threads is recommended.

Tapping data



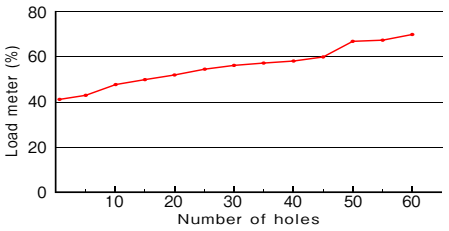
Tapping condition [M8×1.25]

Work material	SKD die steel, heat-treated (60HRC)
Bored hole size	6.9 mm
Tapping length	12mm, through hole
Machine	CNC rigid tapping machine
Tapping speed	1.5m/min (60rpm)
Tapping fluid	insoluble oil (with extreme pressure additive)

Upper graph shows comparison data in tapping heat-treated SKD die steel by the standard carbide tap (N-CT) and by the carbide tap for high hardness steel (UH-CT) Chipping occurred in 8th tapping with N-CT. 60 hole tappings were obtained with UH-CT.
Note: It is necessary to change the drill much earlier because the damage on the edge of drill is larger when drilling high hardness steels.

※Bored hole in this test was prepared by using a carbide drill under such condition as could cause no work-hardening (cutting speed 6m/min, feed 0.04mm/rev.).

〈Tapping Torque〉



Upper graph shows the relation between the number of tapped holes and the load meter data of the machine on the tapping test up to 60 holes with UH-CT tap. Percentage of load meter figure tends to increase after tapping 50 holes. This means from this cutting area the damage on the tool's cutting edge becomes larger rapidly. If we continue tapping further from this area, we might have tap breakage. It is important to pay special attention to the number of tapping holes (tool life) from the view point of safety when tapping high hardness steel materials.

Recommended bored hole size (for reference)

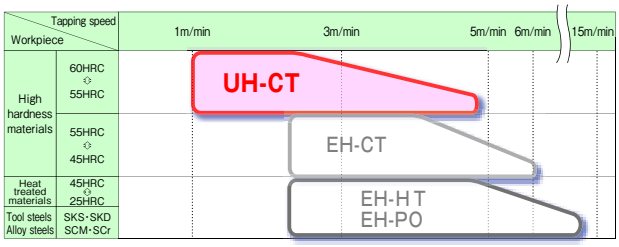
unit : mm

Size	Recommended bored hole size	Minor dia. of JIS 6H class internal screw thread	
		Max. tolerance	Min. tolerance
M2 X0.4	1.65	1.679	1.567
M2.5X0.45	2.1	2.138	2.013
M2.6X0.45	2.2	2.238	2.113
M3 X0.5	2.55	2.599	2.459
M4 X0.7	3.4	3.422	3.242
M5 X0.8	4.3	4.334	4.134
M6 X1	5.1	5.153	4.917
M8 X1.25	6.9	6.912	6.647
M10X1.5	8.6	8.676	8.376
M10X1.25	8.9	8.912	8.647
M12X1.75	10.4	10.441	10.106

unit : mm

Size	Recommended bored hole size	Minor dia. of JIS 6H class internal screw thread	
		Max. tolerance	Min. tolerance
M12X1.5	10.6	10.676	10.376
M12X1.25	10.9	10.912	10.647
M14X2	12.2	12.210	11.835
M14X1.5	12.6	12.676	12.376
M16X2	14.2	14.210	13.835
M16X1.5	14.6	14.676	14.376
M18X2.5	15.7	15.744	15.294
M18X1.5	16.6	16.676	16.376
M20X2.5	17.7	17.744	17.294
M20X1.5	18.6	18.676	18.376

Application



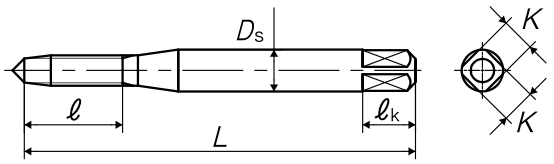
※Please use feedrate/rotation synchronized tapping attachments for UH-CT/EH-CT.

Think threads with YAMAWA

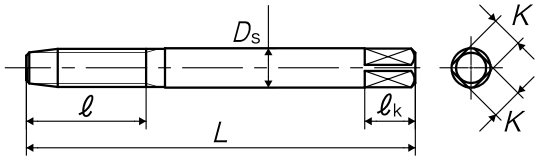
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

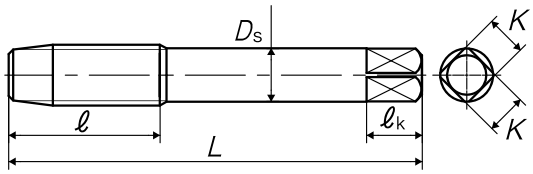
TYPE: 1



TYPE: 2



TYPE: 3



Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads												
M2 × 0.4	P3	UHCR2.0E5	5P	40	8	-	4	3.2	6	3	1	○
M2.5 × 0.45	P3	UHCR2.5F5	5P	44	9.5	-	4	3.2	6	4	1	○
M2.6 × 0.45	P3	UHCR2.6F5	5P	44	9.5	-	4	3.2	6	4	1	○
M3 × 0.5	P3	UHCR3.0G5	5P	46	11	-	5	4	7	4	1	○
M4 × 0.7	P3	UHCR4.0I5	5P	52	13	-	5.5	4.5	7	4	1	○
M5 × 0.8	P3	UHCR5.0K5	5P	60	16	-	6	4.5	7	4	1	○
M6 × 1	P3	UHCR6.0M5	5P	62	19	-	6.2	5	8	5	2	○
M8 × 1.25	P4	UHCS8.0N5	5P	70	22	-	7	5.5	8	5	3	○
M10 × 1.5	P4	UHCS010O5	5P	75	24	-	8.5	6.5	9	5	3	○
M10 × 1.25	P4	UHCS010N5	5P	75	24	-	8.5	6.5	9	5	3	△
M12 × 1.75	P4	UHCS012P5	5P	82	30	-	10.5	8	11	5	3	○
M12 × 1.5	P4	UHCS012O5	5P	82	30	-	10.5	8	11	5	3	△
M12 × 1.25	P4	UHCS012N5	5P	82	30	-	10.5	8	11	5	3	△
M14 × 2	P4	UHCS014Q5	5P	88	30	-	12.5	10	13	6	3	△
M14 × 1.5	P4	UHCS014O5	5P	88	30	-	12.5	10	13	6	3	△
M16 × 2	P4	UHCS016Q5	5P	95	30	-	14	11	14	6	3	△
M16 × 1.5	P4	UHCS016O5	5P	95	30	-	14	11	14	6	3	△
M18 × 2.5	P4	UHCS018R5	5P	100	35	-	15	12	15	6	3	△
M18 × 1.5	P4	UHCS018O5	5P	100	35	-	15	12	15	6	3	△
M20 × 2.5	P4	UHCS020R5	5P	105	35	-	17	13	16	6	3	△
M20 × 1.5	P4	UHCS020O5	5P	105	35	-	17	13	16	6	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

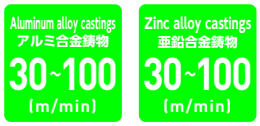
HFACT-P

Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Aluminum

Specification

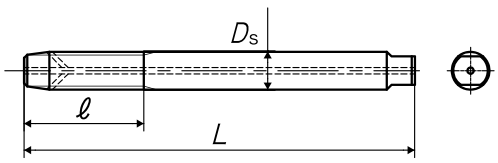
■HFACT-P is the carbide tap applicable under ultra high speed cutting. For such tapping conditions as inner coolant supply, mist coolant and dry under cryogenic condition, HFACT-P has radial type coolant hole and is suitable for through holes of such materials as aluminum castings and aluminum diecastings.

Recommended Tapping Speeds depending on Materials

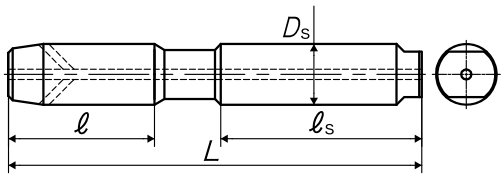


For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P3	HFACTPR6.0M	4P	62	19	-	-	6	-	-	3	1	○
M8 × 1.25	P3	HFACTPR8.0N	4P	70	22	-	36	8	-	-	3	2	○
M10 × 1.5	P3	HFACTPR010O	4P	75	24	-	37	10	-	-	3	2	○
M10 × 1.25	P3	HFACTPR010N	4P	75	24	-	37	10	-	-	3	2	○
M12 × 1.75	P3	HFACTPR012P	4P	82	29	-	40	12	-	-	3	2	○
M12 × 1.5	P3	HFACTPR012O	4P	82	29	-	40	12	-	-	3	2	○
M12 × 1.25	P3	HFACTPR012N	4P	82	29	-	40	12	-	-	3	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

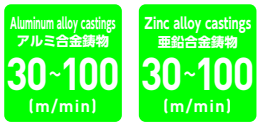
HFACT-B

Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Aluminum

Specification

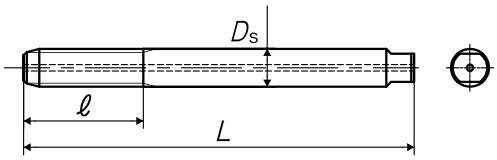
■HFACT-B is the carbide tap applicable under ultra high speed cutting. For such tapping conditions as inner coolant supply, mist coolant and dry under cryogenic condition, HFACT-B has coolant hole (center through type) and is suitable for blind holes of such materials as aluminum castings and aluminum diecastings.

Recommended Tapping Speeds depending on Materials

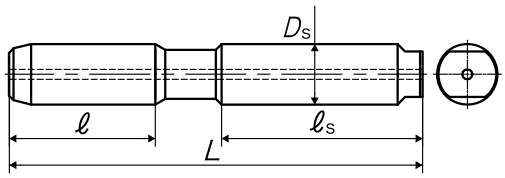


For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P3	HFACTBR6.0M	2.5P	62	19	-	-	6	-	-	3	1	○
M8 × 1.25	P3	HFACTBR8.0N	2.5P	70	22	-	36	8	-	-	3	2	○
M10 × 1.5	P3	HFACTBR010O	2.5P	75	24	-	37	10	-	-	3	2	○
M10 × 1.25	P3	HFACTBR010N	2.5P	75	24	-	37	10	-	-	3	2	○
M12 × 1.75	P3	HFACTBR012P	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.5	P3	HFACTBR012O	2.5P	82	29	-	40	12	-	-	3	2	○
M12 × 1.25	P3	HFACTBR012N	2.5P	82	29	-	40	12	-	-	3	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

HFICT-P

Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Cast Irons

Specification

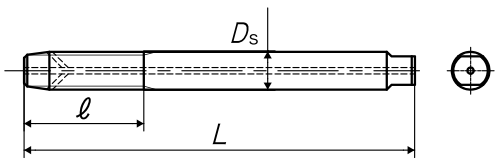
■HFICT-P is the carbide tap applicable under ultra high speed cutting. For such tapping conditions as inner coolant supply, mist coolant and dry under cryogenic condition, HFICT-P has radial type coolant hole, and is suitable for through holes of cast irons and the like.

Recommended Tapping Speeds depending on Materials

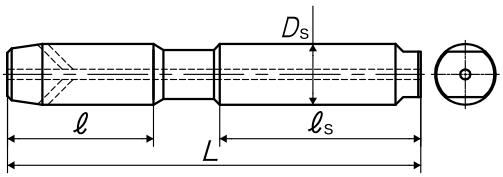
Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄
25~50 (m/min)	25~50 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1L

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P3	HFICTPR6.0M	4P	62	19	-	-	6	-	-	4	1	○
M8 × 1.25	P3	HFICTPR8.0N	4P	70	22	-	36	8	-	-	4	2	○
M10 × 1.5	P3	HFICTPR010O	4P	75	24	-	37	10	-	-	4	2	○
M10 × 1.25	P3	HFICTPR010N	4P	75	24	-	37	10	-	-	4	2	○
M12 × 1.75	P3	HFICTPR012P	4P	82	29	-	40	12	-	-	4	2	○
M12 × 1.5	P3	HFICTPR012O	4P	82	29	-	40	12	-	-	4	2	○
M12 × 1.25	P3	HFICTPR012N	4P	82	29	-	40	12	-	-	4	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HFICT-B

Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Cast Irons

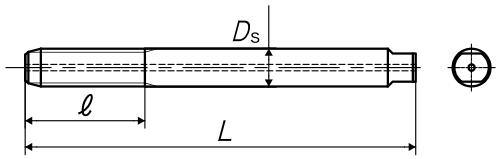
Specification

■HFICT-B is the carbide tap applicable under ultra high speed cutting. For such tapping conditions as inner coolant supply, mist coolant and dry under cryogenic condition, HFICT-B has coolant hole(center through type), and is suitable for blind holes of cast irons and the like.

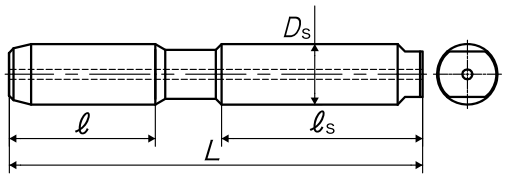
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE : 1



TYPE : 2



Segment : 1L

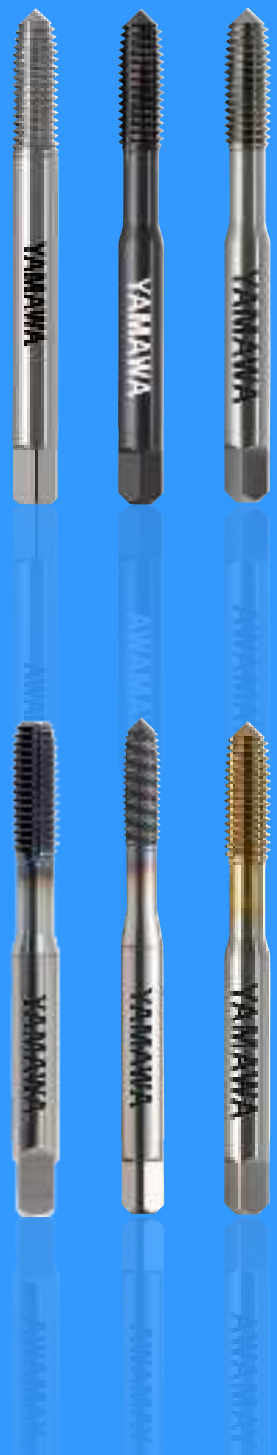
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M6 × 1	P3	HFICTBR6.0M	2.5P	62	19	-	-	6	-	-	4	1	○
M8 × 1.25	P3	HFICTBR8.0N	2.5P	70	22	-	36	8	-	-	4	2	○
M10 × 1.5	P3	HFICTBR010O	2.5P	75	24	-	37	10	-	-	4	2	○
M10 × 1.25	P3	HFICTBR010N	2.5P	75	24	-	37	10	-	-	4	2	○
M12 × 1.75	P3	HFICTBR012P	2.5P	82	29	-	40	12	-	-	4	2	○
M12 × 1.5	P3	HFICTBR012O	2.5P	82	29	-	40	12	-	-	4	2	○
M12 × 1.25	P3	HFICTBR012N	2.5P	82	29	-	40	12	-	-	4	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

MEMO

ROLL TAP SERIES



R-Y	RO-1
N+RZ/N-RZ	RO-2
LS-N-RZ	RO-7
N+RS/N-RS	RO-8
LS-N-RS	RO-14
R+V	RO-16
OL+RZ/OL-RZ	RO-18
HP+RZ/HP-RZ	RO-20
SC-TL-RZ	RO-23
SURZ	RO-25

R-Y

Thread Forming Taps for Thin Soft Structural Steel Sheets

Specification

HSS

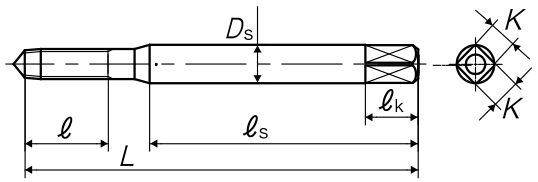
■For tapping general fasteners made from such thin steel sheets as SPC and SPH, and from such soft steels as under SS400 and S20C.

Recommended Tapping Speeds depending on Materials

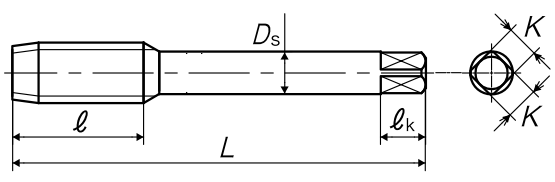
Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M2 × 0.4	6HX	RY2.0E3	3P	42	7	-	31	3	2.5	5	4	1	○
M2.5 × 0.45	6HX	RY2.5F3	3P	44	8	-	33	3	2.5	5	4	1	○
M2.6 × 0.45	6HX	RY2.6F3	3P	44	8	-	33	3	2.5	5	4	1	○
M3 × 0.5	6HX	RY3.0G3	3P	46	9	-	33	4	3.2	6	4	1	○
M4 × 0.7	6HX	RY4.0I3	3P	52	11	-	36	5	4	7	4	1	○
M5 × 0.8	6HX	RY5.0K3	3P	60	12	-	43	5.5	4.5	7	4	1	○
M6 × 1	6HX	RY6.0M3	3P	62	15	-	44	6	4.5	7	4	1	○
M8 × 1.25	6HX	RY8.0N3	3P	70	18	-	-	6.2	5	8	4	2	○

Number of oil grooves : non

※Please use CPR-Y for controlling of bored holes. (For CPR-Y, refer to product page ST-36)

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N+RZ/N-RZ

Thread Forming Taps for Steels

Specification

HSS OX Oxide

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 5~15 (m/min)

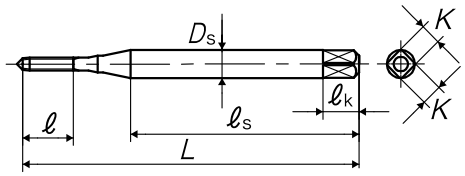
Medium carbon steels 中炭素鋼 5~15 (m/min)

For icon explanation, refer to P.24

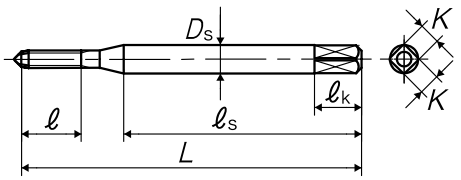
■N+RZ/N-RZ are the forming taps suitable for ferrous materials such as carbon steels, alloy steels, and normal steels.

N+RZ	~M6 (coarse thread)
N−RZ	M7~

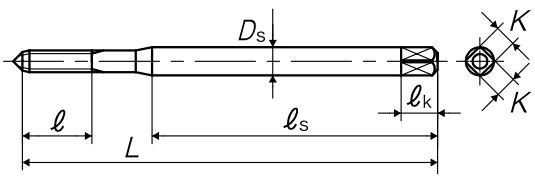
TYPE:1



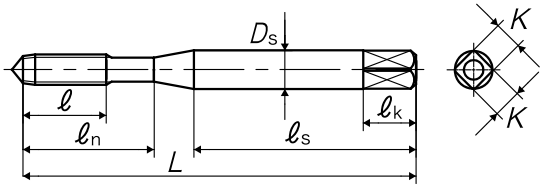
TYPE:2



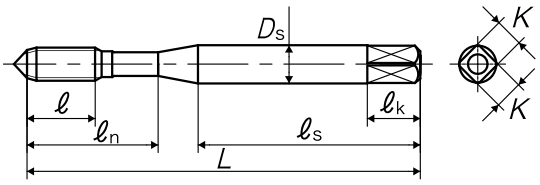
TYPE:3



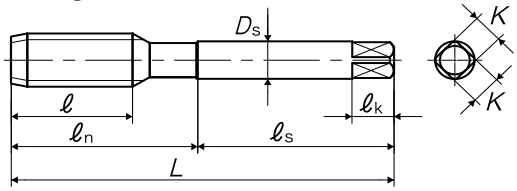
TYPE:4



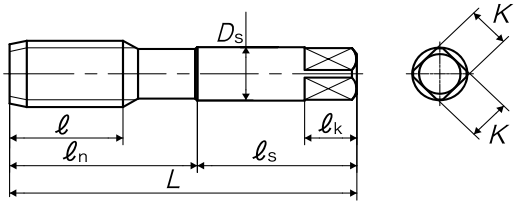
TYPE:5



TYPE:6



TYPE:7



Number of oil grooves : Metric thread : M2.6 and smaller=non, M3~M7=4, M8=3, M10 and larger=4

N+RZ/N-RZ Thread Forming Taps for Steels

Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M1 × 0.25	G4	NRZP41.0BP	4P	36	4.5	-	24	3	2.5	5	4	1	○
		NRZP41.0BB	2P										
	G5	NRZP51.0BP	4P										△
		NRZP51.0BB	2P										
M1.2 × 0.25	G4	NRZP41.2BP	4P	36	4.5	-	24	3	2.5	5	4	1	○
		NRZP41.2BB	2P										
	G5	NRZP51.2BP	4P										△
		NRZP51.2BB	2P										
M1.4 × 0.3	G4	NRZP41.4CP	4P	36	5.4	-	24	3	2.5	5	4	1	◎
		NRZP41.4CB	2P										
	G5	NRZP51.4CP	4P										○
		NRZP51.4CB	2P										
M1.6 × 0.35	G4	NRZP41.6DP	4P	36	6.3	-	24	3	2.5	5	4	2	○
		NRZP41.6DB	2P										
	G5	NRZP51.6DP	4P										
		NRZP51.6DB	2P										
M1.7 × 0.35	G4	NRZP41.7DP	4P	36	6.3	-	24	3	2.5	5	4	2	◎
		NRZP41.7DB	2P										
	G5	NRZP51.7DP	4P										
		NRZP51.7DB	2P										
	G6	NRZP61.7DP	4P										○
		NRZP61.7DB	2P										
M1.8 × 0.35	G4	NRZP41.8DP	4P	42	6.3	-	27	3	2.5	5	4	2	△
		NRZP41.8DB	2P										
	G5	NRZP51.8DP	4P										
		NRZP51.8DB	2P										
M2 × 0.4	G4	NRZP42.0EP	4P	42	7.2	-	27	3	2.5	5	4	3	◎
		NRZP42.0EB	2P										
	G5	NRZP52.0EP	4P										
		NRZP52.0EB	2P										
	G6	NRZP62.0EP	4P										○
		NRZP62.0EB	2P										
M2 × 0.25	G4	NRZM42.0BP	4P	42	4.5	-	27	3	2.5	5	4	3	△
		NRZM42.0BB	2P										
	G5	NRZM52.0BP	4P										
		NRZM52.0BB	2P										
M2.2 × 0.45	G5	NRZP52.2FP	4P	42	8.1	-	27	3	2.5	5	4	3	△
		NRZP52.2FB	2P										
M2.3 × 0.4	G4	NRZP42.3EP	4P	42	7.2	-	27	3	2.5	5	4	3	△
		NRZP42.3EB	2P										
	G5	NRZP52.3EP	4P										
		NRZP52.3EB	2P										
	G6	NRZP62.3EP	4P										
		NRZP62.3EB	2P										
M2.5 × 0.45	G5	NRZP52.5FP	4P	46	8.1	14	29	3	2.5	5	4	4	○
		NRZP52.5FB	2P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M2.5 × 0.45	G6	NRZP62.5FP	4P	46	8.1	14	29	3	2.5	5	4	4	○
		NRZP62.5FB	2P										
M2.5 × 0.35	G5	NRZM52.5DP	4P	46	6.3	14	29	3	2.5	5	4	5	△
		NRZM52.5DB	2P										
M2.6 × 0.45	G5	NRZP52.6FP	4P	46	8.1	14	29	3	2.5	5	4	4	○
		NRZP52.6FB	2P										
	G6	NRZP62.6FP	4P										
		NRZP62.6FB	2P										
M2.6 × 0.35	G5	NRZM52.6DP	4P	46	6.3	14	29	3	2.5	5	4	5	△
		NRZM52.6DB	2P										
M3 × 0.5	G5	NRZP53.0GP	4P	46	9	14	26	4	3.2	6	4	4	◎
		NRZP53.0GB	2P										
	G6	NRZP63.0GP	4P										
		NRZP63.0GB	2P										
	G7	NRZP73.0GP	4P										○
		NRZP73.0GB	2P										
	G8	NRZP83.0GP	4P										△
		NRZP83.0GB	2P										
M3 × 0.35	G5	NRZM53.0DP	4P	46	6.5	14	26	4	3.2	6	4	5	△
		NRZM53.0DB	2P										
M3.5 × 0.6	G5	NRZP53.5HP	4P	52	11	16	29	5	4	7	4	4	○
		NRZP53.5HB	2P										
	G6	NRZP63.5HP	4P										
		NRZP63.5HB	2P										
	G7	NRZP73.5HP	4P										△
		NRZP73.5HB	2P										
M4 × 0.7	G5	NRZP54.0IP	4P	52	11	17	29	5	4	7	4	4	○
		NRZP54.0IB	2P										
	G6	NRZP64.0IP	4P										◎
		NRZP64.0IB	2P										
	G7	NRZP74.0IP	4P										○
		NRZP74.0IB	2P										
	G8	NRZP84.0IP	4P										△
		NRZP84.0IB	2P										
M4 × 0.5	G5	NRZM54.0GP	4P	52	9	17	29	5	4	7	4	5	△
		NRZM54.0GB	2P										
	G6	NRZM64.0GP	4P										
		NRZM64.0GB	2P										
	G7	NRZM74.0GB											
M5 × 0.8	G5	NRZP55.0KP	4P	60	13	22	33	5.5	4.5	7	4	4	△
		NRZP55.0KB	2P										
	G6	NRZP65.0KP	4P										○
		NRZP65.0KB	2P										
	G7	NRZP75.0KP	4P										
		NRZP75.0KB	2P										
	G8	NRZP85.0KP	4P										△
		NRZP85.0KB	2P										
M5 × 0.5	G6	NRZM65.0GP	4P	60	9	22	33	5.5	4.5	7	4	5	△
		NRZM65.0GB	2P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M6 × 1	G5	NRZP56.0MP	4P	62	15	26	33	6	4.5	7	4	4	△
		NRZP56.0MB	2P										
	G6	NRZP66.0MP	4P										○
		NRZP66.0MB	2P										
	G7	NRZP76.0MP	4P										
		NRZP76.0MB	2P										
M6 × 0.75	G6	NRZM66.0JP	4P	62	15	26	33	6	4.5	7	4	4	△
		NRZM66.0JB	2P										
	G7	NRZM76.0JP	4P										
		NRZM76.0JB	2P										
M6 × 0.5	G6	NRZM66.0GP	4P	62	9	26	33	6	4.5	7	4	5	△
		NRZM66.0GB	2P										
M7 × 1	G7	NRZM77.0MP	4P	70	19	-	36	6.2	5	8	4	6	△
		NRZM77.0MB	2P										
M7 × 0.75	G7	NRZM77.0JP	4P	70	19	-	36	6.2	5	8	4	6	△
		NRZM77.0JB	2P										
M8 × 1.25	G7	NRZM78.0NP	4P	70	19	-	36	6.2	5	8	6	6	○
		NRZM78.0NB	2P										
	G8	NRZM88.0NP	4P										△
		NRZM88.0NB	2P										
M8 × 1	G7	NRZM78.0MP	4P	70	19	-	36	6.2	5	8	6	6	△
		NRZM78.0MB	2P										
M8 × 0.75	G7	NRZM78.0JP	4P	70	19	-	36	6.2	5	8	6	6	△
		NRZM78.0JB	2P										
M10 × 1.5	G7	NRZM7010OP	4P	75	23	-	38	7	5.5	8	8	6	△
		NRZM7010OB	2P										
	G8	NRZM8010OP	4P										
		NRZM8010OB	2P										
M10 × 1.25	G7	NRZM7010NP	4P	75	23	-	38	7	5.5	8	8	6	△
		NRZM7010NB	2P										
	G8	NRZM8010NP	4P										
		NRZM8010NB	2P										
M10 × 1	G7	NRZM7010MP	4P	75	23	-	38	7	5.5	8	8	6	△
		NRZM7010MB	2P										
M12 × 1.75	G8	NRZM8012PP	4P	82	26	-	42	8.5	6.5	9	8	6	△
		NRZM8012PB	2P										
	G9	NRZM9012PP	4P										
		NRZM9012PB	2P										
M12 × 1.5	G8	NRZM8012OP	4P	82	26	-	42	8.5	6.5	9	8	6	△
		NRZM8012OB	2P										
M12 × 1.25	G8	NRZM8012NP	4P	82	26	-	42	8.5	6.5	9	8	6	△
		NRZM8012NB	2P										
	G9	NRZM9012NP	4P										
		NRZM9012NB	2P										
M12 × 1	G7	NRZM7012MP	4P	82	26	-	42	8.5	6.5	9	8	6	△
		NRZM7012MB	2P										
M14 × 2	G9	NRZM9014QP	4P	88	26	-	45	10.5	8	11	8	6	△
		NRZM9014QB	2P										
	G10	NRZM0014QP	4P										
		NRZM0014QB	2P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M14 × 1.5	G9	NRZM90140P	4P	88	26	-	45	10.5	8	11	8	6	△
		NRZM90140B	2P										
M14 × 1	G8	NRZM8014MP	4P	88	26	-	45	10.5	8	11	8	6	△
		NRZM8014MB	2P										
M16 × 2	G9	NRZM9016QP	4P	95	26	-	48	12.5	10	13	8	6	△
		NRZM9016QB	2P										
	G10	NRZM0016QP	4P										
		NRZM0016QB	2P										
M16 × 1.5	G9	NRZM90160P	4P	95	26	-	48	12.5	10	13	8	6	△
		NRZM90160B	2P										
M20 × 1.5	G9	NRZM90200P	4P	105	33	-	50	15	12	15	8	7	△
		NRZM90200B	2P										
	G10	NRZM00200P	4P										
		NRZM00200B	2P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

LS-N-RZ

Long Shank Thread Forming Taps for Steels

Specification

HSS | OX Oxide

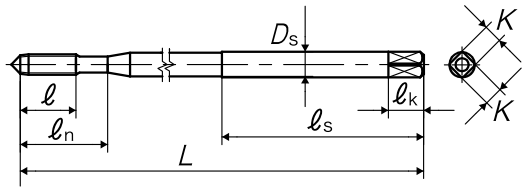
■LS-N-RZ is the long shank forming tap suitable for ferrous materials such as carbon steels, alloy steels and normal steels.

Recommended Tapping Speeds depending on Materials

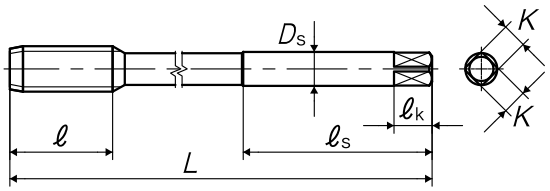
Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M3 × 0.5	G5	NRZM53.0GP10	4P	100	9	14	40	4	3.2	6	4	1	△
		NRZM53.0GB10	2P										
	G6	NRZM63.0GP10	4P										
		NRZM63.0GB10	2P										
M4 × 0.7	G6	NRZM64.0IP10	4P	100	11	17	40	5	4	7	4	1	△
		NRZM64.0IB10	2P										
	G7	NRZM74.0IP10	4P										
		NRZM74.0IB10	2P										
M5 × 0.8	G6	NRZM65.0KP10	4P	100	13	22	40	5.5	4.5	7	4	1	△
		NRZM65.0KB10	2P										
	G7	NRZM75.0KP10	4P										
		NRZM75.0KB10	2P										
M6 × 1	G7	NRZM76.0MP10	4P	100	15	26	40	6	4.5	7	4	1	△
		NRZM76.0MP15		150									
		NRZM76.0MB10	2P	100									
		NRZM76.0MB15		150									
	G8	NRZM86.0MP10	4P	100									
		NRZM86.0MB10	2P										
M8 × 1.25	G7	NRZM78.0NP10	4P	100	19	-	50	6.2	5	8	6	2	△
		NRZM78.0NP15		150									
		NRZM78.0NB10	2P	100									
		NRZM78.0NB15		150									
M10 × 1.5	G7	NRZM70100P10	4P	100	23	-	50	7	5.5	8	8	2	△
		NRZM70100P15		150									
		NRZM70100B10	2P	100									
		NRZM70100B15		150									

Number of oil grooves : M3～M6=4, M8=3, M10=4

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N+RS/N-RS

Thread Forming Taps for Non-Ferrous Materials

Specification

HSS | NI Nitride

■N+RS/N-RS are the forming taps suitable for non-ferrous materials such as aluminum castings, aluminum diecasting and brass.

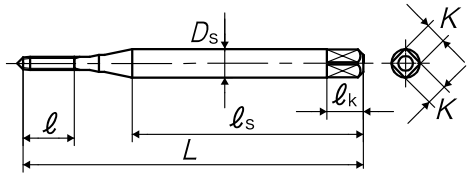
N+RS	～M6 (coarse thread)
N−RS	M7～, all U, all STI

Recommended Tapping Speeds depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE:1



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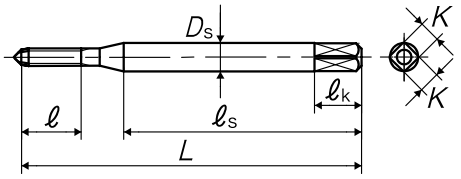
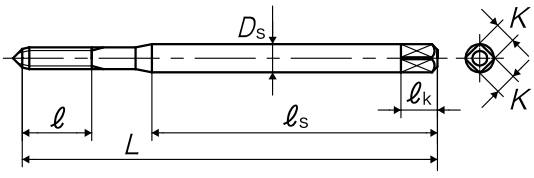
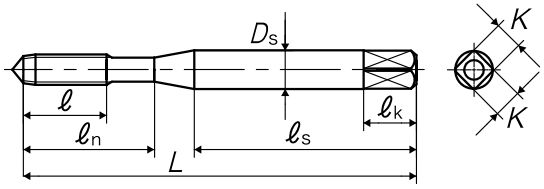


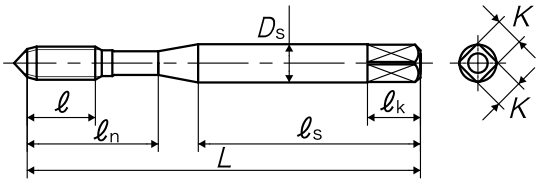
TYPE:3



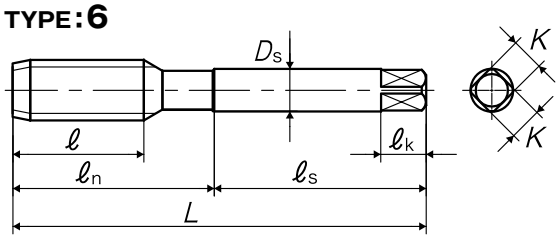
TYPE:4



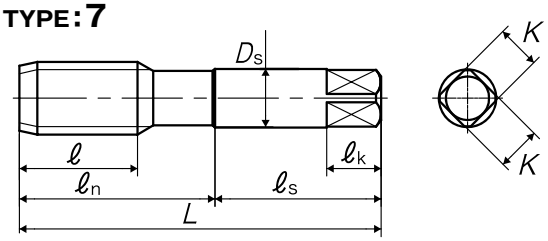
TYPE:5



TYPE:6



TYPE:7



Number of oil grooves :
Metric thread : M2.6 and smaller=non, M3 and larger=1
Unified thread : No.4 and smaller=non, No.5 and larger=1

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M1 × 0.25	G4	NRSP41.0BP	4P	36	4.5	-	24	3	2.5	5	4	1	◎
		NRSP41.0BB	2P										
	G5	NRSP51.0BP	4P										△
		NRSP51.0BB	2P										
M1.2 × 0.25	G4	NRSP41.2BP	4P	36	4.5	-	24	3	2.5	5	4	1	◎
		NRSP41.2BB	2P										
	G5	NRSP51.2BP	4P										○
		NRSP51.2BB	2P										
M1.4 × 0.3	G4	NRSP41.4CP	4P	36	5.4	-	24	3	2.5	5	4	1	◎
		NRSP41.4CB	2P										
	G5	NRSP51.4CP	4P										
		NRSP51.4CB	2P										
M1.6 × 0.35	G4	NRSP41.6DP	4P	36	6.3	-	24	3	2.5	5	4	2	○
		NRSP41.6DB	2P										
	G5	NRSP51.6DP	4P										◎
		NRSP51.6DB	2P										
M1.7 × 0.35	G4	NRSP41.7DP	4P	36	6.3	-	24	3	2.5	5	4	2	◎
		NRSP41.7DB	2P										
	G5	NRSP51.7DP	4P										
		NRSP51.7DB	2P										
	G6	NRSP61.7DP	4P										○
		NRSP61.7DB	2P										
M1.8 × 0.35	G4	NRSP41.8DP	4P	42	6.3	-	27	3	2.5	5	4	2	△
		NRSP41.8DB	2P										
	G5	NRSP51.8DP	4P										
		NRSP51.8DB	2P										
M2 × 0.4	G4	NRSP42.0EP	4P	42	7.2	-	27	3	2.5	5	4	3	◎
		NRSP42.0EB	2P										
	G5	NRSP52.0EP	4P										
		NRSP52.0EB	2P										
	G6	NRSP62.0EP	4P										○
		NRSP62.0EB	2P										
M2 × 0.25	G4	NRSM42.0BP	4P	42	4.5	-	27	3	2.5	5	4	3	△
		NRSM42.0BB	2P										
	G5	NRSM52.0BP	4P										
		NRSM52.0BB	2P										
M2.3 × 0.4	G4	NRSP42.3EP	4P	42	7.2	-	27	3	2.5	5	4	3	○
		NRSP42.3EB	2P										
	G5	NRSP52.3EP	4P										
		NRSP52.3EB	2P										
	G6	NRSP62.3EP	4P										△
		NRSP62.3EB	2P										
M2.5 × 0.45	G5	NRSP52.5FP	4P	46	8.1	14	29	3	2.5	5	4	4	◎
		NRSP52.5FB	2P										
	G6	NRSP62.5FP	4P										○
		NRSP62.5FB	2P										
M2.5 × 0.35	G4	NRSM42.5DP	4P	46	6.3	14	29	3	2.5	5	4	5	△
		NRSM42.5DB	2P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M2.5 × 0.35	G5	NRSM52.5DP	4P	46	6.3	14	29	3	2.5	5	4	5	△
		NRSM52.5DB	2P										
M2.6 × 0.45	G5	NRSP52.6FP	4P	46	8.1	14	29	3	2.5	5	4	4	◎
		NRSP52.6FB	2P										
	G6	NRSP62.6FP	4P										○
		NRSP62.6FB	2P										
M2.6 × 0.35	G5	NRSM52.6DP	4P	46	6.3	14	29	3	2.5	5	4	5	△
		NRSM52.6DB	2P										
	G6	NRSM62.6DP	4P										
		NRSM62.6DB	2P										
M3 × 0.5	G5	NRSP53.0GP	4P	46	9	14	26	4	3.2	6	4	4	◎
		NRSP53.0GB	2P										
	G6	NRSP63.0GP	4P										
		NRSP63.0GB	2P										
	G7	NRSP73.0GP	4P										○
		NRSP73.0GB	2P										
	G8	NRSP83.0GP	4P										△
		NRSP83.0GB	2P										
M3 × 0.35	G5	NRSM53.0DP	4P	46	6.5	14	26	4	3.2	6	4	5	△
		NRSM53.0DB	2P										
	G6	NRSM63.0DP	4P										
		NRSM63.0DB	2P										
M3.5 × 0.6	G5	NRSP53.5HP	4P	52	11	16	29	5	4	7	4	4	○
		NRSP53.5HB	2P										
	G6	NRSP63.5HP	4P										
		NRSP63.5HB	2P										
	G7	NRSP73.5HP	4P										△
M3.5 × 0.35	G5	NRSM53.5DP	4P	52	6.5	16	29	5	4	7	4	5	△
		NRSM53.5DB	2P										
	G6	NRSM63.5DP	4P										
		NRSM63.5DB	2P										
M4 × 0.7	G5	NRSP54.0IP	4P	52	11	17	29	5	4	7	4	4	○
		NRSP54.0IB	2P										
	G6	NRSP64.0IP	4P										◎
		NRSP64.0IB	2P										
	G7	NRSP74.0IP	4P										○
		NRSP74.0IB	2P										
	G8	NRSP84.0IP	4P										△
		NRSP84.0IB	2P										
M4 × 0.5	G6	NRSM64.0GP	4P	52	9	17	29	5	4	7	4	5	△
		NRSM64.0GB	2P										
	G7	NRSM74.0GP	4P										
		NRSM74.0GB	2P										
M5 × 0.8	G5	NRSP55.0KP	4P	60	13	22	33	5.5	4.5	7	4	4	△
		NRSP55.0KB	2P										
	G6	NRSP65.0KP	4P										◎
		NRSP65.0KB	2P										
	G7	NRSP75.0KP	4P										○
		NRSP75.0KB	2P										
	G8	NRSP85.0KB											△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M5 × 0.5	G6	NRSM65.0GP	4P	60	9	22	33	5.5	4.5	7	4	5	△
		NRSM65.0GB	2P										
	G7	NRSM75.0GP	4P										
		NRSM75.0GB	2P										
M6 × 1	G5	NRSP56.0MP	4P	62	15	26	33	6	4.5	7	4	4	△
		NRSP56.0MB	2P										
	G6	NRSP66.0MP	4P										○
		NRSP66.0MB	2P										
	G7	NRSP76.0MP	4P										◎
		NRSP76.0MB	2P										
M6 × 0.75	G6	NRSM66.0JP	4P	62	15	26	33	6	4.5	7	4	4	△
		NRSM66.0JB	2P										
	G7	NRSM76.0JP	4P										
		NRSM76.0JB	2P										
M6 × 0.5	G6	NRSM66.0GP	4P	62	9	26	33	6	4.5	7	4	5	△
		NRSM66.0GB	2P										
M7 × 1	G6	NRSM67.0MP	4P	70	19	-	36	6.2	5	8	4	6	△
		NRSM67.0MB	2P										
	G7	NRSM77.0MP	4P										
		NRSM77.0MB	2P										
M7 × 0.75	G7	NRSM77.0JP	4P	70	19	-	36	6.2	5	8	4	6	△
		NRSM77.0JB	2P										
M8 × 1.25	G7	NRSM78.0NP	4P	70	19	-	36	6.2	5	8	6	6	○
		NRSM78.0NB	2P										
	G8	NRSM88.0NP	4P										
		NRSM88.0NB	2P										
M8 × 1	G7	NRSM78.0MP	4P	70	19	-	36	6.2	5	8	6	6	△
		NRSM78.0MB	2P										
M8 × 0.75	G7	NRSM78.0JP	4P	70	19	-	36	6.2	5	8	6	6	△
		NRSM78.0JB	2P										
M10 × 1.5	G7	NRSM7010OP	4P	75	23	-	38	7	5.5	8	6	6	○
		NRSM7010OB	2P										
	G8	NRSM8010OP	4P										△
		NRSM8010OB	2P										
M10 × 1.25	G7	NRSM7010NP	4P	75	23	-	38	7	5.5	8	6	6	△
		NRSM7010NB	2P										
	G8	NRSM8010NP	4P										
		NRSM8010NB	2P										
M10 × 1	G7	NRSM7010MP	4P	75	23	-	38	7	5.5	8	6	6	△
		NRSM7010MB	2P										
M12 × 1.75	G8	NRSM8012PP	4P	82	26	-	42	8.5	6.5	9	6	6	△
		NRSM8012PB	2P										
	G9	NRSM9012PP	4P										
		NRSM9012PB	2P										
M12 × 1.5	G8	NRSM8012OP	4P	82	26	-	42	8.5	6.5	9	6	6	△
		NRSM8012OB	2P										
	G9	NRSM9012OP	4P										
		NRSM9012OB	2P										
M12 × 1.25	G8	NRSM8012NP	4P	82	26	-	42	8.5	6.5	9	6	6	△
		NRSM8012NB	2P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M12 × 1.25	G9	NRSM9012NP	4P	82	26	-	42	8.5	6.5	9	6	6	△
		NRSM9012NB	2P										
M12 × 1	G7	NRSM7012MP	4P	82	26	-	42	8.5	6.5	9	6	6	△
		NRSM7012MB	2P										
M14 × 2	G9	NRSM9014QP	4P	88	26	-	45	10.5	8	11	6	6	△
		NRSM9014QB	2P										
	G10	NRSM0014QP	4P										
		NRSM0014QB	2P										
M14 × 1.5	G9	NRSM9014OP	4P	88	26	-	45	10.5	8	11	6	6	△
		NRSM9014OB	2P										
M14 × 1	G8	NRSM8014MP	4P	88	26	-	45	10.5	8	11	6	6	△
		NRSM8014MB	2P										
M16 × 2	G9	NRSM9016QP	4P	95	26	-	48	12.5	10	13	6	6	△
		NRSM9016QB	2P										
	G10	NRSM0016QP	4P										
		NRSM0016QB	2P										
M16 × 1.5	G9	NRSM9016OP	4P	95	26	-	48	12.5	10	13	6	6	△
		NRSM9016OB	2P										
M16 × 1	G8	NRSM8016MP	4P	95	26	-	48	12.5	10	13	6	6	△
		NRSM8016MB	2P										
M18 × 1.5	G9	NRSM9018OP	4P	100	33	-	51	14	11	14	6	6	△
		NRSM9018OB	2P										
M20 × 2.5	G11	NRSM1020RP	4P	105	33	-	50	15	12	15	6	7	△
		NRSM1020RB	2P										
M20 × 1.5	G9	NRSM9020OP	4P	105	33	-	50	15	12	15	6	7	△
		NRSM9020OB	2P										
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
No.0-80UNF	G5	NRSM5UN0BP	4P	36	6.3	-	24	3	2.5	5	3	2	△
		NRSM5UN0BB	2P										
No.1-72UNF	G5	NRSM5UN1CP	4P	42	7.2	-	27	3	2.5	5	3	2	△
		NRSM5UN1CB	2P										
No.2-56UNC	G4	NRSM4UN2EP	4P	42	8.1	-	27	3	2.5	5	4	3	△
		NRSM4UN2EB	2P										
	G5	NRSM5UN2EP	4P										
		NRSM5UN2EB	2P										
	G7	NRSM7UN2EP	4P										
		NRSM7UN2EB	2P										
No.3-48UNC	G4	NRSM4UN3FP	4P	46	8.1	14	29	3	2.5	5	4	4	△
		NRSM4UN3FB	2P										
	G5	NRSM5UN3FP	4P										
		NRSM5UN3FB	2P										
No.4-40UNC	G5	NRSM5UN4HP	4P	46	9	14	26	4	3.2	6	4	4	△
		NRSM5UN4HB	2P										
	G6	NRSM6UN4HP	4P										
		NRSM6UN4HB	2P										
	G7	NRSM7UN4HP	4P										
		NRSM7UN4HB	2P										
No.4-48UNF	G5	NRSM5UN4FP	4P	46	9	14	26	4	3.2	6	4	4	△
		NRSM5UN4FB	2P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
No.4-48UNF	G6	NRSM6UN4FP	4P	46	9	14	26	4	3.2	6	4	4	△
		NRSM6UN4FB	2P										
No.6-32UNC	G5	NRSM5UN6JP	4P	52	11	16	29	5	4	7	4	4	△
		NRSM5UN6JB	2P										
	G6	NRSM6UN6JP	4P										
		NRSM6UN6JB	2P										
	G7	NRSM7UN6JP	4P										
		NRSM7UN6JB	2P										
No.6-40UNF	G5	NRSM5UN6HP	4P	52	11	16	29	5	4	7	4	4	△
		NRSM5UN6HB	2P										
No.8-32UNC	G6	NRSM6UN8JP	4P	60	13	21	33	5.5	4.5	7	4	4	△
		NRSM6UN8JB	2P										
	G7	NRSM7UN8JP	4P										
		NRSM7UN8JB	2P										
	G8	NRSM8UN8JP	4P										
No.8-36UNF	G5	NRSM5UN8IP	4P	60	13	21	33	5.5	4.5	7	4	4	△
		NRSM5UN8IB	2P										
	G6	NRSM6UN8IB											
No.10-24UNC	G6	NRSM6UNAMP	4P	60	13	22	33	5.5	4.5	7	4	4	△
		NRSM6UNAMB	2P										
	G7	NRSM7UNAMP	4P										
		NRSM7UNAMB	2P										
No.10-32UNF	G6	NRSM6UNAJP	4P	60	13	22	33	5.5	4.5	7	4	4	△
		NRSM6UNAJB	2P										
	G7	NRSM7UNAJP	4P										
		NRSM7UNAJB	2P										
1/4-20UNC	G6	NRSM6U04NP	4P	62	15	26	33	6	4.5	7	4	4	△
		NRSM6U04NB	2P										
	G7	NRSM7U04NP	4P										
		NRSM7U04NB	2P										
1/4-28UNF	G6	NRSM6U04KP	4P	62	15	26	33	6	4.5	7	4	4	△
		NRSM6U04KB	2P										

For Helical Coil Wire Screw Thread Inserts, for Metric Threads

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
STI M3 × 0.5	G3	RW3.0G3LENP	4P	3.65	52	7.5	17	29	5	4	7	4	4	△
		RW3.0G3LENB	2P											
STI M4 × 0.7	G4	RW4.0I4LENP	4P	4.909	60	13	22	33	5.5	4.5	7	4	4	△
		RW4.0I4LENB	2P											
STI M5 × 0.8	G4	RW5.0K4LENP	4P	6.039	62	15	26	33	6	4.5	7	4	4	△
		RW5.0K4LENB	2P											
STI M6 × 1	G4	RW6.0M4LENP	4P	7.299	70	19	-	36	6.2	5	8	4	6	△
		RW6.0M4LENB	2P											
STI M8 × 1.25	G4	RW8.0N4LENB	2P	9.624	75	23	-	38	7	5.5	8	6	6	△
STI M10 × 1.5	G5	RW010O5LENB	2P	11.948	82	26	-	42	8.5	6.5	9	6	6	△
STI M12 × 1.75	G6	RW012P6LENB	2P	14.273	95	26	-	48	12.5	10	13	6	6	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LS-N-RS

Long Shank Thread Forming Taps for Non-Ferrous Materials

Specification

HSS | NI Nitride

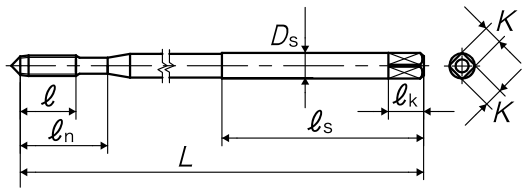
■LS-N-RS is the long shank forming tap suitable for non-ferrous materials such as aluminum castings, aluminum diecasting and brass.

Recommended Tapping Speeds depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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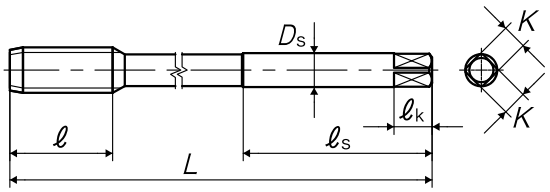


Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M3 × 0.5	G5	NRSM53.0GP10	4P	100	9	14	40	4	3.2	6	4	1	○
		NRSM53.0GB10	2P										
	G6	NRSM63.0GP10	4P										
		NRSM63.0GB10	2P										
M4 × 0.7	G6	NRSM64.0IP10	4P	100	11	17	40	5	4	7	4	1	○
		NRSM64.0IB10	2P										
	G7	NRSM74.0IP10	4P										
		NRSM74.0IB10	2P										
M5 × 0.8	G6	NRSM65.0KP10	4P	100	13	22	40	5.5	4.5	7	4	1	△
		NRSM65.0KB10	2P										
	G7	NRSM75.0KP10	4P										
		NRSM75.0KB10	2P										
M6 × 1	G7	NRSM76.0MP10	4P	100	15	26	40	6	4.5	7	4	1	○
		NRSM76.0MP15		150									
		NRSM76.0MB10	2P	100									
		NRSM76.0MB15		150									
	G8	NRSM86.0MP10	4P	100									△
		NRSM86.0MP15		150									
		NRSM86.0MB10	2P	100									
		NRSM86.0MB15		150									
M8 × 1.25	G7	NRSM78.0NP10	4P	100	19	-	50	6.2	5	8	6	2	△
		NRSM78.0NP15		150									
		NRSM78.0NB10	2P	100									
		NRSM78.0NB15		150									
M10 × 1.5	G7	NRSM70100P10	4P	100	23	-	50	7	5.5	8	6	2	△
		NRSM70100P15		150									

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-N-RS Long Shank Thread Forming Taps for Non-Ferrous Materials

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M10 × 1.5	G7	NRSM70100B10	2P	100	23	-	50	7	5.5	8	6	2	△
		NRSM70100B15		150									

Number of oil grooves : 1

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

R+V

Thread Forming Taps, Coated

Specification

HSS Coating

■R+V is coated forming tap for ferrous and non-ferrous materials. Optimum coating suitable to the tapping condition.

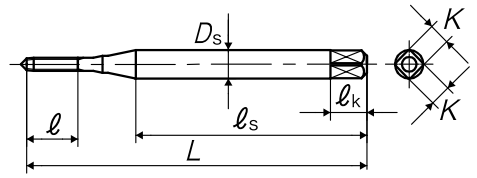
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 10~20 (m/min)

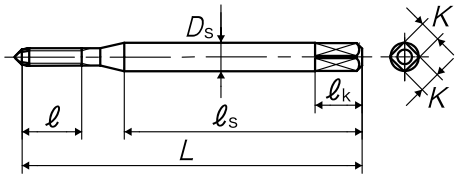
Medium carbon steels 中炭素鋼 10~20 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



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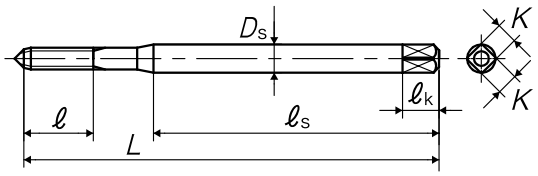

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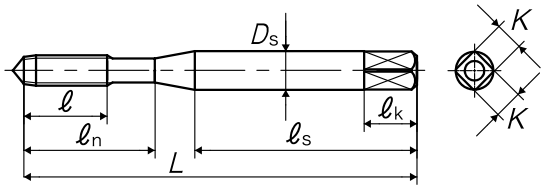


Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M1 × 0.25	G4	RVP41.0BP	4P	36	4.5	-	24	3	2.5	5	4	1	○
		RVP41.0BB	2P										
	G5	RVP51.0BP	4P										△
		RVP51.0BB	2P										
M1.2 × 0.25	G4	RVP41.2BP	4P	36	4.5	-	24	3	2.5	5	4	1	○
		RVP41.2BB	2P										
	G5	RVP51.2BP	4P										△
		RVP51.2BB	2P										
M1.4 × 0.3	G4	RVP41.4CP	4P	36	5.4	-	24	3	2.5	5	4	1	◎
		RVP41.4CB	2P										
	G5	RVP51.4CP	4P										
		RVP51.4CB	2P										
M1.6 × 0.35	G4	RVP41.6DP	4P	36	6.3	-	24	3	2.5	5	4	2	○
		RVP41.6DB	2P										
	G5	RVP51.6DP	4P										
		RVP51.6DB	2P										△
	G6	RVP61.6DB											
M1.7 × 0.35	G4	RVP41.7DP	4P	36	6.3	-	24	3	2.5	5	4	2	○

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Think threads with YAMAWA

R+V Thread Forming Tap, Coated

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M1.7 × 0.35	G4	RVP41.7DB	2P	36	6.3	-	24	3	2.5	5	4	2	○
	G5	RVP51.7DP	4P										◎
		RVP51.7DB	2P										
	G6	RVP61.7DP	4P										△
		RVP61.7DB	2P										
M2 × 0.4	G4	RVP42.0EP	4P	42	7.2	-	27	3	2.5	5	4	3	◎
		RVP42.0EB	2P										
	G5	RVP52.0EP	4P										
		RVP52.0EB	2P										
	G6	RVP62.0EP	4P										△
		RVP62.0EB	2P										
M2.3 × 0.4	G4	RVP42.3EP	4P	42	7.2	-	27	3	2.5	5	4	3	△
		RVP42.3EB	2P										
	G5	RVP52.3EP	4P										
		RVP52.3EB	2P										
M2.5 × 0.45	G5	RVP52.5FP	4P	46	8.1	14	29	3	2.5	5	4	4	○
		RVP52.5FB	2P										
	G6	RVP62.5FP	4P										△
		RVP62.5FB	2P										
M2.6 × 0.45	G5	RVP52.6FP	4P	46	8.1	14	29	3	2.5	5	4	4	◎
		RVP52.6FB	2P										
	G6	RVP62.6FP	4P										○
		RVP62.6FB	2P										
M3 × 0.5	G5	RVP53.0GP	4P	46	9	14	26	4	3.2	6	4	4	◎
		RVP53.0GB	2P										
	G6	RVP63.0GP	4P										
		RVP63.0GB	2P										
	G7	RVP73.0GP	4P										○
		RVP73.0GB	2P										
	G8	RVP83.0GP	4P										△
M4 × 0.7	G5	RVP54.0IP	4P	52	11	17	29	5	4	7	4	4	△
		RVP54.0IB	2P										
	G6	RVP64.0IP	4P										◎
		RVP64.0IB	2P										
	G7	RVP74.0IP	4P										○
		RVP74.0IB	2P										
	G8	RVP84.0IP	4P										△
		RVP84.0IB	2P										
M5 × 0.8	G5	RVP55.0KP	4P	60	13	22	33	5.5	4.5	7	4	4	△
		RVP55.0KB	2P										
	G6	RVP65.0KP	4P										○
		RVP65.0KB	2P										
	G7	RVP75.0KP	4P										
		RVP75.0KB	2P										
	G8	RVP85.0KP	4P										△
		RVP85.0KB	2P										
M6 × 1	G6	RVP66.0MP	4P	62	15	26	33	6	4.5	7	4	4	○
		RVP66.0MB	2P										
	G7	RVP76.0MP	4P										
		RVP76.0MB	2P										

Number of oil grooves : Metric thread : M2.6 and smaller=non, M3 and larger=4

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

OL+RZ/OL-RZ

Thread Forming Taps for Dry Tapping, Coated

Specification

HSS-P | Coating | <1D

■OL+RZ/OL-RZ are the forming taps enabling dry tapping under following condition : tapping sizes of smaller than M6, thin steel sheets having burring operation, and steel parts with rather short length. Optimum coating suitable to the tapping condition.

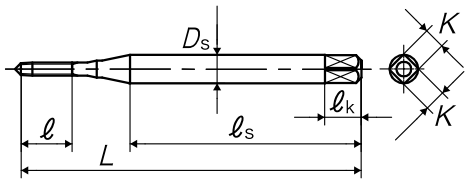
OL+RZ	all M
OL−RZ	all U

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
15~30 (m/min)	15~30 (m/min)	15~25 (m/min)	15~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

TYPE : 1



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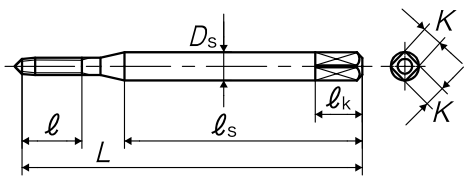
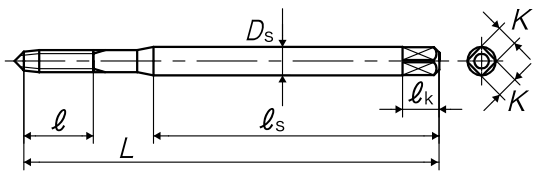


TYPE : 3



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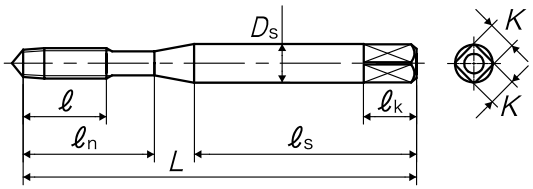

Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M1 × 0.25	G4	OLRZP41.0BP	4P	36	4.5	-	24	3	2.5	5	4	1	△
M1.2 × 0.25	G4	OLRZP41.2BP	4P	36	4.5	-	24	3	2.5	5	4	1	○
M1.4 × 0.3	G4	OLRZP41.4CP	4P	36	5.4	-	24	3	2.5	5	4	1	◎
M1.6 × 0.35	G4	OLRZP41.6DP	4P	36	6.3	-	24	3	2.5	5	4	2	○
M1.7 × 0.35	G4	OLRZP41.7DP	4P	36	6.3	-	24	3	2.5	5	4	2	◎
M2 × 0.4	G4	OLRZP42.0EP	4P	42	7.2	-	27	3	2.5	5	4	3	◎
	G5	OLRZP52.0EP											
M2.3 × 0.4	G4	OLRZP42.3EP	4P	42	7.2	-	27	3	2.5	5	4	3	○
	G5	OLRZP52.3EP											
M2.5 × 0.45	G5	OLRZP52.5FP	4P	46	8.1	14	29	3	2.5	5	4	4	○
	G6	OLRZP62.5FP											
M2.6 × 0.45	G5	OLRZP52.6FP	4P	46	8.1	14	29	3	2.5	5	4	4	○
	G6	OLRZP62.6FP											
M3 × 0.5	G5	OLRZP53.0GP	4P	46	9	14	26	4	3.2	6	4	4	◎
	G6	OLRZP63.0GP											
M3.5 × 0.6	G5	OLRZP53.5HP	4P	52	11	16	29	5	4	7	4	4	△
	G6	OLRZP63.5HP											○
M4 × 0.7	G6	OLRZP64.0IP	4P	52	11	17	29	5	4	7	4	4	◎
	G7	OLRZP74.0IP											○

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Think threads with YAMAWA

OL+RZ/OL-RZ Thread Forming Taps for Dry Tapping, Coated

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M5 × 0.8	G6	OLRZP65.0KP	4P	60	13	22	33	5.5	4.5	7	4	4	○
	G7	OLRZP75.0KP											
M6 × 1	G6	OLRZP66.0MP	4P	62	15	26	33	6	4.5	7	4	4	○
	G7	OLRZP76.0MP											
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
No.2-56UNC	G4	OLRZM4UN2EP	4P	42	8.1	-	27	3	2.5	5	4	3	△
	G5	OLRZM5UN2EP											
No.2-64UNF	G4	OLRZM4UN2DP	4P	42	8.1	-	27	3	2.5	5	4	3	△
No.3-48UNC	G4	OLRZM4UN3FP	4P	46	8.1	14	29	3	2.5	5	4	4	△
No.3-56UNF	G4	OLRZM4UN3EP	4P	46	8.1	14	29	3	2.5	5	4	4	△
No.4-40UNC	G5	OLRZM5UN4HP	4P	46	9	14	26	4	3.2	6	4	4	○
	G6	OLRZM6UN4HP											
No.4-48UNF	G5	OLRZM5UN4FP	4P	46	9	14	26	4	3.2	6	4	4	△
No.5-40UNC	G5	OLRZM5UN5HP	4P	52	11	16	29	5	4	7	4	4	△
No.5-44UNF	G5	OLRZM5UN5GP	4P	52	11	16	29	5	4	7	4	4	△
No.6-32UNC	G5	OLRZM5UN6JP	4P	52	11	16	29	5	4	7	4	4	△
	G6	OLRZM6UN6JP											○
No.6-40UNF	G5	OLRZM5UN6HP	4P	52	11	16	29	5	4	7	4	4	△
No.8-32UNC	G6	OLRZM6UN8JP	4P	60	13	21	33	5.5	4.5	7	4	4	△
	G7	OLRZM7UN8JP											
No.8-36UNF	G6	OLRZM6UN8IP	4P	60	13	21	33	5.5	4.5	7	4	4	△
No.10-24UNC	G6	OLRZM6UNAMP	4P	60	13	22	33	5.5	4.5	7	4	4	△
	G7	OLRZM7UNAMP											
No.10-32UNF	G6	OLRZM6UNAJP	4P	60	13	22	33	5.5	4.5	7	4	4	△
	G7	OLRZM7UNAJP											
No.12-24UNC	G6	OLRZM6UNCMP	4P	62	15	26	33	6	4.5	7	4	4	△
No.12-28UNF	G6	OLRZM6UNCKP	4P	62	15	26	33	6	4.5	7	4	4	△
1/4-20UNC	G7	OLRZM7U04NP	4P	62	15	26	33	6	4.5	7	4	4	△
1/4-28UNF	G7	OLRZM7U04KP	4P	62	15	26	33	6	4.5	7	4	4	△

Number of oil grooves : non

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HP+RZ/HP-RZ

High Performance Thread Forming Taps, Coated

Specification

HSS-P | Coating | ≤1.5D

■HP+RZ/HP-RZ are the forming taps suitable for steels (lower than 35HRC) and light alloys, and applicable to the high speed tapping. Optimum coating suitable to the tapping condition.

HP+RZ	～M6
HP−RZ	M8～, all U

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
15~30 (m/min)	15~30 (m/min)	15~25 (m/min)	15~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

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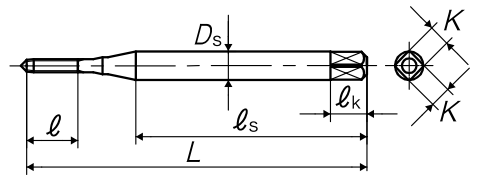

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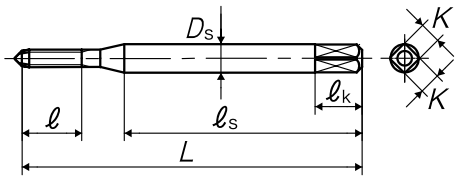

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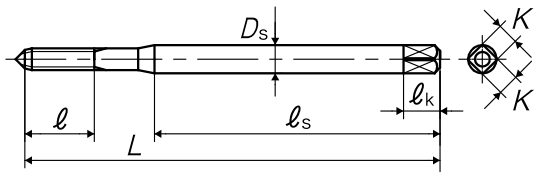

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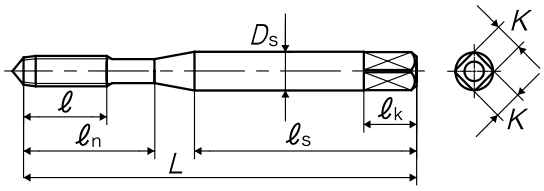

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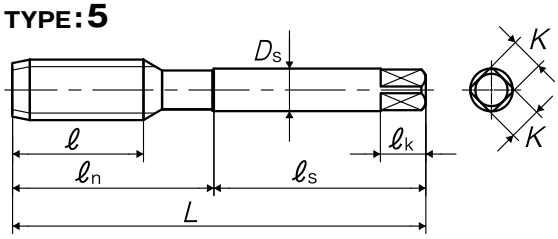

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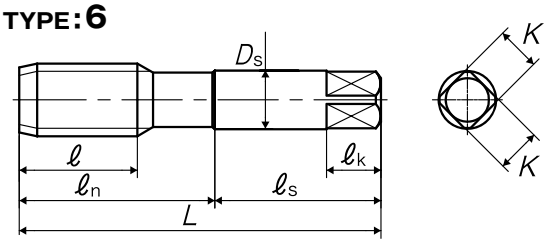


Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M1 × 0.25	G4	HRZP41.0BB	2P	36	4.5	-	24	3	2.5	5	4	1	○
M1.2 × 0.25	G4	HRZP41.2BB	2P	36	4.5	-	24	3	2.5	5	4	1	○
M1.4 × 0.3	G4	HRZP41.4CB	2P	36	5.4	-	24	3	2.5	5	4	1	○
M1.6 × 0.35	G4	HRZP41.6DB	2P	36	6.3	-	24	3	2.5	5	4	2	○
M1.7 × 0.35	G4	HRZP41.7DB	2P	36	6.3	-	24	3	2.5	5	4	2	○
M2 × 0.4	G4	HRZP42.0EB	2P	42	7.2	-	27	3	2.5	5	4	3	◎
	G5	HRZP52.0EB											
M2.3 × 0.4	G4	HRZP42.3EB	2P	42	7.2	-	27	3	2.5	5	4	3	○
	G5	HRZP52.3EB											
M2.5 × 0.45	G5	HRZP52.5FB	2P	46	8.1	14	29	3	2.5	5	4	4	◎
	G6	HRZP62.5FB											○

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Think threads with YAMAWA

HP+RZ/HP-RZ High Performance Thread Forming Taps, Coated

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M2.6 × 0.45	G5	HRZP52.6FB	2P	46	8.1	14	29	3	2.5	5	4	4	○
	G6	HRZP62.6FB											
M3 × 0.5	G5	HRZP53.0GP	4P	46	9	14	26	4	3.2	6	4	4	◎
		HRZP53.0GB	2P										
	G6	HRZP63.0GP	4P										○
		HRZP63.0GB	2P										
M3.5 × 0.6	G5	HRZP53.5HP	4P	52	11	16	29	5	4	7	4	4	△
		HRZP53.5HB	2P										
	G6	HRZP63.5HP	4P										
		HRZP63.5HB	2P										
M4 × 0.7	G6	HRZP64.0IP	4P	52	11	17	29	5	4	7	4	4	○
		HRZP64.0IB	2P										
	G7	HRZP74.0IP	4P										
		HRZP74.0IB	2P										
M5 × 0.8	G6	HRZP65.0KP	4P	60	13	22	33	5.5	4.5	7	4	4	○
		HRZP65.0KB	2P										
	G7	HRZP75.0KP	4P										
		HRZP75.0KB	2P										
M6 × 1	G6	HRZP66.0MP	4P	62	15	26	33	6	4.5	7	4	4	○
		HRZP66.0MB	2P										
	G7	HRZP76.0MP	4P										
		HRZP76.0MB	2P										
M8 × 1.25	G7	HRZM78.0NP	4P	70	19	-	36	6.2	5	8	6	5	○
		HRZM78.0NB	2P										
	G8	HRZM88.0NP	4P										
		HRZM88.0NB	2P										
M10 × 1.5	G7	HRZM7010OP	4P	75	23	-	38	7	5.5	8	8	5	○
		HRZM7010OB	2P										
	G8	HRZM8010OP	4P										△
		HRZM8010OB	2P										
M10 × 1.25	G7	HRZM7010NP	4P	75	23	-	38	7	5.5	8	8	5	○
		HRZM7010NB	2P										
	G8	HRZM8010NP	4P										△
		HRZM8010NB	2P										
M12 × 1.75	G8	HRZM8012PP	4P	82	26	-	42	8.5	6.5	9	8	5	△
		HRZM8012PB	2P										
	G9	HRZM9012PP	4P										
		HRZM9012PB	2P										
M12 × 1.5	G8	HRZM8012OP	4P	82	26	-	42	8.5	6.5	9	8	5	○
		HRZM8012OB	2P										
	G9	HRZM9012OP	4P										△
		HRZM9012OB	2P										
M12 × 1.25	G8	HRZM8012NP	4P	82	26	-	42	8.5	6.5	9	8	5	△
		HRZM8012NB	2P										
	G9	HRZM9012NP	4P										
		HRZM9012NB	2P										
M14 × 1.5	G9	HRZM9014OP	4P	88	26	-	45	10.5	8	11	8	5	△
		HRZM9014OB	2P										
M16 × 1.5	G9	HRZM9016OP	4P	95	26	-	48	12.5	10	13	8	5	△
		HRZM9016OB	2P										

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HP+RZ/HP-RZ High Performance Thread Forming Taps, Coated

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
M18 × 1.5	G9	HRZM90180P	4P	100	33	-	51	14	11	14	8	5	△
		HRZM90180B	2P										
M20 × 1.5	G9	HRZM90200P	4P	105	33	-	50	15	12	15	8	6	△
		HRZM90200B	2P										
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
No.2-56UNC	G4	HRZM4UN2EB	2P	42	8.1	-	27	3	2.5	5	4	3	△
	G5	HRZM5UN2EB											
No.2-64UNF	G4	HRZM4UN2DB	2P	42	8.1	-	27	3	2.5	5	4	3	△
No.3-48UNC	G4	HRZM4UN3FB	2P	46	8.1	14	29	3	2.5	5	4	4	△
No.3-56UNF	G4	HRZM4UN3EB	2P	46	8.1	14	29	3	2.5	5	4	4	△
No.4-40UNC	G5	HRZM5UN4HB	2P	46	9	14	26	4	3.2	6	4	4	○
	G6	HRZM6UN4HB											
No.4-48UNF	G5	HRZM5UN4FB	2P	46	9	14	26	4	3.2	6	4	4	△
No.5-40UNC	G5	HRZM5UN5HP	4P	52	11	16	29	5	4	7	4	4	△
		HRZM5UN5HB	2P										
No.5-44UNF	G5	HRZM5UN5GP	4P	52	11	16	29	5	4	7	4	4	△
		HRZM5UN5GB	2P										
No.6-32UNC	G5	HRZM5UN6JP	4P	52	11	16	29	5	4	7	4	4	△
		HRZM5UN6JB	2P										
	G6	HRZM6UN6JP	4P										
		HRZM6UN6JB	2P										
No.6-40UNF	G5	HRZM5UN6HP	4P	52	11	16	29	5	4	7	4	4	△
		HRZM5UN6HB	2P										
No.8-32UNC	G6	HRZM6UN8JP	4P	60	13	21	33	5.5	4.5	7	4	4	△
		HRZM6UN8JB	2P										
	G7	HRZM7UN8JP	4P										
		HRZM7UN8JB	2P										
No.8-36UNF	G6	HRZM6UN8IP	4P	60	13	21	33	5.5	4.5	7	4	4	△
		HRZM6UN8IB	2P										
No.10-24UNC	G6	HRZM6UNAMP	4P	60	13	22	33	5.5	4.5	7	4	4	△
		HRZM6UNAMB	2P										
	G7	HRZM7UNAMP	4P										
		HRZM7UNAMB	2P										
No.10-32UNF	G6	HRZM6UNAJP	4P	60	13	22	33	5.5	4.5	7	4	4	△
		HRZM6UNAJB	2P										
	G7	HRZM7UNAJP	4P										
		HRZM7UNAJB	2P										
No.12-24UNC	G6	HRZM6UNCMP	4P	62	15	26	33	6	4.5	7	4	4	△
		HRZM6UNCMB	2P										
No.12-28UNF	G6	HRZM6UNCKP	4P	62	15	26	33	6	4.5	7	4	4	△
		HRZM6UNCKB	2P										
1/4-20UNC	G7	HRZM7U04NP	4P	62	15	26	33	6	4.5	7	4	4	△
		HRZM7U04NB	2P										
1/4-28UNF	G7	HRZM7U04KP	4P	62	15	26	33	6	4.5	7	4	4	△
		HRZM7U04KB	2P										

Number of oil grooves : Metric thread : M2.6 and smaller=non, M3~M7=2, M8=3, M10 and larger=4
Unified thread : No.4 and smaller=non, No.5 and larger=2

SC-TL-RZ

Torqueless Thread Forming Taps with short chamfer

Specification

HSS-P | Coating | <1.5D

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
15~30 (m/min)	15~30 (m/min)	15~25 (m/min)	15~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

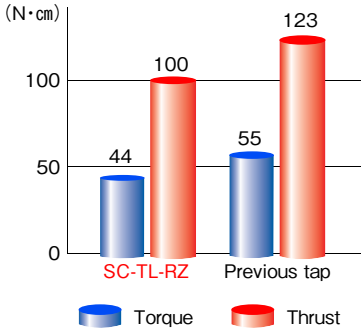
Product features

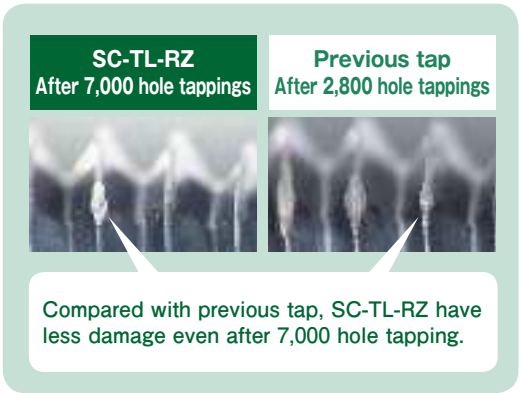
●Producing high quality internal threads with little burrs, SC-TL-RZ results in longer tool life.
●Tapping hard-to-machine materials of lower ductility becomes possible.
●Longer tool life under water soluble oil.
●Wider tapping application range up to higher speed tapping.
●Applicable materials:
- Stainless steels：SUS303, SUS304, SUS316, SUS440C
- Alloy steels：SCM420
- Carbon steels：S45C ～ S50C
- Aluminum alloy castings and die castings

Tapping data

Tapping condition [M3×0.5]

Work material	SCM440 tempered 32HRC
Tapping depth	4.5㎜
Bored hole	ϕ2.8
Tapping speed	5m/min
Tapping fluid	Water soluble oil (×10)
Machine	Tapping center

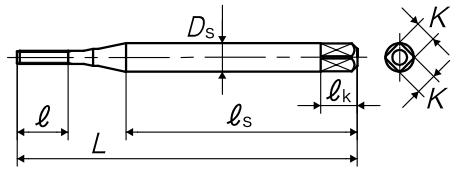




Think threads with YAMAWA
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

TYPE: 1



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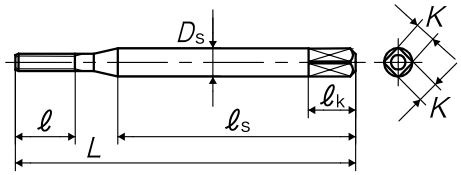

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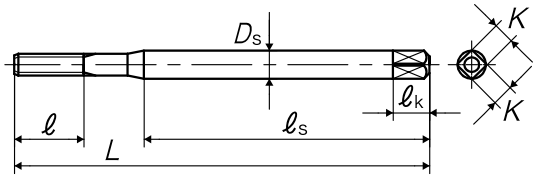

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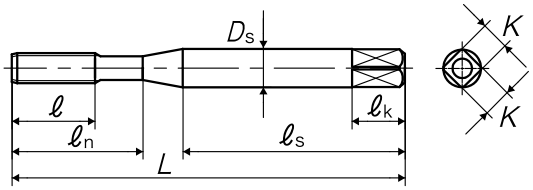


Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M1 × 0.25	G4	SRZM41.0B1	1P	36	4.5	-	24	3	2.5	5	4	1	△
M1.2 × 0.25	G4	SRZM41.2B1	1P	36	4.5	-	24	3	2.5	5	4	1	△
M1.4 × 0.3	G4	SRZM41.4C1	1P	36	5.4	-	24	3	2.5	5	4	1	△
M1.4 × 0.2	G3	SRZM31.4A1	1P	36	3.6	-	24	3	2.5	5	4	1	△
M1.6 × 0.35	G4	SRZM41.6D1	1P	36	6.3	-	24	3	2.5	5	4	2	△
M1.6 × 0.2	G3	SRZM31.6A1	1P	36	3.6	-	24	3	2.5	5	4	2	△
M1.7 × 0.35	G4	SRZM41.7D1	1P	36	6.3	-	24	3	2.5	5	4	2	△
M2 × 0.4	G4	SRZM42.0E1	1P	42	7.2	-	27	3	2.5	5	4	3	△
M2.5 × 0.45	G5	SRZM52.5F1	1P	46	8.1	14	29	3	2.5	5	4	4	△
M2.6 × 0.45	G5	SRZM52.6F1	1P	46	8.1	14	29	3	2.5	5	4	4	△
M3 × 0.5	G5	SRZM53.0G1	1P	46	9	14	26	4	3.2	6	4	4	△
M4 × 0.7	G6	SRZM64.0I1	1P	52	11	17	29	5	4	7	4	4	△
M5 × 0.8	G6	SRZM65.0K1	1P	60	13	22	33	5.5	4.5	7	4	4	△
M6 × 1	G6	SRZM66.0M1	1P	62	15	26	33	6	4.5	7	4	4	△

SURZ

SU Thread Forming Taps

Specification

HSS-P | Coating | ≤1.5D

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
15~30 (m/min)	15~30 (m/min)	15~25 (m/min)	15~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

Product features

- Adopting the special form on tap's root, SURZ controls the minor diameter geometry of internal threads.
- Special lobe shape realizes low tapping torque.
- High efficiency can be obtained in thread forming of stainless steel parts.
- By adjusting bored hole size, you can adjust the minor diameter geometry of internal threads.

Tapping data

Tapping condition [M2×0.4]

Work material	SUS304
Tapping length	5.2mm (Blind hole)
Bored hole size	ϕ1.85～ϕ1.82
Tapping speed	5m/min
Feed	Rigid
Tapping direction	Vertical
Tapping fluid	Water soluble oil (×20)
Machine	Machining center (BT15)

POINT

In use, please select proper bored hole diameter.

Bored hole size	ϕ 1.84	ϕ 1.83
Cross section picture of internal threads		
Seam shape	Normal seams remain.	Seams remain a little.
Minor diameter	ϕ 1.62	ϕ 1.60

Bored hole size	ϕ 1.82	ϕ 1.81
Cross section picture of internal threads		
Seam shape	Seams remain a little.	No seam remains.
Minor diameter	ϕ 1.59	ϕ 1.58

M2x0.4 6H internal thread minor diameter and tolerance	
Max.	1.679
Min.	1.567
Tolerance	0.112

Recommended bored hole diameter before tapping

Unit : mm

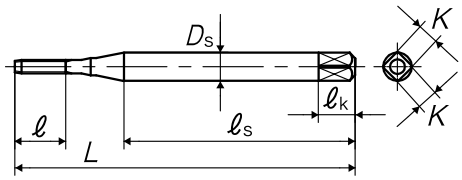
Size	Class	Recommended bored hole size
M1X0.25	G4	0.90
M1.2X0.25	G4	1.10
M1.4X0.3	G4	1.28
M1.6X0.2	G3	1.52
M1.6X0.35	G4	1.46
M1.7X0.35	G4	1.56
M2X0.4	G4	1.82
M2.3X0.4	G4	2.12
M2.5X0.45	G4	2.30
M2.6X0.45	G5	2.40
M3X0.5	G5	2.77
No.2-56UNC	G4	1.98
No.4-40UNC	G5	2.55
No.6-32UNC	G5	3.14

※Recommended bored hole diameters shown in above table have been calculated by aiming at the thread engagement of 90% and by considering avoidance of tap breakage, based on our past tapping test experiences.
※Recommended bore hole diameter may change because material deformation can slightly change depending on material, hardness, dimension of workpiece and tapping condition.

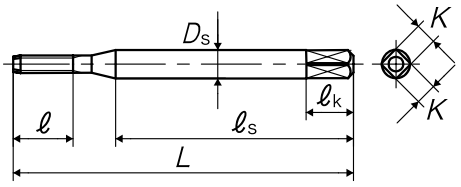
Think threads with YAMAWA
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

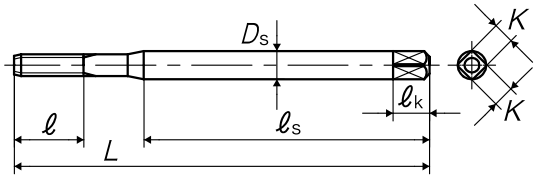
TYPE: 1



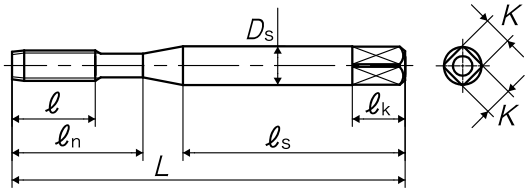
TYPE: 2



TYPE: 3



TYPE: 4



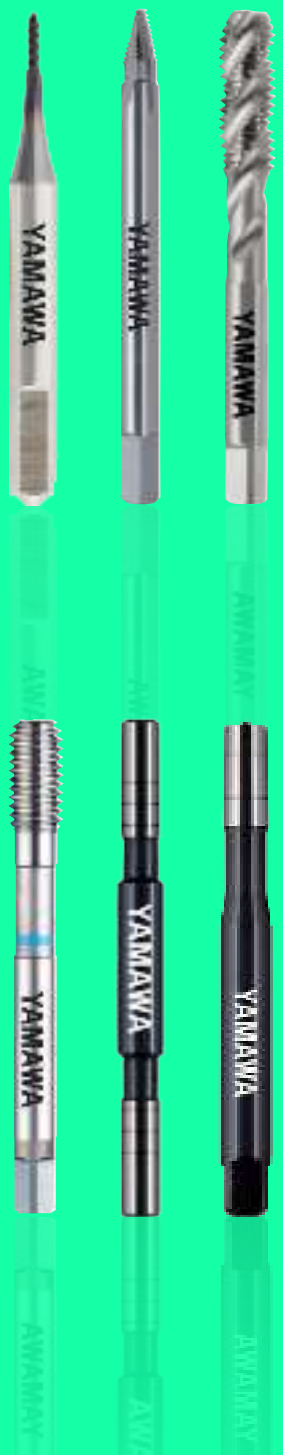
Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Metric Threads													
M1 × 0.25	G4	SURZ41.0BB	2P	36	4.5	-	24	3	2.5	5	4	1	○
M1.2 × 0.25	G4	SURZ41.2BB	2P	36	4.5	-	24	3	2.5	5	4	1	○
M1.4 × 0.3	G4	SURZ41.4CB	2P	36	5.4	-	24	3	2.5	5	4	1	○
M1.6 × 0.2	G3	SURZ31.6AB	2P	36	3.6	-	24	3	2.5	5	4	2	○
M1.6 × 0.35	G4	SURZ41.6DB	2P	36	6.3	-	24	3	2.5	5	4	2	○
M1.7 × 0.35	G4	SURZ41.7DB	2P	36	6.3	-	24	3	2.5	5	4	2	○
M2 × 0.4	G4	SURZ42.0EB	2P	42	7.2	-	27	3	2.5	5	4	3	○
M2.3 × 0.4	G4	SURZ42.3EB	2P	42	7.2	-	27	3	2.5	5	4	3	○
M2.5 × 0.45	G4	SURZ42.5FB	2P	46	8.1	14	29	3	2.5	5	4	4	○
M2.6 × 0.45	G5	SURZ52.6FB	2P	46	8.1	14	29	3	2.5	5	4	4	○
M3 × 0.5	G5	SURZ53.0GB	2P	46	9	14	26	4	3.2	6	4	4	○
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
No.2-56UNC	G4	SURZ4UN2EB	2P	42	8.1	-	27	3	2.5	5	4	3	○
No.4-40UNC	G5	SURZ5UN4HB	2P	46	9	14	26	4	3.2	6	4	4	○
No.6-32UNC	G5	SURZ5UN6JB	2P	52	11	16	29	5	4	7	4	4	○

MEMO

SPECIAL THREAD TAPS / SIMPLE INSPECTION TOOLS



NT	ST-1
MS+RS HPsRZ	ST-3
MS+TR	ST-5
HT TRI	ST-6
SP TRI	ST-7
RLS-HT	ST-8
HT TV	ST-9
HT CTV	ST-11
HT CTC	ST-12
HT CTG	ST-13
HT BC	ST-14
SIT	ST-17
SITD	ST-23
CHECK PINS	ST-27
CPC-S	ST-29
CPC-T	ST-31
CPR-S	ST-32
CPR-T	ST-34
CPR-Y	ST-36
SA	ST-37

NT

Nut Taps

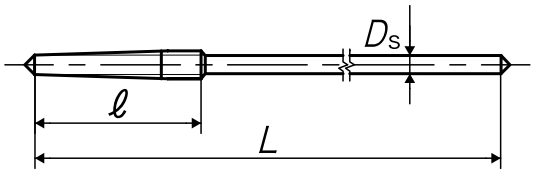
Specification

HSS

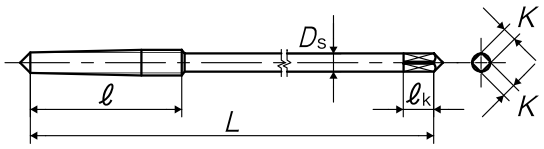
For icon explanation, refer to P.24

■NT is the tap with straight flutes to be mainly used on nut tapping machine.

TYPE: 1



TYPE: 2



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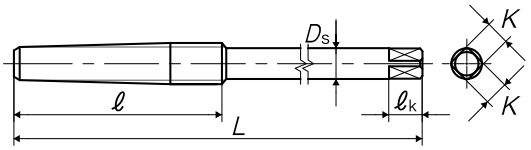


Segment : 1I

Size	Class	Code	ℓc (pitches)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads											
M2 × 0.4	Ⅱb	NH22.0E	25P	75	14	1.4	-	-	3	1	△
M2.3 × 0.4	Ⅱb	NH22.3E	25P	80	14	1.7	-	-	3	1	△
M2.5 × 0.45	Ⅱb	NH22.5F	24P	85	15	2	-	-	3	1	△
M2.6 × 0.45	Ⅱb	NH22.6F	24P	85	15	2	-	-	3	1	△
M3 × 0.5	Ⅱb	NH23.0G	30P	90	20	2.1	-	-	3	1	◎
M4 × 0.7	Ⅱb	NH24.0I	27P	100	25	2.8	-	-	3	1	◎
M5 × 0.8	Ⅱb	NH25.0K	24P	110	30	3.6	2.8	6	3	2	◎
M6 × 1	Ⅱb	NH26.0M	26P	120	35	4.5	3.5	6	3	2	◎
M6 × 0.75	Ⅱ	NH26.0J	24P	115	30	4.5	3.5	6	3	2	△
M8 × 1.25	Ⅱb	NH28.0N	24P	140	40	6.2	5	8	3	3	◎
M8 × 1	Ⅱ	NH28.0M	25P	130	40	6.2	5	8	3	3	△
M8 × 0.75	Ⅱ	NH28.0J	24P	120	30	6.2	5	8	3	3	△
M10 × 1.5	Ⅱb	NH2010O	25P	160	50	7.8	6	9	3	3	○
M10 × 1.25	Ⅱ	NH2010N	24P	150	45	7.8	6	9	3	3	△
M10 × 1	Ⅱ	NH2010M	25P	140	40	7.8	6	9	3	3	△
M12 × 1.75	Ⅱb	NH2012P	26P	170	60	9	7	10	3	3	○
M12 × 1.5	Ⅱ	NH2012O	25P	160	55	9	7	10	3	3	△
M12 × 1.25	Ⅱ	NH2012N	24P	160	45	9	7	10	3	3	△
M12 × 1	Ⅱ	NH2012M	25P	150	40	9	7	10	3	3	△
M14 × 2	Ⅱb	NH2014Q	25P	190	65	11	9	12	3	3	△
M14 × 1.5	Ⅱ	NH2014O	25P	170	55	11	9	12	3	3	△
M16 × 2	Ⅱb	NH2016Q	26P	200	70	13	10	13	3	3	○
M16 × 1.5	Ⅱ	NH2016O	25P	180	55	13	10	13	3	3	△
M18 × 2.5	Ⅱb	NH2018R	24P	220	80	14	11	14	3	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Chamfer length	Overall length	Thread length	Shank dia.	Size of square	Length of square
ℓc	L	ℓ	Ds	K	ℓk

NT Nut Taps

Size	Class	Code	ℓc (pitches)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M18 × 1.5	Ⅱ	NH20180	25P	190	55	14	11	14	3	3	△
M20 × 2.5	Ⅱb	NH2020R	26P	230	85	16	12	15	3	3	△
M20 × 1.5	Ⅱ	NH20200	25P	200	60	16	12	15	3	3	△
M22 × 2.5	Ⅱb	NH2022R	27P	250	90	18	14	17	3	3	△
M24 × 3	Ⅱb	NH2024S	25P	260	100	19	15	18	3	3	△
M24 × 1.5	Ⅱ	NH20240	25P	220	60	19	15	18	3	3	△
M26 × 1.5	Ⅱ	NH20260	25P	230	60	20	15	18	3	3	△
M27 × 3	Ⅱb	NH2027S	27P	280	110	22	17	20	4	3	△
M30 × 3.5	Ⅱb	NH2030T	26P	300	120	24	19	22	4	3	△
M30 × 1.5	Ⅱ	NH20300	25P	240	60	24	19	22	4	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MS+RS

Roll Taps for Miniature Threads

Specification

HSS

Recommended Tapping Speeds depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
~10 (m/min)	~10 (m/min)	~10 (m/min)

For icon explanation, refer to P.24

HPsRZ

High Performance Roll Taps for Miniature Threads

Specification

HSS-P Coating

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
~10 (m/min)	~10 (m/min)	~10 (m/min)	~10 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

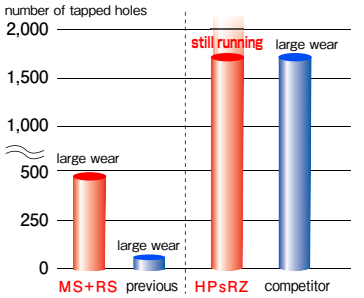
Product features

- Using new blanks, Roll Taps improve their rigidity, bending strength and run-out tolerance.
- Marking position is moved to square portion to keep high shank concentricity.
- Adoption of new thread limits (GS classes) improves the thread accuracy of internal threads machined.

Tapping data

Tapping condition [S0.8×0.2]

Tool	MS+RS	HPsRZ
	previous	competitor
Coating	—	TiCN
Tapping speed	4m/min	8m/min
Work material	SUS304 (88HRB)	
Bored hole size	ϕ0.73	
Tapping length	1.2mm (1.5D)	
Machine	CNC tapping center	
Tapping fluid	Insoluble oil	



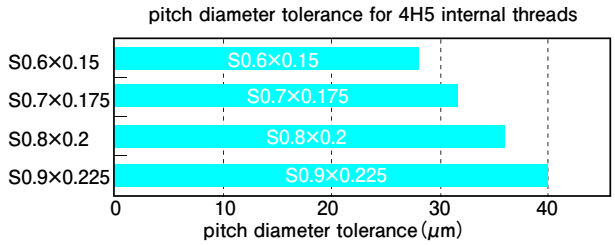
※Judgement of tool life : Crest wear at the 1st full thread

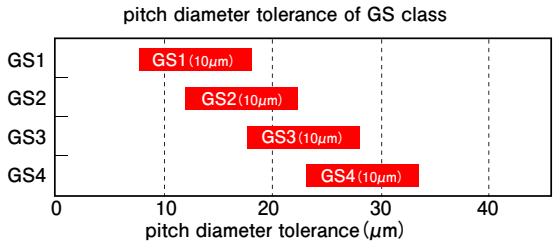
Recommended bored hole size

unit : mm

Size	Class	Bored hole size for class 4H5	
		Max	Min
S0.6X0.15	GS 2	0.55	0.54
S0.7X0.175	GS 3	0.64	0.62
S0.8X0.2	GS 3	0.73	0.71
S0.9X0.225	GS 4	0.82	0.80

4H5 internal threads and New thread class "GS"



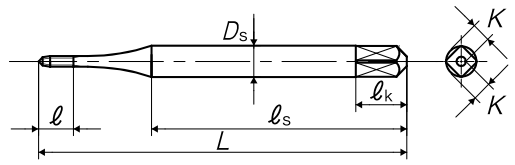


Think threads with YAMAWA
For improvement, spec may change without advance notice.

Overall length	Thread length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓs	Ds	K	ℓk

MS+RS Roll Taps for Miniature Threads

TYPE: 1

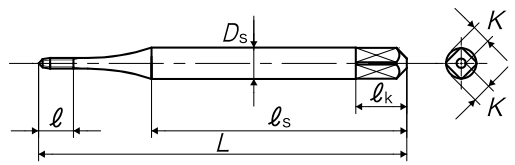


Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Miniature Screw Threads												
S0.6 × 0.15	GS2	MSP20.6-B	2P	36	2.5	25	3	2.5	6	4	1	△
S0.7 × 0.175	GS3	MSP30.7-B	2P	36	2.5	25	3	2.5	6	4	1	△
S0.8 × 0.2	GS3	MSP30.8-B	2P	36	3	25	3	2.5	6	4	1	△
S0.9 × 0.225	GS4	MSP40.9-B	2P	36	3	25	3	2.5	6	4	1	△

HPsRZ High Performance Roll Taps for Miniature Threads

TYPE: 1



Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type	Stock
For Miniature Screw Threads												
S0.6 × 0.15	GS2	HPS20.6-B	2P	36	2.5	25	3	2.5	6	4	1	△
S0.7 × 0.175	GS3	HPS30.7-B	2P	36	2.5	25	3	2.5	6	4	1	△
S0.8 × 0.2	GS3	HPS30.8-B	2P	36	3	25	3	2.5	6	4	1	△
S0.9 × 0.225	GS4	HPS40.9-B	2P	36	3	25	3	2.5	6	4	1	△

MS+TR

Hand Taps for Miniature Screw Threads

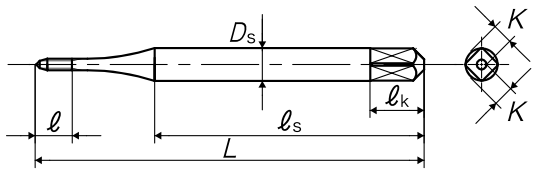
Specification

HSS

■Cutting Tap for Miniature Screw Threads

For icon explanation, refer to P.24

TYPE: 1



Segment : 1A

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Miniature Screw Threads											
S0.6 × 0.15	GMHRP0.6-3	3P	36	2.5	25	3	2.5	6	3	1	△
S0.7 × 0.175	GMHRP0.7-3	3P	36	2.5	25	3	2.5	6	3	1	△
S0.8 × 0.2	GMHRP0.8-3	3P	36	3	25	3	2.5	6	3	1	△
S0.9 × 0.225	GMHRP0.9-3	3P	36	3	25	3	2.5	6	3	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT TRI

Hand Taps for Tripod Threads

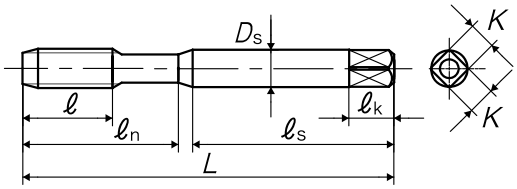
Specification

HSS

For icon explanation, refer to P.24

■Hand Tap for camera tripod threads. Its thread size is oversized.

TYPE: 1



Segment : 1A

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Tripod Threads												
1/4-20	TYU04N0KEB3	3P	62	15	26	33	6	4.5	7	3	1	△
	TYU04N0KEBA	1.5P										

■ for Tripod Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
1/4 - 20	-	6.350	5.525	230	210	4.975

SP TRI

Spiral Fluted Taps for Tripod Threads

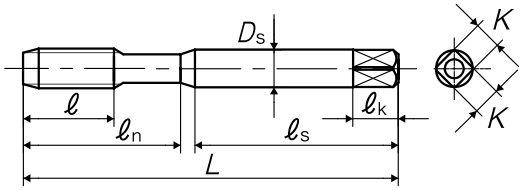
Specification

HSS

For icon explanation, refer to P.24

■Spiral Fluted Tap for camera tripod threads. Its thread size is oversized.

TYPE: 1



Segment : 1C

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Tripod Threads												
1/4-20	SYU04N0KEB	2.5P	62	15	26	33	6	4.5	7	3	1	△

■ for Tripod Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
1/4 - 20	-	6.350	5.525	230	210	4.975

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

RLS-HT

Hand Taps for Camera Release Threads

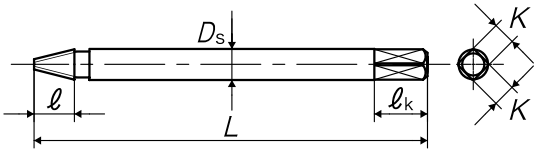
Specification

HSS

For icon explanation, refer to P.24

■Tap for the screws for installing camera release.

TYPE: 1



Size	Code	Chamfer	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Camera Release Threads										
3.4× 0.5× 28°	TY3.4G0LEB	-	52	5.25	4	3.2	6	3	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

HT TV

Hand Taps for Automobile Tire Valve Threads

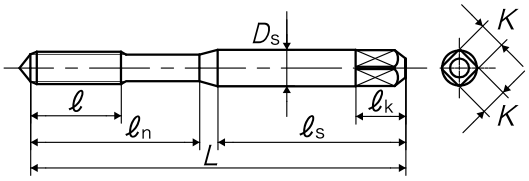
Specification

HSS

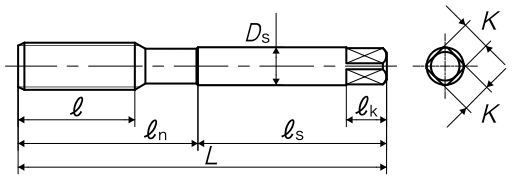
For icon explanation, refer to P.24

■Tap for Automobile Tire Valve Threads.

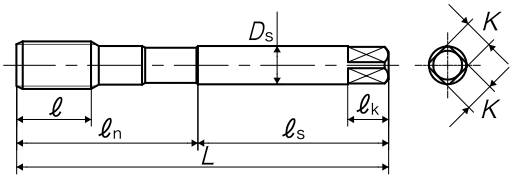
TYPE: 1



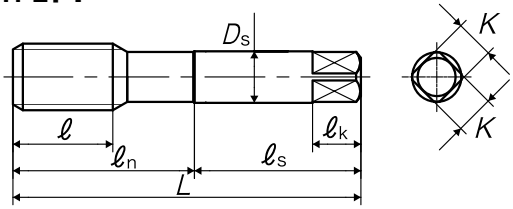
TYPE: 2



TYPE: 3



TYPE: 4



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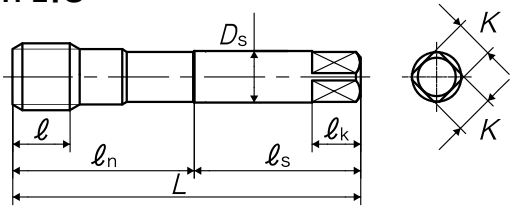


Segment : 1A

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Tire Valve Threads												
5V1	TY05V10LEBA	1.5P	62	15	26	33	6	4.5	7	3	1	△
8V1	TY08V10LEBA	1.5P	70	19	-	36	6.2	5	8	3	2	△
8V2	TY08V20LEBA	1.5P	70	19	-	36	6.2	5	8	3	2	△
9V1	TY09V10LEBA	1.5P	75	23	-	38	7	5.5	8	4	2	△
10V1	TY10V10LEBA	1.5P	75	23	-	38	7	5.5	8	4	2	△
10V2	TY10V20LEBA	1.5P	82	26	-	42	8.5	6.5	9	4	2	△
11V1	TY11V10LEBA	1.5P	82	26	-	42	8.5	6.5	9	4	2	△
12V1	TY12V10LEBA	1.5P	88	26	-	45	10.5	8	11	4	2	△
13V1	TY13V10LEBA	1.5P	88	26	-	45	10.5	8	11	4	2	△
13V2	TY13V20LEBA	1.5P	88	26	-	45	10.5	8	11	4	2	△
15V1	TY15V10LEBA	1.5P	95	26	-	48	12.5	10	13	4	2	△
16V1	TY16V10LEBA	1.5P	95	26	-	48	12.5	10	13	4	2	△
17V1	TY17V10LEBA	1.5P	100	18	-	51	14	11	14	4	3	△
17V2	TY17V20LEBA	1.5P	100	18	-	51	14	11	14	4	3	△
17V3	TY17V30LEBA	1.5P	100	33	-	51	14	11	14	4	2	△
19V1	TY19V10LEBA	1.5P	105	33	-	50	15	12	15	4	4	△
20V1	TY20V10LEBA	1.5P	115	19	-	55	17	13	16	4	5	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

for Tire Valve Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
5 V 1	5.334	4.869	4.597
8 V 1	7.798	7.284	7.036
8 V 2	7.938	7.250	6.782
9 V 1	9.525	9.010	8.661
10 V 1	9.800	9.380	8.750
10 V 2	10.414	9.815	9.350
11 V 1	11.113	10.287	9.729
12 V 1	12.319	11.669	11.176
13 V 1	12.700	11.875	11.328
13 V 2	12.700	12.185	11.837
15 V 1	15.137	14.380	13.750
16 V 1	15.875	15.263	14.869
17 V 1	17.137	16.380	15.750
17 V 2	17.463	16.775	16.307
17 V 3	17.463	16.432	15.748
19 V 1	19.050	18.019	17.323
20 V 1	20.642	19.885	19.250

HT CTV

Hand Taps for Bicycle Tire Valve Threads

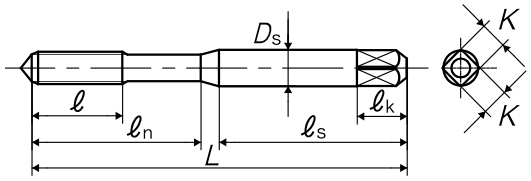
Specification

HSS

■Tap for Bicycle Tire Valve Threads.

For icon explanation, refer to P.24

TYPE: 1



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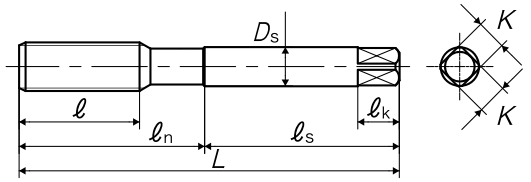


Segment : 1A

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Bicycle Tire Valve Threads												
CTV5-36	TYCV5I0LEBA	1.5P	62	15	26	33	6	4.5	7	3	1	△
CTV5-24	TYCV5M0LEBA	1.5P	62	15	26	33	6	4.5	7	3	1	△
CTV8-32	TYCV8J0LEBA	1.5P	70	18	-	36	6.2	5	8	3	2	△
CTV8-30	TYCV880LEBA	1.5P	75	23	-	38	7	5.5	8	3	2	△
5V2	TY05V20LEBA	1.5P	62	15	26	33	6	4.5	7	3	1	△
6V1	TY06V10LEBA	1.5P	62	15	26	33	6	4.5	7	3	1	△

■ for Bicycle Tire Valve Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
CTV 5 - 36	5.330	4.872	4.566
CTV 5 - 24	5.100	4.413	3.954
CTV 8 - 32	7.900	7.384	7.041
CTV 8 - 30	8.100	7.550	7.183
5 V 2	5.370	4.760	4.400
6 V 1	6.160	5.725	5.440

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT CTC

Hand Taps for Steel Conduit Threads

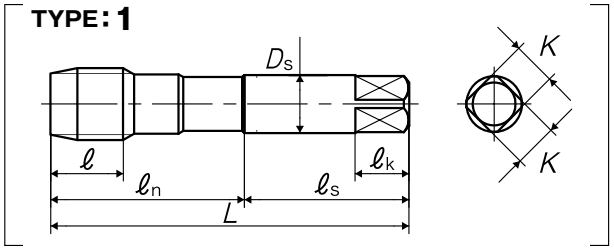
Specification

HSS

For icon explanation, refer to P.24

■Tap for Steel Conduit Threads. Thread angle is 80 degree and the thread symbol is CTC.

TYPE: 1



Segment : 1A

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Steel Conduit Threads												
CTC19-16	TYCC190HEB5	5P	105	23	-	50	15	12	15	4	1	△
CTC25-16	TYCC250HEB5	5P	125	24	-	58	19	15	18	4	1	△
CTC31-16	TYCC310HEB5	5P	145	26	-	67	24	19	22	4	1	△
CTC39-16	TYCC390HEB5	5P	165	27	-	76	30	23	26	4	1	△

■ for Steel Conduit Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
CTC 19 - 16	19.100	18.343	17.708
CTC 25 - 16	25.400	24.643	24.008
CTC 31 - 16	31.800	31.043	30.408
CTC 39 - 16	38.100	37.343	36.708
CTC 51 - 16	50.800	50.043	49.408
CTC 63 - 16	63.500	62.743	62.108
CTC 75 - 16	76.200	75.443	74.808

HT CTG

Hand Taps for Thick Steel Conduit Threads

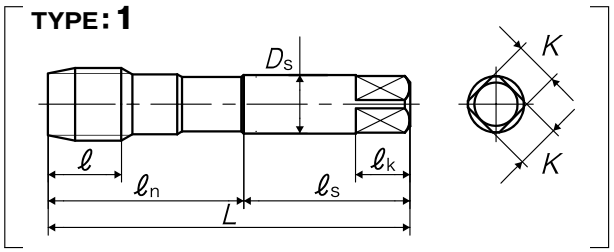
Specification

HSS

For icon explanation, refer to P.24

■Tap for Thick Steel Conduit Threads. Thread angle is 55 degree and the thread symbol is CTG.

TYPE: 1



Segment : 1A

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Thick Steel Conduit Threads												
CTG16-14	TYCG160HEB5	5P	115	25	-	55	17	13	16	4	1	△
CTG22-14	TYCG220HEB5	5P	130	26	-	60	20	15	18	4	1	△
CTG28-11	TYCG280HEB5	5P	155	31	-	71	28	21	24	4	1	△
CTG36-11	TYCG360HEB5	5P	180	33	-	83	35	26	30	4	1	△
CTG42-11	TYCG420HEB5	5P	185	34	-	85	38	29	32	4	1	△

■ for Thick Steel Conduit Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
CTG 16 - 14	20.955	19.793	18.922
CTG 22 - 14	26.441	25.279	24.408
CTG 28 - 11	33.249	31.770	30.661
CTG 36 - 11	41.910	40.431	39.322
CTG 42 - 11	47.803	46.324	45.215
CTG 54 - 11	59.614	58.135	57.026
CTG 70 - 11	75.184	73.705	72.596
CTG 82 - 11	87.884	86.405	85.296
CTG 92 - 11	100.330	98.851	97.742
CTG 104 - 11	113.030	111.551	110.442

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT BC

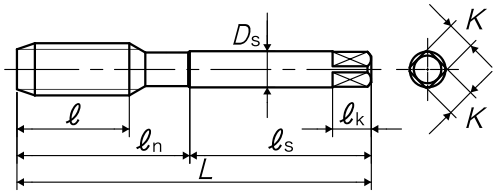
Hand Taps for Bicycle Threads

Specification

For icon explanation, refer to P.24

■Tap for Bicycle Threads (General Use).

TYPE: 1



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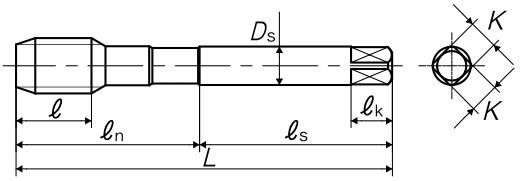

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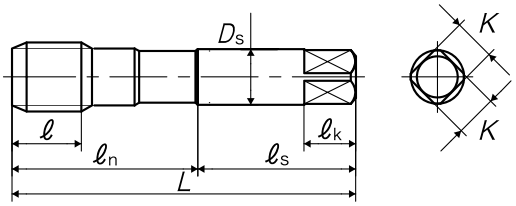


Segment : 1A

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Bicycle Threads												
BC 5/16-26	TYBC010HEB5	5P	70	19	-	36	6.2	5	8	3	1	△
	TYBC010HEBA	1.5P										
BC 3/8-26	TYBC020HEB5	5P	75	23	-	38	7	5.5	8	4	1	△
	TYBC020HEBA	1.5P										
BC 7/16-26	TYBC030HEB5	5P	82	26	-	42	8.5	6.5	9	4	1	△
	TYBC030HEBA	1.5P										
BC 1/2-20	TYBC040HEB5	5P	88	26	-	45	10.5	8	11	4	1	△
	TYBC040HEBA	1.5P										
BC 9/16-20	TYBC050HEB5	5P	95	26	-	48	12.5	10	13	4	1	△
	TYBC050HEBA	1.5P										
BC 5/8-20	TYBC060HEB5	5P	95	26	-	48	12.5	10	13	4	1	△
	TYBC060HEBA	1.5P										
BC 11/16-24	TYBC070HEB5	5P	100	18	-	51	14	11	14	4	2	△
	TYBC070HEBA	1.5P										
BC 3/4-30	TYBC080HEB5	5P	105	18	-	50	15	12	15	4	3	△
	TYBC080HEBA	1.5P										
BC 31/32-30	TYBC090HEB5	5P	125	20	-	58	19	15	18	4	3	△
	TYBC090HEBA	1.5P										
BC 1-24	TYBC100HEB5	5P	125	20	-	58	19	15	18	4	3	△
	TYBC100HEBA	1.5P										
BC 1.29-24	TYBC110HEB5	5P	145	21	-	67	25	19	22	4	3	△
	TYBC110HEBA	1.5P										
BC 1.37-24	TYBC120HEB5	5P	155	26	-	71	28	21	24	4	3	△
	TYBC120HEBA	1.5P										

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

HT BC Hand Taps for Bicycle Threads

Size	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
BC 1 7/16-24	TYBC130HEB5	5P	165	26	-	76	30	23	26	4	3	△
	TYBC130HEBA	1.5P										
BC 1.45-24	TYBC140HEB5	5P	165	26	-	76	30	23	26	4	3	△
	TYBC140HEBA	1.5P										
BC 1 9/16-24	TYBC150HEB5	5P	175	27	-	81	32	26	30	4	3	△
	TYBC150HEBA	1.5P										

for Bicycle Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
BC 5/16 - 26	7.94	7.42	6.90
BC 3/8 - 26	9.53	9.01	8.49
BC 7/16 - 26	11.11	10.59	10.07
BC 1/2 - 20	12.70	12.02	11.34
BC 9/16 - 20	14.29	13.61	12.93
BC 5/8 - 20	15.88	15.20	14.52
BC 11/16 - 24	17.46	16.90	16.34
BC 3/4 - 30	19.05	18.60	18.15
BC 31/32 - 30	24.61	24.16	23.71
BC 1 - 24	25.40	24.84	24.28
BC 1.29 - 24	32.77	32.21	31.65
BC 1.37 - 24	34.80	34.24	33.68
BC 1 7/16 - 24	36.51	35.95	35.39
BC 1.45 - 24	36.83	36.27	35.71
BC 1 9/16 - 24	39.69	39.13	38.57

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MEMO

For improvement, spec may change without advance notice.
Think threads with YAMAWA

SIT

Simple Thread Inspection Tools

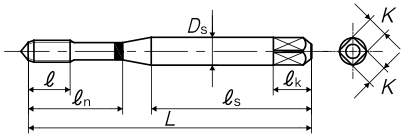
Specification

HSS

For icon explanation, refer to P.24

■Specification of SIT is available up to M48 (U1 3/4). For details, please contact us.

TYPE:1



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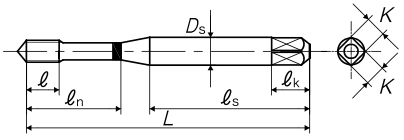

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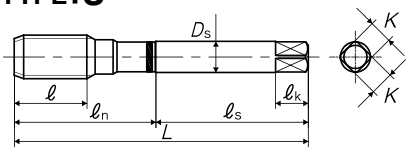

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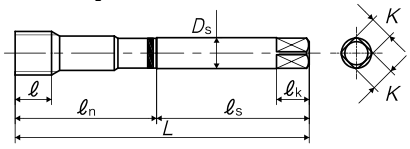

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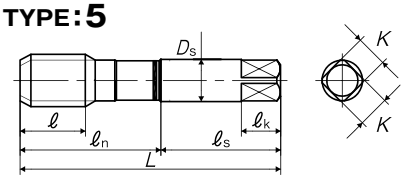

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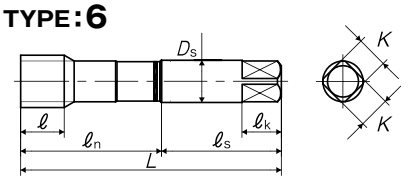
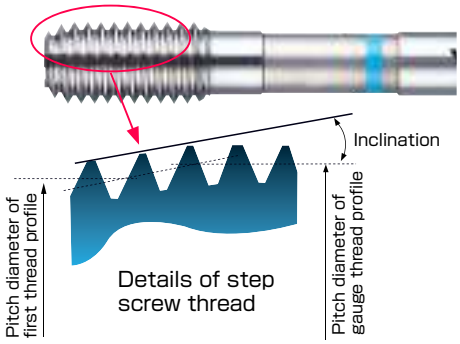


Product features

●SIT can minimize the jobs on inspection process and improve the inspection efficiency by adopting step screw thread.
●Premium HSS material extends the tool life dramatically.
●Tool for through hole or blind hole is available individually.
●Color case and color mark on the tool simplify tool storage control.

●What is the step screw thread ?
YAMAWA new thread gauge (for through hole) has the step screw thread on its end where the whole profile of screw thread becomes incrementally larger.
— Due to this feature, the gauge enters easily the internal screw and works efficiently particularly when checking the screw threads with fine pitches.
Note : Step screw thread is not applied to the gauge for blind hole (NP gauge)



Accuracy of SIT

In SIT, tolerance of simple pitch diameter, pitch tolerance and tolerance of thread half angle, 3 important factors on measuring internal screw threads, are same with those of thread plug gauge.

■Comparison between GB-6H/and GP-6H/thread plug gauge unit:mm

Size	OD				PD				Pitch tolerance	Tolerance for thread half angle
	Basic size	Max	Min	Tolerance	Basic size	Max	Min	Tolerance	(±)	(± minute)
GB-6H M6 × 1	6.000	6.023	6.001	0.022	5.350	5.3675	5.3565	0.011	0.005	15
GP-6H M6 × 1	6.000	6.023	6.001	0.022	5.350	5.3675	5.3565	0.011	0.005	15

The pitch diameter is simple pitch diameter. Pitch tolerance includes error of thread lead.

■Comparison between NB-6H/and NP-6H/thread plug gauge unit:mm

Size	OD				PD				Pitch tolerance	Tolerance for thread half angle
	Basic size	Max	Min	Tolerance	Basic size	Max	Min	Tolerance	(±)	(± minute)
NB-6H M6 × 1	5.7055	5.7165	5.6945	0.022	5.500	5.511	5.500	0.011	0.005	16
NP-6H M6 × 1	5.7055	5.7165	5.6945	0.022	5.500	5.511	5.500	0.011	0.005	16

The pitch diameter is simple pitch diameter. Pitch tolerance includes error of thread lead.

※Main specification of SIT is same with that of thread gauge. But SIT has partly Yamawa's own design in the length of thread and bottom part relief. Due to these features, Yamawa has adopted the name "Simple Inspection Tool or SIT" instead of using the name "thread gauge".

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Segment : 7B

Size		Class	Code	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
For Metric Threads												
M2 × 0.4	For Go	6H	ITM62.0EG	42	5.5	12	27	3	2.5	5	1	△
	For Not-go		ITM62.0EN		4.5						2	
M2 × 0.25	For Go	5H	ITM52.0BG	42	4	12	27	3	2.5	5	1	△
	For Not-go		ITM52.0BN		3.5						2	
M2.2 × 0.45	For Go	6H	ITM62.2FG	42	5.5	12	27	3	2.5	5	1	△
	For Not-go		ITM62.2FN		4.5						2	
M2.2 × 0.25	For Go	5H	ITM52.2BG	42	4	12	27	3	2.5	5	1	△
	For Not-go		ITM52.2BN		3.5						2	
M2.3 × 0.4	For Go	6H	ITM62.3EG	42	5.5	12	27	3	2.5	5	1	△
	For Not-go		ITM62.3EN		4.5						2	
M2.3 × 0.25	For Go	5H	ITM52.3BG	42	4	12	27	3	2.5	5	1	△
	For Not-go		ITM52.3BN		3.5						2	
M2.5 × 0.45	For Go	6H	ITM62.5FG	46	5.5	14	29	3	2.5	5	1	△
	For Not-go		ITM62.5FN		4.5						2	
M2.5 × 0.35	For Go	6H	ITM62.5DG	46	4.5	14	29	3	2.5	5	1	△
	For Not-go		ITM62.5DN		3.5						2	
M2.6 × 0.45	For Go	6H	ITM62.6FG	46	5.5	14	29	3	2.5	5	1	△
	For Not-go		ITM62.6FN		4.5						2	
M2.6 × 0.35	For Go	6H	ITM62.6DG	46	4.5	14	29	3	2.5	5	1	△
	For Not-go		ITM62.6DN		3.5						2	
M3 × 0.5	For Go	6H	ITM63.0GG	46	5.5	14	26	4	3.2	6	1	△
	For Not-go		ITM63.0GN		4.5						2	
M3 × 0.35	For Go	6H	ITM63.0DG	46	4.5	14	26	4	3.2	6	1	△
	For Not-go		ITM63.0DN		3.5						2	
M3.5 × 0.6	For Go	6H	ITM63.5HG	52	7.5	16	29	5	4	7	1	△
	For Not-go		ITM63.5HN		6						2	
M3.5 × 0.35	For Go	6H	ITM63.5DG	52	4.5	16	29	5	4	7	1	△
	For Not-go		ITM63.5DN		3.5						2	
M4 × 0.7	For Go	6H	ITM64.0IG	52	7.5	17	29	5	4	7	1	△
	For Not-go		ITM64.0IN		6						2	
M4 × 0.5	For Go	6H	ITM64.0GG	52	7.5	17	29	5	4	7	1	△
	For Not-go		ITM64.0GN		6						2	
M4.5 × 0.75	For Go	6H	ITM64.5JG	60	7.5	21	33	5.5	4.5	7	1	△
	For Not-go		ITM64.5JN		6						2	
M4.5 × 0.5	For Go	6H	ITM64.5GG	60	7.5	21	33	5.5	4.5	7	1	△
	For Not-go		ITM64.5GN		6						2	
M5 × 0.8	For Go	6H	ITM65.0KG	60	10	22	33	5.5	4.5	7	1	△
	For Not-go		ITM65.0KN		6						2	
M5 × 0.5	For Go	6H	ITM65.0GG	60	7	22	33	5.5	4.5	7	1	△
	For Not-go		ITM65.0GN		6						2	
M5.5 × 0.5	For Go	6H	ITM65.5GG	62	7	26	33	6	4.5	7	1	△
	For Not-go		ITM65.5GN		6						2	
M6 × 1	For Go	6H	ITM66.0MG	62	10	26	33	6	4.5	7	1	△
	For Not-go		ITM66.0MN		6						2	
M6 × 0.75	For Go	6H	ITM66.0JG	62	7.5	26	33	6	4.5	7	1	△
	For Not-go		ITM66.0JN		6						2	

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SIT Simple Thread Inspection Tools

Size		Class	Code	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
M7 × 1	For Go	6H	ITM67.0MG	70	12	34	36	6.2	5	8	3	△
	For Not-go		ITM67.0MN		6						4	
M7 × 0.75	For Go	6H	ITM67.0JG	70	9	34	36	6.2	5	8	3	△
	For Not-go		ITM67.0JN		6						4	
M8 × 1.25	For Go	6H	ITM68.0NG	70	15	34	36	6.2	5	8	3	△
	For Not-go		ITM68.0NN		10						4	
M8 × 1	For Go	6H	ITM68.0MG	70	12	34	36	6.2	5	8	3	△
	For Not-go		ITM68.0MN		6						4	
M8 × 0.75	For Go	6H	ITM68.0JG	70	9	34	36	6.2	5	8	3	△
	For Not-go		ITM68.0JN		6						4	
M9 × 1.25	For Go	6H	ITM69.0NG	75	15	37	38	7	5.5	8	3	△
	For Not-go		ITM69.0NN		10						4	
M9 × 1	For Go	6H	ITM69.0MG	75	12	37	38	7	5.5	8	3	△
	For Not-go		ITM69.0MN		6						4	
M9 × 0.75	For Go	6H	ITM69.0JG	75	9	37	38	7	5.5	8	3	△
	For Not-go		ITM69.0JN		6						4	
M10 × 1.5	For Go	6H	ITM6010OG	75	15	37	38	7	5.5	8	3	△
	For Not-go		ITM6010ON		10						4	
M10 × 1.25	For Go	6H	ITM6010NG	75	15	37	38	7	5.5	8	3	△
	For Not-go		ITM6010NN		10						4	
M10 × 1	For Go	6H	ITM6010MG	75	12	37	38	7	5.5	8	3	△
	For Not-go		ITM6010MN		6						4	
M10 × 0.75	For Go	6H	ITM6010JG	75	9	37	38	7	5.5	8	3	△
	For Not-go		ITM6010JN		6						4	
M11 × 1.5	For Go	6H	ITM6011OG	82	19	40	42	8.5	6.5	9	3	△
	For Not-go		ITM6011ON		10						4	
M11 × 1	For Go	6H	ITM6011MG	82	12	40	42	8.5	6.5	9	3	△
	For Not-go		ITM6011MN		6						4	
M11 × 0.75	For Go	6H	ITM6011JG	82	10	40	42	8.5	6.5	9	3	△
	For Not-go		ITM6011JN		6						4	
M12 × 1.75	For Go	6H	ITM6012PG	82	20	40	42	8.5	6.5	9	3	△
	For Not-go		ITM6012PN		10						4	
M12 × 1.5	For Go	6H	ITM6012OG	82	20	40	42	8.5	6.5	9	3	△
	For Not-go		ITM6012ON		10						4	
M12 × 1.25	For Go	6H	ITM6012NG	82	15	40	42	8.5	6.5	9	3	△
	For Not-go		ITM6012NN		10						4	
M12 × 1	For Go	6H	ITM6012MG	82	12	40	42	8.5	6.5	9	3	△
	For Not-go		ITM6012MN		6						4	
M14 × 2	For Go	6H	ITM6014QG	88	20	43	45	10.5	8	11	3	△
	For Not-go		ITM6014QN		12						4	
M14 × 1.5	For Go	6H	ITM6014OG	88	20	43	45	10.5	8	11	3	△
	For Not-go		ITM6014ON		12						4	
M14 × 1.25	For Go	6H	ITM6014NG	88	15	43	45	10.5	8	11	3	△
	For Not-go		ITM6014NN		12						4	
M14 × 1	For Go	6H	ITM6014MG	88	12	43	45	10.5	8	11	3	△
	For Not-go		ITM6014MN		6						4	
M15 × 1.5	For Go	6H	ITM6015OG	95	19	47	48	12.5	10	13	3	△
	For Not-go		ITM6015ON		10						4	

Think threads with YAMAWA

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SIT Simple Thread Inspection Tools

Size		Class	Code	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
M15 × 1	For Go	6H	ITM6015MG	95	12	47	48	12.5	10	13	3	△
	For Not-go		ITM6015MN		10						4	
M16 × 2	For Go	6H	ITM6016QG	95	20	47	48	12.5	10	13	3	△
	For Not-go		ITM6016QN		12						4	
M16 × 1.5	For Go	6H	ITM6016OG	95	20	47	48	12.5	10	13	3	△
	For Not-go		ITM6016ON		12						4	
M16 × 1	For Go	6H	ITM6016MG	95	12	47	48	12.5	10	13	3	△
	For Not-go		ITM6016MN		8						4	
M17 × 1.5	For Go	6H	ITM6017OG	100	19	49	51	14	11	14	3	△
	For Not-go		ITM6017ON		10						4	
M17 × 1	For Go	6H	ITM6017MG	100	12	49	51	14	11	14	3	△
	For Not-go		ITM6017MN		10						4	
M18 × 2.5	For Go	6H	ITM6018RG	100	25	49	51	14	11	14	3	△
	For Not-go		ITM6018RN		16						4	
M18 × 2	For Go	6H	ITM6018QG	100	20	49	51	14	11	14	3	△
	For Not-go		ITM6018QN		12						4	
M18 × 1.5	For Go	6H	ITM6018OG	100	20	49	51	14	11	14	3	△
	For Not-go		ITM6018ON		12						4	
M18 × 1	For Go	6H	ITM6018MG	100	12	49	51	14	11	14	3	△
	For Not-go		ITM6018MN		8						4	
M20 × 2.5	For Go	6H	ITM6020RG	105	25	55	50	15	12	15	5	△
	For Not-go		ITM6020RN		16						6	
M20 × 2	For Go	6H	ITM6020QG	105	20	55	50	15	12	15	5	△
	For Not-go		ITM6020QN		12						6	
M20 × 1.5	For Go	6H	ITM6020OG	105	20	55	50	15	12	15	5	△
	For Not-go		ITM6020ON		12						6	
M20 × 1	For Go	6H	ITM6020MG	105	14	55	50	15	12	15	5	△
	For Not-go		ITM6020MN		8						6	
M22 × 2.5	For Go	6H	ITM6022RG	115	33	60	55	17	13	16	5	△
	For Not-go		ITM6022RN		16						6	
M22 × 2	For Go	6H	ITM6022QG	115	20	60	55	17	13	16	5	△
	For Not-go		ITM6022QN		14						6	
M22 × 1.5	For Go	6H	ITM6022OG	115	20	60	55	17	13	16	5	△
	For Not-go		ITM6022ON		14						6	
M22 × 1	For Go	6H	ITM6022MG	115	14	60	55	17	13	16	5	△
	For Not-go		ITM6022MN		8						6	
M24 × 3	For Go	6H	ITM6024SG	120	30	65	55	19	15	18	5	△
	For Not-go		ITM6024SN		20						6	
M24 × 2	For Go	6H	ITM6024QG	120	20	65	55	19	15	18	5	△
	For Not-go		ITM6024QN		14						6	
M24 × 1.5	For Go	6H	ITM6024OG	120	20	65	55	19	15	18	5	△
	For Not-go		ITM6024ON		14						6	
M24 × 1	For Go	6H	ITM6024MG	120	14	65	55	19	15	18	5	△
	For Not-go		ITM6024MN		8						6	
For Unified Threads												
No. 2-56UNC	For Go	2B	ITM2UN2EG	42	4.5	12	26	3	2.5	5	1	△
	For Not-go		ITM2UN2EN		3.5						2	
No. 2-64UNF	For Go	2B	ITM2UN2DG	42	4.5	12	26	3	2.5	5	1	△
	For Not-go		ITM2UN2DN		3.5						2	

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SIT Simple Thread Inspection Tools

Size		Class	Code	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
No. 3-48UNC	For Go	2B	ITM2UN3FG	46	6.5	14	28	3	2.5	5	1	△
	For Not-go		ITM2UN3FN		3.5						2	
No. 3-56UNF	For Go	2B	ITM2UN3EG	46	6.5	14	28	3	2.5	5	1	△
	For Not-go		ITM2UN3EN		3.5						2	
No. 4-40UNC	For Go	2B	ITM2UN4HG	46	6.5	14	25	4	3.2	6	1	△
	For Not-go		ITM2UN4HN		3.5						2	
No. 4-48UNF	For Go	2B	ITM2UN4FG	46	6.5	14	25	4	3.2	6	1	△
	For Not-go		ITM2UN4FN		3.5						2	
No. 5-40UNC	For Go	2B	ITM2UN5HG	52	6.5	16	28	5	4	7	1	△
	For Not-go		ITM2UN5HN		3.5						2	
No. 5-44UNF	For Go	2B	ITM2UN5GG	52	6.5	16	28	5	4	7	1	△
	For Not-go		ITM2UN5GN		3.5						2	
No. 6-32UNC	For Go	2B	ITM2UN6JG	52	7	16	28	5	4	7	1	△
	For Not-go		ITM2UN6JN		3.5						2	
No. 6-40UNF	For Go	2B	ITM2UN6HG	52	7	16	28	5	4	7	1	△
	For Not-go		ITM2UN6HN		3.5						2	
No. 8-32UNC	For Go	2B	ITM2UN8JG	60	9	21	32	5.5	4.5	7	1	△
	For Not-go		ITM2UN8JN		5						2	
No. 8-36UNF	For Go	2B	ITM2UN8IG	60	9	21	32	5.5	4.5	7	1	△
	For Not-go		ITM2UN8IN		5						2	
No. 10-24UNC	For Go	2B	ITM2UNAMG	60	9.5	22	32	5.5	4.5	7	1	△
	For Not-go		ITM2UNAMN		5						2	
No. 10-32UNF	For Go	2B	ITM2UNAJG	60	9.5	22	32	5.5	4.5	7	1	△
	For Not-go		ITM2UNAJN		5						2	
No. 12-24UNC	For Go	2B	ITM2UNCMG	62	9.5	26	32	6	4.5	7	1	△
	For Not-go		ITM2UNCMN		5						2	
No. 12-28UNF	For Go	2B	ITM2UNCKG	62	9.5	26	32	6	4.5	7	1	△
	For Not-go		ITM2UNCKN		5						2	
1/4-20UNC	For Go	2B	ITM2U04NG	62	15	26	32	6	4.5	7	1	△
	For Not-go		ITM2U04NN		10						2	
1/4-28UNF	For Go	2B	ITM2U04KG	62	12	26	32	6	4.5	7	1	△
	For Not-go		ITM2U04KN		7						2	
5/16-18UNC	For Go	2B	ITM2U05OG	70	15	34	36	6.2	5	8	3	△
	For Not-go		ITM2U05ON		10						4	
5/16-24UNF	For Go	2B	ITM2U05MG	70	15	34	36	6.2	5	8	3	△
	For Not-go		ITM2U05MN		7						4	
3/8-16UNC	For Go	2B	ITM2U06PG	75	17	37	38	7	5.5	8	3	△
	For Not-go		ITM2U06PN		10						4	
3/8-24UNF	For Go	2B	ITM2U06MG	75	17	37	38	7	5.5	8	3	△
	For Not-go		ITM2U06MN		10						4	
7/16-14UNC	For Go	2B	ITM2U07QG	82	17	40	42	8.5	6.5	9	3	△
	For Not-go		ITM2U07QN		10						4	
7/16-20UNF	For Go	2B	ITM2U07NG	82	17	40	42	8.5	6.5	9	3	△
	For Not-go		ITM2U07NN		10						4	
1/2-13UNC	For Go	2B	ITM2U08RG	88	17	43	45	10.5	8	11	3	△
	For Not-go		ITM2U08RN		13						4	
1/2-20UNF	For Go	2B	ITM2U08NG	88	17	43	45	10.5	8	11	3	△
	For Not-go		ITM2U08NN		10						4	

Think threads with YAMAWA

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Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SIT Simple Thread Inspection Tools

Size		Class	Code	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
9/16-12UNC	For Go	2B	ITM2U09SG	95	26	47	48	12.5	10	13	3	△
	For Not-go		ITM2U09SN		17						4	
9/16-18UNF	For Go	2B	ITM2U090G	95	20	47	48	12.5	10	13	3	△
	For Not-go		ITM2U090N		13						4	
5/8-11UNC	For Go	2B	ITM2U10UG	95	26	47	48	12.5	10	13	3	△
	For Not-go		ITM2U10UN		17						4	
5/8-18UNF	For Go	2B	ITM2U100G	95	20	47	48	12.5	10	13	3	△
	For Not-go		ITM2U100N		13						4	

SITD (Tandem Type)

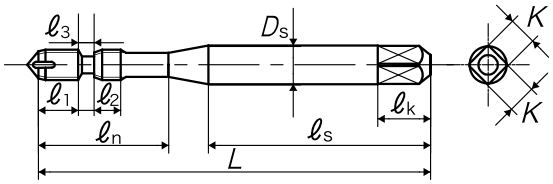
Simple Thread Inspection Tools, Tandem Type

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



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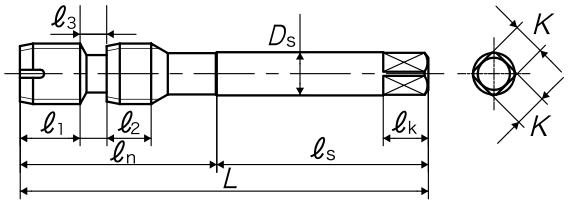
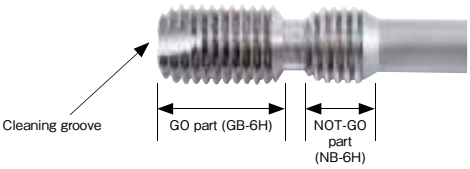


Product features

- Under normal inspection procedure, the finished thread is checked by a 2- time process, that is, by using GP GO gauge and then by using NP/WP NO-GO gauge. By using Yamawa Thread Inspection Tool, the thread inspection can be done in one single process.
- SITD, attached to a measuring machine, enables the mechanical measuring.
- Even in difficult-to-insert thread inspection such as checking smaller sizes and/or finer pitch threads, smooth inspection becomes possible due to the step screw thread mechanism adopted to SITD.

- What is the「SITD」?
  Both GO part and NOT-GO part are embedded in one tool.

- Cleaning groove
  Cleaning groove of the thread portion helps to remove the small dirts left inside the internal threads and hence allows for the proper inspection procedure.



Accuracy of SITD

In SITD, tolerance of simple pitch diameter, pitch tolerance and tolerance of thread half angle, 3 important factors on measuring internal screw threads, are same with those of thread plug gauge.

■Comparison between GB-6H/and GP-6H/thread plug gauge unit : mm

Size	OD				PD				Pitch tolerance	Tolerance for thread half angle
	Basic size	Max	Min	Tolerance	Basic size	Max	Min	Tolerance	(±)	(± minute)
GB-6H M6 × 1	6.000	6.023	6.001	0.022	5.350	5.3675	5.3565	0.011	0.005	15
GP-6H M6 × 1	6.000	6.023	6.001	0.022	5.350	5.3675	5.3565	0.011	0.005	15

The pitch diameter is simple pitch diameter. Pitch tolerance includes error of thread lead.

■Comparison between NB-6H/ and NP-6H/thread plug gauge unit : mm

Size	OD				PD				Pitch tolerance	Tolerance for thread half angle
	Basic size	Max	Min	Tolerance	Basic size	Max	Min	Tolerance	(±)	(± minute)
NB-6H M6 × 1	5.7055	5.7165	5.6945	0.022	5.500	5.511	5.500	0.011	0.005	16
NP-6H M6 × 1	5.7055	5.7165	5.6945	0.022	5.500	5.511	5.500	0.011	0.005	16

The pitch diameter is simple pitch diameter. Pitch tolerance includes error of thread lead.

※Main specification of SITD is same with that of thread gauge. But SITD has partly Yamawa's own design in the length of thread and bottom part relief. Due to these features, Yamawa has adopted the name "Simple Inspection Tool or SITD" instead of using the name "thread gauge".

Overall length	GO part	NOT-GO part	Recess length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ_1	ℓ_2	ℓ_3	ℓn	ℓs	Ds	K	ℓk

Segment : 7B

Size	Class	Code	L (mm)	ℓ_1 (mm)	ℓ_2 (mm)	ℓ_3 (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
For Metric Threads													
M2 × 0.4	6H	ITDM62.0E	42	4	2	1.2	12	27	3	2.5	5	1	△
M2 × 0.25	5H	ITDM52.0B	42	4.9	1.3	1	12	27	3	2.5	5	1	△
M2.2 × 0.45	6H	ITDM62.2F	42	4.4	2.3	1.4	12	27	3	2.5	5	1	△
M2.2 × 0.25	5H	ITDM52.2B	42	5.8	1.3	1	12	27	3	2.5	5	1	△
M2.3 × 0.4	6H	ITDM62.3E	42	4	2	1.2	12	27	3	2.5	5	1	△
M2.3 × 0.25	5H	ITDM52.3B	42	4.9	1.3	1	12	27	3	2.5	5	1	△
M2.5 × 0.45	6H	ITDM62.5F	46	4.4	2.3	1.4	14	29	3	2.5	5	1	△
M2.5 × 0.35	6H	ITDM62.5D	46	5.2	1.8	1.1	14	29	3	2.5	5	1	△
M2.6 × 0.45	6H	ITDM62.6F	46	4.4	2.3	1.4	14	29	3	2.5	5	1	△
M2.6 × 0.35	6H	ITDM62.6D	46	5.2	1.8	1.1	14	29	3	2.5	5	1	△
M3 × 0.5	6H	ITDM63.0G	46	5	2.5	1.5	14	26	4	3.2	6	1	△
M3 × 0.35	6H	ITDM63.0D	46	6.1	1.8	1.1	14	26	4	3.2	6	1	△
M3.5 × 0.6	6H	ITDM63.5H	52	6.2	3	1.8	16	29	5	4	7	1	△
M3.5 × 0.35	6H	ITDM63.5D	52	8.1	1.8	1.1	16	29	5	4	7	1	△
M4 × 0.7	6H	ITDM64.0I	52	5.4	3.5	2.1	17	29	5	4	7	1	△
M4 × 0.5	6H	ITDM64.0G	52	7	2.5	1.5	17	29	5	4	7	1	△
M4.5 × 0.75	6H	ITDM64.5J	60	6.9	3.8	2.3	21	33	5.5	4.5	7	1	△
M4.5 × 0.5	6H	ITDM64.5G	60	9	2.5	1.5	21	33	5.5	4.5	7	1	△
M5 × 0.8	6H	ITDM65.0K	60	6.6	4	2.4	22	33	5.5	4.5	7	1	△
M5 × 0.5	6H	ITDM65.0G	60	9	2.5	1.5	22	33	5.5	4.5	7	1	△
M5.5 × 0.5	6H	ITDM65.5G	62	11	2.5	1.5	26	33	6	4.5	7	1	△
M6 × 1	6H	ITDM66.0M	62	7	5	3	26	33	6	4.5	7	1	△
M6 × 0.75	6H	ITDM66.0J	62	8.9	3.8	2.3	26	33	6	4.5	7	1	△
M7 × 1	6H	ITDM67.0M	70	11.9	5	3	34	36	6.2	5	8	2	△
M7 × 0.75	6H	ITDM67.0J	70	13.8	3.8	2.3	34	36	6.2	5	8	2	△
M8 × 1.25	6H	ITDM68.0N	70	8.9	6.3	3.8	34	36	6.2	5	8	2	△
M8 × 1	6H	ITDM68.0M	70	11	5	3	34	36	6.2	5	8	2	△
M8 × 0.75	6H	ITDM68.0J	70	12.9	3.8	2.3	34	36	6.2	5	8	2	△
M9 × 1.25	6H	ITDM69.0N	75	13.8	6.3	3.8	37	38	7	5.5	8	2	△
M9 × 1	6H	ITDM69.0M	75	15.9	5	3	37	38	7	5.5	8	2	△
M9 × 0.75	6H	ITDM69.0J	75	17.8	3.8	2.3	37	38	7	5.5	8	2	△
M10 × 1.5	6H	ITDM6010O	75	11	7.5	4.5	37	38	7	5.5	8	2	△
M10 × 1.25	6H	ITDM6010N	75	12.9	6.3	3.8	37	38	7	5.5	8	2	△
M10 × 1	6H	ITDM6010M	75	15	5	3	37	38	7	5.5	8	2	△
M10 × 0.75	6H	ITDM6010J	75	16.9	3.8	2.3	37	38	7	5.5	8	2	△
M11 × 1.5	6H	ITDM6011O	82	14.9	7.5	4.5	40	42	8.5	6.5	9	2	△
M11 × 1	6H	ITDM6011M	82	18.9	5	3	40	42	8.5	6.5	9	2	△
M11 × 0.75	6H	ITDM6011J	82	20.8	3.8	2.3	40	42	8.5	6.5	9	2	△
M12 × 1.75	6H	ITDM6012P	82	11.9	8.8	5.3	40	42	8.5	6.5	9	2	△
M12 × 1.5	6H	ITDM6012O	82	14	7.5	4.5	40	42	8.5	6.5	9	2	△
M12 × 1.25	6H	ITDM6012N	82	15.9	6.3	3.8	40	42	8.5	6.5	9	2	△
M12 × 1	6H	ITDM6012M	82	18	5	3	40	42	8.5	6.5	9	2	△
M14 × 2	6H	ITDM6014Q	88	10	10	6	43	45	10.5	8	11	2	△
M14 × 1.5	6H	ITDM6014O	88	14	7.5	4.5	43	45	10.5	8	11	2	△
M14 × 1.25	6H	ITDM6014N	88	15.9	6.3	3.8	43	45	10.5	8	11	2	△
M14 × 1	6H	ITDM6014M	88	18	5	3	43	45	10.5	8	11	2	△
M15 × 1.5	6H	ITDM6015O	95	14.9	7.5	4.5	47	48	12.5	10	13	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	GO part	NOT-GO part	Recess length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ_1	ℓ_2	ℓ_3	ℓn	ℓs	Ds	K	ℓk

SITD Simple Thread Inspection Tools, Tandem Type

Size	Class	Code	L (mm)	ℓ_1 (mm)	ℓ_2 (mm)	ℓ_3 (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
M15 × 1	6H	ITDM6015M	95	18.9	5	3	47	48	12.5	10	13	2	△
M16 × 2	6H	ITDM6016Q	95	10	10	6	47	48	12.5	10	13	2	△
M16 × 1.5	6H	ITDM6016O	95	14	7.5	4.5	47	48	12.5	10	13	2	△
M16 × 1	6H	ITDM6016M	95	18	5	3	47	48	12.5	10	13	2	△
M17 × 1.5	6H	ITDM6017O	100	21.9	7.5	4.5	49	51	14	11	14	2	△
M17 × 1	6H	ITDM6017M	100	25.9	5	3	49	51	14	11	14	2	△
M18 × 2.5	6H	ITDM6018R	100	13	12.5	7.5	49	51	14	11	14	2	△
M18 × 2	6H	ITDM6018Q	100	17	10	6	49	51	14	11	14	2	△
M18 × 1.5	6H	ITDM6018O	100	21	7.5	4.5	49	51	14	11	14	2	△
M18 × 1	6H	ITDM6018M	100	25	5	3	49	51	14	11	14	2	△
For Unified Threads													
Size	Class	Code	L (mm)	ℓ_1 (mm)	ℓ_2 (mm)	ℓ_3 (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
No.2-56UNC	2B	ITDM2UN2E	42	4.4	2.3	1.4	12	26	3	2.5	5	1	△
No.2-64UNF	2B	ITDM2UN2D	42	4.9	2	1.2	12	26	3	2.5	5	1	△
No.3-48UNC	2B	ITDM2UN3F	46	3.9	2.6	1.6	14	28	3	2.5	5	1	△
No.3-56UNF	2B	ITDM2UN3E	46	4.4	2.3	1.4	14	28	3	2.5	5	1	△
No.4-40UNC	2B	ITDM2UN4H	46	3.9	3.2	1.9	14	25	4	3.2	6	1	△
No.4-48UNF	2B	ITDM2UN4F	46	4.8	2.6	1.6	14	25	4	3.2	6	1	△
No.5-40UNC	2B	ITDM2UN5H	52	5.9	3.2	1.9	16	28	5	4	7	1	△
No.5-44UNF	2B	ITDM2UN5G	52	6.4	2.9	1.7	16	28	5	4	7	1	△
No.6-32UNC	2B	ITDM2UN6J	52	4.6	4	2.4	16	28	5	4	7	1	△
No.6-40UNF	2B	ITDM2UN6H	52	5.9	3.2	1.9	16	28	5	4	7	1	△
No.8-32UNC	2B	ITDM2UN8J	60	6.6	4	2.4	21	32	5.5	4.5	7	1	△
No.8-36UNF	2B	ITDM2UN8I	60	7.4	3.5	2.1	21	32	5.5	4.5	7	1	△
No.10-24UNC	2B	ITDM2UNAM	62	7.5	5.3	3.2	26	32	6	4.5	7	1	△
No.10-32UNF	2B	ITDM2UNAJ	62	9.6	4	2.4	26	32	6	4.5	7	1	△
No.12-24UNC	2B	ITDM2UNCM	62	6.5	5.3	3.2	26	32	6	4.5	7	1	△
No.12-28UNF	2B	ITDM2UNCK	62	7.8	4.5	2.7	26	32	6	4.5	7	1	△
1/4-20UNC	2B	ITDM2U04N	70	10.2	6.4	3.8	34	36	6.2	5	8	2	△
1/4-28UNF	2B	ITDM2U04K	70	13.2	4.5	2.7	34	36	6.2	5	8	2	△
5/16-18UNC	2B	ITDM2U05O	70	7.7	7.1	4.2	34	36	6.2	5	8	2	△
5/16-24UNF	2B	ITDM2U05M	70	10.5	5.3	3.2	34	36	6.2	5	8	2	△
3/8-16UNC	2B	ITDM2U06P	75	10.7	7.9	4.8	37	38	7	5.5	8	2	△
3/8-24UNF	2B	ITDM2U06M	75	14.9	5.3	3.2	37	38	7	5.5	8	2	△
7/16-14UNC	2B	ITDM2U07Q	82	12.3	9.1	5.4	40	42	8.5	6.5	9	2	△
7/16-20UNF	2B	ITDM2U07N	82	16.6	6.4	3.8	40	42	8.5	6.5	9	2	△
1/2-13UNC	2B	ITDM2U08R	88	11.4	9.8	5.9	43	45	10.5	8	11	2	△
1/2-20UNF	2B	ITDM2U08N	88	16.9	6.4	3.8	43	45	10.5	8	11	2	△
9/16-12UNC	2B	ITDM2U09S	95	10.5	10.6	6.4	47	48	12.5	10	13	2	△
9/16-18UNF	2B	ITDM2U09O	95	16.2	7.1	4.2	47	48	12.5	10	13	2	△
5/8-11UNC	2B	ITDM2U10U	100	16.4	11.5	6.9	49	51	14	11	14	2	△
5/8-18UNF	2B	ITDM2U10O	100	23.5	7.1	4.2	49	51	14	11	14	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MEMO

For improvement, spec may change without advance notice.
Think threads with YAMAWA

CHECK PINS

■Usage example of Check Pins

You can check both hole size and hole condition at the same time by this Check-pin!

POINT Appropriate bored hole before tapping → ●Longer tool life! ●Improved quality of internal threads! → **Total cost reduction!**

It is important to check the hole condition before tapping!

Hole condition can be inappropriate before tapping.

Set efficient hole size and bore holes correctly, and you can get the longer tool life and keep away from any tapping troubles. Let's check the hole before tapping.

Think threads with YAMAWA
For improvement, spec may change without advance notice.

CHECK PINS

Obtainable from
Video site shown in right

Please check the hole size before tapping!

Let's check the hole size before tapping 6H class internal threads of M6×1 by using Check-pin for cutting taps.

How to use CPC-S (Straight type)

STEP 1 Check the minor dia. for M6×1 6H internal thread

STEP 2 Size of the Check-pin for M6×1

Size	L	ℓ	DS	d1 (Percentage of thread engagement)	d2 (Percentage of thread engagement)
M6 ×1	73	16.5	6	4.917 (100%)	5.026 (90%)
				4.972 (95%)	5.080 (85%)
				5.026 (90%)	5.134 (80%)
				5.080 (85%)	5.188 (75%)
				5.134 (80%)	5.242 (70%)

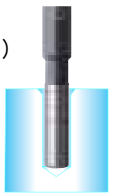
Select the nearest sizes of the Check-pins to the max and min size of minor dia of 6H internal thread by checking the table listed on the left side.

⇒ ①4.917 (100%) and ②5.134 (80%)

Depending on the feature of work-piece materials, it is beneficial to tapping to make the hole size before tapping as large as possible and within the tolerance.

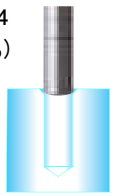
STEP 3 Insert the Check-pins ① and ②, selected in step 2.

① 4.917 (100%)



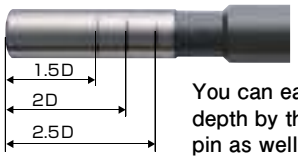
Check-pin smoothly goes into the bottom of the hole.

② 5.134 (80%)



Check-pin doesn't go into the hole.

GOOD The hole is finished within minor dia of 6H class internal threads.

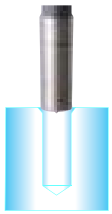


You can easily check hole depth by the three lines on its pin as well.

How to use CPC-T (Taper type)

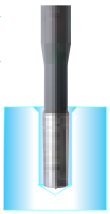
Size	L	ℓ	DS	d1 (Percentage of thread engagement)	d2 (Percentage of thread engagement)	Product code	(ℓ1)	(ℓ2)
M6 ×1	61.5	17	6	4.917 (100%)	5.153 (78%)	CPCT6.0M	3.8	12.8

BAD



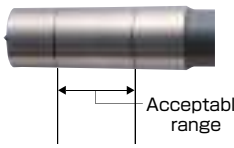
Bad hole : Check-pin doesn't go into the hole over the minimum line.

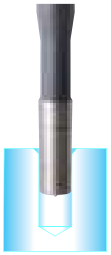
BAD



Bad hole : Check-pin goes into the hole over the maximum line.

GOOD





For improvement, spec may change without advance notice.
Think threads with YAMAWA

CPC-S

Check Pins for Bored Hole in thread cut tapping (Straight Type)

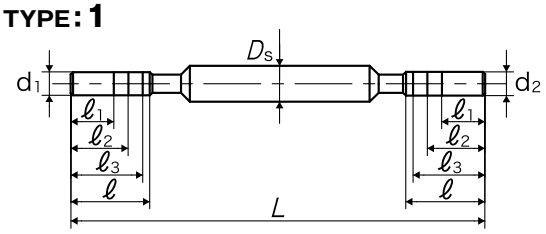
Specification

HSS

For icon explanation, refer to P.24

■CPC-S consisting of 5 piece pins enables checking of several kinds of bored hole dia. and checking of depth of bored hole(for cutting taps, straight type). CPC-S is made from wear resistant HSS material and is applicable for both through hole and blind hole.

TYPE: 1



Segment : 7C

Size	Code	L (mm)	ℓ (mm)	d1 (Thread engagement ratio)	d2 (Thread engagement ratio)	ℓ1 (mm)	ℓ2 (mm)	ℓ3 (mm)	Ds (mm)	Type	Stock
For Metric Threads											
M2 × 0.4	CPCS2.0EA	41.5	5.5	1.567 (100%)	1.610 (90%)	3	4	5	3	1	○
	CPCS2.0EB			1.589 (95%)	1.632 (85%)						
	CPCS2.0EC			1.610 (90%)	1.654 (80%)						
	CPCS2.0ED			1.632 (85%)	1.675 (75%)						
	CPCS2.0EE			1.654 (80%)	1.697 (70%)						
	CPCS2.0EF			1.675 (75%)	1.719 (65%)						
	CPCS2.0ES	※5 piece set consists of CPCS2.0EA ～ CPCS2.0EE.									
M2.5 × 0.45	CPCS2.5FA	45	7.5	2.013 (100%)	2.062 (90%)	3.75	5	6.25	3	1	○
	CPCS2.5FB			2.037 (95%)	2.086 (85%)						
	CPCS2.5FC			2.062 (90%)	2.110 (80%)						
	CPCS2.5FD			2.086 (85%)	2.135 (75%)						
	CPCS2.5FE			2.110 (80%)	2.159 (70%)						
	CPCS2.5FF			2.135 (75%)	2.183 (65%)						
	CPCS2.5FS	※5 piece set consists of CPCS2.5FA ～ CPCS2.5FE.									
M3 × 0.5	CPCS3.0GA	49	9	2.459 (100%)	2.513 (90%)	4.5	6	7.5	4	1	○
	CPCS3.0GB			2.486 (95%)	2.540 (85%)						
	CPCS3.0GC			2.513 (90%)	2.567 (80%)						
	CPCS3.0GD			2.540 (85%)	2.594 (75%)						
	CPCS3.0GE			2.567 (80%)	2.621 (70%)						
	CPCS3.0GF			2.594 (75%)	2.648 (65%)						
	CPCS3.0GS	※5 piece set consists of CPCS3.0GA ～ CPCS3.0GE.									
M4 × 0.7	CPCS4.0IA	57	11	3.242 (100%)	3.318 (90%)	6	8	10	5	1	○
	CPCS4.0IB			3.280 (95%)	3.356 (85%)						
	CPCS4.0IC			3.318 (90%)	3.394 (80%)						
	CPCS4.0ID			3.356 (85%)	3.432 (75%)						
	CPCS4.0IE			3.394 (80%)	3.470 (70%)						
	CPCS4.0IF			3.432 (75%)	3.507 (65%)						
	CPCS4.0IS	※5 piece set consists of CPCS4.0IA ～ CPCS4.0IE.									

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Pin length	Bored hole dia. (GO)	Bored hole dia. (NOT-GO)	Bored hole depth (1.5D)	Bored hole depth (2D)	Bored hole depth (2.5D)	Shank dia.
L	ℓ	d_1	d_2	ℓ_1	ℓ_2	ℓ_3	Ds

CPC-S Check Pins for Bored Hole in thread cut tapping (Straight Type)

Size	Code	L (mm)	ℓ (mm)	d_1 (Thread engagement ratio)	d_2 (Thread engagement ratio)	ℓ_1 (mm)	ℓ_2 (mm)	ℓ_3 (mm)	Ds (mm)	Type	Stock
M5 × 0.8	CPCS5.0KA	65	14	4.134 (100%)	4.221 (90%)	7.5	10	12.5	5.5	1	○
	CPCS5.0KB			4.177 (95%)	4.264 (85%)						
	CPCS5.0KC			4.221 (90%)	4.307 (80%)						
	CPCS5.0KD			4.264 (85%)	4.350 (75%)						
	CPCS5.0KE			4.307 (80%)	4.394 (70%)						
	CPCS5.0KF			4.350 (75%)	4.437 (65%)						
	CPCS5.0KS	※5 piece set consists of CPCS5.0KA ～ CPCS5.0KE.									
M6 × 1	CPCS6.0MA	73	16.5	4.917 (100%)	5.026 (90%)	9	12	15	6	1	○
	CPCS6.0MB			4.972 (95%)	5.080 (85%)						
	CPCS6.0MC			5.026 (90%)	5.134 (80%)						
	CPCS6.0MD			5.080 (85%)	5.188 (75%)						
	CPCS6.0ME			5.134 (80%)	5.242 (70%)						
	CPCS6.0MF			5.188 (75%)	5.296 (65%)						
	CPCS6.0MS	※5 piece set consists of CPCS6.0MA ～ CPCS6.0ME.									
M8 × 1.25	CPCS8.0NA	99	22	6.647 (100%)	6.782 (90%)	12	16	20	8	1	○
	CPCS8.0NB			6.714 (95%)	6.850 (85%)						
	CPCS8.0NC			6.782 (90%)	6.917 (80%)						
	CPCS8.0ND			6.850 (85%)	6.985 (75%)						
	CPCS8.0NE			6.917 (80%)	7.053 (70%)						
	CPCS8.0NF			6.985 (75%)	7.120 (65%)						
	CPCS8.0NS	※5 piece set consists of CPCS8.0NA ～ CPCS8.0NE.									
M10 × 1.5	CPCS0100A	110	27.5	8.376 (100%)	8.538 (90%)	15	20	25	10	1	○
	CPCS0100B			8.457 (95%)	8.620 (85%)						
	CPCS0100C			8.538 (90%)	8.701 (80%)						
	CPCS0100D			8.620 (85%)	8.782 (75%)						
	CPCS0100E			8.701 (80%)	8.863 (70%)						
	CPCS0100F			8.782 (75%)	8.944 (65%)						
	CPCS0100S	※5 piece set consists of CPCS0100A ～ CPCS0100E.									
M12 × 1.75	CPCS012PA	121	33	10.105 (100%)	10.295 (90%)	18	24	30	12	1	○
	CPCS012PB			10.200 (95%)	10.390 (85%)						
	CPCS012PC			10.295 (90%)	10.484 (80%)						
	CPCS012PD			10.390 (85%)	10.579 (75%)						
	CPCS012PE			10.484 (80%)	10.674 (70%)						
	CPCS012PF			10.579 (75%)	10.769 (65%)						
	CPCS012PS	※5 piece set consists of CPCS012PA ～ CPCS012PE.									

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Pin length	Bored hole dia. (GO)	Bored hole dia. (NOT-GO)	d_1 length	d_2 length	Shank dia.	Size of square	Length of square
L	ℓ	d_1	d_2	ℓ_1	ℓ_2	Ds	K	ℓk

CPC-T

Check Pins for Bored Holes in thread cut tapping (Taper Type)

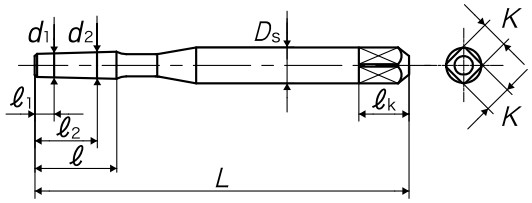
Specification

HSS

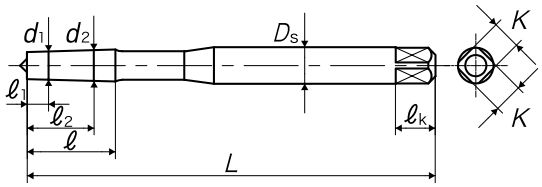
For icon explanation, refer to P.24

■One CPC-T enables simple checking of bored hole dia. (for cutting taps, taper type).CPC-T is made from wear resistant HSS material and is applicable for through hole and for blind hole having enough space in the bottom.

TYPE: 1



TYPE: 2



Segment : 7C

Size	Code	L (mm)	ℓ (mm)	d_1 (Thread engagement ratio)	d_2 (Thread engagement ratio)	ℓ_1 (mm)	ℓ_2 (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
For Metric Threads												
M2 × 0.4	CPCT2.0E	42	7	1.567 (100%)	1.679 (74%)	1	6	3	2.5	5	1	○
M2.5 × 0.45	CPCT2.5F	46	8	2.013 (100%)	2.138 (74%)	1.5	6.5	3	2.5	5	1	○
M3 × 0.5	CPCT3.0G	46	8.5	2.459 (100%)	2.599 (74%)	1.5	7	4	3.2	6	1	○
M4 × 0.7	CPCT4.0I	52	10.5	3.242 (100%)	3.422 (76%)	2.25	8.25	5	4	7	1	○
M5 × 0.8	CPCT5.0K	59.5	12.5	4.134 (100%)	4.334 (77%)	2.5	10	5.5	4.5	7	1	○
M6 × 1	CPCT6.0M	61.5	16.5	4.917 (100%)	5.153 (78%)	3.75	12.75	6	4.5	7	1	○
M8 × 1.25	CPCT8.0N	90	19.4	6.647 (100%)	6.912 (80%)	4.7	14.7	8	6	9	2	○
M10 × 1.5	CPCT010O	100	23.4	8.376 (100%)	8.676 (82%)	6.7	16.7	10	8	11	2	○
M12 × 1.75	CPCT012P	110	27.4	10.106 (100%)	10.441 (82%)	7.7	19.7	12	9	12	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Pin length	Bored hole dia. (GO)	Bored hole dia. (NOT-GO)	Bored hole depth (1.5D)	Bored hole depth (2D)	Bored hole depth (2.5D)	Shank dia.
L	ℓ	d_1	d_2	ℓ_1	ℓ_2	ℓ_3	Ds

CPR-S

Check Pins for Bored Hole in thread form tapping (Straight Type)

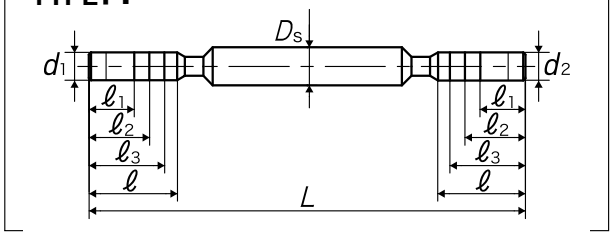
Specification

HSS

For icon explanation, refer to P.24

■CPR-S enables checking of several kinds of bored hole dia. and checking of depth of bored hole(for thread forming taps, straight type). CPR-S is made from wear resistant HSS material and is applicable for blind hole.

TYPE: 1



Segment : 7C

Size	Code	L (mm)	ℓ (mm)	d_1 (mm)	d_2 (mm)	ℓ_1 (mm)	ℓ_2 (mm)	ℓ_3 (mm)	Ds (mm)	Type	Stock
For Metric Threads											
M2 × 0.4	CPRS2.0E	41.5	5.5	1.79	1.84	3	4	5	3	1	○
M2.5 × 0.45	CPRS2.5F	41.5	5.5	2.27	2.34	3.75	5	6.25	3	1	○
M2.6 × 0.45	CPRS2.6F	41.5	5.5	2.37	2.44	3.9	5.2	6.5	3	1	○
M3 × 0.5	CPRS3.0G	49	9	2.75	2.82	4.5	6	7.5	4	1	○
M4 × 0.7	CPRS4.0I	57	11	3.65	3.72	6	8	10	5	1	○
M5 × 0.8	CPRS5.0K	65	14	4.59	4.67	7.5	10	12.5	5.5	1	○
M6 × 1	CPRS6.0M	73	16.5	5.49	5.59	9	12	5	6	1	○
M8 × 1.25	CPRS8.0N	99	22	7.36	7.49	12	16	20	8	1	○
M10 × 1.5	CPRS010O	110	27.5	9.22	9.34	15	20	25	10	1	○
M10 × 1.25	CPRS010N	110	27.5	9.35	9.49	15	20	25	10	1	○
M12 × 1.75	CPRS012P	121	33	11.09	11.23	18	24	30	12	1	○
M12 × 1.5	CPRS012O	121	33	11.22	11.34	18	24	30	12	1	○
M12 × 1.25	CPRS012N	121	33	11.36	11.50	18	24	30	12	1	○
For Unified Threads											
No.2-56UNC	CPRSUN2E	41.5	5.5	1.96	2.04	3.3	4.4	5.5	3	1	○
No.2-64UNF	CPRSUN2D	41.5	5.5	1.98	2.06	3.3	4.4	5.5	3	1	○
No.3-48UNC	CPRSUN3F	45	7.5	2.25	2.35	3.8	5	6.3	3	1	○
No.3-56UNF	CPRSUN3E	45	7.5	2.29	2.37	3.8	5	6.3	3	1	○
No.4-40UNC	CPRSUN4H	49	9	2.54	2.64	4.3	5.7	7.1	4	1	○
No.4-48UNF	CPRSUN4F	49	9	2.59	2.68	4.3	5.7	7.1	4	1	○
No.5-40UNC	CPRSUN5H	49	9	2.87	2.97	4.8	6.4	7.9	4	1	○
No.5-44UNF	CPRSUN5G	49	9	2.90	2.99	4.8	6.4	7.9	4	1	○
No.6-32UNC	CPRSUN6J	57	11	3.11	3.22	5.3	7	8.8	5	1	○
No.6-40UNF	CPRSUN6H	57	11	3.19	3.29	5.3	7	8.8	5	1	○
No.8-32UNC	CPRSUN8J	57	11	3.78	3.89	6.3	8.3	10.4	5	1	○
No.8-36UNF	CPRSUN8I	57	11	3.81	3.91	6.3	8.3	10.4	5	1	○
No.10-24UNC	CPRSUNAM	65	14	4.30	4.44	7.2	9.7	12.1	5.5	1	○
No.10-32UNF	CPRSUNAJ	65	14	4.44	4.53	7.2	9.7	12.1	5.5	1	○
No.12-24UNC	CPRSUNCM	73	16.5	4.96	5.07	8.2	11	13.7	6	1	○
No.12-28UNF	CPRSUNCK	73	16.5	5.03	5.13	8.2	11	13.7	6	1	○
1/4-20UNC	CPRSU04N	73	16.5	5.73	5.86	9.5	12.7	15.9	6	1	○
1/4-28UNF	CPRSU04K	73	16.5	5.91	6.00	9.5	12.7	15.9	6	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

CPR-S Check Pins for Bored Hole in thread form tapping (Straight Type)

Size	Code	L (mm)	ℓ (mm)	d1 (mm)	d2 (mm)	ℓ1 (mm)	ℓ2 (mm)	ℓ3 (mm)	Ds (mm)	Type	Stock
5/16-18UNC	CPRSU050	99	22	7.23	7.38	12	16	20	8	1	○
5/16-24UNF	CPRSU05M	99	22	7.42	7.53	12	16	20	8	1	○
3/8-16UNC	CPRSU06P	110	27.5	8.72	8.89	14.3	19.1	23.8	10	1	○
3/8-24UNF	CPRSU06M	110	27.5	8.99	9.10	14.3	19.1	23.8	10	1	○
7/16-14UNC	CPRSU070	121	33	10.20	10.40	16.7	22.2	27.8	12	1	○
7/16-20UNF	CPRSU07N	121	33	10.48	10.62	16.7	22.2	27.8	12	1	○
1/2-13UNC	CPRSU08R	121	33	11.70	11.92	19.1	25.4	31.8	12	1	○
1/2-20UNF	CPRSU08N	121	33	12.06	12.20	19.1	25.4	31.8	12	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Pin length	Bored hole dia. (GO)	Bored hole dia. (NOT-GO)	d_1 length	d_2 length	Shank dia.	Size of square	Length of square
L	ℓ	d_1	d_2	ℓ_1	ℓ_2	Ds	K	ℓk

CPR-T

Check Pins for Bored Holes in thread form tapping (Taper Type)

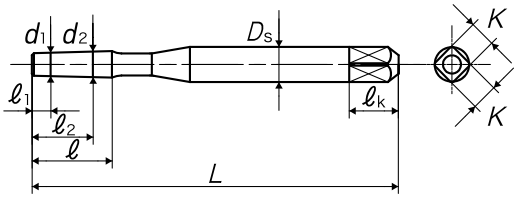
Specification

HSS

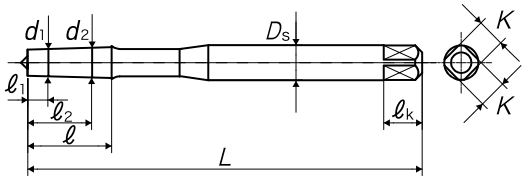
For icon explanation, refer to P.24

■One CPR-T enables simple checking of bored hole dia. (for thread forming taps, taper type).CPR-T is made from wear resistant HSS material is applicable for through hole and for blind hole having enough space in the bottom.

TYPE: 1



TYPE: 2



Segment : 7C

Size	Code	L (mm)	ℓ (mm)	d_1 (mm)	d_2 (mm)	ℓ_1 (mm)	ℓ_2 (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
For Metric Threads												
M2 × 0.4	CPRT2.0E	42	7	1.79	1.84	1	6	3	2.5	5	1	○
M2.5 × 0.45	CPRT2.5F	46	8	2.27	2.34	1.5	6.5	3	2.5	5	1	○
M2.6 × 0.45	CPRT2.6F	46	8	2.37	2.44	1.5	6.5	3	2.5	5	1	○
M3 × 0.5	CPRT3.0G	46	8.5	2.75	2.82	1.5	7	4	3.2	6	1	○
M4 × 0.7	CPRT4.0I	52	10.5	3.65	3.72	2.25	8.25	5	4	7	1	○
M5 × 0.8	CPRT5.0K	59.5	12.5	4.59	4.67	2.5	10	5.5	4.5	7	1	○
M6 × 1	CPRT6.0M	61.5	16.5	5.49	5.59	3.75	12.75	6	4.5	7	1	○
M8 × 1.25	CPRT8.0N	90	19.4	7.36	7.49	4.7	14.7	8	6	9	2	○
M10 × 1.5	CPRT010O	100	23.4	9.22	9.34	6.7	16.7	10	8	11	2	○
M10 × 1.25	CPRT010N	100	23.4	9.35	9.49	6.7	16.7	10	8	11	2	○
M12 × 1.75	CPRT012P	110	27.4	11.09	11.23	7.7	19.7	12	9	12	2	○
M12 × 1.5	CPRT012O	110	27.4	11.22	11.34	7.7	19.7	12	9	12	2	○
M12 × 1.25	CPRT012N	110	27.4	11.36	11.50	7.7	19.7	12	9	12	2	○
For Unified Threads												
No.2-56UNC	CPRTUN2E	46	8	1.96	2.04	1.5	6.5	3	2.5	5	1	○
No.2-64UNF	CPRTUN2D	46	8	1.98	2.06	1.5	6.5	3	2.5	5	1	○
No.3-48UNC	CPRTUN3F	46	8	2.25	2.35	1.5	6.5	3	2.5	5	1	○
No.3-56UNF	CPRTUN3E	46	8	2.29	2.37	1.5	6.5	3	2.5	5	1	○
No.4-40UNC	CPRTUN4H	46	8.5	2.54	2.64	1.5	7	4	3.2	6	1	○
No.4-48UNF	CPRTUN4F	46	8.5	2.59	2.68	1.5	7	4	3.2	6	1	○
No.5-40UNC	CPRTUN5H	46	8.5	2.87	2.97	1.5	7	4	3.2	6	1	○
No.5-44UNF	CPRTUN5G	46	8.5	2.90	2.99	1.5	7	4	3.2	6	1	○
No.6-32UNC	CPRTUN6J	52	10.5	3.11	3.22	2.25	8.25	5	4	7	1	○
No.6-40UNF	CPRTUN6H	52	10.5	3.19	3.29	2.25	8.25	5	4	7	1	○
No.8-32UNC	CPRTUN8J	52	10.5	3.78	3.89	2.25	8.25	5	4	7	1	○
No.8-36UNF	CPRTUN8I	52	10.5	3.81	3.91	2.25	8.25	5	4	7	1	○
No.10-24UNC	CPRTUNAM	59.5	12.5	4.30	4.44	2.5	10	5.5	4.5	7	1	○
No.10-32UNF	CPRTUNAJ	59.5	12.5	4.44	4.53	2.5	10	5.5	4.5	7	1	○
No.12-24UNC	CPRTUNCM	61.5	16.5	4.96	5.07	3.75	12.75	6	4.5	7	1	○
No.12-28UNF	CPRTUNCK	61.5	16.5	5.03	5.13	3.75	12.75	6	4.5	7	1	○
1/4-20UNC	CPRTU04N	61.5	16.5	5.73	5.86	3.75	12.75	6	4.5	7	1	○
1/4-28UNF	CPRTU04K	61.5	16.5	5.91	6.00	3.75	12.75	6	4.5	7	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

CPR-T Check Pins for Bored Holes in thread form tapping (Taper Type)

Size	Code	L (mm)	ℓ (mm)	d_1 (mm)	d_2 (mm)	ℓ_1 (mm)	ℓ_2 (mm)	Ds (mm)	K (mm)	ℓk (mm)	Type	Stock
5/16-18UNC	CPRTU05O	90	19.4	7.23	7.38	4.7	14.7	8	6	9	2	○
5/16-24UNF	CPRTU05M	90	19.4	7.42	7.53	4.7	14.7	8	6	9	2	○
3/8-16UNC	CPRTU06P	100	23.4	8.72	8.89	6.7	16.7	10	8	11	2	○
3/8-24UNF	CPRTU06M	100	23.4	8.99	9.10	6.7	16.7	10	8	11	2	○
7/16-14UNC	CPRTU07Q	110	27.4	10.20	10.40	7.7	19.7	12	9	12	2	○
7/16-20UNF	CPRTU07N	110	27.4	10.48	10.62	7.7	19.7	12	9	12	2	○
1/2-13UNC	CPRTU08R	110	27.4	11.70	11.92	7.7	19.7	12	9	12	2	○
1/2-20UNF	CPRTU08N	110	27.4	12.06	12.20	7.7	19.7	12	9	12	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Pin length	Bored hole dia. (Thread engagement 90%)	Bored hole dia. (Thread engagement 75%)	Bored hole dia. (Thread engagement 60%)	d_1 length	d_2 length	d_3 length	Shank dia.
L	ℓ	d_1	d_2	d_3	ℓ_1	ℓ_2	ℓ_3	Ds

CPR-Y

Check-Pins for Bored Holes in thread form tapping for R-Y taps.

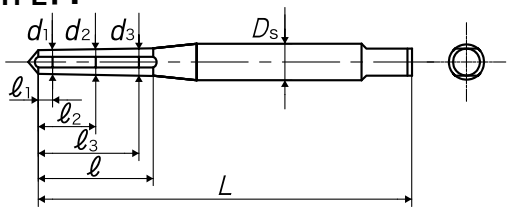
Specification

HSS

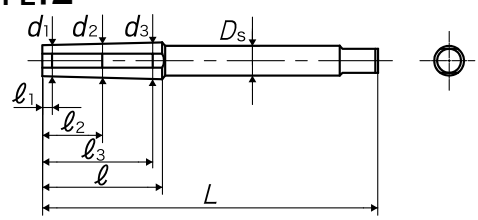
For icon explanation, refer to P.24

■Check Pin for R-Y is the pin to check the bored hole dia. for R-Y forming taps.

TYPE: 1



TYPE: 2



Segment : 1J

Size	Code	L (mm)	ℓ (mm)	d_1 Thread engagement ratio 90%	d_2 Thread engagement ratio 75%	d_3 Thread engagement ratio 60%	ℓ_1 (mm)	ℓ_2 (mm)	ℓ_3 (mm)	Ds (mm)	Type	Stock
For Metric Threads												
M2	CPRY2.0E	42	9	1.83	1.86	1.89	1.5	4.5	7.5	3	1	○
M2.5	CPRY2.5F	44	10	2.31	2.34	2.37	2	5	8	3	1	○
M2.6	CPRY2.6F	44	10	2.41	2.44	2.47	2	5	8	3	1	○
M3	CPRY3.0G	46	13	2.78	2.83	2.87	2	6.5	11	4	1	○
M4	CPRY4.0I	52	16	3.69	3.75	3.81	2	8	14	5	1	○
M5	CPRY5.0K	60	16	4.65	4.71	4.77	2	8	14	5.5	1	○
M6	CPRY6.0M	62	19	5.55	5.63	5.70	2	9.5	17	6	1	○
M8	CPRY8.0N	70	25	7.42	7.53	7.63	2	12.5	23	6.2	2	○

※Please use CPR-Y for controlling bored holes for R-Y taps.

–	–	Shank dia.	Overall length	Size of square	Length of square
L	D	Ds	ℓ	K	ℓk

SA

Shank Adjusters

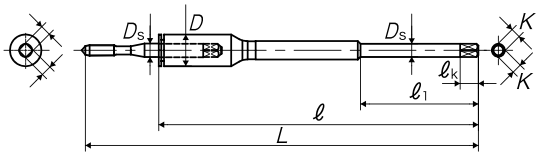
Specification

Alloy steel

For icon explanation, refer to P.24

■Shank Adjuster is a Tap Holder in order to use the tap in the desired longer length.

TYPE: 1



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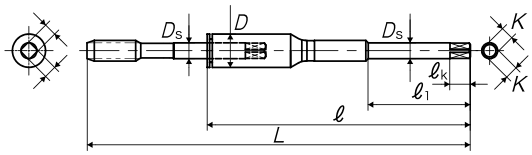


Segment : 5A

Size	Code	L (mm)	D (mm)	Ds (mm)	ℓ (mm)	ℓ1 (mm)	K (mm)	ℓk (mm)	Type	Stock
M3-150	SA3.0M	150	11	4	127	45	3.2	6	1	△
M4-150	SA4.0M	150	12	5	122	45	4	7	1	△
M5-150	SA5.0M	150	12.5	5.5	114	45	4.5	7	1	△
M6-150	SA6.0M	150	13	6	115	45	4.5	7	1	△
M8-150	SA8.0M	150	13	6.2	108	45	5	8	2	△
M10-150	SA010M	150	14	7	103	45	5.5	8	2	△

※By using SA, you can lengthen your I series taps and standard taps.

(For ISP, refer to product page SP-1.
For IPO, refer to product page PO-1.
For IHT, refer to product page HT-1.)

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

PIPE TAP SERIES

Rc	Pipe-1
PT	Pipe-2
PT LH	Pipe-3
PT-X	Pipe-4
S-PT	Pipe-5
S-PT LH	Pipe-6
LS-PT	Pipe-7
LS-S-PT	Pipe-8
SP-PT	Pipe-9
SP-S-PT	Pipe-10
SP-PT-X	Pipe-11
LS-SP-PT	Pipe-12
LS-SP-S-PT	Pipe-13
INT-PT	Pipe-14
INT-S-PT	Pipe-15
LS-INT-PT	Pipe-16
LS-INT-S-PT	Pipe-17
LC-PT	Pipe-18
LC-S-PT	Pipe-19
SU-PT	Pipe-20
SU-S-PT	Pipe-21
SU-SP-PT	Pipe-22
SU-SP-S-PT	Pipe-23
FC-PT	Pipe-24
FC-S-PT	Pipe-25
CT-PT	Pipe-26
CT-S-PT	Pipe-27
Rp	Pipe-28
PS	Pipe-29
PS LH	Pipe-30
LS-PS	Pipe-31
SP-PS	Pipe-32
LS-SP-PS	Pipe-33
CT-PS	Pipe-34
G	Pipe-35
PF	Pipe-36
PF LH	Pipe-37
LS-PF	Pipe-38
SP-PF	Pipe-39
LS-SP-PF	Pipe-40
SU-PF	Pipe-41
FC-PF	Pipe-42
CT-PF	Pipe-43
NPT	Pipe-44
S-NPT	Pipe-45
LS-NPT	Pipe-46
SP-NPT	Pipe-47
LS-SP-S-NPT	Pipe-48
INT-NPT	Pipe-49
INT-S-NPT	Pipe-50
NPTF	Pipe-51
LS-NPTF	Pipe-52
NPS	Pipe-53
NPSF	Pipe-54

Rc

Hand Taps for Taper Pipe Threads

Specification

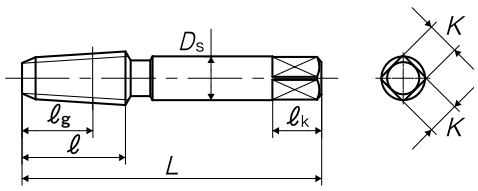
HSS

Recommended Tapping Speeds depending on Materials

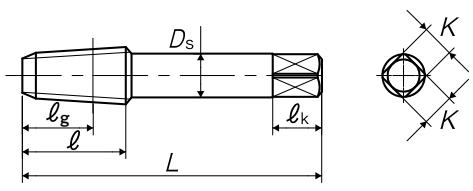
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
Rc 1/16-28	II	TH2RC01K	2.5P	7.723	59	14	10.1	8	6	9	4	1	○
Rc 1/8-28	II	TH2RC02K	2.5P	9.728	59	15	10.1	8	6	9	4	2	○
Rc 1/4-19	II	TH2RC04-	2.5P	13.157	67	19	15	11	9	12	4	2	○
Rc 3/8-19	II	TH2RC06-	2.5P	16.662	75	21	15.4	14	11	14	4	2	○
Rc 1/2-14	II	TH2RC08Q	2.5P	20.955	87	26	20.5	18	14	17	4	2	○
Rc 3/4-14	II	TH2RC12Q	2.5P	26.441	96	28	21.8	23	17	20	4	2	○
Rc 1-11	II	TH2RC16U	2.5P	33.249	109	33	26	26	21	24	5	2	○
Rc 1 1/4-11	II	TH2RC20U	2.5P	41.910	119	36	28.3	32	26	30	5	2	○
Rc 1 1/2-11	II	TH2RC24U	2.5P	47.803	125	37	28.3	38	29	32	6	2	○
Rc 2-11	II	TH2RC32U	2.5P	59.614	140	41	32.7	46	35	38	6	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

PT

Hand Taps for Taper Pipe Threads, Long (ℓg) Type

Specification

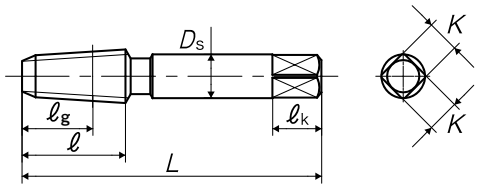
HSS

Recommended Tapping Speeds depending on Materials

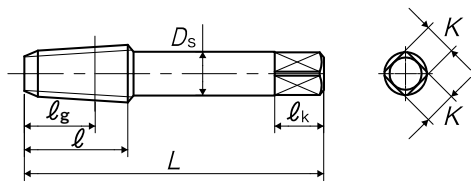
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/16-28	II	TH2T01K-8	2.5P	7.723	55	19	13	8	6	9	4	1	◎
PT 1/8-28	II	TH2T02K	2.5P	9.728	55	19	13	8	6	9	4	2	◎
PT 1/4-19	II	TH2T04-	2.5P	13.157	62	28	21	11	9	12	4	2	◎
PT 3/8-19	II	TH2T06-	2.5P	16.662	65	28	21	14	11	14	4	2	◎
PT 1/2-14	II	TH2T08Q	2.5P	20.955	80	35	25	18	14	17	4	2	◎
PT 5/8-14	II	TH2T10Q	2.5P	22.911	82	35	25	19	15	18	4	2	△
PT 3/4-14	II	TH2T12Q	2.5P	26.441	85	35	25	23	17	20	4	2	◎
PT 7/8-14	II	TH2T14Q	2.5P	30.201	90	40	28	24	19	22	4	2	△
PT 1 -11	II	TH2T16U	2.5P	33.249	95	45	32	26	21	24	5	2	◎
PT 1 1/8-11	II	TH2T18U	2.5P	37.897	100	45	32	28	21	24	5	2	△
PT 1 1/4-11	II	TH2T20U	2.5P	41.910	105	45	32	32	26	30	5	2	◎
PT 1 1/2-11	II	TH2T24U	2.5P	47.803	110	45	32	38	29	32	6	2	◎
PT 1 3/4-11	II	TH2T28U	2.5P	53.746	115	45	32	42	32	35	6	2	△
PT 2 -11	II	TH2T32U	2.5P	59.614	120	50	35	46	35	38	6	2	◎
PT 2 1/4-11	II	TH2T36U	2.5P	65.710	145	65	50	50	38	42	6	2	△
PT 2 1/2-11	II	TH2T40U	2.5P	75.184	145	65	50	55	41	44	8	2	△
PT 3 -11	II	TH2T48U	2.5P	87.884	155	65	52	65	50	52	8	2	△
PT 3 1/2-11	II	TH2T56U	2.5P	100.330	165	68	52	70	54	58	8	2	△
PT 4 -11	II	TH2T64U	2.5P	113.030	170	70	55	75	58	62	10	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

PT LH

Hand Taps for Taper Pipe Threads Long (ℓg) Type for LH Threads

Specification

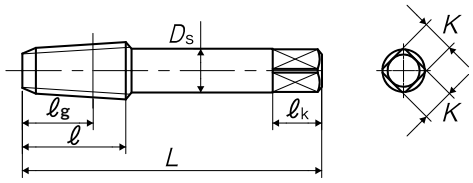
HSS | LH Left hand

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	Ⅱ	TH2T02K--L	2.5P	9.728	55	19	13	8	6	9	4	1	△
PT 1/4-19	Ⅱ	TH2T04---L	2.5P	13.157	62	28	21	11	9	12	4	1	△
PT 3/8-19	Ⅱ	TH2T06---L	2.5P	16.662	65	28	21	14	11	14	4	1	△
PT 1/2-14	Ⅱ	TH2T08Q--L	2.5P	20.955	80	35	25	18	14	17	4	1	△
PT 3/4-14	Ⅱ	TH2T12Q--L	2.5P	26.441	85	35	25	23	17	20	4	1	△
PT 1 -11	Ⅱ	TH2T16U--L	2.5P	33.249	95	45	32	26	21	24	5	1	△
PT 1 1/4-11	Ⅱ	TH2T20U--L	2.5P	41.910	105	45	32	32	26	30	5	1	△
PT 1 1/2-11	Ⅱ	TH2T24U--L	2.5P	47.803	110	45	32	38	29	32	6	1	△
PT 2 -11	Ⅱ	TH2T32U--L	2.5P	59.614	120	50	35	46	35	38	6	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

PT-X

X Series Hand Taps for Taper Pipe Threads Short (ℓg) Type

Specification

HSS

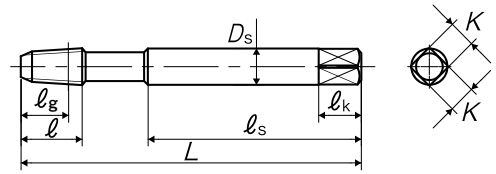
■PT-X Hand Tap, adopting new tap blank, ensures properly long projection length of the tool. Having short thread length, this tap is suitable for tapping of such machine components as have the limit in their thickness.

Recommended Tapping Speeds depending on Materials

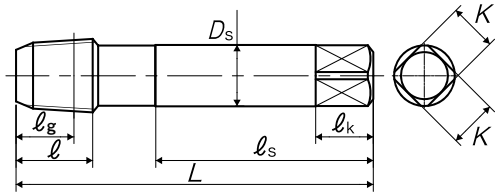
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads														
PT 1/16-28	II	THX2T01K-8	2.5P	7.723	75	13.5	10.5	47	8	6	9	4	1	○
PT 1/8-28	II	THX2T02K	2.5P	9.728	75	13.5	10.5	48	8	6	9	4	2	○
PT 1/4-19	II	THX2T04-	2.5P	13.157	85	16.5	12.5	54	11	9	12	4	2	○
PT 3/8-19	II	THX2T06-	2.5P	16.662	95	18	14	60	14	11	14	4	2	○
PT 1/2-14	II	THX2T08Q	2.5P	20.955	105	22.5	17	64	18	14	17	4	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

S-PT

Hand Taps for Taper Pipe Threads Short (ℓg) Type

Specification

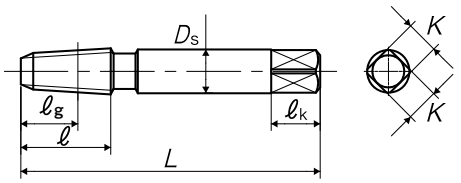
HSS

Recommended Tapping Speeds depending on Materials

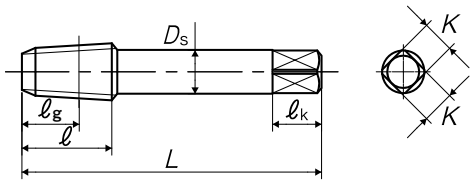
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/16-28	II	TSPT01K-8	2.5P	7.723	55	16.5	10.5	8	6	9	4	1	○
PT 1/8-28	II	TSPT02K	2.5P	9.728	55	16.5	10.5	8	6	9	4	2	◎
PT 1/4-19	II	TSPT04-	2.5P	13.157	62	19.5	12.5	11	9	12	4	2	◎
PT 3/8-19	II	TSPT06-	2.5P	16.662	65	21	14	14	11	14	4	2	◎
PT 1/2-14	II	TSPT08Q	2.5P	20.955	80	27	17	18	14	17	4	2	◎
PT 3/4-14	II	TSPT12Q	2.5P	26.441	85	29	19	23	17	20	4	2	◎
PT 1 -11	II	TSPT16U	2.5P	33.249	95	35	22	26	21	24	5	2	◎
PT 1 1/4-11	II	TSPT20U	2.5P	41.910	105	37.5	24.5	32	26	30	5	2	○
PT 1 1/2-11	II	TSPT24U	2.5P	47.803	110	38.5	25.5	38	29	32	6	2	○
PT 1 3/4-11	II	TSPT28U	2.5P	53.746	115	39.5	26.5	42	32	35	6	2	△
PT 2 -11	II	TSPT32U	2.5P	59.614	120	42.5	27.5	46	35	38	6	2	○
PT 2 1/2-11	II	TSPT40U	2.5P	75.184	145	47	32	55	41	44	8	2	△
PT 3 -11	II	TSPT48U	2.5P	87.884	155	51	36	65	50	52	8	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

S-PT LH

Hand Taps for Taper Pipe Threads Short (ℓg) Type for LH Threads

Specification

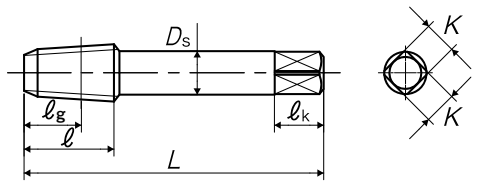
HSS | LH Left hand

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	TSPT02K--L	2.5P	9.728	55	16.5	10.5	8	6	9	4	1	△
PT 1/4-19	II	TSPT04---L	2.5P	13.157	62	19.5	12.5	11	9	12	4	1	△
PT 3/8-19	II	TSPT06---L	2.5P	16.662	65	21	14	14	11	14	4	1	△
PT 1/2-14	II	TSPT08Q--L	2.5P	20.955	80	27	17	18	14	17	4	1	△
PT 3/4-14	II	TSPT12Q--L	2.5P	26.441	85	29	19	23	17	20	4	1	△
PT 1 -11	II	TSPT16U--L	2.5P	33.249	95	35	22	26	21	24	5	1	△
PT 1 1/4-11	II	TSPT20U--L	2.5P	41.910	105	37.5	24.5	32	26	30	5	1	△
PT 1 1/2-11	II	TSPT24U--L	2.5P	47.803	110	38.5	25.5	38	29	32	6	1	△
PT 2 -11	II	TSPT32U--L	2.5P	59.614	120	42.5	27.5	46	35	38	6	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-PT

Long Shank Hand Taps for Taper Pipe Threads Long (ℓg) Type

Specification

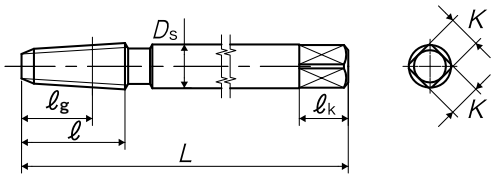
HSS

Recommended Tapping Speeds depending on Materials

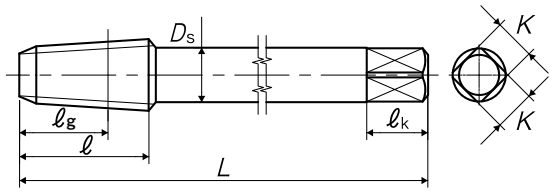
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/16-28	Ⅱ	L10T01K-8	2.5P	7.723	100	19	13	8	6	9	4	1	△
PT 1/8-28	Ⅱ	L10T02K	2.5P	9.728	100	19	13	8	6	9	4	2	◎
		L15T02K			150								
		L20T02K			200								△
PT 1/4-19	Ⅱ	L10T04-	2.5P	13.157	100	28	21	11	9	12	4	2	◎
		L15T04-			150								
		L20T04-			200								△
PT 3/8-19	Ⅱ	L10T06-	2.5P	16.662	100	28	21	14	11	14	4	2	◎
		L12T06-			120								△
		L15T06-			150								◎
		L20T06-			200								△
PT 1/2-14	Ⅱ	L15T08Q	2.5P	20.955	150	35	25	18	14	17	4	2	○
		L20T08Q			200								△
PT 3/4-14	Ⅱ	L15T12Q	2.5P	26.441	150	35	25	23	17	20	4	2	○
		L20T12Q			200								△
PT 1 -11	Ⅱ	L15T16U	2.5P	33.249	150	45	32	26	21	24	5	2	○
		L20T16U			200								△
PT 1 1/4-11	Ⅱ	-	2.5P	41.910	200	45	32	32	26	30	5	2	△
PT 1 1/2-11	Ⅱ	-	2.5P	47.803	200	45	32	38	29	32	6	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

LS-S-PT

Long Shank Hand Taps for Taper Pipe Threads, Short (ℓg) Type

Specification

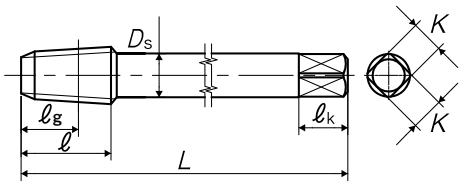
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	TSPT02KL10	2.5P	9.728	100	16.5	10.5	8	6	9	4	1	○
		TSPT02KL15			150								
		TSPT02KL20			200								△
PT 1/4-19	II	TSPT04-L10	2.5P	13.157	100	19.5	12.5	11	9	12	4	1	○
		TSPT04-L15			150								
		TSPT04-L20			200								△
PT 3/8-19	II	TSPT06-L10	2.5P	16.662	100	21	14	14	11	14	4	1	○
		TSPT06-L12			120								△
		TSPT06-L15			150								○
		TSPT06-L20			200								△
PT 1/2-14	II	TSPT08QL15	2.5P	20.955	150	27	17	18	14	17	4	1	○
		TSPT08QL20			200								△
PT 3/4-14	II	TSPT12QL15	2.5P	26.441	150	29	19	23	17	20	4	1	○
		TSPT12QL20			200								△
PT 1 -11	II	TSPT16UL15	2.5P	33.249	150	35	22	26	21	24	5	1	○
		TSPT16UL20			200								△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

SP-PT

Spiral Fluted Taps for Taper Pipe Threads, Long (ℓg) Type

Specification

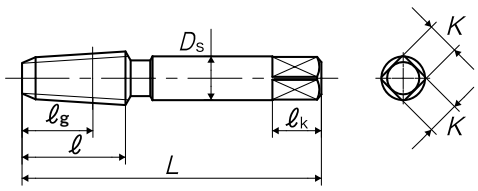
HSS

Recommended Tapping Speeds depending on Materials

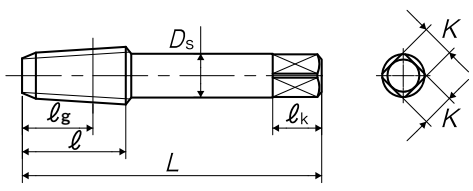
Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/16-28	II	SH2T01K-8	2.5P	7.723	55	19	13	8	6	9	3	1	△
PT 1/8-28	II	SH2T02K	2.5P	9.728	55	19	13	8	6	9	3	2	◎
PT 1/4-19	II	SH2T04-	2.5P	13.157	62	28	21	11	9	12	3	2	◎
PT 3/8-19	II	SH2T06-	2.5P	16.662	65	28	21	14	11	14	3	2	◎
PT 1/2-14	II	SH2T08Q	2.5P	20.955	80	35	25	18	14	17	4	2	○
PT 3/4-14	II	SH2T12Q	2.5P	26.441	85	35	25	23	17	20	4	2	○
PT 1 -11	II	SH2T16U	2.5P	33.249	95	45	32	26	21	24	4	2	○
PT 1 1/4-11	II	SH2T20U	2.5P	41.910	105	45	32	32	26	30	4	2	△
PT 1 1/2-11	II	SH2T24U	2.5P	47.803	110	45	32	38	29	32	4	2	△
PT 2 -11	II	SH2T32U	2.5P	59.614	120	50	35	46	35	38	4	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

SP-S-PT

Spiral Fluted Taps for Taper Pipe Threads Short (ℓg) Type

Specification

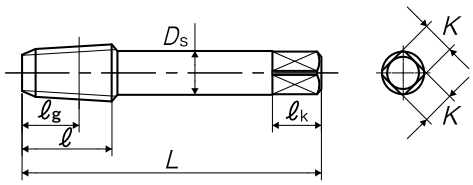
HSS

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	SSPT02K	2.5P	9.728	55	16.5	10.5	8	6	9	3	1	○
PT 1/4-19	II	SSPT04-	2.5P	13.157	62	19.5	12.5	11	9	12	3	1	○
PT 3/8-19	II	SSPT06-	2.5P	16.662	65	21	14	14	11	14	3	1	○
PT 1/2-14	II	SSPT08Q	2.5P	20.955	80	27	17	18	14	17	4	1	○
PT 3/4-14	II	SSPT12Q	2.5P	26.441	85	29	19	23	17	20	4	1	○
PT 1 -11	II	SSPT16U	2.5P	33.249	95	35	22	26	21	24	4	1	○
PT 1 1/4-11	II	SSPT20U	2.5P	41.910	105	37.5	24.5	32	26	30	4	1	△
PT 1 1/2-11	II	SSPT24U	2.5P	47.803	110	38.5	25.5	38	29	32	4	1	△
PT 2 -11	II	SSPT32U	2.5P	59.614	120	42.5	27.5	46	35	38	4	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SP-PT-X

X Series Spiral Fluted Taps for Taper Pipe Threads Short (ℓg) Type

Specification

HSS

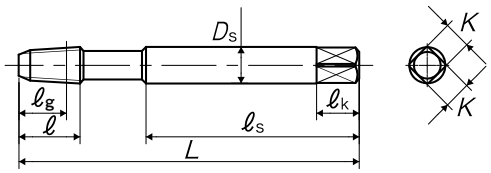
■SP-PT-X Spiral Fluted Tap, adopting new blank, ensures properly long projection length of the tool. Having short thread length, this tap is suitable for tapping of such machine components as have the limit in their thickness.

Recommended Tapping Speeds depending on Materials

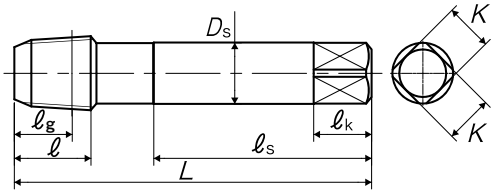
Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads														
PT 1/16-28	II	SHX2T01K-8	2.5P	7.723	75	13.5	10.5	47	8	6	9	3	1	○
PT 1/8-28	II	SHX2T02K	2.5P	9.728	75	13.5	10.5	48	8	6	9	3	2	○
PT 1/4-19	II	SHX2T04-	2.5P	13.157	85	16.5	12.5	54	11	9	12	3	2	○
PT 3/8-19	II	SHX2T06-	2.5P	16.662	95	18	14	60	14	11	14	3	2	○
PT 1/2-14	II	SHX2T08Q	2.5P	20.955	105	22.5	17	64	18	14	17	4	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

LS-SP-PT

Long Shank Spiral Fluted Taps for Taper Pipe Threads, Long (ℓg) Type

Specification

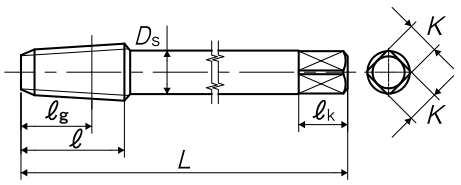
HSS

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	SH2T02KL10	2.5P	9.728	100	19	13	8	6	9	3	1	△
		SH2T02KL12			120								
		SH2T02KL15			150								
PT 1/4-19	II	SH2T04-L10	2.5P	13.157	100	28	21	11	9	12	3	1	△
		SH2T04-L12			120								
		SH2T04-L15			150								
PT 3/8-19	II	SH2T06-L12	2.5P	16.662	120	28	21	14	11	14	3	1	△
		SH2T06-L15			150								
PT 1/2-14	II	SH2T08QL15	2.5P	20.955	150	35	25	18	14	17	4	1	△
PT 3/4-14	II	SH2T12QL15	2.5P	26.441	150	35	25	23	17	20	4	1	△
PT 1 -11	II	SH2T16UL15	2.5P	33.249	150	45	32	26	21	24	4	1	△
		SH2T16UL20			200								

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-SP-S-PT

Long Shank Spiral Fluted Taps for Taper Pipe Threads, Short (ℓg) Type

Specification

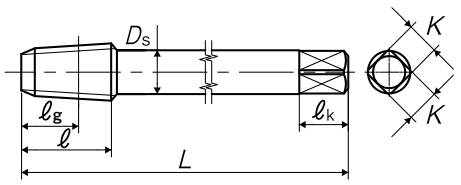
HSS

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	SSPT02KL10	2.5P	9.728	100	16.5	10.5	8	6	9	3	1	△
		SSPT02KL12			120								
		SSPT02KL15			150								
PT 1/4-19	II	SSPT04-L10	2.5P	13.157	100	19.5	12.5	11	9	12	3	1	△
		SSPT04-L12			120								
		SSPT04-L15			150								
PT 3/8-19	II	SSPT06-L12	2.5P	16.662	120	21	14	14	11	14	3	1	△
		SSPT06-L15			150								
PT 1/2-14	II	SSPT08QL15	2.5P	20.955	150	27	17	18	14	17	4	1	△
PT 3/4-14	II	SSPT12QL15	2.5P	26.441	150	29	19	23	17	20	4	1	△
PT 1 -11	II	SSPT16UL15	2.5P	33.249	150	35	22	26	21	24	4	1	△
		SSPT16UL20			200								

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

INT-PT

Interrupted Taps for Taper Pipe Threads, Long (ℓg) Type

Specification

HSS | OX Oxide

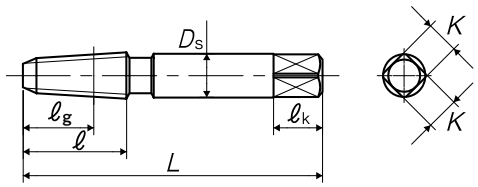
■INT-PT having low left-hand spiral flutes and having every other thread ground off, reduces cutting torque.
INT-PT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

Recommended Tapping Speeds depending on Materials

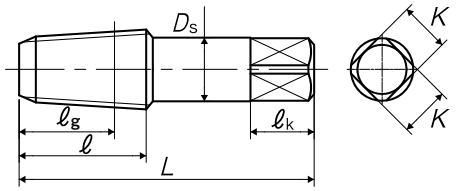
Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/16-28	II	TINT01K-8	3P	7.723	55	19	13	8	6	9	3	1	△
PT 1/8-28	II	TINT02K	3P	9.728	55	19	13	8	6	9	5	2	○
PT 1/4-19	II	TINT04-	3P	13.157	62	28	21	11	9	12	5	2	○
PT 3/8-19	II	TINT06-	3P	16.662	65	28	21	14	11	14	5	2	○
PT 1/2-14	II	TINT08Q	3P	20.955	80	35	25	18	14	17	5	2	○
PT 3/4-14	II	TINT12Q	3P	26.441	85	35	25	23	17	20	5	2	○
PT 1 -11	II	TINT16U	3P	33.249	95	45	32	26	21	24	5	2	○
PT 1 1/4-11	II	TINT20U	3P	41.910	105	45	32	32	26	30	5	2	○
PT 1 1/2-11	II	TINT24U	3P	47.803	110	45	32	38	29	32	7	2	○
PT 2 -11	II	TINT32U	3P	59.614	120	50	35	46	35	38	7	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

INT-S-PT

Interrupted Taps for Taper Pipe Threads, Short (ℓg) Type

Specification

HSS | OX Oxide

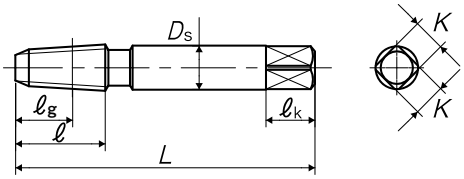
■INT-S-PT Short Spiral Fluted Tap, having low left-hand spiral flutes and having every other thread ground off, reduces cutting torque.
INT-S-PT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

Recommended Tapping Speeds depending on Materials

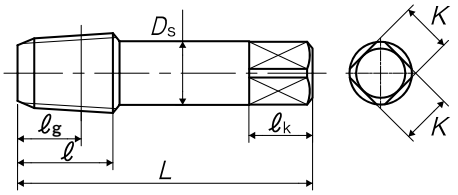
Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/16-28	II	TIST01K-8	3P	7.723	55	16.5	10.5	8	6	9	3	1	△
PT 1/8-28	II	TIST02K	3P	9.728	55	16.5	10.5	8	6	9	5	2	○
PT 1/4-19	II	TIST04-	3P	13.157	62	19.5	12.5	11	9	12	5	2	○
PT 3/8-19	II	TIST06-	3P	16.662	65	21	14	14	11	14	5	2	○
PT 1/2-14	II	TIST08Q	3P	20.955	80	27	17	18	14	17	5	2	○
PT 3/4-14	II	TIST12Q	3P	26.441	85	29	19	23	17	20	5	2	○
PT 1 -11	II	TIST16U	3P	33.249	95	35	22	26	21	24	5	2	○
PT 1 1/4-11	II	TIST20U	3P	41.910	105	37.5	24.5	32	26	30	5	2	○
PT 1 1/2-11	II	TIST24U	3P	47.803	110	38.5	25.5	38	29	32	7	2	○
PT 2 -11	II	TIST32U	3P	59.614	120	42.5	27.5	46	35	38	7	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

LS-INT-PT

Long Shank Interrupted Taps for Taper Pipe Threads, Long (ℓg) Type

Specification

HSS | OX Oxide

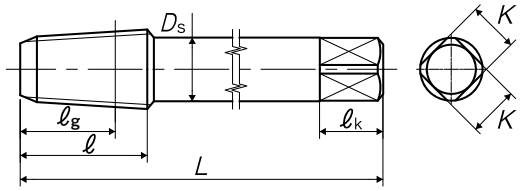
■LS-INT-PT Long Shank Spiral Fluted Tap, having low left-hand spiral flutes and having every other thread ground off, reduces cutting torque.
LS-INT-PT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

Recommended Tapping Speeds depending on Materials

Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	TINT02KL10	3P	9.728	100	19	13	8	6	9	5	1	△
		TINT02KL12			120								
		TINT02KL15			150								
PT 1/4-19	II	TINT04-L10	3P	13.157	100	28	21	11	9	12	5	1	△
		TINT04-L12			120								
		TINT04-L15			150								
PT 3/8-19	II	TINT06-L10	3P	16.662	100	28	21	14	11	14	5	1	△
		TINT06-L12			120								
		TINT06-L15			150								
PT 1/2-14	II	TINT08QL15	3P	20.955	150	35	25	18	14	17	5	1	△
PT 3/4-14	II	TINT12QL15	3P	26.441	150	35	25	23	17	20	5	1	△
PT 1 -11	II	TINT16UL15	3P	33.249	150	45	32	26	21	24	5	1	△
		TINT16UL20			200								

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-INT-S-PT

Long Shank Interrupted Taps for Taper Pipe Threads, Short (ℓg) Type

Specification

HSS | OX Oxide

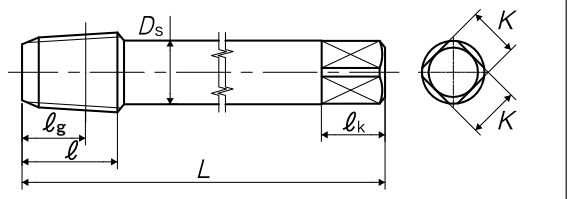
Recommended Tapping Speeds depending on Materials

Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

■LS-INT-S-PT Long Shank Short Spiral Fluted Tap, having low left-hand spiral flutes and having every other thread ground off, reduces cutting torque.
LS-INT-S-PT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	TIST02KL10	3P	9.728	100	16.5	10.5	8	6	9	5	1	△
		TIST02KL12			120								
		TIST02KL15			150								
PT 1/4-19	II	TIST04-L10	3P	13.157	100	19.5	12.5	11	9	12	5	1	△
		TIST04-L12			120								
		TIST04-L15			150								
PT 3/8-19	II	TIST06-L10	3P	16.662	100	21	14	14	11	14	5	1	△
		TIST06-L12			120								
		TIST06-L15			150								
PT 1/2-14	II	TIST08QL15	3P	20.955	150	27	17	18	14	17	5	1	△
PT 3/4-14	II	TIST12QL15	3P	26.441	150	29	19	23	17	20	5	1	△
PT 1 -11	II	TIST16UL15	3P	33.249	150	35	22	26	21	24	5	1	△
		TIST16UL20			200								

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

LC-PT

Hand Taps for Taper Pipe Threads Long (ℓg) Type, for Low Carbon Steels

Specification

HSS | OX Oxide

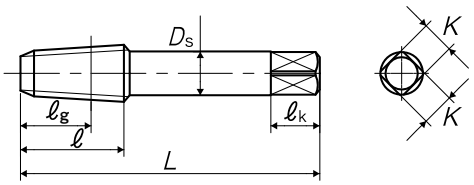
■Tap suitable for such soft steels (Low Carbon Steels) as SS400 and S25C.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	LCPT02K	2.5P	9.728	55	19	13	8	6	9	4	1	△
PT 1/4-19	II	LCPT04-	2.5P	13.157	62	28	21	11	9	12	4	1	△
PT 3/8-19	II	LCPT06-	2.5P	16.662	65	28	21	14	11	14	4	1	△
PT 1/2-14	II	LCPT08Q	2.5P	20.955	80	35	25	18	14	17	4	1	△
PT 3/4-14	II	LCPT12Q	2.5P	26.441	85	35	25	23	17	20	4	1	△
PT 1 -11	II	LCPT16U	2.5P	33.249	95	45	32	26	21	24	5	1	△
PT 1 1/4-11	II	LCPT20U	2.5P	41.910	105	45	32	32	26	30	5	1	△
PT 1 1/2-11	II	LCPT24U	2.5P	47.803	110	45	32	38	29	32	6	1	△
PT 2 -11	II	LCPT32U	2.5P	59.614	120	50	35	46	35	38	6	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LC-S-PT

Hand Taps for Taper Pipe Threads Short (ℓg) Type, for Low Carbon Steels

Specification

HSS | OX Oxide

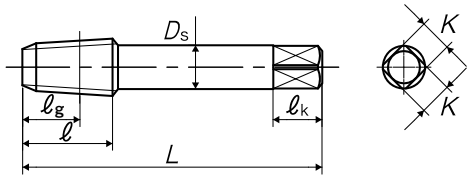
■Tap, having short thread portion, suitable for such soft steels (Low Carbon Steels) as SS400 and S25C.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	Ⅱ	LCSPT02K	2.5P	9.728	55	16.5	10.5	8	6	9	4	1	△
PT 1/4-19	Ⅱ	LCSPT04-	2.5P	13.157	62	19.5	12.5	11	9	12	4	1	△
PT 3/8-19	Ⅱ	LCSPT06-	2.5P	16.662	65	21	14	14	11	14	4	1	△
PT 1/2-14	Ⅱ	LCSPT08Q	2.5P	20.955	80	27	17	18	14	17	4	1	△
PT 3/4-14	Ⅱ	LCSPT12Q	2.5P	26.441	85	29	19	23	17	20	4	1	△
PT 1 -11	Ⅱ	LCSPT16U	2.5P	33.249	95	35	22	26	21	24	5	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

SU-PT

Hand Taps for Taper Pipe Threads Long (ℓg) Type, for Stainless Steels

Specification

HSS | OX Oxide

■SU-PT is the hand tap suitable for stainless steels which tend to work-harden and sticky, as well as chrome steels and molybdenum steels.

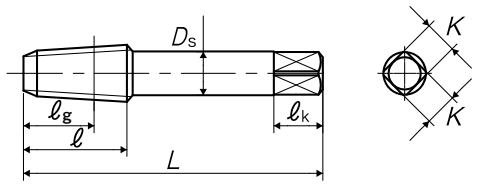
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	TU2T02K	2.5P	9.728	55	19	13	8	6	9	4	1	△
PT 1/4-19	II	TU2T04-	2.5P	13.157	62	28	21	11	9	12	4	1	△
PT 3/8-19	II	TU2T06-	2.5P	16.662	65	28	21	14	11	14	4	1	△
PT 1/2-14	II	TU2T08Q	2.5P	20.955	80	35	25	18	14	17	4	1	△
PT 3/4-14	II	TU2T12Q	2.5P	26.441	85	35	25	23	17	20	4	1	△
PT 1 -11	II	TU2T16U	2.5P	33.249	95	45	32	26	21	24	4	1	△
PT 1 1/4-11	II	TU2T20U	2.5P	41.910	105	45	32	32	26	30	5	1	△
PT 1 1/2-11	II	TU2T24U	2.5P	47.803	110	45	32	38	29	32	6	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SU-S-PT

Hand Taps for Taper Pipe Threads Short (ℓg) Type, for Stainless Steels

Specification

HSS | OX Oxide

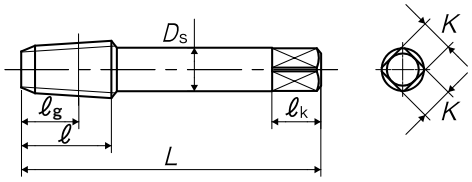
■SU-S-PT is the hand tap with short thread portion, suitable for stainless steels which tend to work-harden and sticky, as well as chrome steels and molybdenum steels.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Stainless steels ステンレス鋼
~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	TUST02K	2.5P	9.728	55	16.5	10.5	8	6	9	4	1	△
PT 1/4-19	II	TUST04-	2.5P	13.157	62	19.5	12.5	11	9	12	4	1	△
PT 3/8-19	II	TUST06-	2.5P	16.662	65	21	14	14	11	14	4	1	△
PT 1/2-14	II	TUST08Q	2.5P	20.955	80	27	17	18	14	17	4	1	△
PT 3/4-14	II	TUST12Q	2.5P	26.441	85	29	19	23	17	20	4	1	△
PT 1 -11	II	TUST16U	2.5P	33.249	95	35	22	26	21	24	4	1	△
PT 1 1/4-11	II	TUST20U	2.5P	41.910	105	37.5	24.5	32	26	30	5	1	△
PT 1 1/2-11	II	TUST24U	2.5P	47.803	110	38.5	25.5	38	29	32	6	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

SU-SP-PT

Spiral Fluted Taps for Taper Pipe Threads, Long (ℓg) Type for Stainless Steels

Specification

HSS | OX Oxide

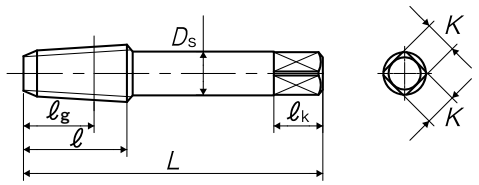
■SU-SP-PT is the tap suitable for stainless steels which tend to work-harden and sticky, as well as chrome steels and molybdenum steels, blind hole use.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
~5 (m/min)	~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	-	2P	9.728	55	19	13	8	6	9	4	1	△
PT 1/4-19	II	-	2P	13.157	62	28	21	11	9	12	4	1	△
PT 3/8-19	II	-	2P	16.662	65	28	21	14	11	14	4	1	△
PT 1/2-14	II	-	2P	20.955	80	35	25	18	14	17	4	1	△
PT 3/4-14	II	-	2P	26.441	85	35	25	23	17	20	4	1	△
PT 1 -11	II	-	2P	33.249	95	45	32	26	21	24	5	1	△

SU-SP-S-PT

Spiral Fluted Taps for Taper Pipe Threads Short (ℓg) Type for Stainless Steels

Specification

HSS | OX Oxide

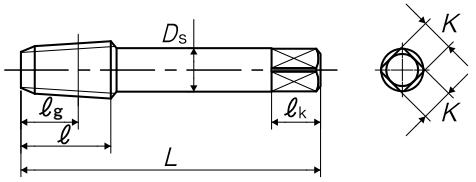
■SU-SP-S-PT is the tap with short thread portion, suitable for stainless steels which tend to work-harden and sticky, as well as chrome steels and molybdenum steels, blind hole use.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
~5 (m/min)	~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	-	2P	9.728	55	16.5	10.5	8	6	9	4	1	△
PT 1/4-19	II	-	2P	13.157	62	19.5	12.5	11	9	12	4	1	△
PT 3/8-19	II	-	2P	16.662	65	21	14	14	11	14	4	1	△
PT 1/2-14	II	-	2P	20.955	80	27	17	18	14	17	4	1	△
PT 3/4-14	II	-	2P	26.441	85	29	19	23	17	20	4	1	△
PT 1 -11	II	-	2P	33.249	95	35	22	26	21	24	5	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

FC-PT

Hand Taps for Taper Pipe Threads, Long (ℓg) Type, for Cast Irons

Specification

HSS NI Nitride

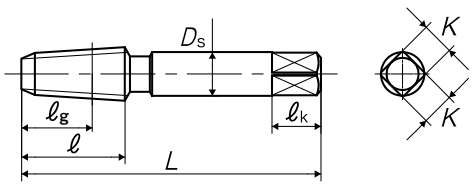
■FC-PT is suitable for hard and abrasive materials such as cast irons.

Recommended Tapping Speeds depending on Materials

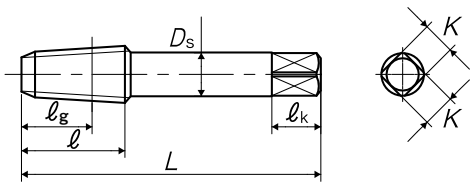
Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄
~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/16-28	II	FCPT01K-8	2.5P	7.723	55	19	13	8	6	9	4	1	△
PT 1/8-28	II	FCPT02K	2.5P	9.728	55	19	13	8	6	9	4	2	△
PT 1/4-19	II	FCPT04-	2.5P	13.157	62	28	21	11	9	12	4	2	△
PT 3/8-19	II	FCPT06-	2.5P	16.662	65	28	21	14	11	14	4	2	△
PT 1/2-14	II	FCPT08Q	2.5P	20.955	80	35	25	18	14	17	4	2	△
PT 3/4-14	II	FCPT12Q	2.5P	26.441	85	35	25	23	17	20	4	2	△
PT 1 -11	II	FCPT16U	2.5P	33.249	95	45	32	26	21	24	5	2	△
PT 1 1/4-11	II	FCPT20U	2.5P	41.910	105	45	32	32	26	30	5	2	△
PT 1 1/2-11	II	FCPT24U	2.5P	47.803	110	45	32	38	29	32	6	2	△
PT 2 -11	II	FCPT32U	2.5P	59.614	120	50	35	46	35	38	6	2	△

FC-S-PT

Hand Taps for Taper Pipe Threads, Short (ℓg) Type, for Cast Irons

Specification

HSS | NI Nitride

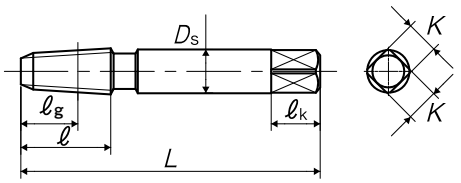
■FC-S-PT is the tap with short thread portion, suitable for hard and abrasive materials such as cast irons.

Recommended Tapping Speeds depending on Materials

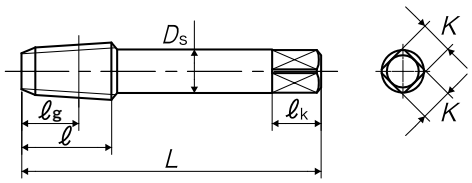
Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄
~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/16-28	II	FCSPT01K-8	2.5P	7.723	55	16.5	10.5	8	6	9	4	1	△
PT 1/8-28	II	FCSPT02K	2.5P	9.728	55	16.5	10.5	8	6	9	4	2	△
PT 1/4-19	II	FCSPT04-	2.5P	13.157	62	19.5	12.5	11	9	12	4	2	△
PT 3/8-19	II	FCSPT06-	2.5P	16.662	65	21	14	14	11	14	4	2	△
PT 1/2-14	II	FCSPT08Q	2.5P	20.955	80	27	17	18	14	17	4	2	△
PT 3/4-14	II	FCSPT12Q	2.5P	26.441	85	29	19	23	17	20	4	2	△
PT 1 -11	II	FCSPT16U	2.5P	33.249	95	35	22	26	21	24	5	2	△
PT 1 1/4-11	II	FCSPT20U	2.5P	41.910	105	37.5	24.5	32	26	30	5	2	△
PT 1 1/2-11	II	FCSPT24U	2.5P	47.803	110	38.5	25.5	38	29	32	6	2	△
PT 2 -11	II	FCSPT32U	2.5P	59.614	120	42.5	27.5	46	35	38	6	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

CT-PT

Carbide Taps for Taper Pipe Threads, Long (ℓg) Type, for Cast Irons

Specification

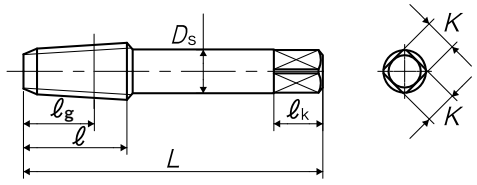
HF

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄	Brass castings 黄銅鋳物
~5 (m/min)	~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1L

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	TCPT02K	2.5P	9.728	55	19	13	8	6	9	4	1	△
PT 1/4-19	II	TCPT04-	2.5P	13.157	62	28	21	11	9	12	4	1	△
PT 3/8-19	II	TCPT06-	2.5P	16.662	65	28	21	14	11	14	4	1	△
PT 1/2-14	II	TCPT08Q	2.5P	20.955	80	35	25	18	14	17	4	1	△
PT 3/4-14	II	TCPT12Q	2.5P	26.441	85	35	25	23	17	20	4	1	△
PT 1 -11	II	TCPT16U	2.5P	33.249	95	45	32	26	21	24	5	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

CT-S-PT

Carbide Taps for Taper Pipe Threads, Short (ℓg) Type, for Cast Irons

Specification

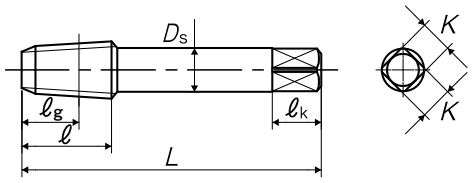
HF

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄	Brass castings 黄銅鋳物
~5 (m/min)	~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1L

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads													
PT 1/8-28	II	TCST02K	2.5P	9.728	55	16.5	10.5	8	6	9	4	1	△
PT 1/4-19	II	TCST04-	2.5P	13.157	62	19.5	12.5	11	9	12	4	1	△
PT 3/8-19	II	TCST06-	2.5P	16.662	65	21	14	14	11	14	4	1	△
PT 1/2-14	II	TCST08Q	2.5P	20.955	80	27	17	18	14	17	4	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

Rp

Hand Taps for Parallel Pipe Threads

Specification

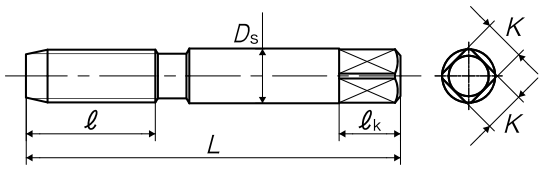
HSS

Recommended Tapping Speeds depending on Materials

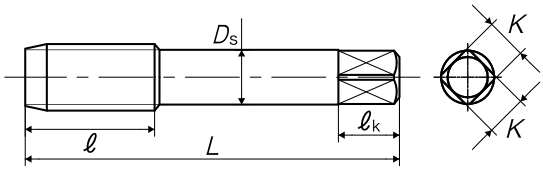
Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
Rp 1/16-28	II	TH2RP01K	3.5P	7.723	59	14	8	6	9	4	1	○
Rp 1/8-28	II	TH2RP02K	3.5P	9.728	59	15	8	6	9	4	2	○
Rp 1/4-19	II	TH2RP04-	3.5P	13.157	67	19	11	9	12	4	2	○
Rp 3/8-19	II	TH2RP06-	3.5P	16.662	75	21	14	11	14	4	2	○
Rp 1/2-14	II	TH2RP08Q	3.5P	20.955	87	26	18	14	17	4	2	○
Rp 3/4-14	II	TH2RP12Q	3.5P	26.441	96	28	23	17	20	4	2	○
Rp 1-11	II	TH2RP16U	3.5P	33.249	109	33	26	21	24	5	2	○
Rp 1 1/4-11	II	TH2RP20U	3.5P	41.910	119	36	32	26	30	5	2	○
Rp 1 1/2-11	II	TH2RP24U	3.5P	47.803	125	37	38	29	32	6	2	○
Rp 2-11	II	TH2RP32U	3.5P	59.614	140	41	46	35	38	6	2	○

PS

Hand Taps for Parallel Pipe Threads

Specification

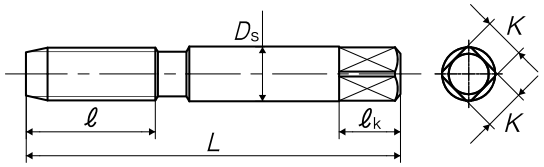
HSS

Recommended Tapping Speeds depending on Materials

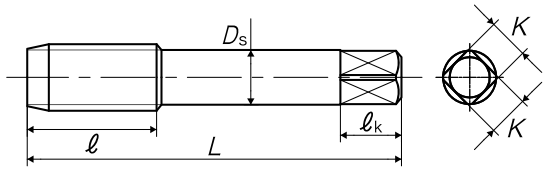
Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PS 1/16-28	II	TH2P01K-8	3.5P	7.723	55	19	8	6	9	4	1	△
PS 1/8-28	II	TH2P02K	3.5P	9.728	55	19	8	6	9	4	2	◎
		TH2P02K1	1.5P									△
PS 1/4-19	II	TH2P04-	3.5P	13.157	62	28	11	9	12	4	2	◎
		TH2P04-1	1.5P									△
PS 3/8-19	II	TH2P06-	3.5P	16.662	65	28	14	11	14	4	2	◎
		TH2P06-1	1.5P									△
PS 1/2-14	II	TH2P08Q	3.5P	20.955	80	35	18	14	17	4	2	◎
		TH2P08Q1	1.5P									△
PS 5/8-14	II	TH2P10Q	3.5P	22.911	82	35	19	15	18	4	2	△
PS 3/4-14	II	TH2P12Q	3.5P	26.441	85	35	23	17	20	4	2	◎
		TH2P12Q1	1.5P									△
PS 7/8-14	II	TH2P14Q	3.5P	30.201	90	40	24	19	22	4	2	△
PS 1 -11	II	TH2P16U	3.5P	33.249	95	45	26	21	24	5	2	◎
		TH2P16U1	1.5P									△
PS 1 1/4-11	II	TH2P20U	3.5P	41.910	105	45	32	26	30	5	2	○
		TH2P20U1	1.5P									△
PS 1 1/2-11	II	TH2P24U	3.5P	47.803	110	45	38	29	32	6	2	○
		TH2P24U1	1.5P									△
PS 2 -11	II	TH2P32U	3.5P	59.614	120	50	46	35	38	6	2	○
PS 2 1/2-11	II	TH2P40U	3.5P	75.184	145	65	55	41	44	8	2	△
PS 3 -11	II	TH2P48U	3.5P	87.884	155	65	65	50	52	8	2	△
PS 4 -11	II	TH2P64U	3.5P	113.030	170	70	75	58	62	10	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

PS LH

Hand Taps for Parallel Pipe Threads, for LH Threads

Specification

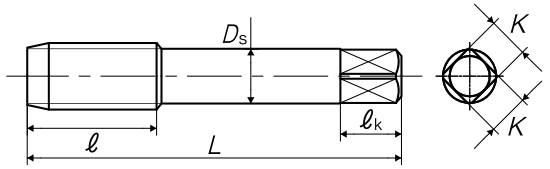
HSS | LH Left hand

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PS 1/8-28	II	TH2P02K--L	3.5P	9.728	55	19	8	6	9	4	1	△
PS 1/4-19	II	TH2P04---L	3.5P	13.157	62	28	11	9	12	4	1	△
PS 3/8-19	II	TH2P06---L	3.5P	16.662	65	28	14	11	14	4	1	△
PS 1/2-14	II	TH2P08Q--L	3.5P	20.955	80	35	18	14	17	4	1	△
PS 3/4-14	II	TH2P12Q--L	3.5P	26.441	85	35	23	17	20	4	1	△
PS 1 -11	II	TH2P16U--L	3.5P	33.249	95	45	26	21	24	5	1	△
PS 1 1/4-11	II	TH2P20U--L	3.5P	41.910	105	45	32	26	30	5	1	△
PS 1 1/2-11	II	TH2P24U--L	3.5P	47.803	110	45	38	29	32	6	1	△
PS 2 -11	II	TH2P32U--L	3.5P	59.614	120	50	46	35	38	6	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-PS

Long Shank Hand Taps for Parallel Pipe Threads

Specification

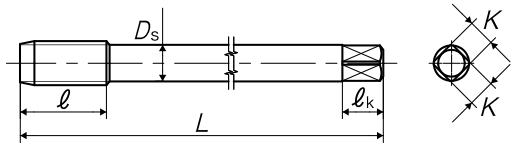
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PS 1/8-28	Ⅱ	L10P02K	3.5P	9.728	100	19	8	6	9	4	1	○
		L15P02K			150							
		L20P02K			200							△
PS 1/4-19	Ⅱ	L10P04-	3.5P	13.157	100	28	11	9	12	4	1	○
		L15P04-			150							
		L20P04-			200							△
PS 3/8-19	Ⅱ	L10P06-	3.5P	16.662	100	28	14	11	14	4	1	○
		L15P06-			150							
		L20P06-			200							△
PS 1/2-14	Ⅱ	L15P08Q	3.5P	20.955	150	35	18	14	17	4	1	○
		L20P08Q			200							△
PS 3/4-14	Ⅱ	L15P12Q	3.5P	26.441	150	35	23	17	20	4	1	○
		L20P12Q			200							△
PS 1 -11	Ⅱ	L15P16U	3.5P	33.249	150	45	26	21	24	5	1	○
		L20P16U			200							△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

SP-PS

Spiral Fluted Taps for Parallel Pipe Threads

Specification

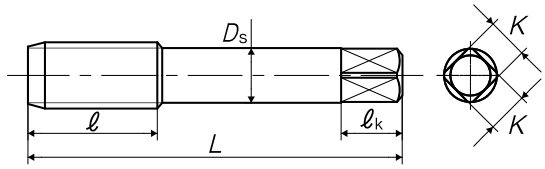
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PS 1/8-28	II	SH2P02K	2.5P	9.728	55	19	8	6	9	3	1	○
PS 1/4-19	II	SH2P04-	2.5P	13.157	62	28	11	9	12	3	1	○
PS 3/8-19	II	SH2P06-	2.5P	16.662	65	28	14	11	14	3	1	○
PS 1/2-14	II	SH2P08Q	2.5P	20.955	80	35	18	14	17	4	1	○
PS 3/4-14	II	SH2P12Q	2.5P	26.441	85	35	23	17	20	4	1	○
PS 1 -11	II	SH2P16U	2.5P	33.249	95	45	26	21	24	4	1	○
PS 1 1/4-11	II	SH2P20U	2.5P	41.910	105	45	32	26	30	4	1	△
PS 1 1/2-11	II	SH2P24U	2.5P	47.803	110	45	38	29	32	4	1	△
PS 2 -11	II	SH2P32U	2.5P	59.614	120	50	46	35	38	4	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

LS-SP-PS

Long Shank Spiral Fluted Taps for Parallel Pipe Threads

Specification

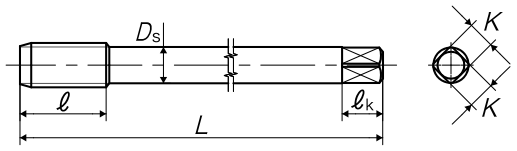
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PS 1/8-28	II	SH2P02KL10	2.5P	9.728	100	19	8	6	9	3	1	△
		SH2P02KL15			150							
PS 1/4-19	II	SH2P04-L10	2.5P	13.157	100	28	11	9	12	3	1	△
		SH2P04-L15			150							
PS 3/8-19	II	SH2P06-L15	2.5P	16.662	150	28	14	11	14	3	1	△
PS 1/2-14	II	SH2P08QL15	2.5P	20.955	150	35	18	14	17	4	1	△
PS 3/4-14	II	SH2P12QL15	2.5P	26.441	150	35	23	17	20	4	1	△
PS 1 -11	II	SH2P16UL15	2.5P	33.249	150	45	26	21	24	4	1	△
		SH2P16UL20			200							

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

CT-PS

Carbide Taps for Parallel Pipe Threads

Specification

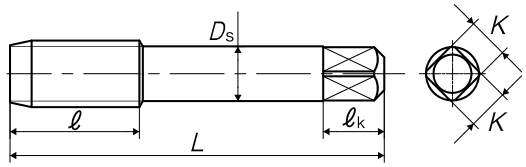
HF

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄	Brass castings 黄銅鋳物
5~10 (m/min)	5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1L

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PS 1/8-28	II	TCPS02K	3.5P	9.728	55	19	8	6	9	4	1	△
PS 1/4-19	II	TCPS04-	3.5P	13.157	62	28	11	9	12	4	1	△
PS 3/8-19	II	TCPS06-	3.5P	16.662	65	28	14	11	14	4	1	△
PS 1/2-14	II	TCPS08Q	3.5P	20.955	80	35	18	14	17	4	1	△
PS 3/4-14	II	TCPS12Q	3.5P	26.441	85	35	23	17	20	4	1	△
PS 1 -11	II	TCPS16U	3.5P	33.249	95	45	26	21	24	5	1	△

G

Hand Taps for Parallel Pipe Threads

Specification

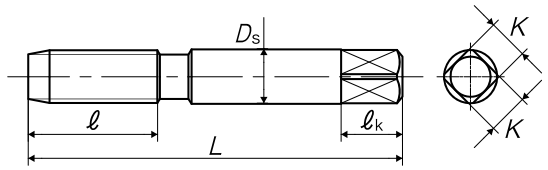
HSS

Recommended Tapping Speeds depending on Materials

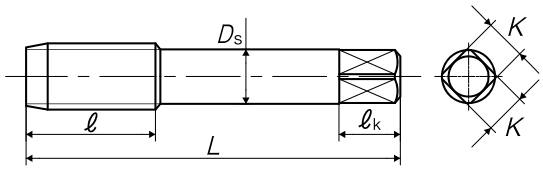
Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
G 1/16-28	II	TH2G01K	3.5P	7.723	59	14	8	6	9	4	1	○
G 1/8-28	II	TH2G02K	3.5P	9.728	59	15	8	6	9	4	2	○
G 1/4-19	II	TH2G04-	3.5P	13.157	67	19	11	9	12	4	2	○
G 3/8-19	II	TH2G06-	3.5P	16.662	75	21	14	11	14	4	2	○
G 1/2-14	II	TH2G08Q	3.5P	20.955	87	26	18	14	17	4	2	○
G 3/4-14	II	TH2G12Q	3.5P	26.441	96	28	23	17	20	4	2	○
G 1 -11	II	TH2G16U	3.5P	33.249	109	33	26	21	24	4	2	○
G 1 1/4-11	II	TH2G20U	3.5P	41.910	119	36	32	26	30	4	2	○
G 1 1/2-11	II	TH2G24U	3.5P	47.803	125	37	38	29	32	6	2	○
G 2 -11	II	TH2G32U	3.5P	59.614	140	41	46	35	38	6	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

PF

Hand Taps for Parallel Pipe Threads

Specification

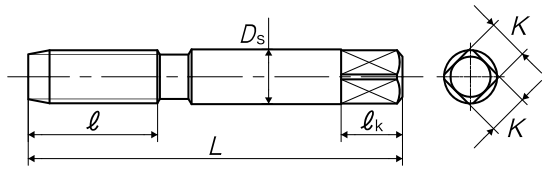
HSS

Recommended Tapping Speeds depending on Materials

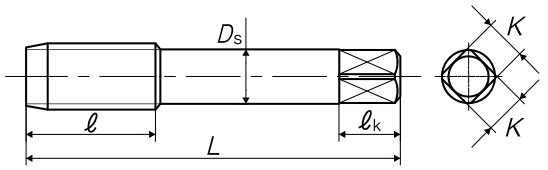
Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PF 1/16-28	II	TH2F01K-8	3.5P	7.723	55	19	8	6	9	4	1	△
PF 1/8-28	II	TH2F02K	3.5P	9.728	55	19	8	6	9	4	2	◎
		TH2F02K1	1.5P									△
PF 1/4-19	II	TH2F04-	3.5P	13.157	62	28	11	9	12	4	2	◎
		TH2F04-1	1.5P									△
PF 3/8-19	II	TH2F06-	3.5P	16.662	65	28	14	11	14	4	2	◎
		TH2F06-1	1.5P									△
PF 1/2-14	II	TH2F08Q	3.5P	20.955	80	35	18	14	17	4	2	◎
		TH2F08Q1	1.5P									△
PF 5/8-14	II	TH2F10Q	3.5P	22.911	82	35	19	15	18	4	2	△
PF 3/4-14	II	TH2F12Q	3.5P	26.441	85	35	23	17	20	4	2	◎
		TH2F12Q1	1.5P									△
PF 7/8-14	II	TH2F14Q	3.5P	30.201	90	40	24	19	22	4	2	△
PF 1 -11	II	TH2F16U	3.5P	33.249	95	45	26	21	24	4	2	◎
		TH2F16U1	1.5P									△
PF 1 1/4-11	II	TH2F20U	3.5P	41.910	105	45	32	26	30	4	2	○
		TH2F20U1	1.5P									△
PF 1 1/2-11	II	TH2F24U	3.5P	47.803	110	45	38	29	32	6	2	○
		TH2F24U1	1.5P									△
PF 2 -11	II	TH2F32U	3.5P	59.614	120	50	46	35	38	6	2	○
		TH2F32U1	1.5P									△
PF 2 1/2-11	II	TH2F40U	3.5P	75.184	145	65	55	41	44	8	2	△
PF 3 -11	II	TH2F48U	3.5P	87.884	155	65	65	50	52	8	2	△
PF 3 1/2-11	II	TH2F56U	3.5P	100.330	165	68	70	54	58	8	2	△
PF 4 -11	II	TH2F64U	3.5P	113.030	170	70	75	58	62	10	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

PF LH

Hand Taps for Parallel Pipe Threads, for LH Threads

Specification

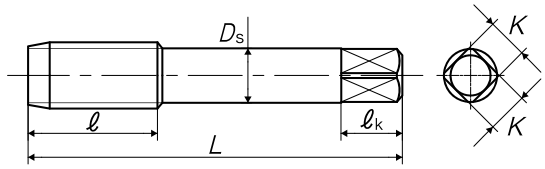
HSS | LH Left hand

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PF 1/8-28	II	TH2F02K--L	3.5P	9.728	55	19	8	6	9	4	1	△
PF 1/4-19	II	TH2F04---L	3.5P	13.157	62	28	11	9	12	4	1	△
PF 3/8-19	II	TH2F06---L	3.5P	16.662	65	28	14	11	14	4	1	△
PF 1/2-14	II	TH2F08Q--L	3.5P	20.955	80	35	18	14	17	4	1	△
PF 3/4-14	II	TH2F12Q--L	3.5P	26.441	85	35	23	17	20	4	1	△
PF 1 -11	II	TH2F16U--L	3.5P	33.249	95	45	26	21	24	4	1	△
PF 1 1/4-11	II	TH2F20U--L	3.5P	41.910	105	45	32	26	30	4	1	△
PF 1 1/2-11	II	TH2F24U--L	3.5P	47.803	110	45	38	29	32	6	1	△
PF 2 -11	II	TH2F32U--L	3.5P	59.614	120	50	46	35	38	6	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

LS-PF

Long Shank Hand Taps for Parallel Pipe Threads

Specification

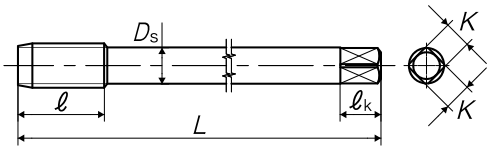
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PF 1/8-28	II	L10F02K	3.5P	9.728	100	19	8	6	9	4	1	○
		L15F02K			150							
		L20F02K			200							△
PF 1/4-19	II	L10F04-	3.5P	13.157	100	28	11	9	12	4	1	○
		L15F04-			150							
		L20F04-			200							△
PF 3/8-19	II	L10F06-	3.5P	16.662	100	28	14	11	14	4	1	○
		L15F06-			150							
		L20F06-			200							△
PF 1/2-14	II	L15F08Q	3.5P	20.955	150	35	18	14	17	4	1	○
		L20F08Q			200							△
PF 3/4-14	II	L15F12Q	3.5P	26.441	150	35	23	17	20	4	1	○
		L20F12Q			200							△
PF 1 -11	II	L15F16U	3.5P	33.249	150	45	26	21	24	4	1	○
		L20F16U			200							△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SP-PF

Spiral Fluted Taps for Parallel Pipe Threads

Specification

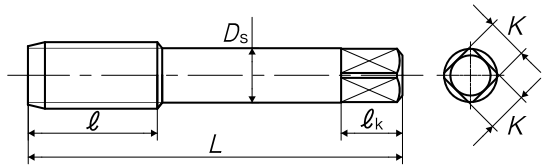
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PF 1/8-28	II	SH2F02K	2.5P	9.728	55	19	8	6	9	3	1	○
PF 1/4-19	II	SH2F04-	2.5P	13.157	62	28	11	9	12	3	1	○
PF 3/8-19	II	SH2F06-	2.5P	16.662	65	28	14	11	14	3	1	○
PF 1/2-14	II	SH2F08Q	2.5P	20.955	80	35	18	14	17	4	1	○
PF 3/4-14	II	SH2F12Q	2.5P	26.441	85	35	23	17	20	4	1	○
PF 1 -11	II	SH2F16U	2.5P	33.249	95	45	26	21	24	4	1	○
PF 1 1/4-11	II	SH2F20U	2.5P	41.910	105	45	32	26	30	4	1	△
PF 1 1/2-11	II	SH2F24U	2.5P	47.803	110	45	38	29	32	4	1	△
PF 2 -11	II	SH2F32U	2.5P	59.614	120	50	46	35	38	4	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

LS-SP-PF

Long Shank Spiral Fluted Taps for Parallel Pipe Threads

Specification

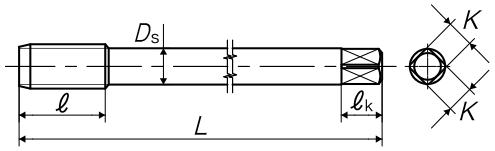
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PF 1/8-28	II	SH2F02KL10	2.5P	9.728	100	19	8	6	9	3	1	△
		SH2F02KL12			120							
		SH2F02KL15			150							
PF 1/4-19	II	SH2F04-L10	2.5P	13.157	100	28	11	9	12	3	1	△
		SH2F04-L12			120							
		SH2F04-L15			150							
PF 3/8-19	II	SH2F06-L12	2.5P	16.662	120	28	14	11	14	3	1	△
		SH2F06-L15			150							
PF 1/2-14	II	SH2F08QL15	2.5P	20.955	150	35	18	14	17	4	1	△
PF 3/4-14	II	SH2F12QL15	2.5P	26.441	150	35	23	17	20	4	1	△
PF 1 -11	II	SH2F16UL15	2.5P	33.249	150	45	26	21	24	4	1	△
		SH2F16UL20			200							

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SU-PF

Hand Taps for Parallel Pipe Threads, for Stainless Steels

Specification

HSS | OX Oxide

■SU-PF is the hand tap suitable for stainless steels which tend to work-harden and sticky, as well as chrome steels, and molybdenum steels.

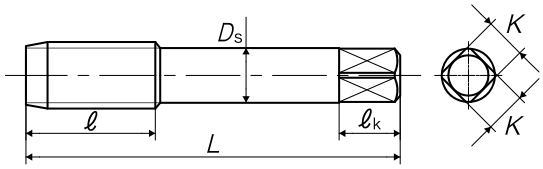
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 5~10 (m/min)

Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PF 1/8-28	Ⅱ	TU2F02K	3.5P	9.728	55	19	8	6	9	4	1	△
PF 1/4-19	Ⅱ	TU2F04-	3.5P	13.157	62	28	11	9	12	4	1	△
PF 3/8-19	Ⅱ	TU2F06-	3.5P	16.662	65	28	14	11	14	4	1	△
PF 1/2-14	Ⅱ	TU2F08Q	3.5P	20.955	80	35	18	14	17	4	1	△
PF 3/4-14	Ⅱ	TU2F12Q	3.5P	26.441	85	35	23	17	20	4	1	△
PF 1 -11	Ⅱ	TU2F16U	3.5P	33.249	95	45	26	21	24	4	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

FC-PF

Hand Taps for Parallel Pipe Threads, for Cast Irons

Specification

HSS | NI Nitride

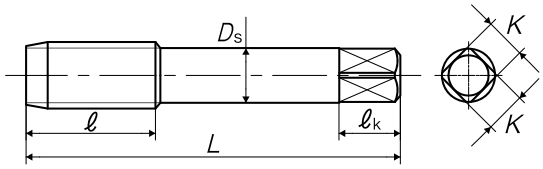
■FC-PF is suitable for hard and abrasive materials such as cast irons.

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PF 1/8-28	II	FCPF02K	3.5P	9.728	55	19	8	6	9	4	1	△
PF 1/4-19	II	FCPF04-	3.5P	13.157	62	28	11	9	12	4	1	△
PF 3/8-19	II	FCPF06-	3.5P	16.662	65	28	14	11	14	4	1	△
PF 1/2-14	II	FCPF08Q	3.5P	20.955	80	35	18	14	17	4	1	△
PF 3/4-14	II	FCPF12Q	3.5P	26.441	85	35	23	17	20	4	1	△
PF 1 -11	II	FCPF16U	3.5P	33.249	95	45	26	21	24	4	1	△
PF 1 1/4-11	II	FCPF20U	3.5P	41.910	105	45	32	26	30	4	1	△
PF 1 1/2-11	II	FCPF24U	3.5P	47.803	110	45	38	29	32	6	1	△
PF 2 -11	II	FCPF32U	3.5P	59.614	120	50	46	35	38	6	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

CT-PF

Carbide Taps for Parallel Pipe Threads

Specification

HF

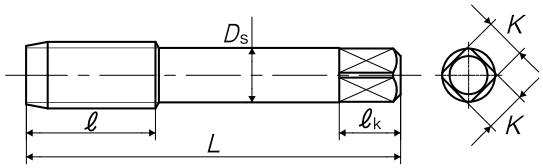
■CT-PF is suitable for hard and abrasive materials such as cast irons.

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄	Ductile cast irons 強靱鋳鉄	Brass castings 黄銅鋳物
5~10 (m/min)	5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1L

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Pipe Threads												
PF 1/8-28	Ⅱ	TCPF02K	3.5P	9.728	55	19	8	6	9	4	1	△
PF 1/4-19	Ⅱ	TCPF04-	3.5P	13.157	62	28	11	9	12	4	1	△
PF 3/8-19	Ⅱ	TCPF06-	3.5P	16.662	65	28	14	11	14	4	1	△
PF 1/2-14	Ⅱ	TCPF08Q	3.5P	20.955	80	35	18	14	17	4	1	△
PF 3/4-14	Ⅱ	TCPF12Q	3.5P	26.441	85	35	23	17	20	4	1	△
PF 1 -11	Ⅱ	TCPF16U	3.5P	33.249	95	45	26	21	24	4	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

NPT

Hand Taps for American Taper Pipe Threads

Specification

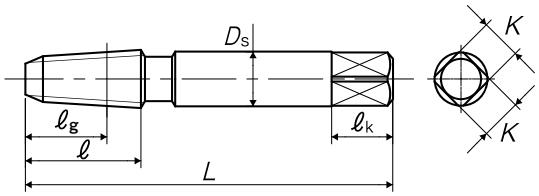
HSS

Recommended Tapping Speeds depending on Materials

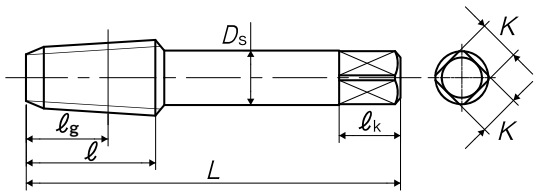
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads													
NPT 1/16-27	ANSI G	TNPT01L	3P	7.770	54	17	12	8	6	9	4	1	◎
NPT 1/8-27	ANSI G	TNPT02L	3P	10.117	55	19	12.05	8	6	9	4	2	◎
NPT 1/4-18	ANSI G	TNPT04O	3P	13.426	62	28	17.45	11	9	12	4	2	◎
NPT 3/8-18	ANSI G	TNPT06O	3P	16.866	65	28	17.65	14	11	14	4	2	◎
NPT 1/2-14	ANSI G	TNPT08Q	3P	20.980	80	35	22.85	18	14	17	4	2	◎
NPT 3/4-14	ANSI G	TNPT12Q	3P	26.325	85	35	22.95	23	17	20	4	2	◎
NPT 1 -11.5	ANSI G	TNPT16T	3P	32.934	95	45	27.4	26	21	24	5	2	◎
NPT 1 1/4-11.5	ANSI G	TNPT20T	3P	41.689	105	45	28.1	32	26	30	5	2	△
NPT 1 1/2-11.5	ANSI G	TNPT24T	3P	47.760	110	45	28.4	38	29	32	6	2	△
NPT 2 -11.5	ANSI G	TNPT32T	3P	59.797	120	50	28	46	35	38	6	2	△
NPT 2 1/2-8	ANSI G	TNPT40X	3P	72.273	145	65	40.8	55	41	44	8	2	△
NPT 3 -8	ANSI G	TNPT48X	3P	88.184	155	65	42.95	65	50	52	8	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

S-NPT

Hand Taps for American Taper Pipe Threads, Short (ℓg) Type

Specification

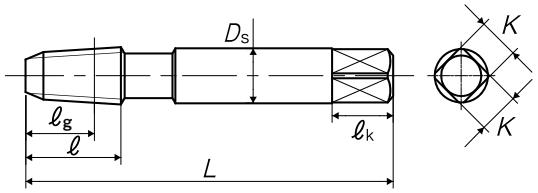
HSS

Recommended Tapping Speeds depending on Materials

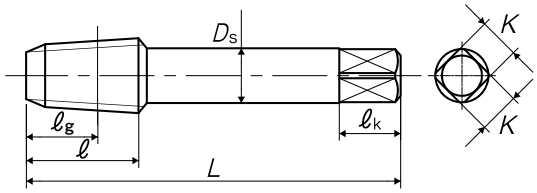
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads													
NPT 1/16-27	ANSI G	TSNPT01L	3P	7.770	54	14	10.1	8	6	9	4	1	△
NPT 1/8-27	ANSI G	TSNPT02L	3P	10.117	55	16.5	10.5	8	6	9	4	2	△
NPT 1/4-18	ANSI G	TSNPT040	3P	13.426	62	19.5	12.5	11	9	12	4	2	△
NPT 3/8-18	ANSI G	TSNPT06O	3P	16.866	65	21	14	14	11	14	4	2	△
NPT 1/2-14	ANSI G	TSNPT08Q	3P	20.980	80	27	17	18	14	17	4	2	△
NPT 3/4-14	ANSI G	TSNPT12Q	3P	26.325	85	29	19	23	17	20	4	2	△
NPT 1 -11.5	ANSI G	TSNPT16T	3P	32.934	95	35	22	26	21	24	5	2	△
NPT 1 1/4-11.5	ANSI G	TSNPT20T	3P	41.689	105	37.5	24.5	32	26	30	5	2	△
NPT 1 1/2-11.5	ANSI G	TSNPT24T	3P	47.760	110	38.5	25.5	38	29	32	6	2	△
NPT 2 -11.5	ANSI G	TSNPT32T	3P	59.797	120	42.5	27.5	46	35	38	6	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

LS-NPT

Long Shank Hand Taps for American Taper Pipe Threads

Specification

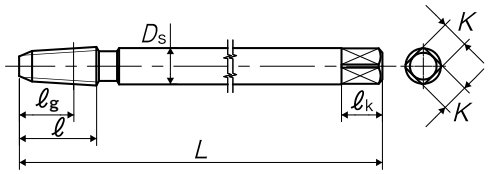
HSS

Recommended Tapping Speeds depending on Materials

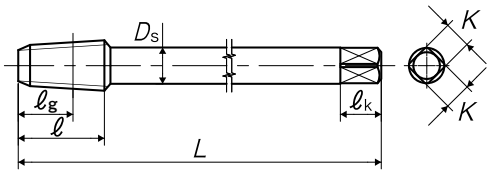
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads													
NPT 1/16-27	ANSI G	TNPT01LL10	3P	7.770	100	17	12	8	6	9	4	1	△
NPT 1/8-27	ANSI G	TNPT02LL10	3P	10.117	100	19	12.05	8	6	9	4	2	△
		TNPT02LL15			150								
NPT 1/4-18	ANSI G	TNPT04OL10	3P	13.426	100	28	17.45	11	9	12	4	2	△
		TNPT04OL15			150								
NPT 3/8-18	ANSI G	TNPT06OL10	3P	16.866	100	28	17.65	14	11	14	4	2	△
		TNPT06OL15			150								
NPT 1/2-14	ANSI G	TNPT08QL15	3P	20.980	150	35	22.85	18	14	17	4	2	△
NPT 3/4-14	ANSI G	TNPT12QL15	3P	26.325	150	35	22.95	23	17	20	4	2	△
NPT 1 -11.5	ANSI G	TNPT16TL15	3P	32.934	150	45	27.4	26	21	24	5	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

SP-NPT

Spiral Fluted Taps for American Taper Pipe Threads

Specification

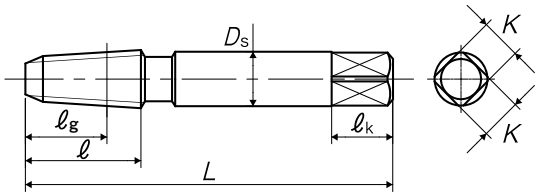
HSS

Recommended Tapping Speeds depending on Materials

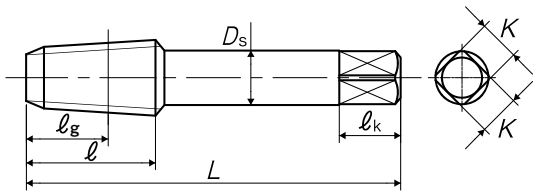
Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads													
NPT 1/16-27	ANSI G	SNPT01L	2.5P	7.770	54	17	12	8	6	9	3	1	△
NPT 1/8-27	ANSI G	SNPT02L	2.5P	10.117	55	19	12.05	8	6	9	3	2	△
NPT 1/4-18	ANSI G	SNPT040	2.5P	13.426	62	28	17.45	11	9	12	3	2	△
NPT 3/8-18	ANSI G	SNPT060	2.5P	16.866	65	28	17.65	14	11	14	3	2	△
NPT 1/2-14	ANSI G	SNPT08Q	2.5P	20.980	80	35	22.85	18	14	17	4	2	△
NPT 3/4-14	ANSI G	SNPT12Q	2.5P	26.325	85	35	22.95	23	17	20	4	2	△
NPT 1 -11.5	ANSI G	SNPT16T	2.5P	32.934	95	45	27.4	26	21	24	4	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

LS-SP-S-NPT

Long Shank Spiral Fluted Taps for American Taper Pipe Threads, Short (ℓg) Type

Specification

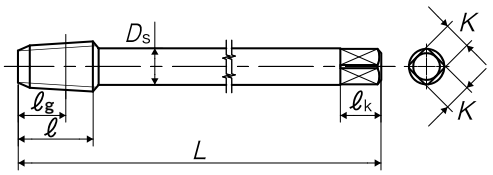
HSS

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads													
NPT 1/8-27	ANSI G	SSNPT02LL10	2.5P	10.117	100	16.5	10.5	8	6	9	3	1	△
NPT 1/4-18	ANSI G	SSNPT040L15	2.5P	13.426	150	19.5	12.5	11	9	12	3	1	△
NPT 3/8-18	ANSI G	SSNPT060L15	2.5P	16.866	150	21	14	14	11	14	3	1	△
NPT 1/2-14	ANSI G	SSNPT08QL15	2.5P	20.980	150	27	17	18	14	17	4	1	△
NPT 3/4-14	ANSI G	SSNPT12QL15	2.5P	26.325	150	29	19	23	17	20	4	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

INT-NPT

Interrupted Taps for American Taper Pipe Threads

Specification

HSS | OX Oxide

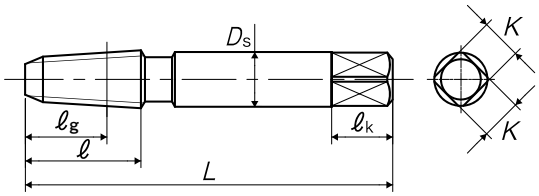
■INT-NPT having low left-hand spiral flutes and having every other thread ground off, reduces cutting torque. INT-NPT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

Recommended Tapping Speeds depending on Materials

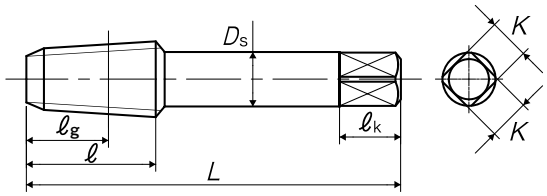
Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads													
NPT 1/16-27	ANSI G	TINPT01L	3P	7.770	54	17	12	8	6	9	3	1	△
NPT 1/8-27	ANSI G	TINPT02L	3P	10.117	55	19	12.05	8	6	9	5	2	△
NPT 1/4-18	ANSI G	TINPT04O	3P	13.426	62	28	17.45	11	9	12	5	2	△
NPT 3/8-18	ANSI G	TINPT06O	3P	16.866	65	28	17.65	14	11	14	5	2	△
NPT 1/2-14	ANSI G	TINPT08Q	3P	20.980	80	35	22.85	18	14	17	5	2	△
NPT 3/4-14	ANSI G	TINPT12Q	3P	26.325	85	35	22.95	23	17	20	5	2	△
NPT 1 -11.5	ANSI G	TINPT16T	3P	32.934	95	45	27.4	26	21	24	5	2	△
NPT 1 1/4-11.5	ANSI G	TINPT20T	3P	41.689	105	45	28.1	32	26	30	5	2	△
NPT 1 1/2-11.5	ANSI G	TINPT24T	3P	47.760	110	45	28.4	38	29	32	7	2	△
NPT 2 -11.5	ANSI G	TINPT32T	3P	59.797	120	50	28	46	35	38	7	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

INT-S-NPT

Interrupted Taps for American Taper Pipe Threads, Short (ℓg) Type

Specification

HSS | OX Oxide

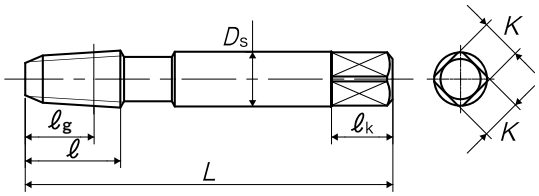
■INT-S-NPT is the tap with short thread portion, and, having low left-hand spiral flutes and having every other thread ground off, reduces cutting torque. INT-S-NPT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

Recommended Tapping Speeds depending on Materials

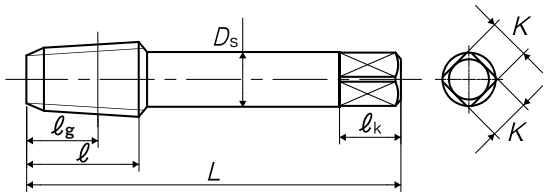
Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads													
NPT 1/16-27	ANSI G	TISNT01L	3P	7.770	54	14	10.1	8	6	9	3	1	△
NPT 1/8-27	ANSI G	TISNT02L	3P	10.117	55	16.5	10.5	8	6	9	5	2	△
NPT 1/4-18	ANSI G	TISNT04O	3P	13.426	62	19.5	12.5	11	9	12	5	2	△
NPT 3/8-18	ANSI G	TISNT06O	3P	16.866	65	21	14	14	11	14	5	2	△
NPT 1/2-14	ANSI G	TISNT08Q	3P	20.980	80	27	17	18	14	17	5	2	△
NPT 3/4-14	ANSI G	TISNT12Q	3P	26.325	85	29	19	23	17	20	5	2	△
NPT 1 -11.5	ANSI G	TISNT16T	3P	32.934	95	35	22	26	21	24	5	2	△
NPT 1 1/4-11.5	ANSI G	TISNT20T	3P	41.689	105	37.5	24.5	32	26	30	5	2	△
NPT 1 1/2-11.5	ANSI G	TISNT24T	3P	47.760	110	38.5	25.5	38	29	32	7	2	△
NPT 2 -11.5	ANSI G	TISNT32T	3P	59.797	120	42.5	27.5	46	35	38	7	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

NPTF

Hand Taps for American Dryseal Taper Pipe Threads

Specification

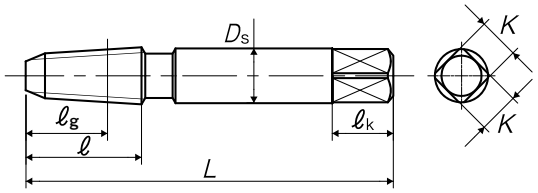
HSS

Recommended Tapping Speeds depending on Materials

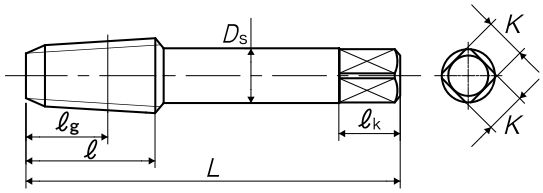
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads													
NPTF 1/16-27	ANSI G	TNTF01L	3P	7.770	54	17	12	8	6	9	4	1	○
NPTF 1/8-27	ANSI G	TNTF02L	3P	10.117	55	19	12.05	8	6	9	4	2	○
NPTF 1/4-18	ANSI G	TNTF040	3P	13.426	62	28	17.45	11	9	12	4	2	○
NPTF 3/8-18	ANSI G	TNTF060	3P	16.866	65	28	17.65	14	11	14	4	2	○
NPTF 1/2-14	ANSI G	TNTF08Q	3P	20.980	80	35	22.85	18	14	17	4	2	○
NPTF 3/4-14	ANSI G	TNTF12Q	3P	26.325	85	35	22.95	23	17	20	4	2	○
NPTF 1 -11.5	ANSI G	TNTF16T	3P	32.934	95	45	27.4	26	21	24	5	2	○
NPTF 1 1/4-11.5	ANSI G	TNTF20T	3P	41.689	105	45	28.1	32	26	30	5	2	△
NPTF 1 1/2-11.5	ANSI G	TNTF24T	3P	47.760	110	45	28.4	38	29	32	6	2	△
NPTF 2 -11.5	ANSI G	TNTF32T	3P	59.797	120	50	28	46	35	38	6	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Position on basic dia.	Shank dia.	Size of square	Length of square
L	ℓ	ℓg	Ds	K	ℓk

LS-NPTF

Long Shank Hand Taps for American Dryseal Taper Pipe Threads

Specification

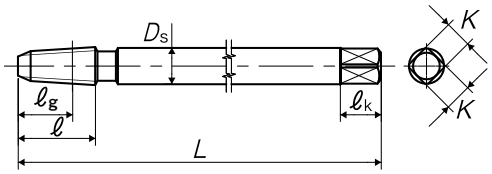
HSS

Recommended Tapping Speeds depending on Materials

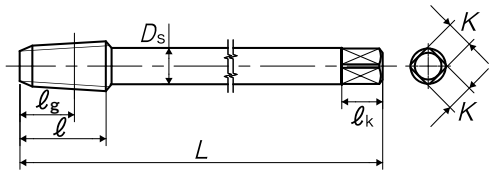
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	ℓg (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads													
NPTF 1/16-27	ANSI G	TNTF01LL10	3P	7.770	100	17	12	8	6	9	4	1	△
NPTF 1/8-27	ANSI G	TNTF02LL10	3P	10.117	100	19	12.05	8	6	9	4	2	△
		TNTF02LL15			150								
NPTF 1/4-18	ANSI G	TNTF040L10	3P	13.426	100	28	17.45	11	9	12	4	2	△
		TNTF040L15			150								
NPTF 3/8-18	ANSI G	TNTF060L10	3P	16.866	100	28	17.65	14	11	14	4	2	△
		TNTF060L15			150								
NPTF 1/2-14	ANSI G	TNTF08QL15	3P	20.980	150	35	22.85	18	14	17	4	2	△
NPTF 3/4-14	ANSI G	TNTF12QL15	3P	26.325	150	35	22.95	23	17	20	4	2	△
NPTF 1 -11.5	ANSI G	TNTF16TL15	3P	32.934	150	45	27.4	26	21	24	5	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

NPS

Hand Taps for American Parallel Pipe Threads

Specification

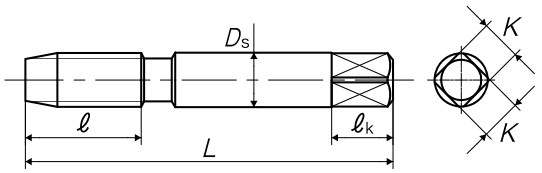
HSS

Recommended Tapping Speeds depending on Materials

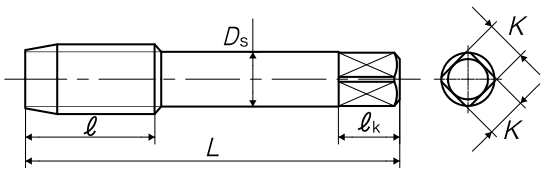
Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads												
NPS 1/16-27	ANSI G	TNPS01L	5P	7.770	54	17	8	6	9	4	1	△
NPS 1/8-27	ANSI G	TNPS02L	5P	10.117	55	19	8	6	9	4	2	△
NPS 1/4-18	ANSI G	TNPS04O	5P	13.426	62	28	11	9	12	4	2	△
NPS 3/8-18	ANSI G	TNPS06O	5P	16.866	65	28	14	11	14	4	2	△
NPS 1/2-14	ANSI G	TNPS08Q	5P	20.980	80	35	18	14	17	4	2	△
NPS 3/4-14	ANSI G	TNPS12Q	5P	26.325	85	35	23	17	20	4	2	△
NPS 1 -11.5	ANSI G	TNPS16T	5P	32.934	95	45	26	21	24	5	2	△
NPS 1 1/4-11.5	ANSI G	TNPS20T	5P	41.689	105	45	32	26	30	5	2	△
NPS 1 1/2-11.5	ANSI G	TNPS24T	5P	47.760	110	45	38	29	32	6	2	△
NPS 2 -11.5	ANSI G	TNPS32T	5P	59.797	120	50	46	35	38	6	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

NPSF

Hand Taps for American Dryseal Parallel Pipe Threads

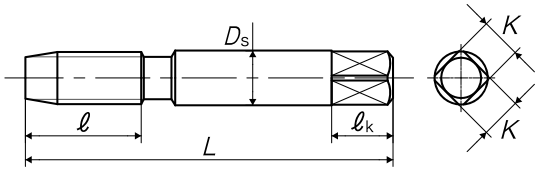
Specification

HSS

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE: 1



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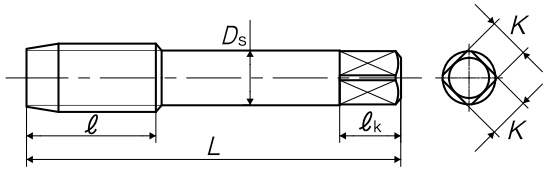


Segment : 1G

Size	Class	Code	Chamfer	Basic major dia (mm)	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For American Pipe Threads												
NPSF 1/16-27	ANSI G	TNSF01L	5P	7.770	54	17	8	6	9	4	1	△
NPSF 1/8-27	ANSI G	TNSF02L	5P	10.117	55	19	8	6	9	4	2	△
NPSF 1/4-18	ANSI G	TNSF04O	5P	13.426	62	28	11	9	12	4	2	△
NPSF 3/8-18	ANSI G	TNSF06O	5P	16.866	65	28	14	11	14	4	2	△
NPSF 1/2-14	ANSI G	TNSF08Q	5P	20.980	80	35	18	14	17	4	2	△
NPSF 3/4-14	ANSI G	TNSF12Q	5P	26.325	85	35	23	17	20	4	2	△
NPSF 1 -11.5	ANSI G	TNSF16T	5P	32.934	95	45	26	21	24	5	2	△
NPSF 1 1/4-11.5	ANSI G	TNSF20T	5P	41.689	105	45	32	26	30	5	2	△
NPSF 1 1/2-11.5	ANSI G	TNSF24T	5P	47.760	110	45	38	29	32	6	2	△
NPSF 2 -11.5	ANSI G	TNSF32T	5P	59.797	120	50	46	35	38	6	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

MEMO

THREAD MILLS

MC-CSLC MC-1
MC-HLC MC-4

MC-CSLC

Carbide Thread Mills for Metric Internal Threads

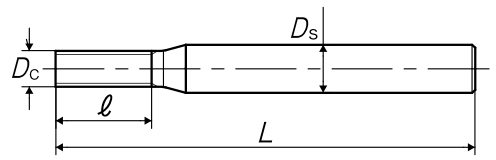
Specification

HF Coating

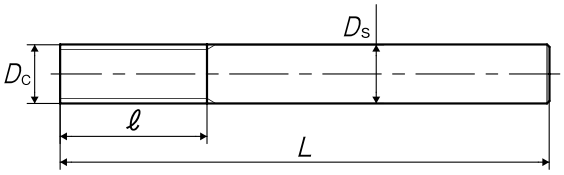
For icon explanation, refer to P.24

■MC-CSLC is the tool cutting threads by using helical interpolating process. One MC-CSLC can produce internal threads of different diameter, both right hand threads and left hand threads, as far as the thread pitch is same.

TYPE: 1



TYPE: 2



Segment : 1L

Tool No.	Code	Outside diameter Dc (mm)	Pitch (mm)	L (mm)	ℓ (mm)	Ds (mm)	No. of flutes	Min.size	Type	Stock
For Metric Threads										
035083N080M	CSLCN3.5K	3.5	0.8	50	8	6	3	5	1	△
035083N075M	CSLCN3.5J	3.5	0.75	50	8	6	3	5	1	△
040123N100M	CSLCN4.0M	4	1	60	12	6	3	6	1	△
060163N125M	CSLCN6.0N	6	1.25	70	16	8	3	8	1	○
060163N100M	CSLCN6.0M	6	1	70	16	8	3	8	1	○
060163N050M	CSLCN6.0G	6	0.5	70	16	8	3	8	1	○
075203N150M	CSLCN7.5O	7.5	1.5	70	20	8	3	10	2	○
075203N125M	CSLCN7.5N	7.5	1.25	70	20	8	3	10	2	△
080203N100M	CSLCN8.0M	8	1	70	20	8	3	12	2	△
080203N050M	CSLCN8.0G	8	0.5	70	20	8	3	12	2	△
090244N175M	CSLCN9.0P	9	1.75	90	24	10	4	12	2	○
090244N125M	CSLCN9.0N	9	1.25	90	24	10	4	12	2	○
100254N200M	CSLCN010Q	10	2	90	25	10	4	14	2	○
100254N150M	CSLCN010O	10	1.5	90	25	10	4	14	2	○
100254N100M	CSLCN010M	10	1	90	25	10	4	14	2	○
100254N050M	CSLCN010G	10	0.5	90	25	10	4	14	2	○
120304N200M	CSLCN012Q	12	2	100	30	12	4	17	2	○
120304N150M	CSLCN012O	12	1.5	100	30	12	4	17	2	○
120304N100M	CSLCN012M	12	1	100	30	12	4	17	2	○
160404N250M	CSLCN016R	16	2.5	110	40	16	4	23	2	○
160404N200M	CSLCN016Q	16	2	110	40	16	4	23	2	○
160404N150M	CSLCN016O	16	1.5	110	40	16	4	23	2	○
200505N300M	CSLCN020S	20	3	140	50	20	5	28	2	○
200505N200M	CSLCN020Q	20	2	140	50	20	5	28	2	○
200505N150M	CSLCN020O	20	1.5	140	50	20	5	28	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside dia.	Overall length	Cut length	Shank dia.
Dc	L	ℓ	Ds

MC-CSLC

Carbide Thread Mills for Taper Pipe Threads

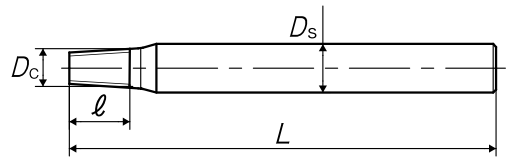
Specification

HF Coating

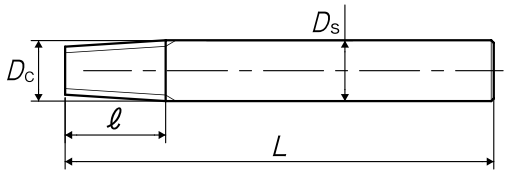
For icon explanation, refer to P.24

■MC-CSLC is the tool cutting threads by using helical interpolating process. One MC-CSLC can produce external and internal threads of different diameter, and both right hand threads and left hand threads, as far as the thread pitch is same.

TYPE: 1



TYPE: 2



Segment : 1L

Tool No.	Code	Outside diameter Dc (mm)	Number of threads	L (mm)	ℓ (mm)	Ds (mm)	No. of flutes	Processable thread size	Type	Stock
For PT Threads										
065103X28R	CSLCX6.5KR	6.5	28	70	10	8	3	1/8	1	○
080153X19R	CSLCX8.0-R	8	19	70	15	8	3	1/4・3/8	2	○
120204X14R	CSLCX012QR	12	14	80	20	12	4	1/2・3/4	2	○
160264X11R	CSLCX016UR	16	11	90	26	16	4	1～	2	○
200305X11R	CSLCX020UR	20	11	110	30	20	5	1～	2	○

MC-CSLC

Carbide Thread Mills for Parallel Pipe Threads

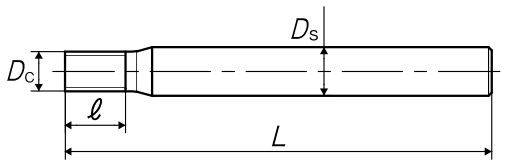
Specification

HF Coating

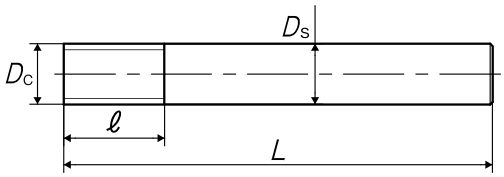
For icon explanation, refer to P.24

■MC-CSLC is the tool cutting threads by using helical interpolating process. One MC-CSLC can produce external and internal threads of different diameter, and both right hand threads and left hand threads, as far as the thread pitch is same.

TYPE: 1



TYPE: 2



Segment : 1L

Tool No.	Code	Outside diameter Dc (mm)	Number of threads	L (mm)	ℓ (mm)	Ds (mm)	No. of flutes	Processable thread size	Type	Stock
For PF Threads										
065103X28G	CSLCX6.5KG	6.5	28	70	10	8	3	1/8	1	○
080153X19G	CSLCX8.0-G	8	19	70	15	8	3	1/4・3/8	2	○
120204X14G	CSLCX012QG	12	14	80	20	12	4	1/2・3/4	2	○
160264X11G	CSLCX016UG	16	11	90	26	16	4	1～	2	○
200305X11G	CSLCX020UG	20	11	110	30	20	5	1～	2	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside dia.	Overall length	Cut length	Shank dia.
Dc	L	ℓ	Ds

MC-HLC

Thread Mills for Metric Internal Threads

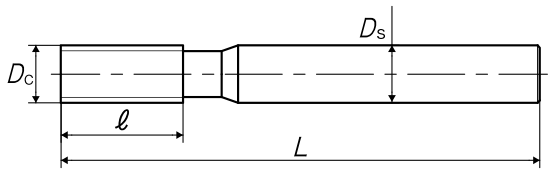
Specification

HSS-Co Coating

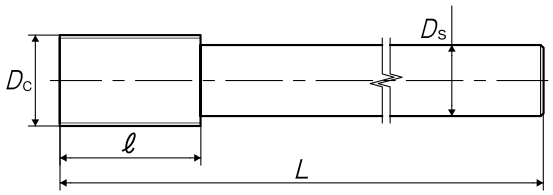
For icon explanation, refer to P.24

■MC-HLC is the tool cutting threads by using helical interpolating process. One MC-HLC can produce internal threads of different diameter, both right hand threads and left hand threads, as far as the thread pitch is same.

TYPE: 1



TYPE: 2



Segment : 57

Tool No.	Code	Outside diameter Dc (mm)	Pitch (mm)	L (mm)	ℓ (mm)	Ds (mm)	No. of flutes	Min.size	Type	Stock
For Metric Threads										
10204N150M	HLCN0100	10	1.5	90	20	10	4	14	1	△
10204N100M	HLCN010M	10	1	90	20	10	4	14	1	△
12254N200M	HLCN012Q	12	2	100	25	12	4	17	1	△
12254N150M	HLCN0120	12	1.5	100	25	12	4	17	1	△
12254N100M	HLCN012M	12	1	100	25	12	4	17	1	△
16304N250M	HLCN016R	16	2.5	110	30	16	4	23	1	△
16304N200M	HLCN016Q	16	2	110	30	16	4	23	1	△
16304N150M	HLCN0160	16	1.5	110	30	16	4	23	1	△
16304N100M	HLCN016M	16	1	110	30	16	4	23	1	△
20505N350M	HLCN020T	20	3.5	140	50	20	5	28	1	△
20505N300M	HLCN020S	20	3	140	50	20	5	28	1	△
20505N200M	HLCN020Q	20	2	140	50	20	5	28	1	△
20505N150M	HLCN0200	20	1.5	140	50	20	5	28	1	△
20505N100M	HLCN020M	20	1	140	50	20	5	28	1	△
25506N350M	HLCN025T	25	3.5	160	50	20	6	36	2	△
25506N300M	HLCN025S	25	3	160	50	20	6	36	2	△
25506N200M	HLCN025Q	25	2	160	50	20	6	36	2	△
25506N150M	HLCN0250	25	1.5	160	50	20	6	36	2	△
25506N100M	HLCN025M	25	1	160	50	20	6	36	2	△
32506N300M	HLCN032S	32	3	200	50	25	6	45	2	△
32506N200M	HLCN032Q	32	2	200	50	25	6	45	2	△
32506N150M	HLCN0320	32	1.5	200	50	25	6	45	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

MC-HLC

Thread Mills for Taper Pipe Threads

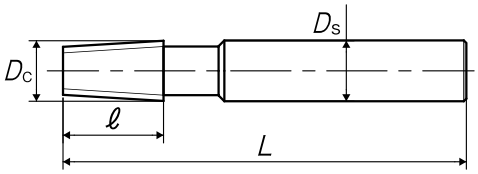
Specification

HSS-Co Coating

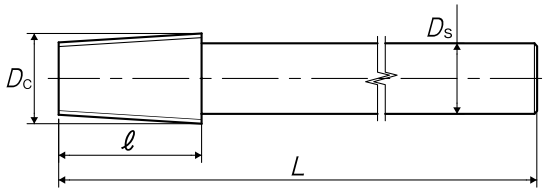
For icon explanation, refer to P.24

■MC-HLC is the tool cutting threads by using helical interpolating process. One MC-HLC can produce external and internal threads of different diameter, and both right hand threads and left hand threads, as far as the thread pitch is same.

TYPE : 1



TYPE : 2



Segment : 57

Tool No.	Code	Outside diameter Dc (mm)	Number of threads	L (mm)	ℓ (mm)	Ds (mm)	No. of flutes	Processable thread size	Type	Stock
For PT Threads										
10154X19R	HLCX010-R	10	19	70	15	10	4	3/8	1	△
12204X14R	HLCX012QR	12	14	80	20	12	4	1/2・3/4	1	△
20305X11R	HLCX020UR	20	11	100	30	20	5	1～2	1	△
32506X11R	HLCX032UR	32	11	200	50	25	6	2 1/2～6	2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside dia.	Overall length	Cut length	Shank dia.
Dc	L	ℓ	Ds

MC-HLC

Thread Mills for Parallel Pipe Threads

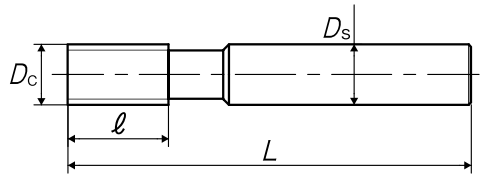
Specification

HSS-Co Coating

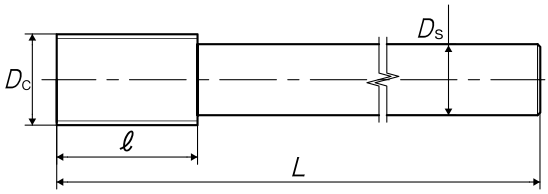
For icon explanation, refer to P.24

■MC-HLC is the tool cutting threads by using helical interpolating process. One MC-HLC can produce external and internal threads of different diameter, and both right hand threads and left hand threads, as far as the thread pitch is same.

TYPE : 1



TYPE : 2



Segment : 57

Tool No.	Code	Outside diameter Dc (mm)	Number of threads	L (mm)	ℓ (mm)	Ds (mm)	No. of flutes	Processable thread size	Type	Stock
For PF Threads										
10154X19G	HLCX010-G	10	19	70	15	10	4	3/8	1	△
12204X14G	HLCX012QG	12	14	80	20	12	4	1/2・3/4	1	△
20305X11G	HLCX020UG	20	11	100	30	20	5	1～2	1	△
32506X11G	HLCX032UG	32	11	200	50	25	6	2 1/2～6	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

MEMO

Dies

D	Di-1
D LH	Di-10
D PF	Di-13
D PF LH	Di-14
D NPSM	Di-15
D PT	Di-16
D PT LH	Di-17
D NPT	Di-18
D NPTF	Di-19
MS-RS-D/RS-D	Di-21
N-RSD	Di-23
RD-DH	Di-24
RD-DC	Di-25
RD-DA	Di-27

D

Solid Round Dies

Specification

Front face

HSS 2~2.5

For icon explanation, refer to P.24

Product features

New Solid Round Dies-D are born, with improved accuracy of run-out tolerance.
The Solid Round Dies-D, realize consistent thread cutting by adopting HSS material.

①The side with markings on its bevel, is the front face.
This makes it easy to determine the cutting direction.

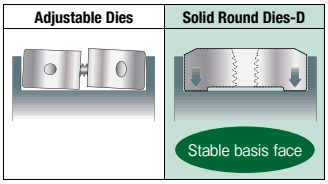
■Solid Round Dies-D Front face

Above is the picture of RD-DA (refer to P.388)

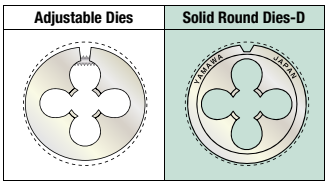
② The rear face becomes the base for cutting.
The rear face has a recess so that the die can fit tightly in the die holder when installing.
※Solid Round Dies-D cannot be used from Rear face.

■Solid Round Dies-D Rear face (basis for cutting)

Special tooling "RD-DA" is available at YAMAWA



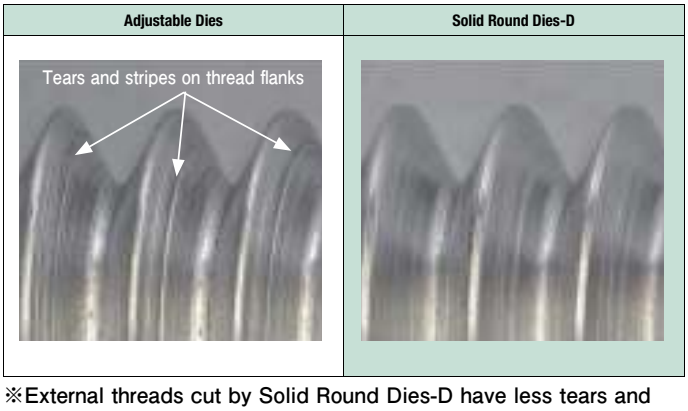
③ D is solid type and does not need the adjusting screw.
Compared with adjustable type, accuracy of D's outside diameter has been greatly improved.



④ D has succeeded in solving difficult problems related to adjustable dies and achieved the high precision cutting of external threads.

Cutting condition

Die size	M6×1 ϕ20
Work material	Free cutting steel
Cutting speed	2.6m/min
Feed	Free
Machine	Engine lathe
Cutting fluid	Insoluble oil

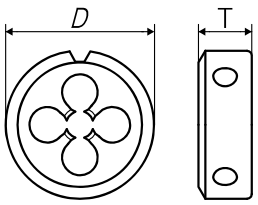


※External threads cut by Solid Round Dies-D have less tears and stripes on thread flank face.

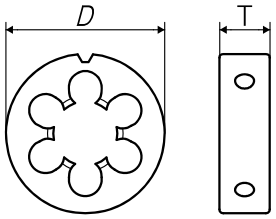
Think threads with YAMAWA
For improvement, spec may change without advance notice.

Outside diameter	Thickness
D	T

TYPE: 1 D ≦ 50



TYPE: 2 D ≧ 63



Segment : 30

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
For Metric Threads								
M1 × 0.25	TYD1.0BDNEBC	Ⅱ	16	5	3	○	1	○
	TYE1.0BDNEBC		20	7				
M1 × 0.2	TYE1.0ADNEBC	Ⅱ	20	7	3	○	1	△
M1.2 × 0.25	TYD1.2BDNEBC	Ⅱ	16	5	3	○	1	○
	TYE1.2BDNEBC		20	7				
M1.2 × 0.2	TYE1.2ADNEBC	Ⅱ	20	7	3	○	1	△
M1.4 × 0.3	TYD1.4CDNEBC	Ⅱ	16	5	3	○	1	○
	TYE1.4CDNEBC		20	7				
M1.4 × 0.2	TYE1.4ADNEBC	Ⅱ	20	7	3	○	1	△
M1.6 × 0.35	TYD1.6DDNEBC	Ⅱ	16	5	3	○	1	○
	TYE1.6DDNEBC		20	7				
M1.6 × 0.2	TYE1.6ADNEBC	Ⅱ	20	7	3	○	1	△
M1.7 × 0.35	TYD1.7DDNEBC	Ⅱ	16	5	3	○	1	○
	TYE1.7DDNEBC		20	7				
M1.7 × 0.2	TYE1.7ADNEBC	Ⅱ	20	7	3	○	1	△
M1.8 × 0.35	TYD1.8DDNEBC	Ⅱ	16	5	3	○	1	△
	TYE1.8DDNEBC		20	7				
M1.8 × 0.2	TYE1.8ADNEBC	Ⅱ	20	7	3	○	1	△
M2 × 0.4	TYD2.0EDNEBC	Ⅱ	16	5	3	○	1	○
	TYE2.0EDNEBC		20	7				◎
	TYG2.0EDNEBC		25	9				△
M2 × 0.25	TYD2.0BDNEBC	Ⅱ	16	5	3	○	1	△
	TYE2.0BDNEBC		20	7				
M2.2 × 0.45	TYD2.2FDNEBC	Ⅱ	16	5	3	○	1	△
	TYE2.2FDNEBC		20	7				
M2.2 × 0.25	TYD2.2BDNEBC	Ⅱ	16	5	3	○	1	△
M2.3 × 0.4	TYD2.3EDNEBC	Ⅱ	16	5	3	○	1	△
	TYE2.3EDNEBC		20	7				○
M2.3 × 0.25	TYE2.3BDNEBC	Ⅱ	20	7	3	○	1	△
M2.5 × 0.45	TYE2.5FDNEBC	Ⅱ	20	7	3	○	1	◎
	TYG2.5FDNEBC		25	9				△
M2.5 × 0.35	TYE2.5DDNEBC	Ⅱ	20	7	3	○	1	△
M2.6 × 0.45	TYE2.6FDNEBC	Ⅱ	20	7	3	○	1	◎
	TYG2.6FDNEBC		25	9				△
M2.6 × 0.35	TYE2.6DDNEBC	Ⅱ	20	7	3	○	1	△
M3 × 0.5	TYD3.0GDNEBC	Ⅱ	16	5	3		1	△
	TYE3.0GDNEBC		20	7				◎
	TYG3.0GDNEBC		25	9		○		○
3M0.6	TYE3.0HDNEBC	Ⅱ	20	7	3		1	△
	TYG3.0HDNEBC		25	9		○		

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

D Solid Round Dies

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
M3 × 0.35	TYE3.0DDNEBC	Ⅱ	20	7	3	○	1	○
	TYG3.0DDNEBC		25	9				△
M3.5 × 0.6	TYE3.5HDNEBC	Ⅱ	20	7	3		1	○
	TYG3.5HDNEBC		25	9		○		△
M3.5 × 0.5	TYE3.5GDNEBC	Ⅱ	20	7	3		1	△
M3.5 × 0.35	TYE3.5DDNEBC	Ⅱ	20	7	3	○	1	○
M4 × 0.7	TYE4.0IDNEBC	Ⅱ	20	7	3		1	◎
	TYG4.0IDNEBC		25	9				
	TYJ4.0IDNEBC		38	13	4	○		△
4M0.75	TYE4.0JDNEBC	Ⅱ	20	7	3		1	○
	TYG4.0JDNEBC		25	9				△
M4 × 0.5	TYE4.0GDNEBC	Ⅱ	20	7	3		1	○
	TYG4.0GDNEBC		25	9		○		△
M4 × 0.35	TYE4.0DDNEBC	Ⅱ	20	7	3	○	1	△
M4.5 × 0.75	TYE4.5JDNEBC	Ⅱ	20	7	4		1	△
M4.5 × 0.5	TYE4.5GDNEBC	Ⅱ	20	7	4		1	△
M5 × 0.8	TYE5.0KDNEBC	Ⅱ	20	7	4		1	◎
	TYG5.0KDNEBC		25	9	3			
	TYJ5.0KDNEBC		38	13	4	○		△
5M0.9	TYE5.0LDNEBC	Ⅱ	20	7	4		1	△
	TYG5.0LDNEBC		25	9	3			
M5 × 0.75	TYE5.0JDNEBC	Ⅱ	20	7	4		1	△
M5 × 0.5	TYE5.0GDNEBC	Ⅱ	20	7	4		1	○
	TYG5.0GDNEBC		25	9	3	○		
M5.5 × 0.9	TYE5.5LDNEBC	Ⅱ	20	7	4		1	△
M5.5 × 0.5	TYE5.5GDNEBC	Ⅱ	20	7	4		1	△
M6 × 1	TYE6.0MDNEBC	Ⅱ	20	7	4		1	◎
	TYG6.0MDNEBC		25	9				
	TYJ6.0MDNEBC		38	13		○		○
M6 × 0.75	TYE6.0JDNEBC	Ⅱ	20	7	4		1	○
	TYG6.0JDNEBC		25	9				
	TYJ6.0JDNEBC		38	13		○		△
M6 × 0.5	TYE6.0GDNEBC	Ⅱ	20	7	4		1	○
	TYG6.0GDNEBC		25	9		○		
M7 × 1	TYG7.0MDNEBC	Ⅱ	25	9	4		1	○
M7 × 0.75	TYG7.0JDNEBC	Ⅱ	25	9	4		1	○
M7 × 0.5	TYG7.0GDNEBC	Ⅱ	25	9	4	○	1	○
M8 × 1.25	TYG8.0NDNEBC	Ⅱ	25	9	4		1	◎
	TYJ8.0NDNEBC		38	13				
	TYM8.0NDNEBC		50	16		○		○
M8 × 1	TYG8.0MDNEBC	Ⅱ	25	9	4		1	○
	TYJ8.0MDNEBC		38	13				
M8 × 0.75	TYG8.0JDNEBC	Ⅱ	25	9	4		1	○
M8 × 0.5	TYG8.0GDNEBC	Ⅱ	25	9	4	○	1	○
M9 × 1.25	TYG9.0NDNEBC	Ⅱ	25	9	5		1	△
M9 × 1	TYG9.0MDNEBC	Ⅱ	25	9	5		1	○
M9 × 0.75	TYG9.0JDNEBC	Ⅱ	25	9	5		1	○
M9 × 0.5	TYG9.0GDNEBC	Ⅱ	25	9	5	○	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside diameter	Thickness
D	T

D Solid Round Dies

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
M10 × 1.5	TYG0100DNEBC	Ⅱ	25	9	5		1	◎
	TYJ0100DNEBC		38	13	4			
	TYM0100DNEBC		50	16				○
M10 × 1.25	TYG010NDNEBC	Ⅱ	25	9	5		1	○
	TYJ010NDNEBC		38	13	4			
	TYM010NDNEBC		50	16				△
M10 × 1	TYG010MDNEBC	Ⅱ	25	9	5		1	○
	TYJ010MDNEBC		38	13	4			
M10 × 0.75	TYG010JDNEBC	Ⅱ	25	9	5		1	○
	TYJ010JDNEBC		38	13	4	○		
M10 × 0.5	TYG010GDNEBC	Ⅱ	25	9	5	○	1	○
M11 × 1.5	TYJ0110DNEBC	Ⅱ	38	13	4		1	△
M11 × 1.25	TYJ011NDNEBC	Ⅱ	38	13	4		1	△
M11 × 1	TYJ011MDNEBC	Ⅱ	38	13	4		1	○
M11 × 0.75	TYJ011JDNEBC	Ⅱ	38	13	4	○	1	○
M11 × 0.5	TYJ011GDNEBC	Ⅱ	38	13	4	○	1	△
M12 × 1.75	TYJ012PDNEBC	Ⅱ	38	13	4		1	◎
	TYM012PDNEBC		50	16				○
M12 × 1.5	TYJ0120DNEBC	Ⅱ	38	13	4		1	○
	TYM0120DNEBC		50	16				△
M12 × 1.25	TYJ012NDNEBC	Ⅱ	38	13	4		1	○
	TYM012NDNEBC		50	16				△
M12 × 1	TYJ012MDNEBC	Ⅱ	38	13	4		1	○
	TYM012MDNEBC		50	16				△
M12 × 0.75	TYJ012JDNEBC	Ⅱ	38	13	4	○	1	○
M12 × 0.5	TYJ012GDNEBC	Ⅱ	38	13	4	○	1	○
M13 × 1.5	TYJ0130DNEBC	Ⅱ	38	13	5		1	△
M13 × 1.25	TYJ013NDNEBC	Ⅱ	38	13	5		1	△
M13 × 1	TYJ013MDNEBC	Ⅱ	38	13	5		1	△
M13 × 0.75	TYJ013JDNEBC	Ⅱ	38	13	5	○	1	△
M13 × 0.5	TYJ013GDNEBC	Ⅱ	38	13	5	○	1	△
M14 × 2	TYJ014QDNEBC	Ⅱ	38	13	5		1	○
	TYM014QDNEBC		50	16	4			
M14 × 1.5	TYJ0140DNEBC	Ⅱ	38	13	5		1	○
	TYM0140DNEBC		50	16	4			△
M14 × 1.25	TYJ014NDNEBC	Ⅱ	38	13	5		1	○
M14 × 1	TYJ014MDNEBC	Ⅱ	38	13	5		1	○
M14 × 0.75	TYJ014JDNEBC	Ⅱ	38	13	5	○	1	△
M14 × 0.5	TYJ014GDNEBC	Ⅱ	38	13	5	○	1	△
M15 × 2	TYJ015QDNEBC	Ⅱ	38	13	5		1	△
M15 × 1.5	TYJ0150DNEBC	Ⅱ	38	13	5		1	△
M15 × 1.25	TYJ015NDNEBC	Ⅱ	38	13	5		1	△
M15 × 1	TYJ015MDNEBC	Ⅱ	38	13	5		1	○
M15 × 0.75	TYJ015JDNEBC	Ⅱ	38	13	5	○	1	△
M15 × 0.5	TYJ015GDNEBC	Ⅱ	38	13	5	○	1	△
M16 × 2	TYJ016QDNEBC	Ⅱ	38	13	5		1	◎
	TYM016QDNEBC		50	16	4			
M16 × 1.5	TYJ0160DNEBC	Ⅱ	38	13	5		1	○
	TYM0160DNEBC		50	16	4			

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

D Solid Round Dies

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
M16 × 1.25	TYJ016NDNEBC	II	38	13	5		1	△
M16 × 1	TYJ016MDNEBC	II	38	13	5		1	○
	TYM016MDNEBC		50	16	4			
M16 × 0.75	TYJ016JDNEBC	II	38	13	5	○	1	△
M16 × 0.5	TYJ016GDNEBC	II	38	13	5	○	1	△
M17 × 2	TYM017QDNEBC	II	50	16	5		1	△
M17 × 1.5	TYM017ODNEBC	II	50	16	5		1	△
M17 × 1	TYM017MDNEBC	II	50	16	5		1	○
M17 × 0.5	TYM017GDNEBC	II	50	16	5	○	1	△
M18 × 2.5	TYM018RDNEBC	II	50	16	5		1	○
M18 × 2	TYM018QDNEBC	II	50	16	5		1	△
M18 × 1.5	TYM018ODNEBC	II	50	16	5		1	○
M18 × 1	TYM018MDNEBC	II	50	16	5		1	○
M18 × 0.5	TYM018GDNEBC	II	50	16	5	○	1	△
M19 × 1.5	TYM019ODNEBC	II	50	16	5		1	△
M19 × 1	TYM019MDNEBC	II	50	16	5		1	△
M20 × 2.5	TYM020RDNEBC	II	50	16	5		1	◎
M20 × 2	TYM020QDNEBC	II	50	16	5		1	○
M20 × 1.5	TYM020ODNEBC	II	50	16	5		1	○
M20 × 1.25	TYM020NDNEBC	II	50	16	5		1	△
M20 × 1	TYM020MDNEBC	II	50	16	5		1	○
M20 × 0.5	TYM020GDNEBC	II	50	16	5	○	1	△
M21 × 1.5	TYM021ODNEBC	II	50	16	5		1	△
M21 × 1	TYM021MDNEBC	II	50	16	5		1	△
M22 × 2.5	TYM022RDNEBC	II	50	16	6		1	○
M22 × 2	TYM022QDNEBC	II	50	16	6		1	△
M22 × 1.5	TYM022ODNEBC	II	50	16	6		1	○
M22 × 1.25	TYM022NDNEBC	II	50	16	6		1	△
M22 × 1	TYM022MDNEBC	II	50	16	6		1	○
M22 × 0.5	TYM022GDNEBC	II	50	16	6	○	1	△
M23 × 1.5	TYM023ODNEBC	II	50	16	6		1	△
M23 × 1	TYM023MDNEBC	II	50	16	6		1	△
M24 × 3	TYM024SDNEBC	II	50	16	6		1	○
M24 × 2	TYM024QDNEBC	II	50	16	6		1	○
M24 × 1.5	TYM024ODNEBC	II	50	16	6		1	○
M24 × 1.25	TYM024NDNEBC	II	50	16	6		1	△
M24 × 1	TYM024MDNEBC	II	50	16	6		1	○
M25 × 3	TYM025SDNEBC	II	50	16	6		1	△
M25 × 2	TYM025QDNEBC	II	50	16	6		1	△
M25 × 1.5	TYM025ODNEBC	II	50	16	6		1	○
M25 × 1.25	TYM025NDNEBC	II	50	16	6		1	△
M25 × 1	TYM025MDNEBC	II	50	16	6		1	△
M26 × 2	TYR026QDNEBC	II	63	20	6		2	△
M26 × 1.5	TYR026ODNEBC	II	63	20	6		2	○
M26 × 1	TYR026MDNEBC	II	63	20	6		2	△
M27 × 3	TYR027SDNEBC	II	63	20	6		2	○
M27 × 2	TYR027QDNEBC	II	63	20	6		2	△
M27 × 1.5	TYR027ODNEBC	II	63	20	6		2	○
M27 × 1	TYR027MDNEBC	II	63	20	6		2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside diameter	Thickness
D	T

D Solid Round Dies

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
M28 × 2	TYR028QDNEBC	Ⅱ	63	20	6		2	△
M28 × 1.5	TYR028ODNEBC	Ⅱ	63	20	6		2	△
M28 × 1	TYR028MDNEBC	Ⅱ	63	20	6		2	△
M30 × 3.5	TYR030TDNEBC	Ⅱ	63	20	6		2	○
M30 × 3	TYR030SDNEBC	Ⅱ	63	20	6		2	△
M30 × 2	TYR030QDNEBC	Ⅱ	63	20	6		2	△
M30 × 1.5	TYR030ODNEBC	Ⅱ	63	20	6		2	○
M30 × 1	TYR030MDNEBC	Ⅱ	63	20	6		2	△
M32 × 3	TYR032SDNEBC	Ⅱ	63	20	6		2	△
M32 × 2	TYR032QDNEBC	Ⅱ	63	20	6		2	△
M32 × 1.5	TYR032ODNEBC	Ⅱ	63	20	6		2	△
M32 × 1	TYR032MDNEBC	Ⅱ	63	20	6		2	△
M33 × 3.5	TYR033TDNEBC	Ⅱ	63	20	6		2	△
M33 × 3	TYR033SDNEBC	Ⅱ	63	20	6		2	△
M33 × 2	TYR033QDNEBC	Ⅱ	63	20	6		2	△
M33 × 1.5	TYR033ODNEBC	Ⅱ	63	20	6		2	△
M33 × 1	TYR033MDNEBC	Ⅱ	63	20	6		2	△
M34 × 3	TYU034SDNEBC	Ⅱ	75	25	6		2	△
M34 × 2	TYU034QDNEBC	Ⅱ	75	25	6		2	△
M34 × 1.5	TYU034ODNEBC	Ⅱ	75	25	6		2	△
M34 × 1	TYU034MDNEBC	Ⅱ	75	25	6		2	△
M35 × 3	TYU035SDNEBC	Ⅱ	75	25	6		2	△
M35 × 2	TYU035QDNEBC	Ⅱ	75	25	6		2	△
M35 × 1.5	TYU035ODNEBC	Ⅱ	75	25	6		2	△
M35 × 1	TYU035MDNEBC	Ⅱ	75	25	6		2	△
M36 × 4	TYU036UDNEBC	Ⅱ	75	25	6		2	△
M36 × 3	TYU036SDNEBC	Ⅱ	75	25	6		2	△
M36 × 2	TYU036QDNEBC	Ⅱ	75	25	6		2	△
M36 × 1.5	TYU036ODNEBC	Ⅱ	75	25	6		2	△
M36 × 1	TYU036MDNEBC	Ⅱ	75	25	6		2	△
M38 × 3	TYU038SDNEBC	Ⅱ	75	25	6		2	△
M38 × 2	TYU038QDNEBC	Ⅱ	75	25	6		2	△
M38 × 1.5	TYU038ODNEBC	Ⅱ	75	25	6		2	△
M38 × 1	TYU038MDNEBC	Ⅱ	75	25	6		2	△
M39 × 4	TYU039UDNEBC	Ⅱ	75	25	6		2	△
M39 × 3	TYU039SDNEBC	Ⅱ	75	25	6		2	△
M39 × 2	TYU039QDNEBC	Ⅱ	75	25	6		2	△
M39 × 1.5	TYU039ODNEBC	Ⅱ	75	25	6		2	△
M39 × 1	TYU039MDNEBC	Ⅱ	75	25	6		2	△
M40 × 3	TYU040SDNEBC	Ⅱ	75	25	8		2	△
M40 × 2	TYU040QDNEBC	Ⅱ	75	25	8		2	△
M40 × 1.5	TYU040ODNEBC	Ⅱ	75	25	8		2	△
M40 × 1	TYU040MDNEBC	Ⅱ	75	25	8		2	△
M42 × 4.5	TYU042VDNEBC	Ⅱ	75	25	8		2	△
M42 × 3	TYU042SDNEBC	Ⅱ	75	25	8		2	△
M42 × 2	TYU042QDNEBC	Ⅱ	75	25	8		2	△
M42 × 1.5	TYU042ODNEBC	Ⅱ	75	25	8		2	△
M42 × 1	TYU042MDNEBC	Ⅱ	75	25	8		2	△
M44 × 1.5	TYU044ODNEBC	Ⅱ	75	25	8		2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

D Solid Round Dies

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
M45 × 4.5	TYU045VDNEBC	Ⅱ	75	25	8		2	△
M45 × 3	TYU045SDNEBC	Ⅱ	75	25	8		2	△
M45 × 2	TYU045QDNEBC	Ⅱ	75	25	8		2	△
M45 × 1.5	TYU045ODNEBC	Ⅱ	75	25	8		2	△
M48 × 5	TYU048WDNEBC	Ⅱ	75	25	8		2	△
M48 × 3	TYU048SDNEBC	Ⅱ	75	25	8		2	△
M48 × 2	TYU048QDNEBC	Ⅱ	75	25	8		2	△
M48 × 1.5	TYU048ODNEBC	Ⅱ	75	25	8		2	△
M50 × 3	TYU050SDNEBC	Ⅱ	75	25	8		2	△
M50 × 2	TYU050QDNEBC	Ⅱ	75	25	8		2	△
M50 × 1.5	TYU050ODNEBC	Ⅱ	75	25	8		2	△

For Unified Threads

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
NO.0-80UNF	TYDUN0BDNEBC	Ⅱ	16	5	3	○	1	△
	TYEUN0BDNEBC		20	7				
NO.1-64UNC	TYEUN1DDNEBC	Ⅱ	20	7	3	○	1	△
NO.1-72UNF	TYEUN1CDNEBC	Ⅱ	20	7	3	○	1	△
NO.2-56UNC	TYDUN2EDNEBC	Ⅱ	16	5	3	○	1	△
	TYEUN2EDNEBC		20	7				
NO.2-64UNF	TYEUN2DDNEBC	Ⅱ	20	7	3	○	1	△
NO.3-48UNC	TYEUN3FDNEBC	Ⅱ	20	7	3	○	1	△
NO.3-56UNF	TYEUN3EDNEBC	Ⅱ	20	7	3	○	1	△
NO.4-40UNC	TYEUN4HDNEBC	Ⅱ	20	7	3	○	1	○
NO.4-48UNF	TYEUN4FDNEBC	Ⅱ	20	7	3	○	1	△
NO.5-40UNC	TYEUN5HDNEBC	Ⅱ	20	7	3		1	△
NO.5-44UNF	TYEUN5GDNEBC	Ⅱ	20	7	3		1	△
NO.6-32UNC	TYEUN6JDNEBC	Ⅱ	20	7	3		1	○
NO.6-40UNF	TYEUN6HDNEBC	Ⅱ	20	7	3		1	△
NO.8-32UNC	TYEUN8JDNEBC	Ⅱ	20	7	3		1	○
NO.8-36UNF	TYEUN8IDNEBC	Ⅱ	20	7	3		1	△
NO.10-24UNC	TYEUNAMDNEBC	Ⅱ	20	7	4		1	△
NO.10-32UNF	TYEUNAJDNEBC	Ⅱ	20	7	4		1	○
NO.12-24UNC	TYEUNCMDNEBC	Ⅱ	20	7	4		1	△
NO.12-28UNF	TYEUNCKDNEBC	Ⅱ	20	7	4		1	△
1/4-20UNC	TYEU04NDNEBC	Ⅱ	20	7	4		1	○
	TYGU04NDNEBC		25	9				△
1/4-28UNF	TYEU04KDNEBC	Ⅱ	20	7	4		1	○
	TYGU04KDNEBC		25	9				
1/4-32UNEF	TYGU04JDNEBC	Ⅱ	25	9	4		1	△
5/16-18UNC	TYGU050DNEBC	Ⅱ	25	9	4		1	△
	TYJU050DNEBC		38	13				
5/16-24UNF	TYGU05MDNEBC	Ⅱ	25	9	4		1	○
	TYJU05MDNEBC		38	13				△
5/16-32UNEF	TYGU05JDNEBC	Ⅱ	25	9	4		1	△
3/8-16UNC	TYGU06PDNEBC	Ⅱ	25	9	5		1	○
	TYJU06PDNEBC		38	13	4			△
3/8-24UNF	TYGU06MDNEBC	Ⅱ	25	9	5		1	○
	TYJU06MDNEBC		38	13	4			
3/8-32UNEF	TYGU06JDNEBC	Ⅱ	25	9	5		1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Outside diameter	Thickness
D	T

D Solid Round Dies

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
7/16-14UNC	TYJU07QDNEBC	Ⅱ	38	13	4		1	△
7/16-20UNF	TYJU07NDNEBC	Ⅱ	38	13	4		1	○
7/16-24UN	TYJU07MDNEBC	Ⅱ	38	13	4		1	△
7/16-28UNEF	TYJU07KDNEBC	Ⅱ	38	13	4		1	△
1/2-13UNC	TYJU08RDNEBC	Ⅱ	38	13	4		1	○
	TYMU08RDNEBC		50	16				△
1/2-20UNF	TYJU08NDNEBC	Ⅱ	38	13	4		1	○
	TYMU08NDNEBC		50	16				△
1/2-28UNEF	TYJU08KDNEBC	Ⅱ	38	13	4		1	△
9/16-12UNC	TYJU09SDNEBC	Ⅱ	38	13	5		1	△
9/16-18UNF	TYJU09ODNEBC	Ⅱ	38	13	5		1	○
9/16-20UN	TYJU09NDNEBC	Ⅱ	38	13	5		1	△
9/16-24UNEF	TYJU09MDNEBC	Ⅱ	38	13	5		1	△
5/8-11UNC	TYJU10UDNEBC	Ⅱ	38	13	5		1	△
	TYMU10UDNEBC		50	16	4			
5/8-18UNF	TYJU10ODNEBC	Ⅱ	38	13	5		1	△
	TYMU10ODNEBC		50	16	4			
5/8-24UNEF	TYJU10MDNEBC	Ⅱ	38	13	5		1	△
3/4-10UNC	TYMU12VDNEBC	Ⅱ	50	16	5		1	△
3/4-16UNF	TYMU12PDNEBC	Ⅱ	50	16	5		1	○
3/4-20UNEF	TYMU12NDNEBC	Ⅱ	50	16	5		1	△
7/8-9UNC	TYMU14WDNEBC	Ⅱ	50	16	6		1	△
7/8-14UNF	TYMU14QDNEBC	Ⅱ	50	16	6		1	○
1 -8UNC	TYMU16XDNEBC	Ⅱ	50	16	6		1	△
1 -12UNF	TYMU16SDNEBC	Ⅱ	50	16	6		1	△
1 -14UNS	TYMU16QDNEBC	Ⅱ	50	16	6		1	△
1 -20UNEF	TYMU16NDNEBC	Ⅱ	50	16	6		1	△
1 1/8-7UNC	TYRU18YDNEBC	Ⅱ	63	20	6		2	△
1 1/8-8UN	TYRU18XDNEBC	Ⅱ	63	20	6		2	△
1 1/8-12UNF	TYRU18SDNEBC	Ⅱ	63	20	6		2	△
1 1/4-7UNC	TYRU20YDNEBC	Ⅱ	63	20	6		2	△
1 1/4-8UN	TYRU20XDNEBC	Ⅱ	63	20	6		2	△
1 1/4-12UNF	TYRU20SDNEBC	Ⅱ	63	20	6		2	△
1 3/8-6UNC	TYUU22ZDNEBC	Ⅱ	75	25	6		2	△
1 3/8-12UNF	TYUU22SDNEBC	Ⅱ	75	25	6		2	△
1 1/2-6UNC	TYUU24ZDNEBC	Ⅱ	75	25	6		2	△
1 1/2-8UN	TYUU24XDNEBC	Ⅱ	75	25	6		2	△
1 1/2-12UNF	TYUU24SDNEBC	Ⅱ	75	25	6		2	△
1 5/8-12UN	TYUU26SDNEBC	Ⅱ	75	25	8		2	△
1 3/4-5UNC	TYUU287DNEBC	Ⅱ	75	25	8		2	△
1 3/4-12UN	TYUU28SDNEBC	Ⅱ	75	25	8		2	△
2 -12UN	TYUU32SDNEBC	Ⅱ	75	25	8	○	2	△

For Whitworth Threads

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
1/16W60	TYEW019DNEBC	Ⅱ	20	7	3	○	1	△
3/32W48	TYEW1HFDNEBC	Ⅱ	20	7	3	○	1	△
1/8W40	TYEW02HDNEBC	Ⅱ	20	7	3		1	○
5/32W32	TYEW2HJDNEBC	Ⅱ	20	7	3		1	○

D Solid Round Dies

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
3/16W24	TYEW03MDNEBC	Ⅱ	20	7	4		1	○
	TYGW03MDNEBC		25	9	3			△
7/32W24	TYEW3HMDNEBC	Ⅱ	20	7	4		1	△
1/4W20	TYEW04NDNEBC	Ⅱ	20	7	4		1	○
	TYGW04NDNEBC		25	9				△
	TYJW04NDNEBC		38	13		○		
5/16W18	TYGW05ODNEBC	Ⅱ	25	9	4		1	○
	TYJW05ODNEBC		38	13				△
3/8W16	TYGW06PDNEBC	Ⅱ	25	9	5		1	○
	TYJW06PDNEBC		38	13	4			
	TYMW06PDNEBC		50	16				△
7/16W14	TYJW07QDNEBC	Ⅱ	38	13	4		1	△
	TYMW07QDNEBC		50	16				
1/2W12	TYJW08SDNEBC	Ⅱ	38	13	4		1	○
	TYMW08SDNEBC		50	16				△
9/16W12	TYJW09SDNEBC	Ⅱ	38	13	5		1	△
5/8W11	TYJW10UDNEBC	Ⅱ	38	13	5		1	○
	TYMW10UDNEBC		50	16	4			
3/4W10	TYMW12VDNEBC	Ⅱ	50	16	5		1	○
7/8W9	TYMW14WDNEBC	Ⅱ	50	16	6		1	○
1 W8	TYMW16XDNEBC	Ⅱ	50	16	6		1	○
1 1/8W7	TYRW18YDNEBC	Ⅱ	63	20	6		2	△
1 1/4W7	TYRW20YDNEBC	Ⅱ	63	20	6		2	△
1 3/8W6	TYUW22ZDNEBC	Ⅱ	75	25	6		2	△
1 1/2W6	TYUW24ZDNEBC	Ⅱ	75	25	6		2	△

For Screw Threads used on Sewing Machines

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
3/32SM56	TYES06EDNEBC	Ⅱ	20	7	3	○	1	△
1/8SM40	TYES08HDNEBC	Ⅱ	20	7	3		1	△
1/8SM44	TYES08GDNEBC	Ⅱ	20	7	3		1	△
9/64SM40	TYES09HDNEBC	Ⅱ	20	7	3		1	△
11/64SM40	TYES11HDNEBC	Ⅱ	20	7	4		1	△
3/16SM28	TYES12KDNEBC	Ⅱ	20	7	4		1	△
3/16SM32	TYES12JDNEBC	Ⅱ	20	7	4		1	△
7/32SM32	TYES14JDNEBC	Ⅱ	20	7	4		1	△
15/64SM28	TYES15KDNEBC	Ⅱ	20	7	4		1	△
1/4SM24	TYES16MDNEBC	Ⅱ	20	7	4		1	△
1/4SM40	TYES16HDNEBC	Ⅱ	20	7	4		1	△

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside diameter	Thickness
D	T

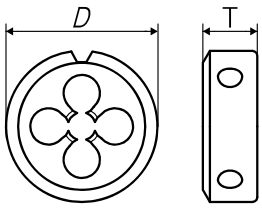
D LH

Solid Round Dies for Left Hand Threads

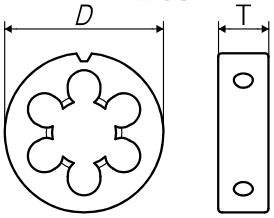
Specification

For icon explanation, refer to P.24

TYPE: 1 D ≦ 50



TYPE: 2 D ≧ 63



Segment : 3O

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
For Metric Threads								
M1 × 0.25	GYE1.0BDNEBC	Ⅱ	20	7	3	○	1	△
M1.4 × 0.3	GYE1.4CDNEBC	Ⅱ	20	7	3	○	1	△
M1.6 × 0.35	GYE1.6DDNEBC	Ⅱ	20	7	3	○	1	△
M1.7 × 0.35	GYE1.7DDNEBC	Ⅱ	20	7	3	○	1	△
M2 × 0.4	GYE2.0EDNEBC	Ⅱ	20	7	3	○	1	△
M2.3 × 0.4	GYE2.3EDNEBC	Ⅱ	20	7	3	○	1	△
M2.5 × 0.45	GYE2.5FDNEBC	Ⅱ	20	7	3	○	1	△
M2.6 × 0.45	GYE2.6FDNEBC	Ⅱ	20	7	3	○	1	△
M3 × 0.5	GYE3.0GDNEBC	Ⅱ	20	7	3		1	○
	GYG3.0GDNEBC		25	9		○		△
M3 × 0.35	GYE3.0DDNEBC	Ⅱ	20	7	3	○	1	△
M3.5 × 0.6	GYE3.5HDNEBC	Ⅱ	20	7	3		1	△
M3.5 × 0.35	GYE3.5DDNEBC	Ⅱ	20	7	3		1	△
M4 × 0.7	GYE4.0IDNEBC	Ⅱ	20	7	3		1	○
	GYG4.0IDNEBC		25	9				
M4 × 0.5	GYE4.0GDNEBC	Ⅱ	20	7	3		1	△
M5 × 0.8	GYE5.0KDNEBC	Ⅱ	20	7	4		1	○
	GYG5.0KDNEBC		25	9	3			
M5 × 0.5	GYE5.0GDNEBC	Ⅱ	20	7	4		1	△
M6 × 1	GYE6.0MDNEBC	Ⅱ	20	7	4		1	○
	GYG6.0MDNEBC		25	9				
	GYJ6.0MDNEBC		38	13		○		△
M6 × 0.75	GYE6.0JDNEBC	Ⅱ	20	7	4		1	△
M6 × 0.5	GYE6.0GDNEBC	Ⅱ	20	7	4		1	△
M7 × 1	GYG7.0MDNEBC	Ⅱ	25	9	4		1	△
M7 × 0.75	GYG7.0JDNEBC	Ⅱ	25	9	4		1	△
M7 × 0.5	GYG7.0GDNEBC	Ⅱ	25	9	4	○	1	△
M8 × 1.25	GYG8.0NDNEBC	Ⅱ	25	9	4		1	○
	GYJ8.0NDNEBC		38	13				
M8 × 1	GYG8.0MDNEBC	Ⅱ	25	9	4		1	△
	GYJ8.0MDNEBC		38	13				

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

D LH Solid Round Dies for Left Hand Threads

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
M8 × 0.75	GYG8.0JDNEBC	Ⅱ	25	9	4		1	△
M8 × 0.5	GYG8.0GDNEBC	Ⅱ	25	9	4	○	1	△
M9 × 1.25	GYG9.0NDNEBC	Ⅱ	25	9	5		1	△
M9 × 1	GYG9.0MDNEBC	Ⅱ	25	9	5		1	△
M9 × 0.75	GYG9.0JDNEBC	Ⅱ	25	9	5		1	△
M9 × 0.5	GYG9.0GDNEBC	Ⅱ	25	9	5	○	1	△
M10 × 1.5	GYG010ODNEBC	Ⅱ	25	9	5		1	○
	GYJ010ODNEBC		38	13	4			
M10 × 1.25	GYG010NDNEBC	Ⅱ	25	9	5		1	△
	GYJ010NDNEBC		38	13	4			
M10 × 1	GYG010MDNEBC	Ⅱ	25	9	5		1	△
	GYJ010MDNEBC		38	13	4			
M10 × 0.75	GYG010JDNEBC	Ⅱ	25	9	5		1	△
M10 × 0.5	GYG010GDNEBC	Ⅱ	25	9	5	○	1	△
M11 × 1.5	GYJ011ODNEBC	Ⅱ	38	13	4		1	△
M11 × 1.25	GYJ011NDNEBC	Ⅱ	38	13	4		1	△
M11 × 1	GYJ011MDNEBC	Ⅱ	38	13	4		1	△
M11 × 0.5	GYJ011GDNEBC	Ⅱ	38	13	4	○	1	△
M12 × 1.75	GYJ012PDNEBC	Ⅱ	38	13	4		1	○
M12 × 1.5	GYJ012ODNEBC	Ⅱ	38	13	4		1	△
M12 × 1.25	GYJ012NDNEBC	Ⅱ	38	13	4		1	△
M12 × 1	GYJ012MDNEBC	Ⅱ	38	13	4		1	△
M12 × 0.75	GYJ012JDNEBC	Ⅱ	38	13	4	○	1	△
M12 × 0.5	GYJ012GDNEBC	Ⅱ	38	13	4	○	1	△
M14 × 2	GYJ014QDNEBC	Ⅱ	38	13	5		1	△
M14 × 1.5	GYJ014ODNEBC	Ⅱ	38	13	5		1	△
M14 × 1.25	GYJ014NDNEBC	Ⅱ	38	13	5		1	△
M14 × 1	GYJ014MDNEBC	Ⅱ	38	13	5		1	△
M15 × 1.5	GYJ015ODNEBC	Ⅱ	38	13	5		1	△
M15 × 1	GYJ015MDNEBC	Ⅱ	38	13	5		1	△
M16 × 2	GYJ016QDNEBC	Ⅱ	38	13	5		1	○
	GYM016QDNEBC		50	16	4			
M16 × 1.5	GYJ016ODNEBC	Ⅱ	38	13	5		1	△
	GYM016ODNEBC		50	16	4			
M16 × 1	GYJ016MDNEBC	Ⅱ	38	13	5		1	△
	GYM016MDNEBC		50	16	4			
M17 × 1	GYM017MDNEBC	Ⅱ	50	16	5		1	△
M18 × 2.5	GYM018RDNEBC	Ⅱ	50	16	5		1	△
M18 × 2	GYM018QDNEBC	Ⅱ	50	16	5		1	△
M18 × 1.5	GYM018ODNEBC	Ⅱ	50	16	5		1	△
M18 × 1	GYM018MDNEBC	Ⅱ	50	16	5		1	△
M20 × 2.5	GYM020RDNEBC	Ⅱ	50	16	5		1	○
M20 × 2	GYM020QDNEBC	Ⅱ	50	16	5		1	△
M20 × 1.5	GYM020ODNEBC	Ⅱ	50	16	5		1	△
M20 × 1	GYM020MDNEBC	Ⅱ	50	16	5		1	△
M22 × 2.5	GYM022RDNEBC	Ⅱ	50	16	6		1	△
M22 × 2	GYM022QDNEBC	Ⅱ	50	16	6		1	△
M22 × 1.5	GYM022ODNEBC	Ⅱ	50	16	6		1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside diameter	Thickness
D	T

D LH Solid Round Dies for Left Hand Threads

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
M22 × 1	GYM022MDNEBC	Ⅱ	50	16	6		1	△
M24 × 3	GYM024SDNEBC	Ⅱ	50	16	6		1	△
M24 × 2	GYM024QDNEBC	Ⅱ	50	16	6		1	△
M24 × 1.5	GYM024ODNEBC	Ⅱ	50	16	6		1	△
M24 × 1	GYM024MDNEBC	Ⅱ	50	16	6		1	△
M25 × 1.5	GYM025ODNEBC	Ⅱ	50	16	6		1	△
M26 × 1.5	GYR026ODNEBC	Ⅱ	63	20	6		2	△
M27 × 3	GYR027SDNEBC	Ⅱ	63	20	6		2	△
M27 × 1.5	GYR027ODNEBC	Ⅱ	63	20	6		2	△
M28 × 1.5	GYR028ODNEBC	Ⅱ	63	20	6		2	△
M30 × 3.5	GYR030TDNEBC	Ⅱ	63	20	6		2	△
M30 × 3	GYR030SDNEBC	Ⅱ	63	20	6		2	△
M30 × 2	GYR030QDNEBC	Ⅱ	63	20	6		2	△
M30 × 1.5	GYR030ODNEBC	Ⅱ	63	20	6		2	△
M36 × 4	GYU036UDNEBC	Ⅱ	75	25	6		2	△
M48 × 5	GYU048WDNEBC	Ⅱ	75	25	8		2	△

For Unified Threads

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
1/4-20UNC	GYGU04NDNEBC	Ⅱ	25	9	4		1	△
1/4-28UNF	GYGU04KDNEBC	Ⅱ	25	9	4		1	△
5/16-18UNC	GYGU05ODNEBC	Ⅱ	25	9	4		1	△
5/16-24UNF	GYGU05MDNEBC	Ⅱ	25	9	4		1	△
3/8-16UNC	GYGU06PDNEBC	Ⅱ	25	9	5		1	△
3/8-24UNF	GYGU06MDNEBC	Ⅱ	25	9	5		1	△
	GYJU06MDNEBC		38	13	4			
7/16-20UNF	GYJU07NDNEBC	Ⅱ	38	13	4		1	△
1/2-13UNC	GYJU08RDNEBC	Ⅱ	38	13	4		1	△
1/2-20UNF	GYJU08NDNEBC	Ⅱ	38	13	4		1	△
9/16-12UNC	GYJU09SDNEBC	Ⅱ	38	13	5		1	△
9/16-18UNF	GYJU09ODNEBC	Ⅱ	38	13	5		1	△
5/8-11UNC	GYMU10UDNEBC	Ⅱ	50	16	4		1	△
5/8-18UNF	GYMU10ODNEBC	Ⅱ	50	16	4		1	△
3/4-10UNC	GYMU12VDNEBC	Ⅱ	50	16	5		1	△
3/4-16UNF	GYMU12PDNEBC	Ⅱ	50	16	5		1	△
7/8-9UNC	GYMU14WDNEBC	Ⅱ	50	16	6		1	△
7/8-14UNF	GYMU14QDNEBC	Ⅱ	50	16	6		1	△

For Whitworth Threads

Size	Code	Class	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
3/16W24	GYEW03MDNEBC	Ⅱ	20	7	4		1	△
5/16W18	GYGW05ODNEBC	Ⅱ	25	9	4		1	△
3/8W16	GYGW06PDNEBC	Ⅱ	25	9	5		1	△
	GYJW06PDNEBC		38	13	4			
7/16W14	GYJW07QDNEBC	Ⅱ	38	13	4		1	△
1/2W12	GYJW08SDNEBC	Ⅱ	38	13	4		1	△
5/8W11	GYJW10UDNEBC	Ⅱ	38	13	5		1	△
3/4W10	GYMW12VDNEBC	Ⅱ	50	16	5		1	△
7/8W9	GYMW14WDNEBC	Ⅱ	50	16	6		1	△
1 W8	GYMW16XDNEBC	Ⅱ	50	16	6		1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

D PF

Solid Round Dies for Parallel Pipe Threads

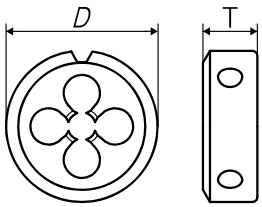
Specification

HSS

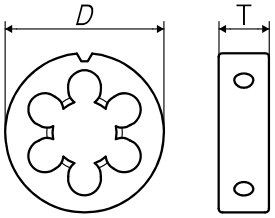
Front face 2~2.5

For icon explanation, refer to P.24

TYPE: 1 D ≦ 50



TYPE: 2 D ≧ 63



Segment : 3G

Size	Code	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
For PF Threads							
PF1/16-28	TYGPF010NEBC	25	9	4		1	△
PF1/8-28	TYGPF020NEBC	25	9	5		1	△
	TYJPF020NEBC	38	13	4			○
PF1/4-19	TYJPF040NEBC	38	13	5		1	○
PF3/8-19	TYJPF060NEBC	38	13	6		1	△
	TYMPF060NEBC	50	16	5			○
PF1/2-14	TYMPF080NEBC	50	16	5		1	○
PF5/8-14	TYMPF100NEBC	50	16	6		1	△
PF3/4-14	TYMPF120NEBC	50	16	6		1	△
	TYRPF120NEBC	63	20			2	○
PF1 -11	TYUPF160NEBC	75	25	6		2	○
PF1 1/4-11	TYUPF200NEBC	75	25	8		2	△
PF1 1/2-11	TYUPF240NEBC	75	25	8		2	△
PF2 -11	TYYPF320NEBC	105	30	8		2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Outside diameter	Thickness
D	T

D PF LH

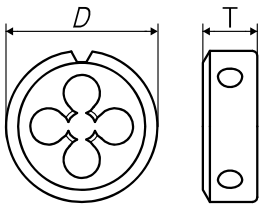
Solid Round Dies for Parallel Pipe Threads, for Left Hand Threads

Specification

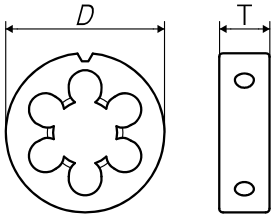
HSS | LH Left hand | Front face 2~2.5

For icon explanation, refer to P.24

TYPE: 1 D ≦ 50



TYPE: 2 D ≧ 63



Segment : 3G

Size	Code	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
For PF Threads							
PF1/8-28	GYJPF020NEBC	38	13	4		1	△
PF1/4-19	GYJPF040NEBC	38	13	5		1	△
PF3/8-19	GYMPF060NEBC	50	16	5		1	△
PF1/2-14	GYMPF080NEBC	50	16	5		1	△
PF3/4-14	GYRPF120NEBC	63	20	6		2	△
PF1 -11	GYUPF160NEBC	75	25	6		2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside diameter	Thickness
D	T

D NPSM

Solid Round Dies for American Parallel Pipe Threads

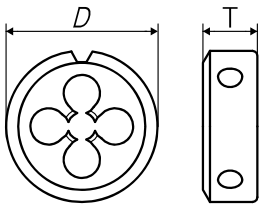
Specification

Front face

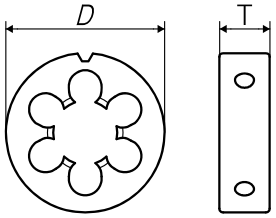
HSS 2~2.5

For icon explanation, refer to P.24

TYPE: 1 D ≦ 50



TYPE: 2 D ≧ 63



Segment : 3G

Size	Code	D (mm)	T (mm)	Clearance holes	Recess	Type	Stock
For NPSM Threads							
NPSM1/16-27	TYJSM010NEBC	38	13	4		1	△
NPSM1/8-27	TYJSM020NEBC	38	13	4		1	△
NPSM1/4-18	TYJSM040NEBC	38	13	5		1	△
NPSM3/8-18	TYMSM060NEBC	50	16	5		1	△
NPSM1/2-14	TYMSM080NEBC	50	16	5		1	△
NPSM3/4-14	TYRSM120NEBC	63	20	6		2	△
NPSM1 -11.5	TYUSM160NEBC	75	25	6		2	△
NPSM1 1/4-11.5	TYUSM200NEBC	75	25	8		2	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

Outside diameter	Thickness	Position of basic dia
D	T	ℓg

D PT

Solid Round Dies for Taper Pipe Threads

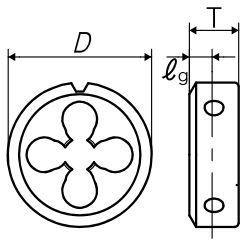
Specification

Front face

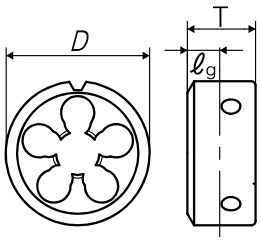
HSS 2~2.5

For icon explanation, refer to P.24

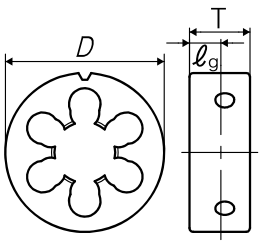
TYPE: 1



TYPE: 2



TYPE: 3



Segment : 3G

Size	Code	D (mm)	T (mm)	ℓg (mm)	Clearance holes	Recess	Type	Stock
For PT Threads								
PT1/16-28	TYJPT010NEBC	38	13	6	4	○	1	△
PT1/8-28	TYJPT020NEBC	38	13	6	4	○	1	◎
PT1/4-19	TYJPT040NEBC	38	18	8.5	5	○	2	◎
PT3/8-19	TYMPT060NEBC	50	22	10	5	○	2	◎
PT1/2-14	TYMPT080NEBC	50	22	12	6		2	◎
PT5/8-14	TYRPT100NEBC	63	24	12	6	○	3	△
PT3/4-14	TYRPT120NEBC	63	24	12.5	6		3	◎
PT7/8-14	TYUPT140NEBC	75	30	12.5	6	○	3	△
PT1 -11	TYUPT160NEBC	75	30	15	6	○	3	◎
PT1 1/4-11	TYUPT200NEBC	75	30	15	6		3	△
PT1 1/2-11	TYUPT240NEBC	75	30	15	6		3	△
PT2 -11	TYYPT320NEBC	105	36	17.5	8		3	△

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

D PT LH

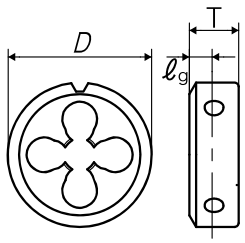
Solid Round Dies for Taper Pipe Threads, for Left Hand Threads

Specification

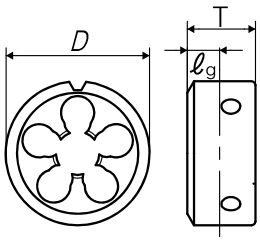
HSS | LH Left hand | Front face 2~2.5

For icon explanation, refer to P.24

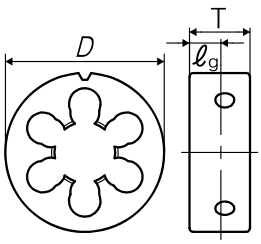
TYPE: 1



TYPE: 2



TYPE: 3



Segment : 3G

Size	Code	D (mm)	T (mm)	ℓg (mm)	Clearance holes	Recess	Type	Stock
For PT Threads								
PT1/8-28	GYJPT020NEBC	38	13	6	4	○	1	△
PT1/4-19	GYJPT040NEBC	38	18	8.5	5	○	2	△
PT3/8-19	GYMPT060NEBC	50	22	10	5	○	2	△
PT1/2-14	GYMPT080NEBC	50	22	12	6		2	△
PT3/4-14	GYRPT120NEBC	63	24	12.5	6		3	△
PT1 -11	GYUPT160NEBC	75	30	15	6	○	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside diameter	Thickness	Position of basic dia
D	T	ℓg

D NPT

Solid Round Dies for American Taper Pipe Threads

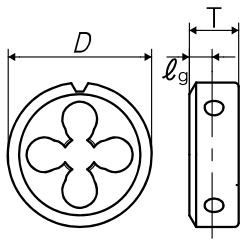
Specification

Front face

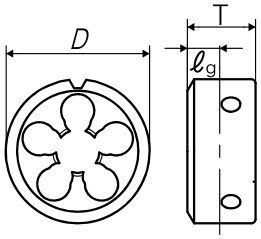
HSS 2~2.5

For icon explanation, refer to P.24

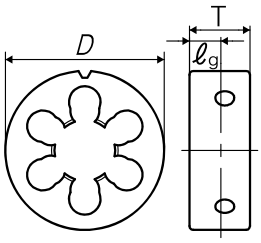
TYPE : 1



TYPE : 2



TYPE : 3



Segment : 3G

Size	Code	D (mm)	T (mm)	ℓg (mm)	Clearance holes	Recess	Type	Stock
For NPT Threads								
NPT1/16-27	TYJNT010NEBC	38	13	5	4	○	1	△
NPT1/8-27	TYJNT020NEBC	38	13	5	4	○	1	○
NPT1/4-18	TYJNT040NEBC	38	18	8	5	○	2	○
NPT3/8-18	TYMNT060NEBC	50	22	8	5	○	2	△
NPT1/2-14	TYMNT080NEBC	50	22	10	6		2	△
NPT3/4-14	TYRNT120NEBC	63	24	10	6		3	△
NPT1 -11.5	TYUNT160NEBC	75	30	13	6	○	3	△
NPT1 1/4-11.5	TYUNT200NEBC	75	30	13.5	6	○	3	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

D NPTF

Solid Round Dies for American Dryseal Taper Pipe Threads

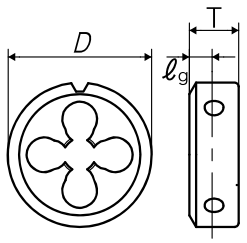
Specification

Front face

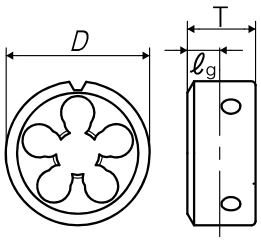
HSS 2~2.5

For icon explanation, refer to P.24

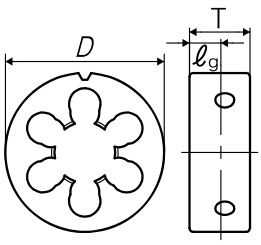
TYPE: 1



TYPE: 2



TYPE: 3



Segment : 3G

Size	Code	D (mm)	T (mm)	ℓg (mm)	Clearance holes	Recess	Type	Stock
For NPTF Threads								
NPTF1/16-27	TYJNF010NEBC	38	13	6	4	○	1	△
NPTF1/8-27	TYJNF020NEBC	38	13	6	4	○	1	△
NPTF1/4-18	TYJNF040NEBC	38	18	10	5	○	2	△
NPTF3/8-18	TYMNF060NEBC	50	22	10	5	○	2	△
NPTF1/2-14	TYMNF080NEBC	50	22	12	6		2	△
NPTF3/4-14	TYRNF120NEBC	63	24	12	6		3	△
NPTF1 -11.5	TYUNF160NEBC	75	30	15	6	○	3	△
NPTF1 1/4-11.5	TYUNF200NEBC	75	30	15.5	6	○	3	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

MEMO

MS-RS-D/RS-D

Rolling Dies

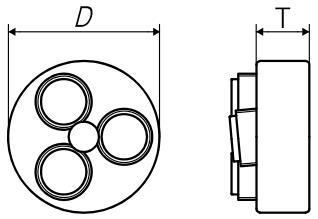
Specification

■Due to the threading through material deformation, the die produces no chips, and produces external threads of high precision with clean surface.

HSS NI Nitride

For icon explanation, refer to P.24

TYPE: 1



Segment : 34

Size	Code	Class	D (mm)	T (mm)	Type	Stock
For Miniature Screw Threads						
S0.5 × 0.125	RA20.5-	R2	6	2	1	△
S0.6 × 0.15	RA20.6-	R2	6	2	1	△
S0.7 × 0.175	RA20.7-	R3	6	2	1	△
S0.8 × 0.2	RO20.8-	R3	8	3	1	△
For Metric Threads						
Size	Code	Class	D (mm)	T (mm)	Type	Stock
M1 × 0.25	RBQ1.0B	R2	10	3.5	1	△
	RBR1.0B	R3				
	RBS1.0B	R4				
M1.1 × 0.25	RBR1.1B	R3	10	3.5	1	△
M1.2 × 0.25	RBQ1.2B	R2	10	3.5	1	△
	RBR1.2B	R3				
	RBS1.2B	R4				
M1.4 × 0.3	RBQ1.4C	R2	10	3.5	1	△
	RDQ1.4C		16	5		
	RBR1.4C	R3	10	3.5		
	RDR1.4C		16	5		
	RBS1.4C	R4	10	3.5		
	RDS1.4C		16	5		
M1.6 × 0.35	RDQ1.6D	R2	16	5	1	△
	RDR1.6D	R3				
	RDS1.6D	R4				
M1.7 × 0.35	RDQ1.7D	R2	16	5	1	△
	RDR1.7D	R3				
	RDS1.7D	R4				
M1.8 × 0.35	RDR1.8D	R3	16	5	1	△
M2 × 0.4	RDQ2.0E	R2	16	5	1	△
	RDR2.0E	R3				
	RDS2.0E	R4				
M2 × 0.25	RDR2.0B	R3	16	5	1	△
	RDS2.0B	R4				

Outside diameter	Thickness
D	T

MS-RS-D/RS-D Rolling Dies

Size	Code	Class	D (mm)	T (mm)	Type	Stock
M2.3 × 0.4	RDQ2.3E	R2	16	5	1	△
	RDR2.3E	R3				
	RDS2.3E	R4				
M2.3 × 0.25	RDR2.3B	R3	16	5	1	△
M2.5 × 0.45	RDQ2.5F	R2	16	5	1	△
	REQ2.5F		20	7		
	RDS2.5F	R4	16	5		
	RES2.5F		20	7		
	RDT2.5F	R5	16	5		
	RET2.5F		20	7		
M2.5 × 0.35	RDQ2.5D	R2	16	5	1	△
	RDR2.5D	R3				
	RDS2.5D	R4				
M2.6 × 0.45	RDQ2.6F	R2	16	5	1	△
	REQ2.6F		20	7		
	RDS2.6F	R4	16	5		
	RES2.6F		20	7		
	RDT2.6F	R5	16	5		
M2.6 × 0.35	RDS2.6D	R4	16	5	1	△
M3 × 0.5	REQ3.0G	R2	20	7	1	△
	RES3.0G	R4				
M3 × 0.35	REQ3.0D	R2	20	7	1	△
	RES3.0D	R4				
	RET3.0D	R5				
M3.5 × 0.35	RES3.5D	R4	20	7	1	△
	RET3.5D	R5				
M4 × 0.5	RET4.0G	R5	20	7	1	△
	REU4.0G	R6				
M5 × 0.5	RER5.0G	R3	20	7	1	△
	RES5.0G	R4				
	RET5.0G	R5				
	REU5.0G	R6				

N-RSD

New Rolling Dies

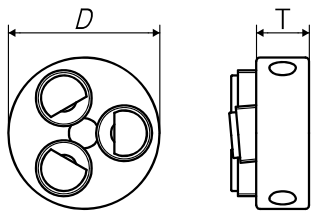
Specification

HSS

For icon explanation, refer to P.24

■Due to the threading through material deformation, the die produces no chips, and produces external threads of high precision with clean surface. Due to low load at its chamfer, the die ensures the improvement of endurance.

TYPE : 1



Segment : 34

Size	Code	Class	D (mm)	T (mm)	Type	Stock
For Metric Threads						
M3 × 0.5	NRGS3.0G	R4	25	9	1	△
M4 × 0.7	NRGS4.0I	R4	25	9	1	△
M5 × 0.8	NRGT5.0K	R5	25	9	1	△
M6 × 1	NRHT6.0M	R5	30	11	1	△
M8 × 1.25	NRJU8.0N	R6	38	13	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

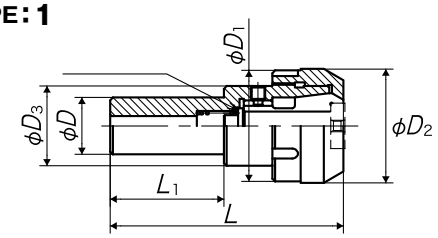
Shank dia.	Nut dia. for Hook spanner	Outside dia. of nut	Dia. of middle shaft	Overall length	Shank length
ϕD	ϕD_1	ϕD_2	ϕD_3	L	L_1

RD-DH

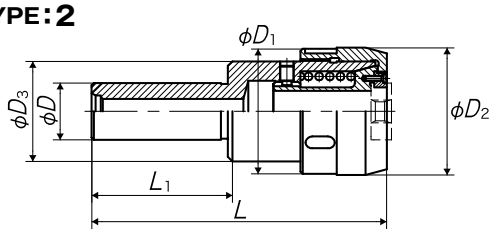
Die Holders for Solid Dies

■Die Holder for Solid Dies.

TYPE : 1



TYPE : 2



Segment : 3A

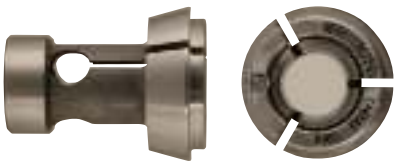
Code	Die OD	ϕD (mm)	ϕD_1 (mm)	ϕD_2 (mm)	ϕD_3 (mm)	L (mm)	L_1 (mm)	Adaptive collet	Weight (kg)	Type	Stock
DH16-20	10 16	20	39	40	27.7	82	40	DC10-20 DC16-20	0.3	1	○
DH25-25	20 25	25	55	56	43.6	130	60	DC20-25 DC25-25	0.8	2	○
DH50-32	38 50	32	78	80	48	151	70	DC38-32 DC50-32	1.6	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Outside dia. of Die	Outside dia of collet	Guide dia.	Overall length
ϕD	ϕA	ϕB	L

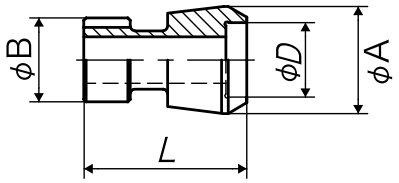
RD-DC

Die Collets for Die Holders

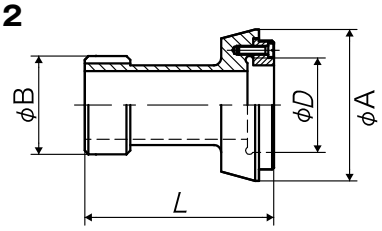


■Due to attachment type, compatible to various kinds of holders.

TYPE : 1



TYPE : 2



Segment : 3A

Code	Die OD	ϕD (mm)	ϕA (mm)	ϕB (mm)	L (mm)	Adaptive holder	Weight (kg)	Type	Stock
DC10-20	10	10	23	18	35	DH16-20	0.05	1	○
DC16-20	16	16							
DC20-25	20	20	40	26	52	DH25-25	0.13	2	○
DC25-25	25	25					0.11		
DC38-32	38	38	62	34	60	DH50-32	0.32	2	○
DC50-32	50	50					0.23		

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MEMO

RD-DA

Die attachment (Designed Specially for Solid Round Dies)

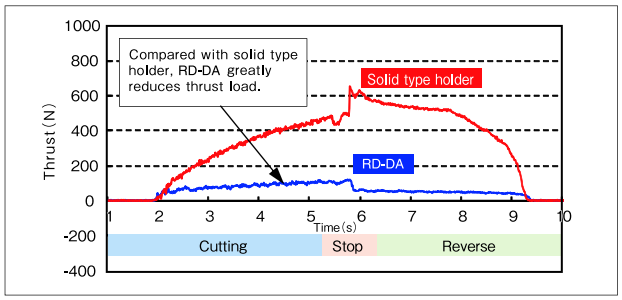
Specification

Alloy steel | Synchronized

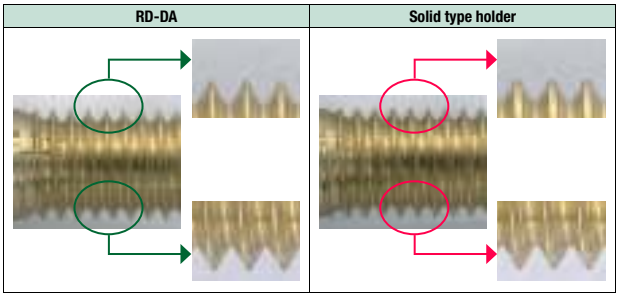
For icon explanation, refer to P.24

●Tooling designed specially for Solid Dies, with the mechanism to compensate for feed error and to absorb misalignment.
●Combined with CNC toolings, this attachment enables the cutting of external threads on complex workpieces with ease.

●Due to the mechanism to compensate for feed error, the thrust in the axial direction decreases and the tool life becomes longer.



●By automatic centering, RD-DA absorbs misalignment in radial direction and realizes the high precision thread cutting of external threads.



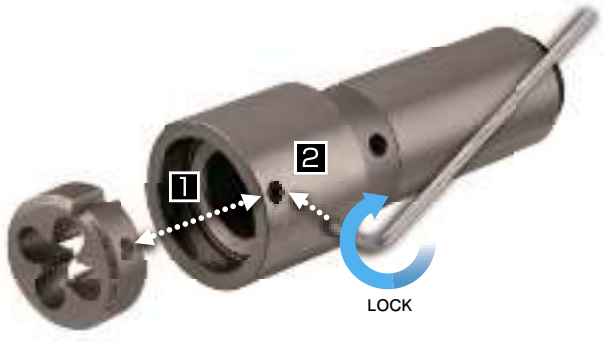
Cutting condition (Rigid feed)

Tool size	M10×1.5	Cutting length	15mm
Work material	Brass	Machine	Vertical MC
Cutting speed	5m/min	Cutting fluid	Tapping spray

Cutting condition (Rigid feed)

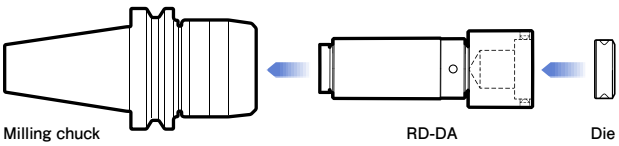
Tool size	M8×1.25	Cutting length	12mm
Work material	Brass	Machine	Vertical MC
Cutting speed	5m/min	Cutting fluid	Water soluble oil

How to attach die



①Align push-hole or V groove of the die with the side lock screw on RD-DA and attach die.
②Turn the side lock screw by hex wrench and fasten die tightly.
③Make sure the die is fastened tightly and use RD-DA with NC toolings.

Example of use

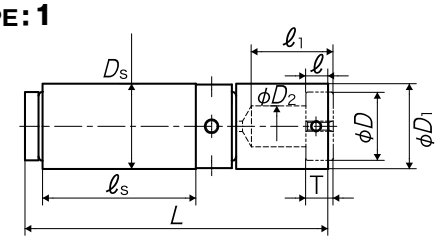


Combined with NC toolings, RD-DA can be used with MC.

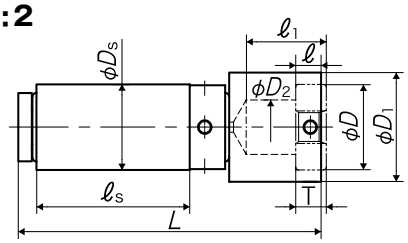
Think threads with YAMAWA
For improvement, spec may change without advance notice.

Shank dia.	Holder dia.	Recess dia.	Overall length	Shank length	Depth of die mounting	Cutting depth	Outside dia of Die	Thickness of Die
Ds	D_1	D_2	L	ℓ_s	ℓ	ℓ_1	D	T

TYPE : 1



TYPE : 2



Segment : 3A

Code	Ds (mm)	D_1 (mm)	D_2 (mm)	L (mm)	ℓs (mm)	ℓ (mm)	ℓ_1 (mm)	D (mm)	T (mm)	Type
DA10-20	20	20	6	71	40	3	11	10	3	1
DA16-20	20	20	10	76	40	4.5	16	16	5	1
DA20-25	25	25	12	89	45	6.5	22.5	20	7	1
DA25-25	25	32	16	89	45	7.5	22	25	9	2

MEMO

MEMO

MEMO

Center Drills/Centering Tools

CESA	CE-1
CE-S	CE-2
CE-S(I)	CE-3
CD-S	CE-4
CD-S(I)	CE-5
CD-S LH	CE-6
CE-S V	CE-7
CE-S V(I)	CE-8
C-CD-S	CE-9
CE-SL	CE-10
CD-SL	CE-11
CE-SL V	CE-12
CD-SL V	CE-13
C-CD-SL	CE-14
CEQA	CE-15
CE-Q	CE-16
CD-Q	CE-17
CD-Q LH	CE-18
CE-Q V	CE-19
CD-Q V	CE-20
C-CD-Q	CE-21
CE-QL	CE-22
CE-QL V	CE-23
C-CD-QL	CE-24
CEIR	CE-25
CD-R	CE-26
CESB	CE-27
CE-S(II)	CE-28
CD-S(II)	CE-29
CESC	CE-30
JO-CES	CE-32
JO-CES V	CE-33
JO-CDS	CE-34
JO-CDS V	CE-35
JO-CDS(II)	CE-36
JO-C-CDS	CE-37
JO-PEQ	CE-38
JO-PEQ V	CE-39
JO-C-PEQ V	CE-40
JO-NCSD V	CE-41
JO-CSQM	CE-42
JO-HOLDER	CE-43
PE-Q	CE-46
PE-Q V	CE-47
C-PE-Q V	CE-48
PE-QL V	CE-49
PE-S	CE-50
PE-S V	CE-51
C-PE-S V	CE-52
PE-SL V	CE-53
NC-SD V NC-SD	CE-55
CS-Q	CE-57
CS-QM	CE-58
CS-G	CE-59
MHCDS	CE-61

CESA

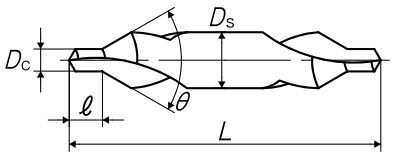
High Helix Center Drills-JIS Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.5 × 60° × 3.15	CEA0.5	3.15	31.5	0.8	1	◎
0.63 × 60° × 3.15	CEA0.63	3.15	31.5	1	1	◎
0.8 × 60° × 3.15	CEA0.8	3.15	31.5	1.2	1	◎
1 × 60° × 3.15	CEA1.0	3.15	31.5	1.5	1	◎
1.25 × 60° × 3.15	CEA1.25	3.15	31.5	1.9	1	◎
1.6 × 60° × 4	CEA1.6	4	35.5	2.4	1	◎
2 × 60° × 5	CEA2.0	5	40	3	1	◎
2.5 × 60° × 6.3	CEA2.5	6.3	45	3.8	1	◎
3.15 × 60° × 8	CEA3.15	8	50	4.8	1	◎
4 × 60° × 10	CEA4.0	10	56	6	1	◎
5 × 60° × 12.5	CEA5.0	12.5	63	7.5	1	◎
6.3 × 60° × 16	CEA6.3	16	71	9.2	1	◎
8 × 60° × 20	CEA8.0	20	80	11.5	1	◎
10 × 60° × 25	CEA010	25	100	14.2	1	◎

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-S

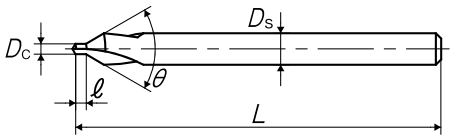
High Helix Center Drills-Type A 60°

Specification

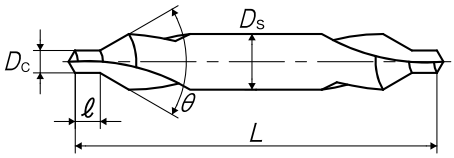
HSS

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.3 × 60° × 3	CE0.3	3	35	0.3	1	△
0.4 × 60° × 3	CE0.4	3	35	0.4	1	△
0.5 × 60° × 3.5	CE0.5	3.5	35	0.5	2	○
0.6 × 60° × 3.5	CE0.6	3.5	35	0.6	2	○
0.7 × 60° × 3.5	CE0.7	3.5	35	0.7	2	○
0.8 × 60° × 3.5	CE0.8	3.5	35	0.8	2	○
0.9 × 60° × 4	CE0.9	4	35	0.9	2	○
1 × 60° × 4	CE1.0	4	35	1	2	○
1.2 × 60° × 5	CE1.2	5	40	1.2	2	○
1.5 × 60° × 5	CE1.5	5	40	1.5	2	○
2 × 60° × 6	CE2.0	6	45	2	2	○
2.5 × 60° × 7.7	CE2.5	7.7	50	2.5	2	○
3 × 60° × 7.7	CE3.0	7.7	55	3	2	○
3 × 60° × 8	CE3.0-8	8	55	3	2	○
4 × 60° × 10	CE4.0	10	65	4.5	2	○
5 × 60° × 11	CE5.0	11	78	5.5	2	○
5 × 60° × 12	CE5.0-12	12	78	5.5	2	○
6 × 60° × 16	CE6.0-16	16	90	6.5	2	○
6 × 60° × 18	CE6.0	18	90	6.5	2	○
8 × 60° × 18	CE8.0	18	100	8.5	2	○
10 × 60° × 18	CE010	18	100	11	2	○
12 × 60° × 25	CE012	25	120	13	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

CE-S(I)

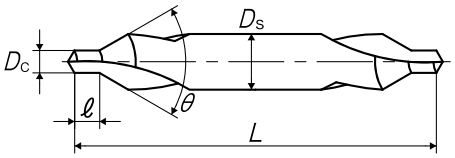
High Helix Center Drills-Type A 60°, (Old JIS Type 1)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
2.5 × 60° × 8	CE12.5	8	50	3.5	1	○
3 × 60° × 10	CE13.0	10	55	4	1	○
4 × 60° × 12	CE14.0	12	66	5	1	○
5 × 60° × 14	CE15.0	14	78	6.5	1	○

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CD-S

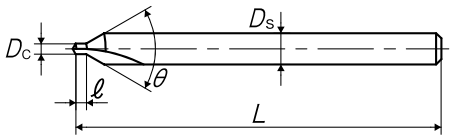
Low Helix Center Drills-Type A 60°

Specification

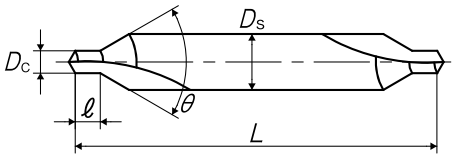
HSS

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.3 × 60° × 3	CY0.3	3	35	0.3	1	△
0.4 × 60° × 3	CY0.4	3	35	0.4	1	△
0.5 × 60° × 3.5	CY0.5	3.5	35	0.5	2	○
0.6 × 60° × 3.5	CY0.6	3.5	35	0.6	2	○
0.7 × 60° × 3.5	CY0.7	3.5	35	0.7	2	△
0.8 × 60° × 3.5	CY0.8	3.5	35	0.8	2	○
0.9 × 60° × 4	CY0.9	4	35	0.9	2	△
1 × 60° × 4	CY1.0	4	35	1	2	○
1.2 × 60° × 5	CY1.2	5	40	1.2	2	○
1.5 × 60° × 5	CY1.5	5	40	1.5	2	○
2 × 60° × 6	CY2.0	6	45	2	2	○
2.5 × 60° × 7.7	CY2.5	7.7	50	2.5	2	○
3 × 60° × 7.7	CY3.0	7.7	55	3	2	○
3 × 60° × 8	CY3.0-8	8	55	3	2	○
4 × 60° × 10	CY4.0	10	65	4.5	2	○
5 × 60° × 11	CY5.0	11	78	5.5	2	○
6 × 60° × 16	CY6.0-16	16	90	6.5	2	○
6 × 60° × 18	CY6.0	18	90	6.5	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

CD-S(I)

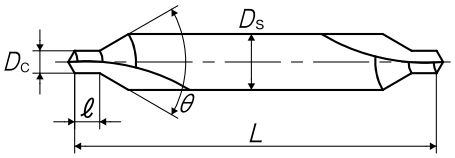
Low Helix Center Drills-Type A 60°, (Old JIS Type 1)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
2.5 × 60° × 8	C12.5	8	50	3.5	1	○
3 × 60° × 10	C13.0	10	55	4	1	○
4 × 60° × 12	C14.0	12	66	5	1	○
5 × 60° × 14	C15.0	14	78	6.5	1	○

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CD-S LH

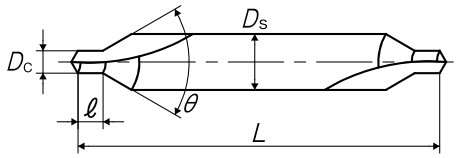
Low Helix Center Drills-Type A 60°, Left Hand Cut

Specification

HSS LH

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.5 × 60° × 3.5	CY0.5-L	3.5	35	0.5	1	△
0.7 × 60° × 3.5	CY0.7-L	3.5	35	0.7	1	△
0.8 × 60° × 3.5	CY0.8-L	3.5	35	0.8	1	△
0.9 × 60° × 4	CY0.9-L	4	35	0.9	1	△
1 × 60° × 4	CY1.0-L	4	35	1	1	△
1.2 × 60° × 5	CY1.2-L	5	40	1.2	1	△
1.5 × 60° × 5	CY1.5-L	5	40	1.5	1	△
2 × 60° × 6	CY2.0-L	6	45	2	1	△
2.5 × 60° × 7.7	CY2.5-L	7.7	50	2.5	1	△
3 × 60° × 7.7	CY3.0-L	7.7	55	3	1	△
4 × 60° × 10	CY4.0-L	10	65	4.5	1	△
5 × 60° × 11	CY5.0-L	11	78	5.5	1	△
6 × 60° × 16	CY6.0-L16	16	90	6.5	1	△
6 × 60° × 18	CY6.0-L	18	90	6.5	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

CE-S V

High Helix Center Drills-Type A 60°, Coated

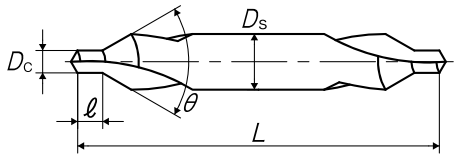
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	VCE1.0	4	35	1	1	○
1.5 × 60° × 5	VCE1.5	5	40	1.5	1	○
2 × 60° × 6	VCE2.0	6	45	2	1	○
2.5 × 60° × 7.7	VCE2.5	7.7	50	2.5	1	○
3 × 60° × 7.7	VCE3.0	7.7	55	3	1	○
4 × 60° × 10	VCE4.0	10	65	4.5	1	○
5 × 60° × 11	VCE5.0	11	78	5.5	1	○
6 × 60° × 18	VCE6.0	18	90	6.5	1	○

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-S V(I)

High Helix Center Drills-Type A 60°, Coated, (Old JIS Type 1)

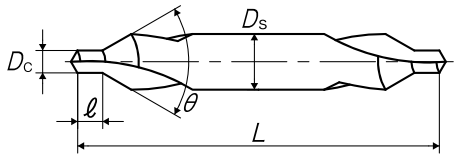
Specification

HSS Coating

■Optimum coating suitable for the cutting condition.

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
2.5 × 60° × 8	VCE12.5	8	50	3.5	1	△
3 × 60° × 10	VCE13.0	10	55	4	1	△
4 × 60° × 12	VCE14.0	12	66	5	1	△
5 × 60° × 14	VCE15.0	14	78	6.5	1	△

C-CD-S

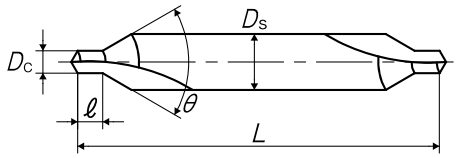
Carbide Center Drills-Type A 60°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	CCD1.0	4	35	1	1	◎
1.2 × 60° × 5	CCD1.2	5	40	1.2	1	△
1.5 × 60° × 5	CCD1.5	5	40	1.5	1	◎
2 × 60° × 6	CCD2.0	6	45	2	1	◎
2.5 × 60° × 7.7	CCD2.5	7.7	50	2.5	1	◎
2.5 × 60° × 8	CCD2.5-8	8	50	2.5	1	△
3 × 60° × 7.7	CCD3.0	7.7	55	3	1	◎
3 × 60° × 8	CCD3.0-8	8	55	3	1	△
4 × 60° × 10	CCD4.0	10	65	4.5	1	◎
5 × 60° × 11	CCD5.0	11	78	5.5	1	○
5 × 60° × 12	CCD5.0-12	12	78	5.5	1	△
6 × 60° × 18	CCD6.0	18	90	6.5	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-SL

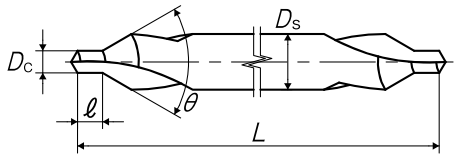
Long Shank High Helix Center Drills-Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	CEL1.0	4	100	1	1	◎
	CEM1.0		150			○
1.5 × 60° × 5	CEL1.5	5	100	1.5	1	◎
	CEM1.5		150			○
2 × 60° × 6	CEL2.0	6	100	2	1	◎
	CEM2.0		150			
2.5 × 60° × 8	CEL2.5	8	100	2.5	1	◎
	CEM2.5		150			
3 × 60° × 8	CEL3.0	8	100	3	1	◎
	CEM3.0		150			
	CEN3.0		200			△
4 × 60° × 10	CEL4.0	10	100	4.5	1	◎
	CEM4.0		150			
	CEN4.0		200			△
5 × 60° × 12	CEL5.0	12	100	5.5	1	◎
	CEM5.0		150			
	CEN5.0		200			△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

CD-SL

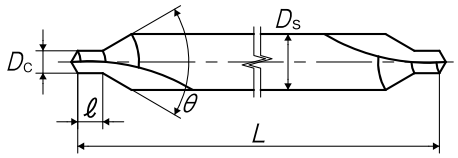
Long Shank Low Helix Center Drills-Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	CDL1.0	4	100	1	1	○
	CDM1.0		150			
1.5 × 60° × 5	CDL1.5	5	100	1.5	1	○
	CDM1.5		150			
2 × 60° × 6	CDL2.0	6	100	2	1	◎
	CDM2.0		150			○
2.5 × 60° × 8	CDL2.5	8	100	2.5	1	◎
	CDM2.5		150			○
3 × 60° × 8	CDL3.0	8	100	3	1	◎
	CDM3.0		150			○
	CDN3.0		200			△
4 × 60° × 10	CDL4.0	10	100	4.5	1	◎
	CDM4.0		150			○
	CDN4.0		200			△
5 × 60° × 12	CDL5.0	12	100	5.5	1	○
	CDM5.0		150			
	CDN5.0		200			△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-SL V

Long Shank High Helix Center Drills-Type A 60°, Coated

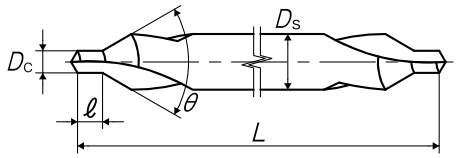
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	VCEL1.0	4	100	1	1	○
	VCEM1.0		150			
1.5 × 60° × 5	VCEL1.5	5	100	1.5	1	○
	VCEM1.5		150			
2 × 60° × 6	VCEL2.0	6	100	2	1	◎
	VCEM2.0		150			○
2.5 × 60° × 8	VCEL2.5	8	100	2.5	1	○
	VCEM2.5		150			
3 × 60° × 8	VCEL3.0	8	100	3	1	◎
	VCEM3.0		150			○
4 × 60° × 10	VCEL4.0	10	100	4.5	1	○
	VCEM4.0		150			
5 × 60° × 12	VCEL5.0	12	100	5.5	1	○
	VCEM5.0		150			

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

CD-SL V

Long Shank Low Helix Center Drills-Type A 60°, Coated

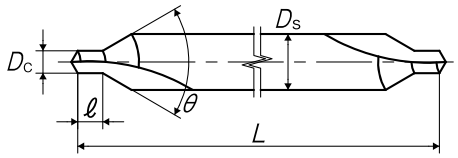
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	VCDL1.0	4	100	1	1	△
	VCDM1.0		150			
1.5 × 60° × 5	VCDL1.5	5	100	1.5	1	△
	VCDM1.5		150			
2 × 60° × 6	VCDL2.0	6	100	2	1	△
	VCDM2.0		150			
2.5 × 60° × 8	VCDL2.5	8	100	2.5	1	△
	VCDM2.5		150			
3 × 60° × 8	VCDL3.0	8	100	3	1	△
	VCDM3.0		150			
4 × 60° × 10	VCDL4.0	10	100	4.5	1	△
	VCDM4.0		150			
5 × 60° × 12	VCDL5.0	12	100	5.5	1	△
	VCDM5.0		150			

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

C-CD-SL

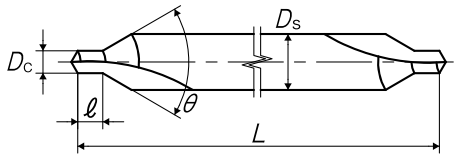
Long Shank Low Helix Carbide Center Drills-Type A 60°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	CCDL1.0	4	100	1	1	△
1.5 × 60° × 5	CCDL1.5	5	100	1.5	1	△
2 × 60° × 6	CCDL2.0	6	100	2	1	△
	CCDM2.0		150			
2.5 × 60° × 8	CCDL2.5	8	100	2.5	1	△
	CCDM2.5		150			
3 × 60° × 8	CCDL3.0	8	100	3	1	△
	CCDM3.0		150			
4 × 60° × 10	CCDL4.0	10	100	4.5	1	△
	CCDM4.0		150			
5 × 60° × 12	CCDL5.0	12	100	5.5	1	△
	CCDM5.0		150			

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

CEQA

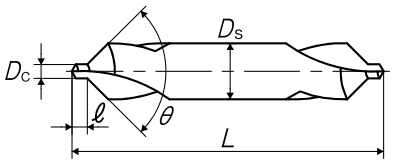
High Helix Center Drills-JIS Type A 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CEA1.0Q	4	35.5	1.1	1	◎
1.25 × 90° × 5	CEA1.25Q	5	40	1.4	1	◎
1.6 × 90° × 6.3	CEA1.6Q	6.3	45	1.8	1	◎
2 × 90° × 8	CEA2.0Q	8	50	2.2	1	◎
2.5 × 90° × 10	CEA2.5Q	10	56	2.8	1	◎
3.15 × 90° × 11.2	CEA3.15Q	11.2	60	3.6	1	◎
4 × 90° × 12.5	CEA4.0Q	12.5	63	4.5	1	◎
5 × 90° × 16	CEA5.0Q	16	71	5.6	1	◎
6.3 × 90° × 20	CEA6.3Q	20	80	7.1	1	◎
8 × 90° × 25	CEA8.0Q	25	100	9	1	◎
10 × 90° × 31.5	CEA010Q	31.5	125	11.2	1	◎
12.5 × 90° × 35.5	CEA12.5Q	35.5	140	14	1	◎

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-Q

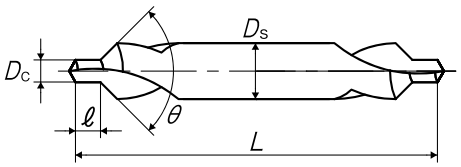
High Helix Center Drills-Type A 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.5 × 90° × 3.5	CY0.5Z	3.5	35	0.5	1	△
0.6 × 90° × 3.5	CY0.6Z	3.5	35	0.6	1	△
0.7 × 90° × 3.5	CY0.7Z	3.5	35	0.7	1	○
0.8 × 90° × 3.5	CY0.8Z	3.5	35	0.8	1	○
0.9 × 90° × 4	CY0.9Z	4	35	0.9	1	△
1 × 90° × 4	CY1.0Z	4	35	1	1	○
1.2 × 90° × 5	CY1.2Z	5	40	1.2	1	△
1.5 × 90° × 5	CY1.5Z	5	40	1.5	1	○
2 × 90° × 6	CY2.0Z	6	45	2	1	○
2.5 × 90° × 7.7	CY2.5Z	7.7	50	2.5	1	○
3 × 90° × 7.7	CY3.0Z	7.7	55	3	1	○
4 × 90° × 10	CY4.0Z	10	65	4.5	1	○
5 × 90° × 11	CY5.0Z	11	78	5.5	1	○
6 × 90° × 16	CY6.0Z-16	16	90	6.5	1	○
6 × 90° × 18	CY6.0Z	18	90	6.5	1	○

CD-Q

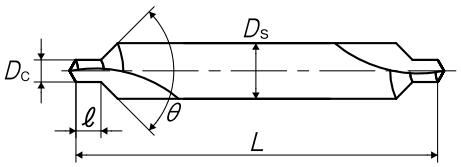
Low Helix Center Drills-Type A 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CY1.0Q	4	35	1	1	○
1.5 × 90° × 5	CY1.5Q	5	40	1.5	1	○
2 × 90° × 6	CY2.0Q	6	45	2	1	○
2.5 × 90° × 7.7	CY2.5Q	7.7	50	2.5	1	○
3 × 90° × 7.7	CY3.0Q	7.7	55	3	1	○
4 × 90° × 10	CY4.0Q	10	65	4.5	1	○
5 × 90° × 11	CY5.0Q	11	78	5.5	1	○
6 × 90° × 16	CY6.0Q-16	16	90	6.5	1	△
6 × 90° × 18	CY6.0Q	18	90	6.5	1	△

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CD-Q LH

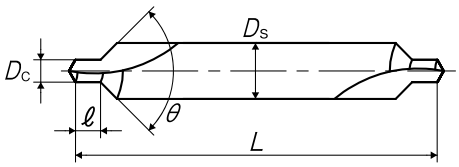
Low Helix Center Drills - Type A 90°, Left Hand Cut

Specification

HSS LH

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CY1.0Q-L	4	35	1	1	△
1.2 × 90° × 5	CY1.2Q-L	5	40	1.2	1	△
1.5 × 90° × 5	CY1.5Q-L	5	40	1.5	1	△
2 × 90° × 6	CY2.0Q-L	6	45	2	1	△
2.5 × 90° × 7.7	CY2.5Q-L	7.7	50	2.5	1	△
2.5 × 90° × 8	CY2.5Q8L	8	50	2.5	1	△
3 × 90° × 7.7	CY3.0Q-L	7.7	55	3	1	△
3 × 90° × 8	CY3.0Q8L	8	55	3	1	△
4 × 90° × 10	CY4.0Q-L	10	65	4.5	1	△
5 × 90° × 12	CY5.0Q12L	12	78	5.5	1	△
6 × 90° × 18	CY6.0Q-L	18	90	6.5	1	△

CE-Q V

High Helix Center Drills-Type A 90°, Coated

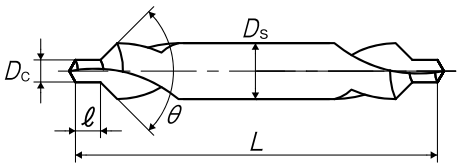
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	VCY1.0Z	4	35	1	1	○
1.5 × 90° × 5	VCY1.5Z	5	40	1.5	1	○
2 × 90° × 6	VCY2.0Z	6	45	2	1	○
2.5 × 90° × 7.7	VCY2.5Z	7.7	50	2.5	1	○
3 × 90° × 7.7	VCY3.0Z	7.7	55	3	1	○
4 × 90° × 10	VCY4.0Z	10	65	4.5	1	○
5 × 90° × 11	VCY5.0Z	11	78	5.5	1	○
6 × 90° × 18	VCY6.0Z	18	90	6.5	1	○

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CD-Q V

Low Helix Center Drills-Type A 90°, Coated

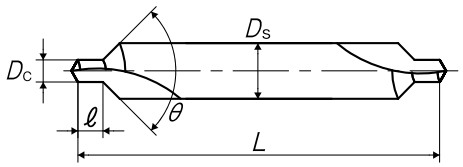
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	VCY1.0Q	4	35	1	1	△
1.5 × 90° × 5	VCY1.5Q	5	40	1.5	1	△
2 × 90° × 6	VCY2.0Q	6	45	2	1	△
2.5 × 90° × 7.7	VCY2.5Q	7.7	50	2.5	1	△
3 × 90° × 7.7	VCY3.0Q	7.7	55	3	1	△
4 × 90° × 10	VCY4.0Q	10	65	4.5	1	△
5 × 90° × 11	VCY5.0Q	11	78	5.5	1	△
6 × 90° × 18	VCY6.0Q	18	90	6.5	1	△

C-CD-Q

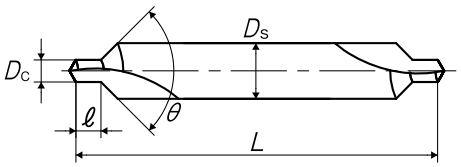
Low Helix Carbide Center Drills-Type A 90°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CC1.0Q	4	35	1	1	△
1.5 × 90° × 5	CC1.5Q	5	40	1.5	1	△
2 × 90° × 6	CC2.0Q	6	45	2	1	△
2.5 × 90° × 7.7	CC2.5Q	7.7	50	2.5	1	△
2.5 × 90° × 8	CC2.5Q-8	8	50	2.5	1	△
3 × 90° × 7.7	CC3.0Q	7.7	55	3	1	△
3 × 90° × 8	CC3.0Q-8	8	55	3	1	△
4 × 90° × 10	CC4.0Q	10	65	4.5	1	△
5 × 90° × 11	CC5.0Q	11	78	5.5	1	△
5 × 90° × 12	CC5.0Q-12	12	78	5.5	1	△
6 × 90° × 18	CC6.0Q	18	90	6.5	1	△

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-QL

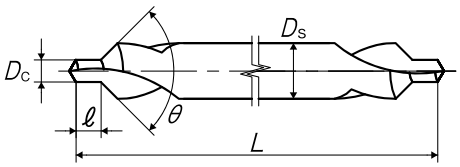
Long Shank High Helix Center Drills-Type A 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CL1.0Z	4	100	1	1	◎
	CM1.0Z		150			△
1.5 × 90° × 5	CL1.5Z	5	100	1.5	1	◎
	CM1.5Z		150			○
2 × 90° × 6	CL2.0Z	6	100	2	1	◎
	CM2.0Z		150			○
2.5 × 90° × 8	CL2.5Z	8	100	2.5	1	◎
	CM2.5Z		150			○
3 × 90° × 8	CL3.0Z	8	100	3	1	◎
	CM3.0Z		150			○
4 × 90° × 10	CL4.0Z	10	100	4.5	1	◎
	CM4.0Z		150			○
5 × 90° × 12	CL5.0Z	12	100	5.5	1	◎
	CM5.0Z		150			○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

CE-QL V

Long Shank High Helix Center Drills-Type A 90°, Coated

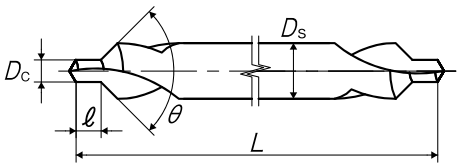
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	VCL1.0Z	4	100	1	1	○
	VCM1.0Z		150			△
1.5 × 90° × 5	VCL1.5Z	5	100	1.5	1	○
	VCM1.5Z		150			△
2 × 90° × 6	VCL2.0Z	6	100	2	1	○
	VCM2.0Z		150			
2.5 × 90° × 8	VCL2.5Z	8	100	2.5	1	○
	VCM2.5Z		150			
3 × 90° × 8	VCL3.0Z	8	100	3	1	○
	VCM3.0Z		150			
4 × 90° × 10	VCL4.0Z	10	100	4.5	1	○
	VCM4.0Z		150			
5 × 90° × 12	VCL5.0Z	12	100	5.5	1	○
	VCM5.0Z		150			

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

C-CD-QL

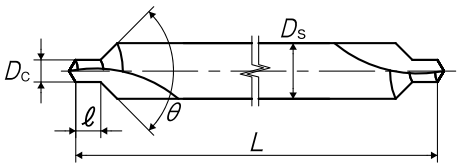
Long Shank Low Helix Carbide Center Drills-Type A 90°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CCL1.0Q	4	100	1	1	△
1.5 × 90° × 5	CCL1.5Q	5	100	1.5	1	△
2 × 90° × 6	CCL2.0Q	6	100	2	1	△
	CCM2.0Q		150			
2.5 × 90° × 8	CCL2.5Q	8	100	2.5	1	△
	CCM2.5Q		150			
3 × 90° × 8	CCL3.0Q	8	100	3	1	△
	CCM3.0Q		150			
4 × 90° × 10	CCL4.0Q	10	100	4.5	1	△
	CCM4.0Q		150			
5 × 90° × 12	CCL5.0Q	12	100	5.5	1	△
	CCM5.0Q		150			

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

CEIR

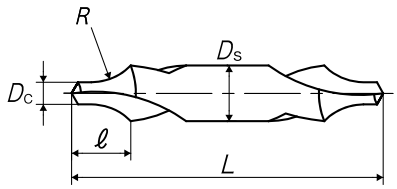
High Helix Center Drills-JIS Type R

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Rmax (mm)	Rmin (mm)	Type	Stock
1 × R × 3.15	CE1.0RI	3.15	31.5	3	3.15	2.5	1	◎
1.25 × R × 3.15	CE1.25RI	3.15	31.5	3.35	4	3.15	1	◎
1.6 × R × 4	CE1.6RI	4	35.5	4.25	5	4	1	◎
2 × R × 5	CE2.0RI	5	40	5.3	6.3	5	1	◎
2.5 × R × 6.3	CE2.5RI	6.3	45	6.7	8	6.3	1	◎
3.15 × R × 8	CE3.15RI	8	50	8.5	10	8	1	◎
4 × R × 10	CE4.0RI	10	56	10.6	12.5	10	1	◎
5 × R × 12.5	CE5.0RI	12.5	63	13.2	16	12.5	1	◎
6.3 × R × 16	CE6.3RI	16	71	17	20	16	1	◎
8 × R × 20	CE8.0RI	20	80	21.2	25	20	1	◎
10 × R × 25	CE010RI	25	100	26.5	31.5	25	1	◎

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Cut length	Rmax (mm)	Rmin (mm)
Dc	Ds	L	ℓ	–	–

CD-R

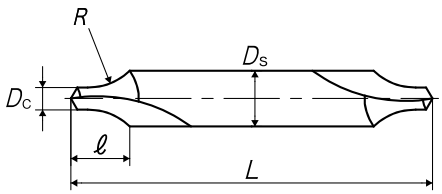
Low Helix Center Drills-Type R

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Rmax (mm)	Type	Stock
0.7 × R × 3.5	CY0.7R	3.5	35	2.5	2.4	1	△
0.8 × R × 3.5	CY0.8R	3.5	35	2.6	2.4	1	△
1 × R × 4	CY1.0R	4	35	3.25	2.9	1	△
1.5 × R × 5	CY1.5R	5	40	4.6	4.6	1	○
2 × R × 6	CY2.0R	6	45	5.75	5.8	1	○
2.5 × R × 7.7	CY2.5R	7.7	50	7.3	7.4	1	○
3 × R × 7.7	CY3.0R	7.7	55	8.3	9.3	1	○
4 × R × 10	CY4.0R	10	65	10.6	11.5	1	○
5 × R × 11	CY5.0R	11	78	12.4	14.7	1	△
6 × R × 16	CY6.0R-16	16	90	16.9	18.5	1	△
6 × R × 18	CY6.0R	18	90	17.8	18.5	1	△

CESB

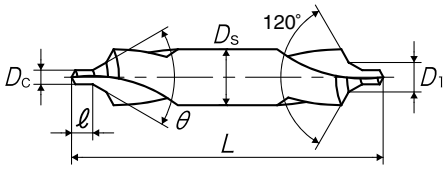
High Helix Center Drills-JIS Type B 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	Type	Stock
0.5 × 60° × 3.15	CEB0.5	3.15	1.06	31.5	0.8	1	◎
0.63 × 60° × 3.15	CEB0.63	3.15	1.32	31.5	1	1	◎
0.8 × 60° × 3.15	CEB0.8	3.15	1.7	31.5	1.2	1	◎
1 × 60° × 4	CEB1.0	4	2.12	35.5	1.5	1	◎
1.25 × 60° × 5	CEB1.25	5	2.65	40	1.9	1	◎
1.6 × 60° × 6.3	CEB1.6	6.3	3.35	45	2.4	1	◎
2 × 60° × 8	CEB2.0	8	4.25	50	3	1	◎
2.5 × 60° × 10	CEB2.5	10	5.3	56	3.8	1	◎
3.15 × 60° × 11.2	CEB3.15	11.2	6.7	60	4.8	1	◎
4 × 60° × 14	CEB4.0	14	8.5	67	6	1	◎
5 × 60° × 18	CEB5.0	18	10.6	75	7.5	1	◎
6.3 × 60° × 20	CEB6.3	20	13.2	80	9.2	1	◎
8 × 60° × 25	CEB8.0	25	17	100	11.5	1	◎
10 × 60° × 31.5	CEB010	31.5	21.2	125	14.2	1	◎

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Maximum dia.	Overall length	Drill length
Dc	Ds	D_1	L	ℓ

CE-S(II)

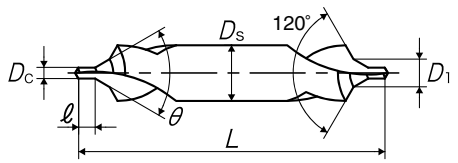
High Helix Center Drills-Type B 60°, (Old JIS Type 2)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 6	CE21.0	6	2.5	45	1.5	1	○
1.5 × 60° × 8	CE21.5	8	4	50	2	1	○
2 × 60° × 10	CE22.0	10	5	55	3	1	○
2.5 × 60° × 12	CE22.5	12	6.5	60	3.5	1	○
3 × 60° × 14	CE23.0	14	8	65	4	1	○
4 × 60° × 18	CE24.0	18	10	76	5	1	○
5 × 60° × 22	CE25.0	22	12	88	6.5	1	○
6 × 60° × 25	CE26.0	25	15	100	8	1	○

Drill dia.	Shank dia.	Maximum dia.	Overall length	Drill length
Dc	Ds	D_1	L	ℓ

CD-S(II)

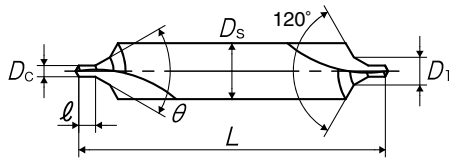
Low Helix Center Drills-Type B 60°, (Old JIS Type 2)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 6	C21.0	6	2.5	45	1.5	1	○
1.5 × 60° × 8	C21.5	8	4	50	2	1	○
2 × 60° × 10	C22.0	10	5	55	3	1	○
2.5 × 60° × 12	C22.5	12	6.5	60	3.5	1	○
3 × 60° × 14	C23.0	14	8	65	4	1	○
4 × 60° × 18	C24.0	18	10	76	5	1	○
5 × 60° × 22	C25.0	22	12	88	6.5	1	○
6 × 60° × 25	C26.0	25	15	100	8	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	–	Maximum dia.	Overall length	Drill length	Larger cut length
Dc	Ds	D_1	D_2	L	ℓ	ℓ_2

CESC

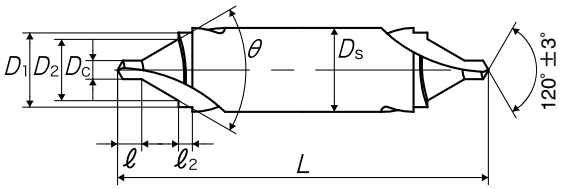
High Helix Center Drills-JIS Type C 60°

Specification

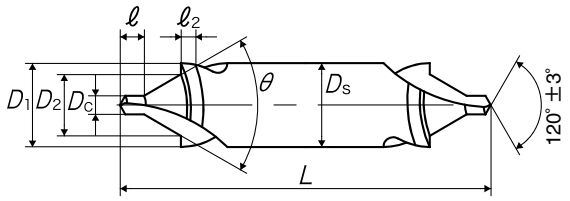
HSS

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	D_2 (mm)	L (mm)	ℓ (mm)	ℓ_2 (mm)	Type	Stock
0.5 × 60° × 3.15	CEC0.5	3.15	1.6	1.06	31.5	0.8	0.6	1	○
0.63 × 60° × 3.15	CEC0.63	3.15	2	1.32	31.5	1	0.8	1	○
0.8 × 60° × 3.15	CEC0.8	3.15	2.5	1.7	31.5	1.2	1	1	○
1 × 60° × 3.15	CEC1.0	3.15	3.15	2.12	31.5	1.5	1.2	2	○
1.25 × 60° × 4	CEC1.25	4	4	2.65	35.5	1.9	1.5	2	○
1.6 × 60° × 5	CEC1.6	5	5	3.35	40	2.4	1.8	2	○
2 × 60° × 6.3	CEC2.0	6.3	6.3	4.25	45	3	2.2	2	○
2.5 × 60° × 8	CEC2.5	8	8	5.3	50	3.8	3	2	○
3.15 × 60° × 10	CEC3.15	10	10	6.7	56	4.8	3.5	2	○
4 × 60° × 12.5	CEC4.0	12.5	12.5	8.5	63	6	4.2	2	○
5 × 60° × 16	CEC5.0	16	16	10.6	71	7.5	5.5	2	○
6.3 × 60° × 18	CEC6.3	18	18	13.2	75	9.2	5.5	2	○
8 × 60° × 22.4	CEC8.0	22.4	22.4	17	90	11.5	5.5	2	○
10 × 60° × 28	CEC010	28	28	21.2	112	14.2	7	2	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

JOINT TOOLS

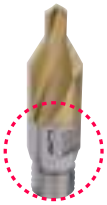
Product features

1 Economy

To one holder, it is possible to attach various kinds of cutters selected to meet the application.
If the cutter has become damaged, all you have to do is only to change the cutter.

2 Increased fastening power.

Special screw threads widen the contact face and strengthen the fastening power.



3 Severe run-out tolerance.

Severe run-out tolerance is secured by having cone shape face at jointing portion.

Jointing portion (mating with cone face)

4 High rigidity.

Powerful tightening assures the high rigidity, and enables cutting operation even under heavy load.

Joint tool

Remarks

Please use spanners (JIS B4630) when exchanging cutters.
For spanner's width size, refer to H sizes shown in specification table.
Take special care while tightening, otherwise excessive tightening may cause breakage on cutting edge.

【Reference】 Tightening torque (N-m)

Adaptable holder Shank dia	Tightening torque
14	5
16	10
20	30

Obtainable from
Video site shown in right

Think threads with YAMAWA
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length	Body length	–
Dc	Ds	L	ℓ	ℓ2	H

JO-CES

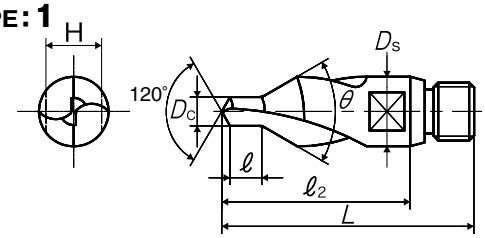
Joint- High Helix Center Drills-Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 5C

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JCE4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JCE5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JCE6.0	16	48.5	6.5	34.5	13	20	1	○

JO-CES V

Joint- High Helix Center Drills-Type A 60°, Coated

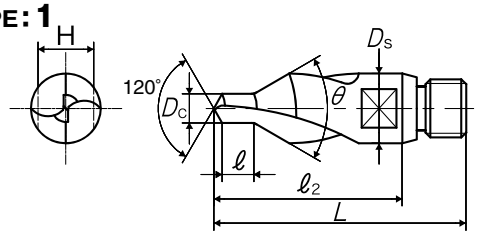
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JVCE4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JVCE5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JVCE6.0	16	48.5	6.5	34.5	13	20	1	○

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length	Body length	–
Dc	Ds	L	ℓ	ℓ2	H

JO-CDS

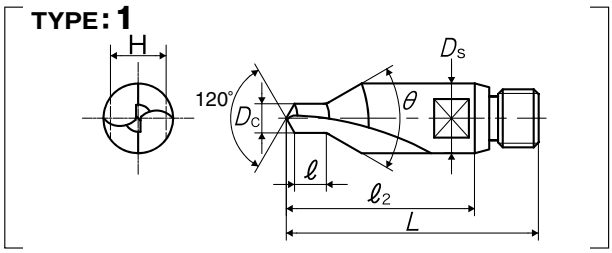
Joint- Low Helix Center Drills-Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JCY4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JCY5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JCY6.0	16	48.5	6.5	34.5	13	20	1	○

Drill dia.	Shank dia.	Overall length	Drill length	Body length	–
Dc	Ds	L	ℓ	ℓ2	H

JO-CDS V

Joint- Low Helix Center Drills-Type A 60°, Coated

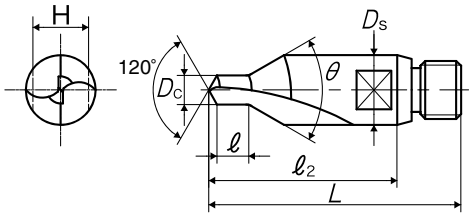
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JVCY4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JVCY5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JVCY6.0	16	48.5	6.5	34.5	13	20	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Maximum dia.	Overall length	Drill length	Body length	–
Dc	Ds	D_1	L	ℓ	ℓ_2	H

JO-CDS(II)

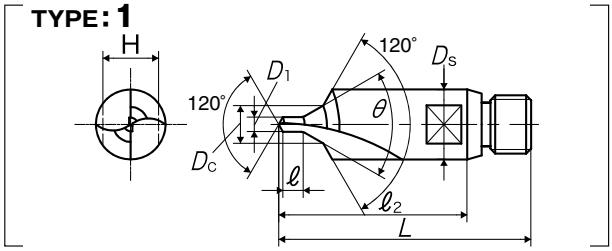
Joint- Low Helix Center Drills-Type B 60°, (Old JIS Type 2)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
2 × 60°	JC22.0	10	5	37.5	3	27.5	8	14	1	○
2.5 × 60°	JC22.5	12	6.5	43.5	3.5	32.5	10	16	1	○
3 × 60°	JC23.0	16	8	48.5	4	34.5	13	20	1	○

Drill dia.	Shank dia.	Overall length	Drill length	Body length	–
Dc	Ds	L	ℓ	ℓ2	H

JO-C-CDS

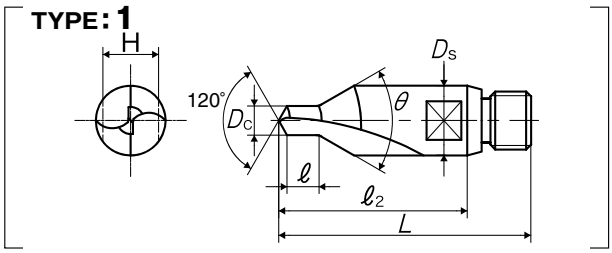
Joint- Low Helix Carbide Center Drills-Type A 60°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JCCY4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JCCY5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JCCY6.0	16	48.5	6.5	34.5	13	20	1	○

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Body length	–
Ds	Dc	L	ℓ_2	H

JO-PEQ

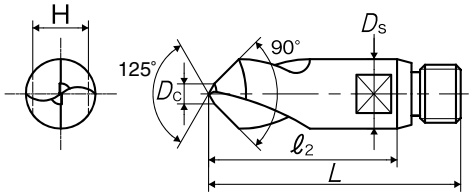
Joint- Point Drills 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Ds × Dc	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
10 × 3	JPE010Q	10	3	37.5	27.5	8	14	1	○
12 × 3.5	JPE012Q	12	3.5	43.5	32.5	10	16	1	○
16 × 4	JPE016Q	16	4	48.5	34.5	13	20	1	○

JO-PEQ V

Joint- Point Drills 90°, Coated

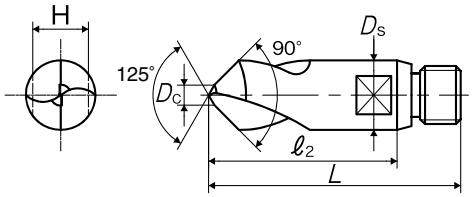
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Ds × Dc	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
10 × 3	JVPE010Q	10	3	37.5	27.5	8	14	1	○
12 × 3.5	JVPE012Q	12	3.5	43.5	32.5	10	16	1	○
16 × 4	JVPE016Q	16	4	48.5	34.5	13	20	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Body length	–
Ds	Dc	L	ℓ_2	H

JO-C-PEQ V

Joint- Carbide Point Drills 90°, Coated

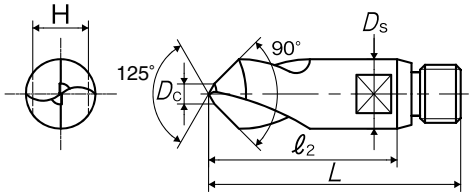
Specification

HF Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Ds × Dc	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
10 × 3	JVCPE010Q	10	3	37.5	27.5	8	14	1	○
12× 3.5	JVCPE012Q	12	3.5	43.5	32.5	10	16	1	○
16× 4	JVCPE016Q	16	4	48.5	34.5	13	20	1	○

Drill dia.	Shank dia.	Overall length	Body length	–
Dc	Ds	L	ℓ2	H

JO-NCSD V

Joint- NC Starting Drills for Beveling, Coated

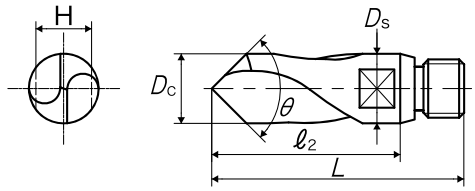
Specification

HSS-Co Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
10 × 90°	JVCS-D010Q	10	37.5	27.5	8	14	1	○
12 × 90°	JVCS-D012Q	12	43.5	32.5	10	16	1	○
16 × 90°	JVCS-D016Q	16	48.5	34.5	13	20	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Tool end dia.	Overall length	Cutting edge length	Body length	–
D_2	Ds	Dc	L	ℓ	ℓ_2	H

JO-CSQM

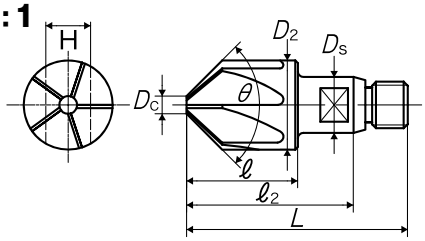
Joint- Countersinks 90°, Drilling Machine Use

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size $D_2 \times \theta$	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
16 × 90°	JCS016QM9	10	3.2	37.5	20	27.5	8	14	1	○
20 × 90°	JCS020QM9	12	4	43.5	24	32.5	10	16	1	○

Shank dia.	Overall length	Body length	–
Ds	L	ℓ	H

JO-HOLDER

Holders for Joint Tools, for 150mm and for 200mm

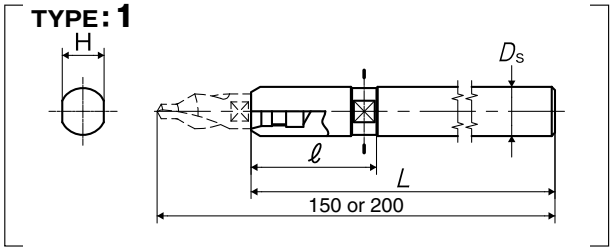
Specification

Alloy steel

For icon explanation, refer to P.24

■Each holder can attach itself to several types of cutters depending on their usage.

TYPE: 1



Segment : 5A

Size	Code	Ds (mm)	L (mm)	ℓ (mm)	H (mm)	Applicable cutting edge shank dia.	Type	Stock
150mm	JH1014M	14	122.5	36	12	10	1	○
150mm	JH1216M	16	117.5	37	14	12	1	○
150mm	JH1620M	20	115.5	41	17	16	1	○
200mm	JH1014N	14	172.5	36	12	10	1	○
200mm	JH1216N	16	167.5	37	14	12	1	○
200mm	JH1620N	20	165.5	41	17	16	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

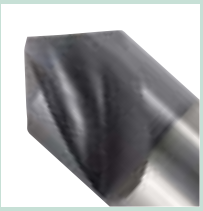
MEMO

For improvement, spec may change without advance notice.
Think threads with YAMAWA

POINT DRILLS

Product features

- ●High rigidity design of the drills enables high speed cutting.
- ●High helix design enables high accuracy of surface finishing due to excellent cutting performance.



Point angle:125°,
Chamfering angle:90° (60°)
By using two types of angles, centering process and chamfering process are obtained at the same time.

- ●Different from normal center drills, because of no drill portion, there is no breakage trouble of drill portion.
- ●Two processes, centering and chamfering, are obtained at the same time. Point drills are also used for other processes such as fluting.
- ●The figures of drill end are two stepped flat type. This type enables excellent chamfering, and high precision cutting becomes possible.

Examples of usage

Centering Chamfering

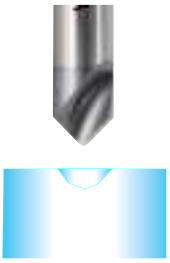
Beveling

Fluting

Cutting processes

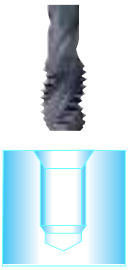
Point drills

Centering process and chamfering process are obtained at the same time.



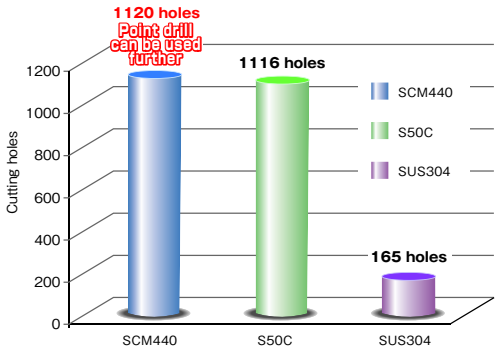
Drilling

Tapping



Test of continuous centering

Tool	Work material	Cutting speed	Feed	Dia. of chamfer hole	Cutting depth	Machine	Lubricant
PE-Q 12× (3.5) ×90°	SCM440 (Alloy steel)	25m/min	0.15mm/rev	8.0mm	3.0mm	Machining center of vertical direction	Water soluble oil ×20
	S50C (Carbon steel)	25m/min	0.2mm/rev				
	SUS304 (Stainless steel)	15m/min	0.1mm/rev				



Think threads with YAMAWA
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

PE-Q

Point Drills 90°

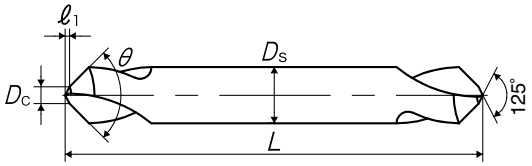
Specification

HSS

For icon explanation, refer to P.24

■PE-Q is the point drill enabling positioning (125° edge angle) and beveling (90°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
3 × 0.5 × 90°	PE3.0Q	3	0.5	40	0.13	1	○
4 × 1 × 90°	PE4.0Q	4	1	45	0.26	1	○
6 × 2 × 90°	PE6.0Q	6	2	55	0.52	1	○
8 × 2.5 × 90°	PE8.0Q	8	2.5	65	0.65	1	○
10 × 3 × 90°	PE010Q	10	3	75	0.78	1	○
12 × 3.5 × 90°	PE012Q	12	3.5	85	0.91	1	○
16 × 4 × 90°	PE016Q	16	4	90	1.04	1	○
20 × 5 × 90°	PE020Q	20	5	100	1.30	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

PE-Q V

Point Drills 90°, Coated

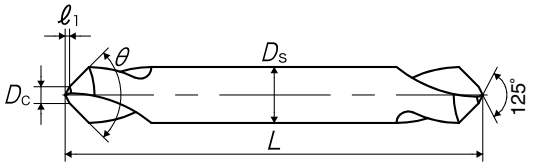
Specification

HSS Coating

For icon explanation, refer to P.24

■PE-Q V is the coated point drill enabling positioning (125° edge angle) and beveling (90°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ1 (mm)	Type	Stock
3 × 0.5 × 90°	VPE3.0Q	3	0.5	40	0.13	1	○
4 × 1 × 90°	VPE4.0Q	4	1	45	0.26	1	○
6 × 2 × 90°	VPE6.0Q	6	2	55	0.52	1	○
8 × 2.5 × 90°	VPE8.0Q	8	2.5	65	0.65	1	○
10 × 3 × 90°	VPE010Q	10	3	75	0.78	1	○
12 × 3.5 × 90°	VPE012Q	12	3.5	85	0.91	1	○
16 × 4 × 90°	VPE016Q	16	4	90	1.04	1	○
20 × 5 × 90°	VPE020Q	20	5	100	1.30	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

C-PE-Q V

Carbide Point Drills 90°, Coated

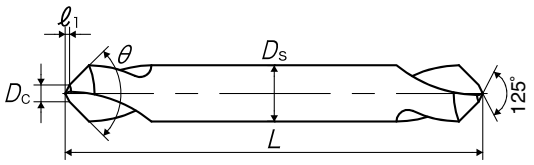
Specification

HF Coating

For icon explanation, refer to P.24

■C-PE-Q V is the carbide point drill enabling positioning (125° edge angle) and beveling (90°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition

TYPE: 1



Segment : 52

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
3 × 0.5 × 90°	VCPE3.0Q	3	0.5	40	0.13	1	○
4 × 1 × 90°	VCPE4.0Q	4	1	45	0.26	1	○
6 × 2 × 90°	VCPE6.0Q	6	2	55	0.52	1	○
8 × 2.5 × 90°	VCPE8.0Q	8	2.5	65	0.65	1	○
10 × 3 × 90°	VCPE010Q	10	3	75	0.78	1	○
12 × 3.5 × 90°	VCPE012Q	12	3.5	85	0.91	1	○
16 × 4 × 90°	VCPE016Q	16	4	90	1.04	1	○

PE-QL V

Long Shank Point Drills 90°, Coated

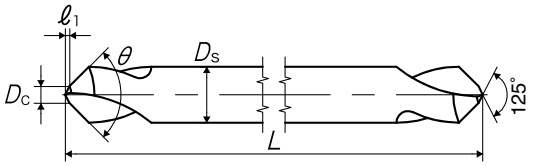
Specification

HSS Coating

For icon explanation, refer to P.24

■PE-QL V is the long shank coated point drill enabling positioning (125° edge angle) and beveling (90°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ1 (mm)	Type	Stock
4 × 1 × 90°	VPEL4.0Q	4	1	100	0.26	1	○
6 × 2 × 90°	VPEL6.0Q	6	2	100	0.52	1	○
8 × 2.5 × 90°	VPEL8.0Q	8	2.5	100	0.65	1	○
	VPEM8.0Q			150			
10 × 3 × 90°	VPEL010Q	10	3	100	0.78	1	○
	VPEM010Q			150			
12 × 3.5 × 90°	VPEL012Q	12	3.5	100	0.91	1	○
	VPEM012Q			150			
16 × 4 × 90°	VPEM016Q	16	4	150	1.04	1	○
20 × 5 × 90°	VPEM020Q	20	5	150	1.30	1	○

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

PE-S

Point Drills 60°

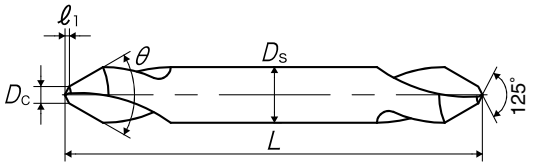
Specification

HSS

For icon explanation, refer to P.24

■PE-S is the point drill enabling positioning (125° edge angle) and beveling (60°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
3 × 0.5 × 60°	PE3.0S	3	0.5	40	0.13	1	○
4 × 1 × 60°	PE4.0S	4	1	45	0.26	1	○
6 × 2 × 60°	PE6.0S	6	2	55	0.52	1	○
8 × 2.5 × 60°	PE8.0S	8	2.5	65	0.65	1	○
10 × 3 × 60°	PE010S	10	3	75	0.78	1	○
12 × 3.5 × 60°	PE012S	12	3.5	85	0.91	1	○
16 × 4 × 60°	PE016S	16	4	90	1.04	1	○
20 × 5 × 60°	PE020S	20	5	100	1.30	1	○

PE-S V

Point Drills 60°, Coated

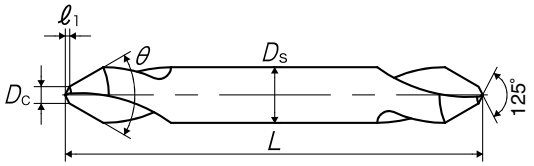
Specification

HSS Coating

For icon explanation, refer to P.24

■PE-S V is the coated point drill enabling positioning (125° edge angle) and beveling (60°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ1 (mm)	Type	Stock
3 × 0.5 × 60°	VPE3.0S	3	0.5	40	0.13	1	○
4 × 1 × 60°	VPE4.0S	4	1	45	0.26	1	○
6 × 2 × 60°	VPE6.0S	6	2	55	0.52	1	○
8 × 2.5 × 60°	VPE8.0S	8	2.5	65	0.65	1	○
10 × 3 × 60°	VPE010S	10	3	75	0.78	1	○
12 × 3.5 × 60°	VPE012S	12	3.5	85	0.91	1	○
16 × 4 × 60°	VPE016S	16	4	90	1.04	1	○
20 × 5 × 60°	VPE020S	20	5	100	1.30	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

C-PE-S V

Carbide Point Drills 60°,Coated

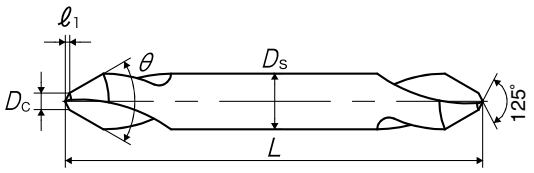
Specification

HF Coating

For icon explanation, refer to P.24

■C-PE-S V is the carbide point drill enabling positioning (125° edge angle) and beveling (60°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 52

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
6 × 2 × 60°	VCPE6.0S	6	2	55	0.52	1	○
8 × 2.5 × 60°	VCPE8.0S	8	2.5	65	0.65	1	○
10 × 3 × 60°	VCPE010S	10	3	75	0.78	1	○

Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

PE-SL V

Long Shank Point Drills 60°, Coated

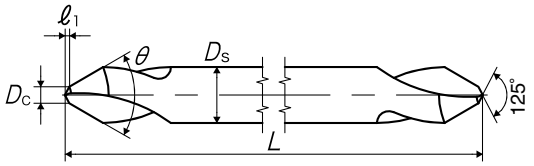
Specification

HSS Coating

For icon explanation, refer to P.24

■PE-SL V is the point drill enabling positioning (125 ° edge angle) and beveling (60°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
4 × 1 × 60°	VPEL4.0S	4	1	100	0.26	1	○
6 × 2 × 60°	VPEL6.0S	6	2	100	0.52	1	○
8 × 2.5 × 60°	VPEL8.0S	8	2.5	100	0.65	1	○
	VPEM8.0S			150			
10 × 3 × 60°	VPEL010S	10	3	100	0.78	1	○
	VPEM010S			150			
12 × 3.5 × 60°	VPEL012S	12	3.5	100	0.91	1	○
	VPEM012S			150			
16 × 4 × 60°	VPEM016S	16	4	150	1.04	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order

For improvement, spec may change without advance notice.

MEMO

For improvement, spec may change without advance notice.
Think threads with YAMAWA

NC-SD V

NC Starting Drills for Bevelling (90°), Coated

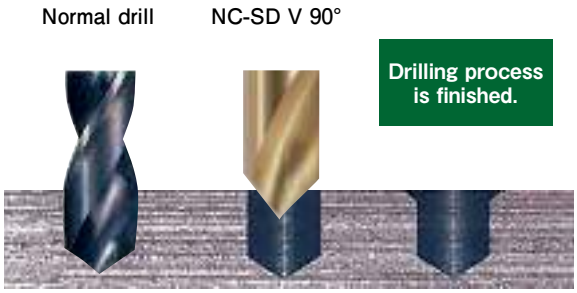
Specification

HSS-Co Coating

For icon explanation, refer to P.24

Product features

After boring with normal drills, use NC-SD V(90 °) larger than bore hole diameter, and we can obtain clean countersinks with better surface finish.



NC-SD

NC Starting Drills for Center Positioning (125°)

Specification

HSS-Co

For icon explanation, refer to P.24

Product features

NC-SD is the drill specially for positioning. It is used before boring holes to heighten positioning accuracy. Having the point angle of a little bit larger degree than normal drill, NC-SD guarantees high positioning accuracy without chippings at its cutting edge.

Difference between starting drills and center drills

For positioning, center drills can also be used. However in the case of center drill, since cutting edge of normal drill first hits the material, this can cause chippings on cutting edge and/or undesirable one side cutting.

Recommended cutting condition

unit : min^{-1}

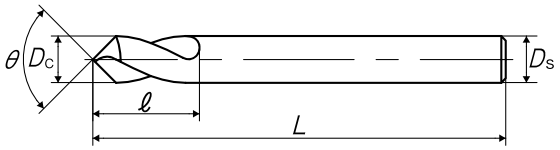
Materials	Cutting speed (m/min)	Diameter (mm)									
		φ 3	φ 4	φ 5	φ 6	φ 8	φ 10	φ 12	φ 16	φ 20	φ 25
SS400	25 ~ 40	3400	2600	2100	1700	1300	1050	850	640	510	410
S50C	25 ~ 32	3000	2300	1800	1500	1150	900	750	560	450	360
FC250	20 ~ 35	2900	2200	1750	1450	1100	860	720	540	430	350
SCM440	15 ~ 25	2200	1600	1300	1100	800	640	540	400	320	260
SUS304	7 ~ 12	1100	800	640	540	400	320	270	200	160	130
SKD61	8 ~ 15	1200	880	700	590	440	360	300	220	180	150
SKD11	7 ~ 12	1100	800	640	540	400	320	270	200	160	130
AC4C	60 ~ 90	8000	6000	4800	4000	3000	2400	2000	1500	1200	1000

※For feeding parameter (mm/rev), select 1-3% of the diameter as a basic rule. When cutting on curved face or slanting face, always choose 0.1mm/rev for feeding parameter.

Shank dia.	Drill diamater	Overall length	Flute length
Ds	Dc	L	ℓ

NC-SD V NC Starting Drills for Center Positioning (90°), Coated

TYPE: 1

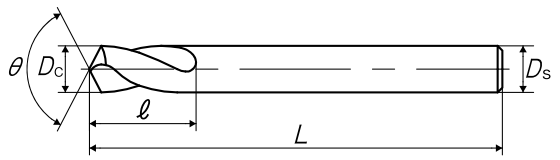


Segment : 56

Size Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ (mm)	Type	Stock
3 × 90 °	VCS-D3.0Q	3	3	46	10	1	○
4 × 90°	VCS-D4.0Q	4	4	55	12	1	○
5 × 90°	VCS-D5.0Q	5	5	62	13	1	○
6 × 90°	VCS-D6.0Q	6	6	66	15	1	◎
8 × 90°	VCS-D8.0Q	8	8	79	20	1	◎
10 × 90°	VCS-D010Q	10	10	89	23	1	◎
12 × 90°	VCS-D012Q	12	12	102	26	1	◎
16 × 90°	VCS-D016Q	16	16	115	32	1	○
20 × 90°	VCS-D020Q	20	20	131	40	1	○
25 × 90°	VCS-D025Q	25	25	151	50	1	○

NC-SD NC Starting Drills for Center Positioning (125°)

TYPE: 1



Segment : 56

Size Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ (mm)	Type	Stock
3 × 125 °	CS-D3.0	3	3	46	10	1	○
4 × 125°	CS-D4.0	4	4	55	12	1	○
5 × 125°	CS-D5.0	5	5	62	13	1	○
6 × 125°	CS-D6.0	6	6	66	15	1	○
8 × 125°	CS-D8.0	8	8	79	20	1	○
10 × 125°	CS-D010	10	10	89	23	1	○
12 × 125°	CS-D012	12	12	102	26	1	○
16 × 125°	CS-D016	16	16	115	32	1	○
20 × 125°	CS-D020	20	20	131	40	1	○
25 × 125°	CS-D025	25	25	151	50	1	○

CS-Q

Countersinks 90°, Machining Center Use

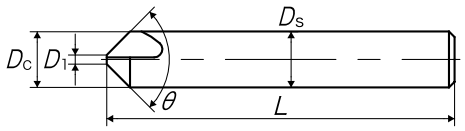
Specification

HSS

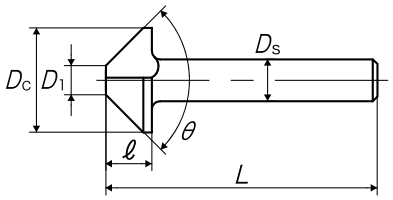
For icon explanation, refer to P.24

■CS-Q is suitable for the machining of high accuracy on the beveling of round hole and on the beveling of attaching face of screw bolts. Having one cutting edge, this tool is suitable for machining center use.

TYPE: 1



TYPE: 2



Segment : 53

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	No. of flutes	Type	Stock
4 × 90° × 4	CS4.0Q	4	0.6	50	-	1	1	△
6 × 90° × 6	CS6.0Q	6	1	50	-	1	1	○
8 × 90° × 8	CS8.0Q	8	1.3	50	-	1	1	○
10 × 90° × 8	CS010Q	8	1.6	46	5.5	1	2	○
15 × 90° × 10	CS015Q	10	3.2	56	7.5	1	2	○
20 × 90° × 10	CS020Q	10	4	60	10	1	2	○
25 × 90° × 10	CS025Q	10	7	65	11	1	2	○
30 × 90° × 12	CS030Q	12	9	70	12.5	1	2	○
35 × 90° × 12	CS035Q	12	11	75	15	1	2	○
40 × 90° × 12	CS040Q	12	12.5	80	17	1	2	○
45 × 90° × 12	CS045Q	12	14	85	18.5	1	2	○
50 × 90° × 12	CS050Q	12	16	90	20	1	2	○
60 × 90° × 16	CS060Q	16	20	100	24	1	2	○

Think threads with YAMAWA
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill diamater	Tool end dia.	Overall length	Cutting edge length	Shank dia.
Dc	D_1	L	ℓ	Ds

CS-QM

Countersinks 90° and 60°, Drilling Machine Use

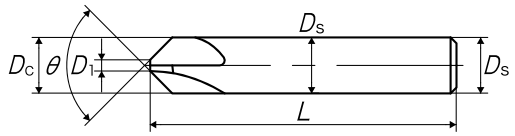
Specification

HSS

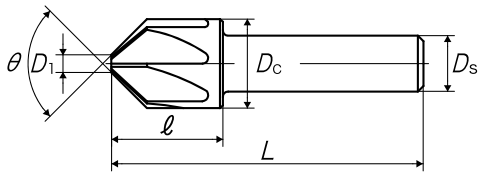
For icon explanation, refer to P.24

■CS-QM is suitable for the machining of high accuracy on the beveling of round hole and on the beveling of attaching face of screw bolts. Having plural cutting edges, this tool is suitable for drilling machine use.

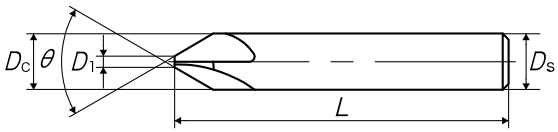
TYPE: 1



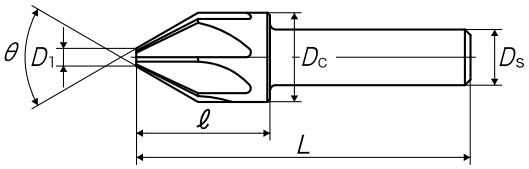
TYPE: 2



TYPE: 3



TYPE: 4



Segment : 53

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	No. of flutes	Type	Stock
6 × 90° × 6	CS6.0QM9	6	1.2	42	-	3	1	○
8 × 90° × 8	CS8.0QM9	8	1.6	44	-	3	1	○
10 × 90° × 8	CS010QM9	8	2	46	14	3	2	○
12 × 90° × 8	CS012QM9	8	2.5	48	16	5	2	○
16 × 90° × 10	CS016QM9	10	3.2	56	20	5	2	○
20 × 90° × 10	CS020QM9	10	4	60	24	5	2	○
25 × 90° × 10	CS025QM9	10	7	65	29	7	2	○
30 × 90° × 12	CS030QM9	12	9	68	32	7	2	○
35 × 90° × 12	CS035QM9	12	11	70	34	7	2	○
40 × 90° × 12	CS040QM9	12	12.5	71	35	7	2	○
6 × 60° × 6	CS6.0QM6	6	1.2	46	-	3	3	△
8 × 60° × 8	CS8.0QM6	8	1.6	48	-	3	3	○
10 × 60° × 8	CS010QM6	8	2	50	18	3	4	△
12 × 60° × 8	CS012QM6	8	2.5	52	20	5	4	△
16 × 60° × 10	CS016QM6	10	3.2	60	24	5	4	○
20 × 60° × 10	CS020QM6	10	4	64	28	5	4	○
25 × 60° × 10	CS025QM6	10	7	69	33	7	4	○
30 × 60° × 12	CS030QM6	12	9	76	40	7	4	△
35 × 60° × 12	CS035QM6	12	11	79	43	7	4	△
40 × 60° × 12	CS040QM6	12	12.5	81	45	7	4	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with YAMAWA

CS-G

Submarine Gate Cutter, 20°, 30°

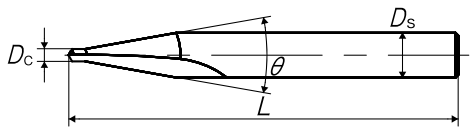
Specification

HSS

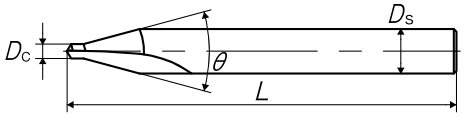
For icon explanation, refer to P.24

■CS-G is the special drill for making submarine gate (tunnel gate) on the die mold of plastic injection machine.

TYPE: 1



TYPE: 2



Segment : 54

Size Dc × θ × Ds	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ (mm)	No. of flutes	Type	Stock
0.5 × 20° × 6	CS-G0.52-J	6	0.5	57	0.5	2	1	△
0.5 × 30° × 6	CS-G0.53-J	6	0.5	57	0.5	2	2	△
0.5 × 20° × 6	CS-G0.52-LS	6	0.5	100	0.5	2	1	△
0.5 × 30° × 6	CS-G0.53-LS	6	0.5	100	0.5	2	2	△
0.6 × 20° × 6	CS-G0.62-J	6	0.6	57	0.5	2	1	△
0.6 × 30° × 6	CS-G0.63-J	6	0.6	57	0.5	2	2	△
0.6 × 20° × 6	CS-G0.62-LS	6	0.6	100	0.5	2	1	△
0.6 × 30° × 6	CS-G0.63-LS	6	0.6	100	0.5	2	2	△
0.7 × 20° × 6	CS-G0.72-J	6	0.7	57	0.5	2	1	△
0.7 × 30° × 6	CS-G0.73-J	6	0.7	57	0.5	2	2	△
0.7 × 20° × 6	CS-G0.72-LS	6	0.7	100	0.5	2	1	△
0.7 × 30° × 6	CS-G0.73-LS	6	0.7	100	0.5	2	2	△
0.8 × 20° × 6	CS-G0.82-J	6	0.8	57	0.5	2	1	△
0.8 × 30° × 6	CS-G0.83-J	6	0.8	57	0.5	2	2	△
0.8 × 20° × 6	CS-G0.82-LS	6	0.8	100	0.5	2	1	△
0.8 × 30° × 6	CS-G0.83-LS	6	0.8	100	0.5	2	2	△
1 × 20° × 6	CS-G1.02-J	6	1	57	0.5	2	1	△
1 × 20° × 8	CS-G1.028J	8	1	57	0.5	2	1	△
1 × 30° × 6	CS-G1.03-J	6	1	57	0.5	2	2	△
1 × 30° × 8	CS-G1.038J	8	1	57	0.5	2	2	△
1 × 20° × 8	CS-G1.028K	8	1	70	0.5	2	1	△
1 × 30° × 8	CS-G1.038K	8	1	70	0.5	2	2	△
1 × 20° × 6	CS-G1.02-LS	6	1	100	0.5	2	1	△
1 × 20° × 8	CS-G1.028LS	8	1	100	0.5	2	1	△
1 × 30° × 6	CS-G1.03-LS	6	1	100	0.5	2	2	△
1 × 30° × 8	CS-G1.038LS	8	1	100	0.5	2	2	△
1.5 × 20° × 8	CS-G1.52-K	8	1.5	70	0.5	2	1	△
1.5 × 30° × 8	CS-G1.53-K	8	1.5	70	0.5	2	2	△
1.5 × 20° × 8	CS-G1.52-LS	8	1.5	100	0.5	2	1	△
1.5 × 30° × 8	CS-G1.53-LS	8	1.5	100	0.5	2	2	△
2 × 20° × 8	CS-G2.02-K	8	2	70	0.5	2	1	△

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Drill diamater	Overall length	Drill length
Ds	Dc	L	ℓ

CS-G Submarine Gate Cutter, 20° , 30°

Size Dc × θ × Ds	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ (mm)	No. of flutes	Type	Stock
2 × 30° × 8	CS-G2.03-K	8	2	70	0.5	2	2	△
2 × 20° × 8	CS-G2.02-LS	8	2	100	0.5	2	1	△
2 × 30° × 8	CS-G2.03-LS	8	2	100	0.5	2	2	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MHCDS

Center Drills for Carbon Steels of Middle Hardness for running at High Speed

Specification

HSS-Co Coating

For icon explanation, refer to P.24

Product features

- In order to improve positioning accuracy of projection and shank tolerance, MHCDS has the cutting edge only on one end.
- Considering clearance between center point and bottom of center hole, cutting edge length(ℓ) is made as short as possible to increase toughness.
- To increase centrality, drill point has 3 rakes and X thinning design, which enables high speed cutting and feeding.
- Increased centrality leads to great improvement of surface finish and circularity of center-drilled hole.

Cutting data

Great extension of tool life with MHCDS

Right pictures show difference of the damage on cutting edge between CD-S and MHCDS after 480 hole cuttings under same cutting condition (stated in right) MHCDS has smaller wear and edge damage. This tells we can continue to use MHCDS further.

Cutting condition [3×60°×8]

Work material	S55C
Machine	NC lathe
Cutting speed	30m/min (1,200min^{-1})
Feed	0.15mm/rev
Cutting fluid	Water soluble oil

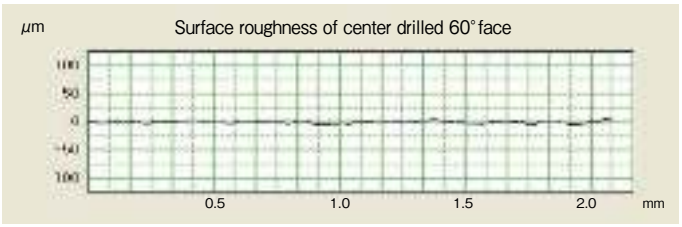
CD-S

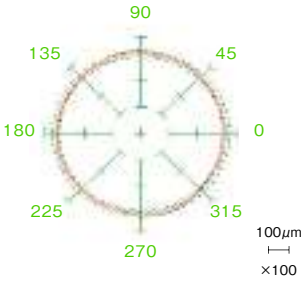
MHCDS

Great improvement in surface roughness and circularity with MHCDS

Under the cutting condition stated above, the surface finish of center-drilled hole has greatly been improved.
Circularity of center drilled hole as well as run-out tolerance of turning axis has been improved.

Enlarged picture





Circularity of center drilled 60° face

Recommended cutting condition

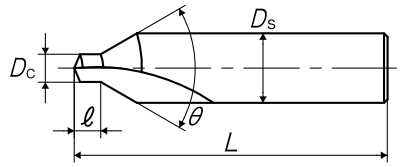
●Material : Carbon Steels(S55C) Alloy Steels(SCM440)

Designation Dc×θ×Ds	Feed f (mm/rev)	RPM n (min^{-1})
1×60°×4	0.1	3,800
1.5×60°×5		2,400
2×60°×6	0.15	1,900
2.5×60°×8		1,500
3×60°×8		1,200
4×60°×10	0.2	1,000
5×60°×12		800
6×60°×16		600

Think threads with YAMAWA
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	VMHCD1.0S	4	1	30	1	1	◎
1.5 × 60° × 5	VMHCD1.5S	5	1.5	30	1.5	1	◎
2 × 60° × 6	VMHCD2.0S	6	2	30	1.9	1	◎
2.5 × 60° × 8	VMHCD2.5S	8	2.5	40	2.4	1	◎
3 × 60° × 8	VMHCD3.0S	8	3	40	2.8	1	◎
4 × 60° × 10	VMHCD4.0S	10	4	45	3.8	1	◎
5 × 60° × 12	VMHCD5.0S	12	5	55	4.6	1	◎
6 × 60° × 16	VMHCD6.0S	16	6	65	5.5	1	◎

MEMO

PRODUCTS FOR USA

ISP	US-1
SP	US-2
SP OX	US-6
SP	US-9
LO-SP	US-10
AU+SP	US-11
ZELX SS SP	US-12
ZELX SS SP 6"	US-17
ZELX AL SP	US-18
ZELX ALS SP	US-20
SP STI	US-22
SP OX STI	US-24
ZELX TI SP	US-26
ZELX NI SP	US-29
ZELX NI SP STI	US-32
ZELX FR	US-34
ZELX TI LHSP	US-35
ZELX FR LHSP	US-38
MHSL	US-39
IPO	US-40
PO	US-41
PO OX	US-44
ZELX SS PO	US-47
ZELX SS PO 6"	US-51
ZELX AL PO	US-52
PO STI	US-54
PO OX STI	US-56
ZELX NI PO	US-58
ZELX NI PO STI	US-61
IHT	US-63
HT	US-65
HT OX	US-70
HT-CI	US-75
AXE-HT	US-77
HT STI	US-78
HT OX STI	US-80
ZELX MOLD	US-82
EH-HT	US-83
ZELX CARB AL	US-84
ZELX CARB CI	US-87
N-RZ	US-90
N-RS	US-94
OL-RZ	US-98
HP-RZ	US-99
ZELX SS NPT	US-102
ZELX SS NPTF	US-103
ZELX MOLD NPT	US-104
NPT	US-105
INT-NPT	US-106
NPT-CI	US-107
NPTF	US-108
NPTF-CI	US-109
NPS	US-110
NPSF	US-111
CPC-S	US-112
CPC-T	US-115
PO-D	US-116
RD-DA	US-117

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

ISP

Spiral Fluted Taps for General Purpose

Specification

HSS | OX Oxide

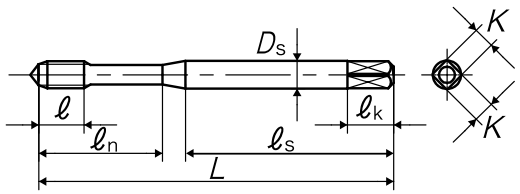
■Suitable for low speed tapping of steels. For manual use and drilling machine use.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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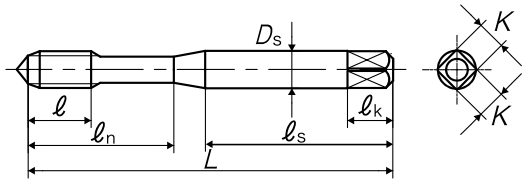
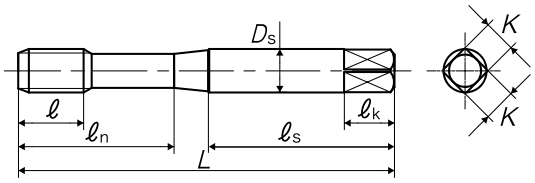


TYPE: 3



Segment : 1C

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads												
No.6-32UNC	-	UAUN6JXHEX	2.5P	2	0.374	0.669	1.201	0.141	0.11	0.187	3	1
No.8-32UNC	-	UAUN8JXHEX	2.5P	2.125	0.374	0.866	1.339	0.168	0.131	0.25	3	1
No.10-24UNC	-	UAUNAMXHEX	2.5P	2.375	0.512	0.866	1.339	0.194	0.152	0.25	3	1
1/4-20UNC	-	UAU04NXHEX	2.5P	2.5	0.591	1.024	1.22	0.255	0.191	0.312	3	2
5/16-18UNC	-	UAU05OXHEX	2.5P	2.718	0.669	1.004	1.378	0.318	0.238	0.375	3	3
3/8-16UNC	-	UAU06PXHEX	2.5P	2.937	0.748	1.059	1.496	0.381	0.286	0.437	3	3
For Unified Threads (In blister package)												
No.6-32UNC	-	UAUN6JXHEXR	2.5P	2	0.374	0.669	1.201	0.141	0.11	0.187	3	1
No.8-32UNC	-	UAUN8JXHEXR	2.5P	2.125	0.374	0.866	1.339	0.168	0.131	0.25	3	1
No.10-24UNC	-	UAUNAMXHEXR	2.5P	2.375	0.512	0.866	1.339	0.194	0.152	0.25	3	1
1/4-20UNC	-	UAU04NXHEXR	2.5P	2.5	0.591	1.024	1.22	0.255	0.191	0.312	3	2
5/16-18UNC	-	UAU05OXHEXR	2.5P	2.718	0.669	1.004	1.378	0.318	0.238	0.375	3	3
3/8-16UNC	-	UAU06PXHEXR	2.5P	2.937	0.748	1.059	1.496	0.381	0.286	0.437	3	3

Blister Package

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SP

Spiral Fluted Taps

Specification

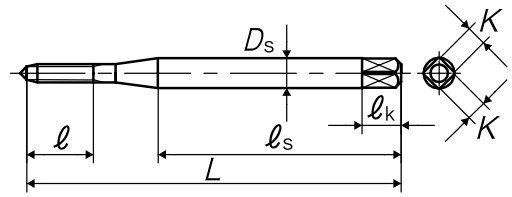
HSS

Recommended Tapping Speed depending on Materials

Medium carbon steels 中炭素鋼
5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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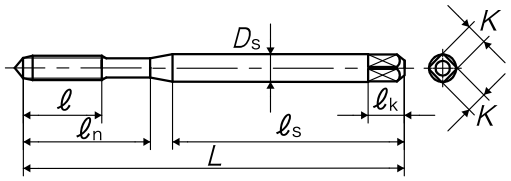
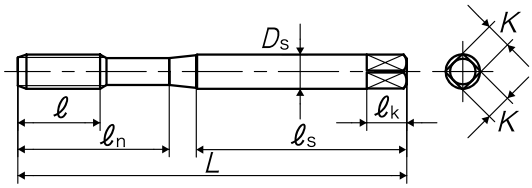


TYPE: 3



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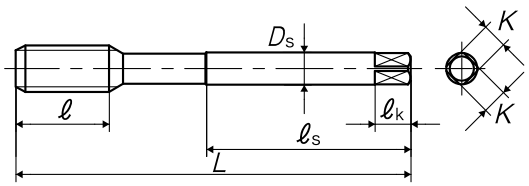


Segment : 1C

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads												
No.2-56UNC	GH1	SSUN2E1NEB	2.5P	1.772	0.314	-	1.161	0.141	0.11	0.187	2	1
	GH2	SSUN2E2NEB										
No.2-64UNF	GH1	SSUN2D1NEB	2.5P	1.772	0.314	-	1.161	0.141	0.11	0.187	2	1
	GH2	SSUN2D2NEB										
No.3-48UNC	GH1	SSUN3F1NEB	2.5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	2	2
	GH2	SSUN3F2NEB										
No.3-56UNF	GH1	SSUN3E1NEB	2.5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	2	2
	GH2	SSUN3E2NEB										
No.4-40UNC	GH1	SSUN4H1NEB	2.5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	2
	GH2	SSUN4H2NEB										
No.4-48UNF	GH1	SSUN4F1NEB	2.5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	2
	GH2	SSUN4F2NEB										
No.5-40UNC	GH1	SSUN5H1NEB	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH2	SSUN5H2NEB										
No.5-44UNF	GH1	SSUN5G1NEB	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH2	SSUN5G2NEB										
No.6-32UNC	GH1	SSUN6J1NEB	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	2
	GH2	SSUN6J2NEB										
	GH3	SSUN6J3NEB										

SP Spiral Fluted Taps

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
No.6-32UNC	GH4	SSUN6J4NEB	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	2
No.6-40UNF	GH1	SSUN6H1NEB	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	2
	GH2	SSUN6H2NEB										
No.8-32UNC	GH2	SSUN8J2NEB	2.5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	3	2
	GH3	SSUN8J3NEB										
No.8-36UNF	GH2	SSUN8I2NEB	2.5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	3	2
	GH3	SSUN8I3NEB										
No.10-24UNC	GH2	SSUNAM2NEB	2.5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	3	2
	GH3	SSUNAM3NEB										
No.10-32UNF	GH2	SSUNAJ2NEB	2.5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	3	2
	GH3	SSUNAJ3NEB										
No.12-24UNC	GH2	SSUNCM2NEB	2.5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	3	2
	GH3	SSUNCM3NEB										
No.12-28UNF	GH2	SSUNCK2NEB	2.5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	3	2
	GH3	SSUNCK3NEB										
1/4-20UNC	GH2	SSU04N2NEB	2.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	2
	GH3	SSU04N3NEB										
	GH5	SSU04N5NEB										
	GH11	SSU04N-EEB										
1/4-28UNF	GH2	SSU04K2NEB	2.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	2
	GH3	SSU04K3NEB										
	GH4	SSU04K4NEB										
	GH11	SSU04K-EEB										
5/16-18UNC	GH2	SSU05O2NEB	2.5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	3
	GH3	SSU05O3NEB										
	GH5	SSU05O5NEB										
	GH11	SSU05O-EEB										
5/16-24UNF	GH2	SSU05M2NEB	2.5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	3
	GH3	SSU05M3NEB										
	GH4	SSU05M4NEB										
	GH5	SSU05M5NEB										
	GH11	SSU05M-EEB										
3/8-16UNC	GH3	SSU06P3NEB	2.5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	3
	GH4	SSU06P4NEB										
	GH5	SSU06P5NEB										
	GH11	SSU06P-EEB										
3/8-24UNF	GH2	SSU06M2NEB	2.5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	3
	GH3	SSU06M3NEB										
	GH4	SSU06M4NEB										
	GH11	SSU06M-EEB										
7/16-14UNC	GH3	SSU07Q3NEB	2.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	4
	GH4	SSU07Q4NEB										
	GH5	SSU07Q5NEB										
7/16-20UNF	GH2	SSU07N2NEB	2.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	4
	GH3	SSU07N3NEB										
	GH5	SSU07N5NEB										
1/2-13UNC	GH3	SSU08R3NEB	2.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	4
	GH4	SSU08R4NEB										
	GH5	SSU08R5NEB										
	GH11	SSU08R-EEB										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

SP Spiral Fluted Taps

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
1/2-20UNF	GH2	SSU08N2NEB	2.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	4
	GH3	SSU08N3NEB										
	GH5	SSU08N5NEB										
	GH11	SSU08N-EEB										
9/16-12UNC	GH3	SSU09S3NEB	2.5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	4
	GH4	SSU09S4NEB										
	GH5	SSU09S5NEB										
9/16-18UNF	GH3	SSU09O3NEB	2.5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	4
	GH4	SSU09O4NEB										
	GH5	SSU09O5NEB										
5/8-11UNC	GH3	SSU10U3NEB	2.5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	4
	GH4	SSU10U4NEB										
	GH5	SSU10U5NEB										
	GH11	SSU10U-EEB										
5/8-18UNF	GH3	SSU10O3NEB	2.5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	4
	GH4	SSU10O4NEB										
	GH5	SSU10O5NEB										
	GH11	SSU10O-EEB										
3/4-10UNC	GH3	SSU12V3NEB	2.5P	4.921	1.299	-	2.52	0.590	0.442	0.687	4	4
	GH5	SSU12V5NEB										
	GH11	SSU12V-EEB										
3/4-16UNF	GH3	SSU12P3NEB	2.5P	4.921	1.299	-	2.52	0.590	0.442	0.687	4	4
	GH4	SSU12P4NEB										
	GH5	SSU12P5NEB										
	GH11	SSU12P-EEB										
7/8-9UNC	GH4	SSU14W4NEB	2.5P	5.512	1.299	-	2.795	0.697	0.523	0.75	4	4
	GH5	SSU14W5NEB										
	GH6	SSU14W6NEB										
7/8-14UNF	GH3	SSU14Q3NEB	2.5P	5.512	1.299	-	2.795	0.697	0.523	0.75	4	4
	GH4	SSU14Q4NEB										
	GH6	SSU14Q6NEB										
1-8UNC	GH4	SSU16X4NEB	2.5P	6.299	1.457	-	3.228	0.800	0.6	0.812	4	4
	GH5	SSU16X5NEB										
	GH6	SSU16X6NEB										
1-12UNF	GH3	SSU16S3NEB	2.5P	6.299	1.457	-	3.228	0.800	0.6	0.812	4	4
	GH4	SSU16S4NEB										
	GH5	SSU16S5NEB										
	GH6	SSU16S6NEB										
1 1/8-7UNC	GH4	SSU18Y4NEB	2.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
	GH6	SSU18Y6NEB										
1 1/8-12UNF	GH4	SSU18S4NEB	2.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
	GH5	SSU18S5NEB										
1 1/4-7UNC	GH4	SSU20Y4NEB	2.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
	GH6	SSU20Y6NEB										
1 1/4-12UNF	GH4	SSU20S4NEB	2.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
	GH5	SSU20S5NEB										
1 3/8-6UNC	GH5	SSU22Z5NEB	2.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
	GH6	SSU22Z6NEB										
1 3/8-12UNF	GH4	SSU22S4NEB	2.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
	GH5	SSU22S5NEB										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

SP Spiral Fluted Taps

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
1 1/2-6UNC	GH5	SSU24Z5NEB	2.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
	GH6	SSU24Z6NEB										
1 1/2-12UNF	GH4	SSU24S4NEB	2.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
	GH5	SSU24S5NEB										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SP OX

Spiral Fluted Taps,Oxided

Specification

HSS | OX Oxide

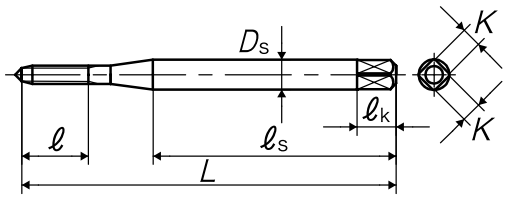
Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼 5~10 (m/min)

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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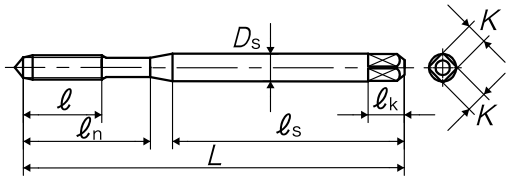

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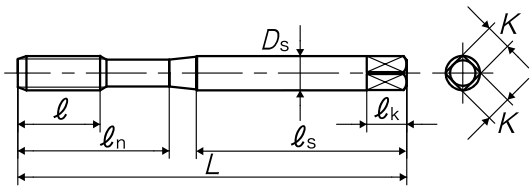

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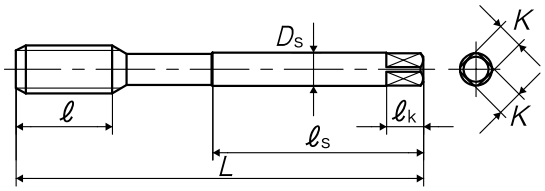


Segment : 1C

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads												
No.2-56UNC	GH1	SSUN2E1NEX	2.5P	1.772	0.314	-	1.161	0.141	0.11	0.187	2	1
	GH2	SSUN2E2NEX										
No.2-64UNF	GH1	SSUN2D1NEX	2.5P	1.772	0.314	-	1.161	0.141	0.11	0.187	2	1
	GH2	SSUN2D2NEX										
No.3-48UNC	GH1	SSUN3F1NEX	2.5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	2	2
	GH2	SSUN3F2NEX										
No.3-56UNF	GH1	SSUN3E1NEX	2.5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	2	2
	GH2	SSUN3E2NEX										
No.4-40UNC	GH1	SSUN4H1NEX	2.5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	2
	GH2	SSUN4H2NEX										
No.4-48UNF	GH1	SSUN4F1NEX	2.5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	2
	GH2	SSUN4F2NEX										
No.5-40UNC	GH1	SSUN5H1NEX	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH2	SSUN5H2NEX										
No.5-44UNF	GH1	SSUN5G1NEX	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH2	SSUN5G2NEX										
No.6-32UNC	GH1	SSUN6J1NEX	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	2
	GH2	SSUN6J2NEX										
	GH3	SSUN6J3NEX										
	GH4	SSUN6J4NEX										

SP OX Spiral Fluted Taps,Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
No.6-40UNF	GH1	SSUN6H1NEX	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	2
	GH2	SSUN6H2NEX										
No.8-32UNC	GH2	SSUN8J2NEX	2.5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	3	2
	GH3	SSUN8J3NEX										
No.8-36UNF	GH2	SSUN8I2NEX	2.5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	3	2
	GH3	SSUN8I3NEX										
No.10-24UNC	GH2	SSUNAM2NEX	2.5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	3	2
	GH3	SSUNAM3NEX										
No.10-32UNF	GH2	SSUNAJ2NEX	2.5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	3	2
	GH3	SSUNAJ3NEX										
No.12-24UNC	GH2	SSUNCM2NEX	2.5P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	3	2
	GH3	SSUNCM3NEX										
No.12-28UNF	GH2	SSUNCK2NEX	2.5P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	3	2
	GH3	SSUNCK3NEX										
1/4-20UNC	GH2	SSU04N2NEX	2.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	2
	GH3	SSU04N3NEX										
	GH5	SSU04N5NEX										
	GH11	SSU04N-EEX										
1/4-28UNF	GH2	SSU04K2NEX	2.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	2
	GH3	SSU04K3NEX										
	GH4	SSU04K4NEX										
	GH11	SSU04K-EEX										
5/16-18UNC	GH2	SSU05O2NEX	2.5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	3
	GH3	SSU05O3NEX										
	GH5	SSU05O5NEX										
	GH11	SSU05O-EEX										
5/16-24UNF	GH2	SSU05M2NEX	2.5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	3
	GH3	SSU05M3NEX										
	GH4	SSU05M4NEX										
	GH5	SSU05M5NEX										
	GH11	SSU05M-EEX										
3/8-16UNC	GH3	SSU06P3NEX	2.5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	3
	GH4	SSU06P4NEX										
	GH5	SSU06P5NEX										
	GH11	SSU06P-EEX										
3/8-24UNF	GH2	SSU06M2NEX	2.5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	3
	GH3	SSU06M3NEX										
	GH4	SSU06M4NEX										
	GH11	SSU06M-EEX										
7/16-14UNC	GH3	SSU07Q3NEX	2.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	4
	GH4	SSU07Q4NEX										
	GH5	SSU07Q5NEX										
7/16-20UNF	GH2	SSU07N2NEX	2.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	4
	GH3	SSU07N3NEX										
	GH5	SSU07N5NEX										
1/2-13UNC	GH3	SSU08R3NEX	2.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	4
	GH4	SSU08R4NEX										
	GH5	SSU08R5NEX										
	GH11	SSU08R-EEX										
1/2-20UNF	GH2	SSU08N2NEX	2.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	4
	GH3	SSU08N3NEX										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

SP OX Spiral Fluted Taps,Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
1/2-20UNF	GH5	SSU08N5NEX	2.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	4
	GH11	SSU08N-EEX										
9/16-12UNC	GH3	SSU09S3NEX	2.5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	4
	GH4	SSU09S4NEX										
	GH5	SSU09S5NEX										
9/16-18UNF	GH3	SSU09Q3NEX	2.5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	4
	GH4	SSU09Q4NEX										
	GH5	SSU09Q5NEX										
5/8-11UNC	GH3	SSU10U3NEX	2.5P	4.331	1.024	-	2.205	0.48	0.36	0.562	3	4
	GH4	SSU10U4NEX										
	GH5	SSU10U5NEX										
	GH11	SSU10U-EEX										
5/8-18UNF	GH3	SSU10Q3NEX	2.5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	4
	GH4	SSU10Q4NEX										
	GH5	SSU10Q5NEX										
	GH11	SSU10Q-EEX										
3/4-10UNC	GH3	SSU12V3NEX	2.5P	4.921	1.299	-	2.52	0.590	0.442	0.687	4	4
	GH5	SSU12V5NEX										
	GH11	SSU12V-EEX										
3/4-16UNF	GH3	SSU12P3NEX	2.5P	4.921	1.299	-	2.52	0.590	0.442	0.687	4	4
	GH4	SSU12P4NEX										
	GH5	SSU12P5NEX										
	GH11	SSU12P-EEX										
7/8-9UNC	GH4	SSU14W4NEX	2.5P	5.512	1.299	-	2.795	0.697	0.523	0.75	4	4
	GH5	SSU14W5NEX										
	GH6	SSU14W6NEX										
7/8-14UNF	GH3	SSU14Q3NEX	2.5P	5.512	1.299	-	2.795	0.697	0.523	0.75	4	4
	GH4	SSU14Q4NEX										
	GH6	SSU14Q6NEX										
1-8UNC	GH4	SSU16X4NEX	2.5P	6.299	1.457	-	3.228	0.800	0.6	0.812	4	4
	GH5	SSU16X5NEX										
	GH6	SSU16X6NEX										
1-12UNF	GH3	SSU16S3NEX	2.5P	6.299	1.457	-	3.228	0.800	0.6	0.812	4	4
	GH4	SSU16S4NEX										
	GH5	SSU16S5NEX										
	GH6	SSU16S6NEX										
1 1/8-7UNC	GH4	SSU18Y4NEX	2.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
	GH6	SSU18Y6NEX										
1 1/8-12UNF	GH4	SSU18S4NEX	2.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
	GH5	SSU18S5NEX										
1 1/4-7UNC	GH4	SSU20Y4NEX	2.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
	GH6	SSU20Y6NEX										
1 1/4-12UNF	GH4	SSU20S4NEX	2.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
	GH5	SSU20S5NEX										
1 3/8-6UNC	GH5	SSU22Z5NEX	2.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
	GH6	SSU22Z6NEX										
1 3/8-12UNF	GH4	SSU22S4NEX	2.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
	GH5	SSU22S5NEX										
1 1/2-6UNC	GH5	SSU24Z5NEX	2.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
	GH6	SSU24Z6NEX										
1 1/2-12UNF	GH4	SSU24S4NEX	2.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
	GH5	SSU24S5NEX										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SP

Spiral Fluted Taps for Alloy Steels

Specification

HSS | OX Oxide

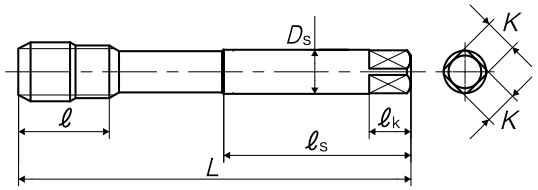
■Spiral Fluted Taps suitable for Alloy Steels and High Carbon Steels. Due to improvement of chip ejection and reduction of tapping torque, SP is optimal for blind hole tapping of larger diameter.

Recommended Tapping Speed depending on Materials

High carbon steels 高炭素鋼	Alloy steels 合金鋼
3~8 (m/min)	3~8 (m/min)

For icon explanation, refer to P.24

TYPE: 1



Segment : 1C

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads												
1-8UNC	2BX	SSU16XYEEXJ	2.5P	6.299	1.457	-	3.228	0.8	0.6	0.812	4	1
1 1/8-8UN	2BX	SSU18XYEEXJ	2.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	1
1 1/4-8UN	2BX	SSU20XYEEXJ	2.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	1
1 3/8-8UN	2BX	SSU22XYEEXJ	2.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	1
1 1/2-8UN	2BX	SSU24XYEEXJ	2.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	1

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

LO-SP

Low Spiral Fluted Taps for Alloy Steels

Specification

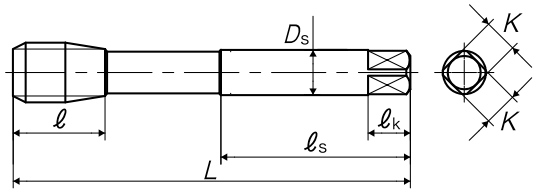
HSS | OX Oxide

Recommended Tapping Speed depending on Materials

High carbon steels 高炭素鋼	Alloy steels 合金鋼
3~8 (m/min)	3~8 (m/min)

For icon explanation, refer to P.24

TYPE: 1



Segment : 1C

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads												
1-8UNC	2BX	SSU16XYEEXHT	2.5P	6.299	1.457	-	3.228	0.8	0.6	0.812	4	1
1 1/8-8UN	2BX	SSU18XYEEXHT	2.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	1
1 1/4-8UN	2BX	SSU20XYEEXHT	2.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	1
1 3/8-8UN	2BX	SSU22XYEEXHT	2.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	1
1 1/2-8UN	2BX	SSU24XYEEXHT	2.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	1

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AU+SP

Plus Series Spiral Fluted Taps,Coated

Specification

HSS Coating

■For wide range of materials.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

Stainless steels ステンレス鋼	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~10 (m/min)	20~30 (m/min)	20~30 (m/min)

For icon explanation, refer to P.24

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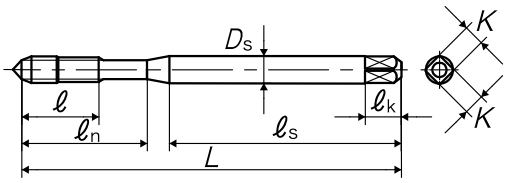

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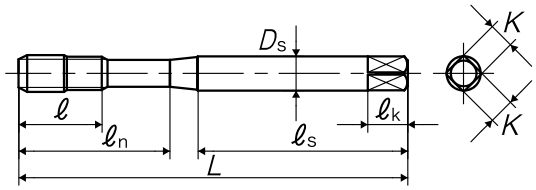

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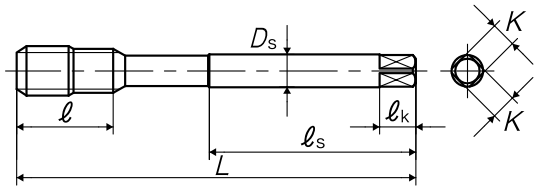


Segment : 1C

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads												
M3 × 0.5	D3	SS3.0GCNEV	2.5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	1
M4 × 0.7	D4	SS4.0IDNEV	2.5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	3	1
M5 × 0.8	D4	SS5.0KDNEV	2.5P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	3	1
M6 × 1	D5	SS6.0MENEV	2.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
M8 × 1.25	D5	SS8.0NENEV	2.5P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	3	2
M8 × 1	D5	SS8.0MENEV	2.5P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	3	2
M10 × 1.5	D6	SS010OFNEV	2.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	3
M10 × 1.25	D5	SS010NENEV	2.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	3
M10 × 1	D5	SS010MENEV	2.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	3
M12 × 1.75	D6	SS012PFNEV	2.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	3
M12 × 1.5	D6	SS012OFNEV	2.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	3
M12 × 1.25	D5	SS012NENEV	2.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	3

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX SS SP

Spiral Fluted Taps for Stainless Steels

Specification

HSS | OX Oxide

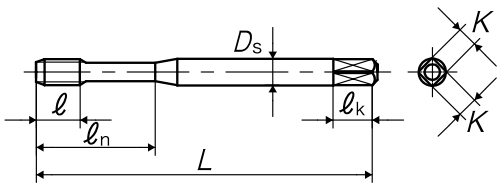
■Suitable for stainless steels, sticky and tending to work-harden, as well as chrome steels and chrome molybdenum steels. Blind hole use.

Recommended Tapping Speed depending on Materials

Alloy steels 合金鋼	Stainless steels ステンレス鋼
~10 (m/min)	~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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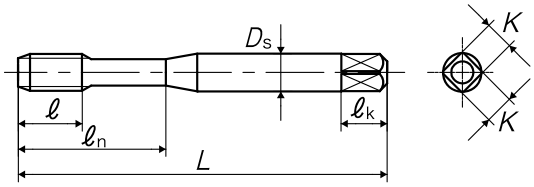

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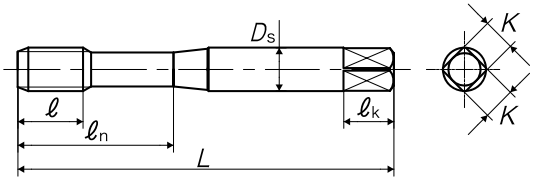

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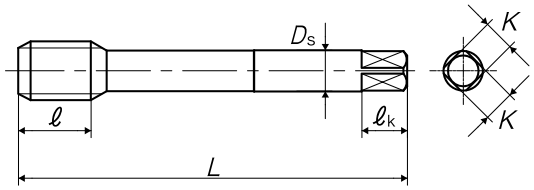


Segment : 1D

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads											
M3 × 0.5	D3	Y74615	2.5P	1.937	0.197	0.625	0.141	0.11	0.187	3	1
		Y74015	1.5P								
M3.5 × 0.6	D4	Y74616	2.5P	2	0.276	0.687	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y74617	2.5P	2.125	0.276	0.75	0.168	0.131	0.25	3	1
		Y74017	1.5P								
M5 × 0.8	D4	Y74619	2.5P	2.375	0.354	0.875	0.194	0.152	0.25	3	1
		Y74019	1.5P								
M6 × 1	D5	Y74620	2.5P	2.5	0.433	1	0.255	0.191	0.312	3	2
		Y74020	1.5P								
M7 × 1	D5	Y74621	2.5P	2.718	0.433	1.125	0.318	0.238	0.375	3	3
M8 × 1.25	D5	Y74623	2.5P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
		Y74023	1.5P								
M8 × 1	D5	Y74622	2.5P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
		Y74022	1.5P								
M10 × 1.5	D6	Y74625	2.5P	2.937	0.512	1.25	0.381	0.286	0.437	3	3
		Y74025	1.5P								
M10 × 1.25	D5	Y74624	2.5P	2.937	0.472	1.25	0.381	0.286	0.437	3	3
M12 × 1.75	D6	Y74627	2.5P	3.375	0.591	-	0.367	0.275	0.437	3	4
		Y74027	1.5P								

ZELX SS SP Spiral Fluted Taps for Stainless Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
M12 × 1.25	D5	Y74626	2.5P	3.375	0.551	-	0.367	0.275	0.437	3	4
		Y74026	1.5P								
M14 × 2	D7	Y74629	2.5P	3.593	0.709	-	0.429	0.322	0.5	3	4
		Y74029	1.5P								
M14 × 1.5	D6	Y74628	2.5P	3.593	0.551	-	0.429	0.322	0.5	3	4
		Y74028	1.5P								
M16 × 2	D7	Y74631	2.5P	3.812	0.709	-	0.480	0.36	0.562	3	4
		Y74031	1.5P								
M16 × 1.5	D6	Y74630	2.5P	3.812	0.551	-	0.480	0.36	0.562	3	4
M18 × 2.5	D7	Y74633	2.5P	4.031	0.787	-	0.542	0.406	0.625	4	4
M18 × 1.5	D6	Y74632	2.5P	4.031	0.551	-	0.542	0.406	0.625	4	4
M20 × 2.5	D7	Y74635	2.5P	4.468	0.787	-	0.652	0.489	0.687	4	4
M24 × 3	D8	Y74639	2.5P	4.906	0.984	-	0.760	0.57	0.75	4	4
For Unified Threads											
No.2-56UNC	GH2	Y84623	2.5P	1.75	0.157	0.437	0.141	0.11	0.187	2	1
No.3-48UNC	GH2	Y84600	2.5P	1.812	0.197	0.5	0.141	0.11	0.187	2	1
No.4-40UNC	GH2	Y84601	2.5P	1.875	0.236	0.562	0.141	0.11	0.187	2	1
		Y84001	1.5P								
	GH3	Y84602	2.5P								
		Y84002	1.5P								
	GH4	Y84629	2.5P								
	GH5	Y84634									
No.4-48UNF	GH2	Y84683	2.5P	1.875	0.236	0.562	0.141	0.11	0.187	2	1
No.5-40UNC	GH2	Y84603	2.5P	1.937	0.236	0.625	0.141	0.11	0.187	3	1
		Y84003	1.5P								
No.6-32UNC	GH2	Y84604	2.5P	2	0.276	0.687	0.141	0.11	0.187	3	1
		Y84004	1.5P								
	GH3	Y84605	2.5P								
		Y84005	1.5P								
	GH4	Y84636	2.5P								
	GH5	Y84635									
	GH6	Y84659									
	GH7	Y84665									
No.6-40UNF	GH2	Y84684	2.5P	2	0.276	0.687	0.141	0.11	0.187	3	1
		Y84084	1.5P								
	GH3	Y84685	2.5P								
No.8-32UNC	GH2	Y84606	2.5P	2.125	0.276	0.75	0.168	0.131	0.25	3	1
	GH3	Y84607									
		Y84007	1.5P								
	GH4	Y84638	2.5P								
	GH5	Y84637									
	GH6	Y84660									
	GH7	Y84667									
No.8-36UNF	GH3	Y84687	2.5P	2.125	0.276	0.75	0.168	0.131	0.25	3	1
No.10-24UNC	GH2	Y84624	2.5P	2.375	0.354	0.875	0.194	0.152	0.25	3	1
	GH3	Y84609									
		Y84009	1.5P								
	GH5	Y84639	2.5P								
		Y84039	1.5P								
	GH6	Y84690	2.5P								
	GH7	Y84669									

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX SS SP Spiral Fluted Taps for Stainless Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
No.10-32UNF	GH2	Y84611	2.5P	2.375	0.276	0.875	0.194	0.152	0.25	3	1
	GH3	Y84610	2.5P								
		Y84010	1.5P								
	GH4	Y84630	2.5P								
	GH5	Y84640	2.5P								
		Y84040	1.5P								
	GH6	Y84662	2.5P								
	GH7	Y84670	2.5P								
No.12-24UNC	GH3	Y84688	2.5P	2.375	0.354	0.937	0.220	0.165	0.281	3	1
No.12-28UNF	GH3	Y84689	2.5P	2.375	0.276	0.937	0.220	0.165	0.281	3	1
1/4-20UNC	GH3	Y84613	2.5P	2.5	0.433	1	0.255	0.191	0.312	3	2
		Y84013	1.5P								
	GH5	Y84643	2.5P								
		Y84043	1.5P								
	GH7	Y84673	2.5P								
1/4-28UNF	GH3	Y84614	2.5P	2.5	0.354	1	0.255	0.191	0.312	3	2
		Y84014	1.5P								
	GH4	Y84631	2.5P								
	GH5	Y84644	2.5P								
		Y84044	2.5P								
	GH6	Y84664	2.5P								
	GH7	Y84674	2.5P								
5/16-18UNC	GH3	Y84615	2.5P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
		Y84015	1.5P								
	GH5	Y84645	2.5P								
		Y84045	1.5P								
	GH7	Y84675	2.5P								
5/16-24UNF	GH3	Y84616	2.5P	2.718	0.394	1.125	0.318	0.238	0.375	3	3
		Y84016	1.5P								
	GH4	Y84632	2.5P								
	GH5	Y84646	2.5P								
		Y84046	2.5P								
	GH7	Y84676	2.5P								
3/8-16UNC	GH3	Y84617	2.5P	2.937	0.551	1.25	0.381	0.286	0.437	3	3
		Y84017	1.5P								
	GH5	Y84647	2.5P								
		Y84047	1.5P								
	GH7	Y84677	2.5P								
		Y84077	1.5P								
3/8-24UNF	GH3	Y84618	2.5P	2.937	0.394	1.25	0.381	0.286	0.437	3	3
		Y84018	1.5P								
	GH4	Y84633	2.5P								
		Y84033	1.5P								
	GH5	Y84648	2.5P								
		Y84048	1.5P								
	GH7	Y84678	2.5P								
7/16-14UNC	GH3	Y84619	2.5P	3.156	0.591	-	0.323	0.242	0.406	3	4
		Y84019	1.5P								
	GH5	Y84649	2.5P								
		Y84049	1.5P								
	GH7	Y84679	2.5P								

ZELX SS SP Spiral Fluted Taps for Stainless Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
7/16-20UNF	GH3	Y84620	2.5P	3.156	0.472	-	0.323	0.242	0.406	3	4
		Y84020	1.5P								
	GH5	Y84650	2.5P								
		Y84050	1.5P								
	GH6	Y84691	2.5P								
	GH7	Y84680									
1/2-13UNC	GH3	Y84621	2.5P	3.375	0.63	-	0.367	0.275	0.437	3	4
		Y84021	1.5P								
	GH5	Y84651	2.5P								
		Y84051	1.5P								
	GH7	Y84681	2.5P								
1/2-20UNF	GH3	Y84622	2.5P	3.375	0.472	-	0.367	0.275	0.437	3	4
		Y84022	1.5P								
	GH5	Y84652	2.5P								
		Y84052	1.5P								
	GH6	Y84692	2.5P								
	GH7	Y84682									
9/16-12UNC	GH3	Y84653	2.5P	3.593	0.709	-	0.429	0.322	0.5	3	4
		Y84053	1.5P								
9/16-18UNF	GH3	Y84654	2.5P	3.593	0.512	-	0.429	0.322	0.5	3	4
		Y84054	1.5P								
	GH5	Y84698	2.5P								
5/8-11UNC	GH3	Y84625	2.5P	3.812	0.748	-	0.480	0.36	0.562	3	4
		Y84025	1.5P								
	GH5	Y84655	2.5P								
		Y84055	1.5P								
5/8-18UNF	GH3	Y84626	2.5P	3.812	0.512	-	0.480	0.36	0.562	3	4
		Y84026	1.5P								
	GH5	Y84656	2.5P								
		Y84056	1.5P								
	GH7	Y84672	2.5P								
3/4-10UNC	GH3	Y84627	2.5P	4.25	0.827	-	0.590	0.442	0.687	4	4
		Y84027	1.5P								
	GH5	Y84657	2.5P								
3/4-16UNF	GH3	Y84628	2.5P	4.25	0.591	-	0.590	0.442	0.687	4	4
		Y84028	1.5P								
	GH5	Y84658	2.5P								
	GH7	Y84686									
7/8-9UNC	GH4	Y84695	2.5P	4.687	0.827	-	0.697	0.523	0.75	4	4
7/8-14UNF	GH4	Y84696	2.5P	4.687	0.709	-	0.697	0.523	0.75	4	4
	GH6	Y84694									
1-8UNC	GH4	Y84697	2.5P	5.125	0.984	-	0.800	0.6	0.812	4	4
1-12UNF	GH4	Y84668	2.5P	5.125	0.709	-	0.800	0.6	0.812	4	4
1 1/8-7UNC	GH6	Y84701	2.5P	5.437	1.181	-	0.896	0.672	0.875	4	4
1 1/8-12UNF	GH5	Y84702	2.5P	5.437	0.787	-	0.896	0.672	0.875	4	4
1 1/4-7UNC	GH6	Y84703	2.5P	5.75	1.181	-	1.021	0.766	1	4	4
1 1/4-12UNF	GH5	Y84705	2.5P	5.75	0.787	-	1.021	0.766	1	4	4
1 3/8-6UNC	GH6	Y84706	2.5P	6.062	1.575	-	1.108	0.831	1.062	4	4
1 3/8-12UNF	GH5	Y84707	2.5P	6.062	0.787	-	1.108	0.831	1.062	4	4
1 1/2-6UNC	GH6	Y84709	2.5P	6.375	1.575	-	1.233	0.925	1.125	4	4

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX SS SP Spiral Fluted Taps for Stainless Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
1 1/2-12UNF	GH5	Y84711	2.5P	6.375	0.787	-	1.233	0.925	1.125	4	4
1 3/4-5UNC	GH7	Y84714	2.5P	7	1.772	-	1.43	1.072	1.25	4	4
2-4.5UNC	GH7	Y84715	2.5P	7.625	1.969	-	1.644	1.233	1.375	4	4

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX SS SP 6"

Long Shank Spiral Fluted Taps for Stainless Steels

Specification

HSS | OX Oxide

■Suitable for stainless steels, sticky and tending to work-harden, as well as chrome steels and chrome molybdenum steels. Blind hole use.

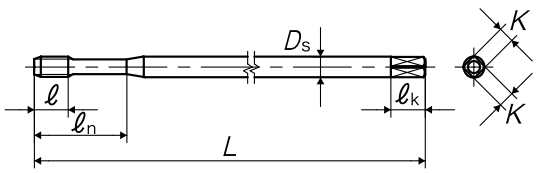
Recommended Tapping Speed depending on Materials

Alloy steels 合金鋼 5~10 (m/min)

Stainless steels ステンレス鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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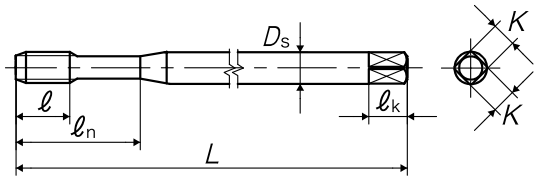

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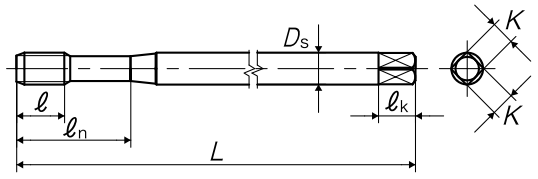

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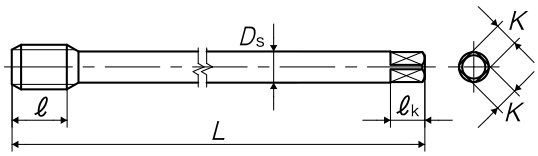


Segment : 1D

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads											
No.2-56UNC	GH2	Y84523	2.5P	6	0.157	0.437	0.141	0.11	0.187	2	1
No.3-48UNC	GH2	Y84500	2.5P	6	0.197	0.5	0.141	0.11	0.187	2	1
No.4-40UNC	GH2	Y84501	2.5P	6	0.236	0.562	0.141	0.11	0.187	2	1
No.6-32UNC	GH3	Y84505	2.5P	6	0.276	0.687	0.141	0.11	0.187	3	1
No.8-32UNC	GH3	Y84507	2.5P	6	0.276	0.75	0.168	0.131	0.25	3	1
No.10-24UNC	GH3	Y84509	2.5P	6	0.354	0.875	0.194	0.152	0.25	3	1
No.10-32UNF	GH3	Y84510	2.5P	6	0.276	0.875	0.194	0.152	0.25	3	1
1/4-20UNC	GH3	Y84513	2.5P	6	0.433	1	0.255	0.191	0.312	3	2
1/4-28UNF	GH3	Y84514	2.5P	6	0.354	1	0.255	0.191	0.312	3	2
5/16-18UNC	GH3	Y84515	2.5P	6	0.472	1.125	0.318	0.238	0.375	3	3
5/16-24UNF	GH3	Y84516	2.5P	6	0.394	1.125	0.318	0.238	0.375	3	3
3/8-16UNC	GH3	Y84517	2.5P	6	0.551	1.25	0.381	0.286	0.437	3	3
3/8-24UNF	GH3	Y84518	2.5P	6	0.394	1.25	0.381	0.286	0.437	3	3
7/16-14UNC	GH3	Y84519	2.5P	6	0.591	-	0.323	0.242	0.406	3	4
7/16-20UNF	GH3	Y84520	2.5P	6	0.472	-	0.323	0.242	0.406	3	4
1/2-13UNC	GH3	Y84521	2.5P	6	0.63	-	0.367	0.275	0.437	3	4
1/2-20UNF	GH3	Y84522	2.5P	6	0.472	-	0.367	0.275	0.437	3	4

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX AL SP

Spiral Fluted Taps for Aluminum

Specification

HSS | NI Nitride

■In aluminum die casting and aluminum casting tapping, ZELX AL SP solves such problems as chip jamming, chip clogging, and torn threads.

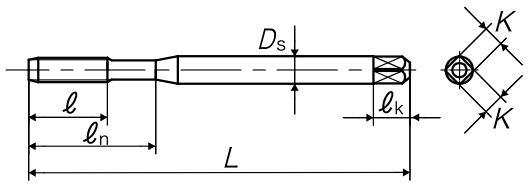
Recommended Tapping Speed depending on Materials

Brass 黄銅	Brass castings 黄銅鋳物	Bronze 青銅	Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物
10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)

Magnesium alloy die castings マグネシウム合金鋳物	Zinc alloy castings 亜鉛合金鋳物
10~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

TYPE : 1



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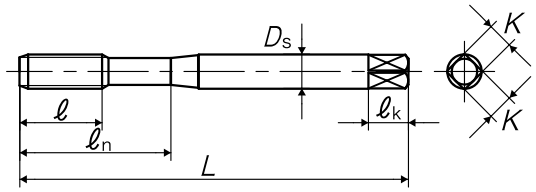
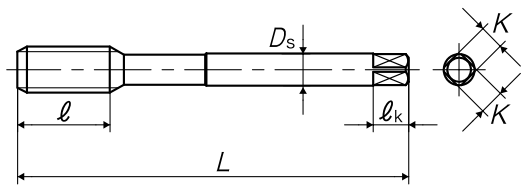


TYPE : 3



Segment : 1D

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads											
M3 × 0.5	D3	Y86528	2.5P	2.205	0.433	0.709	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y86530	2.5P	2.48	0.512	0.827	0.168	0.131	0.25	3	1
M5 × 0.8	D4	Y86531	2.5P	2.756	0.63	0.984	0.194	0.152	0.25	3	1
M6 × 1	D5	Y86532	2.5P	3.15	0.748	1.181	0.255	0.191	0.312	3	1
M8 × 1.25	D5	Y86535	2.5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
M8 × 1	D5	Y86534	2.5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
M10 × 1.5	D6	Y86537	2.5P	3.937	0.945	1.535	0.381	0.286	0.437	3	2
M12 × 1.75	D6	Y86540	2.5P	4.331	1.142	-	0.367	0.275	0.437	3	3
For Unified Threads											
No.2-56UNC	GH2	Y86500	2.5P	1.772	0.276	0.472	0.141	0.11	0.187	2	1
No.4-40UNC	GH2	Y86501	2.5P	2.205	0.433	0.709	0.141	0.11	0.187	2	1
No.5-40UNC	GH2	Y86502	2.5P	2.205	0.433	0.709	0.141	0.11	0.187	3	1
No.6-32UNC	GH3	Y86503	2.5P	2.205	0.512	0.787	0.141	0.11	0.187	3	1
No.8-32UNC	GH3	Y86504	2.5P	2.48	0.512	0.827	0.168	0.131	0.25	3	1
No.10-24UNC	GH3	Y86505	2.5P	2.756	0.63	0.984	0.194	0.152	0.25	3	1
No.10-32UNF	GH3	Y86506	2.5P	2.756	0.63	0.984	0.194	0.152	0.25	3	1
1/4-20UNC	GH3	Y86507	2.5P	3.15	0.748	1.181	0.255	0.191	0.312	3	1
	GH5	Y86508									
1/4-28UNF	GH3	Y86509	2.5P	3.15	0.748	1.181	0.255	0.191	0.312	3	1
	GH4	Y86511									
5/16-18UNC	GH3	Y86512	2.5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
3/8-16UNC	GH3	Y86516	2.5P	3.937	0.945	1.535	0.381	0.286	0.437	3	2
	GH5	Y86517									
3/8-24UNF	GH3	Y86518	2.5P	3.543	0.787	1.535	0.381	0.286	0.437	3	2

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX AL SP Spiral Fluted Taps for Aluminum

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
7/16-14UNC	GH3	Y86520	2.5P	3.937	0.945	-	0.323	0.242	0.406	3	3
1/2-13UNC	GH3	Y86524	2.5P	4.331	1.142	-	0.367	0.275	0.437	3	3
	GH5	Y86525									
1/2-20UNF	GH3	Y86526	2.5P	3.937	0.866	-	0.367	0.275	0.437	3	3

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX ALS SP

Spiral Fluted Taps for Aluminum

Specification

HSS | NI Nitride

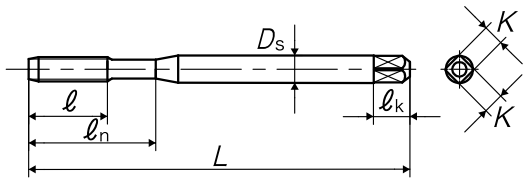
■In aluminum die casting and aluminum casting tapping, ZELX ALS SP solves such problems as chip jamming, chip clogging, and torn threads.

Recommended Tapping Speed depending on Materials

Brass 黄銅	Bronze 青銅	Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物
10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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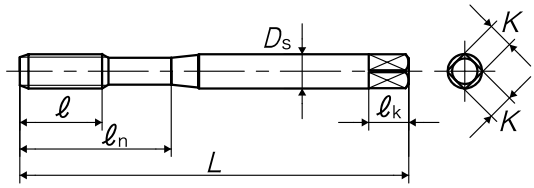

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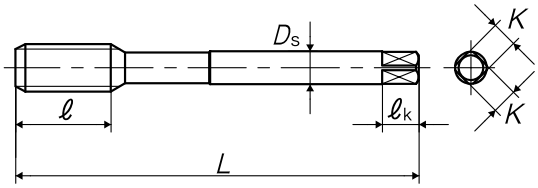

Segment : 1D

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads											
M3 × 0.5	D3	Y86428	2.5P	2.205	0.433	0.709	0.141	0.11	0.187	3	1
M3.5 × 0.6	D4	Y86429	2.5P	2.205	0.512	0.787	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y86430	2.5P	2.48	0.512	0.827	0.168	0.131	0.25	3	1
M5 × 0.8	D4	Y86431	2.5P	2.756	0.63	0.984	0.194	0.152	0.25	3	1
M6 × 1	D5	Y86432	2.5P	3.15	0.748	1.181	0.255	0.191	0.312	3	1
M7 × 1	D5	Y86433	2.5P	3.15	0.748	1.181	0.318	0.238	0.375	3	2
M8 × 1.25	D5	Y86435	2.5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
M8 × 1	D5	Y86434	2.5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
M10 × 1.5	D6	Y86437	2.5P	3.937	0.945	1.535	0.381	0.286	0.437	3	2
M10 × 1.25	D5	Y86436	2.5P	3.937	0.945	1.535	0.381	0.286	0.437	3	2
M12 × 1.75	D6	Y86440	2.5P	4.331	1.142	-	0.367	0.275	0.437	3	3
M12 × 1.25	D5	Y86438	2.5P	3.937	0.866	-	0.367	0.275	0.437	3	3
For Unified Threads											
No.2-56UNC	GH2	Y86400	2.5P	1.772	0.276	0.472	0.141	0.11	0.187	3	1
No.4-40UNC	GH2	Y86401	2.5P	2.205	0.433	0.709	0.141	0.11	0.187	3	1
No.5-40UNC	GH2	Y86402	2.5P	2.205	0.433	0.709	0.141	0.11	0.187	3	1
No.6-32UNC	GH3	Y86403	2.5P	2.205	0.512	0.787	0.141	0.11	0.187	3	1
No.8-32UNC	GH3	Y86404	2.5P	2.48	0.512	0.827	0.168	0.131	0.25	3	1
No.10-24UNC	GH3	Y86405	2.5P	2.756	0.63	0.984	0.194	0.152	0.25	3	1
No.10-32UNF	GH3	Y86406	2.5P	2.756	0.63	0.984	0.194	0.152	0.25	3	1
1/4-20UNC	GH3	Y86407	2.5P	3.15	0.748	1.181	0.255	0.191	0.312	3	1
	GH5	Y86408									
1/4-28UNF	GH3	Y86409	2.5P	3.15	0.748	1.181	0.255	0.191	0.312	3	1

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX ALS SP Spiral Fluted Taps for Aluminum

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
5/16-18UNC	GH3	Y86412	2.5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
5/16-24UNF	GH3	Y86414	2.5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
3/8-16UNC	GH3	Y86416	2.5P	3.937	0.945	1.535	0.381	0.286	0.437	3	2
	GH5	Y86417									
3/8-24UNF	GH3	Y86418	2.5P	3.543	0.787	1.535	0.381	0.286	0.437	3	2
7/16-14UNC	GH3	Y86420	2.5P	3.937	0.945	-	0.323	0.242	0.406	3	3
7/16-20UNF	GH3	Y86422	2.5P	3.937	0.945	-	0.323	0.242	0.406	3	3
1/2-13UNC	GH3	Y86424	2.5P	4.331	1.142	-	0.367	0.275	0.437	3	3
1/2-20UNF	GH3	Y86426	2.5P	3.937	0.866	-	0.367	0.275	0.437	3	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SP STI

Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts

Specification

HSS | NI Nitride

Recommended Tapping Speed depending on Materials

Brass 黄銅	Brass castings 黄銅鋳物	Bronze 青銅	Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

Magnesium alloy die castings マグネシウム合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

■On parts made from comparatively soft materials, helical coil wire thread inserts are often used in order to strengthen internal screws and increase toughness. SP STI produces threads oversize enough to accommodate helical coil wire thread inserts.

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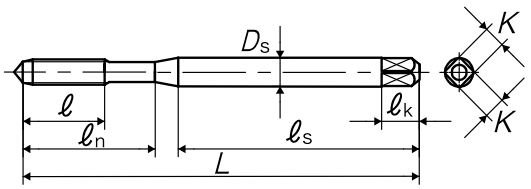

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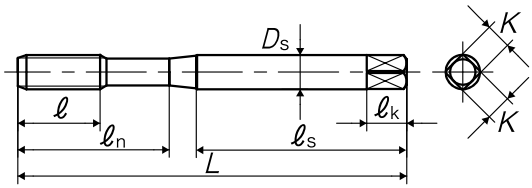

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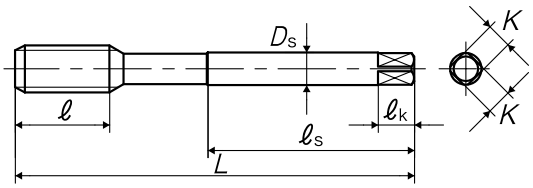

Segment : 1C

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Helical Coil Wire Screw Thread Inserts, for Unified Threads												
STI No.2-56UNC	GH1	SUUN2E1NEB	2P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	1
	GH2	SUUN2E2NEB										
STI No.4-40UNC	GH1	SUUN4H1NEB	2P	2.48	0.512	0.827	1.496	0.168	0.131	0.25	2	1
	GH2	SUUN4H2NEB										
STI No.6-32UNC	GH1	SUUN6J1NEB	2P	2.756	0.551	0.945	1.654	0.194	0.131	0.25	3	1
	GH2	SUUN6J2NEB										
STI No.8-32UNC	GH1	SUUN8J1NEB	2P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	3	1
	GH2	SUUN8J2NEB										
STI No.10-24UNC	GH2	SUUNAM2NEB	2P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
	GH3	SUUNAM3NEB										
STI No.10-32UNF	GH2	SUUNAJ2NEB	2P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
	GH3	SUUNAJ3NEB										
STI 1/4-20UNC	GH2	SUU04N2NEB	2P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	2
	GH3	SUU04N3NEB										
STI 1/4-28UNF	GH2	SUU04K2NEB	2P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	2
	GH3	SUU04K3NEB										
STI 5/16-18UNC	GH2	SUU0502NEB	2P	3.937	0.906	1.535	2.067	0.381	0.286	0.437	3	2
	GH3	SUU0503NEB										
STI 5/16-24UNF	GH2	SUU05M2NEB	2P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	2
	GH3	SUU05M3NEB										
STI 3/8-16UNC	GH2	SUU06P2NEB	2P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	3
	GH3	SUU06P3NEB										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

SP STI Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
STI 3/8-24UNF	GH2	SUU06M2NEB	2P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	3
	GH3	SUU06M3NEB										
STI 7/16-14UNC	GH2	SUU07Q2NEB	2P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	3
	GH3	SUU07Q3NEB										
STI 7/16-20UNF	GH2	SUU07N2NEB	2P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	3
	GH3	SUU07N3NEB										
STI 1/2-13UNC	GH2	SUU08R2NEB	2P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	3
	GH3	SUU08R3NEB										
STI 1/2-20UNF	GH2	SUU08N2NEB	2P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	3
	GH3	SUU08N3NEB										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SP OX STI

Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts, Oxided

Specification

HSS | OX Oxide

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

■On parts made from comparatively soft materials, helical coil wire thread inserts are often used in order to strengthen internal screws and increase toughness. SP OX STI produces threads oversize enough to accommodate helical coil wire thread inserts.

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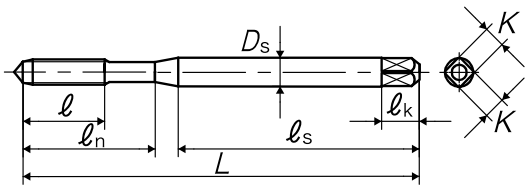

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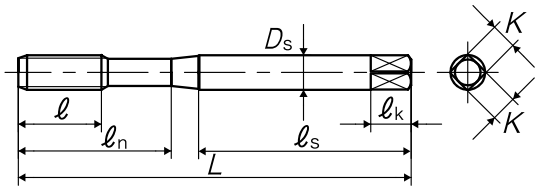

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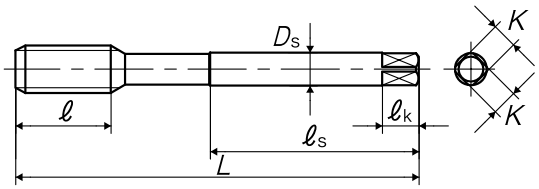

Segment : 1C

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Helical Coil Wire Screw Thread Inserts, for Unified Threads												
STI No.2-56UNC	GH1	SUUN2E1NEX	2P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	1
	GH2	SUUN2E2NEX										
STI No.4-40UNC	GH1	SUUN4H1NEX	2P	2.48	0.512	0.827	1.496	0.168	0.131	0.25	2	1
	GH2	SUUN4H2NEX										
STI No.6-32UNC	GH1	SUUN6J1NEX	2P	2.756	0.551	0.945	1.654	0.194	0.131	0.25	3	1
	GH2	SUUN6J2NEX										
STI No.8-32UNC	GH1	SUUN8J1NEX	2P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	3	1
	GH2	SUUN8J2NEX										
STI No.10-24UNC	GH2	SUUNAM2NEX	2P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
	GH3	SUUNAM3NEX										
STI No.10-32UNF	GH2	SUUNAJ2NEX	2P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
	GH3	SUUNAJ3NEX										
STI 1/4-20UNC	GH2	SUU04K2NEX	2P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	2
	GH3	SUU04N3NEX										
STI 1/4-28UNF	GH2	SUU04N2NEX	2P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	2
	GH3	SUU04K3NEX										
STI 5/16-18UNC	GH2	SUU05O2NEX	2P	3.937	0.906	1.535	2.067	0.381	0.286	0.437	3	2
	GH3	SUU05O3NEX										
STI 5/16-24UNF	GH2	SUU05M2NEX	2P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	2
	GH3	SUU05M3NEX										
STI 3/8-16UNC	GH2	SUU06P2NEX	2P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	3
	GH3	SUU06P3NEX										
STI 3/8-24UNF	GH2	SUU06M2NEX	2P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	3
	GH3	SUU06M3NEX										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

SP OX STI Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts, Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
STI 7/16-14UNC	GH2	SUU07Q2NEX	2P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	3
	GH3	SUU07Q3NEX										
STI 7/16-20UNF	GH2	SUU07N2NEX	2P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	3
	GH3	SUU07N3NEX										
STI 1/2-13UNC	GH2	SUU08R2NEX	2P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	3
	GH3	SUU08R3NEX										
STI 1/2-20UNF	GH2	SUU08N2NEX	2P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	3
	GH3	SUU08N3NEX										

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX TI SP

Spiral Fluted Taps for Titanium Alloys

Specification

HSS-P | NI Nitride | Synchro nized

■Spiral Fluted Tap suitable for titanium alloys which, including titanium as the main composition, are tough, light and heat resistant.

Recommended Tapping Speed depending on Materials

Titanium alloys チタン合金 5~10 (m/min)

For icon explanation, refer to P.24

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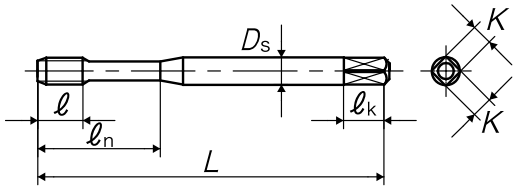

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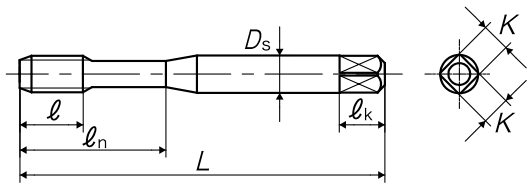

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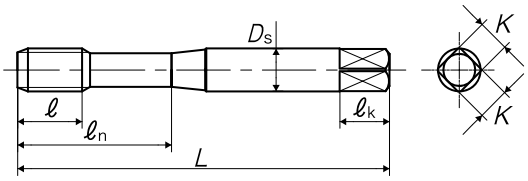

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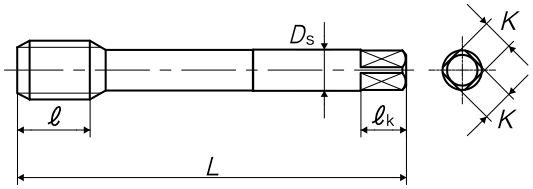


Segment : 1D

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads											
M2.5 × 0.45	D3	Y87700	3P	1.812	0.157	0.5	0.141	0.11	0.187	3	1
M3 × 0.5	D3	Y87701	3P	1.937	0.197	0.625	0.141	0.11	0.187	3	1
M3.5 × 0.6	D4	Y87702	3P	2	0.276	0.687	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y87703	3P	2.125	0.276	0.75	0.168	0.131	0.25	3	1
M5 × 0.8	D4	Y87704	3P	2.375	0.354	0.875	0.194	0.152	0.25	3	1
M6 × 1	D5	Y87705	3P	2.5	0.433	1	0.255	0.191	0.312	3	2
M7 × 1	D5	Y87706	3P	2.718	0.433	1.125	0.318	0.238	0.375	3	3
M8 × 1.25	D5	Y87708	3P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
M8 × 1	D5	Y87707	3P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
M10 × 1.5	D6	Y87710	3P	2.937	0.512	1.25	0.381	0.286	0.437	3	3
M10 × 1.25	D5	Y87709	3P	2.937	0.472	1.25	0.381	0.286	0.437	3	3
M12 × 1.25	D5	Y87711	3P	3.375	0.551	-	0.367	0.275	0.437	3	4
For Unified Threads											
No.2-56UNC	GH2	Y87623	3P	1.75	0.157	0.437	0.141	0.11	0.187	3	1
No.4-40UNC	GH2	Y87601	3P	1.875	0.236	0.562	0.141	0.11	0.187	3	1
	GH4	Y87612									
		Y87001	1.5P								
No.6-32UNC	GH3	Y87605	3P	2	0.276	0.687	0.141	0.11	0.187	3	1
		Y87606	1.5P								

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX TI SP Spiral Fluted Taps for Titanium Alloys

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
No.6-32UNC	GH4	Y87608	3P	2	0.276	0.687	0.141	0.11	0.187	3	1
	GH5	Y87635									
No.8-32UNC	GH3	Y87607	3P	2.125	0.276	0.75	0.168	0.131	0.25	3	1
		Y87007	1.5P								
	GH4	Y87629	3P								
	GH5	Y87637									
	GH6	Y87660									
	GH7	Y87667									
No.10-24UNC	GH3	Y87609	3P	2.375	0.354	0.875	0.194	0.152	0.25	3	1
		Y81608	1.5P								
No.10-32UNF	GH3	Y87610	3P	2.375	0.276	0.875	0.194	0.152	0.25	3	1
		Y87010	1.5P								
	GH4	Y87630	3P								
	GH5	Y87640									
	GH6	Y87661									
	GH7	Y87670									
1/4-20UNC	GH3	Y87613	3P	2.5	0.433	1	0.255	0.191	0.312	3	2
		Y87628	1.5P								
1/4-28UNF	GH3	Y87614	3P	2.5	0.354	1	0.255	0.191	0.312	3	2
		Y87014	1.5P								
	GH4	Y87631	3P								
	GH5	Y87644									
	GH6	Y87662									
	GH7	Y87674									
5/16-18UNC	GH3	Y87615	3P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
		Y87695	1.5P								
5/16-24UNF	GH3	Y87616	3P	2.718	0.394	1.125	0.318	0.238	0.375	3	3
		Y87016	1.5P								
	GH4	Y87632	3P								
	GH5	Y87646									
	GH6	Y87663									
	GH7	Y87676									
3/8-16UNC	GH3	Y87617	3P	2.937	0.551	1.25	0.381	0.286	0.437	3	3
		Y87611	1.5P								
3/8-24UNF	GH3	Y87618	3P	2.937	0.394	1.25	0.381	0.286	0.437	3	3
		Y87018	1.5P								
	GH4	Y87633	3P								
	GH5	Y87648									
	GH6	Y87664									
	GH7	Y87678									
7/16-14UNC	GH3	Y87619	3P	3.156	0.591	-	0.323	0.242	0.406	3	4
		Y81629	1.5P								
7/16-20UNF	GH3	Y87620	3P	3.156	0.472	-	0.323	0.242	0.406	3	4
		Y87020	1.5P								
	GH5	Y87650	3P								
1/2-13UNC	GH3	Y87621	3P	3.375	0.630	-	0.367	0.275	0.437	3	4
		Y87021	1.5P								
	GH5	Y87626	3P								
1/2-20UNF	GH3	Y87622	3P	3.375	0.472	-	0.367	0.275	0.437	3	4
		Y87023	1.5P								
	GH5	Y87652	3P								

MEMO

ZELX NI SP

Spiral Fluted Taps for Nickel Base Alloys

Specification

HSS-P | NX Nitride/Oxide | Synchro nized

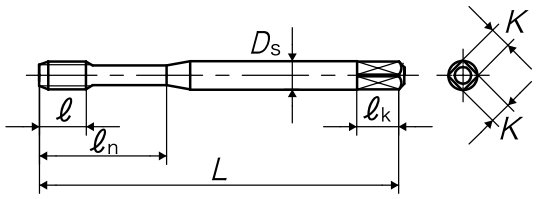
■ZELX NI SP is the spiral fluted tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and much higher heat resistance than steels.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼	Nickel base alloys ニッケル基合金
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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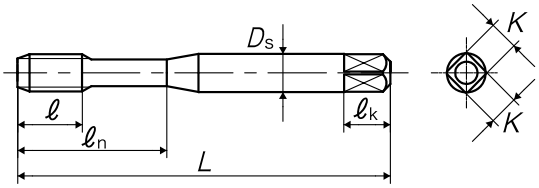

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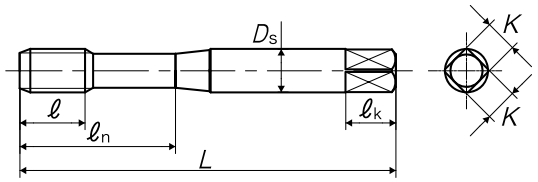

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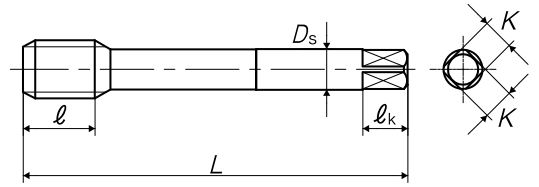


Segment : 1D

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads											
M2.5 × 0.45	D3	Y88320	3P	1.812	0.157	0.5	0.141	0.11	0.187	3	1
M3 × 0.5	D3	Y88321	3P	1.937	0.197	0.625	0.141	0.11	0.187	3	1
M3.5 × 0.6	D4	Y88322	3P	2	0.276	0.687	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y88323	3P	2.125	0.276	0.75	0.168	0.131	0.25	3	1
M5 × 0.8	D4	Y88324	3P	2.375	0.354	0.875	0.194	0.152	0.25	3	1
M6 × 1	D5	Y88325	3P	2.5	0.433	1	0.255	0.191	0.312	3	2
M7 × 1	D5	Y88326	3P	2.718	0.433	1.125	0.318	0.238	0.375	3	3
M8 × 1.25	D5	Y88328	3P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
M8 × 1	D5	Y88327	3P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
M10 × 1.5	D6	Y88330	3P	2.937	0.512	1.25	0.381	0.286	0.437	3	3
M10 × 1.25	D5	Y88329	3P	2.937	0.472	1.25	0.381	0.286	0.437	3	3
M12 × 1.75	D6	Y88332	3P	3.375	0.591	-	0.367	0.275	0.437	3	4
M12 × 1.25	D5	Y88331	3P	3.375	0.551	-	0.367	0.275	0.437	3	4
For Unified Threads											
No.2-56UNC	GH2	Y87523	3P	1.75	0.157	0.437	0.141	0.11	0.187	3	1
No.4-40UNC	GH2	Y87501	3P	1.875	0.236	0.562	0.141	0.11	0.187	3	1
	GH3	Y87502									
		Y87002	1.5P								
	GH2	Y87583									
	GH4	Y87512	3P								

Think threads with YAMAWA

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX NI SP Spiral Fluted Taps for Nickel Base Alloys

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
No.4-40UNC	GH5	Y87534	3P	1.875	0.236	0.562	0.141	0.11	0.187	3	1
No.5-40UNC	GH2	Y87503	3P	1.937	0.236	0.625	0.141	0.11	0.187	3	1
No.6-32UNC	GH2	Y87504	3P	2	0.276	0.687	0.141	0.11	0.187	3	1
		Y87006	1.5P								
	GH3	Y87505	3P								
		Y87005	1.5P								
	GH4	Y87508	3P								
	GH5	Y87535									
		Y87035	1.5P								
	GH6	Y87559	3P								
	GH7	Y87565									
No.8-32UNC	GH2	Y87506	3P	2.125	0.276	0.75	0.168	0.131	0.25	3	1
	GH3	Y87507									
		Y87580	1.5P								
	GH4	Y87529	3P								
	GH5	Y87537									
		Y87037	1.5P								
	GH6	Y87560	3P								
	GH7	Y87567									
No.10-24UNC	GH3	Y87509	3P	2.375	0.354	0.875	0.194	0.152	0.25	3	1
		Y87009	1.5P								
	GH5	Y87539	3P								
No.10-32UNF	GH2	Y87511	3P	2.375	0.276	0.875	0.194	0.152	0.25	3	1
	GH3	Y87510									
		Y81556	1.5P								
	GH4	Y87530	3P								
	GH5	Y87540									
		Y87040	1.5P								
	GH6	Y87561	3P								
	GH7	Y87570									
1/4-20UNC	GH3	Y87513	3P	2.5	0.433	1	0.255	0.191	0.312	3	2
		Y87013	1.5P								
	GH5	Y87543	3P								
		Y87043	1.5P								
1/4-28UNF	GH3	Y87514	3P	2.5	0.354	1	0.255	0.191	0.312	3	2
		Y87579	1.5P								
	GH4	Y87531	3P								
		Y87031	1.5P								
	GH5	Y87544	3P								
		Y87443	1.5P								
	GH6	Y87562	3P								
	GH7	Y87574									
5/16-18UNC	GH3	Y87515	3P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
		Y87015	1.5P								
	GH5	Y87545	3P								
		Y87045	1.5P								
5/16-24UNF	GH3	Y87516	3P	2.718	0.394	1.125	0.318	0.238	0.375	3	3
		Y87577	1.5P								
	GH4	Y87532	3P								
	GH5	Y87546									

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX NI SP Spiral Fluted Taps for Nickel Base Alloys

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
5/16-24UNF	GH6	Y87563	3P	2.718	0.394	1.125	0.318	0.238	0.375	3	3
	GH7	Y87576									
3/8-16UNC	GH3	Y87517	3P	2.937	0.551	1.25	0.381	0.286	0.437	3	3
		Y87017	1.5P								
	GH5	Y87547	3P								
		Y87047	1.5P								
3/8-24UNF	GH3	Y87518	3P	2.937	0.394	1.25	0.381	0.286	0.437	3	3
	GH4	Y87533									
		Y87033	1.5P								
	GH5	Y87548	3P								
	GH6	Y87564									
	GH7	Y87578									
7/16-14UNC	GH3	Y87519	3P	3.156	0.591	-	0.323	0.242	0.406	3	4
	GH5	Y87549									
7/16-20UNF	GH3	Y87520	3P	3.156	0.472	-	0.323	0.242	0.406	3	4
		Y87573	1.5P								
	GH5	Y87550	3P								
		Y87050	1.5P								
1/2-13UNC	GH3	Y87521	3P	3.375	0.630	-	0.367	0.275	0.437	3	4
		Y87500	1.5P								
	GH5	Y87551	3P								
		Y87051	1.5P								
	GH7	Y87581	3P								
1/2-20UNF	GH3	Y87522	3P	3.375	0.472	-	0.367	0.275	0.437	3	4
		Y87022	1.5P								
	GH5	Y87552	3P								
	GH7	Y87582									
9/16-18UNF	GH3	Y88554	3P	3.593	0.512	-	0.429	0.322	0.5	3	4
	GH5	Y88542									
5/8-11UNC	GH3	Y87525	3P	3.812	0.748	-	0.480	0.36	0.562	4	4
	GH5	Y87555									
	GH7	Y87585									
5/8-18UNF	GH3	Y87526	3P	3.812	0.512	-	0.480	0.36	0.562	4	4
		Y81508	1.5P								
	GH4	Y87536	3P								
	GH5	Y87556									
3/4-10UNC	GH3	Y87527	3P	4.25	0.827	-	0.590	0.442	0.687	4	4
		Y87027	1.5P								
	GH5	Y87557	3P								
3/4-16UNF	GH3	Y87528	3P	4.25	0.591	-	0.590	0.442	0.687	4	4
	GH5	Y87558									

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX NI SP STI

Spiral Fluted Taps for Nickel Base Alloys, for Helical Coil Wire Screw Thread Inserts

Specification

HSS-P | NX Nitride/Oxide | Synchronized

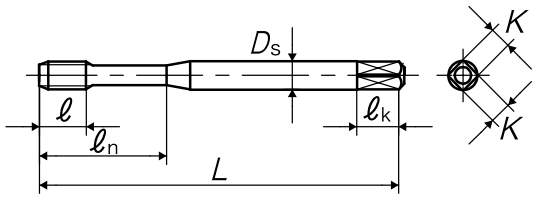
■ZELX NI SP STI is the tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and higher heat resistance than steels, and produces threads oversize enough to accommodate helical coil wire thread inserts.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼	Nickel base alloys ニッケル基合金
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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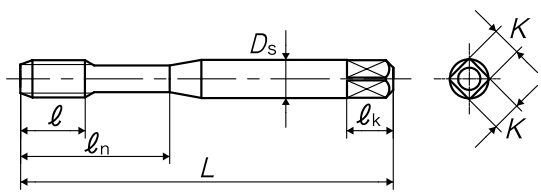

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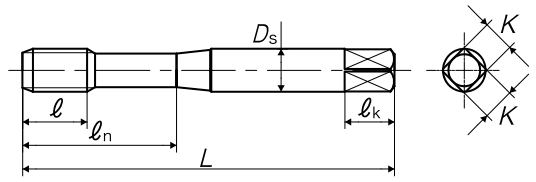

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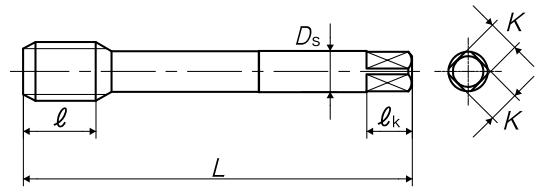


Segment : 1D

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Helical Coil Wire Screw Thread Inserts, for Unified Threads											
STI No.2-56UNC	GH2	Y87400	3P	1.875	0.236	0.562	0.141	0.11	0.187	3	1
STI No.4-40UNC	GH1	Y87403	3P	2	0.276	0.687	0.141	0.11	0.187	3	1
	GH2	Y87404	3P								
		Y87004	1.5P								
	GH3	Y87420	3P								
		Y87419	1.5P								
STI No.6-32UNC	GH2	Y87408	3P	2.375	0.354	0.875	0.194	0.152	0.25	3	1
		Y87008	1.5P								
	GH3	Y87424	3P								
STI No.6-40UNF	GH2	Y87409	3P	2.125	0.276	0.75	0.168	0.131	0.25	3	1
STI No.8-32UNC	GH1	Y81409	3P	2.375	0.354	0.937	0.22	0.165	0.281	3	1
	GH2	Y87410									
	GH3	Y87426									
STI No.10-24UNC	GH2	Y87412	3P	2.5	0.433	1	0.255	0.191	0.312	3	2
	GH3	Y87428									
		Y87028	1.5P								
STI No.10-32UNF	GH2	Y87413	3P	2.5	0.354	1	0.255	0.191	0.312	3	2
	GH3	Y87429									
		Y87029	1.5P								
	GH5	Y87057									

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX NI SP STI Spiral Fluted Taps for Nickel Base Alloys, for Helical Coil Wire Screw Thread Inserts

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
STI 1/4-20UNC	GH2	Y87448	3P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
	GH3	Y87458									
		Y87058	1.5P								
STI 1/4-28UNF	GH2	Y87449	3P	2.718	0.394	1.125	0.318	0.238	0.375	3	3
	GH3	Y87459									
STI 5/16-18UNC	GH3	Y87460	3P	2.937	0.551	1.25	0.381	0.286	0.437	3	3
	GH4	Y87470									
STI 5/16-24UNF	GH2	Y87451	3P	2.937	0.394	1.25	0.381	0.286	0.437	3	3
	GH3	Y87461									
		Y87061	1.5P								
STI 3/8-16UNC	GH3	Y87462	3P	3.375	0.630	-	0.367	0.275	0.437	3	4
	GH4	Y87472									
STI 3/8-24UNF	GH2	Y87453	3P	3.156	0.472	-	0.323	0.242	0.406	3	4
		Y87063	1.5P								
	GH3	Y87463	3P								
STI 7/16-14UNC	GH3	Y87464	3P	3.593	0.709	-	0.429	0.322	0.5	3	4
STI 7/16-20UNF	GH3	Y87465	3P	3.375	0.472	-	0.367	0.275	0.437	3	4
	GH4	Y87475									
STI 1/2-13UNC	GH3	Y87466	3P	3.812	0.748	-	0.480	0.36	0.562	3	4
STI 1/2-20UNF	GH3	Y87467	3P	3.593	0.512	-	0.429	0.322	0.5	3	4
		Y87067	1.5P								

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX FR

Spiral Fluted Taps for High Speed Tapping

Specification

HSS Coating Synchronized

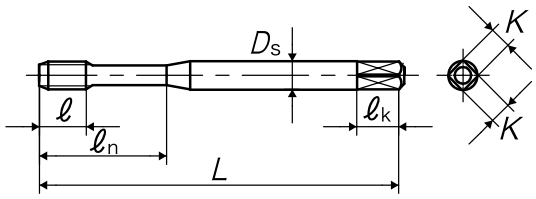
■Spiral Fluted Tap applicable for such high speed tapping as 15m/min to 25m/min. Under low tapping speed, poor chip shape and poor chip ejection may occur and cause tapping troubles.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
15~25 (m/min)	15~25 (m/min)

For icon explanation, refer to P.24

TYPE:1



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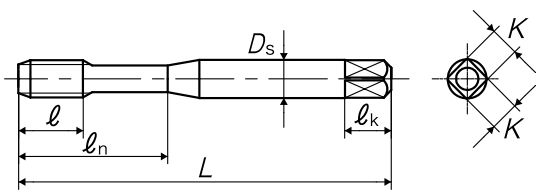

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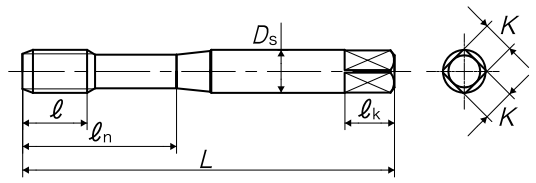

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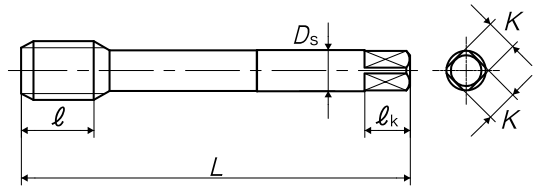

Segment : 1D

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads											
No.4-40UNC	GH2	Y84401	2.5P	1.875	0.236	0.562	0.141	0.11	0.187	3	1
No.5-40UNC	GH2	Y84403	2.5P	1.937	0.236	0.625	0.141	0.11	0.187	3	1
No.8-32UNC	GH3	Y84407	2.5P	2.125	0.276	0.75	0.168	0.131	0.25	3	1
No.10-24UNC	GH3	Y84409	2.5P	2.375	0.354	0.875	0.194	0.152	0.25	3	1
No.10-32UNF	GH3	Y84410	2.5P	2.375	0.276	0.875	0.194	0.152	0.25	3	1
1/4-20UNC	GH3	Y84413	2.5P	2.5	0.433	1	0.255	0.191	0.312	3	2
1/4-28UNF	GH3	Y84414	2.5P	2.5	0.354	1	0.255	0.191	0.312	3	2
5/16-18UNC	GH3	Y84415	2.5P	2.718	0.472	1.125	0.318	0.238	0.375	3	3
5/16-24UNF	GH3	Y84416	2.5P	2.718	0.394	1.125	0.318	0.238	0.375	3	3
3/8-16UNC	GH3	Y84417	2.5P	2.937	0.551	1.25	0.381	0.286	0.437	3	3
3/8-24UNF	GH3	Y84418	2.5P	2.937	0.394	1.25	0.381	0.286	0.437	3	3
7/16-14UNC	GH3	Y84419	2.5P	3.156	0.591	-	0.323	0.242	0.406	3	4
7/16-20UNF	GH3	Y84420	2.5P	3.156	0.472	-	0.323	0.242	0.406	3	4
1/2-13UNC	GH3	Y84421	2.5P	3.375	0.63	-	0.367	0.275	0.437	3	4
1/2-20UNF	GH3	Y84422	2.5P	3.375	0.472	-	0.367	0.275	0.437	3	4
5/8-11UNC	GH3	Y84425	2.5P	3.812	0.748	-	0.48	0.36	0.562	3	4
5/8-18UNF	GH3	Y84426	2.5P	3.812	0.512	-	0.48	0.36	0.562	3	4
3/4-10UNC	GH3	Y84427	2.5P	4.25	0.827	-	0.59	0.442	0.687	4	4
3/4-16UNF	GH3	Y84428	2.5P	4.25	0.591	-	0.59	0.442	0.687	4	4

ZELX TI LHSP

Spiral Fluted Taps for Titanium Alloys, Through Hole Use (with LH spiral flutes)

Specification

HSS-P | NI Nitride | Synchro nized

■Suitable for titanium alloys which, including titanium as the main composition, are tough, light and heat resistant.

Recommended Tapping Speed depending on Materials

Titanium alloys チタン合金 5~10 (m/min)

For icon explanation, refer to P.24

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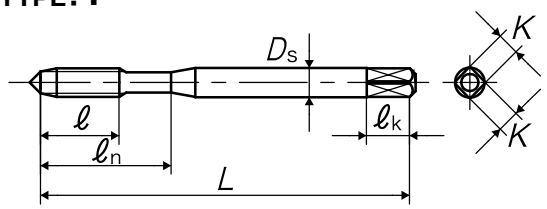

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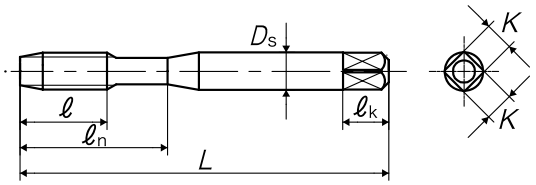

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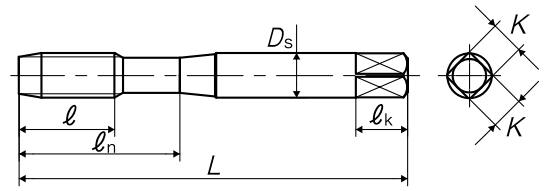

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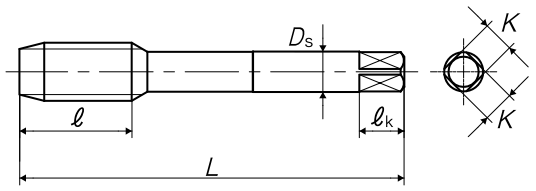

Segment : 1T

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads											
M2.5 × 0.45	D3	Y85700	5P	1.812	0.295	0.5	0.141	0.11	0.187	3	1
M3 × 0.5	D3	Y85701	5P	1.937	0.374	0.625	0.141	0.11	0.187	3	1
M3.5 × 0.6	D4	Y85702	5P	2	0.413	0.687	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y85703	5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
M5 × 0.8	D4	Y85704	5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
M6 × 1	D5	Y85705	5P	2.5	0.591	1	0.255	0.191	0.312	3	2
M7 × 1	D5	Y85706	5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
M8 × 1.25	D5	Y85708	5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
M10 × 1.5	D6	Y85710	5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
M10 × 1.25	D5	Y85709	5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
M12 × 1.75	D6	Y85712	5P	3.375	0.984	-	0.367	0.275	0.437	3	4
M12 × 1.25	D5	Y85711	5P	3.375	0.984	-	0.367	0.275	0.437	3	4
For Unified Threads											
No.2-56UNC	GH2	Y85623	5P	1.75	0.256	0.437	0.141	0.11	0.187	3	1
No.4-40UNC	GH2	Y85601	5P	1.875	0.335	0.562	0.141	0.11	0.187	3	1
No.5-40UNC	GH2	Y85603	5P	1.937	0.374	0.625	0.141	0.11	0.187	3	1
No.6-32UNC	GH3	Y85605	5P	2	0.413	0.687	0.141	0.11	0.187	3	1
	GH5	Y85635									
No.8-32UNC	GH3	Y85607	5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
	GH4	Y85629									

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX TI LHSP Spiral Fluted Taps for Titanium Alloys, Through Hole Use (with LH spiral flutes)

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
No.8-32UNC	GH5	Y85637	5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
	GH6	Y85660									
	GH7	Y85667									
No.10-24UNC	GH3	Y85609	5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
	GH5	Y85639									
No.10-32UNF	GH3	Y85610	5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
	GH4	Y85630									
	GH5	Y85640									
	GH6	Y85661									
	GH7	Y85670									
1/4-20UNC	GH3	Y85613	5P	2.5	0.591	1	0.255	0.191	0.312	3	2
	GH5	Y85643									
1/4-28UNF	GH3	Y85614	5P	2.5	0.591	1	0.255	0.191	0.312	3	2
	GH4	Y85631									
	GH5	Y85644									
	GH6	Y85662									
	GH7	Y85674									
5/16-18UNC	GH3	Y85615	5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
	GH5	Y85645									
5/16-24UNF	GH3	Y85616	5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
	GH4	Y85632									
	GH5	Y85646									
	GH6	Y85663									
	GH7	Y85676									
3/8-16UNC	GH3	Y85617	5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
	GH5	Y85647									
3/8-24UNF	GH3	Y85618	5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
	GH4	Y85633									
	GH5	Y85648									
	GH6	Y85664									
	GH7	Y85678									
7/16-14UNC	GH3	Y85619	5P	3.156	0.866	-	0.323	0.242	0.406	3	4
	GH5	Y85649									
7/16-20UNF	GH3	Y85620	5P	3.156	0.866	-	0.323	0.242	0.406	3	4
	GH5	Y85650									
1/2-13UNC	GH3	Y85621	5P	3.375	0.984	-	0.367	0.275	0.437	3	4
	GH5	Y85651									
1/2-20UNF	GH3	Y85622	5P	3.375	0.984	-	0.367	0.275	0.437	3	4
	GH5	Y85652									
5/8-11UNC	GH3	Y85625	5P	3.812	1.083	-	0.480	0.36	0.562	3	4
5/8-18UNF	GH3	Y85626	5P	3.812	1.083	-	0.480	0.36	0.562	3	4
3/4-10UNC	GH3	Y85627	5P	4.25	1.201	-	0.590	0.442	0.687	3	4
3/4-16UNF	GH3	Y85628	5P	4.25	1.201	-	0.590	0.442	0.687	3	4

MEMO

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX FR LHSP

Spiral Fluted Taps for High Speed Tapping, Through Hole Use (with LH spiral flutes)

Specification

HSS Coating Synchro nized

■ZELX FR LHSP, spiral fluted tap, through hole use (with LH spiral flutes) is applicable for such high speed tapping as 15m/min to 25m/min. Under low tapping speed, chip shape and chip ejection may become poor and cause tapping troubles.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
15~25 (m/min)	15~25 (m/min)

For icon explanation, refer to P.24

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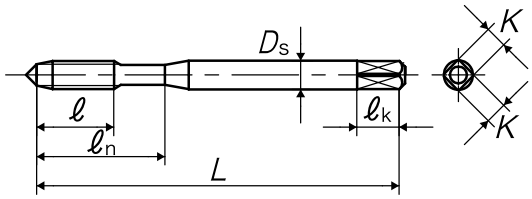

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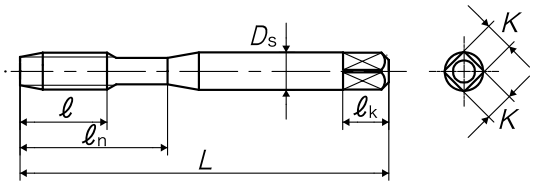

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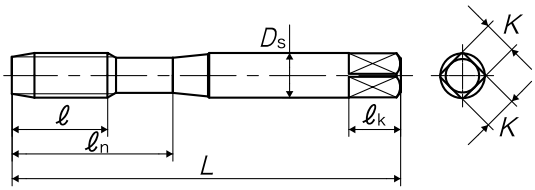

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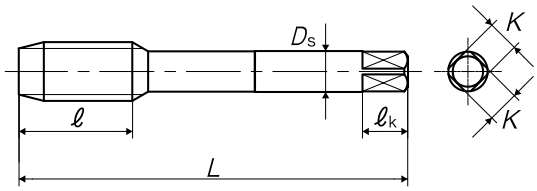

Segment : 1S

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads											
No.4-40UNC	GH2	Y84201	5P	1.875	0.335	0.562	0.141	0.11	0.187	3	1
No.5-40UNC	GH2	Y84203	5P	1.937	0.374	0.625	0.141	0.11	0.187	3	1
No.6-32UNC	GH3	Y84205	5P	2	0.413	0.687	0.141	0.11	0.187	3	1
No.8-32UNC	GH3	Y84207	5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
No.10-24UNC	GH3	Y84209	5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
No.10-32UNF	GH3	Y84210	5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
1/4-20UNC	GH3	Y84213	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
1/4-28UNF	GH3	Y84214	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
5/16-18UNC	GH3	Y84215	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
5/16-24UNF	GH3	Y84216	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
3/8-16UNC	GH3	Y84217	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
3/8-24UNF	GH3	Y84218	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
7/16-14UNC	GH3	Y84219	4.5P	3.156	0.984	-	0.323	0.242	0.406	3	4
7/16-20UNF	GH3	Y84220	4.5P	3.156	0.866	-	0.323	0.242	0.406	3	4
1/2-13UNC	GH3	Y84221	4.5P	3.375	1.142	-	0.367	0.275	0.437	3	4
1/2-20UNF	GH3	Y84222	4.5P	3.375	0.945	-	0.367	0.275	0.437	3	4
5/8-11UNC	GH3	Y84225	4.5P	3.812	1.26	-	0.48	0.36	0.562	3	4
5/8-18UNF	GH3	Y84226	4.5P	3.812	0.984	-	0.48	0.36	0.562	3	4
3/4-10UNC	GH3	Y84227	4.5P	4.25	1.467	-	0.59	0.422	0.687	4	4
3/4-16UNF	GH3	Y84228	4.5P	4.25	1.142	-	0.59	0.422	0.687	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

MHSL

Spiral Fluted Taps for Carbon Steels of middle hardness, Through Hole Use (with LH spiral flutes)

Specification

HSS-Co | Coating | Synchronized

■Suitable for through hole tapping of middle hardness steels such as forgings of high carbon steels and thermal refined steels (20HRC～30HRC)

Recommended Tapping Speed depending on Materials

High carbon steels 高炭素鋼	Medium carbon steels 中炭素鋼	Alloy steels 合金鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

For icon explanation, refer to P.24

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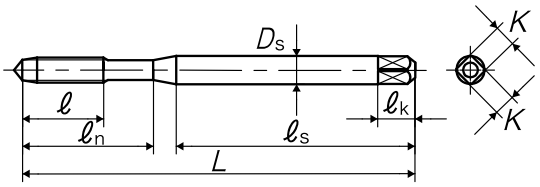

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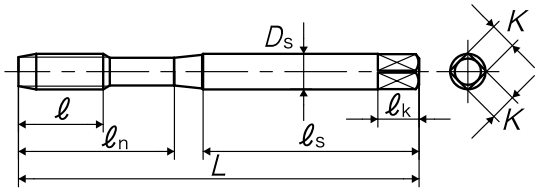

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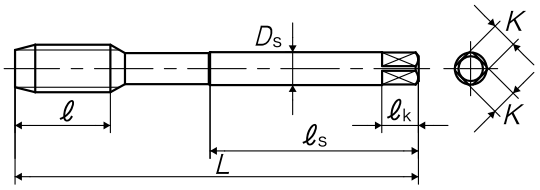

Segment : 1T

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads												
M6 × 1	D5	LS6.0MEFCL5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
M8 × 1.25	D5	LS8.0NEFCL5	5P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	3	2
M10 × 1.25	D6	LS010NFFCL5	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	3
M12 × 1.25	D6	LS012NFFCL7	7P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	3
M14 × 1.5	D7	LS014OHFCL7	7P	4.331	1.024	-	2.205	0.429	0.322	0.5	4	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

IPO

Spiral Pointed Taps for General Purpose

Specification

HSS | OX Oxide

■Suitable for low speed tapping of steels. For manual use and drilling machine use.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

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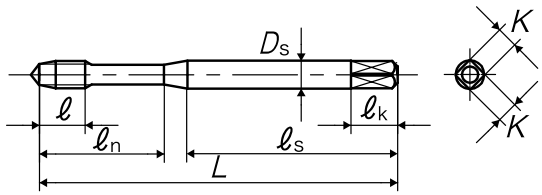

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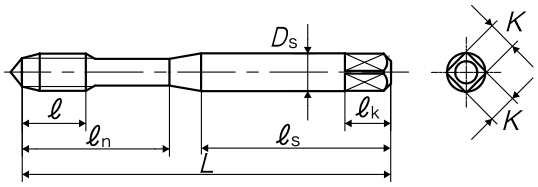

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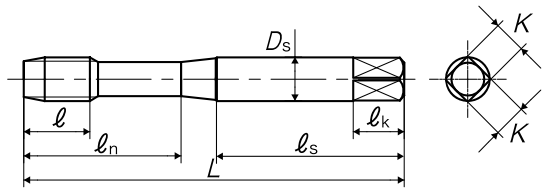


Segment : 1E

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads												
No.6-32UNC	-	VAUN6JXHEX	4.5P	2	0.374	0.669	1.201	0.141	0.11	0.187	2	1
No.8-32UNC	-	VAUN8JXHEX	4.5P	2.125	0.374	0.866	1.339	0.168	0.131	0.25	2	1
No.10-24UNC	-	VAUNAMXHEX	4.5P	2.375	0.512	0.866	1.339	0.194	0.152	0.25	2	1
1/4-20UNC	-	VAU04NXHEX	4.5P	2.5	0.591	1.024	1.22	0.255	0.191	0.312	2	2
5/16-18UNC	-	VAU05OXHEX	4.5P	2.718	0.669	1.004	1.378	0.318	0.238	0.375	3	3
3/8-16UNC	-	VAU06PXHEX	4.5P	2.937	0.748	1.059	1.496	0.381	0.286	0.437	3	3
For Unified Threads (In blister package)												
No.6-32UNC	-	VAUN6JXHEXR	4.5P	2	0.374	0.669	1.201	0.141	0.11	0.187	2	1
No.8-32UNC	-	VAUN8JXHEXR	4.5P	2.125	0.374	0.866	1.339	0.168	0.131	0.25	2	1
No.10-24UNC	-	VAUNAMXHEXR	4.5P	2.375	0.512	0.866	1.339	0.194	0.152	0.25	2	1
1/4-20UNC	-	VAU04NXHEXR	4.5P	2.5	0.591	1.024	1.22	0.255	0.191	0.312	2	2
5/16-18UNC	-	VAU05OXHEXR	4.5P	2.718	0.669	1.004	1.378	0.318	0.238	0.375	3	3
3/8-16UNC	-	VAU06PXHEXR	4.5P	2.937	0.748	1.059	1.496	0.381	0.286	0.437	3	3

Blister Package

PO

Spiral Pointed Taps

Specification

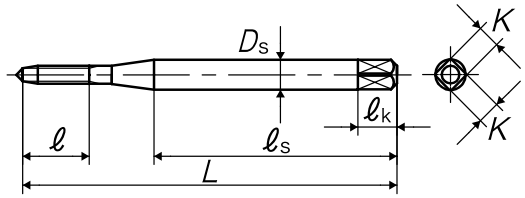
HSS

Recommended Tapping Speed depending on Materials

Medium carbon steels 中炭素鋼
5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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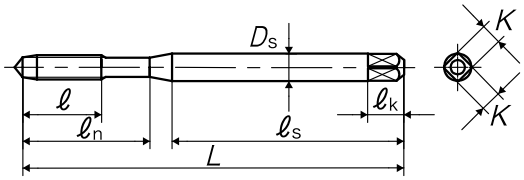

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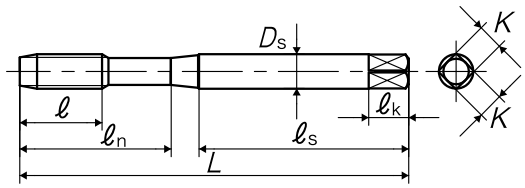

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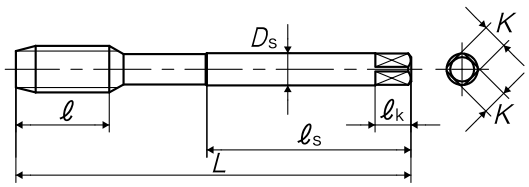


Segment : 1E

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads												
NO.0-80UNF	GH1	PSUN0B1NEB	5P	1.772	0.236	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN0B2NEB										
NO.1-64UNC	GH1	PSUN1D1NEB	5P	1.772	0.275	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN1D2NEB										
NO.1-72UNF	GH1	PSUN1C1NEB	5P	1.772	0.275	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN1C2NEB										
NO.2-56UNC	GH1	PSUN2E1NEB	5P	1.772	0.314	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN2E2NEB										
NO.2-64UNF	GH1	PSUN2D1NEB	5P	1.772	0.314	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN2D2NEB										
NO.3-48UNC	GH1	PSUN3F1NEB	5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	2	2
	GH2	PSUN3F2NEB										
NO.3-56UNF	GH1	PSUN3E1NEB	5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	2	2
	GH2	PSUN3E2NEB										
No.4-40UNC	GH2	PSUN4H2NEB	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	2
	GH3	PSUN4H3NEB										
NO.4-48UNF	GH1	PSUN4F1NEB	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	2
	GH2	PSUN4F2NEB										
No.5-40UNC	GH2	PSUN5H2NEB	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH3	PSUN5H3NEB										

Think threads with YAMAWA

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

PO Spiral Pointed Taps

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
NO.5-44UNF	GH1	PSUN5G1NEB	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH2	PSUN5G2NEB										
	GH3	PSUN5G3NEB										
No.6-32UNC	GH2	PSUN6J2NEB	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH3	PSUN6J3NEB										
No.6-40UNF	GH2	PSUN6H2NEB	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH3	PSUN6H3NEB										
No.8-32UNC	GH2	PSUN8J2NEB	5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	2	2
	GH3	PSUN8J3NEB										
NO.8-36UNF	GH2	PSUN8I2NEB	5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	2	2
	GH3	PSUN8I3NEB										
No.10-24UNC	GH2	PSUNAM2NEB	5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	2	2
	GH3	PSUNAM3NEB										
No.10-32UNF	GH2	PSUNAJ2NEB	5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	2	2
	GH3	PSUNAJ3NEB										
NO.12-24UNC	GH2	PSUNCM2NEB	5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	2	2
	GH3	PSUNCM3NEB										
NO.12-28UNF	GH2	PSUNCK2NEB	5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	2	2
	GH3	PSUNCK3NEB										
1/4-20UNC	GH3	PSU04N3NEB	4.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	2
	GH4	PSU04N4NEB										
	GH5	PSU04N5NEB										
1/4-28UNF	GH2	PSU04K2NEB	4.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	2
	GH3	PSU04K3NEB										
	GH4	PSU04K4NEB										
5/16-18UNC	GH3	PSU05O3NEB	4.5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	3
	GH4	PSU05O4NEB										
	GH5	PSU05O5NEB										
5/16-24UNF	GH3	PSU05M3NEB	4.5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	3
	GH4	PSU05M4NEB										
3/8-16UNC	GH3	PSU06P3NEB	4.5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	3
	GH5	PSU06P5NEB										
3/8-24UNF	GH3	PSU06M3NEB	4.5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	3
	GH4	PSU06M4NEB										
7/16-14UNC	GH4	PSU07Q4NEB	4.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	4
	GH5	PSU07Q5NEB										
7/16-20UNF	GH3	PSU07N3NEB	4.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	4
	GH4	PSU07N4NEB										
	GH5	PSU07N5NEB										
1/2-13UNC	GH3	PSU08R3NEB	4.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	4
	GH4	PSU08R4NEB										
	GH5	PSU08R5NEB										
1/2-20UNF	GH3	PSU08N3NEB	4.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	4
	GH4	PSU08N4NEB										
	GH5	PSU08N5NEB										
9/16-12UNC	GH3	PSU09S3NEB	4.5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	4
	GH4	PSU09S4NEB										
	GH5	PSU09S5NEB										
9/16-18UNF	GH3	PSU09O3NEB	4.5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	4
	GH4	PSU09O4NEB										
	GH5	PSU09O5NEB										

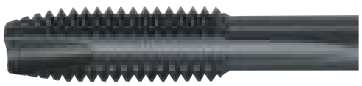
Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

PO Spiral Pointed Taps

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
5/8-11UNC	GH3	PSU10U3NEB	4.5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	4
	GH4	PSU10U4NEB										
	GH5	PSU10U5NEB										
	GH6	PSU10U6NEB										
5/8-18UNF	GH3	PSU10O3NEB	4.5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	4
	GH4	PSU10O4NEB										
	GH5	PSU10O5NEB										
3/4-10UNC	GH5	PSU12V5NEB	4.5P	4.921	1.299	-	2.52	0.590	0.442	0.687	3	4
	GH6	PSU12V6NEB										
3/4-16UNF	GH3	PSU12P3NEB	4.5P	4.921	1.299	-	2.52	0.590	0.442	0.687	3	4
	GH4	PSU12P4NEB										
	GH5	PSU12P5NEB										
7/8-9UNC	GH4	PSU14W4NEB	4.5P	5.512	1.299	-	2.795	0.697	0.523	0.75	3	4
	GH5	PSU14W5NEB										
	GH6	PSU14W6NEB										
7/8-14UNF	GH4	PSU14Q4NEB	4.5P	5.512	1.299	-	2.795	0.697	0.523	0.75	3	4
	GH6	PSU14Q6NEB										
1-8UNC	GH4	PSU16X4NEB	4.5P	6.299	1.457	-	3.228	0.800	0.6	0.812	3	4
	GH5	PSU16X5NEB										
	GH6	PSU16X6NEB										
	GH7	PSU16X7NEB										
1-12UNF	GH4	PSU16S4NEB	4.5P	6.299	1.457	-	3.228	0.800	0.6	0.812	3	4
	GH5	PSU16S5NEB										
	GH6	PSU16S6NEB										
1 1/8-7UNC	GH6	PSU18Y6NEB	4.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
	GH7	PSU18Y7NEB										
1 1/8-12UNF	GH5	PSU18S5NEB	4.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
	GH6	PSU18S6NEB										
1 1/4-7UNC	GH6	PSU20Y6NEB	4.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
	GH8	PSU20Y8NEB										
1 1/4-12UNF	GH5	PSU20S5NEB	4.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
	GH6	PSU20S6NEB										
1 3/8-6UNC	GH6	PSU22Z6NEB	4.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
	GH8	PSU22Z8NEB										
1 3/8-12UNF	GH5	PSU22S5NEB	4.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
	GH6	PSU22S6NEB										
1 1/2-6UNC	GH6	PSU24Z6NEB	4.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
	GH8	PSU24Z8NEB										
1 1/2-12UNF	GH5	PSU24S5NEB	4.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
	GH7	PSU24S7NEB										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO OX



Spiral Pointed Taps, Oxided

Specification

HSS | OX Oxide

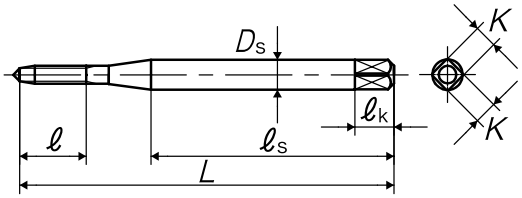
Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼 5~10 (m/min)

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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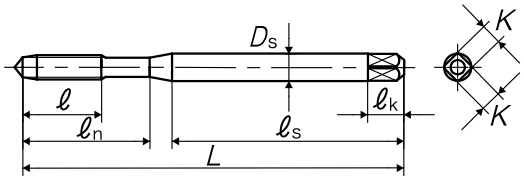

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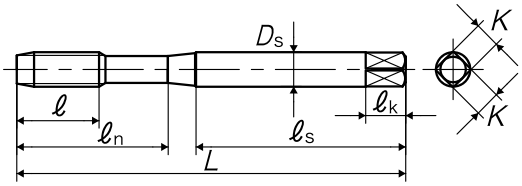

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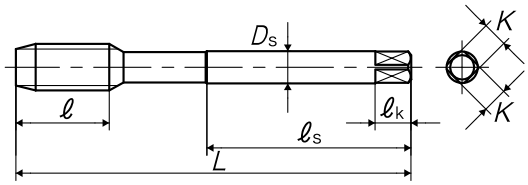

Segment : 1E

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads												
No.0-80UNF	GH1	PSUN0B1NEX	5P	1.772	0.236	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN0B2NEX										
No.1-64UNC	GH1	PSUN1D1NEX	5P	1.772	0.275	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN1D2NEX										
No.1-72UNF	GH1	PSUN1C1NEX	5P	1.772	0.275	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN1C2NEX										
No.2-56UNC	GH1	PSUN2E1NEX	5P	1.772	0.314	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN2E2NEX										
No.2-64UNF	GH1	PSUN2D1NEX	5P	1.772	0.314	-	1.161	0.141	0.11	0.187	2	1
	GH2	PSUN2D2NEX										
No.3-48UNC	GH1	PSUN3F1NEX	5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	2	2
	GH2	PSUN3F2NEX										
NO.3-56UNF	GH1	PSUN3E1NEX	5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	2	2
	GH2	PSUN3E2NEX										
No.4-40UNC	GH2	PSUN4H2NEX	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	2
	GH3	PSUN4H3NEX										
No.4-48UNF	GH1	PSUN4F1NEX	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	2
	GH2	PSUN4F2NEX										
No.5-40UNC	GH2	PSUN5H2NEX	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH3	PSUN5H3NEX										

PO OX Spiral Pointed Taps, Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
NO.5-44UNF	GH1	PSUN5G1NEX	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH2	PSUN5G2NEX										
	GH3	PSUN5G3NEX										
No.6-32UNC	GH2	PSUN6J2NEX	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH3	PSUN6J3NEX										
No.6-40UNF	GH2	PSUN6H2NEX	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	2	2
	GH3	PSUN6H3NEX										
No.8-32UNC	GH2	PSUN8J2NEX	5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	2	2
	GH3	PSUN8J3NEX										
NO.8-36UNF	GH2	PSUN8I2NEX	5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	2	2
	GH3	PSUN8I3NEX										
No.10-24UNC	GH2	PSUNAM2NEX	5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	2	2
	GH3	PSUNAM3NEX										
No.10-32UNF	GH2	PSUNAJ2NEX	5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	2	2
	GH3	PSUNAJ3NEX										
NO.12-24UNC	GH2	PSUNCM2NEX	5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	2	2
	GH3	PSUNCM3NEX										
NO.12-28UNF	GH2	PSUNCK2NEX	5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	2	2
	GH3	PSUNCK3NEX										
1/4-20UNC	GH3	PSU04N3NEX	4.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	2
	GH4	PSU04N4NEX										
	GH5	PSU04N5NEX										
1/4-28UNF	GH2	PSU04K2NEX	4.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	2
	GH3	PSU04K3NEX										
	GH4	PSU04K4NEX										
5/16-18UNC	GH3	PSU05O3NEX	4.5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	3
	GH4	PSU05O4NEX										
	GH5	PSU05O5NEX										
5/16-24UNF	GH3	PSU05M3NEX	4.5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	3
	GH4	PSU05M4NEX										
3/8-16UNC	GH3	PSU06P3NEX	4.5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	3
	GH5	PSU06P5NEX										
3/8-24UNF	GH3	PSU06M3NEX	4.5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	3	3
	GH4	PSU06M4NEX										
7/16-14UNC	GH4	PSU07Q4NEX	4.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	4
	GH5	PSU07Q5NEX										
7/16-20UNF	GH3	PSU07N3NEX	4.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	4
	GH4	PSU07N4NEX										
	GH5	PSU07N5NEX										
1/2-13UNC	GH3	PSU08R3NEX	4.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	4
	GH4	PSU08R4NEX										
	GH5	PSU08R5NEX										
1/2-20UNF	GH3	PSU08N3NEX	4.5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	4
	GH4	PSU08N4NEX										
	GH5	PSU08N5NEX										
9/16-12UNC	GH3	PSU09S3NEX	4.5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	4
	GH4	PSU09S4NEX										
	GH5	PSU09S5NEX										
9/16-18UNF	GH3	PSU09O3NEX	4.5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	4
	GH4	PSU09O4NEX										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

PO OX Spiral Pointed Taps, Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
9/16-18UNF	GH5	PSU09O5NEX	4.5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	4
5/8-11UNC	GH3	PSU10U3NEX	4.5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	4
	GH4	PSU10U4NEX										
	GH5	PSU10U5NEX										
	GH6	PSU10U6NEX										
5/8-18UNF	GH3	PSU10O3NEX	4.5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	4
	GH4	PSU10O4NEX										
	GH5	PSU10O5NEX										
3/4-10UNC	GH5	PSU12V5NEX	4.5P	4.921	1.299	-	2.52	0.590	0.442	0.687	3	4
	GH6	PSU12V6NEX										
3/4-16UNF	GH3	PSU12P3NEX	4.5P	4.921	1.299	-	2.52	0.590	0.442	0.687	3	4
	GH4	PSU12P4NEX										
	GH5	PSU12P5NEX										
7/8-9UNC	GH4	PSU14W4NEX	4.5P	5.512	1.299	-	2.795	0.697	0.523	0.75	3	4
	GH5	PSU14W5NEX										
	GH6	PSU14W6NEX										
7/8-14UNF	GH4	PSU14Q4NEX	4.5P	5.512	1.299	-	2.795	0.697	0.523	0.75	3	4
	GH6	PSU14Q6NEX										
1-8UNC	GH4	PSU16X4NEX	4.5P	6.299	1.457	-	3.228	0.800	0.6	0.812	3	4
	GH5	PSU16X5NEX										
	GH6	PSU16X6NEX										
	GH7	PSU16X7NEX										
1-12UNF	GH4	PSU16S4NEX	4.5P	6.299	1.457	-	3.228	0.800	0.6	0.812	3	4
	GH5	PSU16S5NEX										
	GH6	PSU16S6NEX										
1 1/8-7UNC	GH6	PSU18Y6NEX	4.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
	GH7	PSU18Y7NEX										
1 1/8-12UNF	GH5	PSU18S5NEX	4.5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
	GH6	PSU18S6NEX										
1 1/4-7UNC	GH6	PSU20Y6NEX	4.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
	GH8	PSU20Y8NEX										
1 1/4-12UNF	GH5	PSU20S5NEX	4.5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
	GH6	PSU20S6NEX										
1 3/8-6UNC	GH6	PSU22Z6NEX	4.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
	GH8	PSU22Z8NEX										
1 3/8-12UNF	GH5	PSU22S5NEX	4.5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
	GH6	PSU22S6NEX										
1 1/2-6UNC	GH6	PSU24Z6NEX	4.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
	GH8	PSU24Z8NEX										
1 1/2-12UNF	GH5	PSU24S5NEX	4.5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
	GH7	PSU24S7NEX										

ZELX SS PO

Spiral Pointed Taps for Stainless Steels

Specification

HSS | OX Oxide

■Suitable for stainless steels tending to work harden and sticky, as well as chrome steels and molybdenum steels. Through hole use.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
~10 (m/min)	~10 (m/min)	~10 (m/min)

For icon explanation, refer to P.24

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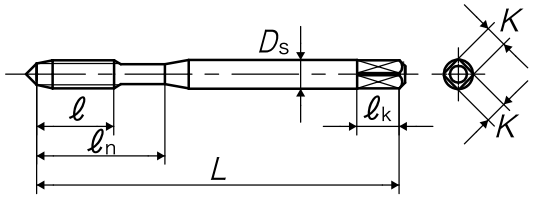

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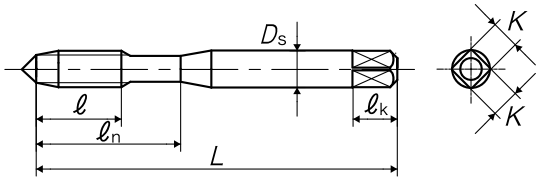

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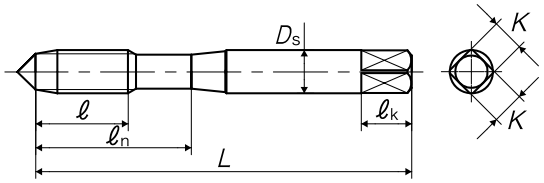

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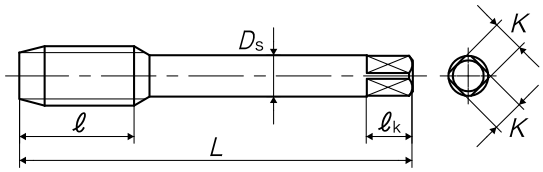

Segment : 1F

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads											
M3 × 0.5	D3	Y72615	4.5P	1.937	0.374	0.625	0.141	0.11	0.187	3	1
M3.5 × 0.6	D4	Y72616	4.5P	2	0.413	0.687	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y72617	4.5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
M5 × 0.8	D4	Y72619	4.5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
M6 × 1	D5	Y72620	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
M7 × 1	D5	Y72621	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
M8 × 1.25	D5	Y72623	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
M8 × 1	D5	Y72622	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
M10 × 1.5	D6	Y72625	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
M10 × 1.25	D5	Y72624	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
M12 × 1.75	D6	Y72627	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
M12 × 1.25	D5	Y72626	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
M14 × 2	D7	Y72629	4.5P	3.593	0.984	-	0.429	0.322	0.5	3	4
M14 × 1.5	D6	Y72628	4.5P	3.593	0.984	-	0.429	0.322	0.5	3	4
M16 × 2	D7	Y72631	4.5P	3.812	1.083	-	0.48	0.36	0.562	3	4
M16 × 1.5	D6	Y72630	4.5P	3.812	1.083	-	0.48	0.36	0.562	3	4
M18 × 2.5	D7	Y72633	4.5P	4.031	1.083	-	0.542	0.406	0.625	3	4
M18 × 1.5	D6	Y72632	4.5P	4.031	1.083	-	0.542	0.406	0.625	3	4

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX SS PO Spiral Pointed Taps for Stainless Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads											
No.2-56UNC	GH2	Y82623	4.5P	1.75	0.256	0.437	0.141	0.11	0.187	2	1
No.3-48UNC	GH2	Y82600	4.5P	1.812	0.295	0.5	0.141	0.11	0.187	2	1
No.4-40UNC	GH2	Y82601	4.5P	1.875	0.335	0.562	0.141	0.11	0.187	2	1
	GH3	Y82602									
	GH4	Y82612									
	GH5	Y82634									
No.4-48UNF	GH2	Y82683	4.5P	1.875	0.335	0.562	0.141	0.11	0.187	2	1
No.5-40UNC	GH2	Y82603	4.5P	1.937	0.374	0.625	0.141	0.11	0.187	3	1
No.6-32UNC	GH2	Y82604	4.5P	2	0.413	0.687	0.141	0.11	0.187	3	1
	GH3	Y82605									
	GH4	Y82608									
	GH5	Y82635									
	GH6	Y82659									
	GH7	Y82665									
No.6-40UNF	GH2	Y82684	4.5P	2	0.413	0.687	0.141	0.11	0.187	3	1
	GH3	Y82642									
No.8-32UNC	GH2	Y82606	4.5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
	GH3	Y82607									
	GH4	Y82629									
	GH5	Y82637									
	GH6	Y82660									
	GH7	Y82667									
No.8-36UNF	GH2	Y82686	4.5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
No.10-24UNC	GH3	Y82609	4.5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
	GH5	Y82639									
	GH6	Y82690									
	GH7	Y82669									
No.10-32UNF	GH2	Y82611	4.5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
	GH3	Y82610									
	GH4	Y82630									
	GH5	Y82640									
	GH6	Y82661									
	GH7	Y82670									
No.12-24UNC	GH3	Y82688	4.5P	2.375	0.571	0.937	0.220	0.165	0.281	3	1
No.12-28UNF	GH3	Y82689	4.5P	2.375	0.571	0.937	0.220	0.165	0.281	3	1
1/4-20UNC	GH3	Y82613	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
	GH5	Y82643									
	GH6	Y82590									
	GH7	Y82673									
1/4-28UNF	GH3	Y82614	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
	GH4	Y82631									
	GH5	Y82644									
	GH6	Y82662									
	GH7	Y82674									
5/16-18UNC	GH3	Y82615	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
	GH5	Y82645									
	GH7	Y82675									
5/16-24UNF	GH3	Y82616	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
	GH4	Y82632									

ZELX SS PO Spiral Pointed Taps for Stainless Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
5/16-24UNF	GH5	Y82646	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
	GH6	Y82663									
	GH7	Y82676									
3/8-16UNC	GH3	Y82617	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
	GH5	Y82647									
	GH7	Y82668									
3/8-24UNF	GH3	Y82618	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
	GH4	Y82633									
	GH5	Y82648									
	GH6	Y82664									
	GH7	Y82678									
7/16-14UNC	GH3	Y82619	4.5P	3.156	0.866	-	0.323	0.242	0.406	3	4
	GH5	Y82649									
7/16-20UNF	GH3	Y82620	4.5P	3.156	0.866	-	0.323	0.242	0.406	3	4
	GH5	Y82650									
	GH6	Y82691									
	GH7	Y82680									
1/2-13UNC	GH3	Y82621	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
	GH5	Y82651									
	GH7	Y82681									
1/2-20UNF	GH3	Y82622	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
	GH5	Y82652									
	GH6	Y82692									
	GH7	Y82682									
	GH9	Y82685									
9/16-12UNC	GH3	Y82653	4.5P	3.593	0.984	-	0.429	0.322	0.5	3	4
9/16-18UNF	GH3	Y82654	4.5P	3.593	0.984	-	0.429	0.322	0.5	3	4
	GH5	Y82666									
5/8-11UNC	GH3	Y82625	4.5P	3.812	1.083	-	0.480	0.36	0.562	3	4
	GH5	Y82655									
5/8-18UNF	GH3	Y82626	4.5P	3.812	1.083	-	0.480	0.36	0.562	3	4
	GH4	Y82636									
	GH5	Y82656									
	GH6	Y82694									
	GH7	Y82591									
3/4-10UNC	GH3	Y82627	4.5P	4.25	1.201	-	0.590	0.422	0.687	3	4
	GH5	Y82657									
3/4-16UNF	GH3	Y82628	4.5P	4.25	1.201	-	0.590	0.422	0.687	3	4
	GH5	Y82658									
	GH7	Y82592									
7/8-9UNC	GH4	Y82695	4.5P	4.687	1.339	-	0.697	0.523	0.75	3	4
7/8-14UNF	GH4	Y82696	4.5P	4.687	1.339	-	0.697	0.523	0.75	3	4
	GH6	Y82699									
1-8UNC	GH4	Y82697	4.5P	5.125	1.496	-	0.800	0.6	0.812	3	4
1-12UNF	GH4	Y82679	4.5P	5.125	1.496	-	0.800	0.6	0.812	3	4
1 1/8-7UNC	GH6	Y82700	4.5P	5.437	1.535	-	0.896	0.672	0.875	4	4
1 1/8-12UNF	GH5	Y82701	4.5P	5.437	1.535	-	0.896	0.672	0.875	4	4
1 1/4-7UNC	GH6	Y82702	4.5P	5.75	1.535	-	1.021	0.766	1	4	4
1 1/4-12UNF	GH5	Y82703	4.5P	5.75	1.535	-	1.021	0.766	1	4	4
1 3/8-6UNC	GH6	Y82705	4.5P	6.062	1.811	-	1.108	0.831	1.062	4	4
1 3/8-12UNF	GH5	Y82706	4.5P	6.062	1.811	-	1.108	0.831	1.062	4	4

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX SS PO Spiral Pointed Taps for Stainless Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
1 1/2-6UNC	GH6	Y82707	4.5P	6.375	1.811	-	1.233	0.925	1.125	4	4
1 1/2-12UNF	GH5	Y82708	4.5P	6.375	1.811	-	1.233	0.925	1.125	4	4
1 3/4-5UNC	GH7	Y82709	4.5P	7	1.929	-	1.430	1.072	1.25	4	4
2-4.5UNC	GH7	Y82710	4.5P	7.625	1.929	-	1.644	1.233	1.375	4	4

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX SS PO 6"

Long Shank Spiral Pointed Taps for Stainless Steels

Specification

HSS | OX Oxide

■Suitable for stainless steels tending to work harden and sticky, as well as chrome steels and molybdenum steels. Through hole use.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
5~10 (m/min)	5~10 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

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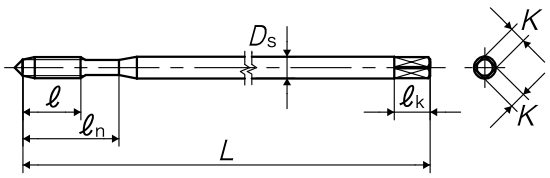

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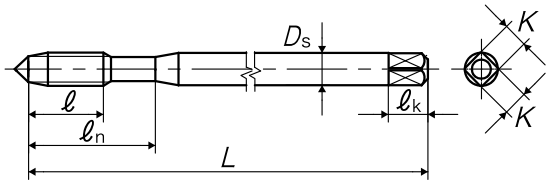

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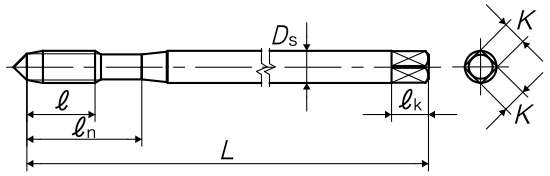

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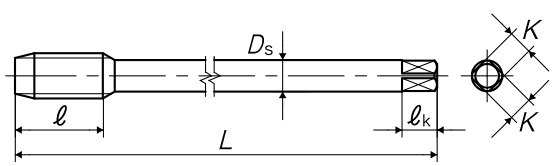


Segment : 1F

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads											
No.2-56UNC	GH2	Y82523	4.5P	6	0.256	0.437	0.141	0.11	0.187	2	1
No.3-48UNC	GH2	Y82500	4.5P	6	0.295	0.5	0.141	0.11	0.187	2	1
No.4-40UNC	GH2	Y82501	4.5P	6	0.335	0.562	0.141	0.11	0.187	2	1
No.6-32UNC	GH3	Y82505	4.5P	6	0.413	0.687	0.141	0.11	0.187	3	1
No.8-32UNC	GH3	Y82507	4.5P	6	0.453	0.75	0.168	0.131	0.25	3	1
No.10-24UNC	GH3	Y82509	4.5P	6	0.531	0.875	0.194	0.152	0.25	3	1
No.10-32UNF	GH3	Y82510	4.5P	6	0.531	0.875	0.194	0.152	0.25	3	1
1/4-20UNC	GH3	Y82513	4.5P	6	0.591	1	0.255	0.191	0.312	3	2
1/4-28UNF	GH3	Y82514	4.5P	6	0.591	1	0.255	0.191	0.312	3	2
5/16-18UNC	GH3	Y82515	4.5P	6	0.669	1.125	0.318	0.238	0.375	3	3
5/16-24UNF	GH3	Y82516	4.5P	6	0.669	1.125	0.318	0.238	0.375	3	3
3/8-16UNC	GH3	Y82517	4.5P	6	0.748	1.25	0.381	0.286	0.437	3	3
3/8-24UNF	GH3	Y82518	4.5P	6	0.748	1.25	0.381	0.286	0.437	3	3
7/16-14UNC	GH3	Y82519	4.5P	6	0.866	-	0.323	0.242	0.406	3	4
7/16-20UNF	GH3	Y82520	4.5P	6	0.866	-	0.323	0.242	0.406	3	4
1/2-13UNC	GH3	Y82521	4.5P	6	0.984	-	0.367	0.275	0.437	3	4
1/2-20UNF	GH3	Y82522	4.5P	6	0.984	-	0.367	0.275	0.437	3	4

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX AL PO

Spiral Pointed Taps for Aluminum

Specification

HSS | NI Nitride

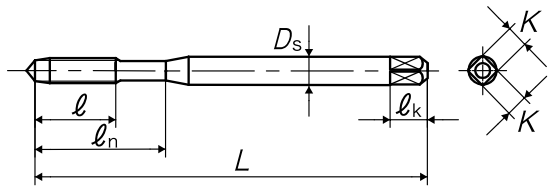
■In tapping of aluminum die casting and aluminum casting, ZELX AL PO solves chip jamming and chip clogging trouble, and eliminates torn threads.

Recommended Tapping Speed depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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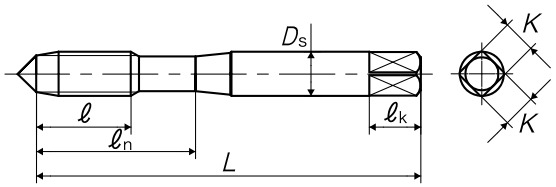

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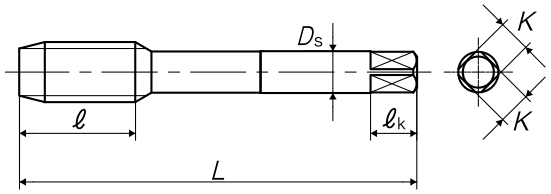

Segment : 1F

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads											
M3 × 0.5	D3	Y86228	5P	2.205	0.433	0.709	0.141	0.11	0.187	3	1
M3.5 × 0.6	D4	Y86229	5P	2.205	0.512	0.787	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y86230	5P	2.48	0.512	0.827	0.168	0.131	0.25	3	1
M5 × 0.8	D4	Y86231	5P	2.756	0.63	0.984	0.194	0.152	0.25	3	1
M6 × 1	D5	Y86232	5P	3.15	0.748	1.181	0.255	0.191	0.312	3	1
M7 × 1	D5	Y86233	5P	3.15	0.748	1.181	0.318	0.238	0.375	3	2
M8 × 1.25	D5	Y86235	5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
M8 × 1	D5	Y86234	5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
M10 × 1.5	D6	Y86237	5P	3.937	0.945	1.535	0.381	0.286	0.437	3	2
M10 × 1.25	D5	Y86236	5P	3.937	0.945	1.535	0.381	0.286	0.437	3	2
M12 × 1.75	D6	Y86240	5P	4.331	1.142	-	0.367	0.275	0.437	3	3
M12 × 1.5	D5	Y86239	5P	3.937	0.866	-	0.367	0.275	0.437	3	3
M12 × 1.25	D5	Y86238	5P	3.937	0.866	-	0.367	0.275	0.437	3	3
For Unified Threads											
No.2-56UNC	GH2	Y86200	5P	1.772	0.276	0.472	0.141	0.11	0.187	2	1
No.4-40UNC	GH2	Y86201	5P	2.205	0.433	0.709	0.141	0.11	0.187	2	1
No.5-40UNC	GH2	Y86202	5P	2.205	0.433	0.709	0.141	0.11	0.187	3	1
No.6-32UNC	GH3	Y86203	5P	2.205	0.512	0.787	0.141	0.11	0.187	3	1
No.8-32UNC	GH3	Y86204	5P	2.48	0.512	0.827	0.168	0.131	0.25	3	1
No.10-24UNC	GH3	Y86205	5P	2.756	0.63	0.984	0.194	0.152	0.25	3	1
No.10-32UNF	GH3	Y86206	5P	2.756	0.63	0.984	0.194	0.152	0.25	3	1
1/4-20UNC	GH3	Y86207	5P	3.15	0.748	1.181	0.255	0.191	0.312	3	1
	GH5	Y86208									

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX AL PO Spiral Pointed Taps for Aluminum

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
1/4-28UNF	GH3	Y86209	5P	3.15	0.748	1.181	0.255	0.191	0.312	3	1
	GH4	Y86211									
5/16-18UNC	GH3	Y86212	5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
	GH5	Y86213									
5/16-24UNF	GH3	Y86214	5P	3.543	0.866	1.378	0.318	0.238	0.375	3	2
	GH4	Y86215									
3/8-16UNC	GH3	Y86216	5P	3.937	0.945	1.535	0.381	0.286	0.437	3	2
	GH5	Y86217									
3/8-24UNF	GH3	Y86218	5P	3.543	0.787	1.535	0.381	0.286	0.437	3	2
	GH4	Y86219									
7/16-14UNC	GH3	Y86220	5P	3.937	0.945	-	0.323	0.242	0.406	3	3
	GH5	Y86221									
7/16-20UNF	GH3	Y86222	5P	3.937	0.945	-	0.323	0.242	0.406	3	3
	GH5	Y86223									
1/2-13UNC	GH3	Y86224	5P	4.331	1.142	-	0.367	0.275	0.437	3	3
	GH5	Y86225									
1/2-20UNF	GH3	Y86226	5P	3.937	0.866	-	0.367	0.275	0.437	3	3
	GH5	Y86227									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO STI

Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts

Specification

HSS

■Spiral pointed tap to cut internal threads for helical coil to enter.

Recommended Tapping Speed depending on Materials

Brass 黄銅	Brass castings 黄銅鋳物	Bronze 青銅	Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

Magnesium alloy die castings マグネシウム合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

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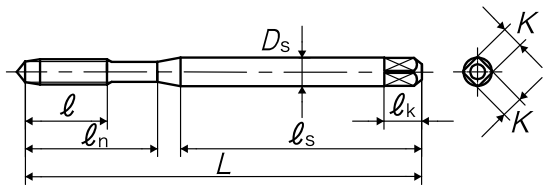

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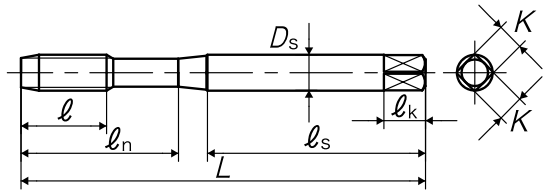

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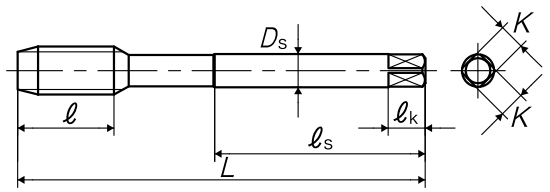

Segment : 1E

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Helical Coil Wire Screw Thread Inserts, for Unified Threads												
STI No.2-56UNC	GH1	PUUN2E1NEB	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	1
	GH2	PUUN2E2NEB										
STI No.4-40UNC	GH1	PUUN4H1NEB	5P	2.48	0.512	0.827	1.496	0.168	0.131	0.25	2	1
	GH2	PUUN4H2NEB										
STI No.6-32UNC	GH1	PUUN6J1NEB	5P	2.756	0.551	0.945	1.654	0.194	0.131	0.25	2	1
	GH2	PUUN6J2NEB										
STI No.8-32UNC	GH1	PUUN8J1NEB	5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	2	1
	GH2	PUUN8J2NEB										
STI No.10-24UNC	GH2	PUUNAM2NEB	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	2	1
	GH3	PUUNAM3NEB										
STI No.10-32UNF	GH2	PUUNAJ2NEB	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	2	1
	GH3	PUUNAJ3NEB										
STI 1/4-20UNC	GH2	PUU04N2NEB	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	2	2
	GH3	PUU04N3NEB										
STI 1/4-28UNF	GH2	PUU04K2NEB	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	2	2
	GH3	PUU04K3NEB										
STI 5/16-18UNC	GH2	PUU05O2NEB	5P	3.937	0.906	1.535	2.067	0.381	0.286	0.437	2	2
	GH3	PUU05O3NEB										
STI 5/16-24UNF	GH2	PUU05M2NEB	5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	2	2
	GH3	PUU05M3NEB										
STI 3/8-16UNC	GH3	PUU06P3NEB	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	3
	GH4	PUU06P4NEB										
STI 3/8-24UNF	GH2	PUU06M2NEB	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	3
	GH3	PUU06M3NEB										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

PO STI Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
STI 7/16-14UNC	GH3	PUU07Q3NEB	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	3
	GH4	PUU07Q4NEB										
STI 7/16-20UNF	GH3	PUU07N3NEB	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	3
	GH4	PUU07N4NEB										
STI 1/2-13UNC	GH3	PUU08R3NEB	5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	3
	GH4	PUU08R4NEB										
STI 1/2-20UNF	GH3	PUU08N3NEB	5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	3
	GH4	PUU08N4NEB										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO OX STI

Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts, Oxided

Specification

HSS | OX Oxide

■Spiral pointed tap to cut internal threads for helical coil to enter.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

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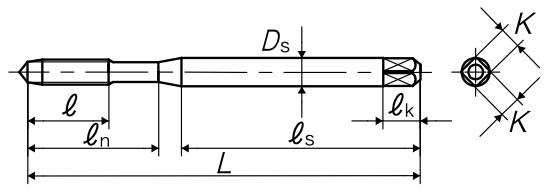

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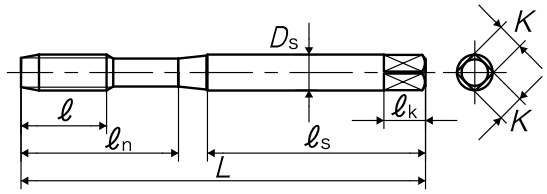

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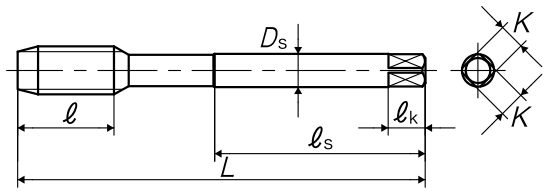

Segment : 1E

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Helical Coil Wire Screw Thread Inserts, for Unified Threads												
STI No.2-56UNC	GH1	PUUN2E1NEX	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	2	1
	GH2	PUUN2E2NEX										
STI No.4-40UNC	GH1	PUUN4H1NEX	5P	2.48	0.512	0.827	1.496	0.168	0.131	0.25	2	1
	GH2	PUUN4H2NEX										
STI No.6-32UNC	GH1	PUUN6J1NEX	5P	2.756	0.551	0.945	1.654	0.194	0.131	0.25	2	1
	GH2	PUUN6J2NEX										
STI No.8-32UNC	GH1	PUUN8J1NEX	5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	2	1
	GH2	PUUN8J2NEX										
STI No.10-24UNC	GH2	PUUNAM2NEX	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	2	1
	GH3	PUUNAM3NEX										
STI No.10-32UNF	GH2	PUUNAJ2NEX	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	2	1
	GH3	PUUNAJ3NEX										
STI 1/4-20UNC	GH2	PUU04N2NEX	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	2	2
	GH3	PUU04N3NEX										
STI 1/4-28UNF	GH2	PUU04K2NEX	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	2	2
	GH3	PUU04K3NEX										
STI 5/16-18UNC	GH2	PUU05O2NEX	5P	3.937	0.906	1.535	2.067	0.381	0.286	0.437	2	2
	GH3	PUU05O3NEX										
STI 5/16-24UNF	GH2	PUU05M2NEX	5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	2	2
	GH3	PUU05M3NEX										
STI 3/8-16UNC	GH3	PUU06P3NEX	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	3	3
	GH4	PUU06P4NEX										
STI 3/8-24UNF	GH2	PUU06M2NEX	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	3	3
	GH3	PUU06M3NEX										

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

PO OX STI Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts, Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
STI 7/16-14UNC	GH3	PUU07Q3NEX	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	3
	GH4	PUU07Q4NEX										
STI 7/16-20UNF	GH3	PUU07N3NEX	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	3	3
	GH4	PUU07N4NEX										
STI 1/2-13UNC	GH3	PUU08R3NEX	5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	3
	GH4	PUU08R4NEX										
STI 1/2-20UNF	GH3	PUU08N3NEX	5P	4.331	1.024	-	2.205	0.480	0.36	0.562	3	3
	GH4	PUU08N4NEX										

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	Ds	K	ℓk

ZELX NI PO

Spiral Pointed Taps for Nickel Base Alloys

Specification

HSS-P | NX Nitride/Oxide | Synchro nized

■ZELX NI PO is the spiral point tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and much higher heat resistance than steels.

Recommended Tapping Speed depending on Materials

Nickel base alloys ニッケル基合金 5~10 (m/min)

For icon explanation, refer to P.24

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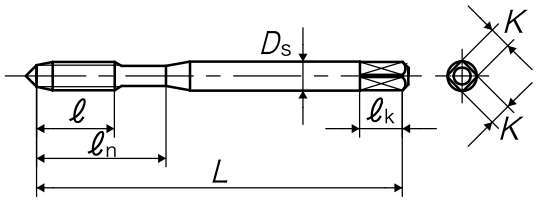

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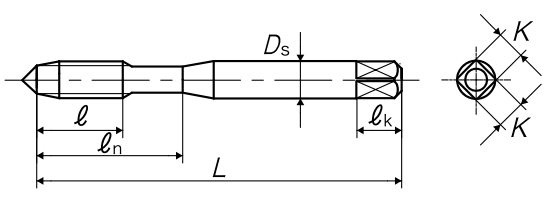

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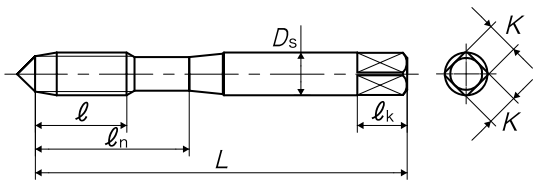

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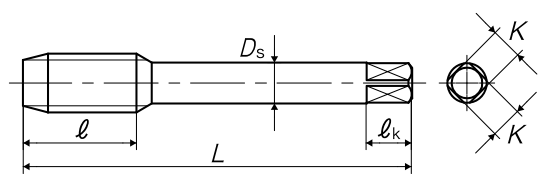


Segment : 1F

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads											
M2.5 × 0.45	D3	Y87320	4.5P	1.812	0.295	0.5	0.141	0.11	0.187	2	1
M3 × 0.5	D3	Y87321	4.5P	1.937	0.374	0.625	0.141	0.11	0.187	3	1
M3.5 × 0.6	D4	Y87322	4.5P	2	0.413	0.687	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y87323	4.5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
M5 × 0.8	D4	Y87324	4.5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
M6 × 1	D5	Y87325	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
M7 × 1	D5	Y87326	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
M8 × 1.25	D5	Y87328	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
M8 × 1	D5	Y87327	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
M10 × 1.5	D6	Y87330	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
M10 × 1.25	D5	Y87329	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
M12 × 1.75	D6	Y87332	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
M12 × 1.25	D5	Y87331	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
For Unified Threads											
No.2-56UNC	GH2	Y85523	4.5P	1.75	0.256	0.437	0.141	0.11	0.187	2	1
No.4-40UNC	GH2	Y85501	4.5P	1.875	0.335	0.562	0.141	0.11	0.187	2	1
	GH3	Y85502									
	GH4	Y85504									
No.5-40UNC	GH2	Y85503	4.5P	1.937	0.374	0.625	0.141	0.11	0.187	3	1

ZELX NI PO Spiral Pointed Taps for Nickel Base Alloys

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
No.6-32UNC	GH3	Y85505	4.5P	2	0.413	0.687	0.141	0.11	0.187	3	1
	GH4	Y85524									
	GH5	Y85535									
	GH7	Y85511									
No.6-40UNF	GH2	Y85512	4.5P	2	0.413	0.687	0.141	0.11	0.187	3	1
No.8-32UNC	GH3	Y85507	4.5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
		Y85507NI									
	GH4	Y85529									
	GH5	Y85537									
		Y85537NI									
	GH6	Y85560									
		Y85560NI									
	GH7	Y85567									
		Y85567NI									
No.10-24UNC	GH3	Y85509	4.5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
	GH5	Y85539									
No.10-32UNF	GH3	Y85510	4.5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
		Y85510NI									
	GH4	Y85530									
		Y85530NI									
	GH5	Y85540									
		Y85540NI									
	GH6	Y85561									
		Y85561NI									
	GH7	Y85570									
		Y85570NI									
1/4-20UNC	GH3	Y85513	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
		Y85513NI									
	GH5	Y85543									
		Y85543NI									
1/4-28UNF	GH3	Y85514	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
	GH4	Y85531									
		Y85531NI									
	GH5	Y85544									
		Y85544NI									
	GH6	Y85562									
		Y85562NI									
	GH7	Y85574									
		Y85574NI									
5/16-18UNC	GH3	Y85515	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
	GH5	Y85545									
	GH7	Y85553									
5/16-24UNF	GH3	Y85516	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
	GH4	Y85532									
	GH5	Y85546									
	GH6	Y85563									
	GH7	Y85576									
3/8-16UNC	GH3	Y85517	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
	GH5	Y85547									

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX NI PO Spiral Pointed Taps for Nickel Base Alloys

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
3/8-24UNF	GH3	Y85518	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
	GH4	Y85533									
	GH5	Y85548									
	GH6	Y85564									
	GH7	Y85578									
7/16-14UNC	GH3	Y85519	4.5P	3.156	0.866	-	0.323	0.242	0.406	3	4
	GH5	Y85549									
7/16-20UNF	GH3	Y85520	4.5P	3.156	0.866	-	0.323	0.242	0.406	3	4
	GH5	Y85550									
1/2-13UNC	GH3	Y85521	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
	GH5	Y85551									
1/2-20UNF	GH3	Y85522	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
	GH5	Y85552									
	GH7	Y85582									
		Y85582NI									
5/8-11UNC	GH3	Y85525	4.5P	3.812	1.083	-	0.48	0.36	0.562	3	4
	GH5	Y85555									
	GH7	Y85585									
5/8-18UNF	GH3	Y85526	4.5P	3.812	1.083	-	0.48	0.36	0.562	3	4
	GH5	Y85556									
	GH7	Y85586									
3/4-10UNC	GH3	Y85527	4.5P	4.25	1.201	-	0.59	0.442	0.687	3	4
	GH5	Y85557									
3/4-16UNF	GH3	Y85528	4.5P	4.25	1.201	-	0.59	0.442	0.687	3	4
	GH5	Y85558									

ZELX NI PO STI

Spiral Pointed Taps for Nickel Base Alloys for Helical Coil Wire Screw Thread Inserts

Specification

HSS-P | NX Nitride/Oxide | Synchro nized

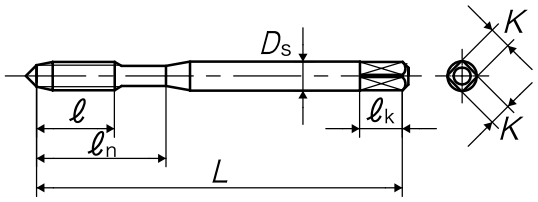
■ZELX NI PO STI is the spiral point tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and much higher heat resistance than steels, and produces threads oversize enough to accommodate helical coil wire thread inserts.

Recommended Tapping Speed depending on Materials

Nickel base alloys ニッケル基合金 **5~10** (m/min)

For icon explanation, refer to P.24

TYPE: 1



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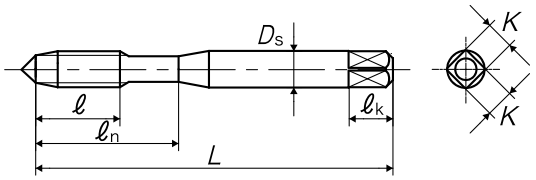

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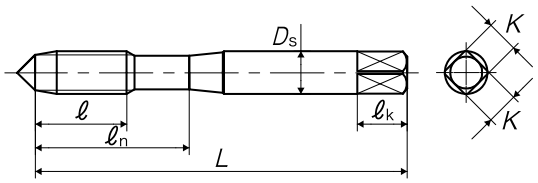

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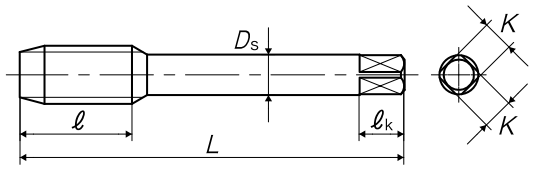


Segment : 1E

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Helical Coil Wire Screw Thread Inserts, for Unified Threads											
STI No.2-56UNC	GH2	Y87200	4.5P	1.875	0.335	0.562	0.141	0.11	0.187	2	1
STI No.4-40UNC	GH1	Y87203	4.5P	2	0.413	0.687	0.141	0.11	0.187	3	1
	GH2	Y87204									
STI No.6-32UNC	GH2	Y87208	4.5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
	GH3	Y87224									
STI No.6-40UNF	GH2	Y87209	4.5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
STI No.8-32UNC	GH2	Y87210	4.5P	2.375	0.571	0.937	0.22	0.165	0.281	3	1
	GH3	Y87226									
STI No.10-24UNC	GH2	Y87212	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
	GH3	Y87228									
STI No.10-32UNF	GH2	Y87213	4.5P	2.5	0.591	1	0.255	0.191	0.312	3	2
	GH3	Y87229									
STI 1/4-20UNC	GH2	Y87248	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
	GH3	Y87258									
STI 1/4-28UNF	GH2	Y87249	4.5P	2.718	0.669	1.125	0.318	0.238	0.375	3	3
	GH3	Y87259									
STI 5/16-18UNC	GH3	Y87260	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
STI 5/16-24UNF	GH2	Y87251	4.5P	2.937	0.748	1.25	0.381	0.286	0.437	3	3
	GH3	Y87261									

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*Ds*	*K*	*ℓk*

ZELX NI PO STI Spiral Pointed Taps for Nickel Base Alloys for Helical Coil Wire Screw Thread Inserts

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
STI 3/8-16UNC	GH3	Y87262	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
	GH4	Y87270									
STI 3/8-24UNF	GH2	Y87253	4.5P	3.156	0.866	-	0.323	0.242	0.406	3	4
	GH3	Y87263									
STI 7/16-14UNC	GH3	Y87264	4.5P	3.593	0.984	-	0.429	0.322	0.5	3	4
STI 7/16-20UNF	GH3	Y87265	4.5P	3.375	0.984	-	0.367	0.275	0.437	3	4
	GH4	Y87275									
STI 1/2-13UNC	GH3	Y87266	4.5P	3.812	1.083	-	0.48	0.36	0.562	3	4
STI 1/2-20UNF	GH3	Y87267	4.5P	3.593	0.984	-	0.429	0.322	0.5	3	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

IHT

Hand Taps for General Purpose

Specification

HSS | OX Oxide

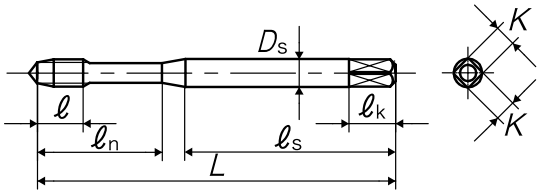
■Suitable for low speed tapping of steels. For manual use and drilling machine use.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE:1



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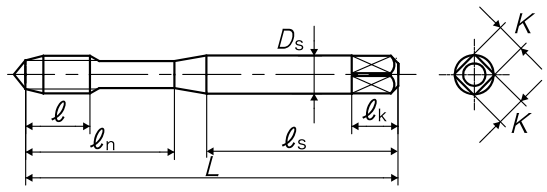

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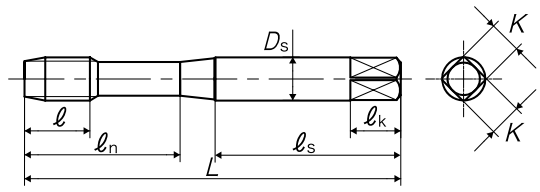

Segment : 1A

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads												
No.6-32UNC	-	IAUN6JXHEX5	5P	2	0.374	0.669	1.201	0.141	0.11	0.187	3	1
		IAUN6JXHEX2	2P									
No.8-32UNC	-	IAUN8JXHEX5	5P	2.125	0.374	0.866	1.339	0.168	0.131	0.25	3	1
		IAUN8JXHEX2	2P									
No.10-24UNC	-	IAUNAMXHEX5	5P	2.375	0.512	0.866	1.339	0.194	0.152	0.25	3	1
		IAUNAMXHEX2	2P									
1/4-20UNC	-	IAU04NXHEX5	5P	2.5	0.591	1.024	1.22	0.255	0.191	0.312	3	2
		IAU04NXHEX2	2P									
5/16-18UNC	-	IAU05OXHEX5	5P	2.718	0.669	1.004	1.378	0.318	0.238	0.375	3	3
		IAU05OXHEX2	2P									
3/8-16UNC	-	IAU06PXHEX5	5P	2.937	0.748	1.059	1.496	0.381	0.286	0.437	3	3
		IAU06PXHEX2	2P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads (In blister package)												
No.6-32UNC	-	IAUN6JXHEX5R	5P	2	0.374	0.669	1.201	0.141	0.11	0.187	3	1
		IAUN6JXHEX2R	2P									
No.8-32UNC	-	IAUN8JXHEX5R	5P	2.125	0.374	0.866	1.339	0.168	0.131	0.25	3	1
		IAUN8JXHEX2R	2P									
No.10-24UNC	-	IAUNAMXHEX5R	5P	2.375	0.512	0.866	1.339	0.194	0.152	0.25	3	1
		IAUNAMXHEX2R	2P									
1/4-20UNC	-	IAU04NXHEX5R	5P	2.5	0.591	1.024	1.22	0.255	0.191	0.312	3	2
		IAU04NXHEX2R	2P									
5/16-18UNC	-	IAU05OXHEX5R	5P	2.718	0.669	1.004	1.378	0.318	0.238	0.375	3	3
		IAU05OXHEX2R	2P									
3/8-16UNC	-	IAU06PXHEX5R	5P	2.937	0.748	1.059	1.496	0.381	0.286	0.437	3	3
		IAU06PXHEX2R	2P									

Blister Package

HT

Hand Taps

Specification

HSS

Recommended Tapping Speed depending on Materials

Medium carbon steels 中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

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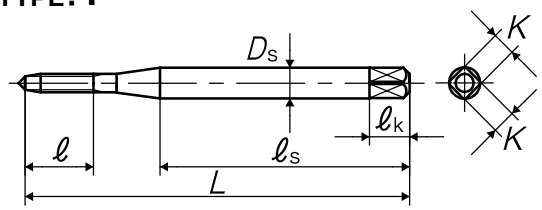

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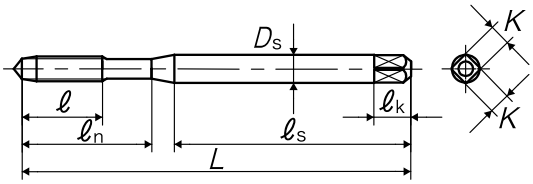

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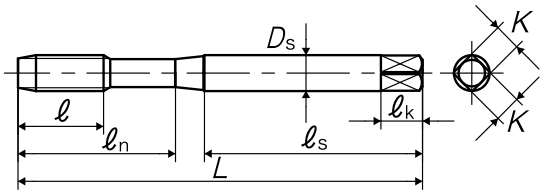

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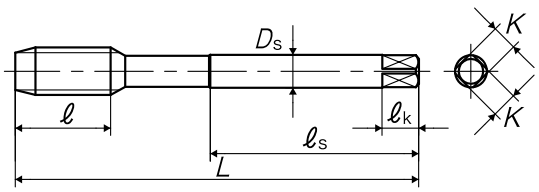


Segment : 1A

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads												
No.0-80UNF	GH1	TSUN0B1NEB5	5P	1.772	0.236	-	1.161	0.141	0.11	0.187	2	1
		TSUN0B1NEBA	1.5P									
	GH2	TSUN0B2NEB5	5P									
		TSUN0B2NEBA	1.5P									
No.1-64UNC	GH1	TSUN1D1NEB5	5P	1.772	0.275	-	1.161	0.141	0.11	0.187	2	1
		TSUN1D1NEBA	1.5P									
	GH2	TSUN1D2NEB5	5P									
		TSUN1D2NEBA	1.5P									
No.1-72UNF	GH1	TSUN1C1NEB5	5P	1.772	0.275	-	1.161	0.141	0.11	0.187	2	1
		TSUN1C1NEBA	1.5P									
	GH2	TSUN1C2NEB5	5P									
		TSUN1C2NEBA	1.5P									
No.2-56UNC	GH1	TSUN2E1NEB5	5P	1.772	0.314	-	1.161	0.141	0.11	0.187	3	1
		TSUN2E1NEBA	1.5P									
	GH2	TSUN2E2NEB5	5P									
		TSUN2E2NEBA	1.5P									
NO.2-64UNF	GH1	TSUN2D1NEB5	5P	1.772	0.314	-	1.161	0.141	0.11	0.187	3	1
		TSUN2D1NEBA	1.5P									
	GH2	TSUN2D2NEB5	5P									
		TSUN2D2NEBA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

HT Hand Taps

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
No.3-48UNC	GH1	TSUN3F1NEB5	5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	3	2
		TSUN3F1NEBA	1.5P									
	GH2	TSUN3F2NEB5	5P									
		TSUN3F2NEBA	1.5P									
No.3-56UNF	GH1	TSUN3E1NEB5	5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	3	2
		TSUN3E1NEBA	1.5P									
	GH2	TSUN3E2NEB5	5P									
		TSUN3E2NEBA	1.5P									
No.4-40UNC	GH2	TSUN4H2NEB5	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	3	2
		TSUN4H2NEBA	1.5P									
	GH3	TSUN4H3NEB5	5P									
		TSUN4H3NEBA	1.5P									
No.4-48UNF	GH1	TSUN4F1NEB5	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	3	2
		TSUN4F1NEBA	1.5P									
	GH2	TSUN4F2NEB5	5P									
		TSUN4F2NEBA	1.5P									
No.5-40UNC	GH2	TSUN5H2NEB5	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	2
		TSUN5H2NEBA	1.5P									
	GH3	TSUN5H3NEB5	5P									
		TSUN5H3NEBA	1.5P									
No.5-44UNF	GH1	TSUN5G1NEB5	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	2
		TSUN5G1NEBA	1.5P									
	GH2	TSUN5G2NEB5	5P									
		TSUN5G2NEBA	1.5P									
	GH3	TSUN5G3NEB5	5P									
		TSUN5G3NEBA	1.5P									
No.6-32UNC	GH2	TSUN6J2NEB5	5P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	3	2
		TSUN6J2NEBA	1.5P									
	GH3	TSUN6J3NEB5	5P									
		TSUN6J3NEBA	1.5P									
No.6-40UNF	GH2	TSUN6H2NEB5	5P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	3	2
		TSUN6H2NEBA	1.5P									
	GH3	TSUN6H3NEB5	5P									
		TSUN6H3NEBA	1.5P									
No.8-32UNC	GH2	TSUN8J2NEB5	5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		TSUN8J2NEBA	1.5P									
	GH3	TSUN8J3NEB5	5P									
		TSUN8J3NEBA	1.5P									
No.8-36UNF	GH2	TSUN8I2NEB5	5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		TSUN8I2NEBA	1.5P									
	GH3	TSUN8I3NEB5	5P									
		TSUN8I3NEBA	1.5P									
No.10-24UNC	GH2	TSUNAM2NEB5	5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		TSUNAM2NEBA	1.5P									
	GH3	TSUNAM3NEB5	5P									
		TSUNAM3NEBA	1.5P									
No.10-32UNF	GH2	TSUNAJ2NEB5	5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		TSUNAJ2NEBA	1.5P									
	GH3	TSUNAJ3NEB5	5P									
		TSUNAJ3NEBA	1.5P									

HT Hand Taps

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
No.12-24UNC	GH2	TSUNCM2NEB5	5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	4	2
		TSUNCM2NEBA	1.5P									
	GH3	TSUNCM3NEB5	5P									
		TSUNCM3NEBA	1.5P									
No.12-28UNF	GH2	TSUNCK2NEB5	5P	3.15	0.591	0.984	1.929	0.220	0.165	0.281	4	2
		TSUNCK2NEBA	1.5P									
	GH3	TSUNCK3NEB5	5P									
		TSUNCK3NEBA	1.5P									
1/4-20UNC	GH3	TSU04N3NEB5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		TSU04N3NEBA	1.5P									
	GH4	TSU04N4NEB5	5P									
		TSU04N4NEBA	1.5P									
	GH5	TSU04N5NEB5	5P									
		TSU04N5NEBA	1.5P									
1/4-28UNF	GH2	TSU04K2NEB5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		TSU04K2NEBA	1.5P									
	GH3	TSU04K3NEB5	5P									
		TSU04K3NEBA	1.5P									
	GH4	TSU04K4NEB5	5P									
		TSU04K4NEBA	1.5P									
5/16-18UNC	GH3	TSU05O3NEB5	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	4	3
		TSU05O3NEBA	1.5P									
	GH4	TSU05O4NEB5	5P									
		TSU05O4NEBA	1.5P									
	GH5	TSU05O5NEB5	5P									
		TSU05O5NEBA	1.5P									
5/16-24UNF	GH3	TSU05M3NEB5	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	4	3
		TSU05M3NEBA	1.5P									
	GH4	TSU05M4NEB5	5P									
		TSU05M4NEBA	1.5P									
3/8-16UNC	GH3	TSU06P3NEB5	5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	4	3
		TSU06P3NEBA	1.5P									
	GH5	TSU06P5NEB5	5P									
		TSU06P5NEBA	1.5P									
3/8-24UNF	GH3	TSU06M3NEB5	5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	4	3
		TSU06M3NEBA	1.5P									
	GH4	TSU06M4NEB5	5P									
		TSU06M4NEBA	1.5P									
7/16-14UNC	GH4	TSU07Q4NEB5	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	4
		TSU07Q4NEBA	1.5P									
	GH5	TSU07Q5NEB5	5P									
		TSU07Q5NEBA	1.5P									
7/16-20UNF	GH3	TSU07N3NEB5	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	4
		TSU07N3NEBA	1.5P									
	GH4	TSU07N4NEB5	5P									
		TSU07N4NEBA	1.5P									
1/2-13UNC	GH3	TSU08R3NEB5	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	4
		TSU08R3NEBA	1.5P									
	GH4	TSU08R4NEB5	5P									
		TSU08R4NEBA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

HT Hand Taps

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
1/2-13UNC	GH5	TSU08R5NEB5	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	4
		TSU08R5NEBA	1.5P									
1/2-20UNF	GH3	TSU08N3NEB5	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	4
		TSU08N3NEBA	1.5P									
	GH4	TSU08N4NEB5	5P									
		TSU08N4NEBA	1.5P									
	GH5	TSU08N5NEB5	5P									
		TSU08N5NEBA	1.5P									
9/16-12UNC	GH3	TSU09S3NEB5	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	4	4
		TSU09S3NEBA	1.5P									
	GH4	TSU09S4NEB5	5P									
		TSU09S4NEBA	1.5P									
	GH5	TSU09S5NEB5	5P									
		TSU09S5NEBA	1.5P									
9/16-18UNF	GH3	TSU09O3NEB5	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	4	4
		TSU09O3NEBA	1.5P									
	GH4	TSU09O4NEB5	5P									
		TSU09O4NEBA	1.5P									
	GH5	TSU09O5NEB5	5P									
		TSU09O5NEBA	1.5P									
5/8-11UNC	GH3	TSU10U3NEB5	5P	4.331	1.024	-	2.205	0.48	0.36	0.562	4	4
		TSU10U3NEBA	1.5P									
	GH4	TSU10U4NEB5	5P									
		TSU10U4NEBA	1.5P									
	GH5	TSU10U5NEB5	5P									
		TSU10U5NEBA	1.5P									
	GH6	TSU10U6NEB5	5P									
		TSU10U6NEBA	1.5P									
5/8-18UNF	GH3	TSU10O3NEB5	5P	4.331	1.024	-	2.205	0.48	0.36	0.562	4	4
		TSU10O3NEBA	1.5P									
	GH4	TSU10O4NEB5	5P									
		TSU10O4NEBA	1.5P									
	GH5	TSU10O5NEB5	5P									
		TSU10O5NEBA	1.5P									
3/4-10UNC	GH3	TSU12V3NEB5	5P	4.921	1.299	-	2.52	0.59	0.442	0.687	4	4
		TSU12V3NEBA	1.5P									
	GH5	TSU12V5NEB5	5P									
		TSU12V5NEBA	1.5P									
	GH6	TSU12V6NEB5	5P									
		TSU12V6NEBA	1.5P									
3/4-16UNF	GH3	TSU12P3NEB5	5P	4.921	1.299	-	2.52	0.59	0.442	0.687	4	4
		TSU12P3NEBA	1.5P									
	GH4	TSU12P4NEB5	5P									
		TSU12P4NEBA	1.5P									
	GH5	TSU12P5NEB5	5P									
		TSU12P5NEBA	1.5P									
7/8-9UNC	GH5	TSU14W5NEB5	5P	5.512	1.299	-	2.795	0.697	0.523	0.75	4	4
		TSU14W5NEBA	1.5P									
	GH6	TSU14W6NEB5	5P									
		TSU14W6NEBA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

HT Hand Taps

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
7/8-14UNF	GH4	TSU14Q4NEB5	5P	5.512	1.299	-	2.795	0.697	0.523	0.75	4	4
		TSU14Q4NEBA	1.5P									
	GH6	TSU14Q6NEB5	5P									
		TSU14Q6NEBA	1.5P									
1-8UNC	GH4	TSU16X4NEB5	5P	6.299	1.457	-	3.228	0.8	0.6	0.812	4	4
		TSU16X4NEBA	1.5P									
	GH5	TSU16X5NEB5	5P									
		TSU16X5NEBA	1.5P									
	GH6	TSU16X6NEB5	5P									
		TSU16X6NEBA	1.5P									
	GH7	TSU16X7NEB5	5P									
		TSU16X7NEBA	1.5P									
1-12UNF	GH4	TSU16S4NEB5	5P	6.299	1.457	-	3.228	0.8	0.6	0.812	4	4
		TSU16S4NEBA	1.5P									
	GH5	TSU16S5NEB5	5P									
		TSU16S5NEBA	1.5P									
	GH6	TSU16S6NEB5	5P									
		TSU16S6NEBA	1.5P									
1 1/8-7UNC	GH6	TSU18Y6NEB5	5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
		TSU18Y6NEBA	1.5P									
	GH7	TSU18Y7NEB5	5P									
		TSU18Y7NEBA	1.5P									
1 1/8-12UNF	GH5	TSU18S5NEB5	5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
		TSU18S5NEBA	1.5P									
	GH6	TSU18S6NEB5	5P									
		TSU18S6NEBA	1.5P									
1 1/4-7UNC	GH6	TSU20Y6NEB5	5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
		TSU20Y6NEBA	1.5P									
	GH8	TSU20Y8NEB5	5P									
		TSU20Y8NEBA	1.5P									
1 1/4-12UNF	GH5	TSU20S5NEB5	5P	7.087	1.929	-	3.622	1.021	0.766	1	6	4
		TSU20S5NEBA	1.5P									
	GH6	TSU20S6NEB5	5P									
		TSU20S6NEBA	1.5P									
1 3/8-6UNC	GH6	TSU22Z6NEB5	5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
		TSU22Z6NEBA	1.5P									
	GH8	TSU22Z8NEB5	5P									
		TSU22Z8NEBA	1.5P									
1 3/8-12UNF	GH5	TSU22S5NEB5	5P	7.874	2.165	-	4.016	1.108	0.831	1.062	6	4
		TSU22S5NEBA	1.5P									
	GH6	TSU22S6NEB5	5P									
		TSU22S6NEBA	1.5P									
1 1/2-6UNC	GH6	TSU24Z6NEB5	5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
		TSU24Z6NEBA	1.5P									
	GH8	TSU24Z8NEB5	5P									
		TSU24Z8NEBA	1.5P									
1 1/2-12UNF	GH5	TSU24S5NEB5	5P	7.874	2.323	-	4.016	1.233	0.925	1.125	6	4
		TSU24S5NEBA	1.5P									
	GH7	TSU24S7NEB5	5P									
		TSU24S7NEBA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT OX

Hand Taps, Oxided

Specification

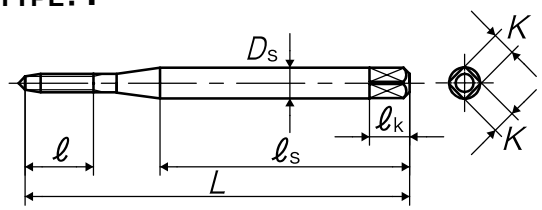
HSS | OX Oxide

Recommended Tapping Speed depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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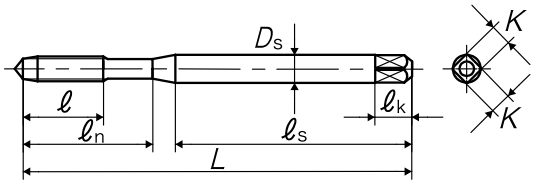

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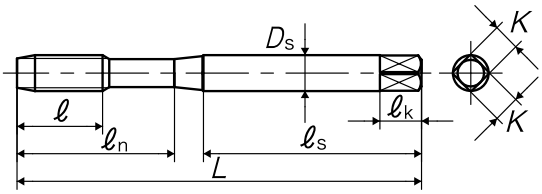

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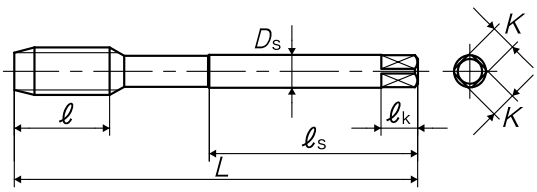

Segment : 1A

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads												
No.0-80UNF	GH1	TSUN0B1NEX5	5P	1.772	0.236	-	1.161	0.141	0.11	0.187	2	1
		TSUN0B1NEXA	1.5P									
	GH2	TSUN0B2NEX5	5P									
		TSUN0B2NEXA	1.5P									
No.1-64UNC	GH1	TSUN1D1NEX5	5P	1.772	0.275	-	1.161	0.141	0.11	0.187	2	1
		TSUN1D1NEXA	1.5P									
	GH2	TSUN1D2NEX5	5P									
		TSUN1D2NEXA	1.5P									
NO.1-72UNF	GH1	TSUN1C1NEX5	5P	1.772	0.275	-	1.161	0.141	0.11	0.187	2	1
		TSUN1C1NEXA	1.5P									
	GH2	TSUN1C2NEX5	5P									
		TSUN1C2NEXA	1.5P									
No.2-56UNC	GH1	TSUN2E1NEX5	5P	1.772	0.314	-	1.161	0.141	0.11	0.187	3	1
		TSUN2E1NEXA	1.5P									
	GH2	TSUN2E2NEX5	5P									
		TSUN2E2NEXA	1.5P									
NO.2-64UNF	GH1	TSUN2D1NEX5	5P	1.772	0.314	-	1.161	0.141	0.11	0.187	3	1
		TSUN2D1NEXA	1.5P									
	GH2	TSUN2D2NEX5	5P									
		TSUN2D2NEXA	1.5P									

HT OX Hand Taps, Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
No.3-48UNC	GH1	TSUN3F1NEX5	5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	3	2
		TSUN3F1NEXA	1.5P									
	GH2	TSUN3F2NEX5	5P									
		TSUN3F2NEXA	1.5P									
NO.3-56UNF	GH1	TSUN3E1NEX5	5P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	3	2
		TSUN3E1NEXA	1.5P									
	GH2	TSUN3E2NEX5	5P									
		TSUN3E2NEXA	1.5P									
No.4-40UNC	GH2	TSUN4H2NEX5	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	3	2
		TSUN4H2NEXA	1.5P									
	GH3	TSUN4H3NEX5	5P									
		TSUN4H3NEXA	1.5P									
No.4-48UNF	GH1	TSUN4F1NEX5	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	3	2
		TSUN4F1NEXA	1.5P									
	GH2	TSUN4F2NEX5	5P									
		TSUN4F2NEXA	1.5P									
No.5-40UNC	GH2	TSUN5H2NEX5	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	2
		TSUN5H2NEXA	1.5P									
	GH3	TSUN5H3NEX5	5P									
		TSUN5H3NEXA	1.5P									
NO.5-44UNF	GH1	TSUN5G1NEX5	5P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	3	2
		TSUN5G1NEXA	1.5P									
	GH2	TSUN5G2NEX5	5P									
		TSUN5G2NEXA	1.5P									
	GH3	TSUN5G3NEX5	5P									
		TSUN5G3NEXA	1.5P									
No.6-32UNC	GH2	TSUN6J2NEX5	5P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	3	2
		TSUN6J2NEXA	1.5P									
	GH3	TSUN6J3NEX5	5P									
		TSUN6J3NEXA	1.5P									
No.6-40UNF	GH2	TSUN6H2NEX5	5P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	3	2
		TSUN6H2NEXA	1.5P									
	GH3	TSUN6H3NEX5	5P									
		TSUN6H3NEXA	1.5P									
No.8-32UNC	GH2	TSUN8J2NEX5	5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		TSUN8J2NEXA	1.5P									
	GH3	TSUN8J3NEX5	5P									
		TSUN8J3NEXA	1.5P									
No.8-36UNF	GH2	TSUN8I2NEX5	5P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		TSUN8I2NEXA	1.5P									
	GH3	TSUN8I3NEX5	5P									
		TSUN8I3NEXA	1.5P									
No.10-24UNC	GH2	TSUNAM2NEX5	5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		TSUNAM2NEXA	1.5P									
	GH3	TSUNAM3NEX5	5P									
		TSUNAM3NEXA	1.5P									
No.10-32UNF	GH2	TSUNAJ2NEX5	5P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		TSUNAJ2NEXA	1.5P									
	GH3	TSUNAJ3NEX5	5P									
		TSUNAJ3NEXA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

HT OX Hand Taps, Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
No.12-24UNC	GH2	TSUNCM2NEX5	5P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
		TSUNCM2NEXA	1.5P									
	GH3	TSUNCM3NEX5	5P									
		TSUNCM3NEXA	1.5P									
No.12-28UNF	GH2	TSUNCK2NEX5	5P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
		TSUNCK2NEXA	1.5P									
	GH3	TSUNCK3NEX5	5P									
		TSUNCK3NEXA	1.5P									
1/4-20UNC	GH3	TSU04N3NEX5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		TSU04N3NEXA	1.5P									
	GH4	TSU04N4NEX5	5P									
		TSU04N4NEXA	1.5P									
	GH5	TSU04N5NEX5	5P									
		TSU04N5NEXA	1.5P									
1/4-28UNF	GH2	TSU04K2NEX5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		TSU04K2NEXA	1.5P									
	GH3	TSU04K3NEX5	5P									
		TSU04K3NEXA	1.5P									
	GH4	TSU04K4NEX5	5P									
		TSU04K4NEXA	1.5P									
5/16-18UNC	GH3	TSU05O3NEX5	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	4	3
		TSU05O3NEXA	1.5P									
	GH4	TSU05O4NEX5	5P									
		TSU05O4NEXA	1.5P									
	GH5	TSU05O5NEX5	5P									
		TSU05O5NEXA	1.5P									
5/16-24UNF	GH3	TSU05M3NEX5	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	4	3
		TSU05M3NEXA	1.5P									
	GH4	TSU05M4NEX5	5P									
		TSU05M4NEXA	1.5P									
3/8-16UNC	GH3	TSU06P3NEX5	5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	4	3
		TSU06P3NEXA	1.5P									
	GH5	TSU06P5NEX5	5P									
		TSU06P5NEXA	1.5P									
3/8-24UNF	GH3	TSU06M3NEX5	5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	4	3
		TSU06M3NEXA	1.5P									
	GH4	TSU06M4NEX5	5P									
		TSU06M4NEXA	1.5P									
7/16-14UNC	GH4	TSU07Q4NEX5	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	4
		TSU07Q4NEXA	1.5P									
	GH5	TSU07Q5NEX5	5P									
		TSU07Q5NEXA	1.5P									
7/16-20UNF	GH3	TSU07N3NEX5	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	4
		TSU07N3NEXA	1.5P									
	GH4	TSU07N4NEX5	5P									
		TSU07N4NEXA	1.5P									
1/2-13UNC	GH3	TSU08R3NEX5	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	4
		TSU08R3NEXA	1.5P									
	GH4	TSU08R4NEX5	5P									
		TSU08R4NEXA	1.5P									

HT OX Hand Taps, Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
1/2-13UNC	GH5	TSU08R5NEX5	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	4
		TSU08R5NEXA	1.5P									
1/2-20UNF	GH3	TSU08N3NEX5	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	4
		TSU08N3NEXA	1.5P									
	GH4	TSU08N4NEX5	5P									
		TSU08N4NEXA	1.5P									
	GH5	TSU08N5NEX5	5P									
		TSU08N5NEXA	1.5P									
9/16-12UNC	GH3	TSU09S3NEX5	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	4	4
		TSU09S3NEXA	1.5P									
	GH4	TSU09S4NEX5	5P									
		TSU09S4NEXA	1.5P									
	GH5	TSU09S5NEX5	5P									
		TSU09S5NEXA	1.5P									
9/16-18UNF	GH3	TSU09O3NEX5	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	4	4
		TSU09O3NEXA	1.5P									
	GH4	TSU09O4NEX5	5P									
		TSU09O4NEXA	1.5P									
	GH5	TSU09O5NEX5	5P									
		TSU09O5NEXA	1.5P									
5/8-11UNC	GH3	TSU10U3NEX5	5P	4.331	1.024	-	2.205	0.48	0.36	0.562	4	4
		TSU10U3NEXA	1.5P									
	GH4	TSU10U4NEX5	5P									
		TSU10U4NEXA	1.5P									
	GH5	TSU10U5NEX5	5P									
		TSU10U5NEXA	1.5P									
	GH6	TSU10U6NEX5	5P									
		TSU10U6NEXA	1.5P									
5/8-18UNF	GH3	TSU10O3NEX5	5P	4.331	1.024	-	2.205	0.48	0.36	0.562	4	4
		TSU10O3NEXA	1.5P									
	GH4	TSU10O4NEX5	5P									
		TSU10O4NEXA	1.5P									
	GH5	TSU10O5NEX5	5P									
		TSU10O5NEXA	1.5P									
3/4-10UNC	GH3	TSU12V3NEX5	5P	4.921	1.299	-	2.52	0.59	0.442	0.687	4	4
		TSU12V3NEXA	1.5P									
	GH5	TSU12V5NEX5	5P									
		TSU12V5NEXA	1.5P									
	GH6	TSU12V6NEX5	5P									
		TSU12V6NEXA	1.5P									
3/4-16UNF	GH3	TSU12P3NEX5	5P	4.921	1.299	-	2.52	0.59	0.442	0.687	4	4
		TSU12P3NEXA	1.5P									
	GH4	TSU12P4NEX5	5P									
		TSU12P4NEXA	1.5P									
	GH5	TSU12P5NEX5	5P									
		TSU12P5NEXA	1.5P									
7/8-9UNC	GH5	TSU14W5NEX5	5P	5.512	1.299	-	2.795	0.697	0.523	0.75	4	4
		TSU14W5NEXA	1.5P									
	GH6	TSU14W6NEX5	5P									
		TSU14W6NEXA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT OX Hand Taps, Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
7/8-14UNF	GH4	TSU14Q4NEX5	5P	5.512	1.299	-	2.795	0.697	0.523	0.75	4	4
		TSU14Q4NEXA	1.5P									
	GH6	TSU14Q6NEX5	5P									
		TSU14Q6NEXA	1.5P									
1-8UNC	GH4	TSU16X4NEX5	5P	6.299	1.457	-	3.228	0.8	0.6	0.812	4	4
		TSU16X4NEXA	1.5P									
	GH5	TSU16X5NEX5	5P									
		TSU16X5NEXA	1.5P									
	GH6	TSU16X6NEX5	5P									
		TSU16X6NEXA	1.5P									
	GH7	TSU16X7NEX5	5P									
		TSU16X7NEXA	1.5P									
1-12UNF	GH4	TSU16S4NEX5	5P	6.299	1.457	-	3.228	0.8	0.6	0.812	4	4
		TSU16S4NEXA	1.5P									
	GH5	TSU16S5NEX5	5P									
		TSU16S5NEXA	1.5P									
	GH6	TSU16S6NEX5	5P									
		TSU16S6NEXA	1.5P									
1 1/8-7UNC	GH6	TSU18Y6NEX5	5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
		TSU18Y6NEXA	1.5P									
	GH7	TSU18Y7NEX5	5P									
		TSU18Y7NEXA	1.5P									
1 1/8-12UNF	GH5	TSU18S5NEX5	5P	7.087	1.732	-	3.622	0.896	0.672	0.875	4	4
		TSU18S5NEXA	1.5P									
	GH6	TSU18S6NEX5	5P									
		TSU18S6NEXA	1.5P									
1 1/4-7UNC	GH6	TSU20Y6NEX5	5P	7.087	1.929	-	3.622	1.021	0.766	1	4	4
		TSU20Y6NEXA	1.5P									
	GH8	TSU20Y8NEX5	5P									
		TSU20Y8NEXA	1.5P									
1 1/4-12UNF	GH5	TSU20S5NEX5	5P	7.087	1.929	-	3.622	1.021	0.766	1	6	4
		TSU20S5NEXA	1.5P									
	GH6	TSU20S6NEX5	5P									
		TSU20S6NEXA	1.5P									
1 3/8-6UNC	GH6	TSU22Z6NEX5	5P	7.874	2.165	-	4.016	1.108	0.831	1.062	4	4
		TSU22Z6NEXA	1.5P									
	GH8	TSU22Z8NEX5	5P									
		TSU22Z8NEXA	1.5P									
1 3/8-12UNF	GH5	TSU22S5NEX5	5P	7.874	2.165	-	4.016	1.108	0.831	1.062	6	4
		TSU22S5NEXA	1.5P									
	GH6	TSU22S6NEX5	5P									
		TSU22S6NEXA	1.5P									
1 1/2-6UNC	GH6	TSU24Z6NEX5	5P	7.874	2.323	-	4.016	1.233	0.925	1.125	4	4
		TSU24Z6NEXA	1.5P									
	GH8	TSU24Z8NEX5	5P									
		TSU24Z8NEXA	1.5P									
1 1/2-12UNF	GH5	TSU24S5NEX5	5P	7.874	2.323	-	4.016	1.233	0.925	1.125	6	4
		TSU24S5NEXA	1.5P									
	GH7	TSU24S7NEX5	5P									
		TSU24S7NEXA	1.5P									

HT-CI

Hand Taps for Cast Irons

Specification

HSS | NI Nitride

■Suitable for hard and abrasive materials such as cast irons.

Recommended Tapping Speed depending on Materials

Cast irons 鋳鉄
5~10
(m/min)

For icon explanation, refer to P.24

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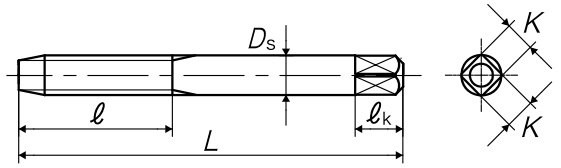

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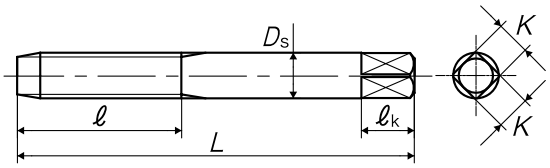

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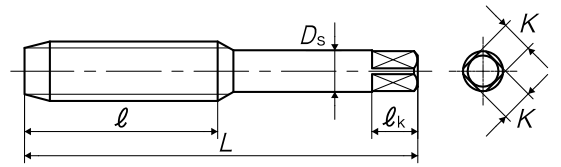

Segment : 1A

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads										
1/4-20UNC	GH3	Y86001	4P	2.5	1	0.255	0.191	0.312	4	1
		Y86002	1.5P							
	GH5	Y86003	4P							
		Y86004	1.5P							
1/4-28UNF	GH3	Y86005	4P	2.5	1	0.255	0.191	0.312	4	1
		Y86006	1.5P							
5/16-18UNC	GH3	Y86007	4P	2.718	1.125	0.318	0.238	0.375	4	2
		Y86008	1.5P							
	GH5	Y86009	4P							
		Y86010	1.5P							
5/16-24UNF	GH3	Y86011	4P	2.718	1.125	0.318	0.238	0.375	4	2
		Y86012	1.5P							
3/8-16UNC	GH3	Y86013	4P	2.937	1.25	0.381	0.286	0.437	4	2
		Y86014	1.5P							
	GH5	Y86015	4P							
		Y86016	1.5P							
3/8-24UNF	GH3	Y86017	4P	2.937	1.25	0.381	0.286	0.437	4	2
		Y86018	1.5P							
7/16-14UNC	GH3	Y86019	4P	3.156	1.437	0.323	0.242	0.406	4	3
		Y86020	1.5P							
	GH5	Y86021	4P							
		Y86022	1.5P							
7/16-20UNF	GH3	Y86023	4P	3.156	1.437	0.323	0.242	0.406	4	3
		Y86024	1.5P							

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	*ℓ*	*Ds*	*K*	*ℓk*

HT-CI Hand Taps for Cast Irons

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
7/16-20UNF	GH5	Y86025	4P	3.156	1.437	0.323	0.242	0.406	4	3
		Y86026	1.5P							
1/2-13UNC	GH3	Y86027	4P	3.375	1.656	0.367	0.275	0.437	4	3
		Y86028	1.5P							
	GH5	Y86029	4P							
		Y86030	1.5P							
1/2-20UNF	GH3	Y86031	4P	3.375	1.656	0.367	0.275	0.437	4	3
		Y86032	1.5P							
	GH5	Y86033	4P							
		Y86034	1.5P							
9/16-12UNC	GH3	Y86035	4P	3.593	1.656	0.429	0.322	0.5	4	3
		Y86036	1.5P							
9/16-18UNF	GH3	Y86037	4P	3.593	1.656	0.429	0.322	0.5	4	3
		Y86038	1.5P							
5/8-11UNC	GH3	Y86039	4P	3.812	1.812	0.48	0.36	0.562	4	3
		Y86040	1.5P							
5/8-18UNF	GH3	Y86041	4P	3.812	1.812	0.48	0.36	0.562	4	3
		Y86042	1.5P							
3/4-10UNC	GH3	Y86043	4P	4.25	2.000	0.59	0.422	0.687	4	3
		Y86044	1.5P							
3/4-16UNF	GH3	Y86045	4P	4.25	2.000	0.59	0.422	0.687	4	3
		Y86046	1.5P							

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AXE-HT

AXE Hand Taps

Specification

HSS-P Coating

■AXE-HT has special cutting edges which minimize chipping trouble in aluminum alloy diecasting tapping, and ensures a long tool life.

Recommended Tapping Speed depending on Materials

Aluminum alloy castings アルミ合金鋳物 10~20 (m/min)

Zinc alloy castings 亜鉛合金鋳物 10~20 (m/min)

For icon explanation, refer to P.24

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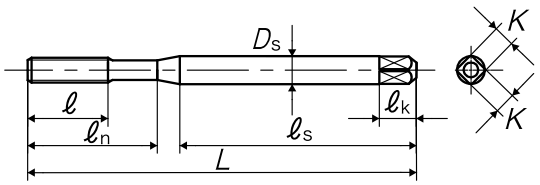

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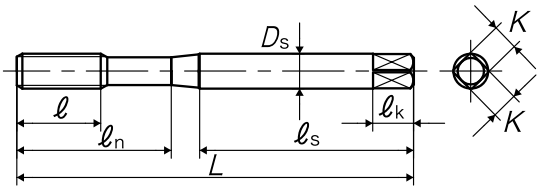

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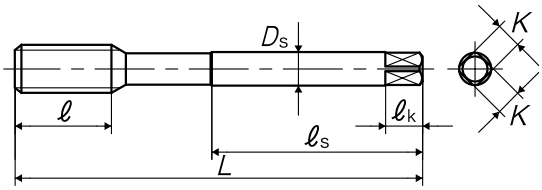


Segment : 1B

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads												
M6 × 1	D5	TS6.0MELPVA	1.5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
M8 × 1.25	D5	TS8.0NELPVA	1.5P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	4	2
M10 × 1.5	D6	TS010OFLPVA	1.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	3
M10 × 1.25	D6	TS010NFLPVA	1.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	3
M10 × 1	D6	TS010MFLPVA	1.5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	3
M12 × 1.75	D6	TS012PFLPVA	1.5P	4.331	1.024	-	2.205	0.367	0.275	0.438	4	3
M12 × 1.5	D6	TS012OFLPVA	1.5P	4.331	1.024	-	2.205	0.367	0.275	0.438	4	3
M12 × 1.25	D6	TS012NFLPVA	1.5P	4.331	1.024	-	2.205	0.367	0.275	0.438	4	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT STI

Hand Taps for Helical Coil Wire Screw Thread Inserts

Specification

HSS

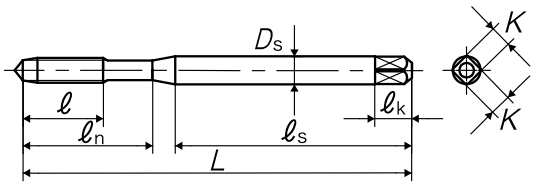
■Hand tap cutting internal threads for helical coil to enter.

Recommended Tapping Speed depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE:1



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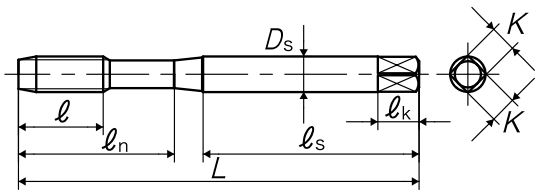

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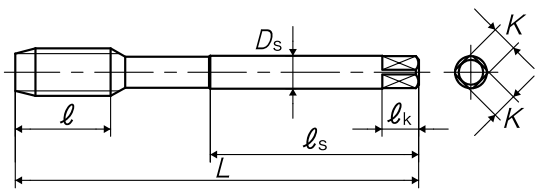


Segment : 1A

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
For Helical Coil Wire Screw Thread Inserts, for Unified Threads												
STI No.2-56UNC	GH1	TUUN2E1NEB5	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	3	1
		TUUN2E1NEBA	1.5P									
	GH2	TUUN2E2NEB5	5P									
		TUUN2E2NEBA	1.5P									
STI No.4-40UNC	GH1	TUUN4H1NEB5	5P	2.48	0.512	0.827	1.496	0.168	0.131	0.25	3	1
		TUUN4H1NEBA	1.5P									
	GH2	TUUN4H2NEB5	5P									
		TUUN4H2NEBA	1.5P									
STI No.6-32UNC	GH1	TUUN6J1NEB5	5P	2.756	0.551	0.945	1.654	0.194	0.131	0.25	3	1
		TUUN6J1NEBA	1.5P									
	GH2	TUUN6J2NEB5	5P									
		TUUN6J2NEBA	1.5P									
STI No.8-32UNC	GH1	TUUN8J1NEB5	5P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	3	1
		TUUN8J1NEBA	1.5P									
	GH2	TUUN8J2NEB5	5P									
		TUUN8J2NEBA	1.5P									
STI No.10-24UNC	GH2	TUUNAM2NEB5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
		TUUNAM2NEBA	1.5P									
	GH3	TUUNAM3NEB5	5P									
		TUUNAM3NEBA	1.5P									
STI No.10-32UNF	GH2	TUUNAJ2NEB5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
		TUUNAJ2NEBA	1.5P									
	GH3	TUUNAJ3NEB5	5P									
		TUUNAJ3NEBA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

HT STI Hand Taps for Helical Coil Wire Screw Thread Inserts

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
STI 1/4-20UNC	GH2	TUU04N2NEB5	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	2
		TUU04N2NEBA	1.5P									
	GH3	TUU04N3NEB5	5P									
		TUU04N3NEBA	1.5P									
STI 1/4-28UNF	GH2	TUU04K2NEB5	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	2
		TUU04K2NEBA	1.5P									
	GH3	TUU04K3NEB5	5P									
		TUU04K3NEBA	1.5P									
STI 5/16-18UNC	GH2	TUU05O2NEB5	5P	3.937	0.906	1.535	2.067	0.381	0.286	0.437	4	2
		TUU05O2NEBA	1.5P									
	GH3	TUU05O3NEB5	5P									
		TUU05O3NEBA	1.5P									
STI 5/16-24UNF	GH2	TUU05M2NEB5	5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	4	2
		TUU05M2NEBA	1.5P									
	GH3	TUU05M3NEB5	5P									
		TUU05M3NEBA	1.5P									
STI 3/8-16UNC	GH3	TUU06P3NEB5	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	3
		TUU06P3NEBA	1.5P									
	GH4	TUU06P4NEB5	5P									
		TUU06P4NEBA	1.5P									
STI 3/8-24UNF	GH2	TUU06M2NEB5	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	3
		TUU06M2NEBA	1.5P									
	GH3	TUU06M3NEB5	5P									
		TUU06M3NEBA	1.5P									
STI 7/16-14UNC	GH3	TUU07Q3NEB5	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	4	3
		TUU07Q3NEBA	1.5P									
	GH4	TUU07Q4NEB5	5P									
		TUU07Q4NEBA	1.5P									
STI 7/16-20UNF	GH3	TUU07N3NEB5	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	4	3
		TUU07N3NEBA	1.5P									
	GH4	TUU07N4NEB5	5P									
		TUU07N4NEBA	1.5P									
STI 1/2-13UNC	GH3	TUU08R3NEB5	5P	4.331	1.024	-	2.205	0.48	0.36	0.562	4	3
		TUU08R3NEBA	1.5P									
	GH4	TUU08R4NEB5	5P									
		TUU08R4NEBA	1.5P									
STI 1/2-20UNF	GH3	TUU08N3NEB5	5P	4.331	1.024	-	2.205	0.48	0.36	0.562	4	3
		TUU08N3NEBA	1.5P									
	GH4	TUU08N4NEB5	5P									
		TUU08N4NEBA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HT OX STI

Hand Taps for Helical Coil Wire Screw Thread Inserts, Oxided

Specification

HSS | OX Oxide

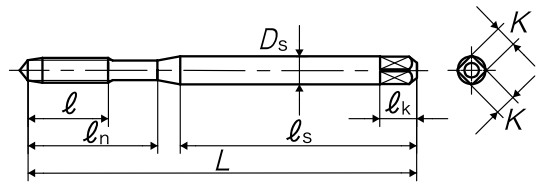
■ Hand tap cutting internal threads for helical coil to enter.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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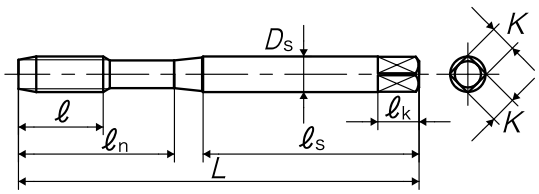

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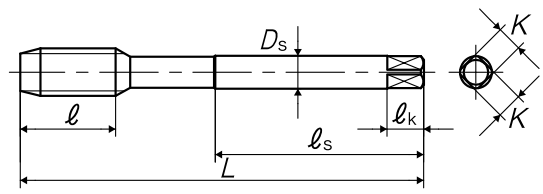

Segment : 1A

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
For Helical Coil Wire Screw Thread Inserts, for Unified Threads												
STI No.2-56UNC	GH1	TUUN2E1NEX5	5P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	3	1
		TUUN2E1NEXA	1.5P									
	GH2	TUUN2E2NEX5	5P									
		TUUN2E2NEXA	1.5P									
STI No.4-40UNC	GH1	TUUN4H1NEX5	5P	2.48	0.512	0.827	1.496	0.168	0.131	0.25	3	1
		TUUN4H1NEXA	1.5P									
	GH2	TUUN4H2NEX5	5P									
		TUUN4H2NEXA	1.5P									
STI No.6-32UNC	GH1	TUUN6J1NEX5	5P	2.756	0.551	0.945	1.654	0.194	0.131	0.25	3	1
		TUUN6J1NEXA	1.5P									
	GH2	TUUN6J2NEX5	5P									
		TUUN6J2NEXA	1.5P									
STI No.8-32UNC	GH1	TUUN8J1NEX5	5P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	3	1
		TUUN8J1NEXA	1.5P									
	GH2	TUUN8J2NEX5	5P									
		TUUN8J2NEXA	1.5P									
STI No.10-24UNC	GH2	TUUNAM2NEX5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
		TUUNAM2NEXA	1.5P									
	GH3	TUUNAM3NEX5	5P									
		TUUNAM3NEXA	1.5P									
STI No.10-32UNF	GH2	TUUNAJ2NEX5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
		TUUNAJ2NEXA	1.5P									
	GH3	TUUNAJ3NEX5	5P									
		TUUNAJ3NEXA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

HT OX STI Hand Taps for Helical Coil Wire Screw Thread Inserts, Oxided

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (mm)	ℓk (mm)	No. of flutes	Type
STI 1/4-20UNC	GH2	TUU04N2NEX5	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	2
		TUU04N2NEXA	1.5P									
	GH3	TUU04N3NEX5	5P									
		TUU04N3NEXA	1.5P									
STI 1/4-28UNF	GH2	TUU04K2NEX5	5P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	3	2
		TUU04K2NEXA	1.5P									
	GH3	TUU04K3NEX5	5P									
		TUU04K3NEXA	1.5P									
STI 5/16-18UNC	GH2	TUU05O2NEX5	5P	3.937	0.906	1.535	2.067	0.381	0.286	0.437	4	2
		TUU05O2NEXA	1.5P									
	GH3	TUU05O3NEX5	5P									
		TUU05O3NEXA	1.5P									
STI 5/16-24UNF	GH2	TUU05M2NEX5	5P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	4	2
		TUU05M2NEXA	1.5P									
	GH3	TUU05M3NEX5	5P									
		TUU05M3NEXA	1.5P									
STI 3/8-16UNC	GH3	TUU06P3NEX5	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	3
		TUU06P3NEXA	1.5P									
	GH4	TUU06P4NEX5	5P									
		TUU06P4NEXA	1.5P									
STI 3/8-24UNF	GH2	TUU06M2NEX5	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	3
		TUU06M2NEXA	1.5P									
	GH3	TUU06M3NEX5	5P									
		TUU06M3NEXA	1.5P									
STI 7/16-14UNC	GH3	TUU07Q3NEX5	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	4	3
		TUU07Q3NEXA	1.5P									
	GH4	TUU07Q4NEX5	5P									
		TUU07Q4NEXA	1.5P									
STI 7/16-20UNF	GH3	TUU07N3NEX5	5P	4.331	1.024	-	2.205	0.429	0.322	0.5	4	3
		TUU07N3NEXA	1.5P									
	GH4	TUU07N4NEX5	5P									
		TUU07N4NEXA	1.5P									
STI 1/2-13UNC	GH3	TUU08R3NEX5	5P	4.331	1.024	-	2.205	0.48	0.36	0.562	4	3
		TUU08R3NEXA	1.5P									
	GH4	TUU08R4NEX5	5P									
		TUU08R4NEXA	1.5P									
STI 1/2-20UNF	GH3	TUU08N3NEX5	5P	4.331	1.024	-	2.205	0.48	0.36	0.562	4	3
		TUU08N3NEXA	1.5P									
	GH4	TUU08N4NEX5	5P									
		TUU08N4NEXA	1.5P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

ZELX MOLD

Hand Taps for Hard-to-Machine Materials

Specification

HSS-Co

■Suitable for hard steels of 35 ～ 45HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels.

Recommended Tapping Speed depending on Materials

Thermal refined steels 調質鋼	Tool steels 工具鋼
~5 (m/min)	~5 (m/min)
35~45HRC	

For icon explanation, refer to P.24

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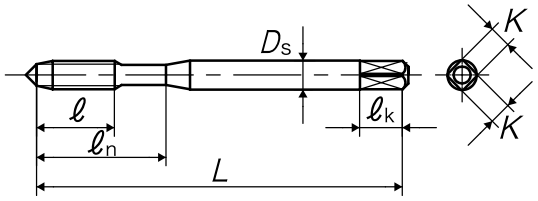

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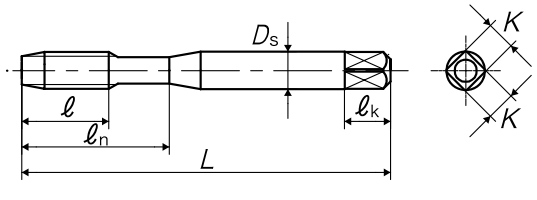

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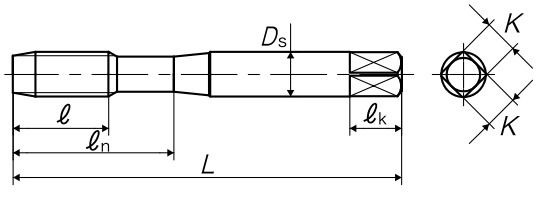

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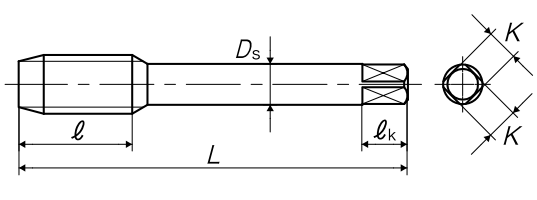


Segment : 1B

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Unified Threads											
No.4-40UNC	GH2	Y89599	5P	1.875	0.335	0.562	0.141	0.11	0.187	3	1
No.5-40UNC	GH2	Y89601	5P	1.937	0.374	0.625	0.141	0.11	0.187	3	1
No.6-32UNC	GH3	Y89602	5P	2	0.413	0.687	0.141	0.11	0.187	3	1
No.8-32UNC	GH3	Y89604	5P	2.125	0.453	0.75	0.168	0.131	0.25	3	1
No.10-24UNC	GH3	Y89606	5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
No.10-32UNF	GH3	Y89607	5P	2.375	0.531	0.875	0.194	0.152	0.25	3	1
1/4-20UNC	GH3	Y89613	5P	2.5	0.591	1	0.255	0.191	0.312	3	2
1/4-28UNF	GH3	Y89614	5P	2.5	0.591	1	0.255	0.191	0.312	3	2
5/16-18UNC	GH3	Y89615	5P	2.718	0.669	1.125	0.318	0.238	0.375	4	3
5/16-24UNF	GH3	Y89616	5P	2.718	0.669	1.125	0.318	0.238	0.375	4	3
3/8-16UNC	GH3	Y89617	5P	2.937	0.748	1.25	0.381	0.286	0.437	4	3
3/8-24UNF	GH3	Y89618	5P	2.937	0.748	1.25	0.381	0.286	0.437	4	3
7/16-14UNC	GH3	Y89619	5P	3.156	0.866	-	0.323	0.242	0.406	4	4
7/16-20UNF	GH3	Y89620	5P	3.156	0.866	-	0.323	0.242	0.406	4	4
1/2-13UNC	GH3	Y89621	5P	3.375	0.984	-	0.367	0.275	0.437	4	4
1/2-20UNF	GH3	Y89622	5P	3.375	0.984	-	0.367	0.275	0.437	4	4
5/8-11UNC	GH3	Y89625	5P	3.812	1.083	-	0.48	0.36	0.562	4	4
5/8-18UNF	GH3	Y89626	5P	3.812	1.083	-	0.48	0.36	0.562	4	4
3/4-10UNC	GH3	Y89627	5P	4.25	1.201	-	0.59	0.422	0.687	4	4
3/4-16UNF	GH3	Y89628	5P	4.25	1.201	-	0.59	0.422	0.687	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

EH-HT

Hand Taps for Hard-to-Machine Materials

Specification

HSS-Co

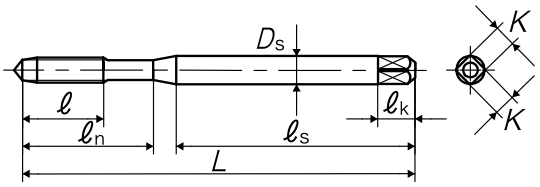
■Suitable for hard steels of 35 ～ 45HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels.

Recommended Tapping Speed depending on Materials

Thermal refined steels 調質鋼	Tool steels 工具鋼
~5 (m/min)	~5 (m/min)
35~45HRC	

For icon explanation, refer to P.24

TYPE : 1



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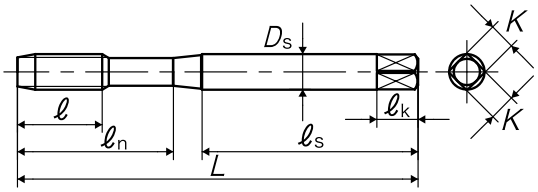

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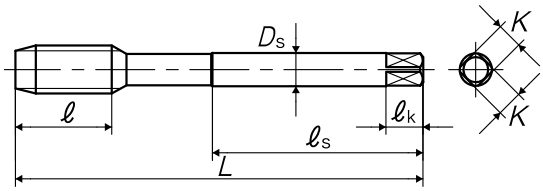
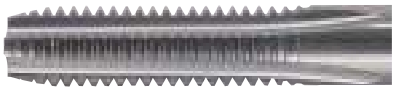


Segment : 1B

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads												
M5 × 0.8	D5	TS5.0KEDCB5	5P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	3	1
M6 × 1	D6	TS6.0MFDCB5	5P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	3	1
M8 × 1.25	D6	TS8.0NFDCB5	5P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	4	2
M8 × 1	D6	TS8.0MFDCB5	5P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	4	2
M10 × 1.5	D7	TS010OHDCB5	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	3
M10 × 1.25	D6	TS010NFDCB5	5P	3.937	0.906	-	2.008	0.323	0.242	0.406	4	3
M12 × 1.75	D7	TS012PHDCB5	5P	4.331	1.024	-	2.205	0.367	0.275	0.437	4	3

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

ZELX CARB AL



Carbide Taps for Light Alloys

Specification

HF

■ZELX CARB AL is the carbide tap suitable for tapping aluminum castings (AC), aluminum die castings (ADC), and zinc die castings(ZDC).

Recommended Tapping Speed depending on Materials

Aluminum alloy castings アルミ合金鋳物 10~20 (m/min)

Zinc alloy castings 亜鉛合金鋳物 10~20 (m/min)

For icon explanation, refer to P.24

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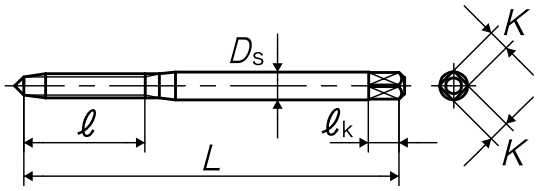

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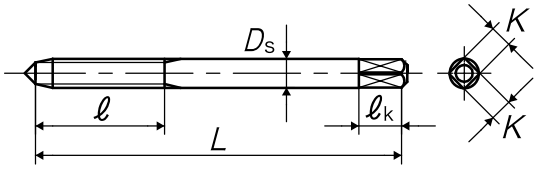

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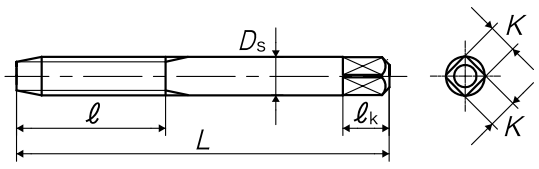

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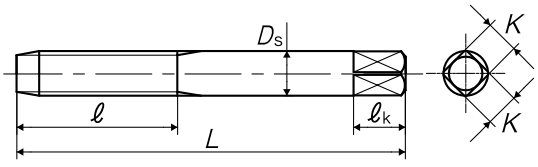

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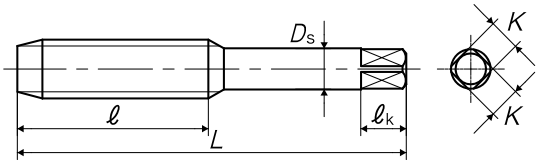


Segment : 1L

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads										
M3 × 0.5	D3	Y71000	4P	1.937	0.625	0.141	0.11	0.187	3	1
M4 × 0.7	D4	Y71002	4P	2.125	0.75	0.168	0.131	0.25	3	2
		Y71003	1.5P							
M5 × 0.8	D4	Y71004	4P	2.375	0.875	0.194	0.152	0.25	3	2
		Y71005	1.5P							
M6 × 1	D5	Y71006	4P	2.5	1	0.255	0.191	0.312	3	3
		Y71007	1.5P							
M8 × 1.25	D5	Y71010	4P	2.718	1.125	0.318	0.238	0.375	3	4
		Y71011	1.5P							
M8 × 1	D5	Y71008	4P	2.718	1.125	0.318	0.238	0.375	3	4
		Y71009	1.5P							
M10 × 1.5	D6	Y71014	4P	2.937	1.25	0.381	0.286	0.437	3	4
		Y71015	1.5P							
M10 × 1.25	D5	Y71012	4P	2.937	1.25	0.381	0.286	0.437	3	4
		Y71013	1.5P							
M12 × 1.75	D6	Y71020	4P	3.375	1.656	0.367	0.275	0.437	3	5

ZELX CARB AL Carbide Taps for Light Alloys

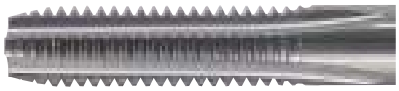
Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
M12 × 1.75	D6	Y71021	1.5P	3.375	1.656	0.367	0.275	0.437	3	5
M12 × 1.5	D6	Y71018	4P	3.375	1.656	0.367	0.275	0.437	3	5
		Y71019	1.5P							
M12 × 1.25	D5	Y71016	4P	3.375	1.656	0.367	0.275	0.437	3	5
		Y71017	1.5P							
For Unified Threads										
No.5-40UNC	GH3	Y84800	4P	1.937	0.625	0.141	0.11	0.187	3	1
		Y84801	1.5P							
No.6-32UNC	GH3	Y84802	4P	2	0.687	0.141	0.11	0.187	3	2
		Y84803	1.5P							
No.8-32UNC	GH3	Y84804	4P	2.125	0.75	0.168	0.131	0.25	3	2
		Y84805	1.5P							
No.10-24UNC	GH3	Y84806	4P	2.375	0.875	0.194	0.152	0.25	3	2
		Y84807	1.5P							
No.10-32UNF	GH3	Y84808	4P	2.375	0.875	0.194	0.152	0.25	3	2
		Y84809	1.5P							
1/4-20UNC	GH3	Y84810	4P	2.5	1	0.255	0.191	0.312	3	3
		Y84811	1.5P							
	GH5	Y84860	4P							
		Y84861	1.5P							
1/4-28UNF	GH3	Y84812	4P	2.5	1	0.255	0.191	0.312	3	3
		Y84813	1.5P							
	GH5	Y84862	4P							
		Y84863	1.5P							
5/16-18UNC	GH3	Y84814	4P	2.718	1.125	0.318	0.238	0.375	3	4
		Y84815	1.5P							
	GH5	Y84864	4P							
		Y84865	1.5P							
5/16-24UNF	GH3	Y84816	4P	2.718	1.125	0.318	0.238	0.375	3	4
		Y84817	1.5P							
	GH5	Y84866	4P							
		Y84867	1.5P							
3/8-16UNC	GH3	Y84818	4P	2.937	1.25	0.381	0.286	0.437	3	4
		Y84819	1.5P							
	GH5	Y84868	4P							
		Y84869	1.5P							
3/8-24UNF	GH3	Y84820	4P	2.937	1.25	0.381	0.286	0.437	3	4
		Y84821	1.5P							
	GH5	Y84870	4P							
		Y84871	1.5P							
7/16-14UNC	GH3	Y84822	4P	3.156	1.437	0.323	0.242	0.406	3	5
		Y84823	1.5P							
	GH5	Y84872	4P							
		Y84873	1.5P							
7/16-20UNF	GH3	Y84824	4P	3.156	1.437	0.323	0.242	0.406	3	5
		Y84825	1.5P							
	GH5	Y84874	4P							
		Y84875	1.5P							
1/2-13UNC	GH3	Y84826	4P	3.375	1.656	0.367	0.275	0.437	3	5
		Y84827	1.5P							

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	*ℓ*	*Ds*	*K*	*ℓk*

ZELX CARB AL Carbide Taps for Light Alloys

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
1/2-13UNC	GH5	Y84876	4P	3.375	1.656	0.367	0.275	0.437	3	5
		Y84877	1.5P							
1/2-20UNF	GH3	Y84828	4P	3.375	1.656	0.367	0.275	0.437	3	5
		Y84829	1.5P							
	GH5	Y84878	4P							
		Y84879	1.5P							

ZELX CARB CI



Carbide Taps for Cast Irons

Specification

HF

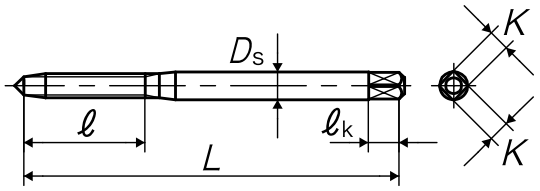
■ZELX CARB CI is the carbide tap suitable for hard and abrasive materials such as cast irons. For volume production.

Recommended Tapping Speed depending on Materials

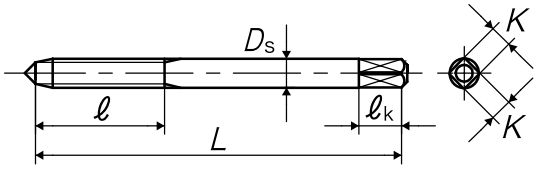
Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄	Brass castings 黄銅鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



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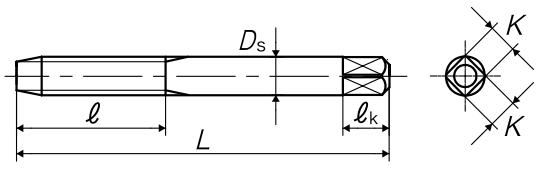

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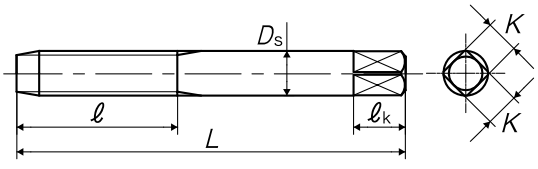
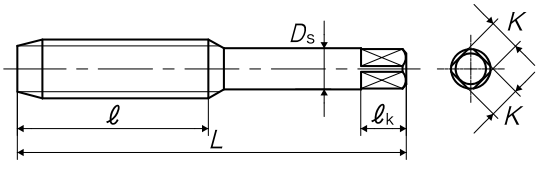


TYPE: 5



Segment : 1L

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Metric threads										
M3 × 0.5	D3	Y70000	4P	1.937	0.625	0.141	0.11	0.187	3	1
		Y70001	1.5P							
M4 × 0.7	D4	Y70002	4P	2.125	0.75	0.168	0.131	0.25	4	2
		Y70003	1.5P							
M5 × 0.8	D4	Y70004	4P	2.375	0.875	0.194	0.152	0.25	4	2
		Y70005	1.5P							
M6 × 1	D5	Y70006	4P	2.5	1	0.255	0.191	0.312	4	3
		Y70007	1.5P							
M8 × 1.25	D5	Y70010	4P	2.718	1.125	0.318	0.238	0.375	4	4
		Y70011	1.5P							
M8 × 1	D5	Y70008	4P	2.718	1.125	0.318	0.238	0.375	4	4
		Y70009	1.5P							
M10 × 1.5	D6	Y70014	4P	2.937	1.25	0.381	0.286	0.437	4	4
		Y70015	1.5P							
M10 × 1.25	D5	Y70012	4P	2.937	1.25	0.381	0.286	0.437	4	4
		Y70013	1.5P							

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	*ℓ*	*Ds*	*K*	*ℓk*

ZELX CARB CI Carbide Taps for Cast Irons

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
M12 × 1.75	D6	Y70020	4P	3.375	1.656	0.367	0.275	0.437	4	5
		Y70021	1.5P							
M12 × 1.5	D6	Y70018	4P	3.375	1.656	0.367	0.275	0.437	4	5
M12 × 1.25	D5	Y70016	4P	3.375	1.656	0.367	0.275	0.437	4	5
		Y70017	1.5P							
M14 × 2	D7	Y70024	4P	3.593	1.656	0.429	0.322	0.5	4	5
		Y70025	1.5P							
M14 × 1.5	D6	Y70022	4P	3.593	1.656	0.429	0.322	0.5	4	5
M16 × 2	D7	Y70029	1.5P	3.812	1.812	0.48	0.36	0.562	4	5
M16 × 1.5	D6	Y70026	4P	3.812	1.812	0.48	0.36	0.562	4	5
		Y70027	1.5P							
For Unified Threads										
No.10-24UNC	GH3	Y83806	4P	2.375	0.875	0.194	0.152	0.25	4	2
		Y83807	1.5P							
No.10-32UNF	GH3	Y83808	4P	2.375	0.875	0.194	0.152	0.25	4	2
		Y83809	1.5P							
1/4-20UNC	GH3	Y83810	4P	2.5	1	0.255	0.191	0.312	4	3
		Y83811	1.5P							
	GH5	Y83860	4P							
		Y83861	1.5P							
1/4-28UNF	GH3	Y83812	4P	2.5	1	0.255	0.191	0.312	4	3
		Y83813	1.5P							
	GH5	Y83862	4P							
		Y83863	1.5P							
5/16-18UNC	GH3	Y83814	4P	2.718	1.125	0.318	0.238	0.375	4	4
		Y83815	1.5P							
	GH5	Y83864	5P							
		Y83865	1.5P							
5/16-24UNF	GH3	Y83816	5P	2.718	1.125	0.318	0.238	0.375	4	4
		Y83817	1.5P							
	GH5	Y83866	4P							
		Y83867	1.5P							
3/8-16UNC	GH3	Y83818	4P	2.937	1.25	0.381	0.286	0.437	4	4
		Y83819	1.5P							
	GH5	Y83868	4P							
		Y83869	1.5P							
3/8-24UNF	GH3	Y83820	4P	2.937	1.25	0.381	0.286	0.437	4	4
		Y83821	1.5P							
	GH5	Y83870	4P							
		Y83871	1.5P							
7/16-14UNC	GH3	Y83822	4P	3.156	1.437	0.323	0.242	0.406	4	5
		Y83823	1.5P							
	GH5	Y83872	4P							
		Y83873	1.5P							
7/16-20UNF	GH3	Y83824	4P	3.156	1.437	0.323	0.242	0.406	4	5
		Y83825	1.5P							
	GH5	Y83874	4P							
		Y83875	1.5P							
1/2-13UNC	GH3	Y83826	4P	3.375	1.656	0.367	0.275	0.437	4	5
		Y83827	1.5P							

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	*ℓ*	*Ds*	*K*	*ℓk*

ZELX CARB CI Carbide Taps for Cast Irons

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
1/2-13UNC	GH5	Y83876	4P	3.375	1.656	0.367	0.275	0.437	4	5
		Y83877	1.5P							
1/2-20UNF	GH3	Y83828	4P	3.375	1.656	0.367	0.275	0.437	4	5
		Y83829	1.5P							
	GH5	Y83878	4P							
		Y83879	1.5P							
5/8-11UNC	GH3	Y83834	4P	3.812	1.812	0.48	0.36	0.562	4	5
		Y83835	1.5P							
	GH5	Y83884	4P							
		Y83885	1.5P							
5/8-18UNF	GH3	Y83836	4P	3.812	1.812	0.48	0.36	0.562	4	5
		Y83837	1.5P							
	GH5	Y83886	4P							
		Y83887	1.5P							

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N-RZ

Thread Forming Taps for Steels

Specification

HSS | OX Oxide

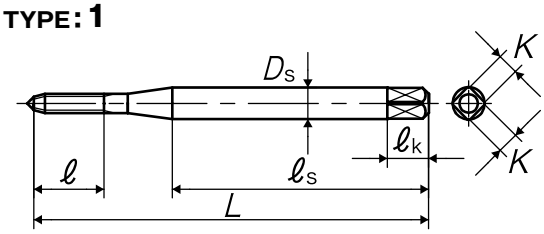
■N-RZ is the forming tap suitable for ferrous materials such as carbon steels, alloy steels, and normal steels.

Recommended Tapping Speed depending on Materials

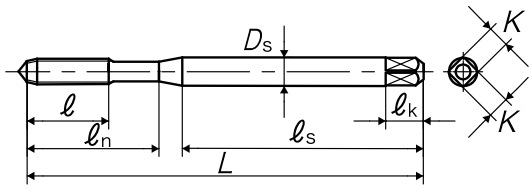
Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

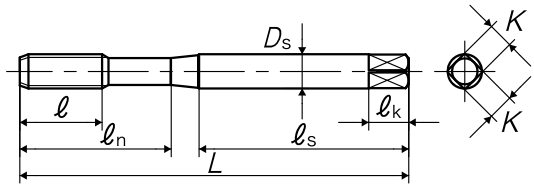
TYPE: 1



TYPE: 2



TYPE: 3



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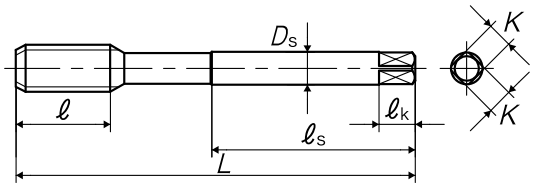

Segment : 1J

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
For Metric threads												
M3 × 0.5	D5	RS3.0GEHEXP	4P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
		RS3.0GEHEXB	2P									
M3.5 × 0.6	D6	RS3.5HFHEXP	4P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
		RS3.5HFHEXB	2P									
M4 × 0.7	D6	RS4.0IFHEXP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		RS4.0IFHEXB	2P									
M5 × 0.8	D7	RS5.0KHHEXP	4P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
		RS5.0KHHEXB	2P									
M6 × 1	D8	RS6.0MIHEXP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		RS6.0MIHEXB	2P									
M7 × 1	D9	RS7.0M*HEXP	4P	3.543	0.748	1.315	1.831	0.318	0.238	0.375	4	3
		RS7.0M*HEXB	2P									
M8 × 1.25	D9	RS8.0N*HEXP	4P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	6	3
		RS8.0N*HEXB	2P									
M8 × 1	D9	RS8.0M*HEXP	4P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	6	3
		RS8.0M*HEXB	2P									
M10 × 1.5	D10	RS010O$HEXP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	8	4
		RS010O$HEXB	2P									
M10 × 1.25	D9	RS010N*HEXP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	8	4
		RS010N*HEXB	2P									

N-RZ Thread Forming Taps for Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
M12 × 1.75	D11	RS012P/HEXP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	8	4
		RS012P/HEXB	2P									
M12 × 1.25	D9	RS012N*HEXP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	8	4
		RS012N*HEXB	2P									
For Unified Threads												
No.0-80UNF	H2	RSUN0B2HEXB	2P	1.772	0.236	-	1.161	0.141	0.11	0.187	3	1
No.1-64UNC	H2	RSUN1D2HEXB	2P	1.772	0.275	-	1.161	0.141	0.11	0.187	3	1
No.1-72UNF	H2	RSUN1C2HEXB	2P	1.772	0.275	-	1.161	0.141	0.11	0.187	3	1
No.2-56UNC	H2	RSUN2E2HEXB	2P	1.772	0.314	-	1.161	0.141	0.11	0.187	4	1
	H3	RSUN2E3HEXB										
No.2-64UNF	H2	RSUN2D2HEXB	2P	1.772	0.314	-	1.161	0.141	0.11	0.187	4	1
	H3	RSUN2D3HEXB										
No.3-48UNC	H2	RSUN3F2HEXB	2P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	4	2
	H3	RSUN3F3HEXB										
No.3-56UNF	H2	RSUN3E2HEXB	2P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	4	2
	H3	RSUN3E3HEXB										
No.4-40UNC	H3	RSUN4H3HEXP	4P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	4	2
		RSUN4H3HEXB	2P									
	H5	RSUN4H5HEXP	4P									
		RSUN4H5HEXB	2P									
No.4-48UNF	H3	RSUN4F3HEXP	4P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	4	2
		RSUN4F3HEXB	2P									
	H5	RSUN4F5HEXP	4P									
		RSUN4F5HEXB	2P									
No.5-40UNC	H3	RSUN5H3HEXP	4P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
		RSUN5H3HEXB	2P									
	H5	RSUN5H5HEXP	4P									
		RSUN5H5HEXB	2P									
No.5-44UNF	H3	RSUN5G3HEXP	4P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
		RSUN5G3HEXB	2P									
	H5	RSUN5G5HEXP	4P									
		RSUN5G5HEXB	2P									
No.6-32UNC	H3	RSUN6J3HEXP	4P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
		RSUN6J3HEXB	2P									
	H5	RSUN6J5HEXP	4P									
		RSUN6J5HEXB	2P									
No.6-40UNF	H3	RSUN6H3HEXP	4P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
		RSUN6H3HEXB	2P									
	H5	RSUN6H5HEXP	4P									
		RSUN6H5HEXB	2P									
No.8-32UNC	H3	RSUN8J3HEXP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		RSUN8J3HEXB	2P									
	H5	RSUN8J5HEXP	4P									
		RSUN8J5HEXB	2P									
No.8-36UNF	H3	RSUN8I3HEXP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		RSUN8I3HEXB	2P									
	H5	RSUN8I5HEXP	4P									
		RSUN8I5HEXB	2P									
No.10-24UNC	H4	RSUNAM4HEXP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		RSUNAM4HEXB	2P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

N-RZ Thread Forming Taps for Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
No.10-24UNC	H6	RSUNAM6HEXP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		RSUNAM6HEXB	2P									
No.10-32UNF	H4	RSUNAJ4HEXP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		RSUNAJ4HEXB	2P									
	H6	RSUNAJ6HEXP	4P									
		RSUNAJ6HEXB	2P									
No.12-24UNC	H4	RSUNCM4HEXP	4P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
		RSUNCM4HEXB	2P									
	H6	RSUNCM6HEXP	4P									
		RSUNCM6HEXB	2P									
No.12-28UNF	H4	RSUNCK4HEXP	4P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
		RSUNCK4HEXB	2P									
	H6	RSUNCK6HEXP	4P									
		RSUNCK6HEXB	2P									
1/4-20UNC	H4	RSU04N4HEXP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		RSU04N4HEXB	2P									
	H6	RSU04N6HEXP	4P									
		RSU04N6HEXB	2P									
1/4-28UNF	H4	RSU04K4HEXP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		RSU04K4HEXB	2P									
	H6	RSU04K6HEXP	4P									
		RSU04K6HEXB	2P									
5/16-18UNC	H5	RSU05O5HEXP	4P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	6	3
		RSU05O5HEXB	2P									
	H7	RSU05O7HEXP	4P									
		RSU05O7HEXB	2P									
5/16-24UNF	H5	RSU05M5HEXP	4P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	6	3
		RSU05M5HEXB	2P									
	H7	RSU05M7HEXP	4P									
		RSU05M7HEXB	2P									
3/8-16UNC	H5	RSU06P5HEXP	4P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	6	3
		RSU06P5HEXB	2P									
	H7	RSU06P7HEXP	4P									
		RSU06P7HEXB	2P									
3/8-24UNF	H5	RSU06M5HEXP	4P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	6	3
		RSU06M5HEXB	2P									
	H7	RSU06M7HEXP	4P									
		RSU06M7HEXB	2P									
7/16-14UNC	H5	RSU07Q5HEXP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	8	4
		RSU07Q5HEXB	2P									
	H7	RSU07Q7HEXP	4P									
		RSU07Q7HEXB	2P									
7/16-20UNF	H5	RSU07N5HEXP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	8	4
		RSU07N5HEXB	2P									
	H7	RSU07N7HEXP	4P									
		RSU07N7HEXB	2P									
1/2-13UNC	H5	RSU08R5HEXP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	8	4
		RSU08R5HEXB	2P									
	H7	RSU08R7HEXP	4P									
		RSU08R7HEXB	2P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

N-RZ Thread Forming Taps for Steels

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
1/2-20UNF	H5	RSU08N5HEXP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	8	4
		RSU08N5HEXB	2P									
	H7	RSU08N7HEXP	4P									
		RSU08N7HEXB	2P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N-RS

Thread Forming Taps for Non-Ferrous Materials

Specification

HSS NI Nitride

■N-RS is the forming tap suitable for non-ferrous materials such as aluminum castings, aluminum die castings and brass.

Recommended Tapping Speed depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

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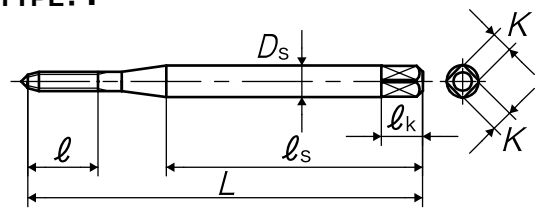

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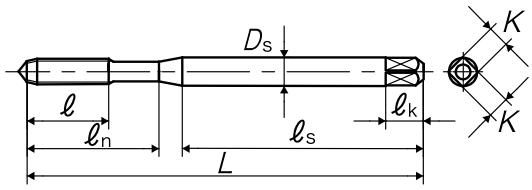

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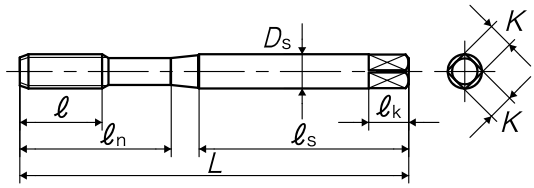

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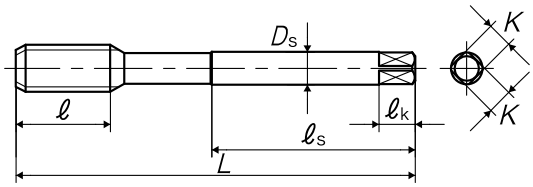

Segment : 1J

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
For Metric threads												
M3 × 0.5	D5	RS3.0GEKENP	4P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
		RS3.0GEKENB	2P									
M3.5 × 0.6	D6	RS3.5HFKENP	4P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
		RS3.5HFKENB	2P									
M4 × 0.7	D6	RS4.0IFKENP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		RS4.0IFKENB	2P									
M5 × 0.8	D7	RS5.0KHKENP	4P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
		RS5.0KHKENB	2P									
M6 × 1	D8	RS6.0MIKENP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		RS6.0MIKENB	2P									
M7 × 1	D9	RS7.0M*KENP	4P	3.543	0.748	1.315	1.831	0.318	0.238	0.375	4	3
		RS7.0M*KENB	2P									
M8 × 1.25	D9	RS8.0N*KENP	4P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	6	3
		RS8.0N*KENB	2P									
M8 × 1	D9	RS8.0M*KENP	4P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	6	3
		RS8.0M*KENB	2P									
M10 × 1.5	D10	RS0100$KENP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	6	4
		RS0100$KENB	2P									
M10 × 1.25	D9	RS010N*KENP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	6	4
		RS010N*KENB	2P									

N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
M12 × 1.75	D11	RS012P/KENP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	6	4
		RS012P/KENB	2P									
M12 × 1.25	D9	RS012N*KENP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	6	4
		RS012N*KENB	2P									
For Unified Threads												
No.0-80UNF	H2	RSUN0B2KENB	2P	1.772	0.236	-	1.161	0.141	0.11	0.187	3	1
No.1-64UNC	H2	RSUN1D2KENB	2P	1.772	0.275	-	1.161	0.141	0.11	0.187	3	1
No.1-72UNF	H2	RSUN1C2KENB	2P	1.772	0.275	-	1.161	0.141	0.11	0.187	3	1
No.2-56UNC	H2	RSUN2E2KENB	2P	1.772	0.314	-	1.161	0.141	0.11	0.187	4	1
	H3	RSUN2E3KENB										
No.2-64UNF	H2	RSUN2D2KENB	2P	1.772	0.314	-	1.161	0.141	0.11	0.187	4	1
	H3	RSUN2D3KENB										
No.3-48UNC	H2	RSUN3F2KENB	2P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	4	2
	H3	RSUN3F3KENB										
No.3-56UNF	H2	RSUN3E2KENB	2P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	4	2
	H3	RSUN3E3KENB										
No.4-40UNC	H3	RSUN4H3KENP	4P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	4	2
		RSUN4H3KENB	2P									
	H5	RSUN4H5KENP	4P									
		RSUN4H5KENB	2P									
No.4-48UNF	H3	RSUN4F3KENP	4P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	4	2
		RSUN4F3KENB	2P									
	H5	RSUN4F5KENP	4P									
		RSUN4F5KENB	2P									
No.5-40UNC	H3	RSUN5H3KENP	4P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
		RSUN5H3KENB	2P									
	H5	RSUN5H5KENP	4P									
		RSUN5H5KENB	2P									
No.5-44UNF	H3	RSUN5G3KENP	4P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
		RSUN5G3KENB	2P									
	H5	RSUN5G5KENP	4P									
		RSUN5G5KENB	2P									
No.6-32UNC	H3	RSUN6J3KENP	4P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
		RSUN6J3KENB	2P									
	H5	RSUN6J5KENP	4P									
		RSUN6J5KENB	2P									
No.6-40UNF	H3	RSUN6H3KENP	4P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
		RSUN6H3KENB	2P									
	H5	RSUN6H5KENP	4P									
		RSUN6H5KENB	2P									
No.8-32UNC	H3	RSUN8J3KENP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		RSUN8J3KENB	2P									
	H5	RSUN8J5KENP	4P									
		RSUN8J5KENB	2P									
No.8-36UNF	H3	RSUN8I3KENP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		RSUN8I3KENB	2P									
	H5	RSUN8I5KENP	4P									
		RSUN8I5KENB	2P									
No.10-24UNC	H4	RSUNAM4KENP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		RSUNAM4KENB	2P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
No.10-24UNC	H6	RSUNAM6KENP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		RSUNAM6KENB	2P									
No.10-32UNF	H4	RSUNAJ4KENP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		RSUNAJ4KENB	2P									
	H6	RSUNAJ6KENP	4P									
		RSUNAJ6KENB	2P									
No.12-24UNC	H4	RSUNCM4KENP	4P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
		RSUNCM4KENB	2P									
	H6	RSUNCM6KENP	4P									
		RSUNCM6KENB	2P									
No.12-28UNF	H4	RSUNCK4KENP	4P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
		RSUNCK4KENB	2P									
	H6	RSUNCK6KENP	4P									
		RSUNCK6KENB	2P									
1/4-20UNC	H4	RSU04N4KENP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		RSU04N4KENB	2P									
	H6	RSU04N6KENP	4P									
		RSU04N6KENB	2P									
1/4-28UNF	H4	RSU04K4KENP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		RSU04K4KENB	2P									
	H6	RSU04K6KENP	4P									
		RSU04K6KENB	2P									
5/16-18UNC	H5	RSU05O5KENP	4P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	6	3
		RSU05O5KENB	2P									
	H7	RSU05O7KENP	4P									
		RSU05O7KENB	2P									
5/16-24UNF	H5	RSU05M5KENP	4P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	6	3
		RSU05M5KENB	2P									
	H7	RSU05M7KENP	4P									
		RSU05M7KENB	2P									
3/8-16UNC	H5	RSU06P5KENP	4P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	6	3
		RSU06P5KENB	2P									
	H7	RSU06P7KENP	4P									
		RSU06P7KENB	2P									
3/8-24UNF	H5	RSU06M5KENP	4P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	6	3
		RSU06M5KENB	2P									
	H7	RSU06M7KENP	4P									
		RSU06M7KENB	2P									
7/16-14UNC	H5	RSU07Q5KENP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	6	4
		RSU07Q5KENB	2P									
	H7	RSU07Q7KENP	4P									
		RSU07Q7KENB	2P									
7/16-20UNF	H5	RSU07N5KENP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	6	4
		RSU07N5KENB	2P									
	H7	RSU07N7KENP	4P									
		RSU07N7KENB	2P									
1/2-13UNC	H5	RSU08R5KENP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	6	4
		RSU08R5KENB	2P									
	H7	RSU08R7KENP	4P									
		RSU08R7KENB	2P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
1/2-20UNF	H5	RSU08N5KENP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	6	4
		RSU08N5KENB	2P									
	H7	RSU08N7KENP	4P									
		RSU08N7KENB	2P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

OL-RZ

Thread Forming Taps for Dry Tapping, Coated

Specification

HSS-P Coating

■OL-RZ is the forming tap enabling dry tapping under following condition : tapping sizes of smaller than M6, thin steel sheets having burring operation, and steel parts with rather short length. Optimum coating suitable to the tapping condition.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
15~30 (m/min)	15~30 (m/min)	15~25 (m/min)	15~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

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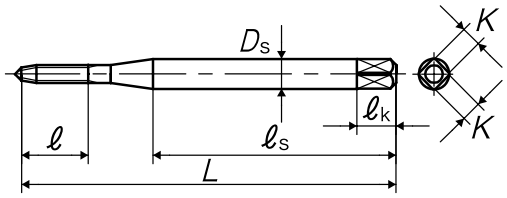

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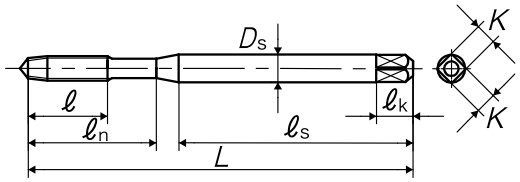


Segment : 1J

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
For Metric threads												
M3 × 0.5	D5	RS3.0GEHPTP	4P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
M3.5 × 0.6	D6	RS3.5HFHPTP	4P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
M4 × 0.7	D6	RS4.0IFHPTP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
M5 × 0.8	D7	RS5.0KHHPTP	4P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
M6 × 1	D8	RS6.0MIHPTP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
For Unified Threads												
No.2-56UNC	H3	RSUN2E3HPTP	4P	1.772	0.314	-	1.161	0.141	0.11	0.187	4	1
No.4-40UNC	H5	RSUN4H5HPTP	4P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	4	2
No.4-48UNF	H5	RSUN4F5HPTP	4P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	4	2
No.5-40UNC	H5	RSUN5H5HPTP	4P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
No.6-32UNC	H5	RSUN6J5HPTP	4P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
No.8-32UNC	H5	RSUN8J5HPTP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
No.10-24UNC	H6	RSUNAM6HPTP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
No.10-32UNF	H6	RSUNAJ6HPTP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
1/4-20UNC	H6	RSU04N6HPTP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
1/4-28UNF	H6	RSU04K6HPTP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2

HP-RZ

High Performance Thread Forming Taps, Coated

Specification

HSS-P Coating

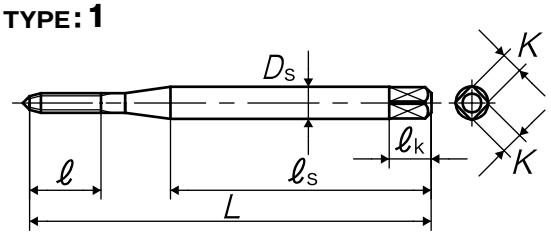
■HP-RZ is the forming tap suitable for steels (lower than 35HRC) and light alloys, and applicable to the high speed tapping. Optimum coating suitable to the tapping condition.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
15~30 (m/min)	15~30 (m/min)	15~25 (m/min)	15~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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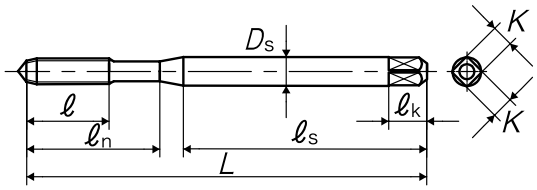
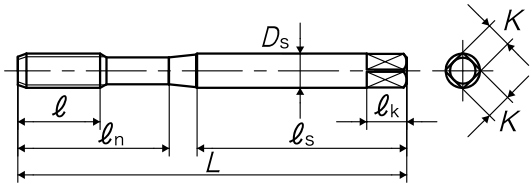


TYPE: 3



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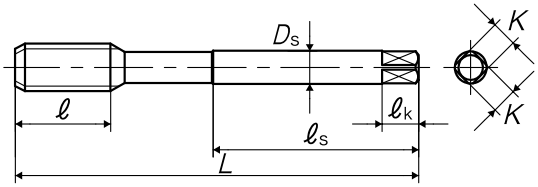


Segment : 1J

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
For Metric threads												
M3 × 0.5	D5	RS3.0GEFPTP	4P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
		RS3.0GEFPTB	2P									
M3.5 × 0.6	D6	RS3.5HFFPTB	2P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
M4 × 0.7	D6	RS4.0IFFPTP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		RS4.0IFFPTB	2P									
M5 × 0.8	D7	RS5.0KHFPTP	4P	3.15	0.591	0.984	1.929	0.22	0.165	0.281	4	2
		RS5.0KHFPTB	2P									
M6 × 1	D8	RS6.0MIFPTP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		RS6.0MIFPTB	2P									
M7 × 1	D9	RS7.0M*FPTP	4P	3.543	0.748	1.315	1.831	0.318	0.238	0.375	4	3
		RS7.0M*FPTB	2P									
M8 × 1.25	D9	RS8.0N*FPTP	4P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	6	3
		RS8.0N*FPTB	2P									
M8 × 1	D9	RS8.0M*FPTP	4P	3.543	0.748	1.382	1.831	0.318	0.238	0.375	6	3
		RS8.0M*FPTB	2P									
M10 × 1.5	D10	RS0100$FPTP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	8	4
		RS0100$FPTB	2P									
M10 × 1.25	D9	RS010N*FPTP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	8	4
		RS010N*FPTB	2P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HP-RZ High Performance Thread Forming Taps, Coated

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
M12 × 1.75	D11	RS012P/FPTP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	8	4
		RS012P/FPTB	2P									
M12 × 1.5	D9	RS012O*FPTP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	8	4
		RS012O*FPTB	2P									
M12 × 1.25	D9	RS012N*FPTP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	8	4
		RS012N*FPTB	2P									
For Unified Threads												
No.0-80UNF	H2	RSUN0B2FPTB	2P	1.772	0.236	-	1.161	0.141	0.11	0.187	3	1
No.2-56UNC	H3	RSUN2E3FPTB	2P	1.772	0.314	-	1.161	0.141	0.11	0.187	4	1
No.3-48UNC	H3	RSUN3F3FPTB	2P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	4	2
No.3-56UNF	H3	RSUN3E3FPTB	2P	2.205	0.354	0.669	1.28	0.141	0.11	0.187	4	2
No.4-40UNC	H3	RSUN4H3FPTB	2P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	4	2
	H5	RSUN4H5FPTB										
No.4-48UNF	H3	RSUN4F3FPTB	2P	2.205	0.354	0.709	1.28	0.141	0.11	0.187	4	2
	H5	RSUN4F5FPTB										
No.5-40UNC	H5	RSUN5H5FPTB	2P	2.205	0.433	0.768	1.358	0.141	0.11	0.187	4	2
No.6-32UNC	H3	RSUN6J3FPTP	4P	2.205	0.433	0.787	1.358	0.141	0.11	0.187	4	2
		RSUN6J3FPTB	2P									
	H5	RSUN6J5FPTP	4P									
		RSUN6J5FPTB	2P									
No.8-32UNC	H3	RSUN8J3FPTP	4P	2.48	0.512	0.827	1.535	0.168	0.131	0.25	4	2
		RSUN8J3FPTB	2P									
	H5	RSUN8J5FPTP	4P									
		RSUN8J5FPTB	2P									
No.10-24UNC	H4	RSUNAM4FPTP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		RSUNAM4FPTB	2P									
	H6	RSUNAM6FPTP	4P									
		RSUNAM6FPTB	2P									
No.10-32UNF	H4	RSUNAJ4FPTP	4P	2.756	0.551	0.984	1.654	0.194	0.152	0.25	4	2
		RSUNAJ4FPTB	2P									
	H6	RSUNAJ6FPTP	4P									
		RSUNAJ6FPTB	2P									
1/4-20UNC	H4	RSU04N4FPTP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		RSU04N4FPTB	2P									
	H6	RSU04N6FPTP	4P									
		RSU04N6FPTB	2P									
1/4-28UNF	H4	RSU04K4FPTP	4P	3.15	0.591	1.181	1.713	0.255	0.191	0.312	4	2
		RSU04K4FPTB	2P									
	H6	RSU04K6FPTP	4P									
		RSU04K6FPTB	2P									
5/16-18UNC	H5	RSU0505FPTP	4P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	6	3
		RSU0505FPTB	2P									
	H7	RSU0507FPTP	4P									
		RSU0507FPTB	2P									
5/16-24UNF	H5	RSU05M5FPTP	4P	3.543	0.748	1.378	1.831	0.318	0.238	0.375	6	3
		RSU05M5FPTB	2P									
	H7	RSU05M7FPTP	4P									
		RSU05M7FPTB	2P									
3/8-16UNC	H5	RSU06P5FPTP	4P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	6	3
		RSU06P5FPTB	2P									

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	*ℓ*	*ℓn*	*ℓs*	*Ds*	*K*	*ℓk*

HP-RZ High Performance Thread Forming Taps, Coated

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	ℓn (inch)	ℓs (inch)	Ds (inch)	K (inch)	ℓk (inch)	Lobe	Type
3/8-16UNC	H7	RSU06P7FPTP	4P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	6	3
		RSU06P7FPTB	2P									
3/8-24UNF	H5	RSU06M5FPTP	4P	3.937	0.906	1.535	2.028	0.381	0.286	0.437	6	3
		RSU06M5FPTB	2P									
	H7	RSU06M7FPTP	4P									
		RSU06M7FPTB	2P									
7/16-14UNC	H5	RSU07Q5FPTP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	8	4
		RSU07Q5FPTB	2P									
	H7	RSU07Q7FPTP	4P									
		RSU07Q7FPTB	2P									
7/16-20UNF	H5	RSU07N5FPTP	4P	3.937	0.906	-	2.008	0.323	0.242	0.406	8	4
		RSU07N5FPTB	2P									
	H7	RSU07N7FPTP	4P									
		RSU07N7FPTB	2P									
1/2-13UNC	H5	RSU08R5FPTP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	8	4
		RSU08R5FPTB	2P									
	H7	RSU08R7FPTP	4P									
		RSU08R7FPTB	2P									
1/2-20UNF	H5	RSU08N5FPTP	4P	4.331	1.024	-	2.205	0.367	0.275	0.437	8	4
		RSU08N5FPTB	2P									
	H7	RSU08N7FPTP	4P									
		RSU08N7FPTB	2P									

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

ZELX SS NPT

Taps for American Taper Pipe Threads

Specification

HSS | OX Oxide

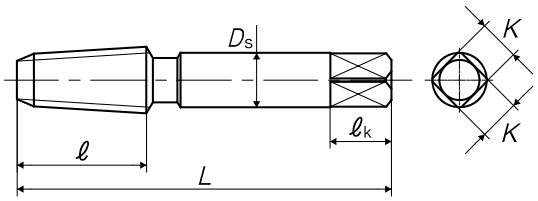
■Suitable for tapping stainless steels, chrome steels and chrome molybdenum steels.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
5 (m/min)	5 (m/min)	5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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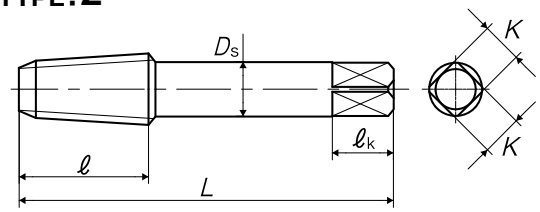


Segment : 1H

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Projection (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For American Pipe Threads											
NPT 1/16-27	ANSI G	Y83640	2.5P	2.125	0.687	0.312	0.312	0.234	0.375	4	1
NPT 1/8-27	ANSI G	Y83641	2.5P	2.125	0.75	0.312	0.437	0.328	0.375	4	1
		Y83642					0.312	0.234			2
NPT 1/4-18	ANSI G	Y83643	2.5P	2.437	1.062	0.459	0.562	0.421	0.437	4	1
NPT 3/8-18	ANSI G	Y83644	2.5P	2.562	1.062	0.454	0.7	0.531	0.5	4	1
NPT 1/2-14	ANSI G	Y83645	2.5P	3.125	1.375	0.579	0.687	0.515	0.625	4	2
NPT 3/4-14	ANSI G	Y83646	2.5P	3.25	1.375	0.565	0.906	0.679	0.687	4	2
NPT 1-11.5	ANSI G	Y83647	2.5P	3.75	1.75	0.678	1.125	0.843	0.812	4	2

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

ZELX SS NPTF

Taps for American Dryseal Taper Pipe Threads

Specification

HSS | OX Oxide

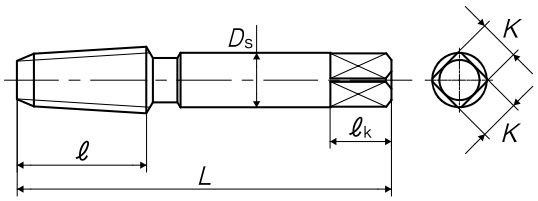
■Suitable for tapping stainless steels, chrome steels and chrome molybdenum steels.

Recommended Tapping Speed depending on Materials

Low carbon steels 低炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
5 (m/min)	5 (m/min)	5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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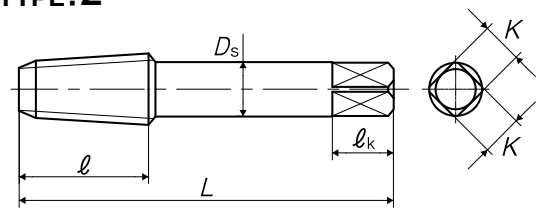


Segment : 1H

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Projection (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Dryseal American Pipe Threads											
NPTF 1/16-27	ANSI G	Y83660	2.5P	2.125	0.687	0.312	0.312	0.234	0.375	4	1
NPTF 1/8-27	ANSI G	Y83661	2.5P	2.125	0.75	0.312	0.437	0.328	0.375	4	1
		Y83662					0.312	0.234			2
NPTF 1/4-18	ANSI G	Y83663	2.5P	2.437	1.062	0.459	0.562	0.421	0.437	4	1
NPTF 3/8-18	ANSI G	Y83664	2.5P	2.562	1.062	0.454	0.7	0.531	0.5	4	1
NPTF 1/2-14	ANSI G	Y83665	2.5P	3.125	1.375	0.579	0.687	0.515	0.625	4	2
NPTF 3/4-14	ANSI G	Y83666	2.5P	3.25	1.375	0.565	0.906	0.679	0.687	4	2
NPTF 1-11.5	ANSI G	Y83667	2.5P	3.75	1.75	0.678	1.125	0.843	0.812	4	2

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

ZELX MOLD NPT

Hand Taps for Hard-to-Machine Materials For American Taper Pipe Threads

Specification

HSS-Co | OX Oxide

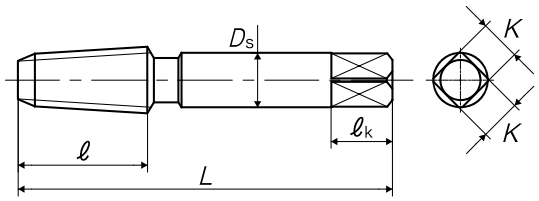
■Suitable for hard steels of 35 ～ 45HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels.

Recommended Tapping Speed depending on Materials

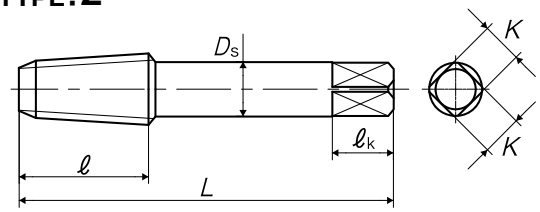
Thermal refined steels 調質鋼	Tool steels 工具鋼
~5 (m/min)	~5 (m/min)
35~45HRC	

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1H

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Projection (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For American Pipe Threads											
NPT 1/8-27	ANSI G	Y89641	3P	2.125	0.75	0.312	0.437	0.328	0.375	4	1
NPT 1/4-18	ANSI G	Y89643	3P	2.437	1.062	0.459	0.562	0.421	0.437	4	1
NPT 3/8-18	ANSI G	Y89644	3P	2.562	1.062	0.454	0.7	0.531	0.5	4	1
NPT 1/2-14	ANSI G	Y89645	3P	3.125	1.375	0.579	0.687	0.515	0.625	4	2
NPT 3/4-14	ANSI G	Y89646	3P	3.25	1.375	0.565	0.906	0.679	0.687	5	2

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

NPT

Hand Taps for American Taper Pipe Threads

Specification

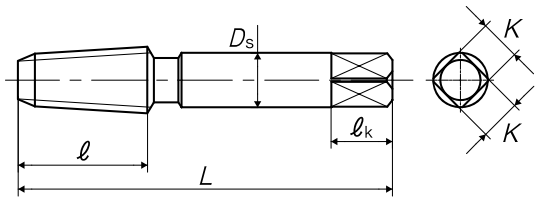
HSS | OX Oxide

Recommended Tapping Speed depending on Materials

Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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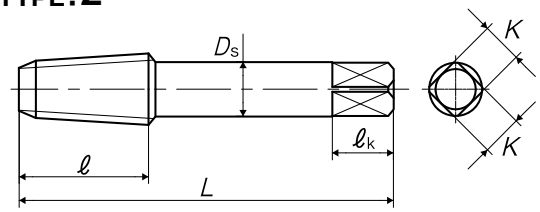


Segment : 1G

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Projection (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For American Pipe Threads											
NPT 1/16-27	ANSI G	Y83100 Y83100BR	3P	2.125	0.687	0.312	0.312	0.234	0.375	4	1
NPT 1/8-27	ANSI G	Y83101 Y83101BR	3P	2.125	0.75	0.312	0.437	0.328	0.375	4	1
		Y83102 Y83102BR					0.312	0.234			2
NPT 1/4-18	ANSI G	Y83103 Y83103BR	3P	2.437	1.062	0.459	0.562	0.421	0.437	4	1
NPT 3/8-18	ANSI G	Y83104 Y83104BR	3P	2.562	1.062	0.454	0.7	0.531	0.5	4	1
NPT 1/2-14	ANSI G	Y83105 Y83105BR	3P	3.125	1.375	0.579	0.687	0.515	0.625	4	2
NPT 3/4-14	ANSI G	Y83106 Y83106BR	3P	3.25	1.375	0.565	0.906	0.679	0.687	4	2
NPT 1-11.5	ANSI G	Y83107 Y83107BR	3P	3.75	1.75	0.678	1.125	0.843	0.812	5	2
NPT 1 1/4-11.5	ANSI G	Y83108 Y83108BR	3P	4	1.75	0.686	1.312	0.984	0.937	5	2
NPT 1 1/2-11.5	ANSI G	Y83109 Y83109BR	3P	4.25	1.75	0.699	1.5	1.125	1	6	2
NPT 2-11.5	ANSI G	Y83110 Y83110BR	3P	4.5	1.75	0.667	1.875	1.406	1.125	6	2

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

INT-NPT

Interrupted Taps for American Taper Pipe Threads

Specification

HSS | OX Oxide

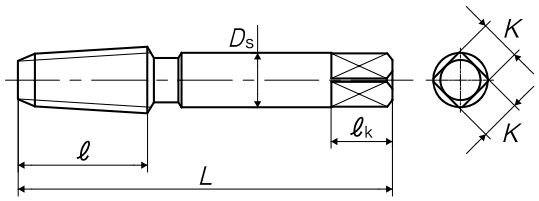
■INT-NPT having low left-hand spiral flutes and having every other thread ground off, reduces cutting torque. INT-NPT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

Recommended Tapping Speed depending on Materials

Stainless steels ステンレス鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



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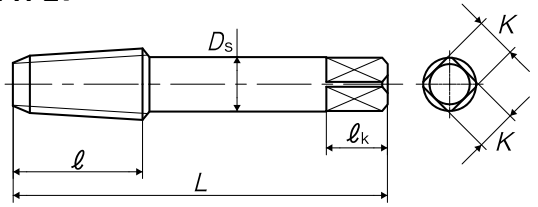


Segment : 1G

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Projection (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For American Pipe Threads											
NPT 1/8-27	ANSI G	Y83151	3P	2.125	0.75	0.312	0.437	0.328	0.375	5	1
		Y83151BR									
		Y83152					0.312	0.234			2
		Y83152BR									
NPT 1/4-18	ANSI G	Y83153	3P	2.437	1.062	0.459	0.562	0.421	0.437	5	1
		Y83153BR									
NPT 3/8-18	ANSI G	Y83154	3P	2.562	1.062	0.454	0.7	0.531	0.5	5	1
		Y83154BR									
NPT 1/2-14	ANSI G	Y83155	3P	3.125	1.375	0.579	0.687	0.515	0.625	5	2
		Y83155BR									
NPT 3/4-14	ANSI G	Y83156	3P	3.25	1.375	0.565	0.906	0.679	0.687	5	2
		Y83156BR									
NPT 1-11.5	ANSI G	Y83157	3P	3.75	1.75	0.678	1.125	0.843	0.812	5	2
		Y83157BR									
NPT 1 1/4-11.5	ANSI G	Y83158	3P	4	1.75	0.686	1.312	0.984	0.937	5	2
		Y83158BR									
NPT 1 1/2-11.5	ANSI G	Y83159	3P	4.25	1.75	0.699	1.5	1.125	1	7	2
		Y83159BR									
NPT 2-11.5	ANSI G	Y83160	3P	4.5	1.75	0.667	1.875	1.406	1.125	7	2
		Y83160BR									

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

NPT-CI

Hand Taps for American Taper Pipe Threads for Cast Irons

Specification

HSS | NI Nitride

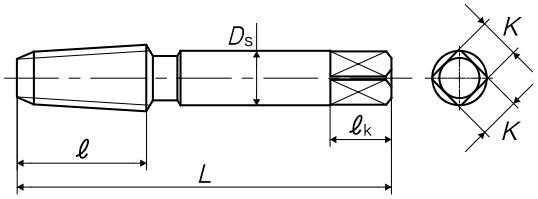
■Suitable for hard and abrasive materials such as cast irons.

Recommended Tapping Speed depending on Materials

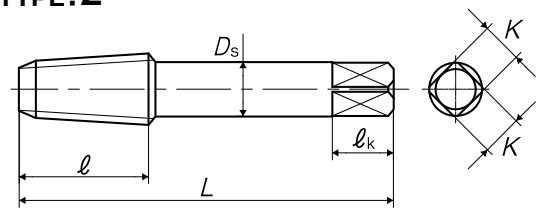
Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄
~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Projection (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For American Pipe Threads											
NPT 1/8-27	ANSI G	Y83201	3P	2.125	0.75	0.312	0.437	0.328	0.375	4	1
		Y83202					0.312	0.234			2
NPT 1/4-18	ANSI G	Y83203	3P	2.437	1.062	0.459	0.562	0.421	0.437	4	1
NPT 3/8-18	ANSI G	Y83204	3P	2.562	1.062	0.454	0.7	0.531	0.5	4	1
NPT 1/2-14	ANSI G	Y83205	3P	3.125	1.375	0.579	0.687	0.515	0.625	4	2
NPT 3/4-14	ANSI G	Y83206	3P	3.25	1.375	0.565	0.906	0.679	0.687	5	2
NPT 1-11.5	ANSI G	Y83207	3P	3.75	1.75	0.678	1.125	0.843	0.812	5	2
NPT 1 1/4-11.5	ANSI G	Y83208	3P	4	1.75	0.686	1.312	0.984	0.937	5	2
NPT 1 1/2-11.5	ANSI G	Y83209	3P	4.25	1.75	0.699	1.5	1.125	1	7	2
NPT 2-11.5	ANSI G	Y83210	3P	4.5	1.75	0.667	1.875	1.406	1.125	7	2

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

NPTF

Hand Taps for American Dryseal Taper Pipe Threads

Specification

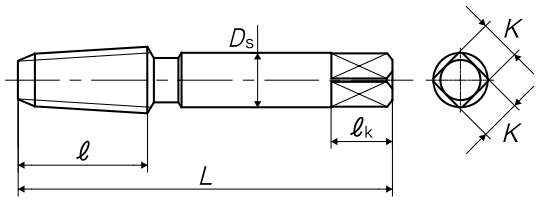
HSS | OX Oxide

Recommended Tapping Speed depending on Materials

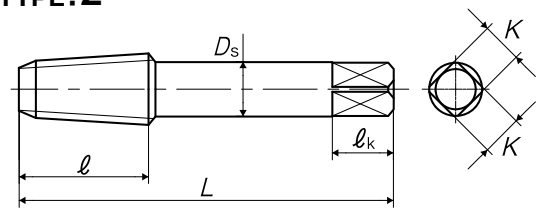
Medium carbon steels 中炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Projection (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Dryseal American Pipe Threads											
NPTF 1/16-27	ANSI G	Y83125 Y83125BR	3P	2.125	0.687	0.312	0.312	0.234	0.375	4	1
NPTF 1/8-27	ANSI G	Y83126 Y83126BR	3P	2.125	0.75	0.312	0.437	0.328	0.375	4	1
		Y83127 Y83127BR					0.312	0.234			2
NPTF 1/4-18	ANSI G	Y83128 Y83128BR	3P	2.437	1.062	0.459	0.562	0.421	0.437	4	1
NPTF 3/8-18	ANSI G	Y83129 Y83129BR	3P	2.562	1.062	0.454	0.7	0.531	0.5	4	1
NPTF 1/2-14	ANSI G	Y83130 Y83130BR	3P	3.125	1.375	0.579	0.687	0.515	0.625	4	2
NPTF 3/4-14	ANSI G	Y83131 Y83131BR	3P	3.25	1.375	0.565	0.906	0.679	0.687	5	2
NPTF 1-11.5	ANSI G	Y83132 Y83132BR	3P	3.75	1.75	0.678	1.125	0.843	0.812	5	2
NPTF 1 1/4-11.5	ANSI G	Y83133 Y83133BR	3P	4	1.75	0.686	1.312	0.984	0.937	5	2
NPTF 1 1/2-11.5	ANSI G	Y83134 Y83134BR	3P	4.25	1.75	0.699	1.5	1.125	1	6	2
NPTF 2-11.5	ANSI G	Y83135 Y83135BR	3P	4.5	1.75	0.667	1.875	1.406	1.125	6	2

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

NPTF-CI

Hand Taps for American Dryseal Taper Pipe Threads, for Cast Irons

Specification

HSS | NI Nitride

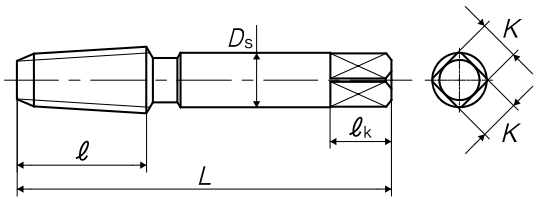
■Suitable for hard and abrasive materials such as cast irons.

Recommended Tapping Speed depending on Materials

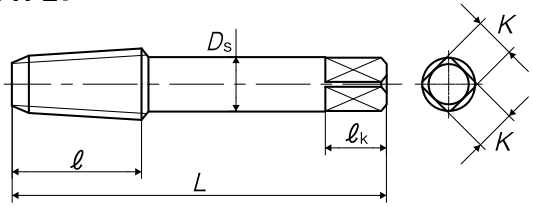
Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄
~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Projection (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Dryseal American Pipe Threads											
NPTF 1/8-27	ANSI G	Y83226	3P	2.125	0.75	0.312	0.437	0.328	0.375	4	1
		Y83227					0.312	0.234			2
NPTF 1/4-18	ANSI G	Y83228	3P	2.437	1.062	0.459	0.562	0.421	0.437	4	1
NPTF 3/8-18	ANSI G	Y83229	3P	2.562	1.062	0.454	0.7	0.531	0.5	4	1
NPTF 1/2-14	ANSI G	Y83230	3P	3.125	1.375	0.579	0.687	0.515	0.625	4	2
NPTF 3/4-14	ANSI G	Y83231	3P	3.25	1.375	0.565	0.906	0.679	0.687	5	2
NPTF 1-11.5	ANSI G	Y83232	3P	3.75	1.75	0.678	1.125	0.843	0.812	5	2
NPTF 1 1/4-11.5	ANSI G	Y83233	3P	4	1.75	0.686	1.312	0.984	0.937	5	2
NPTF 1 1/2-11.5	ANSI G	Y83234	3P	4.25	1.75	0.699	1.5	1.125	1	7	2
NPTF 2-11.5	ANSI G	Y83235	3P	4.5	1.75	0.667	1.875	1.406	1.125	7	2

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

NPS

Hand Taps for American Parallel Pipe Threads

Specification

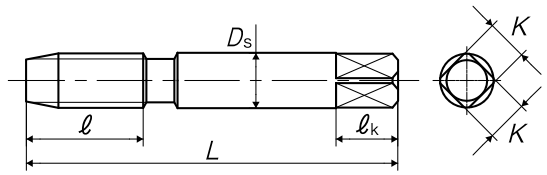
HSS OX Oxide

Recommended Tapping Speed depending on Materials

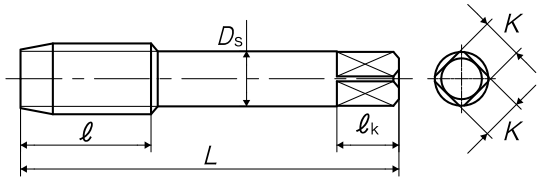
Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For American Pipe Threads										
NPS 1/8-27	ANSI G	Y83301	4P	2.125	0.75	0.437	0.328	0.375	4	1
		Y83301BR								
		Y83302				0.312	0.234			2
		Y83302BR								
NPS 1/4-18	ANSI G	Y83303	4P	2.437	1.062	0.562	0.421	0.437	4	1
		Y83303BR								
NPS 3/8-18	ANSI G	Y83304	4P	2.562	1.062	0.7	0.531	0.5	4	1
		Y83304BR								
NPS 1/2-14	ANSI G	Y83305	4P	3.125	1.375	0.687	0.515	0.625	4	2
		Y83305BR								
NPS 3/4-14	ANSI G	Y83306	4P	3.25	1.375	0.906	0.679	0.687	5	2
		Y83306BR								
NPS 1-11.5	ANSI G	Y83307	4P	3.75	1.75	1.125	0.843	0.812	5	2
		Y83307BR								

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

NPSF

Hand Taps for American Dryseal Parallel Pipe Threads

Specification

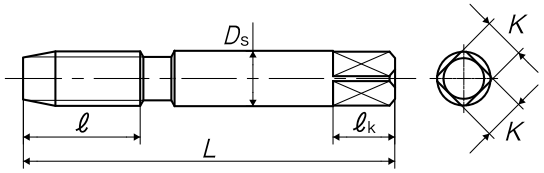
HSS | OX Oxide

Recommended Tapping Speed depending on Materials

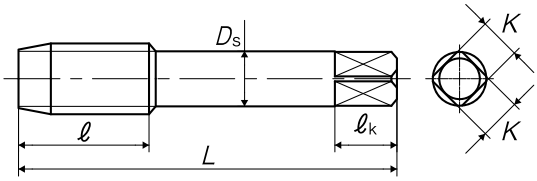
Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 1G

Size	Class	Code	Chamfer	L (inch)	ℓ (inch)	Ds (inch)	K (inch)	ℓk (inch)	No. of flutes	Type
For Dryseal American Pipe Threads										
NPSF 1/8-27	ANSI G	Y83326	4P	2.125	0.75	0.437	0.328	0.375	4	1
		Y83326BR								
		Y83327				0.312	0.234			2
		Y83327BR								
NPSF 1/4-18	ANSI G	Y83328	4P	2.437	1.062	0.562	0.421	0.437	4	1
		Y83328BR								
NPSF 3/8-18	ANSI G	Y83329	4P	2.562	1.062	0.7	0.531	0.5	4	1
NPSF 1/2-14	ANSI G	Y83330	4P	3.125	1.375	0.687	0.515	0.625	4	2
		Y83330BR								
NPSF 3/4-14	ANSI G	Y83331	4P	3.25	1.375	0.906	0.679	0.687	5	2
		Y83331BR								
NPSF 1-11.5	ANSI G	Y83332	4P	3.75	1.75	1.125	0.843	0.812	5	2
		Y83332BR								

Overall length	Pin length	Bored hole dia.(GO)	Bored hole dia. (NOT-GO)	Bored hole depth(1.5D)	Bored hole depth(2D)	Bored hole depth(2.5D)	Shank dia.
L	ℓ	d_1	d_2	ℓ_1	ℓ_2	ℓ_3	Ds

CPC-S

Check Pins for Bored Hole in thread cut tapping (Straight Type)

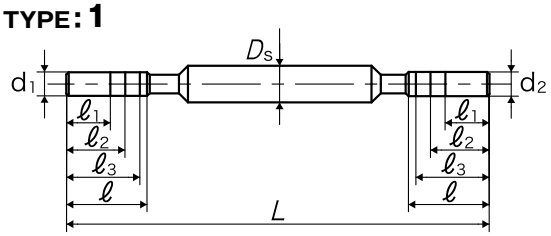
Specification

HSS

For icon explanation, refer to P.24

■CPC-S is to check both diameter and depth of bored hole(for cutting taps, straight type). CPC-S is made from wear resistant HSS material and is applicable for both through hole and blind hole.

TYPE : 1



Segment : 7C

Size	Code	L (inch)	ℓ (inch)	d_1(inch) (Thread engagement ratio)	d_2(inch) (Thread engagement ratio)	ℓ_1 (inch)	ℓ_2 (inch)	ℓ_3 (inch)	Ds (inch)	Type	Stock
For Unified Threads											
No.2-56UNC	CPCSAUN2EA	1.63	0.22	0.0667(83.1%)	0.0705(66.8%)	0.129	0.172	0.215	0.118	1	○
	CPCSAUN2EB			0.0686(75.0%)	0.0724(58.6%)						
	CPCSAUN2EC			0.0699(69.4%)	0.0737(53.0%)						
No.2-64UNF	CPCSAUN2DA	1.63	0.22	0.0691(83.1%)	0.0724(67.0%)	0.129	0.172	0.215	0.118	1	○
	CPCSAUN2DB			0.0707(75.4%)	0.0740(59.1%)						
	CPCSAUN2DC			0.0720(69.0%)	0.0753(52.7%)						
No.3-48UNC	CPCSAUN3FA	1.77	0.30	0.0764(83.4%)	0.0804(68.7%)	0.149	0.198	0.248	0.118	1	○
	CPCSAUN3FB			0.0785(75.7%)	0.0825(61.0%)						
	CPCSAUN3FC			0.0805(68.4%)	0.0845(53.6%)						
No.3-56UNF	CPCSAUN3EA	1.77	0.30	0.0797(83.1%)	0.0831(68.5%)	0.149	0.198	0.248	0.118	1	○
	CPCSAUN3EB			0.0814(75.9%)	0.0848(61.2%)						
	CPCSAUN3EC			0.0831(68.5%)	0.0865(53.9%)						
No.4-40UNC	CPCSAUN4HA	1.77	0.30	0.0849(83.4%)	0.0894(69.6%)	0.168	0.224	0.280	0.118	1	○
	CPCSAUN4HB			0.0871(76.7%)	0.0916(62.8%)						
	CPCSAUN4HC			0.0894(69.6%)	0.0939(55.7%)						
	CPCSAUN4HD			0.0902(67.1%)	0.0947(53.3%)						
No.4-48UNF	CPCSAUN4FA	1.77	0.30	0.0894(83.5%)	0.0931(69.8%)	0.168	0.224	0.280	0.118	1	○
	CPCSAUN4FB			0.0912(76.9%)	0.0949(63.2%)						
	CPCSAUN4FC			0.0931(69.8%)	0.0968(56.2%)						
	CPCSAUN4FD			0.0939(66.9%)	0.0976(53.2%)						
No.5-40UNC	CPCSAUN5HA	1.93	0.35	0.0979(83.4%)	0.1020(70.8%)	0.188	0.250	0.313	0.157	1	○
	CPCSAUN5HB			0.1000(77.0%)	0.1041(64.4%)						
	CPCSAUN5HC			0.1021(70.5%)	0.1062(57.9%)						
	CPCSAUN5HD			0.1036(65.9%)	0.1077(53.3%)						
No.5-44UNF	CPCSAUN5GA	1.93	0.35	0.1004(83.2%)	0.1042(70.5%)	0.188	0.250	0.313	0.157	1	○
	CPCSAUN5GB			0.1023(76.9%)	0.1060(64.4%)						
	CPCSAUN5GC			0.1042(70.5%)	0.1079(57.9%)						
	CPCSAUN5GD			0.1060(64.4%)	0.1097(51.8%)						
No.6-32UNC	CPCSAUN6JA	1.93	0.35	0.1040(83.7%)	0.1091(71.2%)	0.207	0.276	0.345	0.157	1	○
	CPCSAUN6JB			0.1066(77.3%)	0.1115(65.3%)						
	CPCSAUN6JC			0.1091(71.2%)	0.1140(59.1%)						
	CPCSAUN6JD			0.1115(65.3%)	0.1164(53.2%)						

CPC-S Check Pins for Bored Hole in thread cut tapping (Straight Type)

Size	Code	L (inch)	ℓ (inch)	d1(inch) (Thread engagement ratio)	d2(inch) (Thread engagement ratio)	ℓ1 (inch)	ℓ2 (inch)	ℓ3 (inch)	Ds (inch)	Type	Stock
No.6-40UNF	CPCSAUN6HA	1.93	0.35	0.1110(83.1%)	0.1148(71.4%)	0.207	0.276	0.345	0.157	1	○
	CPCSAUN6HB			0.1128(77.6%)	0.1167(65.6%)						
	CPCSAUN6HC			0.1147(71.7%)	0.1186(59.7%)						
	CPCSAUN6HD			0.1166(65.9%)	0.1205(53.9%)						
No.8-32UNC	CPCSAUN8JA	2.24	0.43	0.1300(83.8%)	0.1345(72.7%)	0.246	0.328	0.410	0.197	1	○
	CPCSAUN8JB			0.1324(77.8%)	0.1367(67.2%)						
	CPCSAUN8JC			0.1346(72.4%)	0.1389(61.8%)						
	CPCSAUN8JD			0.1367(67.2%)	0.1410(56.7%)						
No.8-36UNF	CPCSAUN8IA	2.24	0.43	0.1340(83.1%)	0.1377(72.9%)	0.246	0.328	0.410	0.197	1	○
	CPCSAUN8IB			0.1359(77.9%)	0.1397(67.3%)						
	CPCSAUN8IC			0.1378(72.6%)	0.1416(62.1%)						
	CPCSAUN8ID			0.1397(67.3%)	0.1435(56.8%)						
No.10-24UNC	CPCSAUNAMA	2.56	0.55	0.1450(83.1%)	0.1502(73.5%)	0.285	0.380	0.475	0.217	1	○
	CPCSAUNAMB			0.1475(78.5%)	0.1528(68.7%)						
	CPCSAUNAMC			0.1502(73.5%)	0.1555(63.7%)						
	CPCSAUNAMD			0.1528(68.7%)	0.1581(58.9%)						
No.10-32UNF	CPCSAUNAJA	2.56	0.55	0.1560(83.7%)	0.1601(73.7%)	0.285	0.380	0.475	0.217	1	○
	CPCSAUNAJB			0.1581(78.6%)	0.1621(68.7%)						
	CPCSAUNAJC			0.1601(73.7%)	0.1641(63.8%)						
	CPCSAUNAJD			0.1621(68.7%)	0.1661(58.9%)						
No.12-24UNC	CPCSAUNCMA	2.56	0.55	0.1710(83.1%)	0.1758(74.3%)	0.324	0.432	0.540	0.217	1	○
	CPCSAUNCMB			0.1733(78.9%)	0.1782(69.8%)						
	CPCSAUNCMC			0.1758(74.3%)	0.1807(65.2%)						
	CPCSAUNCMD			0.1782(69.8%)	0.1831(60.8%)						
No.12-28UNF	CPCSAUNCKA	2.56	0.55	0.1770(84.0%)	0.1815(74.4%)	0.324	0.432	0.540	0.217	1	○
	CPCSAUNCKB			0.1794(78.9%)	0.1836(69.8%)						
	CPCSAUNCKC			0.1815(74.4%)	0.1857(65.3%)						
	CPCSAUNCKD			0.1836(69.8%)	0.1878(60.8%)						
1/4-20UNC	CPCSAU04NA	2.87	0.65	0.1960(83.1%)	0.2013(75.0%)	0.375	0.500	0.625	0.236	1	○
	CPCSAU04NB			0.1986(79.2%)	0.2040(70.8%)						
	CPCSAU04NC			0.2013(75.0%)	0.2067(66.7%)						
	CPCSAU04ND			0.2040(70.8%)	0.2094(62.5%)						
1/4-28UNF	CPCSAU04KA	2.87	0.65	0.2110(84.0%)	0.2152(75.0%)	0.375	0.500	0.625	0.236	1	○
	CPCSAU04KB			0.2131(79.5%)	0.2171(70.8%)						
	CPCSAU04KC			0.2150(75.4%)	0.2190(66.8%)						
	CPCSAU04KD			0.2169(71.3%)	0.2209(62.7%)						
5/16-18UNC	CPCSAU050A	3.90	0.87	0.2520(83.8%)	0.2577(75.9%)	0.469	0.625	0.781	0.315	1	○
	CPCSAU050B			0.2551(79.5%)	0.2604(72.2%)						
	CPCSAU050C			0.2577(75.9%)	0.2630(68.6%)						
	CPCSAU050D			0.2604(72.2%)	0.2657(64.8%)						
5/16-24UNF	CPCSAU05MA	3.90	0.87	0.2670(84.0%)	0.2714(75.9%)	0.469	0.625	0.781	0.315	1	○
	CPCSAU05MB			0.2694(79.6%)	0.2734(72.2%)						
	CPCSAU05MC			0.2714(75.9%)	0.2754(68.5%)						
	CPCSAU05MD			0.2734(72.2%)	0.2774(64.8%)						
3/8-16UNC	CPCSAU06PA	4.33	1.08	0.3070(83.7%)	0.3127(76.7%)	0.563	0.750	0.938	0.394	1	○
	CPCSAU06PB			0.3101(79.9%)	0.3155(73.3%)						
	CPCSAU06PC			0.3128(76.6%)	0.3182(70.0%)						
	CPCSAU06PD			0.3155(73.3%)	0.3209(66.6%)						
3/8-24UNF	CPCSAU06MA	4.33	1.08	0.3300(83.1%)	0.3336(76.5%)	0.563	0.750	0.938	0.394	1	○
	CPCSAU06MB			0.3314(80.6%)	0.3354(73.2%)						

Overall length	Pin length	Bored hole dia.(GO)	Bored hole dia. (NOT-GO)	Bored hole depth(1.5D)	Bored hole depth(2D)	Bored hole depth(2.5D)	Shank dia.
L	ℓ	d_1	d_2	ℓ_1	ℓ_2	ℓ_3	Ds

CPC-S Check Pins for Bored Hole in thread cut tapping (Straight Type)

Size	Code	L (inch)	ℓ (inch)	d_1(inch) (Thread engagement ratio)	d_2(inch) (Thread engagement ratio)	ℓ_1 (inch)	ℓ_2 (inch)	ℓ_3 (inch)	Ds (inch)	Type	Stock
3/8-24UNF	CPCSAU06MC	4.33	1.08	0.3332(77.2%)	0.3372(69.8%)	0.563	0.750	0.938	0.394	1	○
	CPCSAU06MD			0.3351(73.7%)	0.3391(66.3%)						
7/16-14UNC	CPCSAU07QA	4.76	1.30	0.3600(83.5%)	0.3660(77.1%)	0.656	0.875	1.094	0.472	1	○
	CPCSAU07QB			0.3630(80.3%)	0.3688(74.0%)						
	CPCSAU07QC			0.3659(77.2%)	0.3717(70.9%)						
	CPCSAU07QD			0.3688(74.0%)	0.3746(67.8%)						
7/16-20UNF	CPCSAU07NA	4.76	1.30	0.3830(83.9%)	0.3875(77.0%)	0.656	0.875	1.094	0.472	1	○
	CPCSAU07NB			0.3855(80.1%)	0.3896(73.7%)						
	CPCSAU07NC			0.3875(77.0%)	0.3916(70.7%)						
	CPCSAU07ND			0.3896(73.7%)	0.3937(67.4%)						
1/2-13UNC	CPCSAU08RA	4.76	1.30	0.4170(83.1%)	0.4225(77.6%)	0.750	1.000	1.250	0.472	1	○
	CPCSAU08RB			0.4196(80.5%)	0.4254(74.7%)						
	CPCSAU08RC			0.4226(77.5%)	0.4284(71.7%)						
	CPCSAU08RD			0.4255(74.6%)	0.4313(68.8%)						
1/2-20UNF	CPCSAU08NA	4.76	1.30	0.4460(83.1%)	0.4498(77.3%)	0.750	1.000	1.250	0.472	1	○
	CPCSAU08NB			0.4477(80.5%)	0.4517(74.4%)						
	CPCSAU08NC			0.4497(77.4%)	0.4537(71.3%)						
	CPCSAU08ND			0.4516(74.5%)	0.4556(68.4%)						

Overall length	Pin length	Bored hole dia.(GO)	Bored hole dia. (NOT-GO)	d1 length	d2 length	Shank dia.	Size of square	Length of square
L	ℓ	d_1	d_2	ℓ_1	ℓ_2	Ds	K	ℓk

CPC-T

Check Pins for Bored Holes in thread cut tapping (Taper Type)

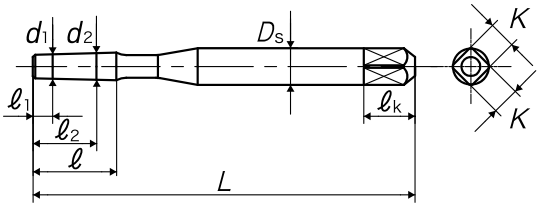
Specification

HSS

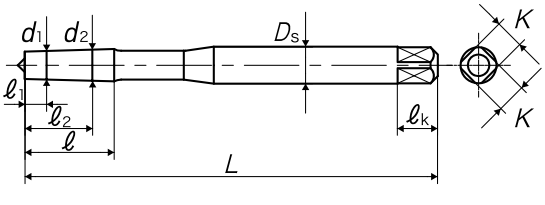
For icon explanation, refer to P.24

■One CPC-T enables simple checking of bored hole dia. (for cutting taps, taper type).CPC-T is made from wear resistant HSS material and is applicable for through hole and for blind hole having enough space in the bottom.

TYPE : 1



TYPE : 2



Segment : 7C

Size	Code	L (inch)	ℓ (inch)	d1(inch) (Thread engagement ratio)	d2(inch) (Thread engagement ratio)	ℓ1 (inch)	ℓ2 (inch)	Ds (inch)	K (inch)	ℓk (inch)	Type	Stock
For Unified Threads												
No.2-56UNC	CPCTAUN2E	1.65	0.28	0.0667(83.1%)	0.0737(53.2%)	0.039	0.236	0.118	0.10	0.20	1	○
No.2-64UNF	CPCTAUN2D	1.65	0.28	0.0691(83.1%)	0.0753(52.8%)	0.039	0.236	0.118	0.10	0.20	1	○
No.3-48UNC	CPCTAUN3F	1.81	0.31	0.0764(83.4%)	0.0845(53.6%)	0.059	0.256	0.118	0.10	0.20	1	○
No.3-56UNF	CPCTAUN3E	1.81	0.31	0.0797(83.1%)	0.0865(53.9%)	0.059	0.256	0.118	0.10	0.20	1	○
No.4-40UNC	CPCTAUN4H	1.81	0.31	0.0849(83.4%)	0.0939(55.7%)	0.059	0.256	0.118	0.10	0.20	1	○
No.4-48UNF	CPCTAUN4F	1.81	0.31	0.0894(83.5%)	0.0968(56.3%)	0.059	0.256	0.118	0.10	0.20	1	○
No.5-40UNC	CPCTAUN5H	1.81	0.33	0.0979(83.4%)	0.1062(57.9%)	0.059	0.276	0.157	0.13	0.24	1	○
No.5-44UNF	CPCTAUN5G	1.81	0.33	0.1004(83.2%)	0.1079(58.0%)	0.059	0.276	0.157	0.13	0.24	1	○
No.6-32UNC	CPCTAUN6J	1.81	0.33	0.1040(83.7%)	0.1140(59.2%)	0.059	0.276	0.157	0.13	0.24	1	○
No.6-40UNF	CPCTAUN6H	1.81	0.33	0.1110(83.1%)	0.1186(59.7%)	0.059	0.276	0.157	0.13	0.24	1	○
No.8-32UNC	CPCTAUN8J	2.05	0.41	0.1300(83.8%)	0.1389(61.8%)	0.091	0.327	0.197	0.16	0.28	1	○
No.8-36UNF	CPCTAUN8I	2.05	0.41	0.1340(83.1%)	0.1416(62.1%)	0.091	0.327	0.197	0.16	0.28	1	○
No.10-24UNC	CPCTAUNAM	2.34	0.49	0.1450(83.1%)	0.1555(63.7%)	0.098	0.394	0.217	0.18	0.28	1	○
No.10-32UNF	CPCTAUNAJ	2.34	0.49	0.1560(83.7%)	0.1641(63.8%)	0.098	0.394	0.217	0.18	0.28	1	○
No.12-24UNC	CPCTAUNCM	2.34	0.49	0.1710(83.1%)	0.1807(65.2%)	0.098	0.394	0.217	0.18	0.28	1	○
No.12-28UNF	CPCTAUNCK	2.34	0.49	0.1770(84.0%)	0.1857(65.3%)	0.098	0.394	0.217	0.18	0.28	1	○
1/4-20UNC	CPCTAU04N	2.42	0.65	0.1960(83.1%)	0.2067(66.7%)	0.150	0.504	0.236	0.18	0.28	1	○
1/4-28UNF	CPCTAU04K	2.42	0.65	0.2110(84.0%)	0.2190(66.8%)	0.150	0.504	0.236	0.18	0.28	1	○
5/16-18UNC	CPCTAU05O	3.54	0.76	0.2520(83.8%)	0.2630(68.6%)	0.185	0.579	0.315	0.24	0.35	2	○
5/16-24UNF	CPCTAU05M	3.54	0.76	0.2670(84.0%)	0.2754(68.5%)	0.185	0.579	0.315	0.24	0.35	2	○
3/8-16UNC	CPCTAU06P	3.94	0.92	0.3070(83.7%)	0.3182(70.0%)	0.264	0.657	0.394	0.31	0.43	2	○
3/8-24UNF	CPCTAU06M	3.94	0.92	0.3300(83.1%)	0.3372(69.8%)	0.264	0.657	0.394	0.31	0.43	2	○
7/16-14UNC	CPCTAU07Q	4.33	1.08	0.3600(83.5%)	0.3717(70.9%)	0.303	0.776	0.472	0.35	0.47	2	○
7/16-20UNF	CPCTAU07N	4.33	1.08	0.3830(83.9%)	0.3916(70.7%)	0.303	0.776	0.472	0.35	0.47	2	○
1/2-13UNC	CPCTAU08R	4.33	1.08	0.4170(83.1%)	0.4284(71.7%)	0.303	0.776	0.472	0.35	0.47	2	○
1/2-20UNF	CPCTAU08N	4.33	1.08	0.4460(83.1%)	0.4537(71.3%)	0.303	0.776	0.472	0.35	0.47	2	○

Outside dia of Die	Thickness of Die
D	*T*

PO-D

HSS Spiral Pointed Dies

Specification

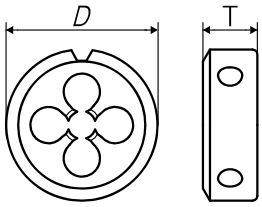
Front face

HSS 2~2.5

For icon explanation, refer to P.24

■Due to the effect of spiral pointed flutes, PO-D pushes out chips toward the cutting direction and reduces the troubles caused by chips.

TYPE : 1



Segment : 32

Size	Class	Code	D (inch)	T (inch)	Clearance holes	Type
For Unified Threads						
No.2-56UNC	2A	PYDUN2EGNEBA	0.63	0.197	3	1
No.2-64UNF	2A	PYDUN2DGNEBA	0.63	0.197	3	1
No.3-48UNC	2A	PYDUN3FGNEBA	0.63	0.197	3	1
No.3-56UNF	2A	PYDUN3EGNEBA	0.63	0.197	3	1
No.4-40UNC	2A	PYEUN4HGNEBA	0.787	0.276	3	1
No.4-48UNF	2A	PYEUN4FGNEBA	0.787	0.276	3	1
No.5-40UNC	2A	PYEUN5HGNEBA	0.787	0.276	3	1
No.5-44UNF	2A	PYEUN5GGNEBA	0.787	0.276	3	1
No.6-32UNC	2A	PYEUN6JGNEBA	0.787	0.276	3	1
No.6-40UNF	2A	PYEUN6HGNEBA	0.787	0.276	3	1
No.8-32UNC	2A	PYEUN8JGNEBA	0.787	0.276	3	1
No.8-36UNF	2A	PYEUN8IGNEBA	0.787	0.276	3	1
No.10-24UNC	2A	PYEUNAMGNEBA	0.787	0.276	4	1
No.10-32UNF	2A	PYEUNAJGNEBA	0.787	0.276	4	1
No.12-28UNF	2A	PYEUNCKGNEBA	0.787	0.276	4	1
No.12-24UNC	2A	PYEUNCMGNEBA	0.787	0.276	4	1
1/4-20UNC	2A	PYGU04NGNEBA	0.984	0.354	4	1
1/4-28UNF	2A	PYGU04KGNEBA	0.984	0.354	4	1
5/16-18UNC	2A	PYGU05OGNEBA	0.984	0.354	4	1
5/16-24UNF	2A	PYGU05MGNEBA	0.984	0.354	4	1
3/8-16UNC	2A	PYJU06PGNEBA	1.496	0.512	4	1
3/8-24UNF	2A	PYJU06MGNEBA	1.496	0.512	4	1
7/16-14UNC	2A	PYJU07QGNEBA	1.496	0.512	4	1
7/16-20UNF	2A	PYJU07NGNEBA	1.496	0.512	4	1
1/2-13UNC	2A	PYJU08RGNEBA	1.496	0.512	4	1
1/2-20UNF	2A	PYJU08NGNEBA	1.496	0.512	4	1
9/16-12UNC	2A	PYJU09SGNEBA	1.496	0.512	5	1
9/16-18UNF	2A	PYJU09OGNEBA	1.496	0.512	5	1

Shank dia.	Holder dia.	Recess dia.	Overall length	Shank length	Depth of die mounting	Cutting depth	Outside dia of Die	Thickness of Die
Ds	*D1*	*D2*	*L*	*ℓs*	*ℓ*	*ℓ1*	*D*	*T*

RD-DA

Die Attachment (for Solid Dies)

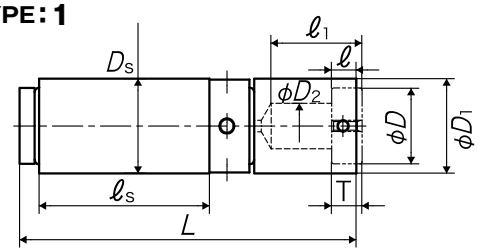
Specification

Alloy steel | Synchronized

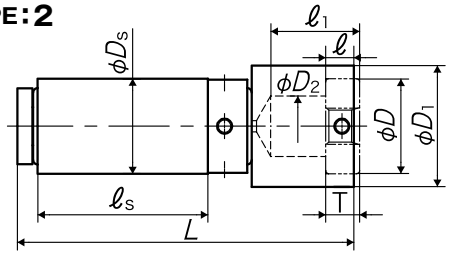
For icon explanation, refer to P.24

■Tooling designed for Solid Dies, with a mechanism to compensate feed error and to absorb misalignment. Combined with CNC toolings, this attachment enables the cutting of external thread cuttings on complex workpieces with ease.

TYPE : 1



TYPE : 2



Segment : 3A

Code	Ds (inch)	D1 (inch)	D2 (inch)	L (inch)	ℓs (inch)	ℓ (inch)	ℓ1 (inch)	D (inch)	T (inch)	Type
DA10-.75	0.75	0.787	0.236	2.795	1.574	0.118	0.433	0.394	0.137	1
DA16-.75	0.75	0.787	0.393	2.992	1.574	0.177	0.63	0.63	0.196	1
DA20-1	1	0.984	0.472	3.503	1.771	0.255	0.885	0.787	0.275	1
DA25-1	1	1.26	0.63	3.503	1.771	0.295	0.866	0.984	0.354	2
DA38-1.25	1.25	1.968	1.023	4.803	2.362	0.433	1.417	1.496	0.511	2

PRODUCTS FOR EUROPE

SP	EU-1
SP OX	EU-4
SP(LH)	EU-7
AU+SP	EU-8
AUXSP	EU-9
AL+SP/AL-SP	EU-10
LO-SP	EU-11
LO-SP OX	EU-13
PH-SP	EU-16
E-SP	EU-18
SP+VA	EU-19
SP-VA	EU-20
SP-BLF	EU-24
SP-BLF OX	EU-25
SU2-SP	EU-26
ZEN-B	EU-28
ZET-B	EU-30
F-SP	EU-33
HFIHS	EU-34
HFISP	EU-35
HFAHS	EU-36
HFASP	EU-37
HDISP	EU-38
HDASP	EU-39
SL+VA	EU-40
MHSL	EU-41
AU+SL	EU-42
AUXSL	EU-43
ZET-P	EU-44
F-SL	EU-45
HDISL	EU-46
PO	EU-47
PO OX	EU-52
PO NX	EU-54
EH-PO	EU-55
PO-VA	EU-56
ZEN-P	EU-59
HT	EU-61
EH-HT	EU-69
GG-HT	EU-71
GG-HT-OH	EU-73
LA-HT	EU-74
AXE-HT	EU-75
CT-FC	EU-76
R-D	EU-77
N+RS/N-RS	EU-78
N+RZ/N-RZ	EU-79
OL+RZ	EU-80
HP+RZ/HP-RZ	EU-81
PO-D	EU-83

SP

Spiral Fluted Taps

Specification

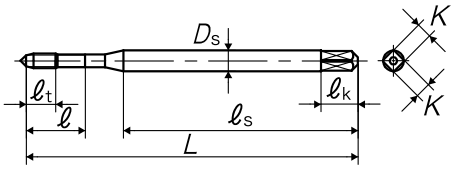
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels
中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE:1



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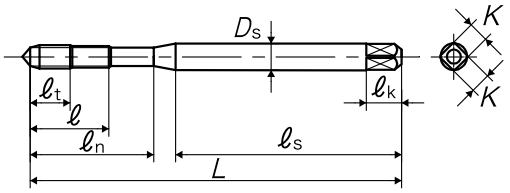
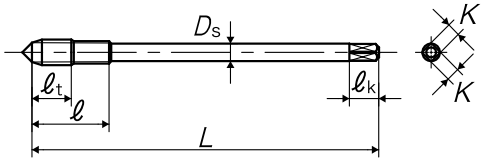


TYPE:3



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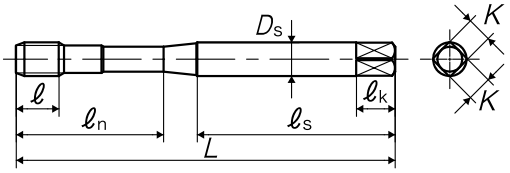

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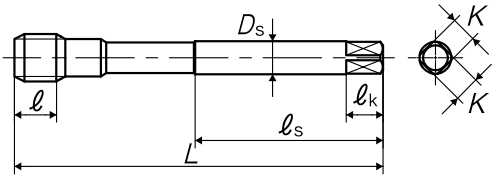

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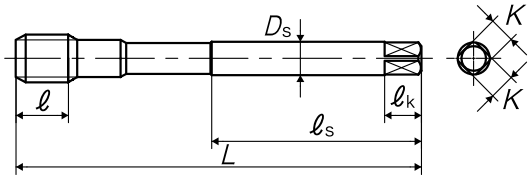
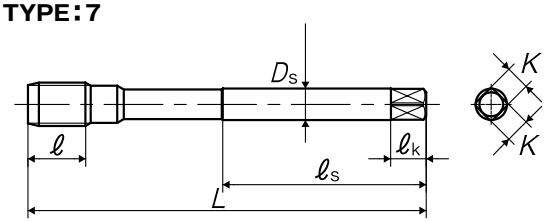


TYPE:7



Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M2 × 0.4	ISO2	SD2.0EANEB	2.5P	45	4	8	-	32	2.8	2.1	5	2	1
M2.2 × 0.45	ISO2	SD2.2FANEB	2.5P	45	4	9	-	32	2.8	2.1	5	2	1
M2.5 × 0.45	ISO2	SD2.5FANEB	2.5P	50	4	8	15	33	2.8	2.1	5	2	2
M2.6 × 0.45	ISO2	SD2.6FANEB	2.5P	50	4	8	15	33	2.8	2.1	5	2	2
M3 × 0.5	ISO2	SD3.0GANEB	2.5P	56	5	9	18	34	3.5	2.7	6	3	2
	ISO3	SD3.0GMNEB	2.5P	56	5	9	18	34	3.5	2.7	6	3	2
M3.5 × 0.6	ISO2	SD3.5HANEB	2.5P	56	7	11	20	32	4	3	6	3	2
M4 × 0.7	ISO2	SD4.0IANEB	2.5P	63	7	13	21	38	4.5	3.4	6	3	2
		SG4.0IANEB	2.5P	63	7	13	-	-	2.8	2.1	5	3	3
	ISO3	SD4.0IMNEB	2.5P	63	7	13	21	38	4.5	3.4	6	3	2
M5 × 0.8	ISO2	SD5.0KANEB	2.5P	70	9	14	25	39	6	4.9	8	3	2
		SG5.0KANEB	2.5P	70	9	14	-	-	3.5	2.7	6	3	3
	ISO3	SD5.0KMNEB	2.5P	70	9	14	25	39	6	4.9	8	3	2
M6 × 1	ISO2	SD6.0MANEB	2.5P	80	11	15	30	45	6	4.9	8	3	2
		SG6.0MANEB	2.5P	80	11	15	-	-	4.5	3.4	6	3	3
	ISO3	SD6.0MMNEB	2.5P	80	11	15	30	45	6	4.9	8	3	2
M7 × 1	ISO2	SD7.0MANEB	2.5P	80	-	11	30	45	7	5.5	8	3	4
M8 × 1.25	ISO2	SD8.0NANEB	2.5P	90	-	12	35	47	8	6.2	9	3	4
		SG8.0NANEB	2.5P	90	-	12	-	46	6	4.9	8	3	5
	ISO3	SD8.0NMNEB	2.5P	90	-	12	35	47	8	6.2	9	3	4
M8 × 1	ISO2	SM8.0MANEB	2.5P	90	-	12	-	46	6	4.9	8	3	5
M10 × 1.5	ISO2	SD010OANEB	2.5P	100	-	13	39	52	10	8	11	3	4
		SG010OANEB	2.5P	100	-	13	-	51	7	5.5	8	3	5
	ISO3	SD010OMNEB	2.5P	100	-	13	39	52	10	8	11	3	4
M10 × 1.25	ISO2	SM010NANEB	2.5P	100	-	13	-	51	7	5.5	8	3	5
M10 × 1	ISO2	SM010MANEB	2.5P	90	-	13	-	46	7	5.5	8	3	5
M12 × 1.75	ISO2	SG012PANEB	2.5P	110	-	15	-	56	9	7	10	3	6
	ISO3	SG012PMNEB	2.5P	110	-	15	-	56	9	7	10	3	6
M12 × 1.5	ISO2	SM012OANEB	2.5P	100	-	15	-	51	9	7	10	3	5
M12 × 1.25	ISO2	SM012NANEB	2.5P	100	-	15	-	51	9	7	10	3	5
M12 × 1	ISO2	SM012MANEB	2.5P	100	-	15	-	51	9	7	10	3	5
M14 × 2	ISO2	SG014QANEB	2.5P	110	-	18	-	56	11	9	12	3	6
	ISO3	SG014QMNEB	2.5P	110	-	18	-	56	11	9	12	3	6
M14 × 1.5	ISO2	SM014OANEB	2.5P	100	-	14	-	51	11	9	12	3	5
M16 × 2	ISO2	SG016QANEB	2.5P	110	-	18	-	56	12	9	12	3	6
	ISO3	SG016QMNEB	2.5P	110	-	18	-	56	12	9	12	3	6
M16 × 1.5	ISO2	SM016OANEB	2.5P	100	-	14	-	51	12	9	12	3	5
M18 × 2.5	ISO2	SG018RANEB	2.5P	125	-	20	-	64	14	11	14	4	6
M18 × 1.5	ISO2	SM018OANEB	2.5P	110	-	14	-	56	14	11	14	4	5
M20 × 2.5	ISO2	SG020RANEB	2.5P	140	-	20	-	71	16	12	15	4	6
M20 × 1.5	ISO2	SM020OANEB	2.5P	125	-	14	-	64	16	12	15	4	5
M22 × 2.5	ISO2	SG022RANEB	2.5P	140	-	20	-	71	18	14.5	17	4	6
M22 × 1.5	ISO2	SM022OANEB	2.5P	125	-	14	-	64	18	14.5	17	4	5
M24 × 3	ISO2	SG024SANEB	2.5P	160	-	25	-	82	18	14.5	17	4	6
M24 × 1.5	ISO2	SM024OANEB	2.5P	140	-	18	-	71	18	14.5	17	4	5
M27 × 3	ISO2	SG027SANEB	2.5P	160	-	25	-	82	20	16	19	4	6
M30 × 3.5	ISO2	SG030TANEB	2.5P	180	-	30	-	92	22	18	21	4	6

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads													
NO.4-40UNC	2B	SDUN4HXNEB	2.5P	56	5	9	18	34	3.5	2.7	6	2	2
NO.4-48UNF	2B	SDUN4FXNEB	2.5P	56	5	9	18	34	3.5	2.7	6	2	2
NO.5-40UNC	2B	SDUN5HXNEB	2.5P	56	5	11	18	34	3.5	2.7	6	2	2
NO.5-44UNF	2B	SDUN5GXNEB	2.5P	56	5	11	18	34	3.5	2.7	6	2	2
NO.6-32UNC	2B	SDUN6JXNEB	2.5P	56	7	11	19	32	4	3	6	3	2
NO.6-40UNF	2B	SDUN6HXNEB	2.5P	56	7	11	19	32	4	3	6	3	2
NO.8-32UNC	2B	SDUN8JXNEB	2.5P	63	7	13	21	38	4.5	3.4	6	3	2
NO.8-36UNF	2B	SDUN8IXNEB	2.5P	63	7	13	21	38	4.5	3.4	6	3	2
NO.10-24UNC	2B	SDUNAMXNEB	2.5P	70	9	14	24	39	6	4.9	8	3	2
NO.10-32UNF	2B	SDUNAJXNEB	2.5P	70	9	14	24	39	6	4.9	8	3	2
NO.12-24UNC	2B	SDUNCMXNEB	2.5P	80	9	15	28	45	6	4.9	8	3	2
NO.12-28UNF	2B	SDUNCKXNEB	2.5P	80	9	15	28	45	6	4.9	8	3	2
1/4-20UNC	2B	SDU04NXNEB	2.5P	80	11	15	30	42	7	5.5	8	3	2
1/4-28UNF	2B	SDU04KXNEB	2.5P	80	11	15	30	42	7	5.5	8	3	2
5/16-18UNC	2B	SDU05OXNEB	2.5P	90	-	12	35	47	8	6.2	9	3	4
5/16-24UNF	2B	SMU05MXNEB	2.5P	90	-	12	-	46	6	4.9	8	3	5
3/8-16UNC	2B	SDU06PXNEB	2.5P	100	-	13	39	54	9	7	10	3	4
3/8-24UNF	2B	SMU06MXNEB	2.5P	100	-	13	-	51	7	5.5	8	3	5
7/16-14UNC	2B	SGU07QXNEB	2.5P	100	-	13	-	51	8	6.2	9	3	6
7/16-20UNF	2B	SMU07NXNEB	2.5P	100	-	13	-	51	8	6.2	9	3	5
1/2-13UNC	2B	SGU08RXNEB	2.5P	110	-	15	-	56	9	7	10	3	6
1/2-20UNF	2B	SMU08NXNEB	2.5P	100	-	15	-	51	9	7	10	3	5
9/16-12UNC	2B	SGU09SXNEB	2.5P	110	-	18	-	56	11	9	12	3	6
9/16-18UNF	2B	SMU090XNEB	2.5P	100	-	14	-	51	11	9	12	3	5
5/8-11UNC	2B	SGU10UXNEB	2.5P	110	-	18	-	56	12	9	12	3	6
5/8-18UNF	2B	SMU100XNEB	2.5P	100	-	14	-	51	12	9	12	3	5
3/4-10UNC	2B	SGU12VXNEB	2.5P	125	-	20	-	64	14	11	14	4	6
3/4-16UNF	2B	SMU12PXNEB	2.5P	110	-	14	-	56	14	11	14	4	5
7/8-9UNC	2B	SGU14WXNEB	2.5P	140	-	20	-	71	18	14.5	17	4	6
7/8-14UNF	2B	SMU14QXNEB	2.5P	125	-	20	-	64	18	14.5	17	4	5
1-8UNC	2B	SGU16XXNEB	2.5P	160	-	25	-	82	18	14.5	17	4	6
1-12UNF	2B	SMU16SXNEB	2.5P	140	-	18	-	71	18	14.5	17	4	5
Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads													
G1/8-28	-	SVG0020NEB	2.5P	90	-	12	-	46	7	5.5	8	3	7
G1/4-19	-	SVG0040NEB	2.5P	100	-	14	-	51	11	9	12	3	7
G3/8-19	-	SVG0060NEB	2.5P	100	-	14	-	51	12	9	12	3	7
G1/2-14	-	SVG0080NEB	2.5P	125	-	18	-	64	16	12	15	4	7
G3/4-14	-	SVG0120NEB	2.5P	140	-	20	-	71	20	16	19	4	7

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP OX

Spiral Fluted Taps, Oxided

Specification

HSS | OX Oxide

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

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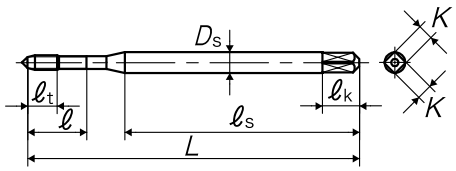

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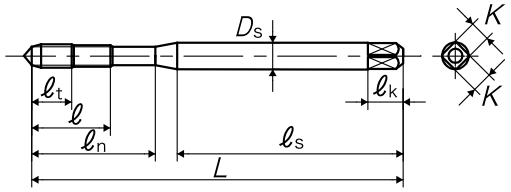

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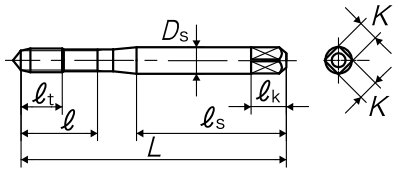

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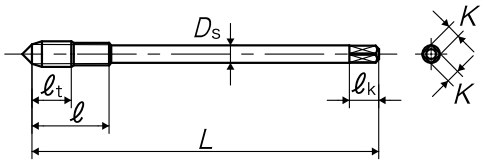

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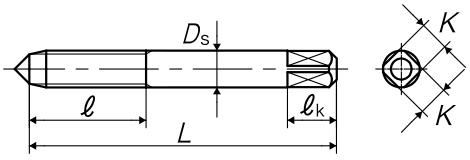

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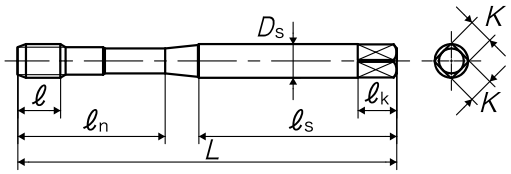

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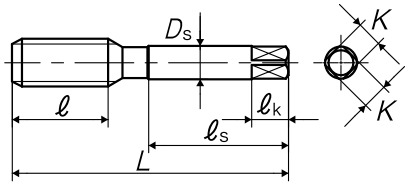

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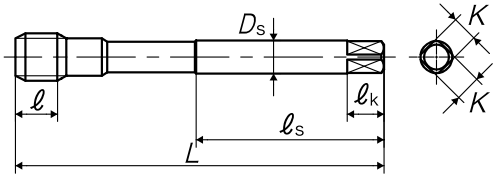


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M2 × 0.4	ISO2	SD2.0EANEX	2.5P	45	4	8	-	32	2.8	2.1	5	2	1
M2.2 × 0.45	ISO2	SD2.2FANEX	2.5P	45	4	9	-	32	2.8	2.1	5	2	1
M2.3 × 0.4	ISO2	SD2.3EANEX	2.5P	45	4	9	-	32	2.8	2.1	5	2	1
M2.5 × 0.45	ISO2	SD2.5FANEX	2.5P	50	4	8	15	33	2.8	2.1	5	2	2
M2.6 × 0.45	ISO2	SD2.6FANEX	2.5P	50	4	8	15	33	2.8	2.1	5	2	2
M3 × 0.5	ISO2	SD3.0GANEX	2.5P	56	5	9	18	34	3.5	2.7	6	3	2
		SQ3.0GANEX	2.5P	40	5	11	-	24	3.5	2.7	6	3	3
M3.5 × 0.6	ISO2	SD3.5HANEX	2.5P	56	7	11	20	32	4	3	6	2	2
M4 × 0.7	ISO2	SD4.0IANEX	2.5P	63	7	13	21	38	4.5	3.4	6	3	2
		SG4.0IANEX	2.5P	63	7	13	-	-	2.8	2.1	5	3	4
		SQ4.0IANEX	2.5P	45	7	13	-	27	4.5	3.4	6	3	3
M4 × 0.5	ISO2	SM4.0GANEX	2.5P	63	5	9	-	-	2.8	2.1	5	3	4
M4.5 × 0.75	ISO2	SD4.5JANEX	2.5P	70	9	14	24	39	6	4.9	8	3	2
M5 × 0.8	ISO2	SD5.0KANEX	2.5P	70	9	14	25	39	6	4.9	8	3	2
		SG5.0KANEX	2.5P	70	9	14	-	-	3.5	2.7	6	3	4
		SQ5.0KANEX	2.5P	50	9	16	-	24	6	4.9	8	3	3
M5 × 0.5	ISO2	SM5.0GANEX	2.5P	70	6	11	-	-	3.5	2.7	6	3	4
M6 × 1	ISO2	SD6.0MANEX	2.5P	80	11	15	30	45	6	4.9	8	3	2
		SG6.0MANEX	2.5P	80	11	15	-	-	4.5	3.4	6	3	4
		SQ6.0MANEX	2.5P	50	11	19	-	-	6	4.9	8	3	5
M6 × 0.75	ISO2	SM6.0JANEX	2.5P	80	8	13	-	-	4.5	3.4	6	3	4
M6 × 0.5	ISO2	SM6.0GANEX	2.5P	80	8	13	-	-	4.5	3.4	6	3	4
M7 × 1	ISO2	SD7.0MANEX	2.5P	80	-	11	30	45	7	5.5	8	3	2
M8 × 1.25	ISO2	SD8.0NANEX	2.5P	90	-	12	35	47	8	6.2	9	3	6
		SG8.0NANEX	2.5P	90	-	12	-	46	6	4.9	8	3	8
		SQ8.0NANEX	2.5P	56	-	12	-	29	6	4.9	8	3	7
M8 × 1	ISO2	SM8.0MANEX	2.5P	90	-	12	-	46	6	4.9	8	3	8
M8 × 0.75	ISO2	SM8.0JANEX	2.5P	80	-	12	-	41	6	4.9	8	3	8
M10 × 1.5	ISO2	SD0100ANEX	2.5P	100	-	13	39	52	10	8	11	3	6
		SG0100ANEX	2.5P	100	-	13	-	51	7	5.5	8	3	8
		SQ0100ANEX	2.5P	70	-	13	-	36	7	5.5	8	3	7
M10 × 1.25	ISO2	SM010NANEX	2.5P	100	-	13	-	51	7	5.5	8	3	8
M10 × 1	ISO2	SM010MANEX	2.5P	90	-	13	-	46	7	5.5	8	3	8
M10 × 0.75	ISO2	SM010JANEX	2.5P	90	-	13	-	46	7	5.5	8	3	6
M12 × 1.75	ISO2	SG012PANEX	2.5P	110	-	15	-	56	9	7	10	3	8
		SQ012PANEX	2.5P	75	-	15	-	38	9	7	10	3	7
M12 × 1.5	ISO2	SM0120ANEX	2.5P	100	-	15	-	51	9	7	10	3	8
M12 × 1.25	ISO2	SM012NANEX	2.5P	100	-	15	-	51	9	7	10	3	8
M12 × 1	ISO2	SM012MANEX	2.5P	100	-	15	-	51	9	7	10	3	8
M14 × 2	ISO2	SG014QANEX	2.5P	110	-	18	-	56	11	9	12	3	8
		SQ014QANEX	2.5P	80	-	18	-	41	11	9	12	3	7
M14 × 1.5	ISO2	SM0140ANEX	2.5P	100	-	14	-	51	11	9	12	3	8
M14 × 1.25	ISO2	SM014NANEX	2.5P	100	-	14	-	51	11	9	12	3	8
M14 × 1	ISO2	SM014MANEX	2.5P	100	-	14	-	51	11	9	12	3	8
M16 × 2	ISO2	SG016QANEX	2.5P	110	-	18	-	56	12	9	12	3	8
		SQ016QANEX	2.5P	80	-	18	-	41	12	9	12	3	7
M16 × 1.5	ISO2	SM0160ANEX	2.5P	100	-	14	-	51	12	9	12	3	8
M16 × 1	ISO2	SM016MANEX	2.5P	100	-	14	-	51	12	9	12	3	8

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M18 × 2.5	IS02	SG018RANEX	2.5P	125	-	20	-	64	14	11	14	4	8
M18 × 2	IS02	SM018QANEX	2.5P	125	-	18	-	64	14	11	14	4	8
M18 × 1.5	IS02	SM018OANEX	2.5P	110	-	14	-	56	14	11	14	4	8
M18 × 1	IS02	SM018MANEX	2.5P	110	-	14	-	56	14	11	14	4	8
M20 × 2.5	IS02	SG020RANEX	2.5P	140	-	20	-	71	16	12	15	4	8
		SQ020RANEX	2.5P	95	-	20	-	48	16	12	15	4	7
M20 × 2	IS02	SM020QANEX	2.5P	140	-	18	-	71	16	12	15	4	8
M20 × 1.5	IS02	SM020OANEX	2.5P	125	-	14	-	64	16	12	15	4	8
M20 × 1	IS02	SM020MANEX	2.5P	125	-	14	-	64	16	12	15	4	8
M22 × 2.5	IS02	SG022RANEX	2.5P	140	-	20	-	71	18	14.5	17	4	8
M22 × 2	IS02	SM022QANEX	2.5P	140	-	18	-	71	18	14.5	17	4	8
M22 × 1.5	IS02	SM022OANEX	2.5P	125	-	14	-	64	18	14.5	17	4	8
M22 × 1	IS02	SM022MANEX	2.5P	125	-	14	-	64	18	14.5	17	4	8
M24 × 3	IS02	SG024SANEX	2.5P	160	-	25	-	82	18	14.5	17	4	8
M24 × 2	IS02	SM024QANEX	2.5P	140	-	18	-	71	18	14.5	17	4	8
M24 × 1.5	IS02	SM024OANEX	2.5P	140	-	18	-	71	18	14.5	17	4	8
M24 × 1	IS02	SM024MANEX	2.5P	140	-	18	-	71	18	14.5	17	4	8
M25 × 1.5	IS02	SM025OANEX	2.5P	140	-	18	-	71	18	14.5	17	4	8
M26 × 1.5	IS02	SM026OANEX	2.5P	140	-	18	-	71	18	14.5	17	4	8
M27 × 3	IS02	SG027SANEX	2.5P	160	-	25	-	82	20	16	19	4	8
M27 × 2	IS02	SM027QANEX	2.5P	140	-	20	-	71	20	16	19	4	8
M27 × 1.5	IS02	SM027OANEX	2.5P	140	-	20	-	71	20	16	19	4	8
M27 × 1	IS02	SM027MANEX	2.5P	140	-	20	-	71	20	16	19	4	8
M28 × 2	IS02	SM028QANEX	2.5P	140	-	20	-	71	20	16	19	4	8
M28 × 1.5	IS02	SM028OANEX	2.5P	140	-	20	-	71	20	16	19	4	8
M28 × 1	IS02	SM028MANEX	2.5P	140	-	20	-	71	20	16	19	4	8
M30 × 3.5	IS02	SG030TANEX	2.5P	180	-	30	-	92	22	18	21	4	8
M30 × 2	IS02	SM030QANEX	2.5P	150	-	20	-	77	22	18	21	4	8
M30 × 1.5	IS02	SM030OANEX	2.5P	150	-	20	-	77	22	18	21	4	8
M30 × 1	IS02	SM030MANEX	2.5P	150	-	20	-	77	22	18	21	4	8
Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads													
G1/8-28	-	SVG0020NEX	2.5P	90	-	12	-	46	7	5.5	8	3	8
G1/4-19	-	SVG0040NEX	2.5P	100	-	14	-	51	11	9	12	3	8
G3/8-19	-	SVG0060NEX	2.5P	100	-	14	-	51	12	9	12	3	8
G1/2-14	-	SVG0080NEX	2.5P	125	-	18	-	64	16	12	15	4	8
G5/8-14	-	SVG0100NEX	2.5P	125	-	18	-	64	18	14.5	17	4	8
G3/4-14	-	SVG0120NEX	2.5P	140	-	20	-	71	20	16	19	4	8

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP (LH)

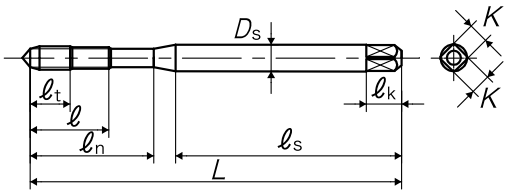
Spiral Fluted Taps for Left Hand Threads

Specification

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE : 1



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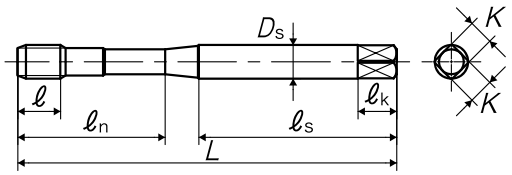

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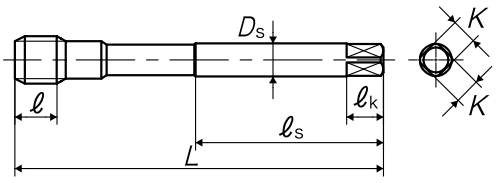

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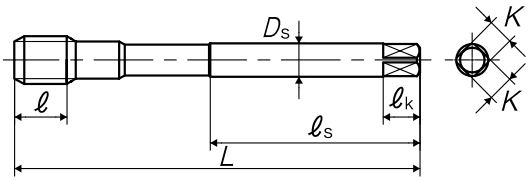


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M4 × 0.7	ISO2	HD4.0IANEB	2.5P	63	7	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	HD5.0KANEB	2.5P	70	9	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2	HD6.0MANEB	2.5P	80	11	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2	HD8.0NANEB	2.5P	90	-	12	35	47	8	6.2	9	3	2
M8 × 1	ISO2	HM8.0MANEB	2.5P	90	-	12	-	46	6	4.9	8	3	3
M10 × 1.5	ISO2	HD010OANEB	2.5P	100	-	13	39	52	10	8	11	3	2
M12 × 1.75	ISO2	HG012PANEB	2.5P	110	-	15	-	56	9	7	10	3	4
M14 × 2	ISO2	HG014QANEB	2.5P	110	-	18	-	56	11	9	12	3	4
M14 × 1.5	ISO2	HM014OANEB	2.5P	100	-	14	-	51	11	9	12	3	3
M16 × 2	ISO2	HG016QANEB	2.5P	110	-	18	-	56	12	9	12	3	4
M16 × 1.5	ISO2	HM016OANEB	2.5P	100	-	14	-	51	12	9	12	3	3
M18 × 2.5	ISO2	HG018RANEB	2.5P	125	-	20	-	64	14	11	14	4	4
M20 × 2.5	ISO2	HG020RANEB	2.5P	140	-	20	-	71	16	12	15	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AU+SP

Plus Series Spiral Fluted Taps, Coated

Specification

HSS Coating

■Optimum coating suitable for the tapping condition.

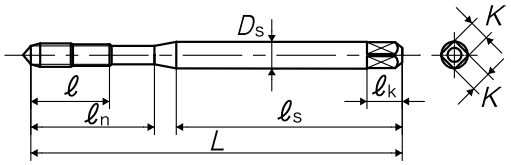
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

Stainless steels ステンレス鋼	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~10 (m/min)	20~30 (m/min)	20~30 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2	SE3.0GANEV	2.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2	SE4.0IANEV	2.5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	SE5.0KANEV	2.5P	70	14	25	39	6	4.9	8	3	1

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AUXSP

X Series Spiral Fluted Taps, Coated

Specification

HSS | Coating | Synchronized

■Applying the blanks of high toughness and high accuracy, AUXSP derives the maximum performance from high facility machining centers and high precision toolings.
Special thread portion design with thread crests ground off and a few full threads left unchanged.
Combination of this design and the special flute geometry maintains good chip ejection and reduces friction. The Spiral Fluted Tap is adopting the optimum coating for the tapping condition.

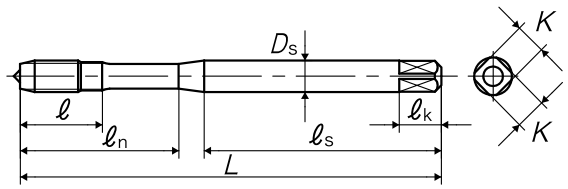
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)

Stainless steels ステンレス鋼	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
10~15 (m/min)	20~30 (m/min)	20~30 (m/min)

For icon explanation, refer to P.24

TYPE : 1



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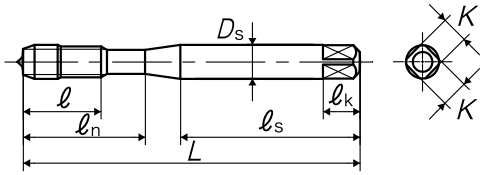


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2	SX6.0MANEV	2.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2	SX8.0NANEV	2.5P	90	19	35	48	8	6.2	9	3	1
M8 × 1	ISO2	SX8.0MANEV	2.5P	90	15	35	48	8	6.2	9	3	2
M10 × 1.5	ISO2	SX010OANEV	2.5P	100	23	39	53	10	8	11	4	1
M10 × 1.25	ISO2	SX010NANEV	2.5P	100	19	39	53	10	8	11	4	2
M10 × 1	ISO2	SX010MANEV	2.5P	100	15	39	53	10	8	11	4	2
M12 × 1.75	ISO2	SX012PANEV	2.5P	110	26	45	56	12	9	12	4	1
M12 × 1.5	ISO2	SX012OANEV	2.5P	110	23	45	56	12	9	12	4	2
M12 × 1.25	ISO2	SX012NANEV	2.5P	110	19	45	56	12	9	12	4	2

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AL+SP/AL-SP

Spiral Fluted Taps for Aluminum

Specification

HSS | NI Nitride

■In aluminum die casting and aluminum casting tapping, AL+SP/AL-SP solves such problems as chip jamming, chip clogging, and torn threads.

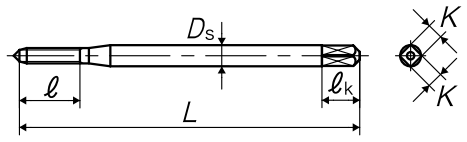
Recommended Tapping Speeds depending on Materials

Brass 黄銅	Brass castings 黄銅鋳物	Bronze 青銅	Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Magnesium alloy die castings マグネシウム合金鋳物	Zinc alloy castings 亜鉛合金鋳物
10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)

AL+SP	～M6
AL−SP	M8～

For icon explanation, refer to P.24

TYPE：1



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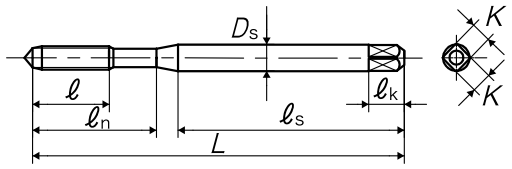

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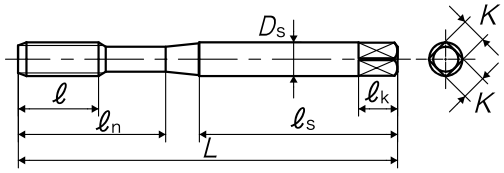

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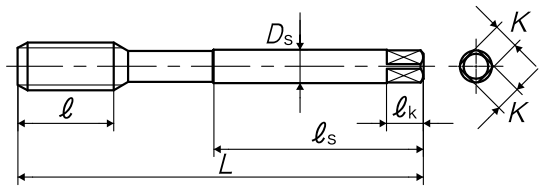


Segment：1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M2 × 0.4	ISO2	SE2.0EALEN	2.5P	45	8	-	-	2.8	2.1	5	2	1
M2.5 × 0.45	ISO2	SE2.5FALEN	2.5P	50	8	15	33	2.8	2.1	5	2	2
M3 × 0.5	ISO2	SE3.0GALEN	2.5P	56	9	18	34	3.5	2.7	6	3	2
M4 × 0.7	ISO2	SE4.0IALEN	2.5P	63	13	21	38	4.5	3.4	6	3	2
M5 × 0.8	ISO2	SE5.0KALEN	2.5P	70	14	25	39	6	4.9	8	3	2
M6 × 1	ISO2	SE6.0MALEN	2.5P	80	15	30	45	6	4.9	8	3	2
M8 × 1.25	ISO2	SD8.0NALEN	2.5P	90	19	35	47	8	6.2	9	3	3
M10 × 1.5	ISO2	SD010OALEN	2.5P	100	23	39	52	10	8	11	3	3
M12 × 1.75	ISO2	SG012PALEN	2.5P	110	26	-	56	9	7	10	3	4
M14 × 2	ISO2	SG014QALEN	2.5P	110	26	-	56	11	9	12	3	4
M16 × 2	ISO2	SG016QALEN	2.5P	110	26	-	56	12	9	12	3	4

LO-SP

Low Spiral Fluted Taps

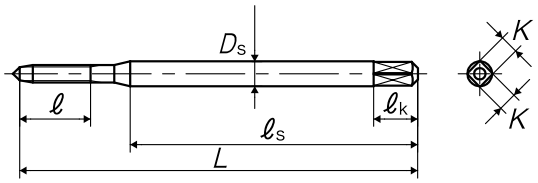
Specification

■Spiral flutes with low helix can break down chips and can eject them smoothly. Suitable for thermal refined high carbon steels and alloy tool steels. Effective in horizontal tapping.

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE:1



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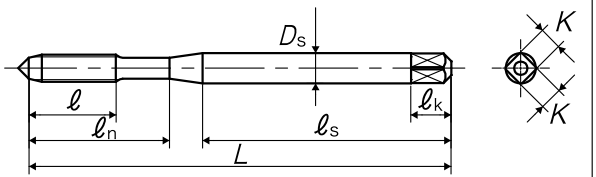

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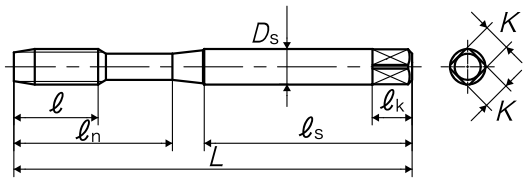

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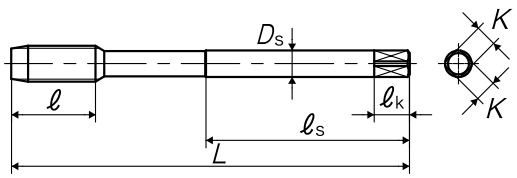

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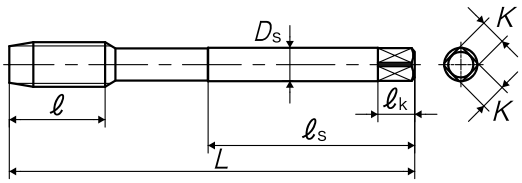

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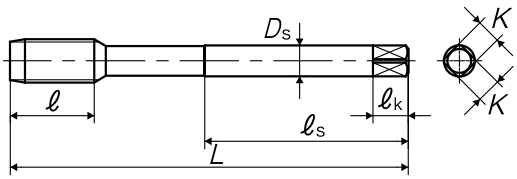


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M2 × 0.4	ISO2	SD2.0EANEBH	3.5P	45	8	-	32	2.8	2.1	5	2	1
M2.3 × 0.4	ISO2	SD2.3EANEBH	3.5P	45	9	-	32	2.8	2.1	5	2	1
M2.5 × 0.45	ISO2	SD2.5FANEBH	3.5P	50	8	15	33	2.8	2.1	5	2	2
M2.6 × 0.45	ISO2	SD2.6FANEBH	3.5P	50	8	15	33	2.8	2.1	5	2	2
M3 × 0.5	ISO2	SD3.0GANEBH	3.5P	56	9	18	34	3.5	2.7	6	2	2
M3.5 × 0.6	ISO2	SD3.5HANEBH	3.5P	56	11	20	32	4	3	6	3	2
M4 × 0.7	ISO2	SD4.0IANEBH	3.5P	63	13	21	38	4.5	3.4	6	3	2
M5 × 0.8	ISO2	SD5.0KANEBH	3.5P	70	14	25	39	6	4.9	8	3	2
M6 × 1	ISO2	SD6.0MANEBH	3.5P	80	15	30	45	6	4.9	8	3	2
M8 × 1.25	ISO2	SD8.0NANEBH	3.5P	90	19	35	47	8	6.2	9	3	3
M8 × 1	ISO2	SM8.0MANEBH	3.5P	90	19	-	46	6	4.9	8	3	4
M10 × 1.5	ISO2	SD010OANEBH	3.5P	100	23	39	52	10	8	11	3	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M10 × 1.25	ISO2	SM010NANEBH	3.5P	100	23	-	51	7	5.5	8	3	4
M10 × 1	ISO2	SM010MANEBH	3.5P	90	19	-	46	7	5.5	8	3	4
M12 × 1.75	ISO2	SG012PANEBH	3.5P	110	26	-	56	9	7	10	3	5
M12 × 1.5	ISO2	SM012OANEBH	3.5P	100	21	-	51	9	7	10	3	4
M12 × 1.25	ISO2	SM012NANEBH	3.5P	100	21	-	51	9	7	10	3	4
M12 × 1	ISO2	SM012MANEBH	3.5P	100	21	-	51	9	7	10	3	4
M14 × 2	ISO2	SG014QANEBH	3.5P	110	26	-	56	11	9	12	3	5
M14 × 1.5	ISO2	SM014OANEBH	3.5P	100	21	-	51	11	9	12	3	4
M16 × 2	ISO2	SG016QANEBH	3.5P	110	26	-	56	12	9	12	3	5
M16 × 1.5	ISO2	SM016OANEBH	3.5P	100	21	-	51	12	9	12	3	4
M16 × 1	ISO2	SM016MANEBH	3.5P	100	21	-	51	12	9	12	3	4
M18 × 1.5	ISO2	SM018OANEBH	3.5P	110	24	-	56	14	11	14	4	4
M20 × 2.5	ISO2	SG020RANEBH	3.5P	140	33	-	71	16	12	15	4	5
M24 × 3	ISO2	SG024SANEBH	3.5P	160	37	-	82	18	14.5	17	4	5
M24 × 1.5	ISO2	SM024OANEBH	3.5P	140	27	-	71	18	14.5	17	4	4
M30 × 3.5	ISO2	SG030TANEBH	3.5P	180	44	-	92	22	18	21	4	5
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads												
G1/8-28	-	SVG0020NEBH	3.5P	90	19	-	46	7	5.5	8	3	6
G1/4-19	-	SVG0040NEBH	3.5P	100	21	-	51	11	9	12	3	6
G3/8-19	-	SVG0060NEBH	3.5P	100	21	-	51	12	9	12	3	6
G1/2-14	-	SVG0080NEBH	3.5P	125	24	-	64	16	12	15	4	6

LO-SP OX

Low Spiral Fluted Taps, Oxided

Specification

HSS | OX Oxide

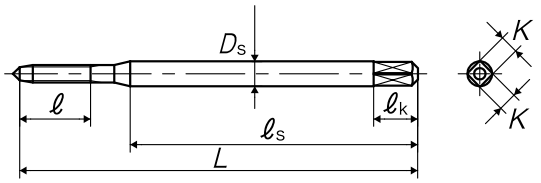
■Spiral flutes with low helix can break down chips and can eject them smoothly. Suitable for thermal refined high carbon steels and alloy tool steels. Effective in horizontal tapping.

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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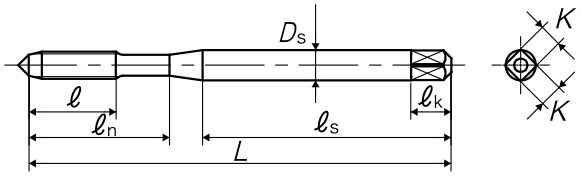

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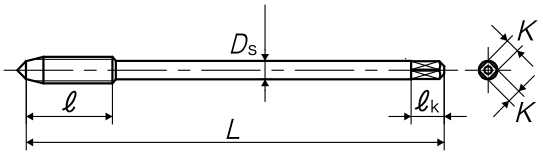

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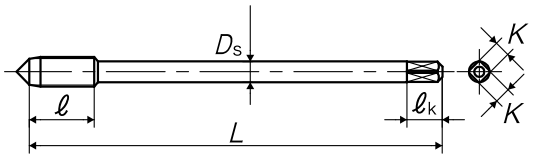

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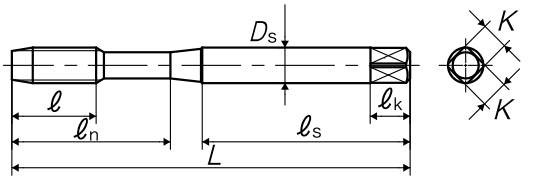

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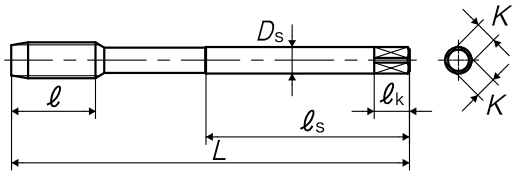

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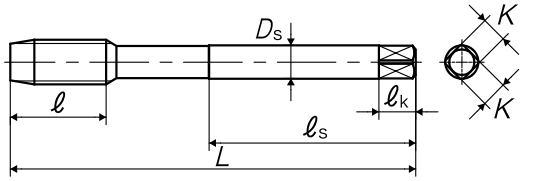

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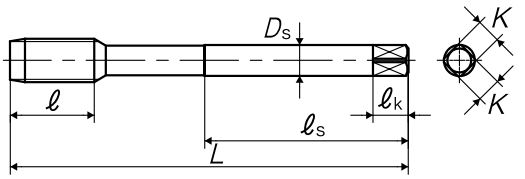


Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M2 × 0.4	ISO2	SD2.0EANEXH	3.5P	45	8	-	32	2.8	2.1	5	2	1
M2.5 × 0.45	ISO2	SD2.5FANEXH	3.5P	50	8	15	33	2.8	2.1	5	2	2
M2.6 × 0.45	ISO2	SD2.6FANEXH	3.5P	50	8	15	33	2.8	2.1	5	2	2
M3 × 0.5	ISO2	SD3.0GANEXH	3.5P	56	9	18	34	3.5	2.7	6	2	2
	ISO3	SD3.0GMNEXH	3.5P	56	9	18	34	3.5	2.7	6	2	2
M4 × 0.7	ISO2	SD4.0IANEXH	3.5P	63	13	21	38	4.5	3.4	6	3	2
		SG4.0IANEXH	3.5P	63	13	-	-	2.8	2.1	5	3	3
	ISO3	SD4.0IMNEXH	3.5P	63	13	21	38	4.5	3.4	6	3	2
M5 × 0.8	ISO2	SD5.0KANEXH	3.5P	70	14	25	39	6	4.9	8	3	2
		SG5.0KANEXH	3.5P	70	14	-	-	3.5	2.7	6	3	3
	ISO3	SD5.0KMNEXH	3.5P	70	14	25	39	6	4.9	8	3	2
M5 × 0.5	ISO2	SM5.0GANEXH	3.5P	70	11	-	-	3.5	2.7	6	3	4
M6 × 1	ISO2	SD6.0MANEXH	3.5P	80	15	30	45	6	4.9	8	3	2
		SG6.0MANEXH	3.5P	80	15	-	-	4.5	3.4	6	3	3
	ISO3	SD6.0MMNEXH	3.5P	80	15	30	45	6	4.9	8	3	2
M6 × 0.75	ISO2	SM6.0JANEXH	3.5P	80	13	-	-	4.5	3.4	6	3	4
M7 × 1	ISO2	SD7.0MANEXH	3.5P	80	15	30	45	7	5.5	8	3	5
M8 × 1.25	ISO2	SD8.0NANEXH	3.5P	90	19	35	47	8	6.2	9	3	5
		SG8.0NANEXH	3.5P	90	19	-	46	6	4.9	8	3	6
	ISO3	SD8.0NMNEXH	3.5P	90	19	35	47	8	6.2	9	3	5
M8 × 1	ISO2	SM8.0MANEXH	3.5P	90	19	-	46	6	4.9	8	3	7
M8 × 0.75	ISO2	SM8.0JANEXH	3.5P	80	19	-	41	6	4.9	8	3	7
M10 × 1.5	ISO2	SD0100ANEXH	3.5P	100	23	39	52	10	8	11	3	5
		SG0100ANEXH	3.5P	100	23	-	51	7	5.5	8	3	6
	ISO3	SD0100MNEXH	3.5P	100	23	39	52	10	8	11	3	5
M10 × 1.25	ISO2	SM010NANEXH	3.5P	100	23	-	51	7	5.5	8	3	7
M10 × 1	ISO2	SM010MANEXH	3.5P	90	19	-	46	7	5.5	8	3	7
M10 × 0.75	ISO2	SM010JANEXH	3.5P	90	19	-	46	7	5.5	8	3	7
M12 × 1.75	ISO2	SG012PANEXH	3.5P	110	26	-	56	9	7	10	3	6
	ISO3	SG012PMNEXH	3.5P	110	26	-	56	9	7	10	3	6
M12 × 1.5	ISO2	SM0120ANEXH	3.5P	100	21	-	51	9	7	10	3	7
M12 × 1.25	ISO2	SM012NANEXH	3.5P	100	21	-	51	9	7	10	3	7
M12 × 1	ISO2	SM012MANEXH	3.5P	100	21	-	51	9	7	10	3	7
M14 × 2	ISO2	SG014QANEXH	3.5P	110	26	-	56	11	9	12	3	6
	ISO3	SG014QMNEXH	3.5P	110	26	-	56	11	9	12	3	6
M14 × 1.5	ISO2	SM0140ANEXH	3.5P	100	21	-	51	11	9	12	3	7
M14 × 1	ISO2	SM014MANEXH	3.5P	100	21	-	51	11	9	12	3	7
M16 × 2	ISO2	SG016QANEXH	3.5P	110	26	-	56	12	9	12	3	6
	ISO3	SG016QMNEXH	3.5P	110	26	-	56	12	9	12	3	6
M16 × 1.5	ISO2	SM0160ANEXH	3.5P	100	21	-	51	12	9	12	3	7
M16 × 1	ISO2	SM016MANEXH	3.5P	100	21	-	51	12	9	12	3	7
M18 × 2.5	ISO2	SG018RANEXH	3.5P	125	33	-	64	14	11	14	4	6
M18 × 1.5	ISO2	SM0180ANEXH	3.5P	110	24	-	56	14	11	14	4	7
M20 × 2.5	ISO2	SG020RANEXH	3.5P	140	33	-	71	16	12	15	4	6
M20 × 2	ISO2	SM020QANEXH	3.5P	140	33	-	71	16	12	15	4	7
M20 × 1.5	ISO2	SM0200ANEXH	3.5P	125	24	-	64	16	12	15	4	7
M20 × 1	ISO2	SM020MANEXH	3.5P	125	24	-	64	16	12	15	4	7
M22 × 2.5	ISO2	SG022RANEXH	3.5P	140	33	-	71	18	14.5	17	4	6

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M22 × 1.5	ISO2	SM0220ANEXH	3.5P	125	24	-	64	18	14.5	17	4	7
M22 × 1	ISO2	SM022MANEXH	3.5P	125	24	-	64	18	14.5	17	4	7
M24 × 3	ISO2	SG024SANEXH	3.5P	160	37	-	82	18	14.5	17	4	6
M24 × 2	ISO2	SM024QANEXH	3.5P	140	27	-	71	18	14.5	17	4	7
M24 × 1.5	ISO2	SM0240ANEXH	3.5P	140	27	-	71	18	14.5	17	4	7
M24 × 1	ISO2	SM024MANEXH	3.5P	140	27	-	71	18	14.5	17	4	7
M25 × 1.5	ISO2	SM0250ANEXH	3.5P	140	27	-	71	18	14.5	17	4	7
M27 × 3	ISO2	SG027SANEXH	3.5P	160	37	-	82	20	16	19	4	6
M27 × 2	ISO2	SM027QANEXH	3.5P	140	27	-	71	20	16	19	4	7
M28 × 1.5	ISO2	SM0280ANEXH	3.5P	140	27	-	71	20	16	19	4	7
M28 × 1	ISO2	SM028MANEXH	3.5P	140	27	-	71	20	16	19	4	7
M30 × 3.5	ISO2	SG030TANEXH	3.5P	180	44	-	92	22	18	21	4	6
M30 × 2	ISO2	SM030QANEXH	3.5P	150	27	-	77	22	18	21	4	7
M30 × 1.5	ISO2	SM0300ANEXH	3.5P	150	27	-	77	22	18	21	4	7
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads												
G1/8-28	-	SVG0020NEXH	3.5P	90	19	-	46	7	5.5	8	3	8
G1/4-19	-	SVG0040NEXH	3.5P	100	21	-	51	11	9	12	3	8
G3/8-19	-	SVG0060NEXH	3.5P	100	21	-	51	12	9	12	3	8
G1/2-14	-	SVG0080NEXH	3.5P	125	24	-	64	16	12	15	4	8
G3/4-14	-	SVG0120NEXH	3.5P	140	27	-	71	20	16	19	4	8

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

PH-SP

Spiral Fluted Taps for Hard-to-Machine Materials

Specification

HSS-Co | OX Oxide

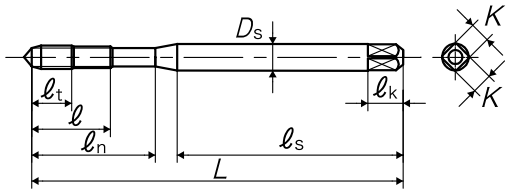
■Suitable for hard steels of 35-45HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels.

Recommended Tapping Speeds depending on Materials

High carbon steels 高炭素鋼	Alloy steels 合金鋼
2~7 (m/min)	2~7 (m/min)

For icon explanation, refer to P.24

TYPE:1



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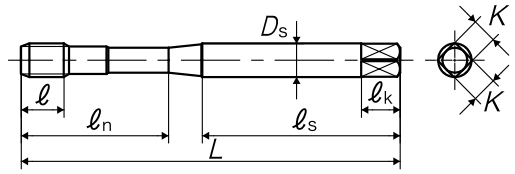

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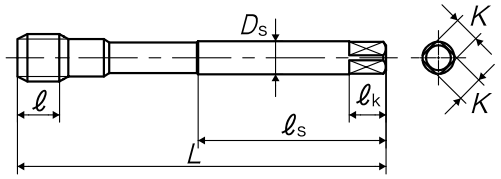

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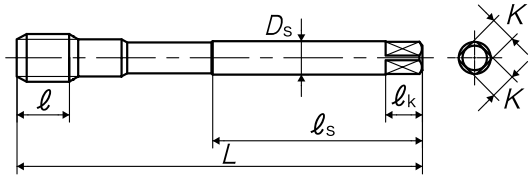

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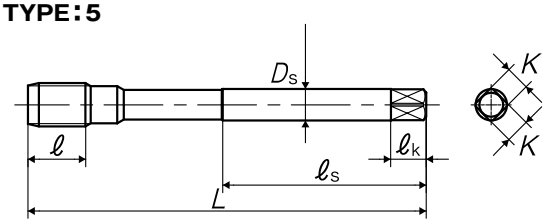


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M3 × 0.5	ISO2	SD3.0GAEEX	3P	56	5	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2	SD4.0IAEEX	3P	63	7	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	SD5.0KAEEX	3P	70	9	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2	SD6.0MAEEX	3P	80	11	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2	SD8.0NAEEX	3P	90	-	12	35	47	8	6.2	9	3	2
M8 × 1	ISO2	SM8.0MAEEX	3P	90	-	12	-	46	6	4.9	8	3	3
M10 × 1.5	ISO2	SD010OAEEX	3P	100	-	13	39	52	10	8	11	3	2
M10 × 1.25	ISO2	SM010NAEEX	3P	100	-	13	-	51	7	5.5	8	3	3
M10 × 1	ISO2	SM010MAEEX	3P	90	-	13	-	46	7	5.5	8	3	3
M12 × 1.75	ISO2	SG012PAEEX	3P	110	-	15	-	56	9	7	10	4	4
M12 × 1.5	ISO2	SM012OAEEX	3P	100	-	15	-	51	9	7	10	4	3
M12 × 1.25	ISO2	SM012NAEEX	3P	100	-	15	-	51	9	7	10	4	3
M14 × 2	ISO2	SG014QAEEX	3P	110	-	18	-	56	11	9	12	4	4
M14 × 1.5	ISO2	SM014OAEEX	3P	100	-	14	-	51	11	9	12	4	3
M16 × 2	ISO2	SG016QAEEX	3P	110	-	18	-	56	12	9	12	4	4
M16 × 1.5	ISO2	SM016OAEEX	3P	100	-	14	-	51	12	9	12	4	3

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M18 × 2.5	ISO2	SG018RAEEX	3P	125	-	20	-	64	14	11	14	4	4
M18 × 1.5	ISO2	SM0180AEEX	3P	110	-	14	-	56	14	11	14	4	3
M20 × 2.5	ISO2	SG020RAEEX	3P	140	-	20	-	71	16	12	15	4	4
M20 × 1.5	ISO2	SM0200AEEX	3P	125	-	14	-	64	16	12	15	4	3
M22 × 2.5	ISO2	SG022RAEEX	3P	140	-	20	-	71	18	14.5	17	5	4
M22 × 1.5	ISO2	SM0220AEEX	3P	125	-	14	-	64	18	14.5	17	5	3
M24 × 3	ISO2	SG024SAEEX	3P	160	-	25	-	82	18	14.5	17	5	4
M24 × 2	ISO2	SM024QAEEX	3P	140	-	18	-	71	18	14.5	17	5	3
M24 × 1.5	ISO2	SM0240AEEX	3P	140	-	18	-	71	18	14.5	17	5	3
M27 × 3	ISO2	SG027SAEEX	3P	160	-	25	-	82	20	16	19	5	4
M27 × 2	ISO2	SM027QAEEX	3P	140	-	20	-	71	20	16	19	5	3
M30 × 3.5	ISO2	SG030TAEEX	3P	180	-	30	-	92	22	18	21	5	4
M30 × 2	ISO2	SM030QAEEX	3P	150	-	20	-	77	22	18	21	5	3
M30 × 1.5	ISO2	SM0300AEEX	3P	150	-	20	-	77	22	18	21	5	3
Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads													
G1/8-28	-	SVG0020EEX	3P	90	-	12	-	46	7	5.5	8	3	5
G1/4-19	-	SVG0040EEX	3P	100	-	14	-	51	11	9	12	4	5
G3/8-19	-	SVG0060EEX	3P	100	-	14	-	51	12	9	12	4	5
G1/2-14	-	SVG0080EEX	3P	125	-	18	-	64	16	12	15	4	5

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

E-SP

Spiral Fluted Taps for Soft Structural Steels

Specification

HSS | OX Oxide

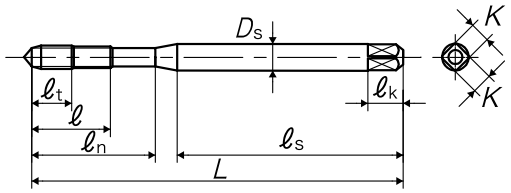
■Suitable particularly for soft steels.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼
5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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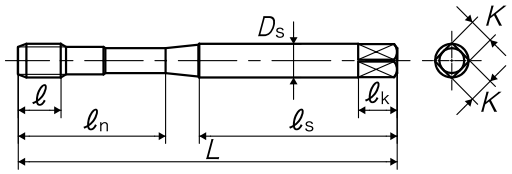

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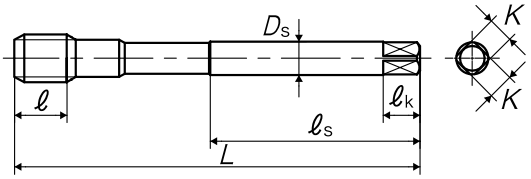


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M3 × 0.5	ISO2	SD3.0GAHEX	2.5P	56	5	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2	SD4.0IAHEX	2.5P	63	7	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	SD5.0KAHEX	2.5P	70	9	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2	SD6.0MAHEX	2.5P	80	11	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2	SD8.0NAHEX	2.5P	90	-	12	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2	SD010OAHEX	2.5P	100	-	13	39	52	10	8	11	3	2
M12 × 1.75	ISO2	SG012PAHEX	2.5P	110	-	15	-	56	9	7	10	3	3
M14 × 2	ISO2	SG014QAHEX	2.5P	110	-	18	-	56	11	9	12	3	3
M16 × 2	ISO2	SG016QAHEX	2.5P	110	-	18	-	56	12	9	12	3	3
M18 × 2.5	ISO2	SG018RAHEX	2.5P	125	-	20	-	64	14	11	14	4	3
M20 × 2.5	ISO2	SG020RAHEX	2.5P	140	-	20	-	71	16	12	15	4	3
M22 × 2.5	ISO2	SG022RAHEX	2.5P	140	-	20	-	71	18	14.5	17	4	3
M24 × 3	ISO2	SG024SAHEX	2.5P	160	-	25	-	82	18	14.5	17	4	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SP+VA

Spiral Fluted Taps for Stainless Steels

Specification

HSS | OX Oxide | Synchro nized

■Applying the blanks of high toughness and high accuracy, SP+VA derives the maximum performance from high facility machining centers and high precision toolings, blind hole use.

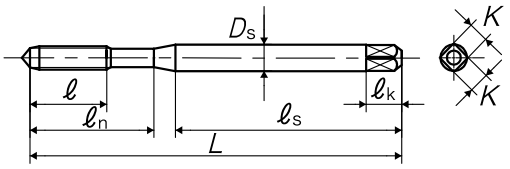
Recommended Tapping Speeds depending on Materials

Alloy steels 合金鋼 ~10 (m/min)

Stainless steels ステンレス鋼 ~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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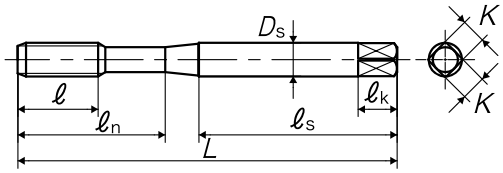

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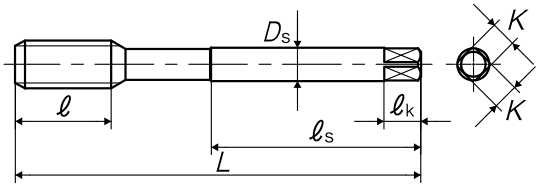

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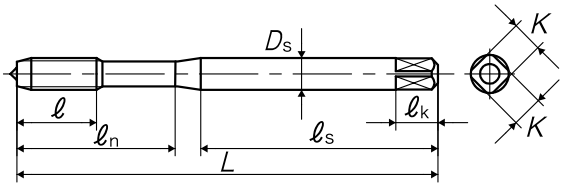


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2	SE3.0GAGEX	2.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2	SE4.0IAGEX	2.5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	SE5.0KAGEX	2.5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2	SE6.0MAGEX	2.5P	80	15	30	45	6	4.9	8	3	1
		SZ6.0MAGEX	2.5P	80	15	30	45	6	4.9	8	3	4
M8 × 1.25	ISO2	SE8.0NAGEX	2.5P	90	19	35	47	8	6.2	9	3	2
		SZ8.0NAGEX	2.5P	90	19	35	48	8	6.2	9	3	4
M10 × 1.5	ISO2	SE0100AGEX	2.5P	100	23	39	52	10	8	11	4	2
		SZ0100AGEX	2.5P	100	23	39	53	10	8	11	4	4
M12 × 1.75	ISO2	SH012PAGEX	2.5P	110	26	-	56	9	7	10	4	3
		SZ012PAGEX	2.5P	110	26	45	56	12	9	12	4	4

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP-VA

Spiral Fluted Taps for Stainless Steels

Specification

HSS | OX Oxide

■Applying the blanks of high toughness and high accuracy, SP-VA derives the maximum performance from high facility machining centers and high precision toolings, blind hole use.

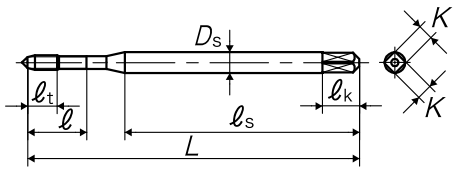
Recommended Tapping Speeds depending on Materials

Alloy steels 合金鋼 ~10 (m/min)

Stainless steels ステンレス鋼 ~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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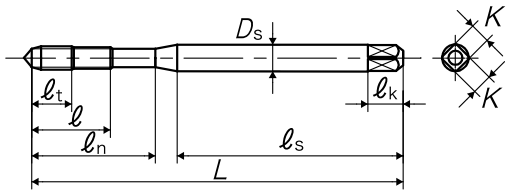

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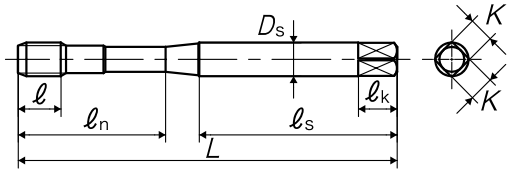

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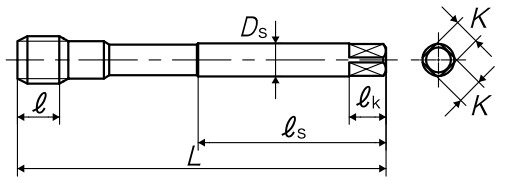

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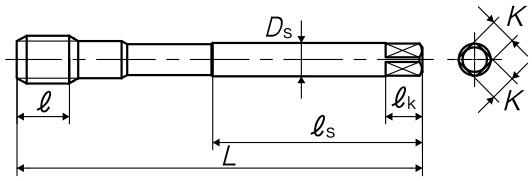

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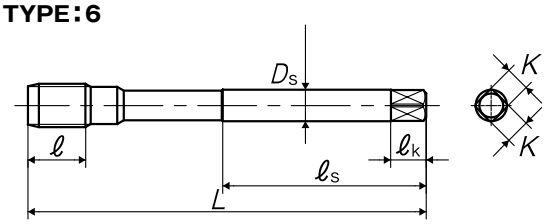


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M2 × 0.4	ISO2	SD2.0EAGEX	2.5P	45	4	8	-	32	2.8	2.1	5	2	1
M2.5 × 0.45	ISO2	SD2.5FAGEX	2.5P	50	4	8	15	33	2.8	2.1	5	2	2
M3 × 0.5	ISO2	SD3.0GAGEX	2.5P	56	5	9	18	34	3.5	2.7	6	2	2
	ISO3	SD3.0GMGEX	2.5P	56	5	9	18	34	3.5	2.7	6	2	2
M4 × 0.7	ISO2	SD4.0IAGEX	2.5P	63	7	13	21	38	4.5	3.4	6	3	2
	ISO3	SD4.0IMGEX	2.5P	63	7	13	21	38	4.5	3.4	6	3	2
M5 × 0.8	ISO2	SD5.0KAGEX	2.5P	70	9	14	25	39	6	4.9	8	3	2
	ISO3	SD5.0KMGEX	2.5P	70	9	14	25	39	6	4.9	8	3	2
M6 × 1	ISO2	SD6.0MAGEX	2.5P	80	11	15	30	45	6	4.9	8	3	2
	ISO3	SD6.0MMGEX	2.5P	80	11	15	30	45	6	4.9	8	3	2

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M8 × 1.25	IS02	SD8.0NAGEX	2.5P	90	-	12	35	47	8	6.2	9	3	3
		SG8.0NAGEX	2.5P	90	-	12	-	46	6	4.9	8	3	4
	IS03	SD8.0NMGEX	2.5P	90	-	12	35	47	8	6.2	9	3	3
M8 × 1	IS02	SM8.0MAGEX	2.5P	90	-	12	-	46	6	4.9	8	3	4
M10 × 1.5	IS02	SD0100AGEX	2.5P	100	-	13	39	52	10	8	11	3	3
		SG0100AGEX	2.5P	100	-	13	-	51	7	5.5	8	3	4
	IS03	SD0100MGEX	2.5P	100	-	13	39	52	10	8	11	3	3
M10 × 1.25	IS02	SM010NAGEX	2.5P	100	-	13	-	51	7	5.5	8	3	4
M10 × 1	IS02	SM010MAGEX	2.5P	90	-	13	-	46	7	5.5	8	3	4
M12 × 1.75	IS02	SG012PAGEX	2.5P	110	-	15	-	56	9	7	10	3	5
	IS03	SG012PMGEX	2.5P	110	-	15	-	56	9	7	10	3	5
M12 × 1.5	IS02	SM012OAGEX	2.5P	100	-	15	-	51	9	7	10	3	4
M12 × 1.25	IS02	SM012NAGEX	2.5P	100	-	15	-	51	9	7	10	3	4
M12 × 1	IS02	SM012MAGEX	2.5P	100	-	15	-	51	9	7	10	3	4
M14 × 2	IS02	SG014QAGEX	2.5P	110	-	18	-	56	11	9	12	3	5
M14 × 1.5	IS02	SM014OAGEX	2.5P	100	-	14	-	51	11	9	12	3	4
M14 × 1	IS02	SM014MAGEX	2.5P	100	-	14	-	51	11	9	12	3	4
M16 × 2	IS02	SG016QAGEX	2.5P	110	-	18	-	56	12	9	12	3	5
M16 × 1.5	IS02	SM016OAGEX	2.5P	100	-	14	-	51	12	9	12	3	4
M18 × 2.5	IS02	SG018RAGEX	2.5P	125	-	20	-	64	14	11	14	4	5
M18 × 1.5	IS02	SM018OAGEX	2.5P	110	-	14	-	56	14	11	14	4	4
M20 × 2.5	IS02	SG020RAGEX	2.5P	140	-	20	-	71	16	12	15	4	5
M20 × 1.5	IS02	SM020OAGEX	2.5P	125	-	14	-	64	16	12	15	4	4
M22 × 2.5	IS02	SG022RAGEX	2.5P	140	-	20	-	71	18	14.5	17	4	5
M22 × 1.5	IS02	SM022OAGEX	2.5P	125	-	14	-	64	18	14.5	17	4	4
M24 × 3	IS02	SG024SAGEX	2.5P	160	-	25	-	82	18	14.5	17	4	5
M24 × 1.5	IS02	SM024OAGEX	2.5P	140	-	18	-	71	18	14.5	17	4	4
M27 × 3	IS02	SG027SAGEX	2.5P	160	-	25	-	82	20	16	19	4	5
M30 × 3.5	IS02	SG030TAGEX	2.5P	180	-	30	-	92	22	18	21	4	5
Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads													
NO.4-40UNC	2B	SDUN4HXGEX	2.5P	56	5	9	18	34	3.5	2.7	6	2	2
NO.6-32UNC	2B	SDUN6JXGEX	2.5P	56	7	11	19	32	4	3	6	3	2
NO.8-32UNC	2B	SDUN8JXGEX	2.5P	63	7	13	21	38	4.5	3.4	6	3	2
NO.10-24UNC	2B	SDUNAMXGEX	2.5P	70	9	14	24	39	6	4.9	8	3	2
NO.10-32UNF	2B	SDUNAJXGEX	2.5P	70	9	14	24	39	6	4.9	8	3	2
1/4-20UNC	2B	SDU04NXGEX	2.5P	80	11	15	30	42	7	5.5	8	3	2
1/4-28UNF	2B	SDU04KXGEX	2.5P	80	11	15	30	42	7	5.5	8	3	2
5/16-18UNC	2B	SDU05OXGEX	2.5P	90	-	12	35	47	8	6.2	9	3	3
5/16-24UNF	2B	SMU05MXGEX	2.5P	90	-	12	-	46	6	4.9	8	3	4
3/8-16UNC	2B	SDU06PXGEX	2.5P	100	-	13	39	54	9	7	10	3	3
3/8-24UNF	2B	SMU06MXGEX	2.5P	100	-	13	-	51	7	5.5	8	3	4
7/16-14UNC	2B	SGU07QXGEX	2.5P	100	-	13	-	51	8	6.2	9	3	5
7/16-20UNF	2B	SMU07NXGEX	2.5P	100	-	13	-	51	8	6.2	9	3	4
1/2-13UNC	2B	SGU08RXGEX	2.5P	110	-	15	-	56	9	7	10	3	5
1/2-20UNF	2B	SMU08NXGEX	2.5P	100	-	15	-	51	9	7	10	3	4
9/16-12UNC	2B	SGU09SXGEX	2.5P	110	-	18	-	56	11	9	12	3	5
9/16-18UNF	2B	SMU090XGEX	2.5P	100	-	14	-	51	11	9	12	3	4
5/8-11UNC	2B	SGU10UXGEX	2.5P	110	-	18	-	56	12	9	12	3	5

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
5/8-18UNF	2B	SMU10OXGEX	2.5P	100	-	14	-	51	12	9	12	3	4
3/4-10UNC	2B	SGU12VXGEX	2.5P	125	-	20	-	64	14	11	14	4	5
3/4-16UNF	2B	SMU12PXGEX	2.5P	110	-	14	-	56	14	11	14	4	4
7/8-9UNC	2B	SGU14WXGEX	2.5P	140	-	20	-	71	18	14.5	17	4	5
7/8-14UNF	2B	SMU14QXGEX	2.5P	125	-	20	-	64	18	14.5	17	4	4
1-8UNC	2B	SGU16XXGEX	2.5P	160	-	25	-	82	18	14.5	17	4	5
1-12UNF	2B	SMU16SXGEX	2.5P	140	-	18	-	71	18	14.5	17	4	4
Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads													
G1/8-28	-	SVG0020GEX	2.5P	90	-	12	-	46	7	5.5	8	3	6
G1/4-19	-	SVG0040GEX	2.5P	100	-	14	-	51	11	9	12	3	6
G3/8-19	-	SVG0060GEX	2.5P	100	-	14	-	51	12	9	12	3	6
G1/2-14	-	SVG0080GEX	2.5P	125	-	18	-	64	16	12	15	4	6
G3/4-14	-	SVG0120GEX	2.5P	140	-	20	-	71	20	16	19	4	6

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SP-VA

Spiral Fluted Taps for Stainless Steels, Coated

Specification

HSS Coating

■Applying the blanks of high toughness and high accuracy, SP-VA, coated, derives the maximum performance from high facility machining centers and high precision toolings, blind hole use.

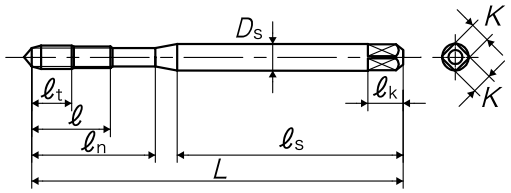
Recommended Tapping Speeds depending on Materials

Alloy steels 合金鋼 ~15 (m/min)

Stainless steels ステンレス鋼 ~10 (m/min)

For icon explanation, refer to P.24

TYPE：1



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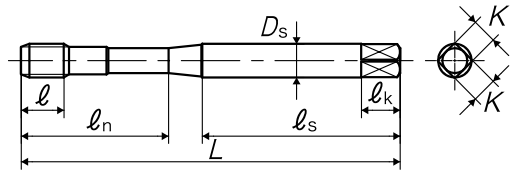

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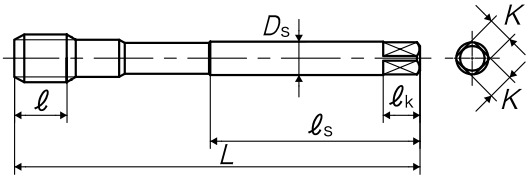


Segment：1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M3 × 0.5	ISO2	SD3.0GAGET	2.5P	56	5	9	18	34	3.5	2.7	6	2	1
M4 × 0.7	ISO2	SD4.0IAGET	2.5P	63	7	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	SD5.0KAGET	2.5P	70	9	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2	SD6.0MAGET	2.5P	80	11	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2	SD8.0NAGET	2.5P	90	-	12	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2	SD010OAGET	2.5P	100	-	13	39	52	10	8	11	3	2
M12 × 1.75	ISO2	SG012PAGET	2.5P	110	-	15	-	56	9	7	10	3	3
M14 × 2	ISO2	SG014QAGET	2.5P	110	-	18	-	56	11	9	12	3	3
M16 × 2	ISO2	SG016QAGET	2.5P	110	-	18	-	56	12	9	12	3	3
M20 × 2.5	ISO2	SG020RAGET	2.5P	140	-	18	-	71	16	12	15	4	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SP-BLF

Spiral Fluted Taps, Deep Hole Use

Specification

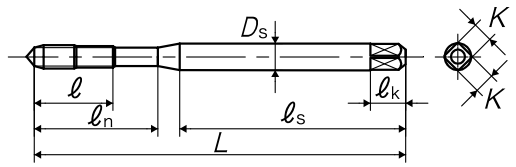
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼
5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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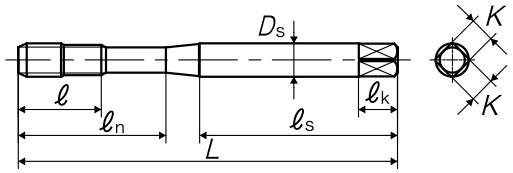

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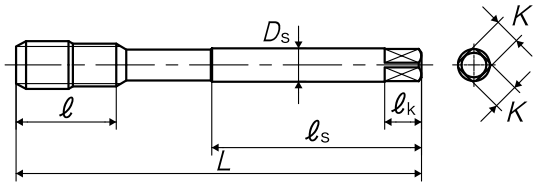

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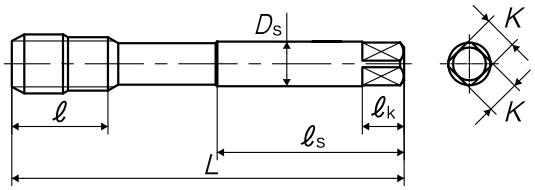


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2	SD3.0GANEBJ	2.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2	SD4.0IANEBAJ	1.5P	63	13	21	38	4.5	3.4	6	3	1
		SD4.0IANEBJ	2.5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	SD5.0KANEBAJ	1.5P	70	14	25	39	6	4.9	8	3	1
		SD5.0KANEBJ	2.5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2	SD6.0MANEBAJ	1.5P	80	15	30	45	6	4.9	8	3	1
		SD6.0MANEBJ	2.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2	SD8.0NANEBAJ	1.5P	90	19	35	47	8	6.2	9	3	2
		SD8.0NANEBJ	2.5P	90	19	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2	SD0100ANEBAJ	1.5P	100	23	39	52	10	8	11	3	2
		SD0100ANEBJ	2.5P	100	23	39	52	10	8	11	3	2
M12 × 1.75	ISO2	SG012PANEBAJ	1.5P	110	26	-	56	9	7	10	3	3
		SG012PANEBJ	2.5P	110	26	-	56	9	7	10	3	3
M14 × 2	ISO2	SG014QANEBJ	2.5P	110	26	-	56	11	9	12	3	3
M16 × 2	ISO2	SG016QANEBJ	2.5P	110	26	-	56	12	9	12	3	3
M18 × 2.5	ISO2	SG018RANEBJ	2.5P	125	33	-	64	14	11	14	4	3
M20 × 2.5	ISO2	SG020RANEBJ	2.5P	140	33	-	71	16	12	15	4	3
M22 × 2.5	ISO2	SG022RANEBJ	2.5P	140	33	-	71	18	14.5	17	4	3
M24 × 3	ISO2	SG024SANEBJ	2.5P	160	37	-	82	18	14.5	17	4	4
M30 × 3.5	ISO2	SG030TANEBJ	2.5P	180	44	-	92	22	18	21	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SP-BLF OX

Spiral Fluted Taps, Deep Hole Use, Oxided

Specification

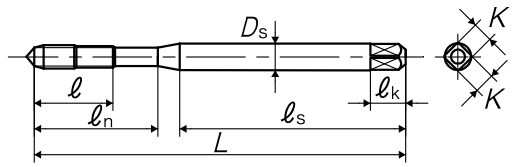
HSS | OX Oxide

Recommended Tapping Speeds depending on Materials

Medium carbon steels 中炭素鋼 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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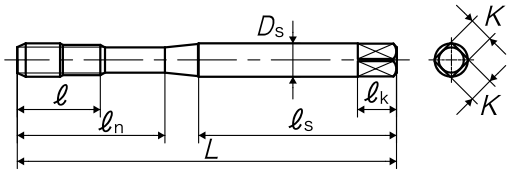

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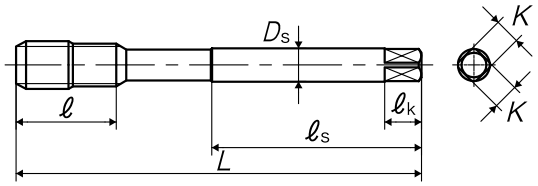

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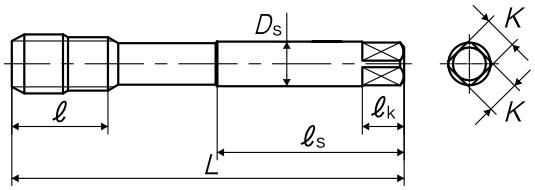


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2	SD3.0GANEXJ	2.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2	SD4.0IANEXJ	2.5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	SD5.0KANEXJ	2.5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2	SD6.0MANEXJ	2.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2	SD8.0NANEXJ	2.5P	90	19	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2	SD010OANEXJ	2.5P	100	23	39	52	10	8	11	3	2
M12 × 1.75	ISO2	SG012PANEXJ	2.5P	110	26	-	56	9	7	10	3	3
M14 × 2	ISO2	SG014QANEXJ	2.5P	110	26	-	56	11	9	12	3	3
M16 × 2	ISO2	SG016QANEXJ	2.5P	110	26	-	56	12	9	12	3	3
M18 × 2.5	ISO2	SG018RANEXJ	2.5P	125	33	-	64	14	11	14	4	3
M20 × 2.5	ISO2	SG020RANEXJ	2.5P	140	33	-	71	16	12	15	4	3
M22 × 2.5	ISO2	SG022RANEXJ	2.5P	140	33	-	71	18	14.5	17	4	3
M24 × 3	ISO2	SG024SANEXJ	2.5P	160	37	-	82	18	14.5	17	4	4
M27 × 3	ISO2	SG027SANEXJ	2.5P	160	37	-	82	20	16	19	4	4
M30 × 3.5	ISO2	SG030TANEXJ	2.5P	180	44	-	92	22	18	21	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SU2-SP

Spiral Fluted Taps for Tough Stainless Steels

Specification

HSS | OX Oxide | Synchro nized

■SU2-SP is the spiral fluted tap most suitable for tough stainless steels, blind hole use.

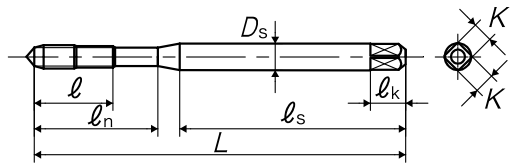
Recommended Tapping Speeds depending on Materials

Alloy steels 合金鋼 5~20 (m/min)

Stainless steels ステンレス鋼 5~15 (m/min)

For icon explanation, refer to P.24

TYPE:1



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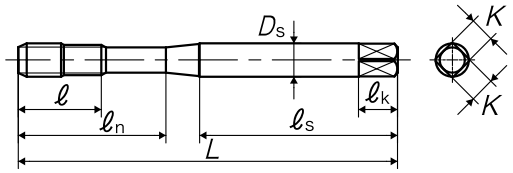

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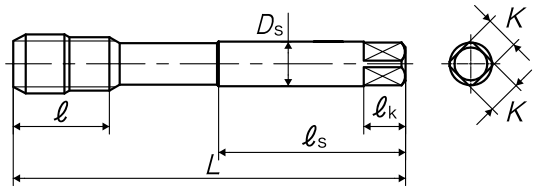

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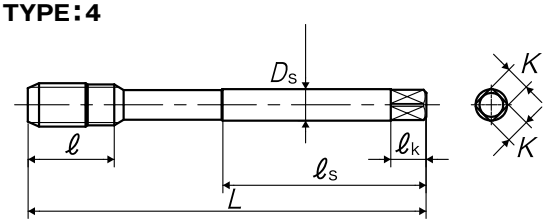


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2	SD3.0GAGEXJ	2.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2	SD4.0IAGEXJ	2.5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	SD5.0KAGEXJ	2.5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2	SD6.0MAGEXJ	2.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2	SD8.0NAGEXJ	2.5P	90	19	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2	SD0100AGEXJ	2.5P	100	23	39	52	10	8	11	3	2
M12 × 1.75	ISO2	SG012PAGEXJ	2.5P	110	26	-	56	9	7	10	4	3
M14 × 2	ISO2	SG014QAGEXJ	2.5P	110	26	-	56	11	9	12	4	3
M16 × 2	ISO2	SG016QAGEXJ	2.5P	110	26	-	56	12	9	12	4	3
M18 × 2.5	ISO2	SG018RAGEXJ	2.5P	125	33	-	64	14	11	14	4	3
M20 × 2.5	ISO2	SG020RAGEXJ	2.5P	140	33	-	71	16	12	15	4	3
M22 × 2.5	ISO2	SG022RAGEXJ	2.5P	140	33	-	71	18	14.5	17	4	3
M24 × 3	ISO2	SG024SAGEXJ	2.5P	160	37	-	82	18	14.5	17	4	3
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads												
G1/8-28	-	SVG0020GEXJ	2.5P	90	19	-	46	7	5.5	8	3	4
G1/4-19	-	SVG0040GEXJ	2.5P	100	21	-	51	11	9	12	4	4
G3/8-19	-	SVG0060GEXJ	2.5P	100	21	-	51	12	9	12	4	4
G1/2-14	-	SVG0080GEXJ	2.5P	125	24	-	64	16	12	15	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
G3/4-14	-	SVG0120GEXJ	2.5P	140	27	-	71	20	16	19	4	4

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

ZEN-B

Spiral Fluted Taps for Nickel Base Alloys

Specification

HSS-P | OX Oxide | Synchro nized

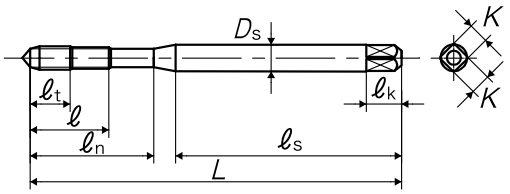
■ZEN-B is the spiral fluted tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and much higher heat resistance than steels.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼	Nickel base alloys ニッケル基合金
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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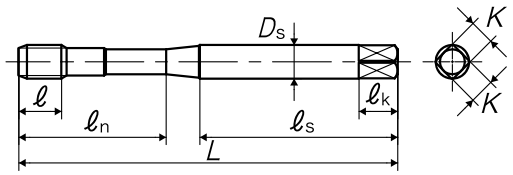

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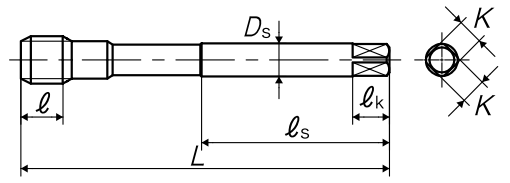

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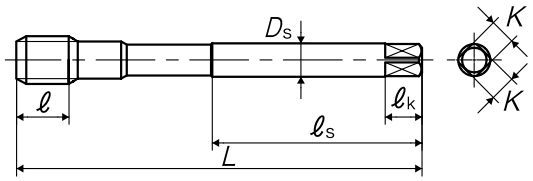


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M3 × 0.5	ISO2X	SD3.0GBJPX	3P	56	5	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	SD4.0IBJPX	3P	63	7	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	SD5.0KBJPX	3P	70	9	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	SD6.0MBJPX	3P	80	11	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	SD8.0NBJPX	3P	90	-	12	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2X	SD010OBJPX	3P	100	-	13	39	52	10	8	11	3	2
M10 × 1.25	ISO2X	SM010NBJPX	3P	100	-	13	-	51	7	5.5	8	3	3
M12 × 1.75	ISO2X	SG012PBJPX	3P	110	-	15	-	56	9	7	10	3	4
M12 × 1.5	ISO2X	SM012OBJPX	3P	100	-	15	-	51	9	7	10	3	3
M12 × 1.25	ISO2X	SM012NBJPX	3P	100	-	15	-	51	9	7	10	3	3
M14 × 2	ISO2X	SG014QBJPX	3P	110	-	18	-	56	11	9	12	3	4
M14 × 1.5	ISO2X	SM014OBJPX	3P	100	-	14	-	51	11	9	12	3	3
M16 × 2	ISO2X	SG016QBJPX	3P	110	-	18	-	56	12	9	12	3	4
M16 × 1.5	ISO2X	SM016OBJPX	3P	100	-	14	-	51	12	9	12	3	3
M18 × 2.5	ISO2X	SG018RBJPX	3P	125	-	20	-	64	14	11	14	4	4
M20 × 2.5	ISO2X	SG020RBJPX	3P	140	-	20	-	71	16	12	15	4	4
M22 × 2.5	ISO2X	SG022RBJPX	3P	140	-	20	-	71	18	14.5	17	4	4
M24 × 3	ISO2X	SG024SBJPX	3P	160	-	25	-	82	18	14.5	17	4	4

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads													
NO.4-40UNC	2BX	SDUN4HYJPX	3P	56	5	9	18	34	3.5	2.7	6	3	1
NO.6-32UNC	2BX	SDUN6JYJPX	3P	56	7	11	19	32	4	3	6	3	1
NO.8-32UNC	2BX	SDUN8JYJPX	3P	63	7	13	21	38	4.5	3.4	6	3	1
NO.10-24UNC	2BX	SDUNAMYJPX	3P	70	9	14	24	39	6	4.9	8	3	1
NO.10-32UNF	2BX	SDUNAJYJPX	3P	70	9	14	24	39	6	4.9	8	3	1
1/4-20UNC	2BX	SDU04NYJPX	3P	80	11	15	30	42	7	5.5	8	3	1
1/4-28UNF	2BX	SDU04KYJPX	3P	80	11	15	30	42	7	5.5	8	3	1
5/16-18UNC	2BX	SDU05OYJPX	3P	90	-	12	35	47	8	6.2	9	3	2
5/16-24UNF	2BX	SMU05MYJPX	3P	90	-	12	-	46	6	4.9	8	3	3
3/8-16UNC	2BX	SDU06PYJPX	3P	100	-	13	39	54	9	7	10	3	2
3/8-24UNF	2BX	SMU06MYJPX	3P	100	-	13	-	51	7	5.5	8	3	3
7/16-20UNF	2BX	SMU07NYJPX	3P	100	-	13	-	51	8	6.2	9	3	3
1/2-13UNC	2BX	SGU08RYJPX	3P	110	-	15	-	56	9	7	10	3	4
1/2-20UNF	2BX	SMU08NYJPX	3P	100	-	15	-	51	9	7	10	3	3
9/16-18UNF	2BX	SMU090YJPX	3P	100	-	14	-	51	11	9	12	3	3

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

ZET-B

Spiral Fluted Taps for Titanium Alloys

Specification

HSS-P | NI Nitride | Synchro nized

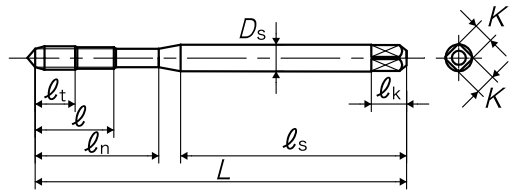
■ZET-B is the spiral fluted tap for titanium alloys which, including titanium as the main composition, are tough, light and heat resistant.

Recommended Tapping Speeds depending on Materials

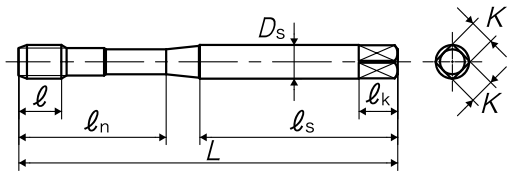
Titanium alloys チタン合金 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



TYPE:2



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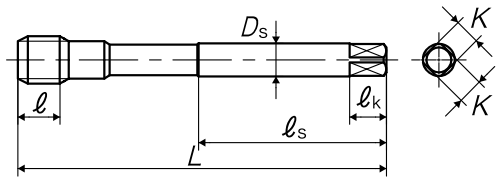

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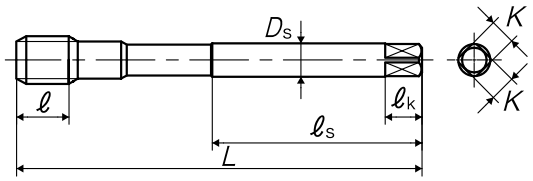


Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M4 × 0.7	ISO2X	SD4.0IBIPN	3P	63	7	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	SD5.0KBIPN	3P	70	9	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	SD6.0MBIPN	3P	80	11	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	SD8.0NBIPN	3P	90	-	12	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2X	SD010OBIPN	3P	100	-	13	39	52	10	8	11	3	2
M10 × 1.25	ISO2X	SM010NBIPN	3P	100	-	13	-	51	7	5.5	8	3	3
M12 × 1.75	ISO2X	SG012PBIPN	3P	110	-	15	-	56	9	7	10	3	4
M12 × 1.5	ISO2X	SM012OBIPN	3P	100	-	15	-	51	9	7	10	3	3
M12 × 1.25	ISO2X	SM012NBIPN	3P	100	-	15	-	51	9	7	10	3	3
M14 × 2	ISO2X	SG014QBIPN	3P	110	-	18	-	56	11	9	12	3	4
M14 × 1.5	ISO2X	SM014OBIPN	3P	100	-	14	-	51	11	9	12	3	3
M16 × 2	ISO2X	SG016QBIPN	3P	110	-	18	-	56	12	9	12	4	4
M16 × 1.5	ISO2X	SM016OBIPN	3P	100	-	14	-	51	12	9	12	4	3
M18 × 2.5	ISO2X	SG018RBIPN	3P	125	-	20	-	64	14	11	14	4	4
M20 × 2.5	ISO2X	SG020RBIPN	3P	140	-	20	-	71	16	12	15	4	4
M22 × 2.5	ISO2X	SG022RBIPN	3P	140	-	20	-	71	18	14.5	17	4	4
M24 × 3	ISO2X	SG024SBIPN	3P	160	-	25	-	82	18	14.5	17	4	4

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads													
NO.4-40UNC	2BX	SDUN4HYIPN	3P	56	5	9	18	34	3.5	2.7	6	3	1
NO.6-32UNC	2BX	SDUN6JYIPN	3P	56	7	11	19	32	4	3	6	3	1
NO.6-40UNF	2BX	SDUN6HYIPN	3P	56	7	11	19	32	4	3	6	3	1
NO.8-32UNC	2BX	SDUN8JYIPN	3P	63	7	13	21	38	4.5	3.4	6	3	1
NO.10-24UNC	2BX	SDUNAMYIPN	3P	70	9	14	24	39	6	4.9	8	3	1
NO.10-32UNF	2BX	SDUNAJYIPN	3P	70	9	14	24	39	6	4.9	8	3	1
1/4-20UNC	2BX	SDU04NYIPN	3P	80	11	15	30	42	7	5.5	8	3	1
1/4-28UNF	2BX	SDU04KYIPN	3P	80	11	15	30	42	7	5.5	8	3	1
5/16-18UNC	2BX	SDU05OYIPN	3P	90	-	12	35	47	8	6.2	9	3	2
5/16-24UNF	2BX	SMU05MYIPN	3P	90	-	12	-	46	6	4.9	8	3	3
3/8-16UNC	2BX	SDU06PYIPN	3P	100	-	13	39	54	9	7	10	3	2
3/8-24UNF	2BX	SMU06MYIPN	3P	100	-	13	-	51	7	5.5	8	3	3
1/2-13UNC	2BX	SGU08RYIPN	3P	110	-	15	-	56	9	7	10	3	4
1/2-20UNF	2BX	SMU08NYIPN	3P	100	-	15	-	51	9	7	10	3	3
5/8-11UNC	2BX	SGU10UYIPN	3P	110	-	18	-	56	12	9	12	4	4
3/4-10UNC	2BX	SGU12VYIPN	3P	125	-	20	-	64	14	11	14	4	4

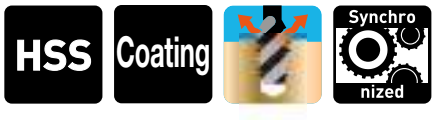
MEMO

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

F-SP

Spiral Fluted Taps for High Speed Tapping

Specification

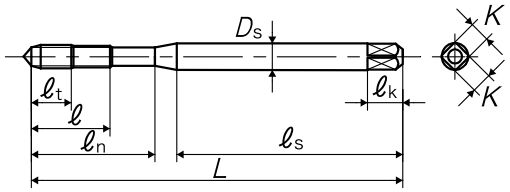


■Spiral Fluted Tap applicable for such high speed tapping as 15m/min to 25m/min. Under low tapping speed, poor chip shape and poor chip ejection may occur and cause tapping troubles.

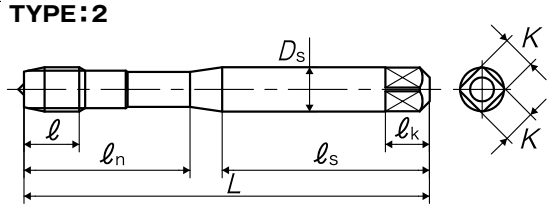
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

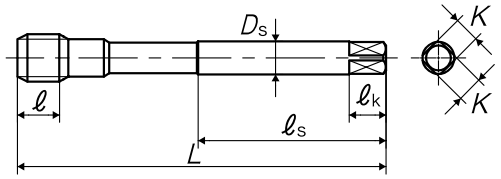
TYPE:1



TYPE:2



TYPE:3



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M3X0.5	ISO2X	SD3.0GBNEV	2.5P	56	5	9	18	34	3.5	2.7	6	3	1
M4X0.7	ISO2X	SD4.0IBNEV	2.5P	63	7	13	21	38	4.5	3.4	6	3	1
M5X0.8	ISO2X	SD5.0KBNEV	2.5P	70	9	14	25	39	6	4.9	8	3	1
M6X1	ISO2X	SY6.0MBNEV	2.5P	80	11	15	30	45	6	4.9	8	3	2
M8X1.25	ISO2X	SY8.0NBNEV	2.5P	90	-	12	35	48	8	6.2	9	3	2
M10X1.5	ISO2X	SY010OBNEV	2.5P	100	-	13	39	53	10	8	11	3	2
M10X1.25	ISO2X	SY010NBNEV	2.5P	100	-	13	39	53	10	8	11	3	2
M12X1.75	ISO2X	SY012PBNEV	2.5P	110	-	15	45	56	12	9	12	3	2
M12X1.75	ISO2X	SG012PBNEV	2.5P	110	-	15	-	56	9	7	10	3	3
M12X1.5	ISO2X	SY012OBNEV	2.5P	110	-	15	45	56	12	9	12	3	2
M12X1.5	ISO2X	SM012OBNEV	2.5P	100	-	15	-	51	9	7	10	3	3
M12X1.25	ISO2X	SY012NBNEV	2.5P	110	-	15	45	56	12	9	12	3	2
M12X1.25	ISO2X	SM012NBNEV	2.5P	100	-	15	-	51	9	7	10	3	3

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

HFIHS

For Ultra Fast Tapping, Vertical Use. Spiral Fluted Taps for Carbon Steels

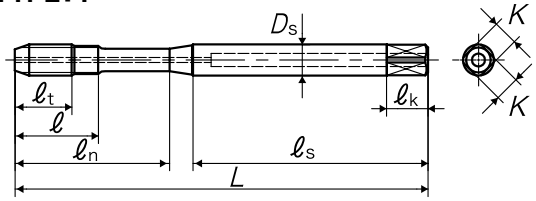
Specification

■Applicable for ultra high speed tapping. Having center through hole geometry to correspond with inner coolant supply system, HFIHS is suitable for carbon steels and alloy steels, blind hole use. Vertical tapping use.

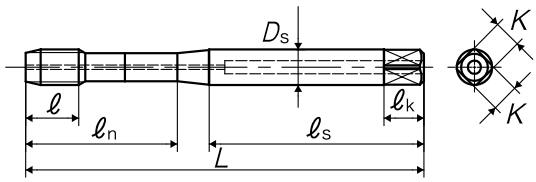
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE:1



TYPE:2



Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M6 × 1	ISO2X	SD6.0MBEDTZ	2.5P	80	11	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	SD8.0NBEDTZ	2.5P	90	-	12	35	48	8	6.2	9	3	2
M10 × 1.5	ISO2X	SD0100BEDTZ	2.5P	100	-	13	39	53	10	8	11	3	2
M10 × 1.25	ISO2X	SY010NBEDTZ	2.5P	100	-	13	39	53	10	8	11	3	2
M12 × 1.75	ISO2X	SY012PBEDTZ	2.5P	110	-	15	44	57	12	9	12	3	2
M12 × 1.5	ISO2X	SY0120BEDTZ	2.5P	110	-	15	44	57	12	9	12	3	2
M12 × 1.25	ISO2X	SY012NBEDTZ	2.5P	110	-	15	44	57	12	9	12	3	2

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HFISP

For Ultra Fast Tapping, Horizontal Use. Low Spiral Fluted Taps for Carbon Steels

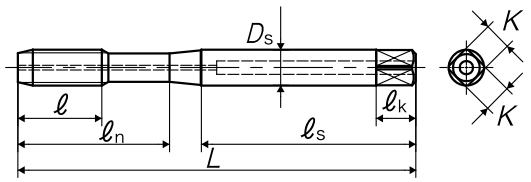
Specification

■Applicable for ultra high speed tapping. Having center through hole geometry to correspond with inner coolant supply system, HFISP is suitable for carbon steels and alloy steels, blind hole use. Effective in horizontal tapping use.

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE : 1



Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2X	SD6.0MBEDTHZ	2.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	SD8.0NBEDTHZ	2.5P	90	19	35	48	8	6.2	9	3	1
M10 × 1.5	ISO2X	SD0100BEDTHZ	2.5P	100	23	39	53	10	8	11	3	1
M10 × 1.25	ISO2X	SY010NBEDTHZ	2.5P	100	23	39	53	10	8	11	3	1
M12 × 1.75	ISO2X	SY012PBEDTHZ	2.5P	110	26	44	57	12	9	12	3	1
M12 × 1.5	ISO2X	SY012OBEDTHZ	2.5P	110	26	44	57	12	9	12	3	1
M12 × 1.25	ISO2X	SY012NBEDTHZ	2.5P	110	26	44	57	12	9	12	3	1

Overall length	Chamfer + full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

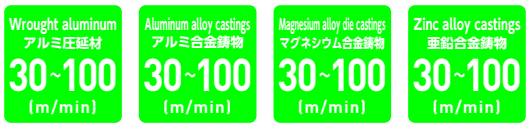
HFAHS

For Ultra Fast Tapping, Vertical Use, Spiral Fluted Taps for Aluminum

Specification

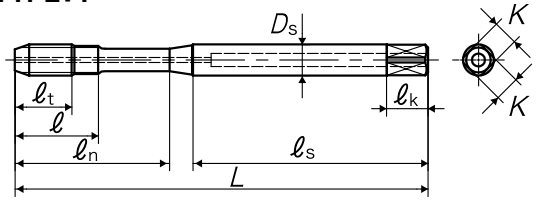
■Applicable for ultra high speed tapping. Having center through hole geometry to correspond with inner coolant supply system, HFAHS is suitable for aluminum castings, blind hole use. Vertical tapping use.

Recommended Tapping Speeds depending on Materials

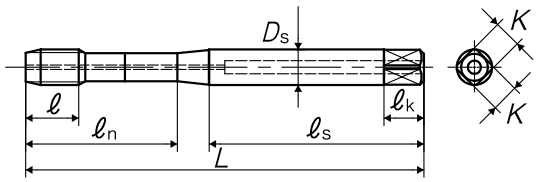


For icon explanation, refer to P.24

TYPE:1



TYPE:2



Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓt (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads													
M6 × 1	ISO2X	SD6.0MBLDTZ	2.5P	80	11	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	SD8.0NBLDTZ	2.5P	90	-	12	35	48	8	6.2	9	3	2
M10 × 1.5	ISO2X	SD0100BLDTZ	2.5P	100	-	13	39	53	10	8	11	3	2
M10 × 1.25	ISO2X	SY010NBLDTZ	2.5P	100	-	13	39	53	10	8	11	3	2
M12 × 1.75	ISO2X	SY012PBLDTZ	2.5P	110	-	15	44	57	12	9	12	3	2
M12 × 1.5	ISO2X	SY012OBLDTZ	2.5P	110	-	15	44	57	12	9	12	3	2
M12 × 1.25	ISO2X	SY012NBLDTZ	2.5P	110	-	15	44	57	12	9	12	3	2

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

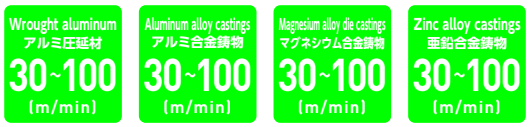
HFASP

For Ultra Fast Tapping, Horizontal Use, Low Spiral Fluted Taps for Aluminum

Specification

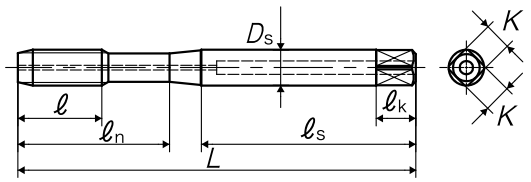
■Applicable for ultra high speed tapping. Having center through geometry to correspond with inner coolant supply system, HFASP is suitable for aluminum castings, blind hole use. Effective in horizontal tapping use.

Recommended Tapping Speeds depending on Materials



For icon explanation, refer to P.24

TYPE : 1



Segment : 1D

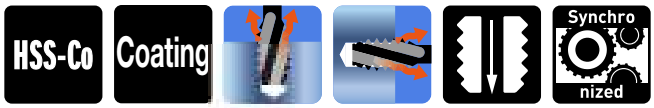
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2X	SD6.0MBLDTHZ	2.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	SD8.0NBLDTHZ	2.5P	90	19	35	48	8	6.2	9	3	1
M10 × 1.5	ISO2X	SD0100BLDTHZ	2.5P	100	23	39	53	10	8	11	3	1
M10 × 1.25	ISO2X	SY010NBLDTHZ	2.5P	100	23	39	53	10	8	11	3	1
M12 × 1.75	ISO2X	SY012PBLDTHZ	2.5P	110	26	44	57	12	9	12	3	1
M12 × 1.5	ISO2X	SY0120BLDTHZ	2.5P	110	26	44	57	12	9	12	3	1
M12 × 1.25	ISO2X	SY012NBLDTHZ	2.5P	110	26	44	57	12	9	12	3	1

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HDISP

For Dry Tapping, Blind Hole Use, Spiral Fluted Taps for Steels

Specification

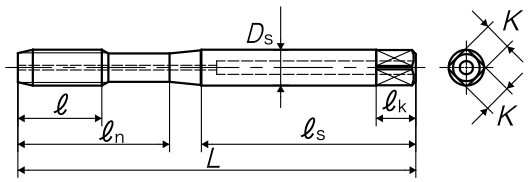


■Applicable for the tapping under mist or dry condition. Having center through hole geometry to correspond with inner coolant supply system, HDISP is suitable for carbon steels and alloy steels, blind hole use. For both horizontal and vertical tapping use.

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE : 1



Segment : 1D

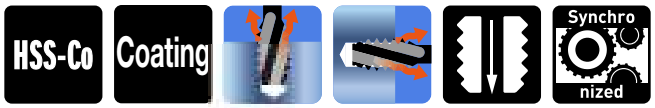
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2X	SD6.0MBEDTLZ	2.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	SD8.0NBEDTLZ	2.5P	90	19	35	48	8	6.2	9	3	1
M10 × 1.5	ISO2X	SD0100BEDTLZ	2.5P	100	23	39	53	10	8	11	3	1
M10 × 1.25	ISO2X	SY010NBEDTLZ	2.5P	100	23	39	53	10	8	11	3	1
M12 × 1.75	ISO2X	SY012PBEDTLZ	2.5P	110	26	44	57	12	9	12	3	1
M12 × 1.5	ISO2X	SY0120BEDTLZ	2.5P	110	26	44	57	12	9	12	3	1
M12 × 1.25	ISO2X	SY012NBEDTLZ	2.5P	110	26	44	57	12	9	12	3	1

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HDASP

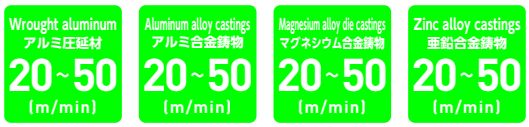
For Dry Tapping, Blind Hole Use, Spiral Fluted Taps for Aluminum

Specification



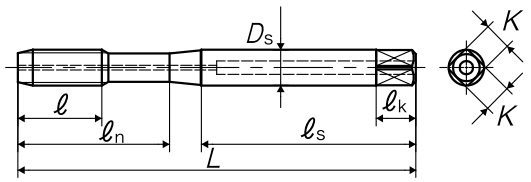
■Applicable for the tapping under mist or dry condition.
Having center through hole geometry to correspond with inner coolant supply system, HDASP is suitable for aluminum castings, blind hole use. For both horizontal and vertical tapping use.

Recommended Tapping Speeds depending on Materials



For icon explanation, refer to P.24

TYPE : 1



Segment : 1D

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2X	SD6.0MBLDTLZ	2.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	SD8.0NBLDTLZ	2.5P	90	19	35	48	8	6.2	9	3	1
M10 × 1.5	ISO2X	SD0100BLDTLZ	2.5P	100	23	39	53	10	8	11	3	1
M10 × 1.25	ISO2X	SY010NBLDTLZ	2.5P	100	23	39	53	10	8	11	3	1
M12 × 1.75	ISO2X	SY012PBLDTLZ	2.5P	110	26	44	57	12	9	12	3	1
M12 × 1.5	ISO2X	SY0120BLDTLZ	2.5P	110	26	44	57	12	9	12	3	1
M12 × 1.25	ISO2X	SY012NBLDTLZ	2.5P	110	26	44	57	12	9	12	3	1

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

SL+VA

Spiral Fluted Taps for Stainless Steels, Through Hole Use（with LH spiral flutes）

Specification

HSS | OX Oxide

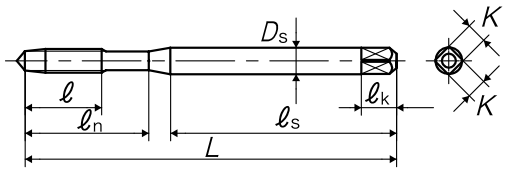
■Applying the blanks of high toughness and high accuracy, SL+VA derives the maximum performance from high facility machining centers and high precision toolings. Spiral fluted taps for stainless steels, through hole use (with LH spiral flutes).

Recommended Tapping Speeds depending on Materials

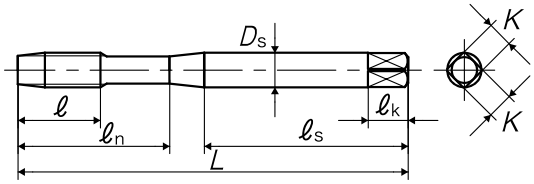
Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
10~15 (m/min)	10~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

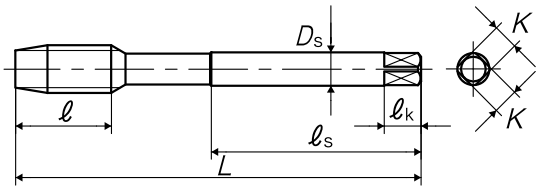
TYPE：1



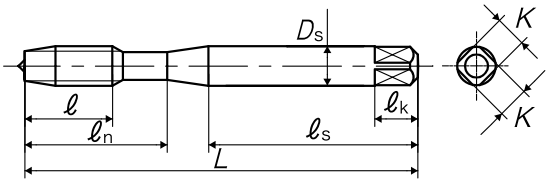
TYPE：2



TYPE：3



TYPE：4



Segment：1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2X	LE3.0GBGEX	5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	LE4.0IBGEX	5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	LE5.0KBGEX	5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	LE6.0MBGEX	5P	80	15	30	45	6	4.9	8	3	1
		LZ6.0MBGEX	5P	80	15	30	45	6	4.9	8	3	4
M8 × 1.25	ISO2X	LE8.0NBGEX	5P	90	19	35	47	8	6.2	9	3	2
		LZ8.0NBGEX	5P	90	19	35	48	8	6.2	9	3	4
M10 × 1.5	ISO2X	LE010OBGEX	5P	100	23	39	52	10	8	11	3	2
		LZ010OBGEX	5P	100	23	39	53	10	8	11	3	4
M12 × 1.75	ISO2X	LH012PBGEX	5P	110	26	-	56	9	7	10	3	3
		LZ012PBGEX	5P	110	26	45	56	12	9	12	3	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

MHSL

Spiral Fluted Taps for Carbon Steels of middle hardness, Through Hole Use (with LH spiral flutes)

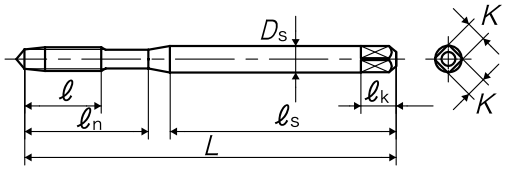
Specification

■Suitable for through hole tapping of middle hardness steels such as forgings of high carbon steels and thermal refined steels. (20HRC～30HRC)

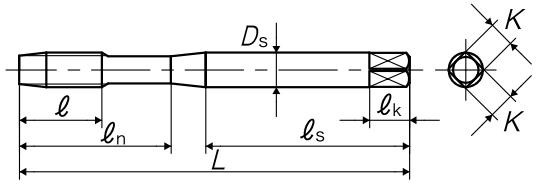
Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

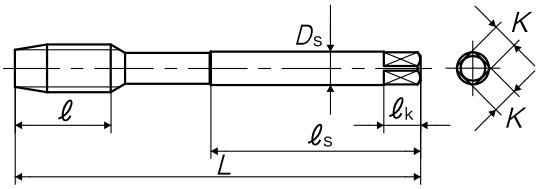
TYPE：1



TYPE：2



TYPE：3



Segment：1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2X	LD6.0MBFCL5	5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	LD8.0NBFCL5	5P	90	19	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2X	LD010OBFCL5	5P	100	23	39	52	10	8	11	3	2
M10 × 1.25	ISO2X	LM010NBFCL5	5P	100	23	-	51	7	5.5	8	3	3
M12 × 1.5	ISO2X	LM012OBFCL5	5P	100	21	-	51	9	7	10	4	3
M12 × 1.25	ISO2X	LM012NBFCL7	7P	100	21	-	51	9	7	10	4	3
M14 × 1.5	ISO2X	LM014OBFCL7	7P	100	21	-	51	11	9	12	4	3
M16 × 1.5	ISO2X	LM016OBFCL7	7P	100	21	-	51	12	9	12	4	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AU+SL

Spiral Fluted Taps, Coated, Through Hole Use (with LH spiral flutes)

Specification

HSS Coating

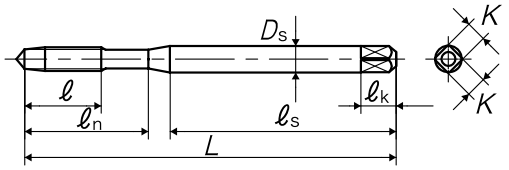
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~20 (m/min)	10~20 (m/min)	10~20 (m/min)	10~20 (m/min)

Stainless steels ステンレス鋼	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~10 (m/min)	20~30 (m/min)	20~30 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2X	LE3.0GBNEV	5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	LE4.0IBNEV	5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	LE5.0KBNEV	5P	70	14	25	39	6	4.9	8	3	1

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AUXSL

X Series Spiral Fluted Taps, Coated, Through Hole Use (with LH spiral flutes)

Specification

HSS | Coating | Synchronized

■Applying the blanks of high toughness and high accuracy, AUXSL, spiral fluted tap, coated, for through hole use (with LH spiral flutes), derives the maximum performance from high facility machining centers and high precision toolings. Optimum coating for the tapping condition.

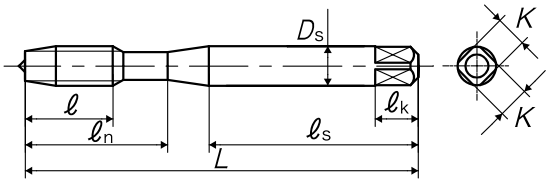
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼
10~25 (m/min)	10~25 (m/min)	10~25 (m/min)	10~25 (m/min)

Stainless steels ステンレス鋼	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
10~15 (m/min)	20~30 (m/min)	20~30 (m/min)

For icon explanation, refer to P.24

TYPE:1



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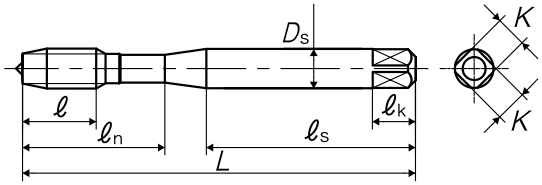


Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2X	LX6.0MBNEV	5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	LX8.0NBNEV	5P	90	19	35	48	8	6.2	9	3	1
M8 × 1	ISO2X	LX8.0MBNEV	5P	90	15	35	48	8	6.2	9	3	2
M10 × 1.5	ISO2X	LX010OBNEV	5P	100	23	39	53	10	8	11	3	1
M10 × 1.25	ISO2X	LX010NBNEV	5P	100	19	39	53	10	8	11	3	2
M10 × 1	ISO2X	LX010MBNEV	5P	100	15	39	53	10	8	11	3	2
M12 × 1.75	ISO2X	LX012PBNEV	5P	110	26	45	56	12	9	12	3	1
M12 × 1.5	ISO2X	LX012OBNEV	5P	110	23	45	56	12	9	12	3	2
M12 × 1.25	ISO2X	LX012NBNEV	5P	110	19	45	56	12	9	12	3	2

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

ZET-P

Spiral Fluted Taps for Titanium Alloys, Through Hole Use (with LH spiral flutes)

Specification

HSS-P | NI Nitride | Synchro nized

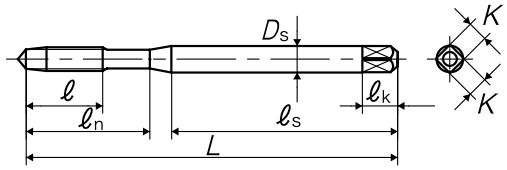
■ZET-P, spiral fluted tap, through hole use (with LH spiral flutes), is suitable for titanium alloys which, having titanium as the main composition, are tough, light, and heat resistant.

Recommended Tapping Speeds depending on Materials

Titanium alloys チタン合金 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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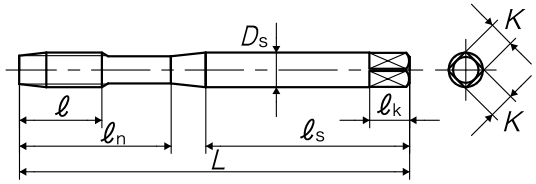

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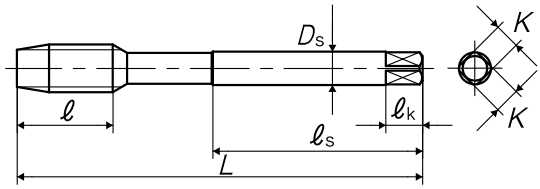


Segment : 1T

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2X	LD3.0GBIPN	5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	LD4.0IBIPN	5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	LD5.0KBIPN	5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	LD6.0MBIPN	5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	LD8.0NBIPN	5P	90	19	35	47	8	6.2	9	3	2
M8 × 1	ISO2X	LM8.0MBIPN	5P	90	19	-	46	6	4.9	8	3	3
M10 × 1.5	ISO2X	LD010OBIPN	5P	100	23	39	52	10	8	11	3	2
M10 × 1.25	ISO2X	LM010NBIPN	5P	100	23	-	51	7	5.5	8	3	3
M12 × 1.75	ISO2X	LG012PBIPN	5P	110	26	-	56	9	7	10	3	3
M12 × 1.5	ISO2X	LM012OBIPN	5P	100	21	-	51	9	7	10	3	3
M12 × 1.25	ISO2X	LM012NBIPN	5P	100	21	-	51	9	7	10	3	3
M14 × 2	ISO2X	LG014QBIPN	5P	110	26	-	56	11	9	12	3	3
M14 × 1.5	ISO2X	LM014OBIPN	5P	100	21	-	51	11	9	12	3	3
M16 × 2	ISO2X	LG016QBIPN	5P	110	26	-	56	12	9	12	3	3
M16 × 1.5	ISO2X	LM016OBIPN	5P	100	21	-	51	12	9	12	3	3
M27 × 3	ISO2X	LG027SBIPN	5P	160	37	-	82	20	16	19	4	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

F-SL

Spiral Fluted Taps for High Speed Tapping, Through Hole Use (with LH spiral flutes)

Specification

HSS Coating Synchronized

■F-SL, spiral fluted tap, through hole use (with LH spiral flutes) is applicable for such high speed tapping as 15m/min to 25m/min. Under low tapping speed, chip shape and chip ejection may become poor and cause tapping troubles.

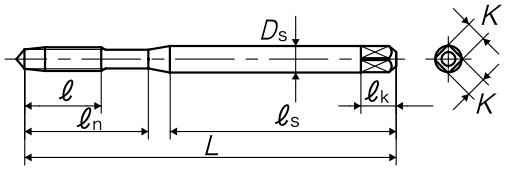
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 15~25 (m/min)

Medium carbon steels 中炭素鋼 15~25 (m/min)

For icon explanation, refer to P.24

TYPE:1



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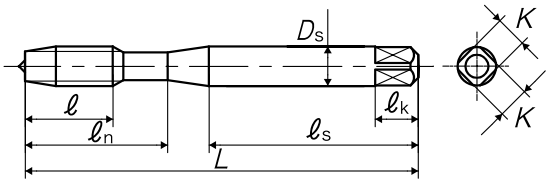

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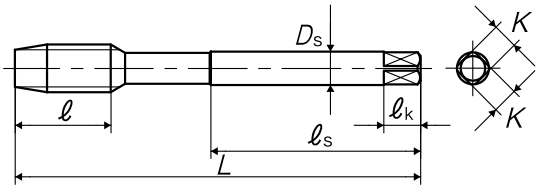


Segment : 1S

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2X	LD3.0GBNEV	5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	LD4.0IBNEV	5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	LD5.0KBNEV	5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	LY6.0MBNEV	5P	80	15	30	45	6	4.9	8	3	2
M8 × 1.25	ISO2X	LY8.0NBNEV	5P	90	19	35	48	8	6.2	9	3	2
M10 × 1.5	ISO2X	LY010OBNEV	5P	100	23	39	53	10	8	11	3	2
M10 × 1.25	ISO2X	LY010NBNEV	5P	100	19	39	53	10	8	11	3	2
M12 × 1.75	ISO2X	LY012PBNEV	5P	110	26	45	56	12	9	12	3	2
M12 × 1.75	ISO2X	LG012PBNEV	5P	110	26	-	56	9	7	10	3	3
M12 × 1.5	ISO2X	LY012OBNEV	5P	110	23	45	56	12	9	12	3	2
M12 × 1.5	ISO2X	LM012OBNEV	5P	100	21	-	51	9	7	10	3	3
M12 × 1.25	ISO2X	LY012NBNEV	5P	110	19	45	56	12	9	12	3	2
M12 × 1.25	ISO2X	LM012NBNEV	5P	100	21	-	51	9	7	10	3	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

HDISL

Spiral Fluted Taps for Steels, for Dry Tapping and for Ultra High Speed Tapping, Through Hole Use (with LH spiral flutes)

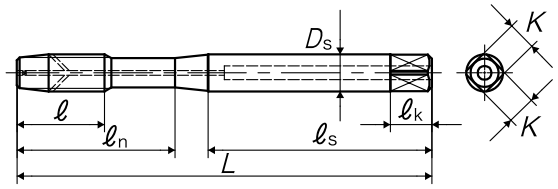
Specification

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

■Tapping under ultra high speed and under mist and dry, is possible with HDISL. Having radial coolant hole, HDISL is suitable for carbon steels and alloy steels. For through hole use (with LH spiral flutes) for both vertical and horizontal use.

TYPE : 1



Segment : 1T

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2X	LD6.0MBEDTLZ	5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	LD8.0NBEDTLZ	5P	90	19	35	48	8	6.2	9	3	1
M10 × 1.5	ISO2X	LD0100BEDTLZ	5P	100	23	39	53	10	8	11	3	1
M10 × 1.25	ISO2X	LM010NBEDTLZ	5P	100	23	39	53	10	8	11	3	1
M12 × 1.75	ISO2X	LG012PBEDTLZ	5P	110	26	44	57	12	9	12	3	1
M12 × 1.5	ISO2X	LM0120BEDTLZ	5P	110	26	44	57	12	9	12	3	1
M12 × 1.25	ISO2X	LM012NBEDTLZ	5P	110	26	44	57	12	9	12	3	1

PO

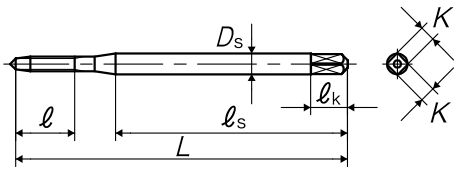
Spiral Pointed Taps

Specification

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

TYPE:1



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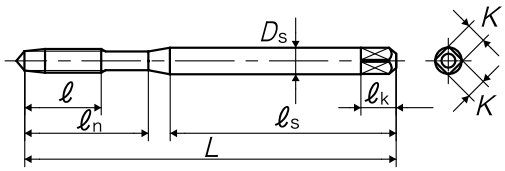
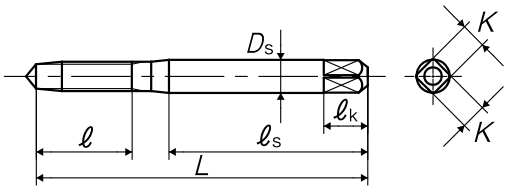


TYPE:3



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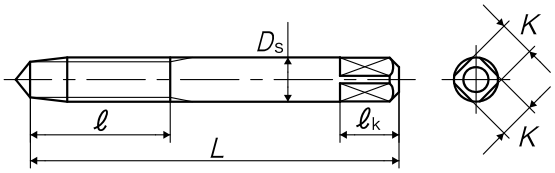

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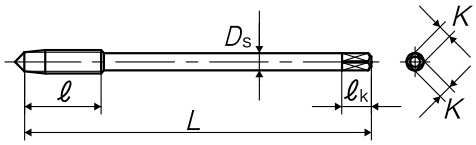

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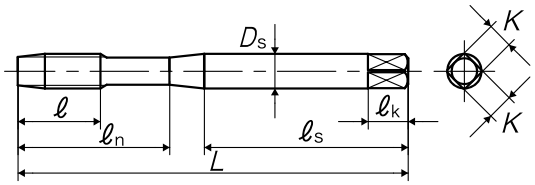
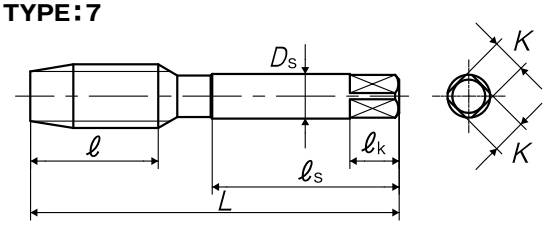


TYPE:7



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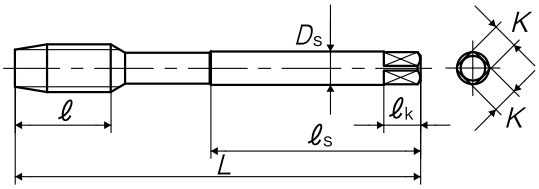


Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Segment : 1F

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M2 × 0.4	ISO2	PD2.0EANEB	5P	45	8	-	32	2.8	2.1	5	3	1
M2.2 × 0.45	ISO2	PD2.2FANEB	5P	45	9	-	32	2.8	2.1	5	3	1
M2.3 × 0.4	ISO2	PD2.3EANEB	5P	45	9	-	32	2.8	2.1	5	3	1
M2.5 × 0.45	ISO2	PD2.5FANEB	5P	50	8	15	33	2.8	2.1	5	3	2
M2.6 × 0.45	ISO2	PD2.6FANEB	5P	50	8	15	33	2.8	2.1	5	3	2
M3 × 0.5	ISO2	PD3.0GANEB	5P	56	9	18	34	3.5	2.7	6	3	2
		PQ3.0GANEB	5P	40	11	-	24	3.5	2.7	6	3	3
	ISO3	PD3.0GMNEB	5P	56	9	18	34	3.5	2.7	6	3	2
M3.5 × 0.6	ISO2	PD3.5HANEB	5P	56	11	20	32	4	3	6	3	2
M4 × 0.7	ISO2	PD4.0IANEB	5P	63	13	21	38	4.5	3.4	6	3	2
		PG4.0IANEB	5P	63	13	-	-	2.8	2.1	5	3	5
		PQ4.0IANEB	5P	45	13	-	27	4.5	3.4	6	3	3
	ISO3	PD4.0IMNEB	5P	63	13	21	38	4.5	3.4	6	3	2
M4 × 0.5	ISO2	PM4.0GANEB	5P	63	9	-	-	2.8	2.1	5	3	5
M5 × 0.8	ISO2	PD5.0KANEB	5P	70	14	25	39	6	4.9	8	3	2
		PG5.0KANEB	5P	70	14	-	-	3.5	2.7	6	3	5
		PQ5.0KANEB	5P	50	16	-	24	6	4.9	8	3	3
	ISO3	PD5.0KMNEB	5P	70	14	25	39	6	4.9	8	3	2
M5 × 0.5	ISO2	PM5.0GANEB	5P	70	11	-	-	3.5	2.7	6	3	5
M6 × 1	ISO2	PD6.0MANEB	5P	80	15	30	45	6	4.9	8	3	2
		PG6.0MANEB	5P	80	15	-	-	4.5	3.4	6	3	5
		PQ6.0MANEB	5P	50	19	-	-	6	4.9	8	3	4
	ISO3	PD6.0MMNEB	5P	80	15	30	45	6	4.9	8	3	2
M6 × 0.75	ISO2	PM6.0JANEB	5P	80	13	-	-	4.5	3.4	6	3	5
M6 × 0.5	ISO2	PM6.0GANEB	5P	80	13	-	-	4.5	3.4	6	3	5
M7 × 1	ISO2	PD7.0MANEB	5P	80	15	30	45	7	5.5	8	3	6
M8 × 1.25	ISO2	PD8.0NANEB	5P	90	19	35	47	8	6.2	9	3	6
		PG8.0NANEB	5P	90	19	-	46	6	4.9	8	3	8
		PQ8.0NANEB	5P	56	19	-	29	6	4.9	8	3	7
	ISO3	PD8.0NMNEB	5P	90	19	35	47	8	6.2	9	3	6
M8 × 1	ISO2	PM8.0MANEB	5P	90	19	-	46	6	4.9	8	3	8
M8 × 0.75	ISO2	PM8.0JANEB	5P	80	19	-	41	6	4.9	8	3	8
M10 × 1.5	ISO2	PD010OANEB	5P	100	23	39	52	10	8	11	3	6
		PG010OANEB	5P	100	23	-	51	7	5.5	8	3	8
		PQ010OANEB	5P	70	23	-	36	7	5.5	8	3	7
	ISO3	PD010OMNEB	5P	100	23	39	52	10	8	11	3	6
M10 × 1.25	ISO2	PM010NANEB	5P	100	23	-	51	7	5.5	8	3	8
M10 × 1	ISO2	PM010MANEB	5P	90	19	-	46	7	5.5	8	3	8
M10 × 0.75	ISO2	PM010JANEB	5P	90	19	-	46	7	5.5	8	3	8
M12 × 1.75	ISO2	PG012PANEB	5P	110	26	-	56	9	7	10	3	8
		PQ012PANEB	5P	75	26	-	38	9	7	10	3	7
	ISO3	PG012PMNEB	5P	110	26	-	56	9	7	10	3	8
M12 × 1.5	ISO2	PM012OANEB	5P	100	21	-	51	9	7	10	3	8
M12 × 1.25	ISO2	PM012NANEB	5P	100	21	-	51	9	7	10	3	8
M12 × 1	ISO2	PM012MANEB	5P	100	21	-	51	9	7	10	3	8
M14 × 2	ISO2	PG014QANEB	5P	110	26	-	56	11	9	12	3	8
	ISO3	PG014QMNEB	5P	110	26	-	56	11	9	12	3	8
M14 × 1.5	ISO2	PM014OANEB	5P	100	21	-	51	11	9	12	3	8

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M14 × 1.25	ISO2	PM014NANEB	5P	100	21	-	51	11	9	12	3	8
M14 × 1	ISO2	PM014MANEB	5P	100	21	-	51	11	9	12	3	8
M16 × 2	ISO2	PG016QANEB	5P	110	26	-	56	12	9	12	3	8
	ISO3	PG016QMNEB	5P	110	26	-	56	12	9	12	3	8
M16 × 1.5	ISO2	PM016OANEB	5P	100	21	-	51	12	9	12	3	8
M16 × 1	ISO2	PM016MANEB	5P	100	21	-	51	12	9	12	3	8
M18 × 2.5	ISO2	PG018RANEB	5P	125	33	-	64	14	11	14	3	8
M18 × 2	ISO2	PM018QANEB	5P	125	33	-	64	14	11	14	3	8
M18 × 1.5	ISO2	PM018OANEB	5P	110	24	-	56	14	11	14	3	8
M18 × 1	ISO2	PM018MANEB	5P	110	24	-	56	14	11	14	3	8
M20 × 2.5	ISO2	PG020RANEB	5P	140	33	-	71	16	12	15	3	8
		PQ020RANEB	5P	95	33	-	48	16	12	15	3	7
M20 × 2	ISO2	PM020QANEB	5P	140	33	-	71	16	12	15	3	8
M20 × 1.5	ISO2	PM020OANEB	5P	125	24	-	64	16	12	15	3	8
M20 × 1	ISO2	PM020MANEB	5P	125	24	-	64	16	12	15	3	8
M22 × 2.5	ISO2	PG022RANEB	5P	140	33	-	71	18	14.5	17	3	8
M22 × 1.5	ISO2	PM022OANEB	5P	125	24	-	64	18	14.5	17	3	8
M22 × 1	ISO2	PM022MANEB	5P	125	24	-	64	18	14.5	17	3	8
M24 × 3	ISO2	PG024SANEB	5P	160	37	-	82	18	14.5	17	3	8
M24 × 2	ISO2	PM024QANEB	5P	140	27	-	71	18	14.5	17	3	8
M24 × 1.5	ISO2	PM024OANEB	5P	140	27	-	71	18	14.5	17	3	8
M24 × 1	ISO2	PM024MANEB	5P	140	27	-	71	18	14.5	17	3	8
M25 × 1.5	ISO2	PM025OANEB	5P	140	27	-	71	18	14.5	17	3	8
M26 × 1.5	ISO2	PM026OANEB	5P	140	27	-	71	18	14.5	17	4	8
M27 × 3	ISO2	PG027SANEB	5P	160	37	-	82	20	16	19	4	8
M27 × 2	ISO2	PM027QANEB	5P	140	27	-	71	20	16	19	4	8
M27 × 1.5	ISO2	PM027OANEB	5P	140	27	-	71	20	16	19	4	8
M28 × 1.5	ISO2	PM028OANEB	5P	140	27	-	71	20	16	19	4	8
M28 × 1	ISO2	PM028MANEB	5P	140	27	-	71	20	16	19	4	8
M30 × 3.5	ISO2	PG030TANEB	5P	180	44	-	92	22	18	21	4	8
M30 × 2	ISO2	PM030QANEB	5P	150	27	-	77	22	18	21	4	8
M30 × 1.5	ISO2	PM030OANEB	5P	150	27	-	77	22	18	21	4	8
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads												
NO.4-40UNC	2B	PDUN4HXNEB	5P	56	9	18	34	3.5	2.7	6	3	2
NO.6-32UNC	2B	PDUN6JXNEB	5P	56	11	19	32	4	3	6	3	2
NO.8-32UNC	2B	PDUN8JXNEB	5P	63	13	21	38	4.5	3.4	6	3	2
NO.10-32UNF	2B	PDUNAJXNEB	5P	70	14	24	39	6	4.9	8	3	2
1/4-20UNC	2B	PDU04NXNEB	5P	80	15	30	42	7	5.5	8	3	2
1/4-28UNF	2B	PDU04KXNEB	5P	80	15	30	42	7	5.5	8	3	2
5/16-18UNC	2B	PDU05OXNEB	5P	90	19	35	47	8	6.2	9	3	6
3/8-16UNC	2B	PDU06PXNEB	5P	100	23	39	52	9	7	10	3	6
3/8-24UNF	2B	PMU06MXNEB	5P	100	23	-	51	7	5.5	8	3	8
7/16-20UNF	2B	PMU07NXNEB	5P	100	23	-	51	8	6.2	9	3	8
1/2-13UNC	2B	PGU08RXNEB	5P	110	26	-	56	9	7	10	3	8
9/16-18UNF	2B	PMU09OXNEB	5P	100	21	-	51	11	9	12	3	8
5/8-11UNC	2B	PGU10UXNEB	5P	110	26	-	56	12	9	12	3	8
5/8-18UNF	2B	PMU100XNEB	5P	100	21	-	51	12	9	12	3	8
3/4-10UNC	2B	PGU12VXNEB	5P	125	33	-	64	14	11	14	3	8

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
3/4-16UNF	2B	PMU12PXNEB	5P	110	24	-	56	14	11	14	3	8
7/8-14UNF	2B	PMU14QXNEB	5P	125	24	-	64	18	14.5	17	3	8
1-8UNC	2B	PGU16XXNEB	5P	160	37	-	82	18	14.5	17	3	8
1-12UNF	2B	PMU16SXNEB	5P	140	27	-	71	18	14.5	17	3	8
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads												
G1/8-28	-	PVG0020NEB	5P	90	19	-	46	7	5.5	8	3	8
G1/4-19	-	PVG0040NEB	5P	100	21	-	51	11	9	12	3	8
G3/8-19	-	PVG0060NEB	5P	100	21	-	51	12	9	12	3	8
G1/2-14	-	PVG0080NEB	5P	125	24	-	64	16	12	15	3	8
G5/8-14	-	PVG0100NEB	5P	125	24	-	64	18	14.5	17	3	8
G3/4-14	-	PVG0120NEB	5P	140	27	-	71	20	16	19	4	8

MEMO

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO OX

Spiral Pointed Taps, Oxided

Specification

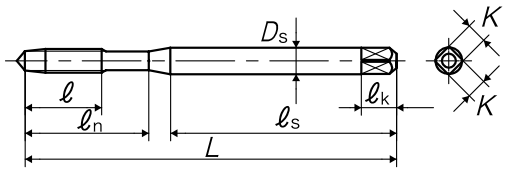
HSS | OX Oxide

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE : 1



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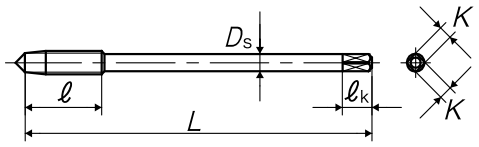

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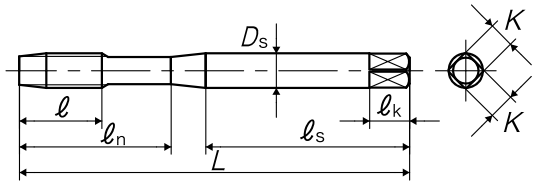

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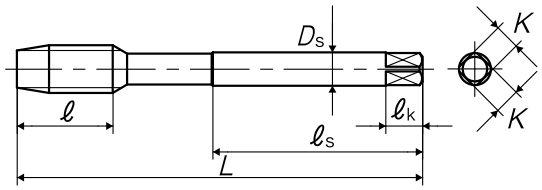


Segment : 1F

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2	PD3.0GANEX	5P	56	9	18	34	3.5	2.7	6	3	1
M3.5 × 0.6	ISO2	PD3.5HANEX	5P	56	11	20	32	4	3	6	3	1
M4 × 0.7	ISO2	PD4.0IANEX	5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	PD5.0KANEX	5P	70	14	25	39	6	4.9	8	3	1
		PG5.0KANEX	5P	70	14	-	-	3.5	2.7	6	3	2
M6 × 1	ISO2	PD6.0MANEX	5P	80	15	30	45	6	4.9	8	3	1
		PG6.0MANEX	5P	80	15	-	-	4.5	3.4	6	3	2
M8 × 1.25	ISO2	PD8.0NANEX	5P	90	19	35	47	8	6.2	9	3	3
		PG8.0NANEX	5P	90	19	-	46	6	4.9	8	3	4
M10 × 1.5	ISO2	PD010OANEX	5P	100	23	39	52	10	8	11	3	3
		PG010OANEX	5P	100	23	-	51	7	5.5	8	3	4
M12 × 1.75	ISO2	PG012PANEX	5P	110	26	-	56	9	7	10	3	4
M14 × 2	ISO2	PG014QANEX	5P	110	26	-	56	11	9	12	3	4
M16 × 2	ISO2	PG016QANEX	5P	110	26	-	56	12	9	12	3	4
M18 × 2.5	ISO2	PG018RANEX	5P	125	33	-	64	14	11	14	3	4
M20 × 2.5	ISO2	PG020RANEX	5P	140	33	-	71	16	12	15	3	4
M24 × 3	ISO2	PG024SANEX	5P	160	37	-	82	18	14.5	17	3	4
M30 × 3.5	ISO2	PG030TANEX	5P	180	44	-	92	22	18	21	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads												
G1/8-28	-	PVG0020NEX	5P	90	19	-	46	7	5.5	8	3	4
G1/4-19	-	PVG0040NEX	5P	100	21	-	51	11	9	12	3	4
G3/8-19	-	PVG0060NEX	5P	100	21	-	51	12	9	12	3	4
G1/2-14	-	PVG0080NEX	5P	125	24	-	64	16	12	15	3	4
G3/4-14	-	PVG0120NEX	5P	140	27	-	71	20	16	19	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO NX

Spiral Pointed Taps, Nitrided and Oxided

Specification

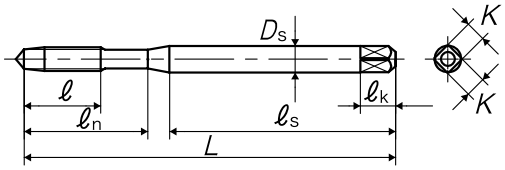
HSS | NX Nitride+Oxide

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼
5~10 (m/min)	5~10 (m/min)

For icon explanation, refer to P.24

TYPE : 1



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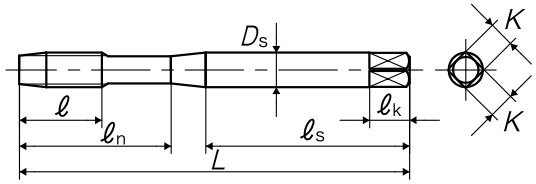

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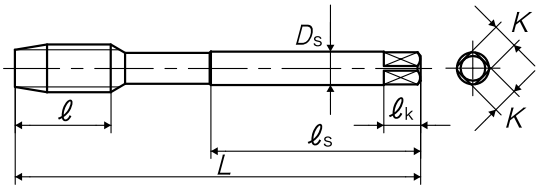


Segment : 1F

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2	PD3.0GANEW	5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2	PD4.0IANEW	5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2	PD5.0KANEW	5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2	PD6.0MANEW	5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2	PD8.0NANEW	5P	90	19	35	47	8	6.2	9	3	2
		PG8.0NANEW	5P	90	19	-	46	6	4.9	8	3	3
M10 × 1.5	ISO2	PD010OANEW	5P	100	23	39	52	10	8	11	3	2
		PG010OANEW	5P	100	23	-	51	7	5.5	8	3	3
M12 × 1.75	ISO2	PG012PANEW	5P	110	26	-	56	9	7	10	3	3
M24 × 3	ISO2	PG024SANEW	5P	160	37	-	82	18	14.5	17	3	3
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads												
G1/8-28	-	PVG0020NEW	5P	90	19	-	46	7	5.5	8	3	3
G3/4-14	-	PVG0120NEW	5P	140	27	-	71	20	16	19	4	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

EH-PO

Spiral Pointed Taps for Hard-to-Machine Materials

Specification

HSS-Co

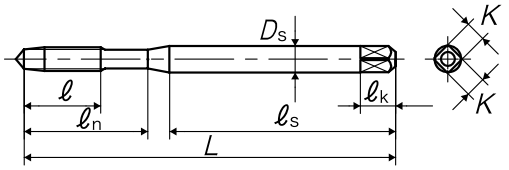
■Spiral pointed tap suitable for high hardness steels of 35～45HRC such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels. Through hole use.

Recommended Tapping Speeds depending on Materials

Thermal refined steels 調質鋼 ~5 (m/min)
35～45HRC

For icon explanation, refer to P.24

TYPE：1



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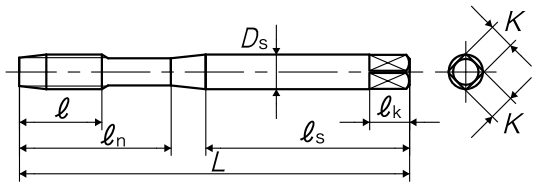

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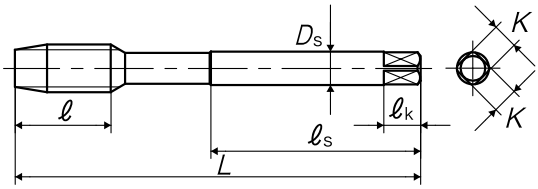


Segment：1F

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2X	PD3.0GBDCB	4.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	PD4.0IBDCB	4.5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	PD5.0KBDCB	4.5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	PD6.0MBDCB	4.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	PD8.0NBDCB	4.5P	90	19	35	47	8	6.2	9	3	2
M8 × 1	ISO2X	PM8.0MBDCB	4.5P	90	19	-	46	6	4.9	8	3	3
M10 × 1.5	ISO2X	PD010OBDCB	4.5P	100	23	39	52	10	8	11	3	2
M10 × 1.25	ISO2X	PM010NBDCB	4.5P	100	23	-	51	7	5.5	8	3	3
M10 × 1	ISO2X	PM010MBDCB	4.5P	90	19	-	46	7	5.5	8	3	3
M12 × 1.75	ISO2X	PG012PBDCB	4.5P	110	26	-	56	9	7	10	3	3
M12 × 1.5	ISO2X	PM012OBDCB	4.5P	100	21	-	51	9	7	10	3	3
M12 × 1.25	ISO2X	PM012NBDCB	4.5P	100	21	-	51	9	7	10	3	3
M14 × 2	ISO2X	PG014QBDCB	4.5P	110	26	-	56	11	9	12	3	3
M14 × 1.5	ISO2X	PM014OBDCB	4.5P	100	21	-	51	11	9	12	3	3
M16 × 2	ISO2X	PG016QBDCB	4.5P	110	26	-	56	12	9	12	3	3
M16 × 1.5	ISO2X	PM016OBDCB	4.5P	100	21	-	51	12	9	12	3	3
M18 × 2.5	ISO2X	PG018RBDCB	4.5P	125	33	-	64	14	11	14	3	3
M18 × 1.5	ISO2X	PM018OBDCB	4.5P	110	24	-	56	14	11	14	3	3
M20 × 2.5	ISO2X	PG020RBDCB	4.5P	140	33	-	71	16	12	15	3	3
M20 × 1.5	ISO2X	PM020OBDCB	4.5P	125	24	-	64	16	12	15	3	3
M22 × 2.5	ISO2X	PG022RBDCB	4.5P	140	33	-	71	18	14.5	17	3	3
M24 × 3	ISO2X	PG024SBDCB	4.5P	160	37	-	82	18	14.5	17	3	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO-VA

Spiral Pointed Taps for Stainless Steels

Specification

HSS | OX Oxide

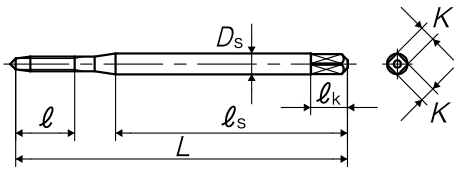
■Suitable for stainless steels tending to work harden and sticky, as well as chrome steels and molybdenum steels. Through hole use.

Recommended Tapping Speeds depending on Materials

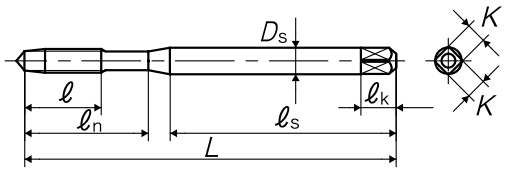
Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
~10 (m/min)	~10 (m/min)	~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



TYPE:2



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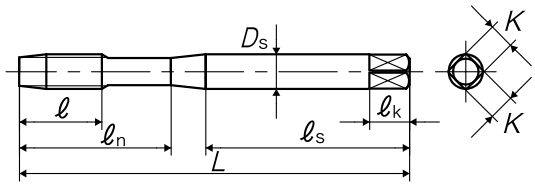
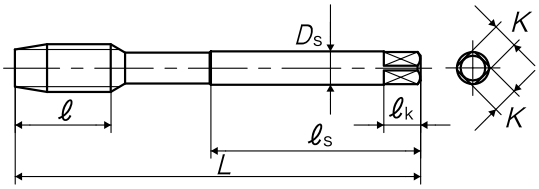


TYPE:4



Segment : 1F

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M2 × 0.4	ISO2X	PD2.0EBGEX	4.5P	45	8	-	32	2.8	2.1	5	2	1
M2.5 × 0.45	ISO2X	PD2.5FBGEX	4.5P	50	8	15	33	2.8	2.1	5	2	2
M3 × 0.5	ISO2X	PD3.0GBGEX	4.5P	56	9	18	34	3.5	2.7	6	3	2
M4 × 0.7	ISO2X	PD4.0IBGEX	4.5P	63	13	21	38	4.5	3.4	6	3	2
M5 × 0.8	ISO2X	PD5.0KBGEX	4.5P	70	14	25	39	6	4.9	8	3	2
M6 × 1	ISO2X	PD6.0MBGEX	4.5P	80	15	30	45	6	4.9	8	3	2
M8 × 1.25	ISO2X	PD8.0NBGEX	4.5P	90	19	35	47	8	6.2	9	3	3
		PG8.0NBGEX	4.5P	90	19	-	46	6	4.9	8	3	4
M8 × 1	ISO2X	PM8.0MBGEX	4.5P	90	19	-	46	6	4.9	8	3	4
	ISO3	PM8.0MMGEX	4.5P	90	19	-	46	6	4.9	8	3	4
M10 × 1.5	ISO2X	PD010OBGEX	4.5P	100	23	39	52	10	8	11	3	3
		PG010OBGEX	4.5P	100	23	-	51	7	5.5	8	3	4
M10 × 1.25	ISO2X	PM010NBGEX	4.5P	100	23	-	51	7	5.5	8	3	4
M10 × 1	ISO2X	PM010MBGEX	4.5P	90	19	-	46	7	5.5	8	3	4
M12 × 1.75	ISO2X	PG012PBGEX	4.5P	110	26	-	56	9	7	10	3	4
M12 × 1.5	ISO2X	PM012OBGEX	4.5P	100	21	-	51	9	7	10	3	4
M12 × 1.25	ISO2X	PM012NBGEX	4.5P	100	21	-	51	9	7	10	3	4
M12 × 1	ISO2X	PM012MBGEX	4.5P	100	21	-	51	9	7	10	3	4
M14 × 2	ISO2X	PG014QBGEX	4.5P	110	26	-	56	11	9	12	3	4

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M14 × 1.5	ISO2X	PM0140BGEX	4.5P	100	21	-	51	11	9	12	3	4
M16 × 2	ISO2X	PG016QBGEX	4.5P	110	26	-	56	12	9	12	3	4
M16 × 1.5	ISO2X	PM0160BGEX	4.5P	100	21	-	51	12	9	12	3	4
M18 × 2.5	ISO2X	PG018RBGEX	4.5P	125	33	-	64	14	11	14	3	4
M18 × 1.5	ISO2X	PM0180BGEX	4.5P	110	24	-	56	14	11	14	3	4
M20 × 2.5	ISO2X	PG020RBGEX	4.5P	140	33	-	71	16	12	15	3	4
M20 × 1.5	ISO2X	PM0200BGEX	4.5P	125	24	-	64	16	12	15	3	4
M22 × 2.5	ISO2X	PG022RBGEX	4.5P	140	33	-	71	18	14.5	17	3	4
M22 × 1.5	ISO2X	PM0220BGEX	4.5P	125	24	-	64	18	14.5	17	3	4
M24 × 3	ISO2X	PG024SBGEX	4.5P	160	37	-	82	18	14.5	17	3	4
M24 × 1.5	ISO2X	PM0240BGEX	4.5P	140	27	-	71	18	14.5	17	3	4
M27 × 3	ISO2X	PG027SBGEX	4.5P	160	37	-	82	20	16	19	4	4
M30 × 3.5	ISO2X	PG030TBGEX	4.5P	180	44	-	92	22	18	21	4	4
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads												
NO.4-40UNC	2BX	PDUN4HYGEX	4.5P	56	9	18	34	3.5	2.7	6	3	2
NO.6-32UNC	2BX	PDUN6JYGEX	4.5P	56	11	19	32	4	3	6	3	2
NO.8-32UNC	2BX	PDUN8JYGEX	4.5P	63	13	21	38	4.5	3.4	6	3	2
NO.10-24UNC	2BX	PDUNAMYGEX	4.5P	70	14	24	39	6	4.9	8	3	2
NO.10-32UNF	2BX	PDUNAJYGEX	4.5P	70	14	24	39	6	4.9	8	3	2
1/4-20UNC	2BX	PDU04NYGEX	4.5P	80	15	30	42	7	5.5	8	3	2
1/4-28UNF	2BX	PDU04KYGEX	4.5P	80	15	30	42	7	5.5	8	3	2
5/16-18UNC	2BX	PDU05OYGEX	4.5P	90	19	35	47	8	6.2	9	3	3
5/16-24UNF	2BX	PMU05MYGEX	4.5P	90	19	-	46	6	4.9	8	3	4
3/8-16UNC	2BX	PDU06PYGEX	4.5P	100	23	39	54	9	7	10	3	3
3/8-24UNF	2BX	PMU06MYGEX	4.5P	100	23	-	51	7	5.5	8	3	4
7/16-14UNC	2BX	PGU07QYGEX	4.5P	100	23	-	51	8	6.2	9	3	4
1/2-13UNC	2BX	PGU08RYGEX	4.5P	110	26	-	56	9	7	10	3	4
1/2-20UNF	2BX	PMU08NYGEX	4.5P	100	21	-	51	9	7	10	3	4
9/16-12UNC	2BX	PGU09SYGEX	4.5P	110	26	-	56	11	9	12	3	4
5/8-11UNC	2BX	PGU10UYGEX	4.5P	110	26	-	56	12	9	12	3	4
3/4-10UNC	2BX	PGU12VYGEX	4.5P	125	33	-	64	14	11	14	3	4
7/8-9UNC	2BX	PGU14WYGEX	4.5P	140	33	-	71	18	14.5	17	3	4
1-8UNC	2BX	PGU16XYGEX	4.5P	160	37	-	82	18	14.5	17	3	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

PO-VA

Spiral Pointed Taps for Stainless Steels, Coated

Specification

HSS Coating

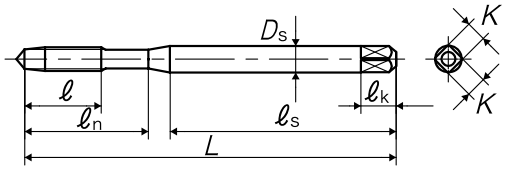
■Suitable for stainless steels tending to work harden and sticky, as well as chrome steels and molybdenum steels. Through hole use.

Recommended Tapping Speeds depending on Materials

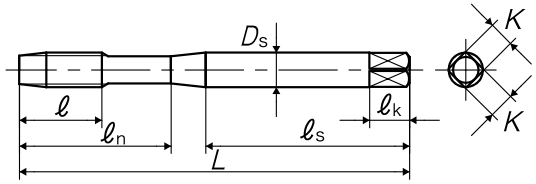
Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
~15 (m/min)	~15 (m/min)	~10 (m/min)

For icon explanation, refer to P.24

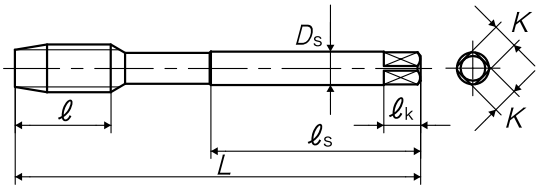
TYPE:1



TYPE:2



TYPE:3



Segment : 1F

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2X	PD3.0GBGET	4.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	PD4.0IBGET	4.5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	PD5.0KBGET	4.5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	PD6.0MBGET	4.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	PD8.0NBGET	4.5P	90	19	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2X	PD010OBGET	4.5P	100	23	39	52	10	8	11	3	2
M12 × 1.75	ISO2X	PG012PBGET	4.5P	110	26	-	56	9	7	10	3	3
M14 × 2	ISO2X	PG014QBGET	4.5P	110	26	-	56	11	9	12	3	3
M16 × 2	ISO2X	PG016QBGET	4.5P	110	26	-	56	12	9	12	3	3
M20 × 2.5	ISO2X	PG020RBGET	4.5P	140	33	-	71	16	12	15	3	3

ZEN-P

Spiral Pointed Taps for Nickel Base Alloys

Specification

HSS-P | NX Nitride+Oxide | Synchro nized

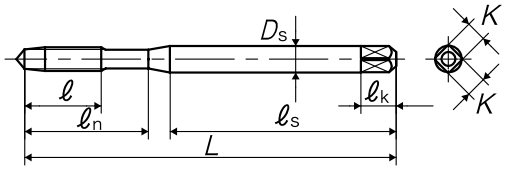
■ZEN-P is the spiral pointed tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and much higher heat resistance than steels.

Recommended Tapping Speeds depending on Materials

Nickel base alloys ニッケル基合金 5~10 (m/min)

For icon explanation, refer to P.24

TYPE:1



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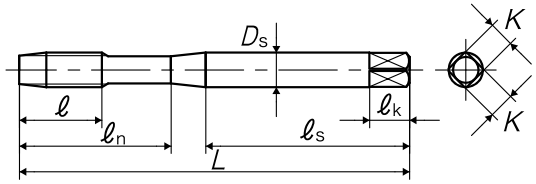
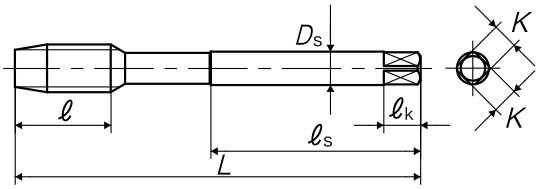


TYPE:3



Segment : 1F

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2X	PD3.0GBJPW	4.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	PD4.0IBJPW	4.5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	PD5.0KBJPW	4.5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	PD6.0MBJPW	4.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	PD8.0NBJPW	4.5P	90	19	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2X	PD010OBJPW	4.5P	100	23	39	52	10	8	11	3	2
M10 × 1.25	ISO2X	PM010NBJPW	4.5P	100	23	-	51	7	5.5	8	3	3
M12 × 1.75	ISO2X	PG012PBJPW	4.5P	110	26	-	56	9	7	10	3	3
M12 × 1.5	ISO2X	PM012OBJPW	4.5P	100	21	-	51	9	7	10	3	3
M12 × 1.25	ISO2X	PM012NBJPW	4.5P	100	21	-	51	9	7	10	3	3
M14 × 2	ISO2X	PG014QBJPW	4.5P	110	26	-	56	11	9	12	3	3
M14 × 1.5	ISO2X	PM014OBJPW	4.5P	100	21	-	51	11	9	12	3	3
M16 × 2	ISO2X	PG016QBJPW	4.5P	110	26	-	56	12	9	12	3	3
M16 × 1.5	ISO2X	PM016OBJPW	4.5P	100	21	-	51	12	9	12	3	3
M18 × 2.5	ISO2X	PG018RBJPW	4.5P	125	33	-	64	14	11	14	3	3
M20 × 2.5	ISO2X	PG020RBJPW	4.5P	140	33	-	71	16	12	15	3	3
M22 × 2.5	ISO2X	PG022RBJPW	4.5P	140	33	-	71	18	14.5	17	3	3
M24 × 3	ISO2X	PG024SBJPW	4.5P	160	37	-	82	18	14.5	17	3	3
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads												
NO.6-32UNC	2BX	PDUN6JYJPW	4.5P	56	11	19	32	4	3	6	3	1
NO.8-32UNC	2BX	PDUN8JYJPW	4.5P	63	13	21	38	4.5	3.4	6	3	1
NO.10-24UNC	2BX	PDUNAMYJPW	4.5P	70	14	24	39	6	4.9	8	3	1

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
NO.10-32UNF	2BX	PDUNAJYJPW	4.5P	70	14	24	39	6	4.9	8	3	1
1/4-20UNC	2BX	PDU04NYJPW	4.5P	80	15	30	42	7	5.5	8	3	1
1/4-28UNF	2BX	PDU04KYJPW	4.5P	80	15	30	42	7	5.5	8	3	1
5/16-18UNC	2BX	PDU05OYJPW	4.5P	90	19	35	47	8	6.2	9	3	2
5/16-24UNF	2BX	PMU05MYJPW	4.5P	90	19	-	46	6	4.9	8	3	3
3/8-16UNC	2BX	PDU06PYJPW	4.5P	100	23	39	54	9	7	10	3	2
3/8-24UNF	2BX	PMU06MYJPW	4.5P	100	23	-	51	7	5.5	8	3	3
1/2-13UNC	2BX	PGU08RYJPW	4.5P	110	26	-	56	9	7	10	3	3
1/2-20UNF	2BX	PMU08NYJPW	4.5P	100	21	-	51	9	7	10	3	3
5/8-11UNC	2BX	PGU10UYJPW	4.5P	110	26	-	56	12	9	12	3	3
5/8-18UNF	2BX	PMU10OYJPW	4.5P	100	21	-	51	12	9	12	3	3

HT

Hand Taps

Specification

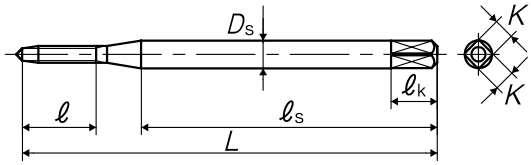
HSS

Recommended Tapping Speeds depending on Materials

Medium carbon steels
中炭素鋼
5~10
(m/min)

For icon explanation, refer to P.24

TYPE:1



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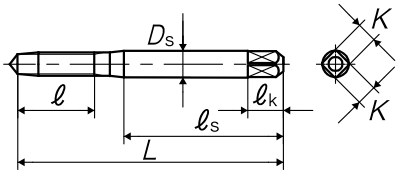
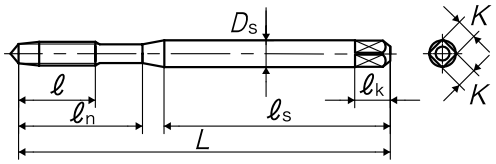
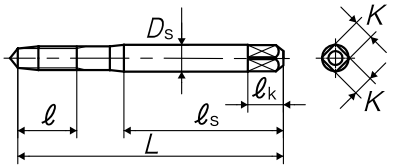


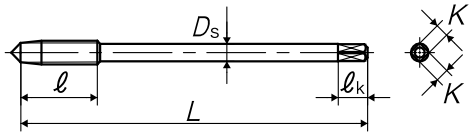
TYPE:3



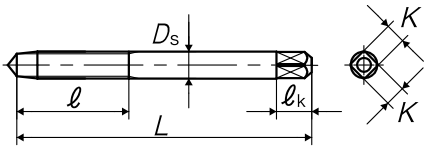
TYPE:4



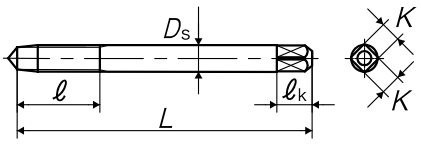
TYPE:5



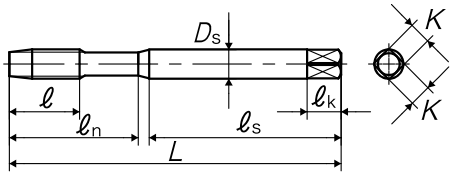
TYPE:6



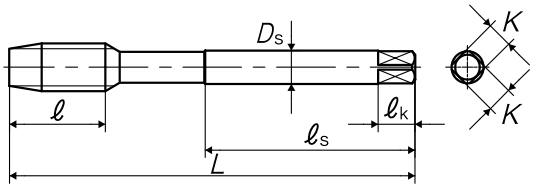
TYPE:7



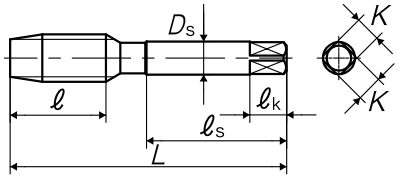
TYPE:8



TYPE:9

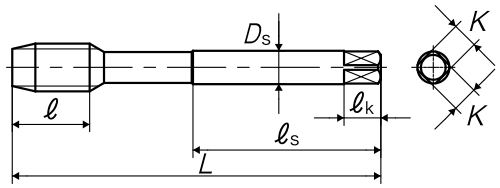


TYPE:10

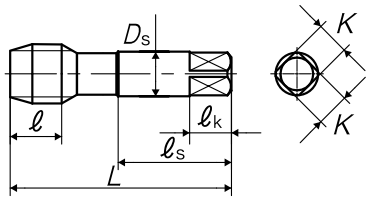


Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

TYPE:11



TYPE:12



Segment : 1B

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M2 × 0.4	ISO2	TD2.0EANEBC	2.5P	45	8	-	32	2.8	2.1	5	3	1
		TQ2.0EANEB2	F	36	8	-	21	2.8	2.1	5	3	2
		TQ2.0EANEBU	M	36	8	-	21	2.8	2.1	5	3	2
		TQ2.0EANEB5	V	36	8	-	21	2.8	2.1	5	3	2
M2.2 × 0.45	ISO2	TQ2.2FANEB2	F	36	9	-	21	2.8	2.1	5	3	2
		TQ2.2FANEBU	M	36	9	-	21	2.8	2.1	5	3	2
		TQ2.2FANEB5	V	36	9	-	21	2.8	2.1	5	3	2
M2.3 × 0.4	ISO2	TQ2.3EANEB2	F	36	9	-	21	2.8	2.1	5	3	2
		TQ2.3EANEBU	M	36	9	-	21	2.8	2.1	5	3	2
		TQ2.3EANEB5	V	36	9	-	21	2.8	2.1	5	3	2
M2.5 × 0.45	ISO2	TD2.5FANEBC	2.5P	50	8	15	33	2.8	2.1	5	3	3
		TQ2.5FANEB2	F	40	9	-	27	2.8	2.1	5	3	2
		TQ2.5FANEBU	M	40	9	-	27	2.8	2.1	5	3	2
		TQ2.5FANEB5	V	40	9	-	27	2.8	2.1	5	3	2
M2.6 × 0.45	ISO2	TQ2.6FANEB2	F	40	9	-	27	2.8	2.1	5	3	2
		TQ2.6FANEBU	M	40	9	-	27	2.8	2.1	5	3	2
		TQ2.6FANEB5	V	40	9	-	27	2.8	2.1	5	3	2
M3 × 0.5	ISO2	TD3.0GANEBC	2.5P	56	9	18	34	3.5	2.7	6	3	3
		TQ3.0GANEB2	F	40	11	-	24	3.5	2.7	6	3	2
		TQ3.0GANEBU	M	40	11	-	24	3.5	2.7	6	3	2
		TQ3.0GANEB5	V	40	11	-	24	3.5	2.7	6	3	2
M3 × 0.35	ISO2	TR3.0DANEB2	F	40	9	-	24	3.5	2.7	6	3	4
		TR3.0DANEB5	V	40	9	-	24	3.5	2.7	6	3	4
M3.5 × 0.6	ISO2	TQ3.5HANEB2	F	45	13	-	26	4	3	6	3	2
		TQ3.5HANEBU	M	45	13	-	26	4	3	6	3	2
		TQ3.5HANEB5	V	45	13	-	26	4	3	6	3	2
M3.5 × 0.35	ISO2	TR3.5DANEB2	F	45	10	-	26	4	3	6	3	4
		TR3.5DANEB5	V	45	10	-	26	4	3	6	3	4
M4 × 0.7	ISO2	TD4.0IANEBC	2.5P	63	13	21	38	4.5	3.4	6	3	3
		TQ4.0IANEB2	F	45	13	-	27	4.5	3.4	6	3	2
		TQ4.0IANEBU	M	45	13	-	27	4.5	3.4	6	3	2
		TQ4.0IANEB5	V	45	13	-	27	4.5	3.4	6	3	2
M4 × 0.5	ISO2	TR4.0GANEB2	F	45	10	-	27	4.5	3.4	6	3	4
		TR4.0GANEB5	V	45	10	-	27	4.5	3.4	6	3	4
M4.5 × 0.75	ISO2	TQ4.5JANEB2	F	50	16	-	24	6	4.9	8	3	2
		TQ4.5JANEBU	M	50	16	-	24	6	4.9	8	3	2
		TQ4.5JANEB5	V	50	16	-	24	6	4.9	8	3	2
M5 × 0.8	ISO2	TD5.0KANEBC	2.5P	70	14	25	39	6	4.9	8	3	3
		TQ5.0KANEB2	F	50	16	-	24	6	4.9	8	3	2
		TQ5.0KANEBU	M	50	16	-	24	6	4.9	8	3	2
		TQ5.0KANEB5	V	50	16	-	24	6	4.9	8	3	2

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M5 × 0.5	ISO2	TR5.0GANEB2	F	50	12	-	24	6	4.9	8	3	4
		TR5.0GANEB5	V	50	12	-	24	6	4.9	8	3	4
M6 × 1	ISO2	TD6.0MANEBC	2.5P	80	15	30	45	6	4.9	8	3	3
		TG6.0MANEBC	2.5P	80	15	-	-	4.5	3.4	6	3	5
		TQ6.0MANEB2	F	50	19	-	-	6	4.9	8	3	6
		TQ6.0MANEBU	M	50	19	-	-	6	4.9	8	3	6
		TQ6.0MANEB5	V	50	19	-	-	6	4.9	8	3	6
M6 × 0.75	ISO2	TR6.0JANEB2	F	50	14	-	-	6	4.9	8	3	7
		TR6.0JANEB5	V	50	14	-	-	6	4.9	8	3	7
M6 × 0.5	ISO2	TR6.0GANEB2	F	50	14	-	-	6	4.9	8	3	7
		TR6.0GANEB5	V	50	14	-	-	6	4.9	8	3	7
M7 × 1	ISO2	TD7.0MANEBC	2.5P	80	15	30	45	7	5.5	8	3	8
		TQ7.0MANEB2	F	50	15	-	26	6	4.9	8	4	10
		TQ7.0MANEBU	M	50	15	-	26	6	4.9	8	4	10
		TQ7.0MANEB5	V	50	15	-	26	6	4.9	8	4	10
M7 × 0.75	ISO2	TR7.0JANEB2	F	50	13	-	26	6	4.9	8	4	10
		TR7.0JANEB5	V	50	13	-	26	6	4.9	8	4	10
M8 × 1.25	ISO2	TD8.0NANEBC	2.5P	90	19	35	47	8	6.2	9	3	8
		TG8.0NANEBC	2.5P	90	19	-	46	6	4.9	8	3	9
		TQ8.0NANEB2	F	56	19	-	29	6	4.9	8	4	10
		TQ8.0NANEBU	M	56	19	-	29	6	4.9	8	4	10
		TQ8.0NANEB5	V	56	19	-	29	6	4.9	8	4	10
M8 × 1	ISO2	TM8.0MANEBC	2.5P	90	19	-	46	6	4.9	8	3	11
		TR8.0MANEB2	F	56	19	-	29	6	4.9	8	3	10
		TR8.0MANEB5	V	56	19	-	29	6	4.9	8	4	10
M8 × 0.75	ISO2	TR8.0JANEB2	F	50	15	-	26	6	4.9	8	4	10
		TR8.0JANEB5	V	50	15	-	26	6	4.9	8	4	10
M8 × 0.5	ISO2	TR8.0GANEB2	F	50	15	-	26	6	4.9	8	4	10
		TR8.0GANEB5	V	50	15	-	26	6	4.9	8	4	10
M9 × 1.25	ISO2	TD9.0NANEBC	2.5P	90	19	35	48	9	7	10	3	8
		TQ9.0NANEB2	F	63	19	-	32	7	5.5	8	4	10
		TQ9.0NANEBU	M	63	19	-	32	7	5.5	8	4	10
		TQ9.0NANEB5	V	63	19	-	32	7	5.5	8	4	10
M9 × 1	ISO2	TR9.0MANEB2	F	63	19	-	32	7	5.5	8	4	10
		TR9.0MANEB5	V	63	19	-	32	7	5.5	8	4	10
M9 × 0.75	ISO2	TR9.0JANEB2	F	56	19	-	29	7	5.5	8	4	10
		TR9.0JANEB5	V	56	19	-	29	7	5.5	8	4	10
M10 × 1.5	ISO2	TD0100ANEBC	2.5P	100	23	39	52	10	8	11	3	8
		TG0100ANEBC	2.5P	100	23	-	51	7	5.5	8	3	9
		TQ0100ANEB2	F	70	23	-	36	7	5.5	8	4	10
		TQ0100ANEBU	M	70	23	-	36	7	5.5	8	4	10
		TQ0100ANEB5	V	70	23	-	36	7	5.5	8	4	10
M10 × 1.25	ISO2	TM010NANEBC	2.5P	100	23	-	51	7	5.5	8	3	11
		TR010NANEB2	F	70	23	-	36	7	5.5	8	4	10
		TR010NANEB5	V	70	23	-	36	7	5.5	8	4	10
M10 × 1	ISO2	TM010MANEBC	2.5P	90	19	-	46	7	5.5	8	3	11
		TR010MANEB2	F	63	19	-	32	7	5.5	8	4	10
		TR010MANEB5	V	63	19	-	32	7	5.5	8	4	10

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M10 × 0.75	ISO2	TR010JANEB2	F	63	19	-	32	7	5.5	8	4	10
		TR010JANEB5	V	63	19	-	32	7	5.5	8	4	10
M10 × 0.5	ISO2	TR010GANEB2	F	63	19	-	32	7	5.5	8	4	10
		TR010GANEB5	V	63	19	-	32	7	5.5	8	4	10
M11 × 1.5	ISO2	TQ0110ANEB2	F	70	23	-	36	8	6.2	9	4	10
		TQ0110ANEBU	M	70	23	-	36	8	6.2	9	4	10
		TQ0110ANEB5	V	70	23	-	36	8	6.2	9	4	10
M12 × 1.75	ISO2	TG012PANEBC	2.5P	110	26	-	56	9	7	10	3	9
		TQ012PANEB2	F	75	26	-	38	9	7	10	4	10
		TQ012PANEBU	M	75	26	-	38	9	7	10	4	10
		TQ012PANEB5	V	75	26	-	38	9	7	10	4	10
M12 × 1.5	ISO2	TM012OANEBC	2.5P	100	21	-	51	9	7	10	3	11
		TR012OANEB2	F	70	21	-	36	9	7	10	4	10
		TR012OANEB5	V	70	21	-	36	9	7	10	4	10
M12 × 1.25	ISO2	TM012NANEBC	2.5P	100	21	-	51	9	7	10	3	11
		TR012NANEB2	F	70	21	-	36	9	7	10	4	10
		TR012NANEB5	V	70	21	-	36	9	7	10	4	10
M12 × 1	ISO2	TM012MANEBC	2.5P	100	21	-	51	9	7	10	3	11
		TR012MANEB2	F	70	21	-	36	9	7	10	4	10
		TR012MANEB5	V	70	21	-	36	9	7	10	4	10
M14 × 2	ISO2	TG014QANEBC	2.5P	110	26	-	56	11	9	12	3	9
		TQ014QANEB2	F	80	26	-	41	11	9	12	4	10
		TQ014QANEBU	M	80	26	-	41	11	9	12	4	10
		TQ014QANEB5	V	80	26	-	41	11	9	12	4	10
M14 × 1.5	ISO2	TM014OANEBC	2.5P	100	21	-	51	11	9	12	3	11
		TR014OANEB2	F	70	21	-	36	11	9	12	4	10
		TR014OANEB5	V	70	21	-	36	11	9	12	4	10
M14 × 1.25	ISO2	TR014NANEB2	F	70	21	-	36	11	9	12	4	10
		TR014NANEB5	V	70	21	-	36	11	9	12	4	10
M14 × 1	ISO2	TM014MANEBC	2.5P	100	21	-	51	11	9	12	3	11
		TR014MANEB2	F	70	21	-	36	11	9	12	4	10
		TR014MANEB5	V	70	21	-	36	11	9	12	4	10
M16 × 2	ISO2	TG016QANEBC	2.5P	110	26	-	56	12	9	12	3	9
		TQ016QANEB2	F	80	26	-	41	12	9	12	4	10
		TQ016QANEBU	M	80	26	-	41	12	9	12	4	10
		TQ016QANEB5	V	80	26	-	41	12	9	12	4	10
M16 × 1.5	ISO2	TM016OANEBC	2.5P	100	21	-	51	12	9	12	3	11
		TR016OANEB2	F	70	21	-	36	12	9	12	4	10
		TR016OANEB5	V	70	21	-	36	12	9	12	4	10
M16 × 1	ISO2	TM016MANEBC	2.5P	100	21	-	51	12	9	12	3	11
		TR016MANEB2	F	70	21	-	36	12	9	12	4	10
		TR016MANEB5	V	70	21	-	36	12	9	12	4	10
M18 × 2.5	ISO2	TQ018RANEB2	F	95	33	-	48	14	11	14	4	10
		TQ018RANEBU	M	95	33	-	48	14	11	14	4	10
		TQ018RANEB5	V	95	33	-	48	14	11	14	4	10
M18 × 2	ISO2	TM018QANEBC	2.5P	125	33	-	64	14	11	14	3	11
		TR018QANEB2	F	80	21	-	41	14	11	14	4	10
		TR018QANEB5	V	80	21	-	41	14	11	14	4	10

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M18 × 1.5	ISO2	TM0180ANEBC	2.5P	110	24	-	56	14	11	14	3	11
		TR0180ANEB2	F	80	21	-	41	14	11	14	4	10
		TR0180ANEB5	V	80	21	-	41	14	11	14	4	10
M18 × 1	ISO2	TM018MANEBC	2.5P	110	24	-	56	14	11	14	3	11
		TR018MANEB2	F	80	21	-	41	14	11	14	4	10
		TR018MANEB5	V	80	21	-	41	14	11	14	4	10
M20 × 2.5	ISO2	TQ020RANEB2	F	95	33	-	48	16	12	15	4	10
		TQ020RANEBU	M	95	33	-	48	16	12	15	4	10
		TQ020RANEB5	V	95	33	-	48	16	12	15	4	10
M20 × 2	ISO2	TM020QANEBC	2.5P	140	33	-	71	16	12	15	3	11
		TR020QANEB2	F	80	21	-	41	16	12	15	4	10
		TR020QANEB5	V	80	21	-	41	16	12	15	4	10
M20 × 1.5	ISO2	TM0200ANEBC	2.5P	125	24	-	64	16	12	15	3	11
		TR0200ANEB2	F	80	21	-	41	16	12	15	4	10
		TR0200ANEB5	V	80	21	-	41	16	12	15	4	10
M20 × 1	ISO2	TM020MANEBC	2.5P	125	24	-	64	16	12	15	3	11
		TR020MANEB2	F	80	21	-	41	16	12	15	4	10
		TR020MANEB5	V	80	21	-	41	16	12	15	4	10
M22 × 2.5	ISO2	TQ022RANEB2	F	100	33	-	51	18	14.5	17	4	10
		TQ022RANEBU	M	100	33	-	51	18	14.5	17	4	10
		TQ022RANEB5	V	100	33	-	51	18	14.5	17	4	10
M22 × 2	ISO2	TR022QANEB2	F	80	21	-	41	18	14.5	17	4	10
		TR022QANEB5	V	80	21	-	41	18	14.5	17	4	10
M22 × 1.5	ISO2	TM0220ANEBC	2.5P	125	24	-	64	18	14.5	17	3	11
		TR0220ANEB2	F	80	21	-	41	18	14.5	17	4	10
		TR0220ANEB5	V	80	21	-	41	18	14.5	17	4	10
M22 × 1	ISO2	TR022MANEB2	F	80	21	-	41	18	14.5	17	4	10
		TR022MANEB5	V	80	21	-	41	18	14.5	17	4	10
M24 × 3	ISO2	TG024SANEBC	2.5P	160	37	-	82	18	14.5	17	3	9
		TQ024SANEB2	F	110	39	-	56	18	14.5	17	4	10
		TQ024SANEBU	M	110	39	-	56	18	14.5	17	4	10
		TQ024SANEB5	V	110	39	-	56	18	14.5	17	4	10
M24 × 2	ISO2	TM024QANEBC	2.5P	140	27	-	71	18	14.5	17	3	11
		TR024QANEB2	F	90	21	-	46	18	14.5	17	4	10
		TR024QANEB5	V	90	21	-	46	18	14.5	17	4	10
M24 × 1.5	ISO2	TM0240ANEBC	2.5P	140	27	-	71	18	14.5	17	3	11
		TR0240ANEB2	F	90	21	-	46	18	14.5	17	4	10
		TR0240ANEB5	V	90	21	-	46	18	14.5	17	4	10
M24 × 1	ISO2	TM024MANEBC	2.5P	140	27	-	71	18	14.5	17	3	11
		TR024MANEB2	F	90	21	-	46	18	14.5	17	4	10
		TR024MANEB5	V	90	21	-	46	18	14.5	17	4	10
M25 × 2	ISO2	TR025QANEB2	F	90	21	-	46	18	14.5	17	4	10
		TR025QANEB5	V	90	21	-	46	18	14.5	17	4	10
M25 × 1.5	ISO2	TM0250ANEBC	2.5P	140	27	-	71	18	14.5	17	4	11
		TR0250ANEB2	F	90	21	-	46	18	14.5	17	4	10
		TR0250ANEB5	V	90	21	-	46	18	14.5	17	4	10
M26 × 1.5	ISO2	TM0260ANEBC	2.5P	140	27	-	71	18	14.5	17	4	11
		TR0260ANEB2	F	90	21	-	46	18	14.5	17	4	10
		TR0260ANEB5	V	90	21	-	46	18	14.5	17	4	10

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M27 × 3	ISO2	TG027SANEBC	2.5P	160	37	-	82	20	16	19	4	9
		TQ027SANEB2	F	110	39	-	56	20	16	19	4	10
		TQ027SANEBU	M	110	39	-	56	20	16	19	4	10
		TQ027SANEB5	V	110	39	-	56	20	16	19	4	10
M27 × 2	ISO2	TM027QANEBC	2.5P	140	27	-	71	20	16	19	4	11
		TR027QANEB2	F	90	21	-	46	20	16	19	4	10
		TR027QANEB5	V	90	21	-	46	20	16	19	4	10
M27 × 1.5	ISO2	TR027OANEB2	F	90	21	-	46	20	16	19	4	10
		TR027OANEB5	V	90	21	-	46	20	16	19	4	10
M28 × 2	ISO2	TR028QANEB2	F	90	21	-	46	20	16	19	4	10
		TR028QANEB5	V	90	21	-	46	20	16	19	4	10
M28 × 1.5	ISO2	TM028OANEBC	2.5P	140	27	-	71	20	16	19	4	11
		TR028OANEB2	F	90	21	-	46	20	16	19	4	10
		TR028OANEB5	V	90	21	-	46	20	16	19	4	10
M30 × 3.5	ISO2	TG030TANEBC	2.5P	180	44	-	92	22	18	21	4	9
		TQ030TANEB2	F	125	46	-	64	22	18	21	4	10
		TQ030TANEBU	M	125	46	-	64	22	18	21	4	10
		TQ030TANEB5	V	125	46	-	64	22	18	21	4	10
M30 × 2	ISO2	TM030QANEBC	2.5P	150	27	-	77	22	18	21	4	11
		TR030QANEB2	F	90	21	-	46	22	18	21	4	10
		TR030QANEB5	V	90	21	-	46	22	18	21	4	10
M30 × 1.5	ISO2	TM030OANEBC	2.5P	150	27	-	77	22	18	21	4	11
		TR030OANEB2	F	90	21	-	46	22	18	21	4	10
		TR030OANEB5	V	90	21	-	46	22	18	21	4	10
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Unified Threads												
3/8-16UNC	2B	TDU06PXNEBC	2.5P	100	23	39	54	10	7	10	4	8
3/8-24UNF	2B	TMU06MXNEBC	2.5P	100	23	-	51	7	5.5	8	4	11
1/2-13UNC	2B	TGU08RXNEBC	2.5P	110	26	-	56	9	7	10	4	9
9/16-18UNF	2B	TMU09OXNEBC	2.5P	100	21	-	51	11	9	12	4	11
5/8-11UNC	2B	TGU10UXNEBC	2.5P	110	26	-	56	12	9	12	4	9
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Whitworth Threads												
3/32W48	-	TPW1HF0NEB2	F	36	10	-	21	2.8	2.1	5	3	3
		TPW1HF0NEBU	M	36	10	-	21	2.8	2.1	5	3	3
		TPW1HF0NEB5	V	36	10	-	21	2.8	2.1	5	3	3
1/8W40	-	TPW02H0NEB2	F	40	11	-	25	3.5	2.7	6	3	3
		TPW02H0NEBU	M	40	11	-	25	3.5	2.7	6	3	3
		TPW02H0NEB5	V	40	11	-	25	3.5	2.7	6	3	3
5/32W32	-	TPW2HJ0NEB2	F	45	13	-	27	4.5	3.4	6	3	3
		TPW2HJ0NEBU	M	45	13	-	27	4.5	3.4	6	3	3
		TPW2HJ0NEB5	V	45	13	-	27	4.5	3.4	6	3	3
3/16W24	-	TPW03M0NEB2	F	50	17	-	26	5.5	4.3	7	3	3
		TPW03M0NEBU	M	50	17	-	26	5.5	4.3	7	3	3
		TPW03M0NEB5	V	50	17	-	26	5.5	4.3	7	3	3
1/4W20	-	TPW04N0NEB2	F	56	21	-	-	6	4.9	8	3	6
		TPW04N0NEBU	M	56	21	-	-	6	4.9	8	3	6
		TPW04N0NEB5	V	56	21	-	-	6	4.9	8	3	6

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
5/16W18	-	TPW0500NEB2	F	63	19	-	32	6	4.9	8	4	10
		TPW0500NEBU	M	63	19	-	32	6	4.9	8	4	10
		TPW0500NEB5	V	63	19	-	32	6	4.9	8	4	10
3/8W16	-	TPW06P0NEB2	F	70	23	-	36	7	5.5	8	4	10
		TPW06P0NEBU	M	70	23	-	36	7	5.5	8	4	10
		TPW06P0NEB5	V	70	23	-	36	7	5.5	8	4	10
7/16W14	-	TPW07Q0NEB2	F	70	23	-	36	8	6.2	9	4	10
		TPW07Q0NEBU	M	70	23	-	36	8	6.2	9	4	10
		TPW07Q0NEB5	V	70	23	-	36	8	6.2	9	4	10
1/2W12	-	TPW08S0NEB2	F	80	26	-	41	9	7	10	4	10
		TPW08S0NEBU	M	80	26	-	41	9	7	10	4	10
		TPW08S0NEB5	V	80	26	-	41	9	7	10	4	10
9/16W12	-	TPW09S0NEB2	F	80	26	-	41	11	9	12	4	10
		TPW09S0NEBU	M	80	26	-	41	11	9	12	4	10
		TPW09S0NEB5	V	80	26	-	41	11	9	12	4	10
5/8W11	-	TPW10U0NEB2	F	90	26	-	46	12	9	12	4	10
		TPW10U0NEBU	M	90	26	-	46	12	9	12	4	10
		TPW10U0NEB5	V	90	26	-	46	12	9	12	4	10
3/4W10	-	TPW12V0NEB2	F	95	33	-	48	14	11	14	4	10
		TPW12V0NEBU	M	95	33	-	48	14	11	14	4	10
		TPW12V0NEB5	V	95	33	-	48	14	11	14	4	10
7/8W9	-	TPW14W0NEB2	F	100	33	-	51	18	14.5	17	4	10
		TPW14W0NEBU	M	100	33	-	51	18	14.5	17	4	10
		TPW14W0NEB5	V	100	33	-	51	18	14.5	17	4	10
1W8	-	TPW16X0NEB2	F	110	39	-	56	20	16	19	4	10
		TPW16X0NEBU	M	110	39	-	56	20	16	19	4	10
		TPW16X0NEB5	V	110	39	-	56	20	16	19	4	10

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Pg Threads												
Pg 7	-	TYPG070NEBU	3.5P	70	21	-	36	9	7	10	4	12
Pg 9	-	TYPG090NEBU	3.5P	70	21	-	36	12	9	12	4	12
Pg 11	-	TYPG110NEBU	3.5P	80	21	-	41	14	11	14	4	12
Pg 13.5	-	TYPG130NEBU	3.5P	80	21	-	41	16	12	15	4	12
Pg 16	-	TYPG160NEBU	3.5P	80	21	-	41	18	14.5	17	4	12
Pg 21	-	TYPG210NEBU	3.5P	90	21	-	46	22	18	21	4	12

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads												
G1/8-28	-	TVG0020NEBC	2.5P	90	19	-	46	7	5.5	8	3	11
		T9G0020NEB2	F	63	19	-	32	7	5.5	8	4	12
		T9G0020NEB5	V	63	19	-	32	7	5.5	8	4	12
G1/4-19	-	TVG0040NEBC	2.5P	100	21	-	51	11	9	12	3	11
		T9G0040NEB2	F	70	21	-	36	11	9	12	4	12
		T9G0040NEB5	V	70	21	-	36	11	9	12	4	12
G3/8-19	-	TVG0060NEBC	2.5P	100	21	-	51	12	9	12	3	11
		T9G0060NEB2	F	70	21	-	36	12	9	12	4	12
		T9G0060NEB5	V	70	21	-	36	12	9	12	4	12
G1/2-14	-	TVG0080NEBC	2.5P	125	24	-	64	16	12	15	3	11
		T9G0080NEB2	F	80	21	-	41	16	12	15	4	12
		T9G0080NEB5	V	80	21	-	41	16	12	15	4	12

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
G5/8-14	-	T9G0100NEB2	F	80	21	-	41	18	14.5	17	4	12
		T9G0100NEB5	V	80	21	-	41	18	14.5	17	4	12
G3/4-14	-	T9G0120NEB2	F	90	21	-	46	20	16	19	4	12
		T9G0120NEB5	V	90	21	-	46	20	16	19	4	12

EH-HT

Hand Taps for Hard-to-Machine Materials

Specification

HSS-Co

■EH-HT is the hand tap suitable for hard steels of 35-45HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels.

Recommended Tapping Speeds depending on Materials

Thermal refined steels 調質鋼	Tool steels 工具鋼
~5 (m/min)	~5 (m/min)

For icon explanation, refer to P.24

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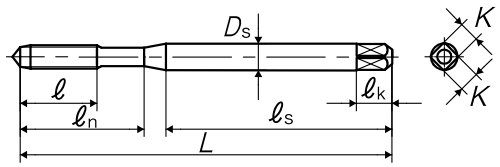

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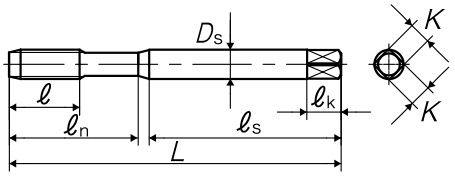

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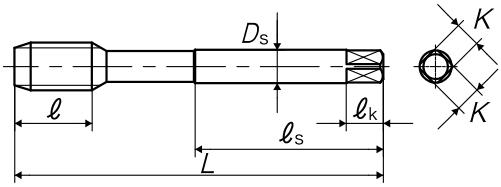

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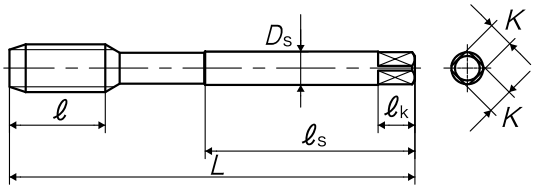

Segment : 1B

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M2.5 × 0.45	ISO2X	TD2.5FBDCBC	2.5P	50	8	15	33	2.8	2.1	5	3	1
M3 × 0.5	ISO2X	TD3.0GBDCBC	2.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	TD4.0IBDCBC	2.5P	63	13	21	38	4.5	3.4	6	3	1
M4.5 × 0.75	ISO2X	TD4.5JBDCBC	2.5P	70	14	24	39	6	4.9	8	3	1
M5 × 0.8	ISO2X	TD5.0KBDCBC	2.5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	TD6.0MBDCBC	2.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	TD8.0NBDCBC	2.5P	90	19	35	47	8	6.2	9	4	2
M8 × 1	ISO2X	TM8.0MBDCBC	2.5P	90	19	-	46	6	4.9	8	4	3
M10 × 1.5	ISO2X	TD010OBDCBC	2.5P	100	23	39	52	10	8	11	4	2
M10 × 1.25	ISO2X	TM010NBDCBC	2.5P	100	23	-	51	7	5.5	8	4	3
M10 × 1	ISO2X	TM010MBDCBC	2.5P	90	19	-	46	7	5.5	8	4	3
M12 × 1.75	ISO2X	TG012PBDCBC	2.5P	110	26	-	56	9	7	10	4	4
M12 × 1.5	ISO2X	TM012OBDCBC	2.5P	100	21	-	51	9	7	10	4	3
M12 × 1.25	ISO2X	TM012NBDCBC	2.5P	100	21	-	51	9	7	10	4	3
M14 × 2	ISO2X	TG014QBDCBC	2.5P	110	26	-	56	11	9	12	4	4
M14 × 1.5	ISO2X	TM014OBDCBC	2.5P	100	21	-	51	11	9	12	4	3
M16 × 2	ISO2X	TG016QBDCBC	2.5P	110	26	-	56	12	9	12	4	4
M16 × 1.5	ISO2X	TM016OBDCBC	2.5P	100	21	-	51	12	9	12	4	3
M18 × 2.5	ISO2X	TG018RBDCBC	2.5P	125	33	-	64	14	11	14	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M18 × 1.5	ISO2X	TM0180BDCBC	2.5P	110	24	-	56	14	11	14	4	3
M20 × 2.5	ISO2X	TG020RBDCBC	2.5P	140	33	-	71	16	12	15	4	4
M20 × 1.5	ISO2X	TM0200BDCBC	2.5P	125	24	-	64	16	12	15	4	3
M22 × 2.5	ISO2X	TG022RBDCBC	2.5P	140	33	-	71	18	14.5	17	4	4
M24 × 3	ISO2X	TG024SBDCBC	2.5P	160	37	-	82	18	14.5	17	4	4
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads												
G1/8-28	-	TVG0020DCBC	2.5P	90	19	-	46	7	5.5	8	4	3
G1/4-19	-	TVG0040DCBC	2.5P	100	21	-	51	11	9	12	4	3
G3/8-19	-	TVG0060DCBC	2.5P	100	21	-	51	12	9	12	4	3
G1/2-14	-	TVG0080DCBC	2.5P	125	24	-	64	16	12	15	4	3

GG-HT

Hand Taps for Cast Irons

Specification

HSS | NI Nitride

■Suitable for hard and abrasive materials such as cast irons. Considering comparatively quick wear, GG-HT is properly oversized.

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄
5~10
(m/min)

For icon explanation, refer to P.24

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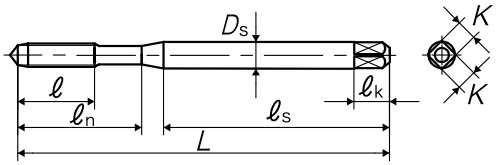

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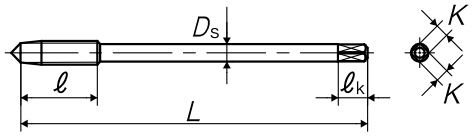

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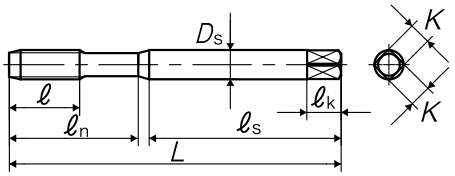

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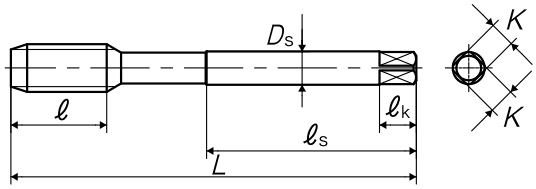

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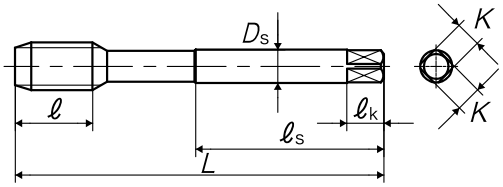

Segment : 1B

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2X	TD3.0GBAENC	2.5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	TD4.0IBAENC	2.5P	63	13	21	38	4.5	3.4	6	4	1
M5 × 0.8	ISO2X	TD5.0KBAENC	2.5P	70	14	25	39	6	4.9	8	4	1
		TG5.0KBAENC	2.5P	70	14	-	-	3.5	2.7	6	4	2
M6 × 1	ISO2X	TD6.0MBAENC	2.5P	80	15	30	45	6	4.9	8	4	1
		TG6.0MBAENC	2.5P	80	15	-	-	4.5	3.4	6	4	2
M8 × 1.25	ISO2X	TD8.0NBAENC	2.5P	90	19	35	47	8	6.2	9	4	3
		TG8.0NBAENC	2.5P	90	19	-	46	6	4.9	8	4	4
M8 × 1	ISO2X	TM8.0MBAENC	2.5P	90	19	-	46	6	4.9	8	4	5
M10 × 1.5	ISO2X	TD0100BAENC	2.5P	100	23	39	52	10	8	11	4	3
		TG0100BAENC	2.5P	100	23	-	51	7	5.5	8	4	4
M10 × 1.25	ISO2X	TM010NBAENC	2.5P	100	23	-	51	7	5.5	8	4	5
M10 × 1	ISO2X	TM010MBAENC	2.5P	90	19	-	46	7	5.5	8	4	5
M12 × 1.75	ISO2X	TG012PBAENC	2.5P	110	26	-	56	9	7	10	4	4
M12 × 1.5	ISO2X	TM0120BAENC	2.5P	100	21	-	51	9	7	10	4	5
M12 × 1.25	ISO2X	TM012NBAENC	2.5P	100	21	-	51	9	7	10	4	5

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
M12 × 1	ISO2X	TM012MBAENC	2.5P	100	21	-	51	9	7	10	4	5
M14 × 2	ISO2X	TG014QBAENC	2.5P	110	26	-	56	11	9	12	4	4
M14 × 1.5	ISO2X	TM014OBAENC	2.5P	100	21	-	51	11	9	12	4	5
M16 × 2	ISO2X	TG016QBAENC	2.5P	110	26	-	56	12	9	12	4	4
M16 × 1.5	ISO2X	TM016OBAENC	2.5P	100	21	-	51	12	9	12	4	5
M18 × 2.5	ISO2X	TG018RBAENC	2.5P	125	33	-	64	14	11	14	4	4
M18 × 1.5	ISO2X	TM018OBAENC	2.5P	110	24	-	56	14	11	14	4	5
M20 × 2.5	ISO2X	TG020RBAENC	2.5P	140	33	-	71	16	12	15	4	4
M20 × 1.5	ISO2X	TM020OBAENC	2.5P	125	24	-	64	16	12	15	4	5
M22 × 2.5	ISO2X	TG022RBAENC	2.5P	140	33	-	71	18	14.5	17	4	4
M22 × 1.5	ISO2X	TM022OBAENC	2.5P	125	24	-	64	18	14.5	17	4	5
M24 × 3	ISO2X	TG024SBAENC	2.5P	160	37	-	82	18	14.5	17	4	4
M24 × 1.5	ISO2X	TM024OBAENC	2.5P	140	27	-	71	18	14.5	17	4	5
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads												
G1/8-28	-	TVG0020AENC	2.5P	90	19	-	46	7	5.5	8	4	5
G1/4-19	-	TVG0040AENC	2.5P	100	21	-	51	11	9	12	4	5
G3/8-19	-	TVG0060AENC	2.5P	100	21	-	51	12	9	12	4	5
G1/2-14	-	TVG0080AENC	2.5P	125	24	-	64	16	12	15	4	5
G3/4-14	-	TVG0120AENC	2.5P	140	27	-	71	20	16	19	4	5

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

GG-HT-OH

Hand Taps for Cast Irons with Internal Coolant Hole

Specification

■Suitable for hard and abrasive materials such as cast irons. Considering comparatively quick wear, GG-HT-OH is properly oversized.

Recommended Tapping Speeds depending on Materials

For icon explanation, refer to P.24

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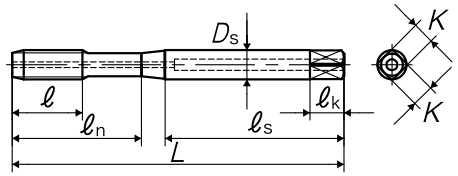

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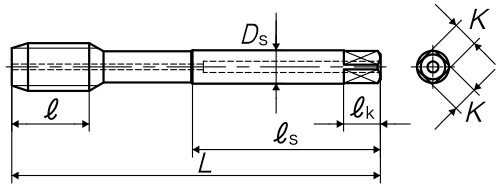

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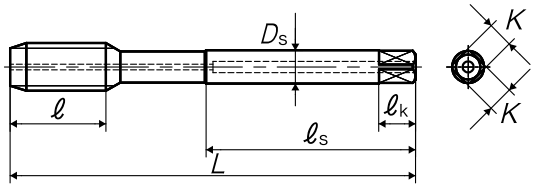


Segment : 1B

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2X	TD6.0MBAFNC	2.5P	80	15	30	45	6	4.9	8	4	1
M8 × 1.25	ISO2X	TD8.0NBAFNC	2.5P	90	19	35	47	8	6.2	9	4	1
M8 × 1	ISO2X	TM8.0MBAFNC	2.5P	90	19	-	46	6	4.9	8	4	2
M10 × 1.5	ISO2X	TD010OBAFNC	2.5P	100	23	39	52	10	8	11	4	1
M10 × 1.25	ISO2X	TM010NBAFNC	2.5P	100	23	-	51	7	5.5	8	4	2
M10 × 1	ISO2X	TM010MBAFNC	2.5P	90	19	-	46	7	5.5	8	4	2
M12 × 1.75	ISO2X	TG012PBAFNC	2.5P	110	26	-	56	9	7	10	4	3
M12 × 1.5	ISO2X	TM012OBAFNC	2.5P	100	21	-	51	9	7	10	4	2
M12 × 1.25	ISO2X	TM012NBAFNC	2.5P	100	21	-	51	9	7	10	4	2
M14 × 2	ISO2X	TG014QBAFNC	2.5P	110	26	-	56	11	9	12	4	3
M14 × 1.5	ISO2X	TM014OBAFNC	2.5P	100	21	-	51	11	9	12	4	2
M14 × 1	ISO2X	TM014MBAFNC	2.5P	100	21	-	51	11	9	12	4	2
M16 × 2	ISO2X	TG016QBAFNC	2.5P	110	26	-	56	12	9	12	4	3
M16 × 1.5	ISO2X	TM016OBAFNC	2.5P	100	21	-	51	12	9	12	4	2
M18 × 2.5	ISO2X	TG018RBAFNC	2.5P	125	33	-	64	14	11	14	4	3
M18 × 1.5	ISO2X	TM018OBAFNC	2.5P	110	24	-	56	14	11	14	4	2
M20 × 2.5	ISO2X	TG020RBAFNC	2.5P	140	33	-	71	16	12	15	4	3
M20 × 1.5	ISO2X	TM020OBAFNC	2.5P	125	24	-	64	16	12	15	4	2
M22 × 1.5	ISO2X	TM022OBAFNC	2.5P	125	24	-	64	18	14.5	17	4	2

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

LA-HT

Hand Taps for Die Cast Materials

Specification

HSS | NI Nitride

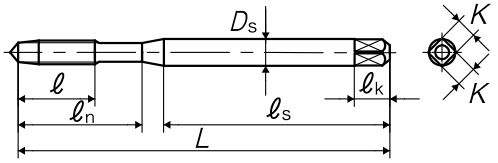
■LA-HT is the oversized tap, and is suitable for the materials tending to shrink, such as aluminum alloy diecastings (ADC) and zinc alloy diecastings (ZDC).

Recommended Tapping Speeds depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE : 1



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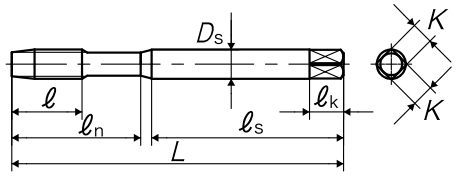

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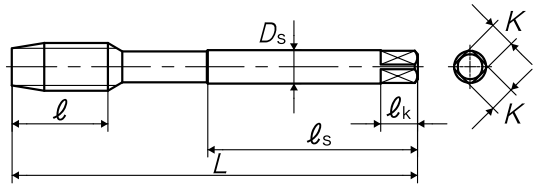


Segment : 1B

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M3 × 0.5	ISO2X	TD3.0GBLEN5	5P	56	9	18	34	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	TD4.0IBLEN5	5P	63	13	21	38	4.5	3.4	6	3	1
M5 × 0.8	ISO2X	TD5.0KBLEN5	5P	70	14	25	39	6	4.9	8	3	1
M6 × 1	ISO2X	TD6.0MBLEN5	5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	TD8.0NBLEN5	5P	90	19	35	47	8	6.2	9	3	2
M10 × 1.5	ISO2X	TD010OBLEN5	5P	100	23	39	52	10	8	11	4	2
M12 × 1.75	ISO2X	TG012PBLEN5	5P	110	26	-	56	9	7	10	4	3
M14 × 2	ISO2X	TG014QBLEN5	5P	110	26	-	56	11	9	12	4	3
M16 × 2	ISO2X	TG016QBLEN5	5P	110	26	-	56	12	9	12	4	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

AXE-HT

AXE Hand Taps

Specification

HSS-P Coating

■AXE-HT has special cutting edge geometry which minimizes the damage of cutting edge in aluminum alloy diecasting tapping, and ensures a long tool life.

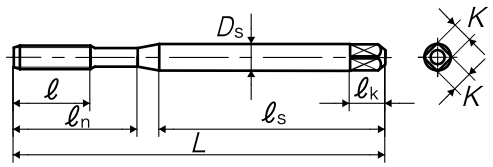
Recommended Tapping Speeds depending on Materials

Aluminum alloy castings アルミ合金鋳物 10~20 (m/min)

Zinc alloy castings 亜鉛合金鋳物 10~20 (m/min)

For icon explanation, refer to P.24

TYPE:1



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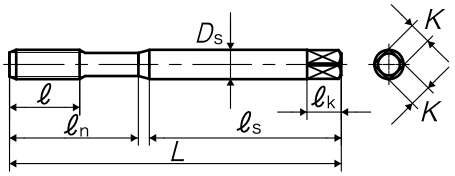

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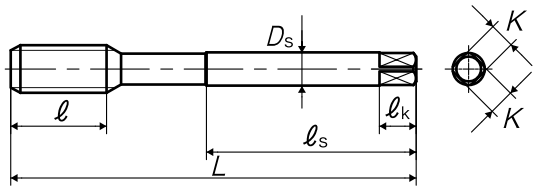

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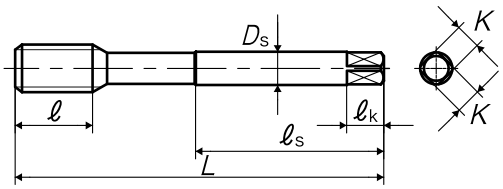


Segment : 1B

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads												
M6 × 1	ISO2X	TD6.0MBLPVA	1.5P	80	15	30	45	6	4.9	8	3	1
M8 × 1.25	ISO2X	TD8.0NBLPVA	1.5P	90	19	35	47	8	6.2	9	4	2
M10 × 1.5	ISO2X	TD010OBLPVA	1.5P	100	23	39	52	10	8	11	4	2
M10 × 1.25	ISO2X	TM010NBLPVA	1.5P	100	23	-	51	7	5.5	8	4	4
M10 × 1	ISO2X	TM010MBLPVA	1.5P	90	19	-	46	7	5.5	8	4	4
M12 × 1.75	ISO2X	TG012PBLPVA	1.5P	110	26	-	56	9	7	10	4	3
M12 × 1.5	ISO2X	TM012OBLPVA	1.5P	100	21	-	51	9	7	10	4	4
M12 × 1.25	ISO2X	TM012NBLPVA	1.5P	100	21	-	51	9	7	10	4	4

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	Ds	K	ℓk

CT-FC

Carbide Taps for Cast Irons

Specification

HF

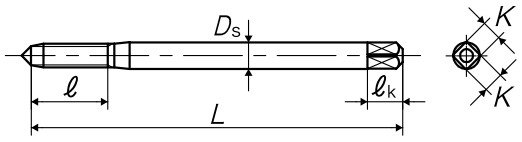
■CT-FC is the carbide tap suitable for hard and abrasive materials such as cast irons. For volume production.

Recommended Tapping Speeds depending on Materials

Cast irons 鋳鉄	Ductile cast irons 強靭鋳鉄	Brass castings 黄銅鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE:1



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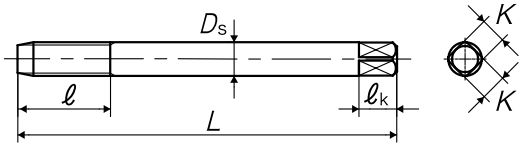

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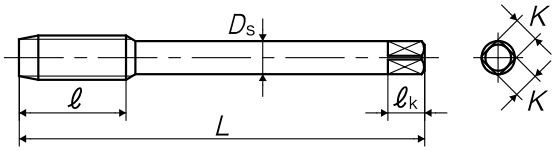

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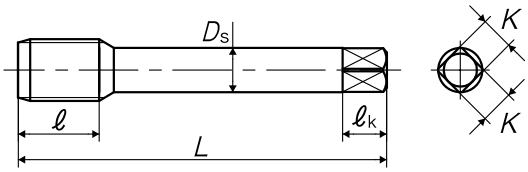


Segment : 1B

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For Metric Threads										
M3 × 0.5	ISO2X	36263.0	2.5P	56	11	3.5	2.7	6	3	1
M4 × 0.7	ISO2X	36264.0	2.5P	63	13	4.5	3.4	6	4	1
M5 × 0.8	ISO2X	36265.0	2.5P	70	16	6	4.9	8	4	1
M6 × 1	ISO2X	36266.0	2.5P	80	19	6	4.9	8	4	1
M8 × 1.25	ISO2X	36268.0	2.5P	90	22	8	6.2	9	4	2
M10 × 1.5	ISO2X	3626010	2.5P	100	24	10	8	11	4	2
M12 × 1.75	ISO2X	3726012	2.5P	110	29	9	7	10	4	3
M14 × 2	ISO2X	3726014	2.5P	110	30	11	9	12	4	3
M16 × 2	ISO2X	3726016	2.5P	110	32	12	9	12	4	3
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type
For G Threads										
G3/8-19	-	3926G06	2.5P	100	22	12	9	12	4	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

R-D

Thread Forming Taps for Soft Structural Steel Sheets

Specification

HSS

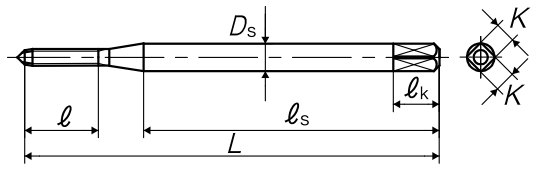
■R-D is the forming tap suitable for steel materials.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)

For icon explanation, refer to P.24

TYPE:1



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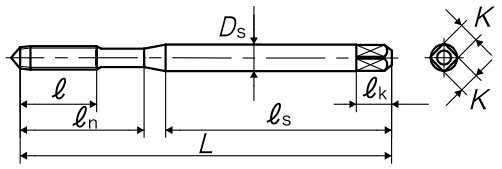

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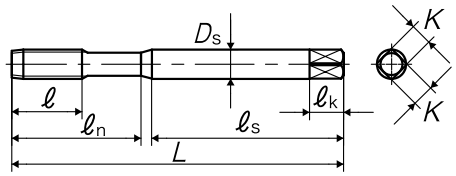

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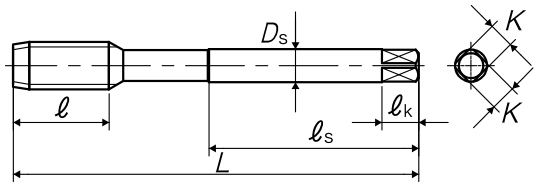


Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type
For Metric Threads												
M2 × 0.4	ISO2X	RD2.0EBNEBB	2P	45	8	-	32	2.8	2.1	5	4	1
M2.5 × 0.45	ISO2X	RD2.5FBNEBB	2P	50	8	15	33	2.8	2.1	5	4	2
M3 × 0.5	ISO2X	RD3.0GBNEBB	2P	56	9	18	34	3.5	2.7	6	4	2
M3.5 × 0.6	ISO2X	RD3.5HBNEBB	2P	56	11	20	32	4	3	6	4	2
M4 × 0.7	ISO2X	RD4.0IBNEBB	2P	63	13	21	38	4.5	3.4	6	4	2
M5 × 0.8	ISO2X	RD5.0KBNEBB	2P	70	14	25	39	6	4.9	8	4	2
M6 × 1	ISO2X	RD6.0MBNEBB	2P	80	15	30	45	6	4.9	8	4	2
M8 × 1.25	ISO2X	RD8.0NBNEBB	2P	90	19	35	47	8	6.2	9	6	3
M10 × 1.5	ISO2X	RD010OBNEBB	2P	100	23	39	52	10	8	11	8	3
M12 × 1.75	ISO2X	RG012PBNEBB	2P	110	26	-	56	9	7	10	8	4
M14 × 2	ISO2X	RG014QBNEBB	2P	110	26	-	56	11	9	12	8	4
M16 × 2	ISO2X	RG016QBNEBB	2P	110	26	-	56	12	9	12	8	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N+RS/N-RS

Thread Forming Taps for Non-Ferrous Materials

Specification

HSS | NI Nitride

■N+RS/N-RS is the forming tap suitable for non-ferrous materials such as aluminum castings, aluminum die castings and brass.

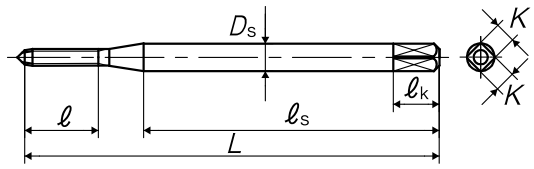
N+RS	～M6
N−RS	M8～

Recommended Tapping Speeds depending on Materials

Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物	Zinc alloy castings 亜鉛合金鋳物
5~15 (m/min)	5~15 (m/min)	5~15 (m/min)

For icon explanation, refer to P.24

TYPE：1



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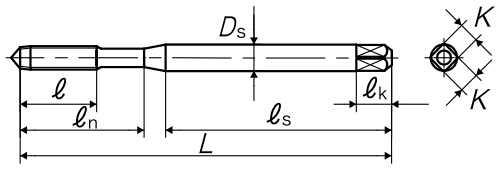

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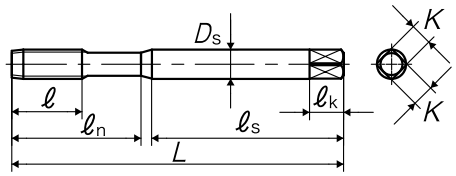

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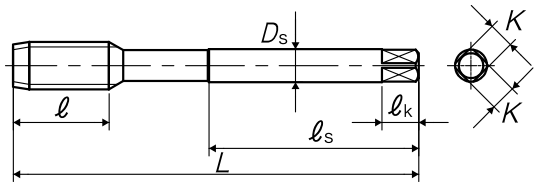


Segment：1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type
For Metric Threads												
M2 × 0.4	ISO2X	RE2.0EBKENB	2P	45	8	-	32	2.8	2.1	5	4	1
M2.3 × 0.4	ISO2X	RE2.3EBKENB	2P	45	9	-	32	2.8	2.1	5	4	1
M2.5 × 0.45	ISO2X	RE2.5FBKENB	2P	50	8	15	33	2.8	2.1	5	4	2
M3 × 0.5	ISO2X	RE3.0GBKENB	2P	56	9	18	34	3.5	2.7	6	4	2
M4 × 0.7	ISO2X	RE4.0IBKENB	2P	63	13	21	38	4.5	3.4	6	4	2
M5 × 0.8	ISO2X	RE5.0KBKENB	2P	70	14	25	39	6	4.9	8	4	2
M6 × 1	ISO2X	RE6.0MBKENB	2P	80	15	30	45	6	4.9	8	4	2
M8 × 1.25	ISO2X	RD8.0NBKENB	2P	90	19	35	47	8	6.2	9	6	3
M10 × 1.5	ISO2X	RD010OBKENB	2P	100	23	39	52	10	8	11	6	3
M12 × 1.75	ISO2X	RG012PBKENB	2P	110	26	-	56	9	7	10	6	4

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

N+RZ/N-RZ

Thread Forming Taps for Steels

Specification

HSS | OX Oxide

■N+RZ/N-RZ is the forming tap suitable for steel materials such as carbon steels, alloy steels, and stainless steels.

N+RZ	～M6
N−RZ	M8～

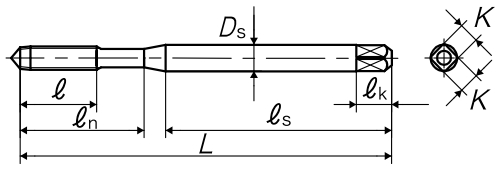
Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 5~15 (m/min)

Medium carbon steels 中炭素鋼 5~15 (m/min)

For icon explanation, refer to P.24

TYPE：1



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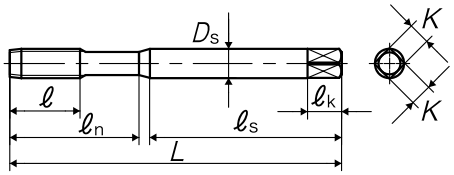

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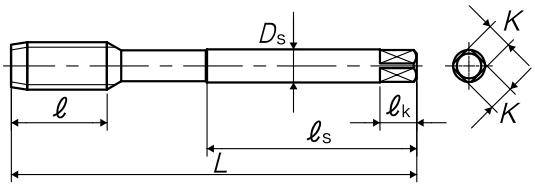


Segment：1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type
For Metric Threads												
M2.5 × 0.45	ISO2X	RE2.5FBHEXB	2P	50	8	15	33	2.8	2.1	5	4	1
M3 × 0.5	ISO2X	RE3.0GBHEXB	2P	56	9	18	34	3.5	2.7	6	4	1
M3.5 × 0.6	ISO2X	RE3.5HBHEXB	2P	56	11	20	32	4	3	6	4	1
M4 × 0.7	ISO2X	RE4.0IBHEXB	2P	63	13	21	38	4.5	3.4	6	4	1
M5 × 0.8	ISO2X	RE5.0KBHEXB	2P	70	14	25	39	6	4.9	8	4	1
M6 × 1	ISO2X	RE6.0MBHEXB	2P	80	15	30	45	6	4.9	8	4	1
M8 × 1.25	ISO2X	RD8.0NBHEXB	2P	90	19	35	47	8	6.2	9	6	2
M10 × 1.5	ISO2X	RD0100BHEXB	2P	100	23	39	52	10	8	11	8	2
M12 × 1.75	ISO2X	RG012PBHEXB	2P	110	26	-	56	9	7	10	8	3
M16 × 2	ISO2X	RG016QBHEXB	2P	110	26	-	56	12	9	12	8	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

OL+RZ

Thread Forming Taps for Dry Tapping, Coated

Specification

HSS-P Coating

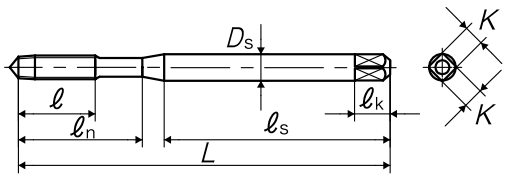
■OL+RZ is the forming taps enabling dry tapping under following condition : tapping sizes of smaller than M6, thin steel sheets having burring operation, and steel parts with rather short length. Optimum coating suitable to the tapping condition.

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
15~30 (m/min)	15~30 (m/min)	15~25 (m/min)	15~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

TYPE : 1



Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type
For Metric Threads												
M3 × 0.5	ISO2X	RE3.0GBHPTP	4P	56	9	18	34	3.5	2.7	6	4	1
M4 × 0.7	ISO2X	RE4.0IBHPTP	4P	63	13	21	38	4.5	3.4	6	4	1
M5 × 0.8	ISO2X	RE5.0KBHPTP	4P	70	14	25	39	6	4.9	8	4	1
M6 × 1	ISO2X	RE6.0MBHPTP	4P	80	15	30	45	6	4.9	8	4	1

HP+RZ/HP-RZ

High Performance Thread Forming Taps, Coated

Specification

HSS-P | Coating

■HP+RZ/HP-RZ is the forming tap suitable for steels (lower than 35HRC) and light alloys, and applicable to the high speed tapping. Optimum coating suitable to the tapping condition.

HP+RZ	～M6
HP−RZ	M8～

Recommended Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Stainless steels ステンレス鋼
15~30 (m/min)	15~30 (m/min)	15~25 (m/min)	15~25 (m/min)	10~25 (m/min)

For icon explanation, refer to P.24

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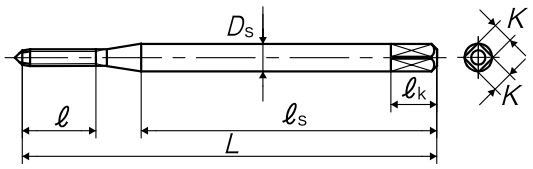

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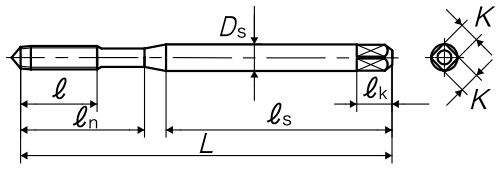

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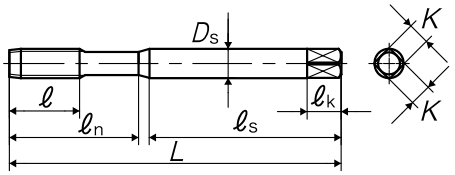
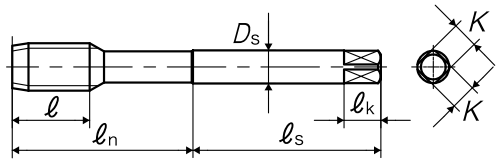


TYPE：4



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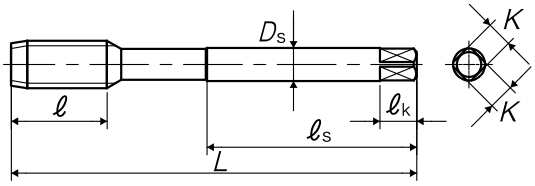


Segment：1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type
For Metric Threads												
M2 × 0.4	ISO2X	RE2.0EBFPTB	2P	45	8	-	32	2.8	2.1	5	4	1
	ISO3X	RE2.0ENFPTB	2P	45	8	-	32	2.8	2.1	5	4	1
M2.5 × 0.45	ISO2X	RE2.5FBFPTB	2P	50	8	15	33	2.8	2.1	5	4	2
	ISO3X	RE2.5FNFPTB	2P	50	8	15	33	2.8	2.1	5	4	2
M3 × 0.5	ISO2X	RE3.0GBFPTB	2P	56	9	18	34	3.5	2.7	6	4	2
	ISO3X	RE3.0GNFPTB	2P	56	9	18	34	3.5	2.7	6	4	2
M4 × 0.7	ISO2X	RE4.0IBFPTB	2P	63	13	21	38	4.5	3.4	6	4	2
	ISO3X	RE4.0INFPTB	2P	63	13	21	38	4.5	3.4	6	4	2
M5 × 0.8	ISO2X	RE5.0KBFPTB	2P	70	14	25	39	6	4.9	8	4	2
	ISO3X	RE5.0KNFPTB	2P	70	14	25	39	6	4.9	8	4	2
M6 × 1	ISO2X	RE6.0MBFPTB	2P	80	15	30	45	6	4.9	8	4	2
	ISO3X	RE6.0MNFPTB	2P	80	15	30	45	6	4.9	8	4	2
M8 × 1.25	ISO2X	RD8.0NBFPTB	2P	90	19	35	47	8	6.2	9	6	3
	ISO3X	RD8.0NNFPTB	2P	90	19	35	47	8	6.2	9	6	3
M10 × 1.5	ISO2X	RD0100BFPTB	2P	100	23	39	52	10	8	11	8	3
	ISO3X	RD0100NFPTB	2P	100	23	39	52	10	8	11	8	3

Overall length	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	Lobe	Type
M10 × 1.25	ISO2X	RM010NBFPTB	2P	100	23	-	51	7	5.5	8	8	4
M12 × 1.75	ISO2X	RG012PBFPTB	2P	110	26	-	56	9	7	10	8	5
	ISO3X	RG012PNFPTB	2P	110	26	-	56	9	7	10	8	5
M12 × 1.5	ISO2X	RM012OBFPTB	2P	100	21	-	51	9	7	10	8	4
M12 × 1.25	ISO2X	RM012NBFPTB	2P	100	21	-	51	9	7	10	8	4
M14 × 2	ISO2X	RG014QBFPTB	2P	110	26	-	56	11	9	12	8	5
M14 × 1.5	ISO2X	RM014OBFPTB	2P	100	21	-	51	11	9	12	8	4
M16 × 2	ISO2X	RG016QBFPTB	2P	110	26	-	56	12	9	12	8	5
M16 × 1.5	ISO2X	RM016OBFPTB	2P	100	21	-	51	12	9	12	8	4

PO-D

HSS Spiral Pointed Dies

Specification

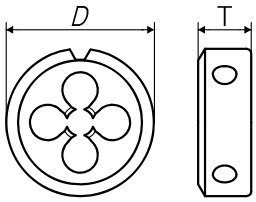
Front face

HSS 2~2.5

For icon explanation, refer to P.24

■Due to the effect of spiral pointed flutes, PO-D pushes out chips toward the cutting direction and reduces the troubles caused by chips.

TYPE:1



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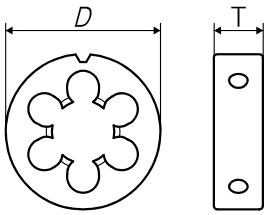

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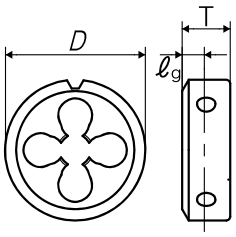

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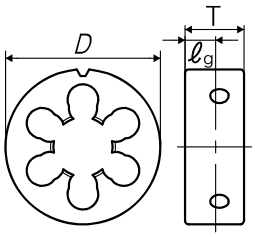


Segment : 32, 33

Size	Class	Code	D (mm)	T (mm)	Clearance Holes	Type
For Metric threads						
M1 × 0.25	6g	PDD1.0BLNEBC	16	5	3	1
M1.1 × 0.25	6g	PDD1.1BLNEBC	16	5	3	1
M1.2 × 0.25	6g	PDD1.2BLNEBC	16	5	3	1
M1.4 × 0.3	6g	PDD1.4CLNEBC	16	5	3	1
M1.6 × 0.35	6g	PDD1.6DLNEBC	16	5	3	1
M1.7 × 0.35	6g	PDD1.7DLNEBC	16	5	3	1
M1.8 × 0.35	6g	PDD1.8DLNEBC	16	5	3	1
M2 × 0.4	6g	PDD2.0ELNEBC	16	5	3	1
M2 × 0.25	6g	PDD2.0BLNEBC	16	5	3	1
M2.2 × 0.45	6g	PDD2.2FLNEBC	16	5	3	1
M2.3 × 0.4	6g	PDD2.3ELNEBC	16	5	3	1
M2.5 × 0.45	6g	PDD2.5FLNEBC	16	5	3	1
M2.5 × 0.35	6g	PDD2.5DLNEBC	16	5	3	1
M2.6 × 0.45	6g	PDD2.6FLNEBC	16	5	3	1
M3 × 0.5	6g	PDE3.0GLNEBC	20	5	3	1
M3 × 0.35	6g	PDE3.0DLNEBC	20	5	3	1
M3.5 × 0.6	6g	PDE3.5HLNEBC	20	5	3	1
M4 × 0.7	6g	PDE4.0ILNEBC	20	5	3	1
M4 × 0.5	6g	PDE4.0GLNEBC	20	5	3	1

Outside diameter	Thickness
D	T

Size	Class	Code	D (mm)	T (mm)	Clearance Holes	Type
M5 × 0.8	6g	PDE5KLNEBC	20	7	4	1
M5 × 0.5	6g	PDE5.0GLNEBC	20	5	4	1
M6 × 1	6g	PDE6.0MLNEBC	20	7	4	1
M6 × 0.75	6g	PDE6.0JLNEBC	20	7	4	1
M6 × 0.5	6g	PDE6.0GLNEBC	20	5	4	1
M7 × 1	6g	PDG7.0MLNEBC	25	9	4	1
M7 × 0.75	6g	PDG7.0JLNEBC	25	9	4	1
M8 × 1.25	6g	PDG8.0NLNEBC	25	9	4	1
M8 × 1	6g	PDG8.0MLNEBC	25	9	4	1
M8 × 0.75	6g	PDG8.0JLNEBC	25	9	4	1
M8 × 0.5	6g	PDG8.0GLNEBC	25	9	4	1
M9 × 1.25	6g	PDG9.0NLNEBC	25	9	5	1
M9 × 1	6g	PDG9.0MLNEBC	25	9	5	1
M10 × 1.5	6g	PDH010OLNEBC	30	11	4	1
M10 × 1.25	6g	PDH010NLNEBC	30	11	4	1
M10 × 1	6g	PDH010MLNEBC	30	11	4	1
M10 × 0.75	6g	PDH010JLNEBC	30	11	4	1
M10 × 0.5	6g	PDH010GLNEBC	30	11	4	1
M11 × 1.5	6g	PDH011OLNEBC	30	11	5	1
M12 × 1.75	6g	PDJ012PLNEBC	38	14	4	1
M12 × 1.5	6g	PDJ012OLNEBC	38	10	4	1
M12 × 1.25	6g	PDJ012NLNEBC	38	10	4	1
M12 × 0.75	6g	PDJ012JLNEBC	38	10	4	1
M12 × 0.5	6g	PDJ012GLNEBC	38	10	4	1
M14 × 2	6g	PDJ014QLNEBC	38	14	5	1
M14 × 1.5	6g	PDJ014OLNEBC	38	10	5	1
M14 × 1.25	6g	PDJ014NLNEBC	38	10	5	1
M14 × 1	6g	PDJ014MLNEBC	38	10	5	1
M15 × 1.5	6g	PDJ015OLNEBC	38	10	5	1
M16 × 2	6g	PDL016QLNEBC	45	18	5	1
M16 × 1.5	6g	PDL016OLNEBC	45	14	5	1
M16 × 1	6g	PDL016MLNEBC	45	14	5	1
M18 × 2.5	6g	PDL018RLNEBC	45	18	5	1
M18 × 2	6g	PDL018QLNEBC	45	14	5	1
M18 × 1.5	6g	PDL018OLNEBC	45	14	5	1
M18 × 1	6g	PDL018MLNEBC	45	14	5	1
M20 × 2.5	6g	PDL020RLNEBC	45	18	5	1
M20 × 2	6g	PDL020QLNEBC	45	14	5	1
M20 × 1.5	6g	PDL020OLNEBC	45	14	5	1
M20 × 1	6g	PDL020MLNEBC	45	14	5	1
M22 × 2	6g	PDP022QLNEBC	55	16	5	1
M22 × 1.5	6g	PDP022OLNEBC	55	16	5	1
M22 × 1	6g	PDP022MLNEBC	55	16	5	1
M24 × 2	6g	PDP024QLNEBC	55	16	5	1
M24 × 1.5	6g	PDP024OLNEBC	55	16	5	1
M24 × 1	6g	PDP024MLNEBC	55	16	5	1
M26 × 1.5	6g	PDP026OLNEBC	55	16	6	1
M27 × 3	6g	PDS027SLNEBC	65	25	6	2
M27 × 2	6g	PDS027QLNEBC	65	18	6	2
M27 × 1.5	6g	PDS027OLNEBC	65	18	6	2

Size	Class	Code	D (mm)	T (mm)	Clearance Holes	Type
M27 × 1	6g	PDS027MLNEBC	65	18	6	2
M28 × 2	6g	PDS028QLNEBC	65	18	6	2
M28 × 1.5	6g	PDS028OLNEBC	65	18	6	2
M30 × 1.5	6g	PDS030OLNEBC	65	18	6	2
M33 × 3.5	6g	PDS033TLNEBC	65	25	8	2
M36 × 4	6g	PDS036ULNEBC	65	25	8	2
Size	Class	Code	D (mm)	T (mm)	Clearance Holes	Type
For Unified Threads						
No.0-80UNF	2A	PDDUN0BGNEBC	16	5	3	1
No.1-64UNC	2A	PDDUN1DGNEBC	16	5	3	1
No.1-72UNF	2A	PDDUN1CGNEBC	16	5	3	1
No.2-56UNC	2A	PDDUN2EGNEBC	16	5	3	1
No.2-64UNF	2A	PDDUN2DGNEBC	16	5	3	1
No.3-48UNC	2A	PDDUN3FGNEBC	16	5	3	1
No.3-56UNF	2A	PDDUN3EGNEBC	16	5	3	1
No.4-40UNC	2A	PDEUN4HGNEBC	20	5	3	1
No.4-48UNF	2A	PDEUN4FGNEBC	20	5	3	1
No.5-40UNC	2A	PDEUN5HGNEBC	20	5	3	1
No.5-44UNF	2A	PDEUN5GGNEBC	20	5	3	1
No.6-32UNC	2A	PDEUN6JGNEBC	20	7	3	1
No.6-40UNF	2A	PDEUN6HGNEBC	20	5	3	1
No.8-32UNC	2A	PDEUN8JGNEBC	20	7	3	1
No.8-36UNF	2A	PDEUN8IGNEBC	20	7	3	1
No.10-24UNC	2A	PDEUNAMGNEBC	20	7	4	1
No.10-32UNF	2A	PDEUNAJGNEBC	20	7	4	1
No.12-24UNC	2A	PDEUNCMGNEBC	20	7	4	1
No.12-28UNF	2A	PDEUNCKGNEBC	20	7	4	1
1/4-20UNC	2A	PDGU04NGNEBC	25	9	4	1
1/4-28UNF	2A	PDGU04KGNEBC	25	9	4	1
5/16-18UNC	2A	PDGU05OGNEBC	25	9	4	1
5/16-24UNF	2A	PDGU05MGNEBC	25	9	4	1
3/8-16UNC	2A	PDHU06PGNEBC	30	11	4	1
3/8-24UNF	2A	PDHU06MGNEBC	30	11	4	1
7/16-14UNC	2A	PDHU07QGNEBC	30	11	5	1
7/16-20UNF	2A	PDHU07NGNEBC	30	11	5	1
1/2-13UNC	2A	PDJU08RGNEBC	38	14	4	1
1/2-20UNF	2A	PDJU08NGNEBC	38	10	4	1
9/16-12UNC	2A	PDJU09SGNEBC	38	14	5	1
9/16-18UNF	2A	PDJU09OGNEBC	38	10	5	1
5/8-11UNC	2A	PDLU10UGNEBC	45	18	5	1
5/8-18UNF	2A	PDLU10OGNEBC	45	14	5	1
3/4-10UNC	2A	PDLU12VGNEBC	45	18	5	1
3/4-16UNF	2A	PDLU12PGNEBC	45	14	5	1
7/8-9UNC	2A	PDPU14WGNEBC	55	22	5	1
7/8-14UNF	2A	PDPU14QGNEBC	55	16	5	1
1 -8UNC	2A	PDPU16XGNEBC	55	22	5	1
1 -12UNF	2A	PDPU16SGNEBC	55	16	5	1

Outside diameter	Thickness	Position of basic dia
D	T	ℓg

Size	Class	Code	D (mm)	T (mm)	Clearance Holes	Type
For G Threads						
G1/8-28	-	PVHG0020NEBC	30	11	4	1
G1/4-19	-	PVJG0040NEBC	38	10	5	1
G3/8-19	-	PVLG0060NEBC	45	14	5	1
G1/2-14	-	PVLG0080NEBC	45	16	5	1
G5/8-14	-	PVPG0100NEBC	55	16	5	1
G3/4-14	-	PVPG0120NEBC	55	16	6	1
G7/8-14	-	PVSG0140NEBC	65	18	6	2
G1-11	-	PVSG0160NEBC	65	18	8	2
G1 1/4-11	-	PVUG0200NEBC	75	20	8	2
G1 1/2-11	-	PVXG0240NEBC	90	22	8	2

Size	Class	Code	D (mm)	T (mm)	ℓg (mm)	Clearance Holes	Type
For NPT Threads							
NPT1/8-27	-	PDJNT020NEBC	38	10	5	4	3
NPT1/4-18	-	PDJNT040NEBC	38	15	8	5	3
NPT3/8-18	-	PDLNT060NEBC	45	15	8	5	3
NPT1/2-14	-	PDLNT080NEBC	45	19	10	6	3
NPT3/4-14	-	PDSNT120NEBC	65	20	10	6	4
NPT1 -11.5	-	PDSNT160NEBC	65	25	12.5	8	4

MEMO

MEMO

MEMO

MEMO

MEMO

YAMAWA
LINE-UPS ARRANGED ON SIZES

M2 Taps	Sizes-1	M9 ~ M24 Taps	Sizes-50
M2 Dies	Sizes-4	M9 ~ M24 Dies	Sizes-62
M3 Taps	Sizes-5	M25 ~ M48 Taps	Sizes-64
M3 Dies	Sizes-8	M25 ~ M48 Dies	Sizes-70
M4 Taps	Sizes-9	For Unified threads Taps	Sizes-72
M4 Dies	Sizes-12	For Unified threads Dies	Sizes-81
M5 Taps	Sizes-13	For Whitworth threads Taps	Sizes-83
M5 Dies	Sizes-16	For Whitworth threads Dies	Sizes-85
M6 Taps	Sizes-17	For Screw threads used on sewing machines Taps (SM)	Sizes-86
M6 Dies	Sizes-21	For Screw threads used on sewing machines Dies (SM)	Sizes-87
M8 Taps	Sizes-22	For Pipe threads Taps	Sizes-88
M8 Dies	Sizes-26	For Pipe threads Dies	Sizes-93
M10 Taps	Sizes-27	For American pipe threads Taps	Sizes-94
M10 Dies	Sizes-32	For American pipe threads Dies	Sizes-95
M12 Taps	Sizes-33	For Miniature threads Taps	Sizes-96
M12 Dies	Sizes-39	For Miniature threads Dies	Sizes-98
M1 ~ M7 Taps	Sizes-40		
M1 ~ M7 Dies	Sizes-48		

Explanation of catalogue contents

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
General purpose	8	R-Y	RY2.0E3	RO	6HX	42	3	3P	RO-1
Standard	5 6 8 11 12	SP	SPP2.0E	SP	P1	42	3	2.5P	SP-4
		+SP	SNPP2.0E						SP-13
		SP 1.5P	SY2.0EPNEBA					1.5P	SP-11
		PO	POQ2.0E	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMP2.0E5	HT	P1	42	3	5P	HT-4

Page shown in line-ups depending on products

Classification of materials

Kind	Chip shape after boring (drilling)	No.	Examples of materials
Ferrous	Chip or powder like ↕ Continuous	①	Cast iron, Ductile cast iron, Sintered material
		②	High hardness material
		③	Heat treated steel (45-55HRC)
		④	Heat treated steel (25-45HRC)
		⑤	High carbon steel, Tool steel, Alloy steel, Heat treated steel
		⑥	Medium carbon steel, Cast steel
		⑦	Stainless steel
		⑧	Low carbon steel
Non-ferrous	Continuous ↕ Chip or powder like	⑨	Titanium alloy
		⑩	Nickel base alloy
		⑪	Rolled aluminum, Copper, Copper alloy
		⑫	Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
		⑬	Thermosetting plastic

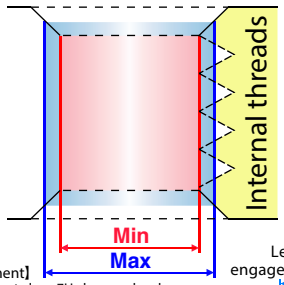
Hardness of materials : Please refer to material composition table shown in technical data.

Flute shape of taps and chip ejection

SP= Spiral	PO= Spiral point	SL= LH spiral	HT= Straight	RO= Forming
Continuous chips	Chip ejection		Broken chips stored in flutes	No chips thread forming

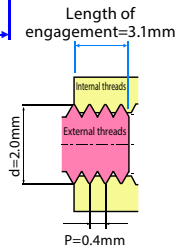
Flowchart : M2 tapping

Boring before tapping — Check 1

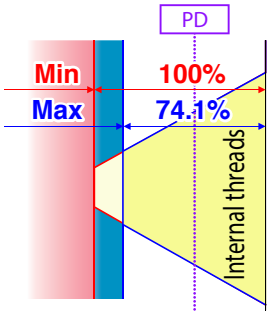


【Length of engagement】
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification \ Engagement classification	Fine	Middle	Coarse	Engagement length
S	Short engagement length	4H	5H	–	S≦1(mm)
M	Normal engagement length	5H	6H	7H	1<M≦3(mm)
L	Long engagement length	6H	7H	8H	3<L(mm)



Engagement ratio on cutting taps

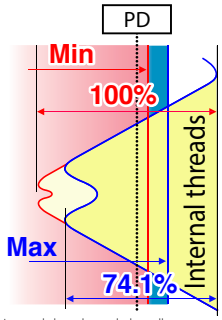


Unit : mm

	Drill size (ref.)	D1 Min	D1 Max
Bored hole size	1.6	1.567	1.679
Engagement ratio	92.4%	100%	74.1%

D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor dimameter.

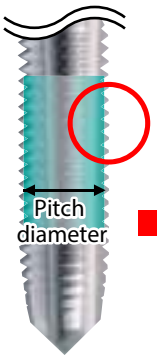
Unit : mm

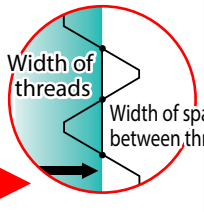
*Hole size for thread forming taps	
Min	Max
1.79	1.84

Forming condition changes depending on workpiece's Material and shape. Above is for customer's reference.

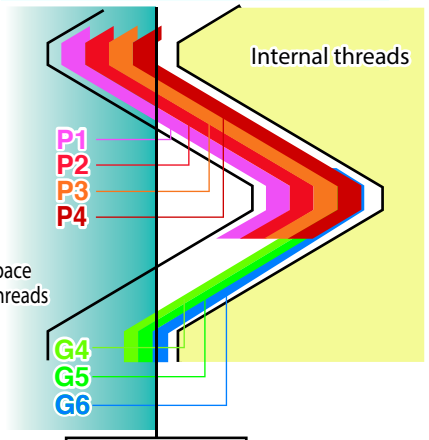
Threading — Check 2

【Pitch diameter】
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads





Tolerance area of tap's pitch diameter



【Thread class of cutting taps】

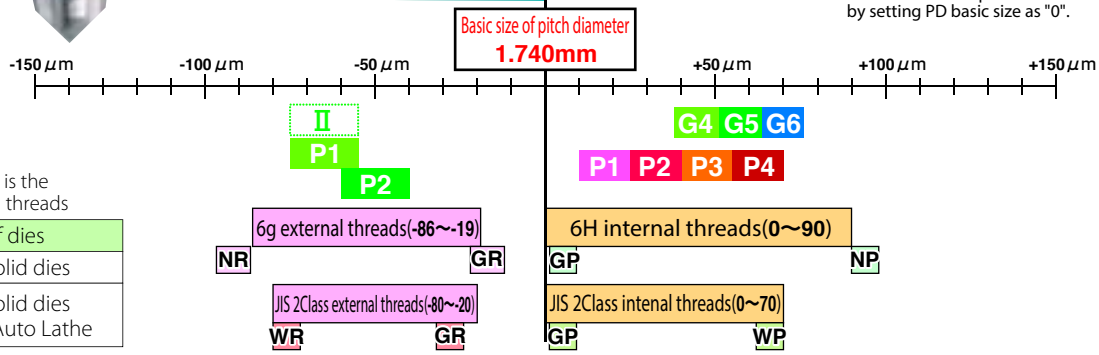
Class	PD tolerance
P1	10μm～25μm
P2	25μm～40μm
P3	40μm～55μm
P4	55μm～70μm

*Above shows the plus tolerance by setting PD basic size as "0".

【Thread class of roll taps】

Class	PD tolerance
G4	38μm～51μm
G5	51μm～64μm
G6	64μm～76μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
Ⅱ	Solid dies
P1 P2	Solid dies for Auto Lathe

Relative position of PD tolerance area of external threads, internal threads, taps and gages.

Gage check — Check 3

(−) ← Basic size of pitch diameter → (+)
1.740mm

Unit : μm

Ring gage pitch diameter (for external threads inspection)			
NR6g	-96 ～ -86	GR6g	-22 ～ -12
WRⅡ	-80 ～ -72	GRⅡ	-32 ～ -24

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

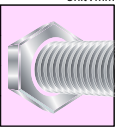
Unit : μm

Plug gage pitch diameter (for internal threads inspection)			
GP6H	2 ～ 10	NP6H	90 ～ 98
GPⅡ	4 ～ 12	WPⅡ	62 ～ 70

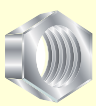
GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Unit : mm

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	1.886～1.981	1.654～1.721	–
JIS 2class	1.890～1.980	1.660～1.720	～1.490



Unit : mm



Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	–	1.740～1.830	1.567～1.679
JIS 2class	–	1.740～1.810	1.567～1.679

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Taps M2×0.4

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
General purpose		8	R-Y	RY2.0E3	RO	6HX	42	3	3P	RO-1
Standard		5 6 8 11 12	SP	SPP2.0E	SP	P1	42	3	2.5P	SP-4
			+SP	SNPP2.0E						SP-13
			SP 1.5P	SY2.0EPNEBA					1.5P	SP-11
			PO	POQ2.0E	PO	P2			5P	PO-4
		1 5 6 12	HT	TNMP2.0E5	HT	P1	42	3	5P	HT-4
				TNMP2.0E1					1.5P	HT-4
	Oversize	5 6 8 11 12	SP	SPQ2.0E	SP	P2	42	3	2.5P	SP-4
				SPR2.0E		P3				SP-4
				SPS2.0E		P4				SP-4
			+SP	SNPQ2.0E		P2				SP-13
				SNPR2.0E		P3				SP-13
				SNPS2.0E		P4				SP-13
			PO	POR2.0E	PO	P3			5P	PO-4
				POS2.0E		P4				PO-4
		1 5 6 12	HT	TNMR2.0E5	HT	P3	42	3	5P	HT-4
				TNMR2.0E1					1.5P	HT-4
				TNMS2.0E5		P4			5P	HT-4
				TNMS2.0E1					1.5P	HT-4
For left hand threads		5 6 8 11 12	SP LH	SPP2.0E--L	SP	P1	42	3	2.5P	SP-20
		1 5 6 12	HT LH	TNMP2.0E5-L	HT	P1	42	3	5P	HT-19
				TNMP2.0E1-L					1.5P	HT-19
Oxidizing		5 6 8	SP OX	SPP2.0EX	SP	P1	42	3	2.5P	SP-16
			+SP OX	SNPP2.0EX						SP-19
			PO OX	POQ2.0EX	PO	P2			5P	PO-11
	Oversize	5 6 8	PO OX	POR2.0EX	PO	P3	42	3	5P	PO-11
			+SP OX	SNPQ2.0EX	SP	P2			2.5P	SP-19
				SNPR2.0EX		P3				SP-19
				SNPS2.0EX		P4				SP-19
TiN coated		7 8 11 12	AU+SP	VSAPQ2.0E	SP	P2	42	3	2.5P	SP-24
		6 7 8 11 12	R+V	RVP42.0EP	RO	G4	42	3	4P	RO-17
				RVP42.0EB					2P	RO-17
				RVP52.0EP		G5			4P	RO-17
				RVP52.0EB					2P	RO-17
				RVP62.0EP		G6			4P	RO-17
				RVP62.0EB					2P	RO-17
Long shank		5 6 8 11 12	LS-SP	SPP2.0EL07	SP	P1	70	3	2.5P	SP-26
				SPP2.0EL10			100			SP-26
			LS-PO	POQ2.0EL07	PO	P2	70		5P	PO-17
				POQ2.0EL10			100			PO-17
		1 5 6 12	LS-HT	TNMP2.0E507	HT	P1	70	3	5P	HT-21
				TNMP2.0E107					1.5P	HT-21
Thread forming taps for steels		6 8	N+RZ	NRZP42.0EP	RO	G4	42	3	4P	RO-3
				NRZP42.0EB					2P	RO-3
				NRZP52.0EP		G5			4P	RO-3
				NRZP52.0EB					2P	RO-3
				NRZP62.0EP		G6			4P	RO-3
				NRZP62.0EB					2P	RO-3
For high carbon steels		1 5 6	HC+PO	PCPQ2.0E	PO	P2	42	3	5P	PO-29
Carbide taps for hard materials		2	UH-CT	UHCR2.0E5	HT	P3	40	4	5P	CT-16
For stainless steels		6 7 8	SU+SP	SUPP2.0E	SP	P1	42	3	2.5P	SP-34
			SU+PO	PUPQ2.0E	PO	P2			5P	PO-23
			SU-HT	TUMQ2.0E4	HT				4P	HT-33
				TUMQ2.0E1					1.5P	HT-33
	Oversize	6 7 8	SU+SP	SUPQ2.0E	SP	P2	42	3	2.5P	SP-34
				SUPR2.0E		P3				SP-34
			SU+PO	PUPR2.0E	PO				5P	PO-23
For cast irons		1	FC-O	TFCM2.0E5	HT	40~25	42	3	5P	HT-38
				TFCM2.0E1					1.5P	HT-38
	Carbide	1 12 13	N-CT FC	TCNR2.0E3	HT	P3	40	3	3P	CT-4
				TCNR2.0E1					1.5P	CT-4
For aluminum alloys		11 12 13	AL+SP	ASHPQ2.0E	SP	P2	42	3	2.5P	SP-52
			AL-SP 1.5P	SY2.0EQLENA					1.5P	SP-54
		11 12	LA-HT	TY2.0EQLEN5	HT	P2	42	3	5P	HT-40
				TY2.0EQLENA					1.5P	HT-40
			LA-O	TLAM2.0E5		40~25			5P	HT-42
				TLAM2.0E1					1.5P	HT-42
	Carbide	11 12 13	N-CT LA	TCNR2.0E3A	HT	P3	40	3	3P	CT-1
				TCNR2.0E1A					1.5P	CT-1
Thread forming taps for non-ferrous metals		11 12	N+RS	NRSP42.0EP	RO	G4	42	3	4P	RO-9
				NRSP42.0EB					2P	RO-9
				NRSP52.0EP		G5			4P	RO-9
				NRSP52.0EB					2P	RO-9
				NRSP62.0EP		G6			4P	RO-9
				NRSP62.0EB					2P	RO-9
Short chamfer		11 12	MG-HT	TMGMQ2.0E1	HT	P2	42	3	1P	HT-47
For thermosetting plastics		13	PL1	TPLM2.0E3	HT	P4	42	3	3P	HT-51
Thread forming taps for dry tapping		5 6 7 11 12	OL+RZ	OLRZP42.0EP	RO	G4	42	3	4P	RO-18
				OLRZP52.0EP		G5				RO-18
Thread forming taps for high carbon steels		5 6 7 11 12	HP+RZ	HRZP42.0EB	RO	G4	42	3	2P	RO-20
				HRZP52.0EB		G5				RO-20
Torqueless thread forming taps	Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM42.0E1	RO	G4	42	3	1P	RO-24
	Seamless	6 7 8 11 12	SURZ	SURZ42.0EB	RO	G4	42	3	2P	RO-26
For deep hole use		5 6 8	S-SP	SSMP2.0E	SP	P1	42	3	2.5P	SP-43
			S-PO	PSMQ2.0E	PO	P2			5P	PO-27
Nut taps		6 8 11 12	NT	NH22.0E	HT	II b	75	1.4	25P	ST-1

Taps M2×0.25

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Standard	5 6 8 11 12	SP	SPP2.0B	SP	P1	42	3	2.5P	SP-4
		PO	POP2.0B	PO				5P	PO-4
	1 5 6 12	HT	TNMP2.0B5	HT	P1	42	3	5P	HT-4
			TNMP2.0B1					1.5P	HT-4
Thread forming taps for steels	6 8	N-RZ	NRZM42.0BP	RO	G4	42	3	4P	RO-3
			NRZM42.0BB					2P	RO-3
			NRZM52.0BP		G5			4P	RO-3
			NRZM52.0BB					2P	RO-3
Thread forming taps for non-ferrous metals	11 12	N-RS	NRSM42.0BP	RO	G4	42	3	4P	RO-9
			NRSM42.0BB					2P	RO-9
			NRSM52.0BP		G5			4P	RO-9
			NRSM52.0BB					2P	RO-9

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

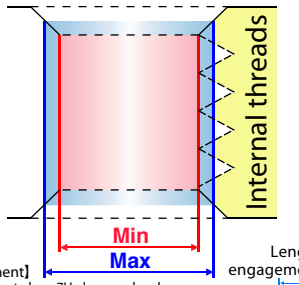
Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection		Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M2×0.4										
Solid dies		HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD2.0EDNEBC	Di-2
						20	7		TYE2.0EDNEBC	Di-2
						25	9		TYG2.0EDNEBC	Di-2
	For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE2.0EDNEBC	Di-10
Rolling dies		HSS	6 7 8 11 12	RS-D	R2	16	5	—	RDQ2.0E	Di-21
					R3				RDR2.0E	Di-21
					R4				RDS2.0E	Di-21
Dies M2×0.25										
Solid dies		HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD2.0BDNEBC	Di-2
						20	7		TYE2.0BDNEBC	Di-2
Rolling dies		HSS	6 7 8 11 12	RS-D	R3	16	5	—	RDR2.0B	Di-21
					R4				RDS2.0B	Di-21

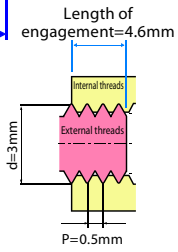
Flowchart : M3 tapping

Boring before tapping — Check 1

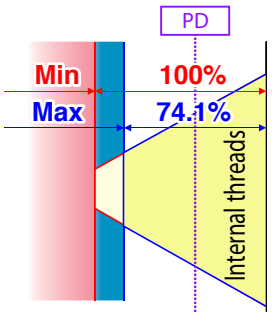


【Length of engagement】
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification \ Engagement classification	Fine	Middle	Coarse	Engagement length
S	Short engagement length	4H	5H	–	S≦1.5(mm)
M	Normal engagement length	5H	6H	7H	1.5<M≦4.5(mm)
L	Long engagement length	6H	7H	8H	4.5<L(mm)



Engagement ratio on cutting taps

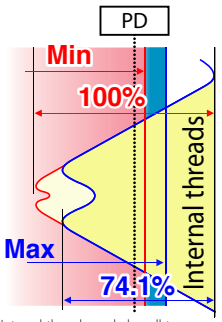


Unit : mm

	Drill size (ref.)	D1 Min	D1 Max
Bored hole size	2.5	2.459	2.599
Engagement ratio	92.4%	100%	74.1%

D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor dimameter.

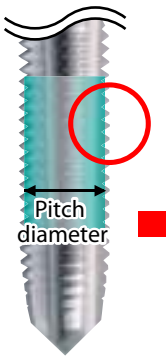
Unit : mm

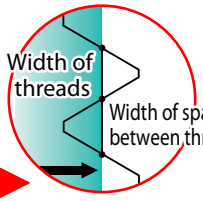
*Hole size for thread forming taps	
Min	Max
2.75	2.82

Forming condition changes depending on workpiece's Material and shape. Above is for customer's reference.

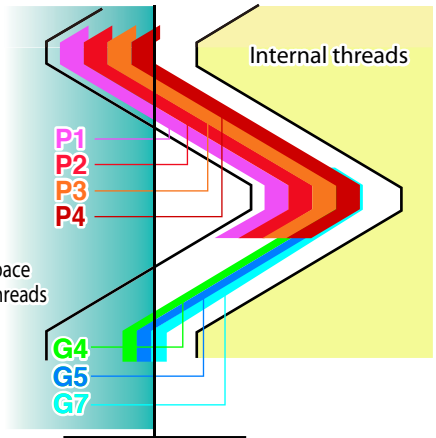
Threading — Check 2

【Pitch diameter】
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads





Tolerance area of tap's pitch diameter



【Thread class of cutting taps】

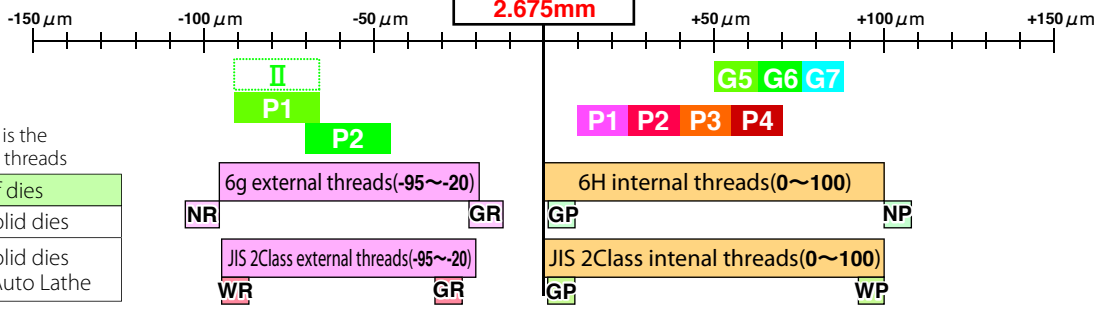
Class	PD tolerance
P1	10μm～25μm
P2	25μm～40μm
P3	40μm～55μm
P4	55μm～70μm

*Above shows the plus tolerance by setting PD basic size as "0".

【Thread class of roll taps】

Class	PD tolerance
G5	51μm～64μm
G6	64μm～76μm
G7	76μm～89μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
Ⅱ	Solid dies
P1 P2	Solid dies for Auto Lathe

Relative position of PD tolerance area of external threads, internal threads, taps and gages.

Gage check — Check 3

(–) ← Basic size of pitch diameter → (+)
2.675mm

Unit : μm

Ring gage pitch diameter (for external threads inspection)			
NR6g	-105～-95	GR6g	-23～-13
WRⅡ	-95～-87	GRⅡ	-32～-24

NR : NOT GO ring gage
GR : GO ring gage
WR : NOT GO working ring gage

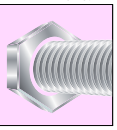
Unit : μm

Plug gage pitch diameter (for internal threads inspection)			
GP6H	2～10	NP6H	100～108
GPⅡ	4～12	WPⅡ	92～100

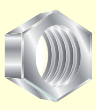
GP : GO plug gage
NP : NOT GO plug gage
WP : NOT GO working plug gage

Unit : mm

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	2.874～2.980	2.580～2.655	–
JIS 2class	2.874～2.980	2.580～2.655	～2.367



Unit : mm



Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	–	2.675～2.775	2.459～2.599
JIS 2class	–	2.675～2.775	2.459～2.599

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Taps M3×0.5

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
General purpose	8	ISP	SI73.0G	SP	-	46	4	2.5P	SP-2
		ISP BP	SI73.0GBP						SP-2
		IPO	PI73.0G	PO				5P	PO-2
		IPO BP	PI73.0GBP						PO-2
		IHT	HI73.0G5	HT				5P	HT-2
			HI73.0G2					2P	HT-2
		IHT BP	HI73.0G5BP					5P	HT-2
			HI73.0G2BP					2P	HT-2
		R-Y	RY3.0G3	RO	6HX			3P	RO-1
Standard	5 6 8 11 12	SP	SPP3.0G	SP	P1	46	4	2.5P	SP-4
		+SP	SNPP3.0G						SP-13
		SP 1.5P	SY3.0GPNEBA					1.5P	SP-11
		PO	POQ3.0G	PO	P2			5P	PO-4
		+PO	PNPQ3.0G						PO-10
	1 5 6 12	HT	TNMQ3.0G5	HT	P2	46	4	5P	HT-5
			TNMQ3.0G1					1.5P	HT-5
Oversize	5 6 8 11 12	SP	SPQ3.0G	SP	P2	46	4	2.5P	SP-4
			SPR3.0G		P3				SP-4
			SPS3.0G		P4				SP-4
		+SP	SNPQ3.0G		P2				SP-13
			SNPR3.0G		P3				SP-13
			SNPS3.0G		P4				SP-13
		PO	POR3.0G	PO	P3			5P	PO-4
			POS3.0G		P4				PO-4
	1 5 6 12	HT	TNMR3.0G5	HT	P3	46	4	5P	HT-5
			TNMR3.0G1					1.5P	HT-5
			TNMS3.0G5		P4			5P	HT-5
			TNMS3.0G1					1.5P	HT-5
			TNMT3.0G5		P5			5P	HT-5
			TNMT3.0G1					1.5P	HT-5
For left hand threads	5 6 8 11 12	SP LH	SPP3.0G--L	SP	P1	46	4	2.5P	SP-20
		PO LH	POQ3.0G--L	PO	P2			5P	PO-14
	1 5 6 12	HT LH	TNMQ3.0G5-L	HT	P2	46	4	5P	HT-19
			TNMQ3.0G1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPP3.0GX	SP	P1	46	4	2.5P	SP-16
		+SP OX	SNPP3.0GX						SP-19
		PO OX	POQ3.0GX	PO	P2			5P	PO-11
		+PO OX	PNPQ3.0GX						PO-13
Oversize	5 6 8	SP OX	SPQ3.0GX	SP	P2	46	4	2.5P	SP-16
			SPR3.0GX		P3				SP-16
		+SP OX	SNPQ3.0GX		P2				SP-19
			SNPR3.0GX		P3				SP-19
			SNPS3.0GX		P4				SP-19
		PO OX	POR3.0GX	PO	P3			5P	PO-11
			POS3.0GX		P4				PO-11
		+PO OX	PNPR3.0GX		P3				PO-13
			PNPS3.0GX		P4				PO-13

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
TiN coated	7 8 11 12	AU+SP	VSAPQ3.0G	SP	P2	46	4	2.5P	SP-24
		AU+SL	VSAPQ3.0GL	SL				5P	SL-4
	5 6 8 11 12	PO V	VPOQ3.0G	PO	P2	46	4	5P	PO-16
	6 7 8 11 12	R+V	RVP53.0GP	RO	G5	46	4	4P	RO-17
			RVP53.0GB					2P	RO-17
			RVP63.0GP		G6			4P	RO-17
			RVP63.0GB					2P	RO-17
			RVP73.0GP		G7			4P	RO-17
			RVP73.0GB					2P	RO-17
			RVP83.0GP		G8			4P	RO-17
Long shank	5 6 8 11 12	LS-SP	SPP3.0GL07	SP	P1	70	4	2.5P	SP-26
			SPP3.0GL10			100			SP-26
			SPP3.0GL12			120			SP-26
			SPP3.0GL15			150			SP-26
		LS-PO	POQ3.0GL07	PO	P2	70		5P	PO-17
			POQ3.0GL10			100			PO-17
			POQ3.0GL12			120			PO-17
			POQ3.0GL15			150			PO-17
	1 5 6 12	LS-HT	TNMP3.0G507	HT	P1	70	4	5P	HT-21
			TNMP3.0G510			100			HT-21
			TNMP3.0G512			120			HT-21
			TNMP3.0G515			150			HT-21
			TNMP3.0G107			70		1.5P	HT-21
			TNMP3.0G110			100			HT-21
			TNMP3.0G112			120			HT-21
			TNMP3.0G115			150			HT-21
Oversize	5 6 8 11 12	LS-SP	SPQ3.0GL10	SP	P2	100	4	2.5P	SP-26
			SPR3.0GL10		P3				SP-26
			SPR3.0GL15			150			SP-26
		LS-PO	POR3.0GL10	PO		100		5P	PO-17
			POR3.0GL15			150			PO-17
	1 5 6 12	LS-HT	TNMR3.0G510	HT	P3	100	4	5P	HT-21
			TNMR3.0G515			150			HT-21
			TNMR3.0G110			100		1.5P	HT-21
			TNMR3.0G115			150			HT-21
With neck	5 6 8 11 12	LS-SP-K	-	SP	P1	100	4	2.5P	SP-32
		LS-PO-K	-	PO	P2			4.5P	PO-22
For left hand threads	5 6 8 11 12	LS-SP LH	SPP3.0GL10L	SP	P1	100	4	2.5P	SP-30
	1 5 6 12	LS-HT LH	TNMP3.0G510L	HT	P1	100	4	5P	HT-29
			TNMP3.0G110L					1.5P	HT-29
TiN coated	5 6 8 11 12	LS-SP V	VSPP3.0GL10	SP	P1	100	4	2.5P	SP-31
		LS-PO V	VPOQ3.0GL10	PO	P2			5P	PO-21
	1 5 6 12	LS-HT V	TNMP3.0G510V	HT	P1	100	4	5P	HT-31
			TNMP3.0G110V					1.5P	HT-31
For soft structural steels	8	E-SP	ESHMP3.0G	SP	P1	46	4	2.5P	SP-45
		3F	ESHMP3.0G-3						SP-45

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Thread forming taps for steels	6 8	N+RZ	NRZP53.0GP	RO	G5	46	4	4P	RO-4
			NRZP53.0GB					2P	RO-4
			NRZP63.0GP		G6			4P	RO-4
			NRZP63.0GB					2P	RO-4
			NRZP73.0GP		G7			4P	RO-4
			NRZP73.0GB					2P	RO-4
			NRZP83.0GP		G8			4P	RO-4
			NRZP83.0GB					2P	RO-4
Long shank	6 8	LS-N-RZ	NRZM53.0GP10	RO	G5	100	4	4P	RO-7
			NRZM53.0GB10					2P	RO-7
			NRZM63.0GP10		G6			4P	RO-7
			NRZM63.0GB10					2P	RO-7
For high carbon steels	5 6	HC+SP	SCPP3.0G	SP	P1	46	4	2.5P	SP-47
	1 5 6	HC-PO	PCMQ3.0G	PO	P2	46	4	5P	PO-29
Oxidizing	5 6	HC+SP OX	SCPP3.0GX	SP	P1	46	4	2.5P	SP-49
For hard-to-machine materials	1 4 5	EH-PO	EPHMR3.0G	PO	P3	46	4	4.5P	PO-33
		EH-HT	ETHMR3.0G5	HT				5P	HT-55
			ETHMR3.0G1					2.5P	HT-55
Powdered HSS	4 5	PM-SP	-	SP	P3	46	4	2.75P	SP-60
		PM-PO	-	PO				5.5P	PO-35
For titanium alloys	4 5 6 9	ZET-B	ZETBMQ3.0G	SP	P2	46	4	3P	SP-58
		ZET-P	ZETPMR3.0G	SL	P3			5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMQ3.0G	SP	P2	46	4	3P	SP-59
		ZEN-P	ZENPMR3.0G	PO	P3			4.5P	PO-34
Carbide taps for hard materials	2	UH-CT	UHCR3.0G5	HT	P3	46	5	5P	CT-16
	3	EH-CT	EHCR3.0G5	HT	P3	46	4	5P	CT-14
For stainless steels	6 7 8	SU+SP	SUPP3.0G	SP	P1	46	4	2.5P	SP-34
		SU+SL	SUPQ3.0GL	SL	P2			5P	SL-8
		SU-PO	PUMQ3.0G	PO					PO-23
		SU-HT	TUMQ3.0G4	HT				4P	HT-33
			TUMQ3.0G1					1.5P	HT-33
Oversize	6 7 8	SU+SP	SUPQ3.0G	SP	P2	46	4	2.5P	SP-34
			SUPR3.0G						SP-34
		SU-PO	PUMR3.0G	PO	P3			5P	PO-23
			PUMS3.0G		P4				PO-23
For deep hole use	6 7 8	SU-S-SP	SSMP3.0G-SU	SP	P1	46	4	2.5P	SP-41
		LS-SU-S-SP	-			100			SP-42
		LS-SU-S-PO	-	PO	P2			4.5P	PO-26
For hard-to-machine materials	5 6 7	SU2-SP	SU2MQ3.0G	SP	P2	46	4	3P	SP-39
For cast irons	1	FC-HT	TY3.0GRAEN5	HT	P3	46	4	5P	HT-36
			TY3.0GRAENA					1.5P	HT-36
		FC-O	TFCM3.0G5		40~25			5P	HT-38
			TFCM3.0G1					1.5P	HT-38
Carbide	1 12 13	N-CT FC	TCNR3.0G3	HT	P3	46	4	3P	CT-4
			TCNR3.0G1					1.5P	CT-4
Long shank, carbide	1 12 13	LS-N-CT	-	HT	P3	100	4	3P	CT-8
			-					1.5P	CT-8

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For aluminum alloys	11 12 13	AL+SP	ASHPQ3.0G	SP	P2	46	4	2.5P	SP-52
		AL-SP 1.5P	SY3.0GQLENA					1.5P	SP-54
	11 12	LA-HT	TY3.0GQLEN5	HT	P2	46	4	5P	HT-40
			TY3.0GQLENA					1.5P	HT-40
		LA-O	TLAM3.0G5		40~25			5P	HT-42
			TLAM3.0G1					1.5P	HT-42
Carbide	11 12 13	N-CT LA	TCNR3.0G3A	HT	P3	46	4	3P	CT-1
			TCNR3.0G1A					1.5P	CT-1
Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P3	46	4	2.5P	CT-9
Carbide spiral pointed taps	11 12 13	N-CT-PO	PCNR3.0G	PO	P3	46	4	5P	CT-10
Thread forming taps for non-ferrous metals	11 12	N+RS	NRSP53.0GP	RO	G5	46	4	4P	RO-10
			NRSP53.0GB					2P	RO-10
			NRSP63.0GP		G6			4P	RO-10
			NRSP63.0GB					2P	RO-10
			NRSP73.0GP		G7			4P	RO-10
			NRSP73.0GB					2P	RO-10
			NRSP83.0GP		G8			4P	RO-10
			NRSP83.0GB					2P	RO-10
Long shank	11 12	LS-N-RS	NRSM53.0GP10	RO	G5	100	4	4P	RO-14
			NRSM53.0GB10					2P	RO-14
			NRSM63.0GP10		G6			4P	RO-14
			NRSM63.0GB10					2P	RO-14
Short chamfer	11 12	MG-HT	TMGMQ3.0G1	HT	P2	46	4	1P	HT-47
For thermosetting plastics	13	PL1	TPLM3.0G3	HT	P5	46	4	3P	HT-51
For high speed	5 6 8 11 12 13	F-SP	VFSHMQ3.0G	SP	P2	46	4	2.5P	SP-62
		LS-F-SP	-			100			SP-63
		F-SL	VFSHMQ3.0GL	SL		46		5P	SL-11
		LS-F-SL	-			100			SL-12
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP53.0GP	RO	G5	46	4	4P	RO-18
			OLRZP63.0GP		G6				RO-18
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP53.0GP	RO	G5	46	4	4P	RO-21
			HRZP53.0GB					2P	RO-21
			HRZP63.0GP		G6			4P	RO-21
			HRZP63.0GB					2P	RO-21
Torqueless thread forming taps — Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM53.0G1	RO	G5	46	4	1P	RO-24
Torqueless thread forming taps — Seamless	6 7 8 11 12	SURZ	SURZ53.0GB	RO	G5	46	4	2P	RO-26
For deep hole use	5 6 8	S-SP	SSMP3.0G-3	SP	P1	46	4	2.5P	SP-43
		S-PO	PSMQ3.0G	PO	P2			5P	PO-27
Oversize	5 6 8	S-SP	SSMR3.0G	SP	P3	46	4	2.5P	SP-43
Low spiral	1 5 6 11 12	LO-SP 8°	LSHMP3.0G8	SP	P1	46	4	2.5P	SP-55
		LO-SP 15°	LSHMP3.0G15						SP-55
		LO-SP 20°	LSHMP3.0G20						SP-55
For helical coil wire screw thread inserts	11 12	AL-SP	SW3.0G1LEN	SP	1b	52	5	2.5P	SP-52
		AL-PO	-	PO				5P	PO-31
		AL-HT	TW3.0G1LEB5	HT					HT-48
			TW3.0G1LEBA					1.5P	HT-48
		N-RS	RW3.0G3LENP	RO	G3			4P	RO-13
			RW3.0G3LENB					2P	RO-13
Carbide	11 12	N-CT LA	TW3.0G1LWB5	HT	1b	52	5	5P	CT-3
			TW3.0G1LWBA					1.5P	CT-3
Nut taps	6 8 11 12	NT	NH23.0G	HT	II b	90	2.1	30P	ST-1

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

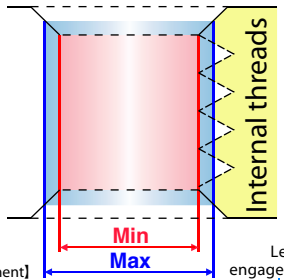
	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M3 0.6									
Standard	5 6 8 11 12	SP	SPP3.0H	SP	P1	46	4	2.5P	SP-4
		PO	POQ3.0H	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMQ3.0H5	HT	P2	46	4	5P	HT-5
			TNMQ3.0H1					1.5P	HT-5
For left hand threads	1 5 6 12	HT LH	TNMQ3.0H5-L	HT	P2	46	4	5P	HT-19
			TNMQ3.0H1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPP3.0HX	SP	P1	46	4	2.5P	SP-16
		PO OX	POQ3.0HX	PO	P2			5P	PO-12
For stainless steels	6 7 8	SU+SP	SUPP3.0H	SP	P1	46	4	2.5P	SP-34
		SU-PO	PUMQ3.0H	PO	P2			5P	PO-23
Taps M3×0.35									
Standard	5 6 8 11 12	SP	SPP3.0D	SP	P1	46	4	2.5P	SP-4
		PO	POQ3.0D	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMQ3.0D5	HT	P2	46	4	5P	HT-5
			TNMQ3.0D1					1.5P	HT-5
For left hand threads	1 5 6 12	HT LH	TNMQ3.0D5-L	HT	P2	46	4	5P	HT-19
			TNMQ3.0D1-L					1.5P	HT-19
Thread forming taps for steels	6 8	N-RZ	NRZM53.0DP	RO	G5	46	4	4P	RO-4
			NRZM53.0DB					2P	RO-4
For cast irons — Carbide	1 12 13	N-CT FC	TCNR3.0D3	HT	P3	46	4	3P	CT-4
			TCNR3.0D1					1.5P	CT-5
Thread forming taps for non-ferrous metals	11 12	N-RS	NRSM53.0DP	RO	G5	46	4	4P	RO-10
			NRSM53.0DB					2P	RO-10
			NRSM63.0DP		G6			4P	RO-10
			NRSM63.0DB					2P	RO-10

Dies selection		Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M3×0.5										
Solid dies		HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD3.0GDNEBC	Di-2
						20	7		TYE3.0GDNEBC	Di-2
						25	9		TYG3.0GDNEBC	Di-2
	For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE3.0GDNEBC	Di-10
						25	9		GYG3.0GDNEBC	Di-10
Rolling dies		HSS	6 7 8 11 12	RS-D	R2	20	7	—	REQ3.0G	Di-22
					R4				RES3.0G	Di-22
New rolling dies		HSS	6 7 8 11 12	N-RSD	R4	25	9	—	NRGS3.0G	Di-23
Dies M3 0.6										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE3.0HDNEBC	Di-2
						25	9		TYG3.0HDNEBC	Di-2
Dies M3×0.35										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE3.0DDNEBC	Di-3
						25	9		TYG3.0DDNEBC	Di-3
	For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE3.0DDNEBC	Di-10
Rolling dies		HSS	6 7 8 11 12	RS-D	R2	20	7	—	REQ3.0D	Di-22
					R4				RES3.0D	Di-22
					R5				RET3.0D	Di-22

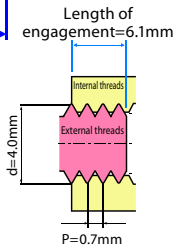
Flowchart : M4 tapping

Boring before tapping — Check 1

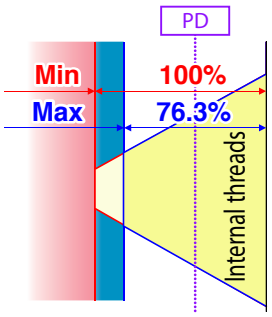


【Length of engagement】
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement classification / Engagement length classification	Fine	Middle	Coarse	Engagement length
S	Short engagement length	4H	5H	–	S≦2(mm)
M	Normal engagement length	5H	6H	7H	2<M≦6(mm)
L	Long engagement length	6H	7H	8H	6<L(mm)



Engagement ratio on cutting taps

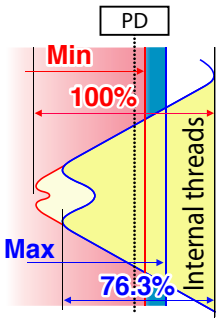


Unit : mm

	Drill size (ref.)	D1 Min	D1 Max
Bored hole size	3.3	3.242	3.422
Engagement ratio	92.4%	100%	76.3%

D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor dimameter.

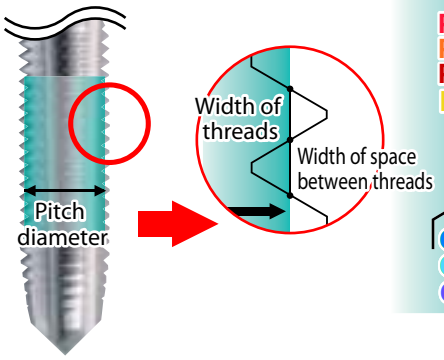
Unit : mm

*Hole size for thread forming taps	
Min	Max
3.65	3.72

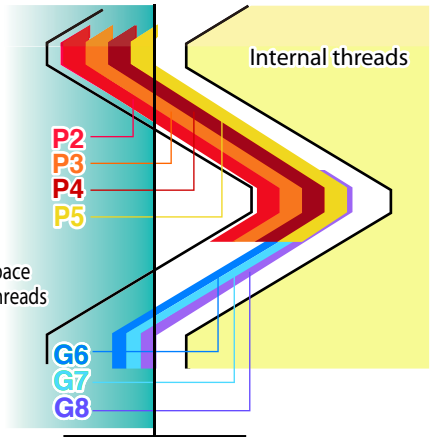
Forming condition changes depending on workpiece's Material and shape. Above is for customer's reference.

Threading — Check 2

【Pitch diameter】
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



【Thread class of cutting taps】

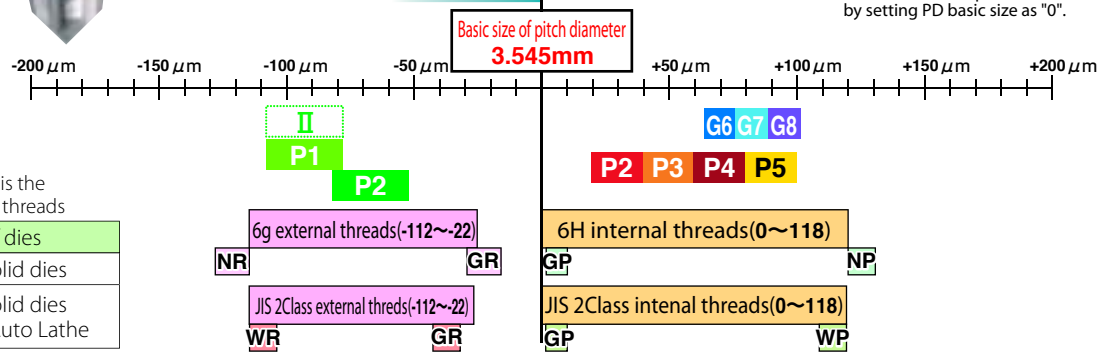
Class	PD tolerance
P2	20μm～40μm
P3	40μm～60μm
P4	60μm～80μm
P5	80μm～100μm

*Above shows the plus tolerance by setting PD basic size as "0".

【Thread class of roll taps】

Class	PD tolerance
G6	64μm～76μm
G7	76μm～89μm
G8	89μm～102μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
Ⅱ	Solid dies
P1	Solid dies for Auto Lathe
P2	

Relative position of PD tolerance area of external threads, internal threads, taps and gages.

Gage check — Check 3

(−) ← Basic size of pitch diameter → (+)
3.545mm

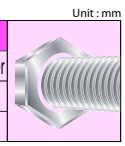
Unit : μm

Ring gage pitch diameter (for external threads inspection)			
NR6g	-126 ～-112	GR6g	-31 ～-17
WRⅡ	-112 ～-104	GRⅡ	-34 ～-26

NR : NOT GO ring gage **GR** : GO ring gage
WR : NOT GO working ring gage

Unit : mm

Accuracy of external threads	Major diameter	Pitch diameter	Minor diameter
6g	3.838～3.978	3.433～3.523	–
JIS 2class	3.838～3.978	3.433～3.523	～3.119

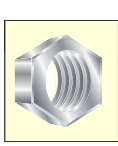


Unit : μm

Plug gage pitch diameter (for internal threads inspection)			
GP6H	2 ～ 10	NP6H	118 ～ 126
GPⅡ	4 ～ 12	WPⅡ	110 ～ 118

GP : GO plug gage **NP** : NOT GO plug gage
WP : NOT GO working plug gage

Unit : mm



Accuracy of internal threads	Major diameter	Pitch diameter	Minor diameter
6H	–	3.545～3.663	3.242～3.422
JIS 2class	–	3.545～3.663	3.242～3.422

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Taps M4×0.7

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
General purpose	8	ISP	SI74.0I	SP	-	52	5	2.5P	SP-2
		ISP BP	SI74.0IBP						SP-2
		IPO	PI74.0I	PO				5P	PO-2
		IPO BP	PI74.0IBP						PO-2
		IHT	HI74.0I5	HT				5P	HT-2
			HI74.0I2					2P	HT-2
		IHT BP	HI74.0I5BP					5P	HT-2
			HI74.0I2BP					2P	HT-2
		R-Y	RY4.0I3	RO	6HX			3P	RO-1
Standard	5 6 8 11 12	SP	SPQ4.0I	SP	P2	52	5	2.5P	SP-4
		+SP	SNPQ4.0I						SP-13
		SP 1.5P	SY4.0IQNEBA					1.5P	SP-11
		PO	POQ4.0I	PO				5P	PO-4
		+PO	PNPQ4.0I						PO-10
	1 5 6 12	HT	TNMQ4.0I5	HT	P2	52	5	5P	HT-5
			TNMQ4.0I1					1.5P	HT-5
Oversize	5 6 8 11 12	SP	SPR4.0I	SP	P3	52	5	2.5P	SP-4
			SPS4.0I		P4				SP-4
		+SP	SNPR4.0I		P3				SP-14
			SNPS4.0I		P4				SP-14
		PO	POR4.0I	PO	P3			5P	PO-4
			POS4.0I		P4				PO-4
	1 5 6 12	HT 3F	TNMR4.0I53	HT	P3			5P	HT-5
		3F	TNMR4.0I13					1.5P	HT-5
		3F	TNMS4.0I53		P4			5P	HT-5
		3F	TNMS4.0I13					1.5P	HT-5
		3F	TNMT4.0I53		P5			5P	HT-5
		3F	TNMT4.0I13					1.5P	HT-5
			TNMT4.0I5					5P	HT-6
			TNMT4.0I1					1.5P	HT-6
For left hand threads	5 6 8 11 12	SP LH	SPQ4.0I--L	SP	P2	52	5	2.5P	SP-20
		PO LH	POQ4.0I--L	PO				5P	PO-14
	1 5 6 12	HT LH	TNMQ4.0I5-L	HT	P2	52	5	5P	HT-19
			TNMQ4.0I1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPQ4.0IX	SP	P2	52	5	2.5P	SP-17
		+SP OX	SNPQ4.0IX						SP-19
		PO OX	POQ4.0IX	PO				5P	PO-12
		+PO OX	PNPQ4.0IX						PO-13
Oxidizing Oversize	5 6 8	SP OX	SPR4.0IX	SP	P3	52	5	2.5P	SP-17
			SPS4.0IX		P4				SP-17
		+SP OX	SNPR4.0IX		P3				SP-19
			SNPS4.0IX		P4				SP-19
		PO OX	POR4.0IX	PO	P3			5P	PO-12
		+PO OX	PNPR4.0IX						PO-13
			PNPS4.0IX		P4				PO-13

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
TiN coated	7 8 11 12	AU+SP	VSAPQ4.0I	SP	P2	52	5	2.5P	SP-24
		AU+SL	VSAPR4.0IL	SL	P3			5P	SL-4
	5 6 8 11 12	PO V	VPOQ4.0I	PO	P2	52	5	5P	PO-16
	6 7 8 11 12	R+V	RVP54.0IP	RO	G5	52	5	4P	RO-17
			RVP54.0IB					2P	RO-17
			RVP64.0IP		G6			4P	RO-17
			RVP64.0IB					2P	RO-17
			RVP74.0IP		G7			4P	RO-17
			RVP74.0IB					2P	RO-17
			RVP84.0IP		G8			4P	RO-17
			RVP84.0IB					2P	RO-17
Long shank	5 6 8 11 12	LS-SP	SPQ4.0IL07	SP	P2	70	5	2.5P	SP-26
			SPQ4.0IL10			100			SP-26
			SPQ4.0IL12			120			SP-26
			SPQ4.0IL15			150			SP-26
		LS-PO	POQ4.0IL07	PO		70		5P	PO-17
			POQ4.0IL10			100			PO-17
			POQ4.0IL12			120			PO-17
			POQ4.0IL15			150			PO-17
	1 5 6 12	LS-HT	TNMQ4.0I507	HT	P2	70	5	5P	HT-21
			TNMQ4.0I510			100			HT-21
			TNMQ4.0I512			120			HT-21
			TNMQ4.0I515			150			HT-22
			TNMQ4.0I107			70		1.5P	HT-22
			TNMQ4.0I110			100			HT-22
			TNMQ4.0I112			120			HT-22
			TNMQ4.0I115			150			HT-22
Oversize	5 6 8 11 12	LS-SP	SPR4.0IL10	SP	P3	100	5	2.5P	SP-26
			SPR4.0IL15			150			SP-26
		LS-PO	POR4.0IL10	PO		100		5P	PO-17
			POR4.0IL15			150			PO-17
	1 5 6 12	LS-HT	TNMR4.0I510	HT	P3	100	5	5P	HT-22
			TNMR4.0I515			150			HT-22
			TNMR4.0I110			100		1.5P	HT-22
			TNMR4.0I115			150			HT-22
With neck	5 6 8 11 12	LS-SP-K	-	SP	P2	100	5	2.5P	SP-32
		LS-PO-K	-	PO				5P	PO-22
For left hand threads	5 6 8 11 12	LS-SP LH	SPQ4.0IL10L	SP	P2	100	5	2.5P	SP-30
	1 5 6 12	LS-HT LH	TNMQ4.0I510L	HT	P2	100	5	5P	HT-29
			TNMQ4.0I110L					1.5P	HT-29
TiN coated	5 6 8 11 12	LS-SP V	VSPQ4.0IL10	SP	P2	100	5	2.5P	SP-31
		LS-PO V	VPOQ4.0IL10	PO				4.5P	PO-21
	1 5 6 12	LS-HT V	TNMQ4.0I510V	HT	P2	100	5	5P	HT-31
			TNMQ4.0I110V					1.5P	HT-31
For soft structural steels	8	E-SP	ESHMQ4.0I	SP	P2	52	5	2.5P	SP-45

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Thread forming taps for steels	6 8	N+RZ	NRZP54.0IP	RO	G5	52	5	4P	RO-4
			NRZP54.0IB					2P	RO-4
			NRZP64.0IP		G6			4P	RO-4
			NRZP64.0IB					2P	RO-4
			NRZP74.0IP		G7			4P	RO-4
			NRZP74.0IB					2P	RO-4
			NRZP84.0IP		G8			4P	RO-4
			NRZP84.0IB					2P	RO-4
Long shank	6 8	LS-N-RZ	NRZM64.0IP10	RO	G6	100	5	4P	RO-7
			NRZM64.0IB10					2P	RO-7
			NRZM74.0IP10		G7			4P	RO-7
			NRZM74.0IB10					2P	RO-7
For high carbon steels	5 6	HC+SP	SCPQ4.0I	SP	P2	52	5	2.5P	SP-47
	1 5 6	HC-PO	PCMQ4.0I	PO	P2	52	5	5P	PO-29
Oxidizing	5 6	HC+SP OX	SCPQ4.0IX	SP	P2	52	5	2.5P	SP-49
For hard-to-machine materials	1 4 5	EH-PO	EPHMR4.0I	PO	P3	52	5	4.5P	PO-33
		EH-HT	ETHMR4.0I5	HT				5P	HT-55
			ETHMR4.0I1					2.5P	HT-55
Powdered HSS	4 5	PM-SP	-	SP	P3	52	5	2.75P	SP-60
		LS-PM-SP	-			100			SP-61
		PM-PO	-	PO		52		5.5P	PO-35
		LS-PM-PO	-			100			PO-36
For titanium alloys	4 5 6 9	ZET-B	ZETBMR4.0I	SP	P3	52	5	3P	SP-58
		ZET-P	ZETPMR4.0I	SL				5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR4.0I	SP	P3	52	5	3P	SP-59
		ZEN-P	ZENPMR4.0I	PO				4.5P	PO-34
Carbide taps for hard materials	2	UH-CT	UHCR4.0I5	HT	P3	52	5.5	5P	CT-16
	3	EH-CT	EHCR4.0I5	HT	P3	52	5	5P	CT-14
For stainless steels	6 7 8	SU+SP	SUPQ4.0I	SP	P2	52	5	2.5P	SP-34
		SU+SL	SUPQ4.0IL	SL				5P	SL-8
		SU-PO	PUMQ4.0I	PO					PO-24
		SU-HT	TUMQ4.0I4	HT				4P	HT-33
			TUMQ4.0I1					1.5P	HT-33
Oversize	6 7 8	SU+SP	SUPR4.0I	SP	P3	52	5	2.5P	SP-34
			SUPS4.0I		P4				SP-34
		SU-PO	PUMR4.0I	PO	P3			5P	PO-24
			PUMS4.0I		P4				PO-24
For deep hole use	6 7 8	SU-S-SP	SSMQ4.0I-SU	SP	P2	52	5	2.5P	SP-41
		LS-SU-S-SP	-			100			SP-42
			-			150			SP-42
		LS-SU-S-PO	-	PO		100		4.5P	PO-26
			-			150			PO-26
For hard-to-machine materials	5 6 7	SU2-SP	SU2MQ4.0I	SP	P2	52	5	3P	SP-39
For cast irons	1	FC-HT	TY4.0IRAEN5	HT	P3	52	5	5P	HT-36
			TY4.0IRAENA					1.5P	HT-36
		FC-O	TFCM4.0I5		45~25			5P	HT-38
			TFCM4.0I1					1.5P	HT-38
Carbide	1 12 13	N-CT FC	TCNR4.0I3	HT	P3	52	5	3P	CT-5
			TCNR4.0I1					1.5P	CT-5
Long shank, carbide	1 12 13	LS-N-CT	-	HT	P3	100	5	3P	CT-8
			-					1.5P	CT-8

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For aluminum alloys	11 12 13	AL+SP	ASHPR4.0I	SP	P3	52	5	2.5P	SP-52
		AL-SP 1.5P	SY4.0IRLENA					1.5P	SP-54
	11 12	LA-HT	TY4.0IRLEN5	HT	P3	52	5	5P	HT-40
			TY4.0IRLENA					1.5P	HT-40
		LA-O	TLAM4.0I5		45~25			5P	HT-43
			TLAM4.0I1					1.5P	HT-43
Carbide	11 12 13	N-CT LA	TCNR4.0I3A	HT	P3	52	5	3P	CT-1
			TCNR4.0I1A					1.5P	CT-1
Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P3	52	5	2.5P	CT-9
Carbide spiral pointed taps	11 12 13	N-CT-PO	PCNR4.0I	PO	P3	52	5	5P	CT-10
Thread forming taps for non-ferrous metals	11 12	N+RS	NRSP54.0IP	RO	G5	52	5	4P	RO-10
			NRSP54.0IB					2P	RO-10
			NRSP64.0IP		G6			4P	RO-10
			NRSP64.0IB					2P	RO-10
			NRSP74.0IP		G7			4P	RO-10
			NRSP74.0IB					2P	RO-10
			NRSP84.0IP		G8			4P	RO-10
			NRSP84.0IB					2P	RO-10
Long shank	11 12	LS-N-RS	NRSM64.0IP10	RO	G6	100	5	4P	RO-14
			NRSM64.0IB10					2P	RO-14
			NRSM74.0IP10		G7			4P	RO-14
			NRSM74.0IB10					2P	RO-14
For thermosetting plastics	13	PL1	TPLM4.0I3	HT	P5	52	5	3P	HT-51
For high speed	5 6 8 11 12 13	F-SP	VFSHMQ4.0I	SP	P2	52	5	2.5P	SP-62
		LS-F-SP	-			100			SP-63
		F-SL	VFSHMQ4.0IL	SL		52		5P	SL-11
		LS-F-SL	-			100			SL-12
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP64.0IP	RO	G6	52	5	4P	RO-18
			OLRZP74.0IP		G7				RO-18
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP64.0IP	RO	G6	52	5	4P	RO-21
			HRZP64.0IB					2P	RO-21
			HRZP74.0IP		G7			4P	RO-21
			HRZP74.0IB					2P	RO-21
Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	SRZM64.0I1	RO	G6	52	5	1P	RO-24
For deep hole use	5 6 8	S-SP	SSMQ4.0I	SP	P2	52	5	2.5P	SP-43
		S-PO	PSMQ4.0I	PO				5P	PO-27
Oversize	5 6 8	S-SP	SSMR4.0I	SP	P3	52	5	2.5P	SP-43
Low spiral fluted taps	1 5 6 11 12	LO-SP 8°	LSHMQ4.0I8	SP	P2	52	5	2.5P	SP-55
		LO-SP 15°	LSHMQ4.0I15						SP-55
		LO-SP 20°	LSHMQ4.0I20						SP-55
For helical coil wire screw thread inserts	11 12	AL-SP	SW4.0I1LEN	SP	1b	60	5.5	2.5P	SP-52
		AL-PO	-	PO				5P	PO-31
		AL-HT	TW4.0I1LEB5	HT					HT-48
			TW4.0I1LEBA					1.5P	HT-48
		N-RS	RW4.0I4LENP	RO	G4			4P	RO-13
			RW4.0I4LENB					2P	RO-13
Carbide	11 12	N-CT LA	TW4.0I1LWB5	HT	1b	60	5.5	5P	CT-3
			TW4.0I1LWBA					1.5P	CT-3
Nut taps	6 8 11 12	NT	NH24.0I	HT	II b	100	2.8	27P	ST-1

Think threads with YAMAWA

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

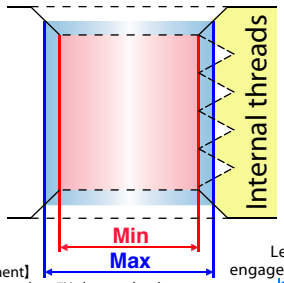
	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps 4M 0.75									
Standard	5 6 8 11 12	SP	SPQ4.0J	SP	P2	52	5	2.5P	SP-4
		PO	POQ4.0J	PO				5P	PO-4
	1 5 6 12	HT	TNMQ4.0J5	HT	P2	52	5	5P	HT-6
		3F	TNMQ4.0J53						HT-6
			TNMQ4.0J1					1.5P	HT-6
		3F	TNMQ4.0J13						HT-6
For left hand threads	1 5 6 12	HT LH	TNMQ4.0J5-L	HT	P2	52	5	5P	HT-19
			TNMQ4.0J1-L					1.5P	HT-19
Oxidizing	5 6 8	PO OX	POQ4.0JX	PO	P2	52	5	5P	PO-12
For stainless steels	6 7 8	SU+SP	SUPQ4.0J	SP	P2	52	5	2.5P	SP-35
		SU-PO	PUMQ4.0J	PO				5P	PO-24
Taps M4×0.5									
Standard	5 6 8 11 12	SP	SPP4.0G	SP	P1	52	5	2.5P	SP-4
		PO	POQ4.0G	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMQ4.0G5	HT	P2	52	5	5P	HT-6
			TNMQ4.0G1					1.5P	HT-6
For left hand threads	1 5 6 12	HT LH	TNMQ4.0G5-L	HT	P2	52	5	5P	HT-19
			TNMQ4.0G1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPP4.0GX	SP	P1	52	5	2.5P	SP-17
Thread forming taps for steels	6 8	N-RZ	NRZM54.0GP	RO	G5	52	5	4P	RO-4
			NRZM54.0GB					2P	RO-4
			NRZM64.0GP		G6			4P	RO-4
			NRZM64.0GB					2P	RO-4
			NRZM74.0GB		G7				RO-4
For cast irons — Carbide	1 12 13	N-CT FC	TCNR4.0G3	HT	P3	52	5	3P	CT-5
			TCNR4.0G1					1.5P	CT-5
For aluminum alloys — Carbide	11 12 13	N-CT LA	TCNR4.0G3A	HT	P3	52	5	3P	CT-1
			TCNR4.0G1A					1.5P	CT-1
Thread forming taps for non-ferrous metals	11 12	N-RS	NRSM64.0GP	RO	G6	52	5	4P	RO-10
			NRSM64.0GB					2P	RO-10
			NRSM74.0GP		G7			4P	RO-10
			NRSM74.0GB					2P	RO-10

Dies selection	Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M4×0.7									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE4.0IDNEBC	Di-3
					25	9		TYG4.0IDNEBC	Di-3
					38	13		TYJ4.0IDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE4.0IDNEBC	Di-10
					25	9		GYG4.0IDNEBC	Di-10
New rolling dies	HSS	6 7 8 11 12	N-RSD	R4	25	9	—	NRGS4.0I	Di-23
Dies 4M 0.75									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE4.0JDNEBC	Di-3
					25	9		TYG4.0JDNEBC	Di-3
Dies M4×0.5									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE4.0GDNEBC	Di-3
					25	9		TYG4.0GDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE4.0GDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R5	20	7	—	RET4.0G	Di-22
				R6				REU4.0G	Di-22
Dies M4×0.35									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE4.0DDNEBC	Di-3

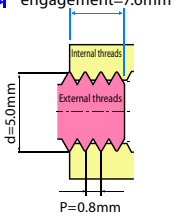
Flowchart : M5 tapping

Boring before tapping — Check 1

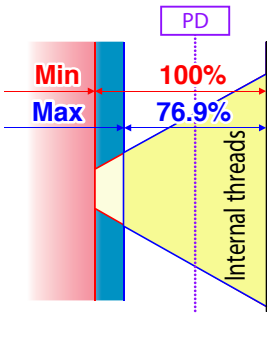


【Length of engagement】
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification \ Engagement classification	Fine	Middle	Coarse	Engagement length
S	Short engagement length	4H	5H	–	S≦2.5(mm)
M	Normal engagement length	5H	6H	7H	2.5<M≦7.5(mm)
L	Long engagement length	6H	7H	8H	7.5<L(mm)



Engagement ratio on cutting taps

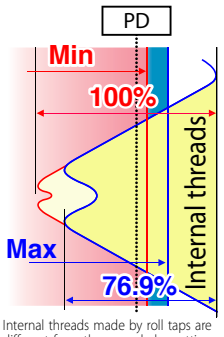


Unit : mm

	Drill size (ref.)	D1 Min	D1 Max
Bored hole size	4.2	4.134	4.334
Engagement ratio	92.4%	100%	76.9%

D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor dimameter.

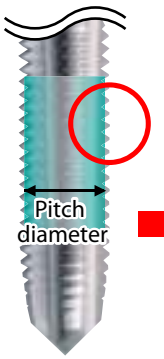
Unit : mm

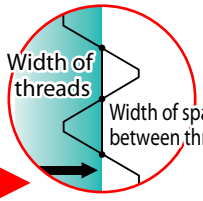
*Hole size for thread forming taps	
Min	Max
4.59	4.67

Forming condition changes depending on workpiece's Material and shape. Above is for customer's reference.

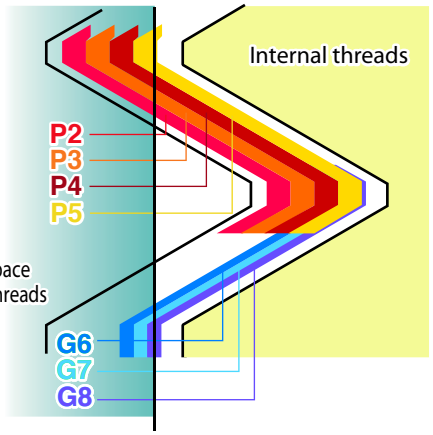
Threading — Check 2

【Pitch diameter】
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads





Tolerance area of tap's pitch diameter



【Thread class of cutting taps】

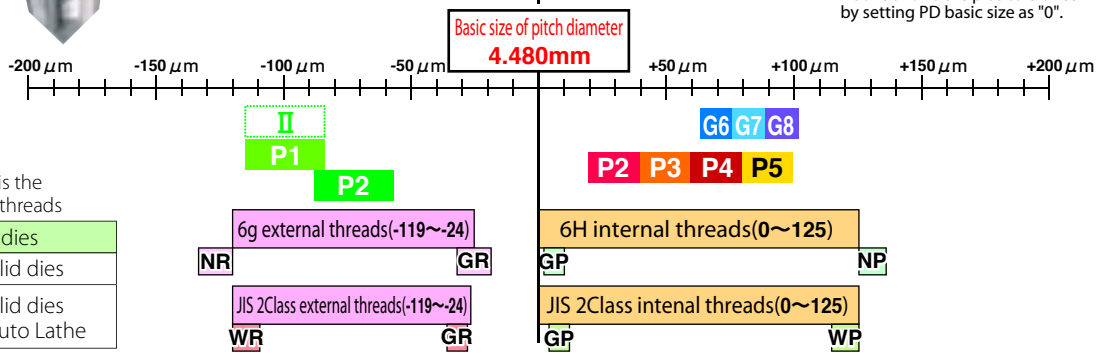
Class	PD tolerance
P2	20μm～40μm
P3	40μm～60μm
P4	60μm～80μm
P5	80μm～100μm

*Above shows the plus tolerance by setting PD basic size as "0".

【Thread class of roll taps】

Class	PD tolerance
G6	64μm～76μm
G7	76μm～89μm
G8	89μm～102μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
Ⅱ	Solid dies
P1 P2	Solid dies for Auto Lathe

Relative position of PD tolerance area of external threads, internal threads, taps and gages.

Gage check — Check 3

(−) ← Basic size of pitch diameter → (+)
4.480mm

Unit : μm

Ring gage pitch diameter (for external threads inspection)			
NR6g	-133 ～ -119	GR6g	-33 ～-19
WRⅡ	-119 ～ -111	GRⅡ	-36 ～-28

NR : NOT GO ring gage **GR** : GO ring gage
WR : NOT GO working ring gage

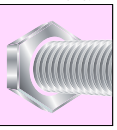
Unit : μm

Plug gage pitch diameter (for internal threads inspection)			
GP6H	2 ～ 10	NP6H	125～133
GPⅡ	4 ～ 12	WPⅡ	117～125

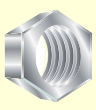
GP : GO plug gage **NP** : NOT GO plug gage
WP : NOT GO working plug gage

Unit : mm

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	4.826～4.976	4.361～4.456	–
JIS 2class	4.826～4.976	4.361～4.456	～3.994



Unit : mm



Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	–	4.480～4.605	4.134～4.334
JIS 2Class	–	4.480～4.605	4.134～4.334

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Taps M5×0.8

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
General purpose	8	ISP	SI75.0K	SP	-	60	5.5	2.5P	SP-2
		ISP BP	SI75.0KBP						SP-2
		IPO	PI75.0K	PO				5P	PO-2
		IPO BP	PI75.0KBP						PO-2
		IHT	HI75.0K5	HT				5P	HT-2
			HI75.0K2					2P	HT-2
		IHT BP	HI75.0K5BP					5P	HT-2
			HI75.0K2BP					2P	HT-2
		R-Y	RY5.0K3	RO	6HX			3P	RO-1
Standard	5 6 8 11 12	SP	SPQ5.0K	SP	P2	60	5.5	2.5P	SP-4
		+SP	SNPQ5.0K						SP-14
		SP 1.5P	SY5.0KQNEBA					1.5P	SP-11
		PO	POQ5.0K	PO				5P	PO-4
		+PO	PNPQ5.0K						PO-10
	1 5 6 12	HT	TNMR5.0K5	HT	P3	60	5.5	5P	HT-6
			TNMR5.0K1					1.5P	HT-6
Oversize	5 6 8 11 12	SP	SPR5.0K	SP	P3	60	5.5	2.5P	SP-5
			SPS5.0K		P4				SP-5
		+SP	SNPR5.0K		P3				SP-14
			SNPS5.0K		P4				SP-14
		PO	POR5.0K	PO	P3			5P	PO-4
			POS5.0K		P4				PO-4
	1 5 6 12	HT 3F	TNMS5.0K53	HT	P4	60	5.5	5P	HT-6
			TNMS5.0K13					1.5P	HT-6
		3F	TNMT5.0K53		P5			5P	HT-6
			TNMT5.0K13					1.5P	HT-6
			TNMS5.0K5		P4			5P	HT-6
			TNMS5.0K1					1.5P	HT-6
			TNMT5.0K5		P5			5P	HT-6
			TNMT5.0K1					1.5P	HT-6
For left hand threads	5 6 8 11 12	SP LH	SPQ5.0K--L	SP	P2	60	5.5	2.5P	SP-20
		PO LH	POQ5.0K--L	PO				5P	PO-14
	1 5 6 12	HT LH	TNMR5.0K5-L	HT	P3	60	5.5	5P	HT-19
			TNMR5.0K1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPQ5.0KX	SP	P2	60	5.5	2.5P	SP-17
		+SP OX	SNPQ5.0KX						SP-19
		PO OX	POQ5.0KX	PO				5P	PO-12
		+PO OX	PNPQ5.0KX						PO-13
Oversize	5 6 8	SP OX	SPR5.0KX	SP	P3	60	5.5	2.5P	SP-17
			SPS5.0KX		P4				SP-17
		+SP OX	SNPR5.0KX		P3				SP-19
			SNPS5.0KX		P4				SP-19
		PO OX	POR5.0KX	PO	P3			5P	PO-12
		+PO OX	PNPR5.0KX						PO-13
			PNPS5.0KX		P4				XXXX

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
TiN coated	7 8 11 12	AU+SP	VSAPQ5.0K	SP	P2	60	5.5	2.5P	SP-24
		AU+SL	VSAPR5.0KL	SL	P3			5P	SL-4
	5 6 8 11 12	PO V	VPOQ5.0K	PO	P2	60	5.5	5P	PO-16
	6 7 8 11 12	R+V	RVP55.0KP	RO	G5	60	5.5	4P	RO-17
			RVP55.0KB					2P	RO-17
			RVP65.0KP		G6			4P	RO-17
			RVP65.0KB					2P	RO-17
			RVP75.0KP		G7			4P	RO-17
			RVP75.0KB					2P	RO-17
			RVP85.0KP		G8			4P	RO-17
			RVP85.0KB					2P	RO-17
Long shank	5 6 8 11 12	LS-SP	SPQ5.0KL10	SP	P2	100	5.5	2.5P	SP-27
			SPQ5.0KL12			120			SP-27
			SPQ5.0KL15			150			SP-27
		LS-PO	POQ5.0KL10	PO		100		5P	PO-18
			POQ5.0KL12			120			PO-18
			POQ5.0KL15			150			PO-18
	1 5 6 12	LS-HT	TNMQ5.0K507	HT	P2	70	5.5	5P	HT-22
			TNMQ5.0K510			100			HT-22
			TNMQ5.0K512			120			HT-22
			TNMQ5.0K515			150			HT-22
			TNMQ5.0K107			70		1.5P	HT-22
			TNMQ5.0K110			100			HT-22
			TNMQ5.0K112			120			HT-22
			TNMQ5.0K115			150			HT-22
Oversize	5 6 8 11 12	LS-SP	SPR5.0KL10	SP	P3	100	5.5	2.5P	SP-27
			SPR5.0KL15			150			SP-27
		LS-PO	POR5.0KL10	PO		100		5P	PO-18
			POR5.0KL15			150			PO-18
			POS5.0KL15		P4				PO-18
	1 5 6 12	LS-HT	TNMR5.0K510	HT	P3	100	5.5	5P	HT-22
			TNMR5.0K515			150			HT-22
			TNMR5.0K110			100		1.5P	HT-22
			TNMR5.0K115			150			HT-22
With neck	5 6 8 11 12	LS-SP-K	-	SP	P2	100	5.5	2.5P	SP-32
		LS-PO-K	-	PO				4.5P	PO-22
For left hand threads	5 6 8 11 12	LS-SP LH	SPQ5.0KL10L	SP	P2	100	5.5	2.5P	SP-30
	1 5 6 12	LS-HT LH	TNMQ5.0K510L	HT	P2	100	5.5	5P	HT-29
			TNMQ5.0K110L					1.5P	HT-29
TiN coated	5 6 8 11 12	LS-SP V	VSPQ5.0KL10	SP	P2	100	5.5	2.5P	SP-31
		LS-PO V	VPOQ5.0KL10	PO				5P	PO-21
	1 5 6 12	LS-HT V	TNMQ5.0K510V	HT	P2	100	5.5	5P	HT-31
			TNMQ5.0K110V					1.5P	HT-31
For soft structural steels	8	E-SP	ESHMQ5.0K	SP	P2	60	5.5	2.5P	SP-45

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Thread forming taps for steels	6 8	N+RZ	NRZP55.0KP	RO	G5	60	5.5	4P	RO-4
			NRZP55.0KB					2P	RO-4
			NRZP65.0KP		G6			4P	RO-4
			NRZP65.0KB					2P	RO-4
			NRZP75.0KP		G7			4P	RO-4
			NRZP75.0KB					2P	RO-4
			NRZP85.0KP		G8			4P	RO-4
			NRZP85.0KB					2P	RO-4
Long shank	6 8	LS-N-RZ	NRZM65.0KP10	RO	G6	100	5.5	4P	RO-7
			NRZM65.0KB10					2P	RO-7
			NRZM75.0KP10		G7			4P	RO-7
			NRZM75.0KB10					2P	RO-7
For high carbon steels	5 6	HC+SP	SCPQ5.0K	SP	P2	60	5.5	2.5P	SP-47
	1 5 6	HC-PO	PCMQ5.0K	PO	P2	60	5.5	5P	PO-29
Oxidizing	5 6	HC+SP OX	SCPQ5.0KX	SP	P2	60	5.5	2.5P	SP-49
For hard-to-machine materials	1 4 5	EH-PO	EPHMR5.0K	PO	P3	60	5.5	4.5P	PO-33
		EH-HT	ETHMR5.0K5	HT				5P	HT-55
			ETHMR5.0K1					2.5P	HT-55
Powdered HSS	4 5	PM-SP	-	SP	P3	60	5.5	2.75P	SP-60
		LS-PM-SP	-			100			SP-61
		PM-PO	-	PO		60		5.5P	PO-35
		LS-PM-PO	-			100			PO-36
For titanium alloys	4 5 6 9	ZET-B	ZETBMR5.0K	SP	P3	60	5.5	3P	SP-58
		ZET-P	ZETPMR5.0K	SL				5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR5.0K	SP	P3	60	5.5	3P	SP-59
		ZEN-P	ZENPMR5.0K	PO				4.5P	PO-34
Carbide taps for hard materials	2	UH-CT	UHCR5.0K5	HT	P3	60	6	5P	CT-16
	3	EH-CT	EHCR5.0K5	HT	P3	60	5.5	5P	CT-14
For stainless steels	6 7 8	SU+SP	SUPQ5.0K	SP	P2	60	5.5	2.5P	SP-35
		SU+SL	SUPR5.0KL	SL	P3			5P	SL-8
		SU-PO	PUMQ5.0K	PO	P2				PO-24
		SU-HT	TUMQ5.0K4	HT				4P	HT-33
			TUMQ5.0K1					1.5P	HT-33
Oversize	6 7 8	SU+SP	SUPR5.0K	SP	P3	60	5.5	2.5P	SP-35
			SUPS5.0K		P4				SP-35
		SU-PO	PUMR5.0K	PO	P3			5P	PO-24
			PUMS5.0K		P4				PO-24
For deep hole use	6 7 8	SU-S-SP	SSMQ5.0K-SU	SP	P2	60	5.5	2.5P	SP-41
		LS-SU-S-SP	-			100			SP-42
			-			150			SP-42
		LS-SU-S-PO	-	PO		100		4.5P	PO-26
			-			150			PO-26
For hard-to-machine materials	5 6 7	SU2-SP	SU2MQ5.0K	SP	P2	60	5.5	3P	SP-39
For cast irons	1	FC-HT	TY5.0KRAEN5	HT	P3	60	5.5	5P	HT-36
			TY5.0KRAENA					1.5P	HT-36
		FC-O	TFCM5.0K5		50~30			5P	HT-38
			TFCM5.0K1					1.5P	HT-38
Carbide	1 12 13	N-CT FC	TCNR5.0K3	HT	P3	60	5.5	3P	CT-5
			TCNR5.0K1					1.5P	CT-5
Long shank, carbide	1 12 13	LS-N-CT	-	HT	P3	100	5.5	3P	CT-8
			-					1.5P	CT-8

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
For aluminum alloys	11 12 13	AL+SP	ASHPR5.0K	SP	P3	60	5.5	2.5P	SP-52
		AL-SP 1.5P	SY5.0KRLENA					1.5P	SP-54
	11 12	LA-HT	TY5.0KRLEN5	HT	P3	60	5.5	5P	HT-40
			TY5.0KRLENA					1.5P	HT-40
		LA-O	TLAM5.0K5		50~30			5P	HT-43
			TLAM5.0K1					1.5P	HT-43
Carbide	11 12 13	N-CT LA	TCNR5.0K3A	HT	P3	60	5.5	3P	CT-2
			TCNR5.0K1A					1.5P	CT-2
Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P3	60	5.5	2.5P	CT-9
Carbide spiral pointed taps	11 12 13	N-CT-PO	PCNR5.0K	PO	P3	60	5.5	5P	CT-10
Thread forming taps for non-ferrous metals	11 12	N+RS	NRSP55.0KP	RO	G5	60	5.5	4P	RO-10
			NRSP55.0KB					2P	RO-10
			NRSP65.0KP		G6			4P	RO-10
			NRSP65.0KB					2P	RO-10
			NRSP75.0KP		G7			4P	RO-10
			NRSP75.0KB					2P	RO-10
			NRSP85.0KB		G8				RO-10
Long shank	11 12	LS-N-RS	NRSM65.0KP10	RO	G6	100	5.5	4P	RO-14
			NRSM65.0KB10					2P	RO-14
			NRSM75.0KP10		G7			4P	RO-14
			NRSM75.0KB10					2P	RO-14
For thermosetting plastics	13	PL1	TPLM5.0K3	HT	P5	60	5.5	3P	HT-51
For high speed	5 6 8 11 12 13	F-SP	VFSHMQ5.0K	SP	P2	60	5.5	2.5P	SP-62
		LS-F-SP	-			100			SP-63
		F-SL	VFSHMQ5.0KL	SL		60		5P	SL-11
		LS-F-SL	-			100			SL-12
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP65.0KP	RO	G6	60	5.5	4P	RO-19
			OLRZP75.0KP		G7				RO-19
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP+RZ	HRZP65.0KP	RO	G6	60	5.5	4P	RO-21
			HRZP65.0KB					2P	RO-21
			HRZP75.0KP		G7			4P	RO-21
			HRZP75.0KB					2P	RO-21
Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	SRZM65.0K1	RO	G6	60	5.5	1P	RO-24
For deep hole use	5 6 8	S-SP	SSMQ5.0K	SP	P2	60	5.5	2.5P	SP-43
		S-PO	PSMQ5.0K	PO				5P	PO-27
Oversize	5 6 8	S-SP	SSMR5.0K	SP	P3	60	5.5	2.5P	SP-43
Low spiral	1 5 6 11 12	LO-SP 8°	LSHMQ5.0K8	SP	P2	60	5.5	2.5P	SP-55
		LO-SP 15°	LSHMQ5.0K15						SP-55
		LO-SP 20°	LSHMQ5.0K20						SP-55
For helical coil wire screw thread inserts	11 12	AL-SP	SW5.0K1LEN	SP	1b	62	6	2.5P	SP-52
		AL-PO	-	PO				5P	PO-31
		AL-HT	TW5.0K1LEB5	HT					HT-48
			TW5.0K1LEBA					1.5P	HT-48
		N-RS	RW5.0K4LENP	RO	G4			4P	RO-13
			RW5.0K4LENB					2P	RO-13
Carbide	11 12	N-CT LA	TW5.0K1LWB5	HT	1b	62	6	5P	CT-3
			TW5.0K1LWBA					1.5P	CT-3
Nut taps	6 8 11 12	NT	NH25.0K	HT	II b	110	3.6	24P	ST-1

Think threads with YAMAWA

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

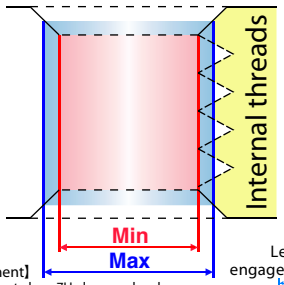
	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M5 0.9									
Standard	5 6 8 11 12	SP	SPQ5.0L	SP	P2	60	5.5	2.5P	SP-5
		PO	POQ5.0L	PO				5P	PO-4
	1 5 6 12	HT	TNMQ5.0L5	HT	P2	60	5.5	5P	HT-6
		3F	TNMQ5.0L53						HT-6
			TNMQ5.0L1					1.5P	HT-6
		3F	TNMQ5.0L13						HT-6
For left hand threads	1 5 6 12	HT LH	TNMQ5.0L5-L	HT	P2	60	5.5	5P	HT-19
			TNMQ5.0L1-L					1.5P	HT-19
Oxidizing	5 6 8	PO OX	POQ5.0LX	PO	P2	60	5.5	5P	PO-12
For stainless steels	6 7 8	SU+SP	SUPQ5.0L	SP	P2	60	5.5	2.5P	SP-35
		SU-PO	PUMQ5.0L	PO				5P	PO-24
Taps M5×0.75									
Standard	5 6 8 11 12	SP	SPQ5.0J	SP	P2	60	5.5	2.5P	SP-5
	1 5 6 12	HT	TNMQ5.0J5	HT	P2	60	5.5	5P	HT-6
			TNMQ5.0J1					1.5P	HT-6
Taps M5×0.5									
Standard	5 6 8 11 12	SP	SPP5.0G	SP	P1	60	5.5	2.5P	SP-5
		PO	POQ5.0G	PO	P2			5P	PO-5
	1 5 6 12	HT	TNMQ5.0G5	HT	P2	60	5.5	5P	HT-6
			TNMQ5.0G1					1.5P	HT-6
Oversize	1 5 6 12	HT	TNMR5.0G5	HT	P3	60	5.5	5P	HT-6
			TNMR5.0G1					1.5P	HT-6
For left hand threads	1 5 6 12	HT LH	TNMQ5.0G5-L	HT	P2	60	5.5	5P	HT-19
			TNMQ5.0G1-L					1.5P	HT-19
Thread forming taps for steels	6 8	N-RZ	NRZM65.0GP	RO	G6	60	5.5	4P	RO-4
			NRZM65.0GB					2P	RO-4
For cast irons — Carbide	1 12 13	N-CT FC	TCNR5.0G3	HT	P3	52	5.5	3P	CT-5
			TCNR5.0G1					1.5P	CT-5
For aluminum alloys — Carbide	11 12 13	N-CT LA	TCNR5.0G3A	HT	P3	52	5.5	3P	CT-2
			TCNR5.0G1A					1.5P	CT-2
Thread forming taps for non-ferrous metals	11 12	N-RS	NRSM65.0GP	RO	G6	60	5.5	4P	RO-11
			NRSM65.0GB					2P	RO-11
			NRSM75.0GP		G7			4P	RO-11
			NRSM75.0GB					2P	RO-11

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M5×0.8									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE5.0KDNEBC	Di-3
					25	9		TYGS.0KDNEBC	Di-3
					38	13		TYJS.0KDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE5.0KDNEBC	Di-10
					25	9		GYGS.0KDNEBC	Di-10
New rolling dies	HSS	6 7 8 11 12	N-RSD	R5	25	9	—	NRGT5.0K	Di-23
Dies 5M 0.9									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE5.0LDNEBC	Di-3
					25	9		TYGS.0LDNEBC	Di-3
Dies M5×0.75									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE5.0JDNEBC	Di-3
Dies M5×0.5									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE5.0GDNEBC	Di-3
					25	9		TYGS.0GDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE5.0GDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R3	20	7	—	RER5.0G	Di-22
				R4				RES5.0G	Di-22
				R5				RET5.0G	Di-22
				R6				REU5.0G	Di-22

Flowchart : M6 tapping

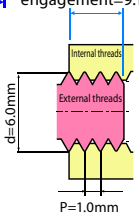
Boring before tapping — Check 1



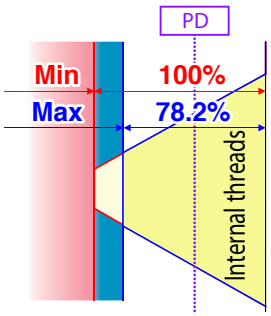
【Length of engagement】
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification \ Engagement classification	Fine	Middle	Coarse	Engagement length
S	Short engagement length	4H	5H	–	S≦3(mm)
M	Normal engagement length	5H	6H	7H	3<M≦9(mm)
L	Long engagement length	6H	7H	8H	9<L(mm)

Length of engagement=9.1mm



Engagement ratio on cutting taps

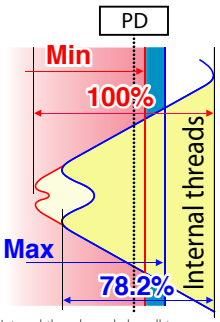


Unit : mm

	Drill size (ref.)	D1 Min	D1 Max
Bored hole size	5.0	4.917	5.153
Engagement ratio	92.4%	100%	78.2%

D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor dimameter.

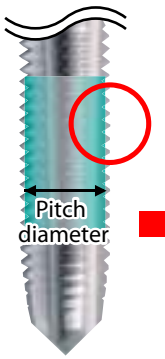
Unit : mm

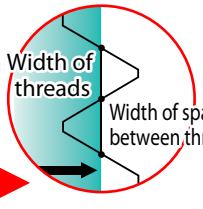
*Hole size for thread forming taps	
Min	Max
5.49	5.59

Forming condition changes depending on workpiece's Material and shape. Above is for customer's reference.

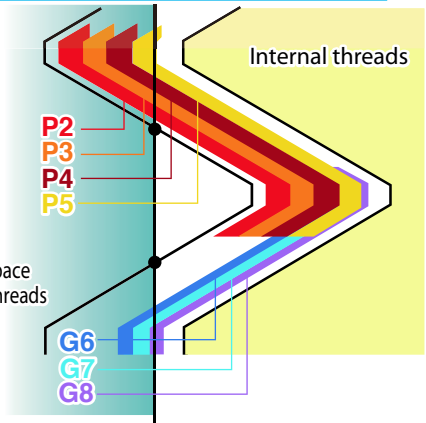
Threading — Check 2

【Pitch diameter】
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads





Tolerance area of tap's pitch diameter



【Thread class of cutting taps】

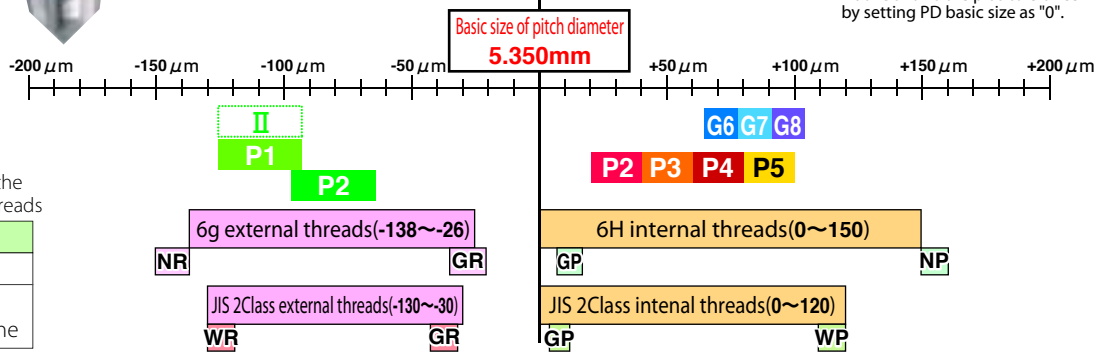
Class	PD tolerance
P2	20μm～40μm
P3	40μm～60μm
P4	60μm～80μm
P5	80μm～100μm

*Above shows the plus tolerance by setting PD basic size as "0".

【Thread class of roll taps】

Class	PD tolerance
G6	64μm～76μm
G7	76μm～89μm
G8	89μm～102μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
Ⅱ	Solid dies
P1	Solid dies for Auto Lathe
P2	

Relative position of PD tolerance area of external threads, internal threads, taps and gages.

Gage check — Check 3

(−) ← Basic size of pitch diameter → (+)
5.350mm

Unit : μm

Ring gage pitch diameter (for external threads inspection)			
NR6g	-152～-138	GR6g	-35 ～ -21
WRⅡ	-130～-122	GRⅡ	-42 ～ -34

NR : NOT GO ring gage **GR** : GO ring gage
WR : NOT GO working ring gage

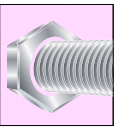
Unit : μm

Plug gage pitch diameter (for internal threads inspection)			
GP6H	7 ～ 17	NP6H	150 ～ 160
GPⅡ	4 ～ 12	WPⅡ	112 ～ 120

GP : GO plug gage **NP** : NOT GO plug gage
WP : NOT GO working plug gage

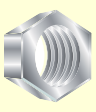
Unit : mm

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	5.794～5.974	5.212～5.324	–
JIS 2class	5.820～5.970	5.220～5.320	～4.743



Unit : mm

Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	–	5.350～5.500	4.917～5.153
JIS 2class	–	5.350～5.470	4.917～5.153



Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Taps M6×1

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
General purpose	8	ISP	SI76.0M	SP	-	62	6	2.5P	SP-2
		ISP BP	SI76.0MBP						SP-2
		IPO	PI76.0M	PO				5P	PO-2
		IPO BP	PI76.0MBP						PO-2
		IHT	HI76.0M5	HT				5P	HT-2
			HI76.0M2					2P	HT-2
		IHT BP	HI76.0M5BP					5P	HT-2
			HI76.0M2BP					2P	HT-2
		R-Y	RY6.0M3	RO	6HX			3P	RO-1
Standard	5 6 8 11 12	SP	SPQ6.0M	SP	P2	62	6	2.5P	SP-5
			SPQ6.0M-T						SP-5
		+SP	SNPQ6.0M						SP-14
		SP 1.5P	SY6.0MQNEBA					1.5P	SP-11
		PO	POQ6.0M	PO				5P	PO-5
		+PO	PNPQ6.0M						PO-10
	1 5 6 12	HT	TNMQ6.0M5	HT	P2	62	6	5P	HT-6
			TNMQ6.0M1					1.5P	HT-6
Oversize	5 6 8 11 12	SP	SPR6.0M	SP	P3	62	6	2.5P	SP-5
			SPS6.0M		P4				SP-5
		+SP	SNPR6.0M		P3				SP-14
			SNPS6.0M		P4				SP-14
		PO	POR6.0M	PO	P3			5P	PO-5
			POS6.0M		P4				PO-5
	1 5 6 12	HT 3F	TNMR6.0M53	HT	P3	62	6	5P	HT-6
			TNMR6.0M13					1.5P	HT-6
		HT 3F	TNMS6.0M53		P4			5P	HT-6
			TNMS6.0M13					1.5P	HT-6
		HT 3F	TNMT6.0M53		P5			5P	HT-6
			TNMT6.0M13					1.5P	HT-6
		HT 4F	TNMS6.0M5		P4			5P	HT-6
			TNMS6.0M1					1.5P	HT-6
			TNMT6.0M5		P5			5P	HT-6
			TNMT6.0M1					1.5P	HT-6
For left hand threads	5 6 8 11 12	SP LH	SPQ6.0M--L	SP	P2	62	6	2.5P	SP-20
		PO LH	POQ6.0M--L	PO				5P	PO-14
	1 5 6 12	HT LH	TNMQ6.0M5-L	HT	P2	62	6	5P	HT-19
			TNMQ6.0M1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPQ6.0MX	SP	P2	62	6	2.5P	SP-17
		+SP OX	SNPQ6.0MX						SP-19
		PO OX	POQ6.0MX	PO				5P	PO-12
		+PO OX	PNPQ6.0MX						PO-13
Oversize	5 6 8	SP OX	SPR6.0MX	SP	P3	62	6	2.5P	SP-17
			SPS6.0MX		P4				SP-17
		+SP OX	SNPR6.0MX		P3				SP-19
			SNPS6.0MX		P4				SP-19
		PO OX	POR6.0MX	PO	P3			5P	PO-12
		+PO OX	PNPR6.0MX		P3				PO-13
			PNPS6.0MX		P4				PO-13
TiN coated	7 8 11 12	AU+SP	VSAPQ6.0M	SP	P2	62	6	2.5P	SP-24
		AU+SL	VSAPR6.0ML	SL	P3			5P	SL-4
	5 6 8 11 12	PO V	VPOQ6.0M	PO	P2	62	6	5P	PO-16
		R+V	RVP66.0MP	RO	G6			4P	RO-17
			RVP66.0MB					2P	RO-17
		R+V	RVP76.0MP	RO	G7			4P	RO-17
			RVP76.0MB					2P	RO-17
Long shank	5 6 8 11 12	LS-SP	SPQ6.0ML10	SP	P2	100	6	2.5P	SP-27
			SPQ6.0ML12			120			SP-27
			SPQ6.0ML15			150			SP-27
			SPQ6.0ML20			200			SP-27
		LS-PO	POQ6.0ML10	PO		100		5P	PO-18
			POQ6.0ML12			120			PO-18
			POQ6.0ML15			150			PO-18
			POQ6.0ML20			200			PO-18
	1 5 6 12	LS-HT	TNMQ6.0M510	HT	P2	100	6	5P	HT-22
			TNMQ6.0M512			120			HT-22
			TNMQ6.0M515			150			HT-22
			TNMQ6.0M520			200			HT-22
			TNMQ6.0M110			100		1.5P	HT-22
			TNMQ6.0M112			120			HT-22
			TNMQ6.0M115			150			HT-22
			TNMQ6.0M120			200			HT-22
Oversize	5 6 8 11 12	LS-SP	SPR6.0ML10	SP	P3	100	6	2.5P	SP-27
			SPR6.0ML15			150			SP-27
		LS-PO	POR6.0ML10	PO		100		5P	PO-18
			POR6.0ML15			150			PO-18
			POS6.0ML15		P4				PO-18
	1 5 6 12	LS-HT	TNMR6.0M510	HT	P3	100	6	5P	HT-22
			TNMR6.0M515			150			HT-22
			TNMR6.0M110			100		1.5P	HT-22
			TNMR6.0M115			150			HT-22
With neck	5 6 8 11 12	LS-SP-K	-	SP	P2	100	6	2.5P	SP-32
		LS-PO-K	-	PO				5P	PO-22
For left hand threads	5 6 8 11 12	LS-SP LH	SPQ6.0ML10L	SP	P2	100	6	2.5P	SP-30
			SPQ6.0ML15L			150			SP-30
	1 5 6 12	LS-HT LH	TNMQ6.0M510L	HT	P2	100	6	5P	HT-29
			TNMQ6.0M515L			150			HT-29
			TNMQ6.0M110L			100		1.5P	HT-29
			TNMQ6.0M115L			150			HT-29
TiN coated	5 6 8 11 12	LS-SP V	VSPQ6.0ML10	SP	P2	100	6	2.5P	SP-31
			VSPQ6.0ML15			150			SP-31
		LS-PO V	VPOQ6.0ML10	PO		100		5P	PO-21
			VPOQ6.0ML15			150			PO-21
	1 5 6 12	LS-HT V	TNMQ6.0M510V	HT	P2	100	6	5P	HT-31
			TNMQ6.0M515V			150			HT-31
			TNMQ6.0M110V			100		1.5P	HT-31
			TNMQ6.0M115V			150			HT-31
For soft structural steels	8	E-SP	ESHMQ6.0M	SP	P2	62	6	2.5P	SP-45

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Thread forming taps for steels	6 8	N+RZ	NRZP56.0MP	RO	G5	62	6	4P	RO-5
			NRZP56.0MB					2P	RO-5
			NRZP66.0MP		G6			4P	RO-5
			NRZP66.0MB					2P	RO-5
			NRZP76.0MP		G7			4P	RO-5
			NRZP76.0MB					2P	RO-5
Long shank	6 8	LS-N-RZ	NRZM76.0MP10	RO	G7	100	6	4P	RO-7
			NRZM76.0MP15			150			RO-7
		LS-N-RZ	NRZM76.0MB10			100		2P	RO-7
			NRZM76.0MB15			150			RO-7
			NRZM86.0MP10		G8	100		4P	RO-7
			NRZM86.0MB10					2P	RO-7
For high carbon steels	5 6	HC+SP	SCPQ6.0M	SP	P2	62	6	2.5P	SP-47
	1 5 6	HC-PO	PCMQ6.0M	PO	P2	62	6	5P	PO-29
Oxidizing	5 6	HC+SP OX	SCPQ6.0MX	SP	P2	62	6	2.5P	SP-49
For hard-to-machine materials	1 4 5	EH-PO	EPHMR6.0M	PO	P3	62	6	4.5P	PO-33
		EH-HT	ETHMR6.0M5	HT				5P	HT-55
			ETHMR6.0M1					2.5P	HT-55
Powdered HSS	4 5	PM-SP	-	SP	P3	62	6	3P	SP-60
		LS-PM-SP	-			100			SP-61
		PM-PO	-	PO		62		5.5P	PO-35
		LS-PM-PO	-			100			PO-36
For titanium alloys	4 5 6 9	ZET-B	ZETBMR6.0M	SP	P3	62	6	3P	SP-58
		ZET-P	ZETPMR6.0M	SL				5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR6.0M	SP	P3	62	6	3P	SP-59
		ZEN-P	ZENPMR6.0M	PO				4.5P	PO-34
For medium hardness carbon steels	5 6	MHSL	MHSLR6.0M5	SL	P3	62	6	5P	SL-16
Carbide taps for hard materials	2	UH-CT	UHCR6.0M5	HT	P3	62	6.2	5P	CT-16
	3	EH-CT	EHCR6.0M5	HT	P3	62	6	5P	CT-14
For stainless steels	6 7 8	SU+SP	SUPQ6.0M	SP	P2	62	6	2.5P	SP-35
		SU+SL	SUPQ6.0ML	SL				5P	SL-8
		SU-PO	PUMQ6.0M	PO					PO-24
		SU-HT	TUMQ6.0M4	HT				4P	HT-33
			TUMQ6.0M1					1.5P	HT-33
Oversize	6 7 8	SU+SP	SUPR6.0M	SP	P3	62	6	2.5P	SP-35
			SUPS6.0M		P4				SP-35
		SU-PO	PUMR6.0M	PO	P3			5P	PO-24
			PUMS6.0M		P4				PO-24
For deep hole use	6 7 8	SU-S-SP	SSMQ6.0M-SU	SP	P2	62	6	2.5P	SP-41
		LS-SU-S-SP	-			100			SP-42
			-			150			SP-42
		LS-SU-S-PO	-	PO		100		5P	PO-26
			-			150			PO-26
For hard-to-machine materials	5 6 7	SU2-SP	SU2MQ6.0M	SP	P2	62	6	3P	SP-39

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For cast irons	1	FC-HT	TY6.0MRAEN5	HT	P3	62	6	5P	HT-36
			TY6.0MRAENA					1.5P	HT-36
		FC-O	TFCM6.0M5		50~30			5P	HT-39
			TFCM6.0M1					1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNR6.0M3	HT	P3	62	6	3P	CT-5
			TCNR6.0M3F						CT-5
			TCNR6.0M1					1.5P	CT-5
			TCNR6.0M1F						CT-5
CarbideLong shank	1 12 13	LS-N-CT	-	HT	P3	100	6	3P	CT-8
			-					1.5P	CT-8
For aluminum alloys	11 12 13	AL+SP	ASHPR6.0M	SP	P3	62	6	2.5P	SP-52
		AL-SP 1.5P	SY6.0MRLENA					1.5P	SP-54
	11 12	LA-HT	TY6.0MRLEN5	HT	P3	62	6	5P	HT-41
			TY6.0MRLENA					1.5P	HT-41
		LA-O	TLAM6.0M5		50~30			5P	HT-43
			TLAM6.0M1					1.5P	HT-43
AXE	12	AXE-HT	(TAXEMR6.0M1)	HT	P3	62	6	1.5P	HT-46
Carbide	11 12 13	N-CT LA	TCNR6.0M3A	HT	P3	62	6	3P	CT-2
			TCNR6.0M1A					1.5P	CT-2
Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P3	62	6	2.5P	CT -9
Carbide spiral pointed taps	11 12 13	N-CT-PO	PCNR6.0M	PO	P3	62	6	5P	CT-10
For aluminum alloys (with coolant hole) Carbide	11 12	MC-AD-CT	(MCADR6.0M1)	HT	P3	100	6	1.5P	CT-12
Thread forming taps for non-ferrous metals	11 12	N+RS	NRSP56.0MP	RO	G5	62	6	4P	RO-11
			NRSP56.0MB					2P	RO-11
			NRSP66.0MP		G6			4P	RO-11
			NRSP66.0MB					2P	RO-11
			NRSP76.0MP		G7			4P	RO-11
			NRSP76.0MB					2P	RO-11
Long shank	11 12	LS-N-RS	NRSM76.0MP10	RO	G7	100	6	4P	RO-14
			NRSM76.0MP15			150			RO-14
			NRSM76.0MB10			100		2P	RO-14
			NRSM76.0MB15			150			RO-14
			NRSM86.0MP10		G8	100		4P	RO-14
			NRSM86.0MP15			150			RO-14
			NRSM86.0MB10			100		2P	RO-14
			NRSM86.0MB15			150			RO-14
For thermosetting plastics	13	PL1	TPLM6.0M3	HT	P5	62	6	3P	HT-51
X series For general steels	5 6 8 11 12	XSP	SNXQ6.0M	SP	P2	80	6	2.5P	SP-15
		XSL	SNXQ6.0ML	SL				5P	SL-1
TiN coated	7 8 11 12	AUXSP	VSAXQ6.0M	SP	P2	80	6	2.5P	SP-25
		AUXSL	VSAXQ6.0ML	SL				5P	SL-5
For stainless steels	6 7 8	SUXSP	SUXQ6.0M	SP	P2	80	6	2.5P	SP-38
		SUXSL	SUXQ6.0ML	SL				5P	SL-9
For high speed	5 6 8 11 12 13	F-SP	VFSHMQ6.0M	SP	P2	62	6	2.5P	SP-62
		LS-F-SP	-			100			SP-63
		F-SL	VFSHMQ6.0ML	SL		62		5P	SL-11
		LS-F-SL	-			100			SL-12

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	*D*s	*ℓ*c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	*D*s	*ℓ*c	Product page
Ultra fast tapping(with coolant hole)	For steels	5 6 8	HFIHS	HFIHSS6.0M	SP	P4	62	6	2.5P	SP-64
		1 5 6	HFISP	HFISPS6.0M	SP	P4	62	6	2.5P	SP-65
	Carbide taps for cast irons	1 12	HFICT-B	HFICTBR6.0M	HT	P3	62	6	2.5P	CT-20
			HFICT-P	HFICTPR6.0M					4P	CT-19
	For non-ferrous metals	11 12	HFAHS	HFAHSS6.0M	SP	P4	62	6	2.5P	SP-66
			HFASP	HFASPS6.0M						SP-67
	Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR6.0M	HT	P3	62	6	2.5P	CT-18
			HFACT-P	HFACTPR6.0M					4P	CT-17
For dry tapping (with coolant hole)	For steels	1 5 6	HDISP	HDISPS6.0M	SP	P4	62	6	2.5P	SP-68
	For non-ferrous metals	11 12	HDASP	HDASPS6.0M	SP	P4	62	6	2.5P	SP-69
Ultra fast tapping (with coolant hole)	For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLS6.0M	SL	P4	62	6	5P	SL-13
Thread forming taps for dry tapping		5 6 7 11 12	OL+RZ	OLRZP66.0MP	RO	G6	62	6	4P	RO-19
				OLRZP76.0MP		G7				RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP+RZ	HRZP66.0MP	RO	G6	62	6	4P	RO-21
				HRZP66.0MB					2P	RO-21
				HRZP76.0MP		G7			4P	RO-21
				HRZP76.0MB					2P	RO-21
Torqueless thread forming taps		6 7 8 11 12	SC-TL-RZ	SRZM66.0M1	RO	G6	62	6	1P	RO-24
For deep hole use		5 6 8	S-SP	SSMQ6.0M	SP	P2	62	6	2.5P	SP-43
			S-PO	PSMQ6.0M	PO				5P	PO-27
	Oversize		S-SP	SSMR6.0M	SP	P3	62	6	2.5P	SP-43
Low spiral		1 5 6 11 12	LO-SP 8°	LSHMQ6.0M8	SP	P2	62	6	2.5P	SP-55
			LO-SP 15°	LSHMQ6.0M15						SP-55
			LO-SP 20°	LSHMQ6.0M20						SP-55
			LS-LO-SP	LSHMQ6.0ML10			100			SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW6.0M1LEN	SP	1b	70	6.2	2.5P	SP-52
			AL-PO	-	PO				5P	PO-31
			AL-HT	TW6.0M1LEB5	HT					HT-48
				TW6.0M1LEBA					1.5P	HT-48
			N-RS	RW6.0M4LENP	RO	G4			4P	RO-13
				RW6.0M4LENB					2P	RO-13
	Carbide	11 12	N-CT LA	TW6.0M1LWB5	HT	1b	65	6.2	5P	CT-3
				TW6.0M1LWBA					1.5P	CT-3
With coolant hole		5 6 8 11 12	MC-SP	MSHQ6.0ML10	SP	P2	100	6	2.5P	SP-57
				MSHQ6.0ML15			150			SP-57
		1 5 6 11 12	MC-PO	MPHQ6.0ML10	PO	P2	100	6	5P	PO-32
				MPHQ6.0ML15			150			PO-32
			MC-HT	ML106.0M5-Q	HT		100			HT-52
				ML156.0M5-Q			150			HT-52
				ML106.0M1-Q			100		1.5P	HT-52
				ML156.0M1-Q			150			HT-52
Nut taps		6 8 11 12	NT	NH26.0M	HT	II b	120	4.5	26P	ST-1

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	*D*s	*ℓ*c	Product page
Taps M6×0.75										
Standard		5 6 8 11 12	SP	SPQ6.0J	SP	P2	62	6	2.5P	SP-5
			PO	POQ6.0J	PO				5P	PO-5
		1 5 6 12	HT	TNMQ6.0J5	HT	P2	62	6	5P	HT-7
				TNMQ6.0J1					1.5P	HT-7
	Oversize	5 6 8 11 12	SP	SPR6.0J	SP	P3	62	6	2.5P	SP-5
			PO	POR6.0J	PO				5P	PO-5
		1 5 6 12	HT	TNMR6.0J5	HT	P3	62	6	5P	HT-7
				TNMR6.0J1					1.5P	HT-7
				TNMS6.0J5		P4			5P	HT-7
				TNMS6.0J1					1.5P	HT-7
For left hand threads		1 5 6 12	HT LH	TNMQ6.0J5-L	HT	P2	62	6	5P	HT-19
				TNMQ6.0J1-L					1.5P	HT-19
Oxidizing		5 6 8	SP OX	SPQ6.0JX	SP	P2	62	6	2.5P	SP-17
Long shank		5 6 8 11 12	LS-SP	SPQ6.0JL10	SP	P2	100	6	2.5P	SP-27
Thread forming taps for steels		6 8	N-RZ	NRZM66.0JP	RO	G6	62	6	4P	RO-5
				NRZM66.0JB					2P	RO-5
				NRZM76.0JP		G7			4P	RO-5
				NRZM76.0JB					2P	RO-5
For stainless steels		6 7 8	SU-SP	SUMQ6.0J	SP	P2	62	6	2.5P	SP-35
			SU-PO	PUMQ6.0J	PO				5P	PO-24
			SU-HT	TUMQ6.0J4	HT				4P	HT-33
				TUMQ6.0J1					1.5P	HT-33
For cast irons	Carbide	1 12 13	N-CT FC	TCNR6.0J3	HT	P3	62	6	3P	CT-5
				TCNR6.0J1					1.5P	CT-5
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR6.0J3A	HT	P3	62	6	3P	CT-2
				TCNR6.0J1A					1.5P	CT-2
Thread forming taps for non-ferrous metals		11 12	N-RS	NRSM66.0JP	RO	G6	62	6	4P	RO-11
				NRSM66.0JB					2P	RO-11
				NRSM76.0JP		G7			4P	RO-11
				NRSM76.0JB					2P	RO-11
Nut taps		6 8 11 12	NT	NH26.0J	HT	II	115	4.5	31P	ST-1
Taps M6×0.5										
Standard		5 6 8 11 12	SP	SPP6.0G	SP	P1	62	6	2.5P	SP-5
			PO	POQ6.0G	PO	P2			5P	PO-5
		1 5 6 12	HT	TNMQ6.0G5	HT	P2	62	6	5P	HT-7
				TNMQ6.0G1					1.5P	HT-7
	Oversize	5 6 8 11 12	SP	SPQ6.0G	SP	P2	62	6	2.5P	SP-5
				SPR6.0G		P3				SP-5
For left hand threads		1 5 6 12	HT LH	TNMQ6.0G5-L	HT	P2	62	6	5P	HT-19
				TNMQ6.0G1-L					1.5P	HT-19
Thread forming taps for steels		6 8	N-RZ	NRZM66.0GP	RO	G6	62	6	4P	RO-5
				NRZM66.0GB					2P	RO-5
For cast irons	Carbide	1 12 13	N-CT FC	TCNR6.0G3	HT	P3	55	6	3P	CT-5
				TCNR6.0G1					1.5P	CT-5
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR6.0G3A	HT	P3	55	6	3P	CT-2
				TCNR6.0G1A					1.5P	CT-2
Thread forming taps for non-ferrous metals		11 12	N-RS	NRSM66.0GP	RO	G6	62	6	4P	RO-11
				NRSM66.0GB					2P	RO-11

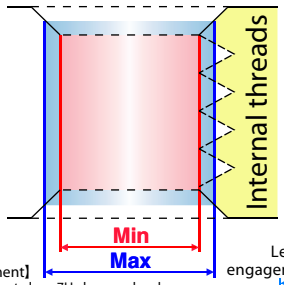
Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Dies selection		Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M6×1										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE6.0MDNEBC	Di-3
						25	9		TYG6.0MDNEBC	Di-3
						38	13		TYJ6.0MDNEBC	Di-3
	For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE6.0MDNEBC	Di-10
						25	9		GYG6.0MDNEBC	Di-10
						38	13		GYJ6.0MDNEBC	Di-10
New rolling dies		HSS	6 7 8 11 12	N-RSD	R5	30	11	-	NRHT6.0M	Di-23
Dies M6×0.75										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE6.0JDNEBC	Di-3
						25	9		TYG6.0JDNEBC	Di-3
						38	13		TYJ6.0JDNEBC	Di-3
	For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE6.0JDNEBC	Di-10
Dies M6×0.5										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE6.0GDNEBC	Di-3
						25	9		TYG6.0GDNEBC	Di-3
	For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE6.0GDNEBC	Di-10

Flowchart : M8 tapping

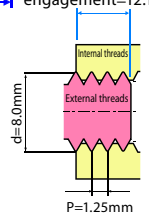
Boring before tapping — Check 1



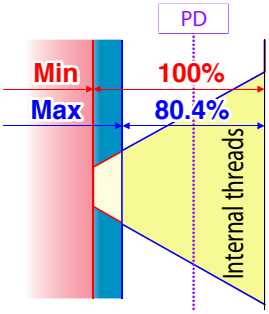
【Length of engagement】
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification \ Engagement classification	Fine	Middle	Coarse	Engagement length
S	Short engagement length	4H	5H	–	S≦4(mm)
M	Normal engagement length	5H	6H	7H	4<M≦12(mm)
L	Long engagement length	6H	7H	8H	12<L(mm)

Length of engagement=12.1mm



Engagement ratio on cutting taps

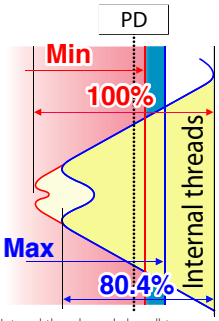


Unit : mm

	Drill size (ref.)	D1 Min	D1 Max
Bored hole size	6.8	6.647	6.912
Engagement ratio	88.7%	100%	80.4%

D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor dimameter.

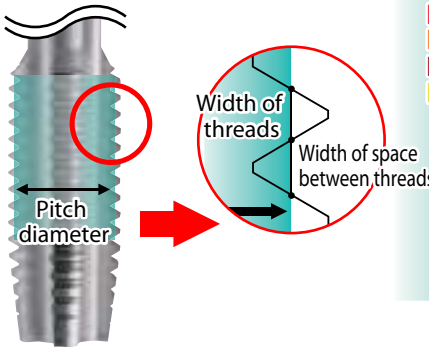
Unit : mm

*Hole size for thread forming taps	
Min	Max
7.36	7.49

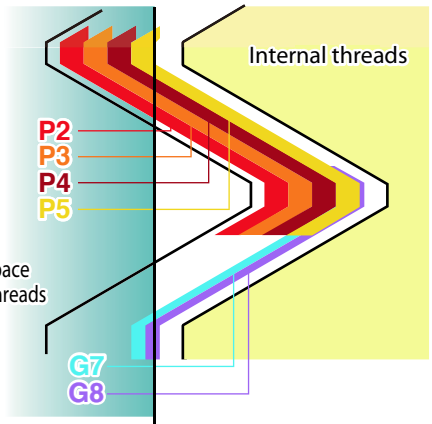
Forming condition changes depending on workpiece's Material and shape. Above is for customer's reference.

Threading — Check 2

【Pitch diameter】
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



【Thread class of cutting taps】

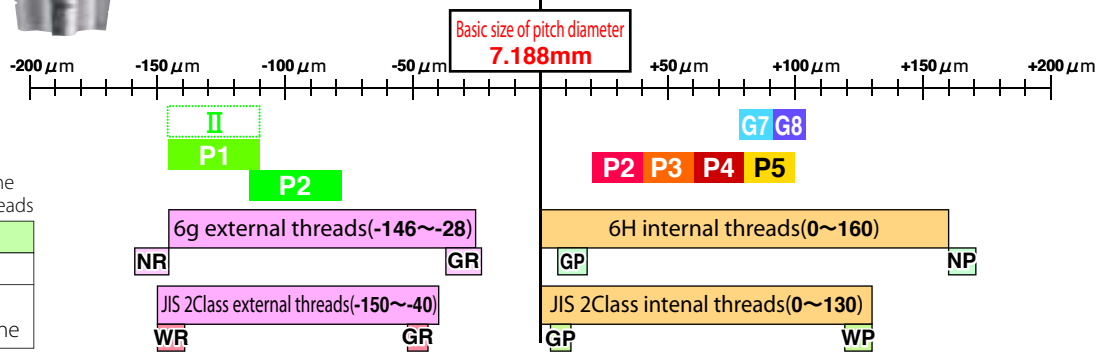
Class	PD tolerance
P2	20μm~40μm
P3	40μm~60μm
P4	60μm~80μm
P5	80μm~100μm

*Above shows the plus tolerance by setting PD basic size as "0".

【Thread class of roll taps】

Class	PD tolerance
G7	76μm~89μm
G8	89μm~102μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
Ⅱ	Solid dies
P1 P2	Solid dies for Auto Lathe

Relative position of PD tolerance area of external threads, internal threads, taps and gages.

Gage check — Check 3

(–) ← Basic size of pitch diameter → (+)
7.188mm

Unit : μm

Ring gage pitch diameter(for external threads inspection)			
NR6g	-160 ~-146	GR6g	-37~-23
WRⅡ	-150 ~-142	GRⅡ	-52 ~-44

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

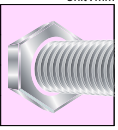
Unit : μm

Plug gage pitch diameter(for internal threads inspection)			
GP6H	7 ~ 17	NP6H	160 ~ 170
GPⅡ	4 ~ 12	WPⅡ	122 ~ 130

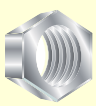
GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Unit : mm

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	7.760~7.972	7.042~7.160	–
JIS 2class	7.790~7.960	7.038~7.148	~6.427



Unit : mm



Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	–	7.188~7.348	6.647~6.912
JIS 2class	–	7.188~7.318	6.647~6.912

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Taps M8×1.25

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
General purpose	8	ISP	SI78.0N	SP	-	70	6.2	2.5P	SP-2
		ISP BP	SI78.0NBP						SP-2
		IPO	PI78.0N	PO				5P	PO-2
		IPO BP	PI78.0NBP						PO-2
		IHT	HI78.0N5	HT				5P	HT-2
			HI78.0N2					2P	HT-2
		IHT BP	HI78.0N5BP					5P	HT-2
			HI78.0N2BP					2P	HT-2
		R-Y	RY8.0N3	RO	6HX			3P	RO-1
Standard	5 6 8 11 12	SP	SPQ8.0N	SP	P2	70	6.2	2.5P	SP-5
		+SP	SNPQ8.0N						SP-14
		SP 1.5P	SY8.0NQNEBA					1.5P	SP-11
		PO	POR8.0N	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR8.0N5	HT	P3	70	6.2	5P	HT-7
		4F	TNMR8.0N5F						HT-7
			TNMR8.0N1					1.5P	HT-7
		4F	TNMR8.0N1F						HT-7
Oversize	5 6 8 11 12	SP	SPR8.0N	SP	P3	70	6.2	2.5P	SP-5
			SPS8.0N		P4				SP-5
		+SP	SNPR8.0N		P3				SP-14
			SNPS8.0N		P4				SP-14
		PO	POS8.0N	PO				5P	PO-5
	1 5 6 12	HT 4F	TNMS8.0N5F	HT	P4	70	6.2	5P	HT-7
			TNMS8.0N1F					1.5P	HT-7
For left hand threads	5 6 8 11 12	SP LH	SPQ8.0N--L	SP	P2	70	6.2	2.5P	SP-20
		PO LH	POR8.0N--L	PO	P3			5P	PO-14
	1 5 6 12	HT LH	TNMR8.0N5-L	HT	P3	70	6.2	5P	HT-19
			TNMR8.0N1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPQ8.0NX	SP	P2	70	6.2	2.5P	SP-17
		PO OX	POR8.0NX	PO	P3			5P	PO-12
Oversize	5 6 8	SP OX	SPR8.0NX	SP	P3	70	6.2	2.5P	SP-17
			SPS8.0NX		P4				SP-17
		PO OX	POS8.0NX	PO				5P	PO-12
TiN coated	7 8 11 12	AU+SP	VSAPR8.0N	SP	P3	70	6.2	2.5P	SP-24
		AU+SL	VSAPR8.0NL	SL				5P	SL-4
	5 6 8 11 12	PO V	VPOR8.0N	PO	P3	7.0	6.2	5P	PO-16
Long shank	5 6 8 11 12	LS-SP	SPQ8.0NL10	SP	P2	100	6.2	2.5P	SP-27
			SPQ8.0NL12			120			SP-27
			SPQ8.0NL15			150			SP-27
			SPQ8.0NL20			200			SP-27
		LS-PO	POR8.0NL10	PO	P3	100		5P	PO-18
			POR8.0NL12			120			PO-18
			POR8.0NL15			150			PO-18
			POR8.0NL20			200			PO-18
Long shank	1 5 6 12	LS-HT	TNMQ8.0N510	HT	P2	100	6.2	5P	HT-22
			TNMQ8.0N512			120			HT-22
			TNMQ8.0N515			150			HT-22
			TNMQ8.0N520			200			HT-22
			TNMQ8.0N110			100		1.5P	HT-22
			TNMQ8.0N112			120			HT-22
			TNMQ8.0N115			150			HT-22
			TNMQ8.0N120			200			HT-22
Oversize	5 6 8 11 12	LS-SP	SPR8.0NL10	SP	P3	100	6.2	2.5P	SP-27
			SPR8.0NL15			150			SP-27
		LS-PO	POS8.0NL15	PO	P4			5P	PO-18
	1 5 6 12	LS-HT	TNMR8.0N510	HT	P3	100	6.2	5P	HT-22
			TNMR8.0N515			150			HT-22
			TNMR8.0N520			200			HT-22
			TNMR8.0N110			100		1.5P	HT-22
			TNMR8.0N115			150			HT-22
			TNMR8.0N120			200			HT-22
For left hand threads	5 6 8 11 12	LS-SP LH	SPQ8.0NL15-L	SP	P2	150	6.2	2.5P	SP-30
	1 5 6 12	LS-HT LH	TNMQ8.0N510L	HT	P2	100	6.2	5P	HT-29
			TNMQ8.0N515L			150			HT-29
			TNMQ8.0N110L			100		1.5P	HT-29
			TNMQ8.0N115L			150			HT-29
TiN coated	5 6 8 11 12	LS-SP V	VSPQ8.0NL10	SP	P2	100	6.2	2.5P	SP-31
			VSPQ8.0NL15			150			SP-31
		LS-PO V	VPOR8.0NL10	PO	P3	100		5P	PO-21
			VPOR8.0NL15			150			PO-21
	1 5 6 12	LS-HT V	TNMQ8.0N510V	HT	P2	100	6.2	5P	HT-31
			TNMQ8.0N515V			150			HT-31
			TNMQ8.0N110V			100		1.5P	HT-31
			TNMQ8.0N115V			150			HT-31
For soft structural steels	8	E-SP	ESHMQ8.0N	SP	P2	70	6.2	2.5P	SP-45
Thread forming taps for steels	6 8	N-RZ	NRZM78.0NP	RO	G7	70	6.2	4P	RO-5
			NRZM78.0NB					2P	RO-5
			NRZM88.0NP		G8			4P	RO-5
			NRZM88.0NB					2P	RO-5
Long shank	6 8	LS-N-RZ	NRZM78.0NP10	RO	G7	100	6.2	4P	RO-7
			NRZM78.0NP15			150			RO-7
			NRZM78.0NB10			100		2P	RO-7
			NRZM78.0NB15			150			RO-7
For high carbon steels	5 6	HC-SP	SCMQ8.0N	SP	P2	70	6.2	2.5P	SP-47
	1 5 6	HC-PO	PCMR8.0N	PO	P3	70	6.2	5P	PO-29
Oxidizing	5 6	HC-SP OX	SCMQ8.0NX	SP	P2	70	6.2	2.5P	SP-49
For hard-to-machine-materials	1 4 5	EH-PO	EPHMS8.0N	PO	P4	70	6.2	4.5P	PO-33
		EH-HT	ETHMS8.0N5	HT				5P	HT-55
			ETHMS8.0N1					2.5P	HT-55
Powder HSS	4 5	PM-SP	-	SP	P3	70	6.2	2.75P	SP-60
		LS-PM-SP	-			100			SP-61
			-			150			SP-61
		PM-PO	-	PO	P4	70		5.5P	PO-35
		LS-PM-PO	-			100			PO-36
For titanium alloys	4 5 6 9	ZET-B	ZETBMR8.0N	SP	P3	70	6.2	3P	SP-58
		ZET-P	ZETPMS8.0N	SL	P4			5P	SL-10

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
For nickel base alloys		6 7 8 10	ZEN-B	ZENBMR8.0N	SP	P3	70	6.2	3P	SP-59
			ZEN-P	ZENPMS8.0N	PO	P4			4.5P	PO-34
For medium hardness carbon steels		5 6	MHSL	MHSLS8.0N5	SL	P4	70	6.2	5P	SL-16
Cemented carbide taps for hard materials		2	UH-CT	UHCS8.0N5	HT	P4	70	7	5P	CT-16
		3	EH-CT	EHCS8.0N5	HT	P4	70	6.2	5P	CT-14
For stainless steels		6 7 8	SU-SP	SUMQ8.0N	SP	P2	70	6.2	2.5P	SP-35
			SU-PO	PUMR8.0N	PO	P3			5P	PO-24
			SU-HT	TUMR8.0N4	HT				4P	HT-33
				TUMR8.0N1					1.5P	HT-33
	Oversize	6 7 8	SU-SP	SUMR8.0N	SP	P3	70	6.2	2.5P	SP-35
				SUMS8.0N		P4				SP-35
			SU-PO	PUMS8.0N	PO				5P	PO-24
				PUMT8.0N		P5				PO-24
	For deep hole use	6 7 8	SU-S-SP	SSMQ8.0N-SU	SP	P2	70	6.2	2.5P	SP-41
			LS-SU-S-SP	-			100			SP-42
				-			150			SP-42
			LS-SU-S-PO	-	PO	P3	100		5P	PO-26
				-			150			PO-26
	For hard-to-machine-materials	5 6 7	SU2-SP	SU2MR8.0N	SP	P3	70	6.2	3P	SP-39
For cast irons		1	FC-HT	TY8.0NRAEN5	HT	P3	70	6.2	5P	HT-36
				TY8.0NRAENA					1.5P	HT-36
			FC-O	TFCM8.0N5	HT	60~35	70	6.2	5P	HT-39
				TFCM8.0N1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNR8.0N3	HT	P3	70	6.2	3P	CT-5
				TCNR8.0N1					1.5P	CT-5
				TCNS8.0N3		P4			3P	CT-5
				TCNS8.0N1					1.5P	CT-5
	Long shank, carbide	1 12 13	LS-N-CT	-	HT	P3	100	6.2	3P	CT-8
				-					1.5P	CT-8
For aluminum alloys		11 12 13	AL-SP	ASHMR8.0N	SP	P3	70	6.2	2.5P	SP-52
			AL-SP 1.5P	SY8.0NRLENA					1.5P	SP-54
		11 12	LA-HT	TY8.0NRLEN5	HT	P3	70	6.2	5P	HT-41
				TY8.0NRLENA					1.5P	HT-41
			LA-O	TLAM8.0N5		65~40			5P	HT-43
				TLAM8.0N1					1.5P	HT-43
	AXE	12	AXE-HT	TAXEMR8.0N1	HT	P3	70	6.2	1.5P	HT-46
	Carbide	11 12 13	N-CT LA	TCNR8.0N3A	HT	P3	70	6.2	3P	CT-2
				TCNR8.0N1A					1.5P	CT-2
	Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P3	70	6.2	2.5P	CT-9
	Carbide spiral pointed taps	11 12 13	N-CT-PO	PCNR8.0N	PO	P3	70	6.2	5P	CT-10
For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	MCADR8.0N1	HT	P3	100	6.2	1.5P	CT-12
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM78.0NP	RO	G7	70	6.2	4P	RO-11
				NRSM78.0NB					2P	RO-11
				NRSM88.0NP		G8			4P	RO-11
				NRSM88.0NB					2P	RO-11
	Long shank	11 12	LS-N-RS	NRSM78.0NP10	RO	G7	100	6.2	4P	RO-14
				NRSM78.0NP15			150			RO-14
				NRSM78.0NB10			100		2P	RO-14
				NRSM78.0NB15			150			RO-14
For plastics		13	PL1	TPLM8.0N3	HT	P6	70	6.2	3P	HT-51

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
X series	For general steels	5 6 8 11 12	XSP	SNXR8.0N	SP	P3	90	8	2.5P	SP-15
			XSL	SNXR8.0NL	SL				5P	SL-1
	TiN coated	7 8 11 12	AUXSP	VSAXR8.0N	SP	P3	90	8	2.5P	SP-25
			AUXSL	VSAXR8.0NL	SL				5P	SL-5
	For stainless steels	6 7 8	SUXSP	SUXR8.0N	SP	P3	90	8	2.5P	SP-38
			SUXSL	SUXR8.0NL	SL				5P	SL-9
For high speed		5 6 8 11 12 13	F-SP	VFSHMR8.0N	SP	P3	70	6.2	2.5P	SP-62
			LS-F-SP	-			100			SP-63
			F-SL	VFSHMR8.0NL	SL		70		5P	SL-11
			LS-F-SL	-			100			SL-12
Ultra fast tapping (with coolant hole)	For steels	5 6 8	HFIHS	HFIHSS8.0N	SP	P4	70	8	2.5P	SP-64
		1 5 6	HFISP	HFISPS8.0N	SP	P4	70	8	2.5P	SP-65
	Carbide taps for cast irons	1 12	HFICT-B	HFICTBR8.0N	HT	P3	70	8	2.5P	CT-20
			HFICT-P	HFICTPR8.0N					4P	CT-19
	For non-ferrous materials	11 12	HFAHS	HFAHSS8.0N	SP	P4	70	8	2.5P	SP-66
			HFASP	HFASPS8.0N						SP-67
	Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR8.0N	HT	P3	70	8	2.5P	CT-18
			HFACT-P	HFACTPR8.0N					4P	CT-17
For dry tapping(with coolant hole)	For steels	1 5 6	HDISP	HDISPS8.0N	SP	P4	70	8	2.5P	SP-68
	For non-ferrous materials	11 12	HDASP	HDASPS8.0N	SP	P4	70	8	2.5P	SP-69
Ultra fast tapping (with coolant hole)	For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLS8.0N	SL	P4	70	8	5P	SL-13
High performance thread forming taps, TiCN coated		5 6 7 11 12	HP-RZ	HRZM78.0NP	RO	G7	70	6.2	4P	RO-21
				HRZM78.0NB					2P	RO-21
				HRZM88.0NP		G8			4P	RO-21
				HRZM88.0NB					2P	RO-21
For deep hole use		5 6 8	S-SP	SSMQ8.0N	SP	P2	70	6.2	2.5P	SP-43
			S-PO	PSMR8.0N	PO	P3			5P	PO-27
	Oversize	5 6 8	S-SP	SSMR8.0N	SP	P3	70	6.2	2.5P	SP-43
Low spiral fluted taps		1 5 6 11 12	LO-SP 8°	LSHMQ8.0N8	SP	P2	70	6.2	2.5P	SP-55
			LO-SP 15°	LSHMQ8.0N15						SP-55
			LO-SP 20°	LSHMQ8.0N20						SP-55
			LS-LO-SP	LSHMQ8.0NL10			100			SP-56
				LSHMQ8.0NL15			150			SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW8.0N1LEN	SP	1b	75	7	2.5P	SP-52
			AL-PO	-	PO				5P	PO-31
			AL-HT	TW8.0N1LEB5	HT					HT-48
				TW8.0N1LEBA					1.5P	HT-48
			N-RS	RW8.0N4LENB	RO	G4			2P	RO-13
	Carbide	11 12	N-CT LA	TW8.0N1LWB5	HT	1b	75	7	5P	CT-3
				TW8.0N1LWBA					1.5P	CT-3
With coolant hole		5 6 8 11 12	MC-SP	MSHQ8.0NL10	SP	P2	100	6.2	2.5P	SP-57
				MSHQ8.0NL15			150			SP-57
		1 5 6 11 12	MC-PO	MPHR8.0NL10	PO	P3	100	6.2	5P	PO-32
				MPHR8.0NL15			150			PO-32
			MC-HT	ML108.0N5-Q	HT	P2	100			HT-52
				ML158.0N5-Q			150			HT-52
				ML108.0N1-Q			100		1.5P	HT-52
				ML158.0N1-Q			150			HT-52
Nut taps		6 8 11 12	NT	NH28.0N	HT	II b	140	6.2	24P	ST-1

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Taps M8×1

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Standard		5 6 8 11 12	SP	SPQ8.0M	SP	P2	70	6.2	2.5P	SP-5
			SP 1.5P	SY8.0MQNEBA					1.5P	SP-11
			PO	POR8.0M	PO	P3			5P	PO-5
		1 5 6 12	HT	TNMQ8.0M5	HT	P2	70	6.2	5P	HT-7
				TNMQ8.0M1					1.5P	HT-7
	Oversize	5 6 8 11 12	SP	SPR8.0M	SP	P3	70	6.2	2.5P	SP-5
				SPS8.0M		P4				SP-5
			PO	POS8.0M	PO				5P	PO-5
		1 5 6 12	HT	TNMS8.0M5	HT	P4	70	6.2	5P	HT-7
				TNMS8.0M1					1.5P	HT-7
For left hand threads		5 6 8 11 12	SP LH	SPQ8.0M--L	SP	P2	70	6.2	2.5P	SP-20
			PO LH	POR8.0M--L	PO	P3			5P	PO-14
		1 5 6 12	HT LH	TNMQ8.0M5-L	HT	P2	70	6.2	5P	HT-19
				TNMQ8.0M1-L					1.5P	HT-19
Oxidizing		5 6 8	SP OX	SPQ8.0MX	SP	P2	70	6.2	2.5P	SP-17
			PO OX	POR8.0MX	PO	P3			5P	PO-12
TiN coated		7 8 11 12	AU+SP	VSAPR8.0M	SP	P3	70	6.2	2.5P	SP-24
			AU+SL	VSAPR8.0ML	SL				5P	SL-4
Long shank		5 6 8 11 12	LS-SP	SPQ8.0ML10	SP	P2	100	6.2	2.5P	SP-27
				SPQ8.0ML15			150			SP-27
			LS-PO	POR8.0ML10	PO	P3	100		5P	PO-18
				POR8.0ML15			150			PO-18
		1 5 6 12	LS-HT	TNMQ8.0M510	HT	P2	100	6.2	5P	HT-22
				TNMQ8.0M512			120			HT-22
				TNMQ8.0M515			150			HT-22
				TNMQ8.0M110			100		1.5P	HT-23
				TNMQ8.0M112			120			HT-23
				TNMQ8.0M115			150			HT-23
Thread forming taps for steels		6 8	N-RZ	NRZM78.0MP	RO	G7	70	6.2	4P	RO-5
				NRZM78.0MB					2P	RO-5
For high carbon steels		5 6	HC-SP	SCMQ8.0M	SP	P2	70	6.2	2.5P	SP-47
For stainless steels		6 7 8	SU-SP	SUMQ8.0M	SP	P2	70	6.2	2.5P	SP-35
			SU-PO	PUMR8.0M	PO	P3			5P	PO-24
			SU-HT	TUMR8.0M4	HT				4P	HT-33
				TUMR8.0M1					1.5P	HT-33
For cast irons		1	FC-HT	TY8.0MRAEN5	HT	P3	70	6.2	5P	HT-36
				TY8.0MRAENA					1.5P	HT-36
			FC-O	TFCM8.0M5		55~30			5P	HT-39
				TFCM8.0M1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNR8.0M3	HT	P3	70	6.2	3P	CT-5
				TCNR8.0M1					1.5P	CT-5
For aluminum alloys		11 12	LA-HT	TY8.0MRLEN5	HT	P3	70	6.2	5P	HT-41
				TY8.0MRLENA					1.5P	HT-41
			LA-O	TLAM8.0M5		55~30			5P	HT-43
				TLAM8.0M1					1.5P	HT-43
	Carbide	11 12 13	N-CT LA	TCNR8.0M3A	HT	P3	70	6.2	3P	CT-2
				TCNR8.0M1A					1.5P	CT-2
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM78.0MP	RO	G7	70	6.2	4P	RO-11
				NRSM78.0MB					2P	RO-11
X series	For stainless steels	5 6 8 11 12	XSP	SNXR8.0M	SP	P3	90	8	2.5P	SP-15
			XSL	SNXR8.0ML	SL				5P	SL-1
	TiN coated	7 8 11 12	AUXSP	VSAXR8.0M	SP	P3	90	8	2.5P	SP-25
			AUXSL	VSAXR8.0ML	SL				5P	SL-5
	For stainless steels	6 7 8	SUXSP	SUXR8.0M	SP	P3	90	8	2.5P	SP-38
			SUXSL	SUXR8.0ML	SL				5P	SL-9
For deep hole use		5 6 8	S-SP	SSMQ8.0M	SP	P2	70	6.2	2.5P	SP-43
			S-PO	PSMR8.0M	PO	P3			5P	PO-27
Nut taps		6 8 11 12	NT	NH28.0M	HT	II	130	6.2	30P	ST-1

Taps M8×0.75

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Standard		5 6 8 11 12	SP	SPQ8.0J	SP	P2	70	6.2	2.5P	SP-5
			PO	POR8.0J	PO	P3			5P	PO-5
		1 5 6 12	HT	TNMQ8.0J5	HT	P2	70	6.2	5P	HT-7
				TNMQ8.0J1					1.5P	HT-7
	Oversize	5 6 8 11 12	SP	SPR8.0J	SP	P3	70	6.2	2.5P	SP-5
For left hand threads		1 5 6 12	HT LH	TNMQ8.0J5-L	HT	P2	70	6.2	5P	HT-19
				TNMQ8.0J1-L					1.5P	HT-19
Thread forming taps for steels		6 8	N-RZ	NRZM78.0JP	RO	G7	70	6.2	4P	RO-5
				NRZM78.0JB					2P	RO-5
For stainless steels		6 7 8	SU-SP	SUMQ8.0J	SP	P2	70	6.2	2.5P	SP-35
For cast irons	Carbide	1 12 13	N-CT FC	TCNR8.0J3	HT	P3	62	6.2	3P	CT-5
				TCNR8.0J1					1.5P	CT-5
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR8.0J3A	HT	P3	62	6.2	3P	CT-2
				TCNR8.0J1A					1.5P	CT-2
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM78.0JP	RO	G7	70	6.2	4P	RO-11
				NRSM78.0JB					2P	RO-11
Nut taps		6 8 11 12	NT	NH28.0J	HT	II	120	6.2	24P	ST-1

Taps M8×0.5

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Standard		5 6 8 11 12	SP	SPQ8.0G	SP	P2	70	6.2	2.5P	SP-5
			PO	POQ8.0G	PO				5P	PO-5
		1 5 6 12	HT	TNMQ8.0G5	HT	P2	70	6.2	5P	HT-7
				TNMQ8.0G1					1.5P	HT-7
For left hand threads		1 5 6 12	HT LH	TNMQ8.0G5-L	HT	P2	70	6.2	5P	HT-19
				TNMQ8.0G1-L					1.5P	HT-19

Think threads with YAMAWA
Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

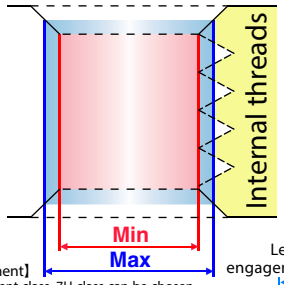
Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection		Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies	**M8×1.25**									
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG8.0NDNEBC	Di-3
						38	13		TYJ8.0NDNEBC	Di-3
						50	16		TYM8.0NDNEBC	Di-3
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG8.0NDNEBC	Di-10
						38	13		GYJ8.0NDNEBC	Di-10
New rolling dies		HSS	6 7 8 11 12	N-RSD	R6	38	13	-	NRJU8.0N	Di-23
Dies	**M8×1**									
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG8.0MDNEBC	Di-3
						38	13		TYJ8.0MDNEBC	Di-3
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG8.0MDNEBC	Di-10
						38	13		GYJ8.0MDNEBC	Di-10
Dies	**M8×0.75**									
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG8.0JDNEBC	Di-3
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG8.0JDNEBC	Di-11
Dies	**M8×0.5**									
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG8.0GDNEBC	Di-3
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG8.0GDNEBC	Di-11

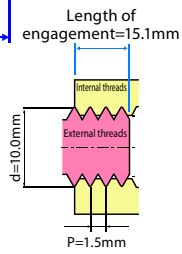
Flowchart : M10 tapping

Boring before tapping — Check 1

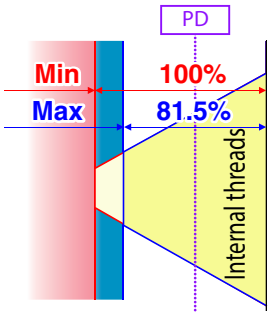


【Length of engagement】
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification \ Engagement classification	Fine	Middle	Coarse	Engagement length
S	Short engagement length	4H	5H	—	S≦5(mm)
M	Normal engagement length	5H	6H	7H	5<M≦15(mm)
L	Long engagement length	6H	7H	8H	15<L(mm)



Engagement ratio on cutting taps

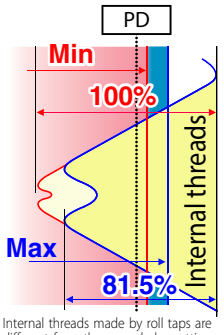


Unit : mm

	Drill size (ref.)	D1 Min	D1 Max
Bored hole size	8.5	8.376	8.676
Engagement ratio	92.4%	100%	81.5%

D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor dimameter.

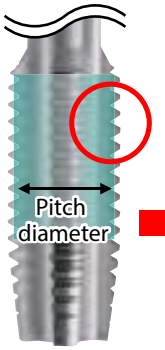
Unit : mm

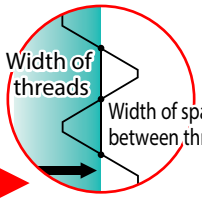
*Hole size for thread forming taps	
Min	Max
9.22	9.34

Forming condition changes depending on workpiece's Material and shape. Above is for customer's reference.

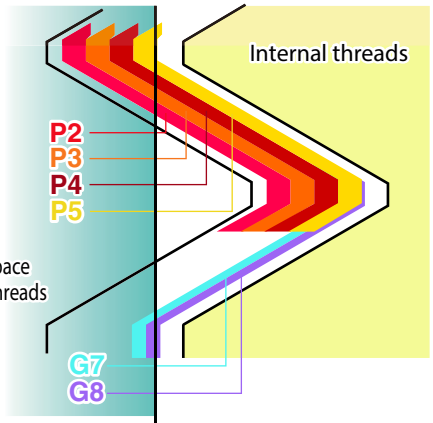
Threading — Check 2

【Pitch diameter】
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads





Tolerance area of tap's pitch diameter



【Thread class of cutting taps】

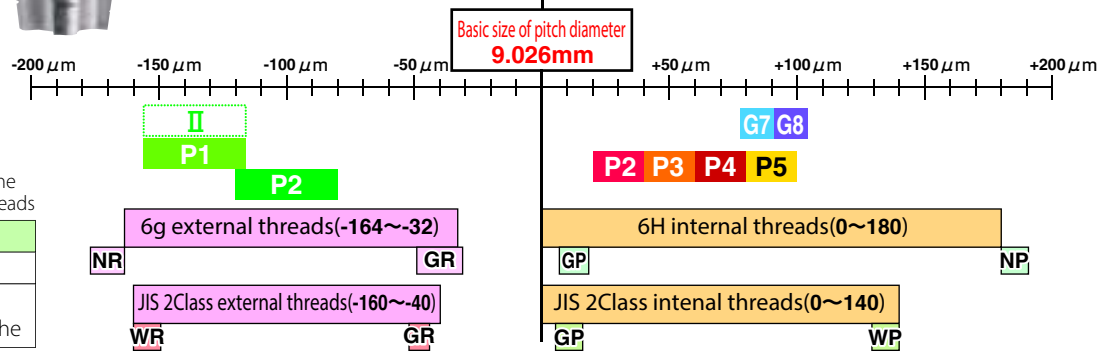
Class	PD tolerance
P2	20μm~40μm
P3	40μm~60μm
P4	60μm~80μm
P5	80μm~100μm

*Above shows the plus tolerance by setting PD basic size as "0".

【Thread class of roll taps】

Class	PD tolerance
G7	76μm~89μm
G8	89μm~102μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
Ⅱ	Solid dies
P1	Solid dies for Auto Lathe
P2	

Relative position of PD tolerance area of external threads, internal threads, taps and gages.

Gage check — Check 3

(−) ← Basic size of pitch diameter → (+)
9.026mm

Unit : μm

Ring gage pitch diameter(for external threads inspection)			
NR6g	-182 ~-164	GR6g	-49 ~-31
WRⅡ	-160 ~-152	GRⅡ	-52 ~-44

NR : NOT GO ring gage **GR** : GO ring gage
WR : NOT GO working ring gage

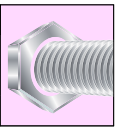
Unit : μm

Plug gage pitch diameter(for internal threads inspection)			
GP6H	7 ~ 17	NP6H	180 ~ 190
GPⅡ	4 ~ 12	WPⅡ	132 ~ 140

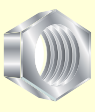
GP : GO plug gage **NP** : NOT GO plug gage
WP : NOT GO working plug gage

Unit : mm

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	9.732~9.968	8.862~8.994	-
JIS 2class	9.770~9.960	8.866~8.986	~8.119



Unit : mm



Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	-	9.026~9.206	8.376~8.676
JIS 2class	-	9.026~9.166	8.376~8.676

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Taps M10×1.5

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
General purpose	8	ISP	SI7010O	SP	-	75	7	2.5P	SP-2
		ISP BP	SI7010OBP						SP-2
		IPO	PI7010O	PO				5P	PO-2
		IPO BP	PI7010OBP						PO-2
		IHT	HI7010O5	HT				5P	HT-2
			HI7010O2					2P	HT-2
		IHT BP	HI7010O5BP					5P	HT-2
			HI7010O2BP					2P	HT-2
Standard	5 6 8 11 12	SP	SPQ010O	SP	P2	75	7	2.5P	SP-5
		+SP	SNPQ010O						SP-14
		SP 1.5P	SY010OQNEBA		P2			1.5P	SP-11
		PO	POR010O	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR010O5	HT	P3	75	7	5P	HT-7
		3F	TNMR010O5T						HT-7
			TNMR010O1					1.5P	HT-7
		3F	TNMR010O1T						HT-7
Oversize	5 6 8 11 12	SP	SPR010O	SP	P3	75	7	2.5P	SP-5
			SPS010O		P4				SP-5
		+SP	SNPR010O		P3				SP-14
			SNPS010O		P4				SP-14
		PO	POS010O	PO				5P	PO-5
	1 5 6 12	HT	TNMS010O5	HT	P4	75	7	5P	HT-7
			TNMS010O1					1.5P	HT-7
For left hand threads	5 6 8 11 12	SP LH	SPQ010O--L	SP	P2	75	7	2.5P	SP-20
		PO LH	POR010O--L	PO	P3			5P	PO-14
	1 5 6 12	HT LH	TNMR010O5-L	HT	P3	75	7	5P	HT-20
			TNMR010O1-L					1.5P	HT-20
Oxidizing	5 6 8	SP OX	SPQ010OX	SP	P2	75	7	2.5P	SP-17
		PO OX	POR010OX	PO	P3			5P	PO-12
Oversize	5 6 8	PO OX	POS010OX	PO	P4	75	7	5P	PO-12
TiN coated	7 8 11 12	AU+SP	VSAPR010O	SP	P3	75	7	2.5P	SP-24
		AU+SL	VSAPR010OL	SL				5P	SL-4
	5 6 8 11 12	PO V	VPOR010O	PO	P3	75	7	5P	PO-16
Long shank	5 6 8 11 12	LS-SP	SPQ010OL10	SP	P2	100	7	2.5P	SP-27
			SPQ010OL12			120			SP-27
			SPQ010OL15			150			SP-27
			SPQ010OL20			200			SP-27
		LS-PO	POR010OL10	PO	P3	100		5P	PO-18
			POR010OL12			120			PO-18
			POR010OL15			150			PO-18
			POR010OL20			200			PO-18
	1 5 6 12	LS-HT	TNMQ010O510	HT	P2	100	7	5P	HT-23
			TNMQ010O512			120			HT-23
			TNMQ010O515			150			HT-23
			TNMQ010O520			200			HT-23
			TNMQ010O525			250			HT-23
			TNMQ010O110			100		1.5P	HT-23
			TNMQ010O112			120			HT-23
			TNMQ010O115			150			HT-23
			TNMQ010O120			200			HT-23
Long shank	1 5 6 12	LS-HT	TNMQ010O125	HT	P2	250	7	1.5P	HT-23
Oversize	5 6 8 11 12	LS-SP	SPR010OL10	SP	P3	100	7	2.5P	SP-27
			SPR010OL15			150			SP-27
		LS-PO	POS010OL15	PO	P4			5P	PO-18
	1 5 6 12	LS-HT	TNMR010O510	HT	P3	100	7	5P	HT-23
			TNMR010O515			150			HT-23
			TNMR010O110			100		1.5P	HT-23
			TNMR010O115			150			HT-23
			TNMS010O510		P4	100		5P	HT-23
			TNMS010O515			150			HT-23
			TNMS010O110			100		1.5P	HT-23
			TNMS010O115			150			HT-23
For left hand threads	5 6 8 11 12	LS-SP LH	SPQ010OL15-L	SP	P2	150	7	2.5P	SP-30
	1 5 6 12	LS-HT LH	TNMQ010O510L	HT	P2	100	7	5P	HT-29
			TNMQ010O515L			150			HT-29
			TNMQ010O110L			100		1.5P	HT-29
			TNMQ010O115L			150			HT-29
TiN coated	5 6 8 11 12	LS-SP V	VSPQ010OL15	SP	P2	150	7	2.5P	SP-31
		LS-PO V	VPOR010OL15	PO	P3			5P	PO-21
	1 5 6 12	LS-HT V	TNMQ010O510V	HT	P2	100	7	5P	HT-31
			TNMQ010O515V			150			HT-31
			TNMQ010O110V			100		1.5P	HT-31
			TNMQ010O115V			150			HT-31
For soft structural steels	8	E-SP	ESHMQ010O	SP	P2	75	7	2.5P	SP-45
Thread forming taps for steels	6 8	N-RZ	NRZM7010OP	RO	G7	75	7	4P	RO-5
			NRZM7010OB					2P	RO-5
			NRZM8010OP		G8			4P	RO-5
			NRZM8010OB					2P	RO-5
Long shank	6 8	LS-N-RZ	NRZM7010OP10	RO	G7	100	7	4P	RO-7
			NRZM7010OP15			150			RO-7
			NRZM7010OB10			100		2P	RO-7
			NRZM7010OB15			150			RO-7
For high carbon steels	5 6	HC-SP	SCMQ010O	SP	P2	75	7	2.5P	SP-47
	1 5 6	HC-PO	PCMR010O	PO	P3	75	7	5P	PO-29
Oxidizing	5 6	HC-SP OX	SCMQ010OX	SP	P2	75	7	2.5P	SP-49
For hard-to-machine materials	1 4 5	EH-PO	EPHMS010O	PO	P4	75	7	4.5P	PO-33
		EH-HT	ETHMS010O5	HT				5P	HT-55
			ETHMS010O1					2.5P	HT-55
Powder HSS	4 5	PM-SP	-	SP	P3	75	7	2.75P	SP-60
		LS-PM-SP	-			150			SP-61
		PM-PO	-	PO	P4	75		5.5P	PO-35
For titanium alloys	4 5 6 9	ZET-B	ZETBMR010O	SP	P3	75	7	3P	SP-58
		ZET-P	ZETPMS010O	SL	P4			5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR010O	SP	P3	75	7	3P	SP-59
		ZEN-P	ZENPMS010O	PO	P4			4.5P	PO-34
For medium hardness carbon steels	5 6	MHSL	MHSLS010O5	SL	P4	75	7	5P	SL-16
Cemented carbide taps for hard materials	2	UH-CT	UHCS010O5	HT	P4	75	8.5	5P	CT-16
	3	EH-CT	EHCS010O5	HT	P4	75	7	5P	CT-14
For stainless steels	6 7 8	SU-SP	SUMQ010O	SP	P2	75	7	2.5P	SP-35
		SU-PO	PUMR010O	PO	P3			5P	PO-24
		SU-HT	TUMR010O4	HT				4P	HT-34
			TUMR010O1					1.5P	HT-34

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For stainless steels	Oversize	6 7 8	SU-SP	SUMR010O	SP	P3	75	7	2.5P	SP-35
				SUMS010O		P4				SP-35
			SU-PO	PUMS010O	PO				5P	PO-24
	For deep hole use	6 7 8	SU-S-SP	SSMQ010O-SU	SP	P2	75	7	2.5P	SP-41
			LS-SU-S-SP	-			100			SP-42
							150			XXXX
			LS-SU-S-PO	-	PO	P3	100		5P	PO-26
			LS-SU-S-PO	-			150			PO-26
	For hard-to-machine-materials	5 6 7	SU2-SP	SU2MR010O	SP	P3	75	7	3P	SP-39
For cast irons		1	FC-HT	TY010OSAEN5	HT	P4	75	7	5P	HT-36
				TY010OSAENA					1.5P	HT-36
			FC-O	TFCM010O5		65~40			5P	HT-39
				TFCM010O1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNR010O3	HT	P3	75	7	3P	CT-5
				TCNR010O1					1.5P	CT-5
				TCNS010O3		P4			3P	CT-5
				TCNS010O1					1.5P	CT-5
	Long shank, carbide	1 12 13	LS-N-CT	-	HT	P3	100	7	3P	CT-8
				-					1.5P	CT-8
For aluminum alloys		11 12 13	AL-SP	ASHMR010O	SP	P3	75	7	2.5P	SP-52
			AL-SP 1.5P	SY010ORLENA					1.5P	SP-54
		11 12	LA-HT	TY010OSLEN5	HT	P4	75	7	5P	HT-41
				TY010OSLENA					1.5P	HT-41
			LA-O	TLAM010O5		70~45			5P	HT-43
				TLAM010O1					1.5P	HT-43
	AXE	12	AXE-HT	TAXEMR010O1	HT	P3	75	7	1.5P	HT-46
	Carbide	11 12 13	N-CT LA	TCNR010O3A	HT	P3	75	7	3P	CT-2
				TCNR010O1A					1.5P	CT-2
	Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P3	75	7	2.5P	CT-9
	Carbide spiral pointed taps	11 12 13	N-CT-PO	PCNS010O	PO	P4	75	7	5P	CT-10
For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	MCADS010O1	HT	P4	100	7	1.5P	CT-12
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM7010OP	RO	G7	75	7	4P	RO-11
				NRSM7010OB					2P	RO-11
				NRSM8010OP		G8			4P	RO-11
				NRSM8010OB					2P	RO-11
	Long shank	11 12	LS-N-RS	NRSM7010OP10	RO	G7	100	7	4P	RO-14
				NRSM7010OP15			150			RO-14
				NRSM7010OB10			100		2P	RO-15
				NRSM7010OB15			150			RO-15
X series	For general steels	5 6 8 11 12	XSP	SNXR010O	SP	P3	100	10	2.5P	SP-15
			XSL	SNXR010OL	SL				5P	SL-1
	TiN coated	7 8 11 12	AUXSP	VSAXR010O	SP	P3	100	10	2.5P	SP-25
			AUXSL	VSAXR010OL	SL				5P	SL-5
	For stainless steels	6 7 8	SUXSP	SUXR010O	SP	P3	100	10	2.5P	SP-38
			SUXSL	SUXR010OL	SL				5P	SL-9
High speed tapping		5 6 8 11 12 13	F-SP	VFSHMR010O	SP	P3	75	7	2.5P	SP-62
			LS-F-SP	-			100			SP-63
			F-SL	VFSHMR010OL	SL		75		5P	SL-11
			LS-F-SL	-			100			SL-12
Ultra fast tapping (with coolant hole)	For steels	5 6 8	HFIHS	HFIHSS010O	SP	P4	75	10	2.5P	SP-64
		1 5 6	HFISP	HFISPS010O	SP	P4	75	10	2.5P	SP-65

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Ultra fast tapping (with coolant hole)	Carbide taps for cast irons	1 12	HFICT-B	HFICTBR010O	HT	P3	75	10	2.5P	CT-20
			HFICT-P	HFICTPR010O					4P	CT-19
	For non-ferrous materials	11 12	HFAHS	HFAHSS010O	SP	P4	75	10	2.5P	SP-66
			HFASP	HFASPS010O						SP-67
	Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR010O	HT	P3	75	10	2.5P	CT-18
			HFACT-P	HFACTPR010O					4P	CT-17
For dry tapping(with coolant hole)	For steels	1 5 6	HDISP	HDISPS010O	SP	P4	75	10	2.5P	SP-68
	For non-ferrous materials	11 12	HDASP	HDASPS010O	SP	P4	75	10	2.5P	SP-69
Ultra fast tapping (with coolant hole)	For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLS010O	SL	P4	75	10	5P	SL-13
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM7010OP	RO	G7	75	7	4P	RO-21
				HRZM7010OB					2P	RO-21
				HRZM8010OP		G8			4P	RO-21
				HRZM8010OB					2P	RO-21
For deep hole use		5 6 8	S-SP	SSMQ010O	SP	P2	75	7	2.5P	SP-43
			S-PO	PSMR010O	PO	P3			5P	PO-27
	Oversize	5 6 8	S-SP	SSMR010O	SP	P3	75	7	2.5P	SP-43
Low spiral		1 5 6 11 12	LO-SP 8°	LSHMQ010O8	SP	P2	75	7	2.5P	SP-55
			LO-SP 15°	LSHMQ010O15						SP-55
			LO-SP 20°	LSHMQ010O20						SP-55
			LS-LO-SP	LSHMQ010OL15			150			SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW010O1LEN	SP	1b	82	8.5	2.5P	SP-52
			AL-PO	-	PO				5P	PO-31
			AL-HT	TW010O1LEB5	HT					HT-48
				TW010O1LEBA					1.5P	HT-48
			N-RS	RW010O5LENB	RO	G5			2P	RO-13
	Carbide	11 12	N-CT LA	TW010O1LWB5	HT	1b	82	8.5	5P	CT-3
				TW010O1LWBA					1.5P	CT-3
With coolant hole		5 6 8 11 12	MC-SP	MSHQ010OL10	SP	P2	100	7	2.5P	SP-57
				MSHQ010OL15			150			SP-57
		1 5 6 11 12	MC-PO	MPHR010OL10	PO	P3	100	7	5P	PO-32
				MPHR010OL15			150			PO-32
			MC-HT	ML10010O5-Q	HT	P2	100			HT-52
				ML15010O5-Q			150			HT-52
				ML10010O1-Q			100		1.5P	HT-52
				ML15010O1-Q			150			HT-52
Nut taps		6 8 11 12	NT	NH2010O	HT	II b	160	7.8	25P	ST-1

Taps M10×1.25

Standard		5 6 8 11 12	SP	SPQ010N	SP	P2	75	7	2.5P	SP-5
			+SP	SNPQ010N						SP-14
			SP 1.5P	SY010NQNEBA		P2			1.5P	SP-11
			PO	POR010N	PO	P3			5P	PO-5
		1 5 6 12	HT	TNMR010N5	HT	P3	75	7	5P	HT-7
				TNMR010N1					1.5P	HT-7
	Oversize	5 6 8 11 12	SP	SPR010N	SP	P3	75	7	2.5P	SP-5
				SPS010N		P4				SP-5
			+SP	SNPR010N		P3				SP-14
				SNPS010N		P4				SP-14
			PO	POS010N	PO				5P	PO-5
		1 5 6 12	HT	TNMS010N5	HT	P4	75	7	5P	HT-7
				TNMS010N1					1.5P	HT-7

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
For left hand threads		5 6 8 11 12	SP LH	SPQ010N--L	SP	P2	75	7	2.5P	SP-20
			PO LH	POR010N--L	PO	P3			5P	PO-14
		1 5 6 12	HT LH	TNMR010N5-L	HT	P3	75	7	5P	HT-20
				TNMR010N1-L					1.5P	HT-20
Oxidizing		5 6 8	SP OX	SPQ010NX	SP	P2	75	7	2.5P	SP-17
			PO OX	POR010NX	PO	P3			5P	PO-12
	Oversize	5 6 8	SP OX	SPR010NX	SP	P3	75	7	2.5P	SP-17
TiN coated		7 8 11 12	AU+SP	VSAPR010N	SP	P3	75	7	2.5P	SP-24
			AU+SL	VSAPR010NL					5P	SL-4
		5 6 8 11 12	PO V	VPOR010N	PO	P3	75	7	5P	PO-16
Long shank		5 6 8 11 12	LS-SP	SPQ010NL10	SP	P2	100	7	2.5P	SP-27
				SPQ010NL12			120			SP-27
				SPQ010NL15			150			SP-27
				SPQ010NL20			200			SP-27
			LS-PO	POR010NL10	PO	P3	100		5P	PO-18
				POR010NL15			150			PO-18
				POR010NL20			200			PO-18
		1 5 6 12	LS-HT	TNMQ010N510	HT	P2	100	7	5P	HT-23
				TNMQ010N512			120			HT-23
				TNMQ010N515			150			HT-23
				TNMQ010N520			200			HT-23
				TNMQ010N110			100		1.5P	HT-23
				TNMQ010N112			120			HT-23
				TNMQ010N115			150			HT-23
				TNMQ010N120			200			HT-23
	Oversize	1 5 6 12	LS-HT	TNMR010N510	HT	P3	100	7	5P	HT-23
				TNMR010N110					1.5P	HT-23
				TNMS010N510		P4			5P	HT-23
				TNMS010N515			150			HT-23
				TNMS010N110			100		1.5P	HT-23
				TNMS010N115			150			HT-23
	For left hand threads	5 6 8 11 12	LS-SP LH	SPQ010NL15-L	SP	P2	150	7	2.5P	SP-30
		1 5 6 12	LS-HT LH	TNMQ010N515L	HT	P2	150	7	5P	HT-29
				TNMQ010N115L					1.5P	HT-29
	TiN coated	5 6 8 11 12	LS-SP V	VSPQ010NL15	SP	P2	150	7	2.5P	SP-31
			LS-PO V	VPOR010NL15	PO	P3			5P	PO-21
		1 5 6 12	LS-HT V	TNMQ010N510V	HT	P2	100	7	5P	HT-31
				TNMQ010N515V			150			HT-31
				TNMQ010N110V			100		1.5P	HT-31
				TNMQ010N115V			150			HT-31
For soft structural steels		8	E-SP	ESHMQ010N	SP	P2	75	7	2.5P	SP-45
Thread forming taps for steels		6 8	N-RZ	NRZM7010NP	RO	G7	75	7	4P	RO-5
				NRZM7010NB					2P	RO-5
				NRZM8010NP		G8			4P	RO-5
				NRZM8010NB					2P	RO-5
For high carbon steels		5 6	HC-SP	SCMQ010N	SP	P2	75	7	2.5P	SP-47
		1 5 6	HC-PO	PCMR010N	PO	P3	75	7	5P	PO-29
For hard-to-machine materials		1 4 5	EH-PO	EPHMS010N	PO	P4	75	7	4.5P	PO-33
			EH-HT	ETHMS010N5	HT				5P	HT-55
				ETHMS010N1					2.5P	HT-55
	Powder HSS	4 5	PM-SP	-	SP	P3	75	7	2.75P	SP-60
			PM-PO	-	PO	P4			5.5P	PO-35

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
For titanium alloys		4 5 6 9	ZET-B	ZETBMR010N	SP	P3	75	7	3P	SP-58
			ZET-P	ZETPMS010N	SL	P4			5P	SL-10
For nickel base alloys		6 7 8 10	ZEN-B	ZENBMR010N	SP	P3	75	7	3P	SP-59
			ZEN-P	ZENPMS010N	PO	P4			4.5P	PO-34
For medium hardness carbon steels		5 6	MHSL	MHSLS010N5	SL	P4	75	7	5P	SL-16
Cemented carbide taps for hard materials		2	UH-CT	UHCS010N5	HT	P4	75	8.5	5P	CT-16
For stainless steels		6 7 8	SU-SP	SUMQ010N	SP	P2	75	7	2.5P	SP-35
			SU-PO	PUMR010N	PO	P3			5P	PO-24
			SU-HT	TUMR010N4	HT				4P	HT-34
				TUMR010N1					1.5P	HT-34
	Oversize	6 7 8	SU-SP	SUMR010N	SP	P3	75	7	2.5P	SP-35
				SUMS010N		P4				SP-35
			SU-PO	PUMS010N	PO				5P	PO-24
	For hard-to-machine-materials	5 6 7	SU2-SP	SU2MR010N	SP	P3	75	7	3P	SP-39
For cast irons		1	FC-HT	TY010NRAEN5	HT	P3	75	7	5P	HT-36
				TY010NRAENA					1.5P	HT-36
			FC-O	TFCM010N5		60~35			5P	HT-39
				TFCM010N1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNR010N3	HT	P3	75	7	3P	CT-5
				TCNR010N1					1.5P	CT-5
				TCNS010N3		P4			3P	CT-5
				TCNS010N1					1.5P	CT-5
For aluminum alloys		11 12 13	AL-SP	ASHMR010N	SP	P3	75	7	2.5P	SP-52
			AL-SP 1.5P	SY010NRLENA					1.5P	SP-54
		11 12	LA-HT	TY010NRLEN5	HT	P3	75	7	5P	HT-41
				TY010NRLENA					1.5P	HT-41
			LA-O	TLAM010N5		65~40			5P	HT-43
				TLAM010N1					1.5P	HT-43
	AXE	12	AXE-HT	TAXEMR010N1	HT	P3	75	7	1.5P	HT-46
	Carbide	11 12 13	N-CT LA	TCNR010N3A	HT	P3	75	7	3P	CT-2
				TCNR010N1A					1.5P	CT-2
				TCNS010N3A		P4			3P	CT-2
				TCNS010N1A					1.5P	CT-2
	Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P3	75	7	2.5P	CT-9
For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	MCADS010N1	HT	P4	100	7	1.5P	CT-12
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM7010NP	RO	G7	75	7	4P	RO-11
				NRSM7010NB					2P	RO-11
				NRSM8010NP		G8			4P	RO-11
				NRSM8010NB					2P	RO-11
X series	For general steels	5 6 8 11 12	XSP	SNXR010N	SP	P3	100	10	2.5P	SP-15
			XSL	SNXR010NL	SL				5P	SL-1
	TiN coated	7 8 11 12	AUXSP	VSAXR010N	SP	P3	100	10	2.5P	SP-25
			AUXSL	VSAXR010NL	SL				5P	SL-5
	For stainless steels	6 7 8	SUXSP	SUXR010N	SP	P3	100	10	2.5P	SP-38
			SUXSL	SUXR010NL	SL				5P	SL-9
High speed tapping		5 6 8 11 12 13	F-SP	VFSHMR010N	SP	P3	75	7	2.5P	SP-62
			F-SL	VFSHMR010NL	SL				5P	SL-11

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Ultra fast tapping (with coolant hole)	For steels	5 6 8	HFIHS	HFIHSS010N	SP	P4	75	10	2.5P	SP-64
		1 5 6	HFISP	HFISPS010N	SP	P4	75	10	2.5P	SP-65
	Carbide taps for cast irons	1 12	HFICT-B	HFICTBR010N	HT	P3	75	10	2.5P	CT-20
			HFICT-P	HFICTPR010N					4P	CT-19
	For non-ferrous materials	11 12	HFAHS	HFAHSS010N	SP	P4	75	10	2.5P	SP-66
			HFASP	HFASPS010N						SP-67
	Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR010N	HT	P3	75	10	2.5P	CT-18
			HFACT-P	HFACTPR010N					4P	CT-17
For dry tapping (with coolant hole)	For steels	1 5 6	HDISP	HDISPS010N	SP	P4	75	10	2.5P	SP-68
	For non-ferrous materials	11 12	HDASP	HDASPS010N	SP	P4	75	10	2.5P	SP-69
Ultra fast tapping (with coolant hole)	For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLS010N	SL	P4	75	10	5P	SL-13
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM7010NP	RO	G7	75	7	4P	RO-21
				HRZM7010NB					2P	RO-21
				HRZM8010NP		G8			4P	RO-21
				HRZM8010NB					2P	RO-21
For deep hole use	Standard	5 6 8	S-SP	SSMQ010N	SP	P2	75	7	2.5P	SP-43
			S-PO	PSMR010N	PO	P3			5P	PO-27
Low spiral		1 5 6 11 12	LS-LO-SP	LSHMQ010NL15	SP	P2	150	7	2.5P	SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW010N1LEN	SP	1b	82	8.5	2.5P	SP-52
			AL-HT	TW010N1LEB5	HT				5P	HT-48
				TW010N1LEBA					1.5P	HT-48
With coolant hole		5 6 8 11 12	MC-SP	MSHQ010NL10	SP	P2	100	7	2.5P	SP-57
		1 5 6 11 12	MC-PO	MPHR010NL15	PO	P3	150	7	5P	PO-32
			MC-HT	ML10010N5-Q	HT	P2	100			HT-52
				ML15010N5-Q			150			HT-52
				ML10010N1-Q			100		1.5P	HT-52
				ML15010N1-Q			150			HT-52
Nut taps		6 8 11 12	NT	NH2010N	HT	II	150	7.8	27P	ST-1
Taps M10×1										
Standard		5 6 8 11 12	SP	SPQ010M	SP	P2	75	7	2.5P	SP-5
			SP 1.5P	SY010MQNEBA					1.5P	SP-11
			PO	POR010M	PO	P3			5P	PO-5
		1 5 6 12	HT	TNMR010M5	HT	P3	75	7	5P	HT-7
				TNMR010M1					1.5P	HT-7
	Oversize	5 6 8 11 12	SP	SPR010M	SP	P3	75	7	2.5P	SP-5
				SPS010M		P4				SP-5
			PO	POS010M	PO				5P	PO-5
		1 5 6 12	HT	TNMS010M5	HT	P4	75	7	5P	HT-8
				TNMS010M1					1.5P	HT-8
For left hand threads		5 6 8 11 12	SP LH	SPQ010M--L	SP	P2	75	7	2.5P	SP-20
			PO LH	POR010M--L	PO	P3			5P	PO-14
		1 5 6 12	HT LH	TNMR010M5-L	HT	P3	75	7	5P	HT-20
				TNMR010M1-L					1.5P	HT-20
Oxidizing		5 6 8	SP OX	SPQ010MX	SP	P2	75	7	2.5P	SP-17
			PO OX	POR010MX	PO	P3			5P	PO-12
	Oversize	5 6 8	PO OX	POS010MX	PO	P4	75	7	5P	PO-12
TiN coated		7 8 11 12	AU+SP	VSAPR010M	SP	P3	75	7	2.5P	SP-24
			AU+SL	VSAPR010ML	SL				5P	SL-4

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Long shank		5 6 8 11 12	LS-SP	SPQ010ML10	SP	P2	100	7	2.5P	SP-27
				SPQ010ML15			150			SP-27
			LS-PO	POR010ML10	PO	P3	100		5P	PO-18
				POR010ML15			150			PO-18
		1 5 6 12	LS-HT	TNMQ010M510	HT	P2	100	7	5P	HT-23
				TNMQ010M512			120			HT-23
				TNMQ010M515			150			HT-23
				TNMQ010M110			100		1.5P	HT-23
				TNMQ010M112			120			HT-23
		1 5 6 12	LS-HT	TNMQ010M115	HT	P2	150	7	1.5P	HT-23
Thread forming taps for steels		6 8	N-RZ	NRZM7010MP	RO	G7	75	7	4P	RO-5
				NRZM7010MB					2P	RO-5
For high carbon steels		5 6	HC-SP	SCMQ010M	SP	P2	75	7	2.5P	SP-47
For stainless steels		6 7 8	SU-SP	SUMQ010M	SP	P2	75	7	2.5P	SP-35
			SU-PO	PUMR010M	PO	P3			5P	PO-24
			SU-HT	TUMR010M4	HT				4P	HT-34
				TUMR010M1					1.5P	HT-34
	Oversize	6 7 8	SU-SP	SUMS010M	SP	P4	75	7	2.5P	SP-35
	For hard-to-machine-materials	5 6 7	SU2-SP	SU2MR010M	SP	P3	75	7	3P	SP-39
For cast irons		1	FC-HT	TY010MRAEN5	HT	P3	75	7	5P	HT-36
				TY010MRAENA					1.5P	HT-36
			FC-O	TFCM010M5		57~32			5P	HT-39
				TFCM010M1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNR010M3	HT	P3	70	7	3P	CT-5
				TCNR010M1					1.5P	CT-5
				TCNS010M3		P4			3P	CT-5
				TCNS010M1					1.5P	CT-5
For aluminum alloys		11 12 13	AL-SP	ASHMR010M	SP	P3	75	7	2.5P	SP-52
			AL-SP 1.5P	SY010MRLENA					1.5P	SP-54
		11 12	LA-HT	TY010MRLEN5	HT	P3	75	7	5P	HT-41
				TY010MRLENA					1.5P	HT-41
			LA-O	TLAM010M5		57~32			5P	HT-43
				TLAM010M1					1.5P	HT-43
	AXE	12	AXE-HT	(TAXEMR010M1)	HT	P3	75	7	1.5P	HT-46
	Carbide	11 12 13	N-CT LA	TCNR010M3A	HT	P3	70	7	3P	CT-2
				TCNR010M1A					1.5P	CT-2
For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	(MCADS010M1)	HT	P4	100	7	1.5P	CT-12
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM7010MP	RO	G7	75	7	4P	RO-11
				NRSM7010MB					2P	RO-11
X series	For general steels	5 6 8 11 12	XSP	SNXR010M	SP	P3	100	10	2.5P	SP-15
			XSL	SNXR010ML	SL				5P	SL-1
	TiN coated	7 8 11 12	AUXSP	VSAXR010M	SP	P3	100	10	2.5P	SP-25
			AUXSL	VSAXR010ML	SL				5P	SL-5
	For stainless steels	6 7 8	SUXSP	SUXR010M	SP	P3	100	10	2.5P	SP-38
			SUXSL	SUXR010ML	SL				5P	SL-9
For deep hole use		5 6 8	S-SP	SSMQ010M	SP	P2	75	7	2.5P	SP-43
			S-PO	PSMR010M	PO	P3			5P	PO-27
For helical coil wire screw thread inserts		11 12	AL-HT	TW010M1LEB5	HT	1b	82	8.5	5P	HT-48
				TW010M1LEBA					1.5P	HT-48
Nut taps		6 8 11 12	NT	NH2010M	HT	II	140	7.8	25P	ST-1

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

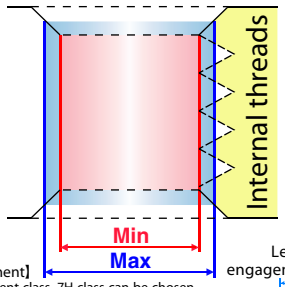
	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M10×0.75									
Standard	5 6 8 11 12	SP	SPQ010J	SP	P2	75	7	2.5P	SP-5
		PO	POR010J	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR010J5	HT	P3	75	7	5P	HT-8
			TNMR010J1					1.5P	HT-8
Taps M10×0.5									
Standard	5 6 8 11 12	SP	SPQ010G	SP	P2	75	7	2.5P	SP-5
		PO	POQ010G	PO				5P	PO-5
	1 5 6 12	HT	TNMQ010G5	HT	P2	75	7	5P	HT-8
			TNMQ010G1					1.5P	HT-8

Dies selection		Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M10×1.5										
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG010ODNEBC	Di-4
						38	13		TYJ010ODNEBC	Di-4
						50	16		TYM010ODNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG010ODNEBC	Di-11
						38	13		GYJ010ODNEBC	Di-11
Dies M10×1.25										
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG010NDNEBC	Di-4
						38	13		TYJ010NDNEBC	Di-4
						50	16		TYM010NDNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG010NDNEBC	Di-11
						38	13		GYJ010NDNEBC	Di-11
Dies M10×1										
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG010MDNEBC	Di-4
						38	13		TYJ010MDNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG010MDNEBC	Di-11
						38	13		GYJ010MDNEBC	Di-11
Dies M10×0.75										
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG010JDNEBC	Di-4
						38	13		TYJ010JDNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG010JDNEBC	Di-11
Dies M10×0.5										
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG010GDNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG010GDNEBC	Di-11

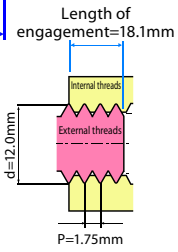
Flowchart : M12 tapping

Boring before tapping — Check 1

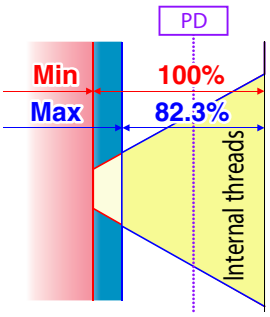


【Length of engagement】
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

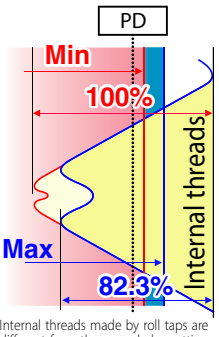
Symbol	Engagement length classification \ Engagement classification	Fine	Middle	Coarse	Engagement length
S	Short engagement length	4H	5H	–	S≦6(mm)
M	Normal engagement length	5H	6H	7H	6<M≦18(mm)
L	Long engagement length	6H	7H	8H	18<L(mm)



Engagement ratio on cutting taps



Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor dimameter.

Unit : mm

	Drill size (ref.)	D1 Min	D1 Max
Bored hole size	10.3	10.106	10.441
Engagement ratio	89.7%	100%	82.3%

D1 is minor diameter of JIS 6H(2nd Class) of internal threads

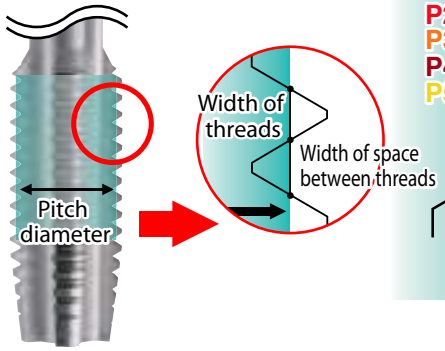
Unit : mm

*Hole size for thread forming taps	
Min	Max
11.09	11.23

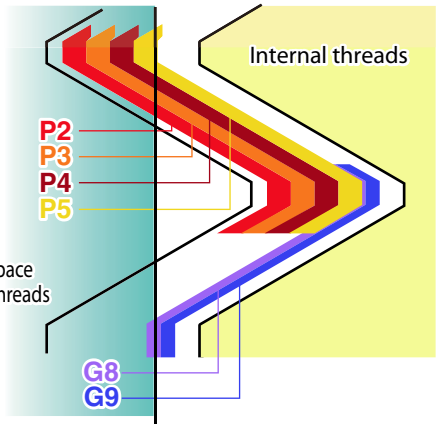
Forming condition changes depending on workpiece's Material and shape. Above is for customer's reference.

Threading — Check 2

【Pitch diameter】
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



【Thread class of cutting taps】

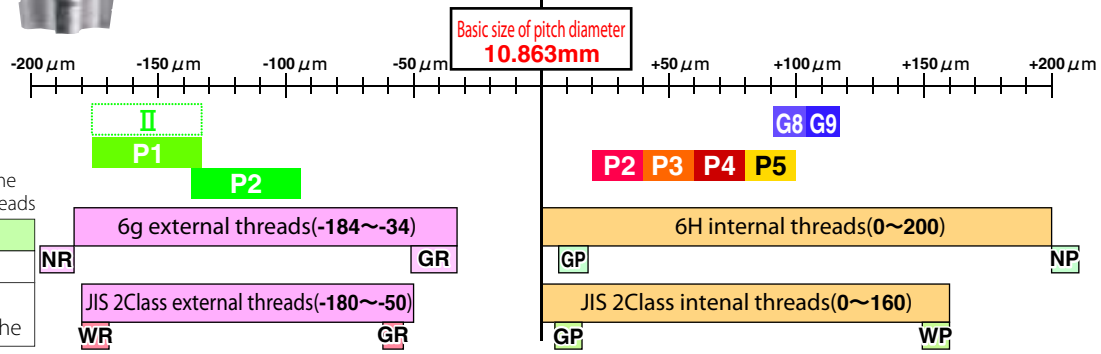
Class	PD tolerance
P2	20μm~40μm
P3	40μm~60μm
P4	60μm~80μm
P5	80μm~100μm

*Above shows the plus tolerance by setting PD basic size as "0".

【Thread class of roll taps】

Class	PD tolerance
G8	89μm~102μm
G9	102μm~114μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
Ⅱ	Solid dies
P1	Solid dies for Auto Lathe
P2	

Relative position of PD tolerance area of external threads, internal threads, taps and gages.

Gage check — Check 3

(–) ← Basic size of pitch diameter → (+)
10.863mm

Unit : μm

Ring gage pitch diameter(for external threads inspection)			
NR6g	-202 ~-184	GR6g	-51~-33
WRⅡ	-180 ~-172	GRⅡ	-62 ~-54

NR : NOT GO ring gage
GR : GO ring gage
WR : NOT GO working ring gage

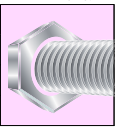
Unit : μm

Plug gage pitch diameter(for internal threads inspection)			
GP6H	7 ~ 17	NP6H	200 ~ 210
GPⅡ	4 ~ 12	WPⅡ	152 ~ 160

GP : GO plug gage
NP : NOT GO plug gage
WP : NOT GO working plug gage

Unit : mm

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	11.701~11.966	10.679~10.829	–
JIS 2class	11.760~11.950	10.683~10.813	~9.803



Unit : mm

Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	–	10.863~11.063	10.106~10.441
JIS 2class	–	10.863~11.023	10.106~10.441

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channmfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Taps M12×1.75

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Standard		5 6 8 11 12	SP	SPQ012P	SP	P2	82	8.5	2.5P	SP-5
			+SP	SNPQ012P						SP-14
			SP 1.5P	SY012PQNEBA					1.5P	SP-12
			PO	POS012P	PO				5P	PO-5
		1 5 6 12	HT	TNMR012P5	HT	P3	82	8.5	5P	HT-8
				TNMR012P1					1.5P	HT-8
	Oversize	5 6 8 11 12	SP	SPR012P	SP	P3	82	8.5	2.5P	SP-6
				SPS012P		P4				SP-6
			+SP	SNPR012P		P3				SP-14
				SNPS012P		P4				SP-14
			PO	POT012P	PO	P5			5P	PO-5
		1 5 6 12	HT	TNMS012P5	HT	P4	82	8.5	5P	HT-8
				TNMS012P1					1.5P	HT-8
For left hand threads		5 6 8 11 12	SP LH	SPQ012P--L	SP	P2	82	8.5	2.5P	SP-20
			PO LH	POS012P--L	PO	P4			5P	PO-14
		1 5 6 12	HT LH	TNMR012P5-L	HT	P3	82	8.5	5P	HT-20
				TNMR012P1-L					1.5P	HT-20
Oxidizing		5 6 8	SP OX	SPQ012PX	SP	P2	82	8.5	2.5P	SP-17
			PO OX	POS012PX	PO	P4			5P	PO-12
TiN coated		7 8 11 12	AU+SP	VSAPR012P	SP	P3	82	8.5	2.5P	SP-24
			AU+SL	VSAPS012PL	SL	P4			5P	SL-4
		5 6 8 11 12	PO V	VPOS012P	PO	P4	82	8.5	5P	PO-16
Long shank		5 6 8 11 12	LS-SP	SPQ012PL10	SP	P2	100	8.5	2.5P	SP-27
				SPQ012PL12			120			SP-27
				SPQ012PL15			150			SP-27
				SPQ012PL20			200			SP-27
		5 6 8 11 12	LS-PO	POS012PL10	PO	P4	100	8.5	5P	PO-18
				POS012PL12			120			PO-18
				POS012PL15			150			PO-18
				POS012PL20			200			PO-18
		1 5 6 12	LS-HT	TNMQ012P510	HT	P2	100	8.5	5P	HT-23
				TNMQ012P512			120			HT-23
				TNMQ012P515			150			HT-23
				TNMQ012P520			200			HT-23
				TNMQ012P525			250			HT-23
				TNMQ012P110			100		1.5P	HT-23
				TNMQ012P112			120			HT-23
				TNMQ012P115			150			HT-23
				TNMQ012P120			200			HT-23
				TNMQ012P125			250			HT-24
	Oversize	5 6 8 11 12	LS-SP	SPR012PL15	SP	P3	150	8.5	2.5P	SP-27
			LS-PO	POT012PL15	PO	P5			5P	PO-18
		1 5 6 12	LS-HT	TNMR012P515	HT	P3	150	8.5	5P	HT-24
				TNMR012P115					1.5P	HT-24
				TNMS012P515		P4			5P	HT-24
				TNMS012P520			200			HT-24
				TNMS012P115			150		1.5P	HT-24
				TNMS012P120			200			HT-24
	For left hand threads	5 6 8 11 12	LS-SP LH	SPQ012PL15-L	SP	P2	150	8.5	2.5P	SP-30

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Long shank	For left hand threads	1 5 6 12	LS-HT LH	TNMQ012P515L	HT	P2	150	8.5	5P	HT-29
				TNMQ012P115L					1.5P	HT-29
	TiN coated	5 6 8 11 12	LS-SP V	VSPQ012PL15	SP	P2	150	8.5	2.5P	SP-31
			LS-PO V	VPOS012PL15	PO	P4			5P	PO-21
		1 5 6 12	LS-HT V	TNMQ012P510V	HT	P2	100	8.5	5P	HT-31
				TNMQ012P515V			150			HT-31
				TNMQ012P110V			100		1.5P	HT-31
				TNMQ012P115V			150			HT-31
For soft structural steels		8	E-SP	ESHMQ012P	SP	P2	82	8.5	2.5P	SP-45
Thread forming taps for steels		6 8	N-RZ	NRZM8012PP	RO	G8	82	8.5	4P	RO-5
				NRZM8012PB					2P	RO-5
				NRZM9012PP		G9			4P	RO-5
				NRZM9012PB					2P	RO-5
For high carbon steels		5 6	HC-SP	SCMQ012P	SP	P2	82	8.5	2.5P	SP-47
		1 5 6	HC-PO	PCMS012P	PO	P4	82	8.5	5P	PO-29
	Oxidizing	5 6	HC-SP OX	SCMQ012PX	SP	P2	82	8.5	2.5P	SP-49
For hard-to-machine materials		1 4 5	EH-PO	EPHMS012P	PO	P4	82	8.5	4.5P	PO-33
			EH-HT	ETHMS012P5	HT				5P	HT-55
				ETHMS012P1					2.5P	HT-55
	Powder HSS	4 5	PM-SP	-	SP	P3	82	8.5	2.75P	SP-60
			LS-PM-SP	-			150			SP-61
			PM-PO	-	PO	P4	82		5.5P	PO-35
For titanium alloys		4 5 6 9	ZET-B	ZETBMR012P	SP	P3	82	8.5	3P	SP-58
			ZET-P	ZETPMT012P	SL	P5			5P	SL-10
For nickel base alloys		6 7 8 10	ZEN-B	ZENBMR012P	SP	P3	82	8.5	3P	SP-59
			ZEN-P	ZENPMT012P	PO	P5			4.5P	PO-34
For medium hardness carbon steels		5 6	MHSL	MHSLT012P5	SL	P5	82	8.5	5P	SL-16
Cemented carbide taps for hard materials		2	UH-CT	UHCS012P5	HT	P4	82	10.5	5P	CT-16
		3	EH-CT	EHCS012P5	HT	P4	82	8.5	5P	CT-14
For stainless steels		6 7 8	SU-SP	SUMQ012P	SP	P2	82	8.5	2.5P	SP-35
			SU-PO	PUMS012P	PO	P4			5P	PO-24
			SU-HT	TUMS012P4	HT				4P	HT-34
				TUMS012P1					1.5P	HT-34
	Oversize	6 7 8	SU-SP	SUMR012P	SP	P3	82	8.5	2.5P	SP-35
				SUMS012P		P4				SP-35
			SU-PO	PUMT012P	PO	P5			5P	PO-24
	For deep hole use	6 7 8	SU-S-SP	SSMQ012P-SU	SP	P2	82	8.5	2.5P	SP-41
			LS-SU-S-SP	-			150			SP-42
			LS-SU-S-PO	-	PO	P4			5P	PO-26
	For hard-to-machine-materials	5 6 7	SU2-SP	SU2MR012P	SP	P3	82	8.5	3P	SP-39
For cast irons		1	FC-HT	TY012PSAEN5	HT	P4	82	8.5	5P	HT-36
				TY012PSAENA					1.5P	HT-36
			FC-O	TFCM012P5		70~40			5P	HT-39
				TFCM012P1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNR012P3	HT	P3	82	8.5	3P	CT-5
				TCNR012P1					1.5P	CT-5
				TCNS012P3		P4			3P	CT-5
				TCNS012P1					1.5P	CT-5
For aluminum alloys	Carbide spiral fluted taps	1 12 13	N-CT-SP	-	SP	P4	82	8.5	2.5P	CT-9
	Carbide spiral pointed taps	1 12 13	N-CT-PO	PCNS012P	PO	P4	82	8.5	5P	CT-10
For aluminum alloys		11 12	AL-SP	ASHMR012P	SP	P3	82	8.5	2.5P	SP-52
		11 12 13	AL-SP 1.5P	SY012PRLENA	SP	P3	82	8.5	1.5P	SP-54

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For aluminum alloys		11 12	LA-HT	TY012PSLEN5	HT	P4	82	8.5	5P	HT-41
				TY012PSLENA					1.5P	HT-41
			LA-O	TLAM012P5		75~45			5P	HT-43
				TLAM012P1					1.5P	HT-43
	AXE	12	AXE-HT	TAXEMR012P1	HT	P3	82	8.5	1.5P	HT-46
	Carbide	11 12 13	N-CT LA	TCNR012P3A	HT	P3	82	8.5	3P	CT-2
				TCNR012P1A					1.5P	CT-2
For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	MCADS012P1	HT	P4	100	8.5	1.5P	CT-12
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM8012PP	RO	G8	82	8.5	4P	RO-11
				NRSM8012PB					2P	RO-11
				NRSM9012PP		G9			4P	RO-11
				NRSM9012PB					2P	RO-11
X series	For general steels	5 6 8 11 12	XSP	SNXR012P	SP	P3	110	12	2.5P	SP-15
			XSL	SNXS012PL	SL	P4			5P	SL-1
	TiN coated	7 8 11 12	AUXSP	VSAXR012P	SP	P3	110	12	2.5P	SP-25
			AUXSL	VSAXS012PL	SL	P4			5P	SL-5
	For stainless steels	6 7 8	SUXSP	SUXS012P	SP	P4	110	12	2.5P	SP-38
			SUXSL	SUXS012PL	SL				5P	SL-9
High speed tapping		5 6 8 11 12 13	F-SP	VFSHMS012P	SP	P4	82	8.5	2.5P	SP-62
			LS-F-SP	-			150			SP-63
			F-SL	VFSHMS012PL	SL		82		5P	SL-11
			LS-F-SL	-			150			SL-12
Ultra fast tapping (with coolant hole)	For steels	5 6 8	HFIHS	HFIHS012P	SP	P4	82	12	2.5P	SP-64
		1 5 6	HFISP	HFISP012P	SP	P4	82	12	2.5P	SP-65
	Carbide taps for cast irons	1 12	HFICT-B	HFICTBR012P	HT	P3	82	12	2.5P	CT-20
			HFICT-P	HFICTPR012P					4P	CT-19
	For non-ferrous materials	11 12	HFAHS	HFAHSS012P	SP	P4	82	12	2.5P	SP-66
			HFASP	HFASPS012P						SP-67
	Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR012P	HT	P3	82	12	2.5P	CT-18
			HFACT-P	HFACTPR012P					4P	CT-17
For dry tapping(with coolant hole)	For steels	1 5 6	HDISP	HDISPS012P	SP	P4	82	12	2.5P	SP-68
	For non-ferrous materials	11 12	HDASP	HDASPS012P	SP	P4	82	12	2.5P	SP-69
Ultra fast tapping (with coolant hole)	For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLS012P	SL	P4	82	12	5P	SL-13
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM8012PP	RO	G8	82	8.5	4P	RO-21
				HRZM8012PB					2P	RO-21
				HRZM9012PP		G9			4P	RO-21
				HRZM9012PB					2P	RO-21
For deep hole use		5 6 8	S-SP	SSMQ012P	SP	P2	82	8.5	2.5P	SP-43
			S-PO	PSMS012P	PO	P4			5P	PO-27
	Oversize	5 6 8	S-SP	SSMR012P	SP	P3	82	8.5	2.5P	SP-43
Low spiral		1 5 6 11 12	LO-SP 8°	LSHMQ012P8	SP	P2	82	8.5	2.5P	SP-55
			LO-SP 15°	LSHMQ012P15						SP-55
			LO-SP 20°	LSHMQ012P20						SP-55
			LS-LO-SP	LSHMQ012PL15			150			SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW012P1LEN	SP	1b	95	12.5	2.5P	SP-52
			AL-PO	-	PO				5P	PO-31
			AL-HT	TW012P1LEB5	HT					HT-48
				TW012P1LEBA					1.5P	HT-49
			N-RS	RW012P6LENB	RO	G6			2P	RO-13
With coolant hole		5 6 8 11 12	MC-SP	MSHQ012PL10	SP	P2	100	8.5	2.5P	SP-57
				MSHQ012PL15			150			SP-57

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
With coolant hole		1 5 6 11 12	MC-PO	MPHS012PL10	PO	P4	100	8.5	5P	PO-32
				MPHS012PL15			150			PO-32
			MC-HT	ML10012P5-Q	HT	P2	100			HT-52
				ML15012P5-Q			150			HT-52
				ML20012P5-Q			200			HT-52
				ML10012P1-Q			100		1.5P	HT-53
				ML15012P1-Q			150			HT-53
				ML20012P1-Q			200			HT-53
Nut taps		6 8 11 12	NT	NH2012P	HT	II b	170	9	26P	ST-1

Taps M12×1.5

Standard		5 6 8 11 12	SP	SPQ012O	SP	P2	82	8.5	2.5P	SP-6
			SP 1.5P	SY012OQNEBA					1.5P	SP-12
			PO	POR012O	PO	P3			5P	PO-5
		1 5 6 12	HT	TNMR012O5	HT	P3	82	8.5	5P	HT-8
				TNMR012O1					1.5P	HT-8
	Oversize	5 6 8 11 12	SP	SPR012O	SP	P3	82	8.5	2.5P	SP-6
				SPS012O		P4				SP-6
			PO	POS012O	PO				5P	PO-5
				POT012O		P5				PO-5
		1 5 6 12	HT	TNMS012O5	HT	P4	82	8.5	5P	HT-8
				TNMS012O1					1.5P	HT-8
For left hand threads		5 6 8 11 12	SP LH	SPQ012O--L	SP	P2	82	8.5	2.5P	SP-20
			PO LH	POR012O--L	PO	P3			5P	PO-14
		1 5 6 12	HT LH	TNMR012O5-L	HT	P3	82	8.5	5P	HT-20
				TNMR012O1-L					1.5P	HT-20
Oxidizing		5 6 8	SP OX	SPQ012OX	SP	P2	82	8.5	2.5P	SP-17
			PO OX	POR012OX	PO	P3			5P	PO-12
TiN coated		7 8 11 12	AU+SP	VSAPR012O	SP	P3	82	8.5	2.5P	SP-24
			AU+SL	VSAPR012OL	SL				5P	SL-4
		5 6 8 11 12	PO V	VPOR012O	PO	P3	82	8.5	5P	PO-16
Long shank		5 6 8 11 12	LS-SP	SPQ012OL10	SP	P2	100	8.5	2.5P	SP-27
				SPQ012OL15			150			SP-27
				SPQ012OL20			200			SP-27
			LS-PO	POR012OL10	PO	P3	100		5P	PO-18
				POR012OL15			150			PO-18
				POR012OL20			200			PO-18
		1 5 6 12	LS-HT	TNMQ012O510	HT	P2	100	8.5	5P	HT-24
				TNMQ012O512			120			HT-24
				TNMQ012O515			150			HT-24
				TNMQ012O520			200			HT-24
				TNMQ012O110			100		1.5P	HT-24
				TNMQ012O112			120			HT-24
				TNMQ012O115			150			HT-24
				TNMQ012O120			200			HT-24
	Oversize	1 5 6 12	LS-HT	TNMS012O515	HT	P4	150	8.5	5P	HT-24
				TNMS012O520			200			HT-24
				TNMS012O115			150		1.5P	HT-24
				TNMS012O120			200			HT-24
	For left hand threads	5 6 8 11 12	LS-SP LH	SPQ012OL15-L	SP	P2	150	8.5	2.5P	SP-30
		1 5 6 12	LS-HT LH	TNMQ012O515L	HT	P2	150	8.5	5P	HT-29
				TNMQ012O115L					1.5P	HT-30

Think threads with YAMAWA

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	*D*s	*ℓ*c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	*D*s	*ℓ*c	Product page
Long shank	TiN coated	5 6 8 11 12	LS-SP V	VSPQ012OL15	SP	P2	150	8.5	2.5P	SP-31
			LS-PO V	VPOR012OL15	PO	P3			5P	PO-21
		1 5 6 12	LS-HT V	TNMQ012O510V	HT	P2	100	8.5	5P	HT-31
				TNMQ012O515V			150			HT-32
				TNMQ012O110V			100		1.5P	HT-32
				TNMQ012O115V			150			HT-32
For soft structural steels		8	E-SP	ESHMQ012O	SP	P2	82	8.5	2.5P	SP-45
Thread forming taps for steels		6 8	N-RZ	NRZM8012OP	RO	G8	82	8.5	4P	RO-5
				NRZM8012OB					2P	RO-5
For high carbon steels		5 6	HC-SP	SCMQ012O	SP	P2	82	8.5	2.5P	SP-47
		1 5 6	HC-PO	PCMR012O	PO	P3	82	8.5	5P	PO-29
For hard-to-machine materials		1 4 5	EH-PO	EPHMS012O	PO	P4	82	8.5	4.5P	PO-33
			EH-HT	ETHMS012O5	HT				5P	HT-55
				ETHMS012O1					2.5P	HT-55
For titanium alloys		4 5 6 9	ZET-B	ZETBMR012O	SP	P3	82	8.5	3P	SP-58
			ZET-P	ZETPMS012O	SL	P4			5P	SL-10
For nickel base alloys		6 7 8 10	ZEN-B	ZENBMR012O	SP	P3	82	8.5	3P	SP-59
			ZEN-P	ZENPMS012O	PO	P4			4.5P	PO-34
For medium hardness carbon steels		5 6	MHSL	MHSLT012O5	SL	P5	82	8.5	5P	SL-16
Cemented carbide taps for hard materials		2	UH-CT	UHCS012O5	HT	P4	82	10.5	5P	CT-16
For stainless steels		6 7 8	SU-SP	SUMQ012O	SP	P2	82	8.5	2.5P	SP-35
			SU-PO	PUMR012O	PO	P3			5P	PO-24
			SU-HT	TUMR012O4	HT				4P	HT-34
				TUMR012O1					1.5P	HT-34
	Oversize	6 7 8	SU-SP	SUMR012O	SP	P3	82	8.5	2.5P	SP-35
				SUMS012O		P4				SP-35
			SU-PO	PUMT012O	PO	P5			5P	PO-24
	For hard-to-machine-materials	5 6 7	SU2-SP	SU2MR012O	SP	P3	82	8.5	3P	SP-39
For cast irons		1	FC-HT	TY012OSAEN5	HT	P4	82	8.5	5P	HT-36
				TY012OSAENA					1.5P	HT-36
			FC-O	TFCM012O5		70~40			5P	HT-39
				TFCM012O1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNR012O3	HT	P3	82	8.5	3P	CT-5
				TCNR012O1					1.5P	CT-5
				TCNS012O3		P4			3P	CT-5
				TCNS012O1					1.5P	CT-6
For aluminum alloys		11 12 13	AL-SP	ASHMR012O	SP	P3	82	8.5	2.5P	SP-52
			AL-SP 1.5P	SY012ORLENA					1.5P	SP-54
		11 12	LA-HT	TY012OSLEN5	HT	P4	82	8.5	5P	HT-41
				TY012OSLENA					1.5P	HT-41
			LA-O	TLAM012O5		75~45			5P	HT-43
				TLAM012O1					1.5P	HT-43
	AXE	12	AXE-HT	TAXEMR012O1	HT	P3	82	8.5	1.5P	HT-46
	Carbide	11 12 13	N-CT LA	TCNR012O3A	HT	P3	82	8.5	3P	CT-2
				TCNR012O1A					1.5P	CT-2
				TCNS012O3A		P4			3P	CT-2
				TCNS012O1A					1.5P	CT-2
For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	MCADS012O1	HT	P4	100	8.5	1.5P	CT-12
Thread forming taps For non-ferrous materials		11 12	N-RS	NRSM8012OP	RO	G8	82	8.5	4P	RO-11
				NRSM8012OB					2P	RO-11
				NRSM9012OP		G9			4P	RO-11
				NRSM9012OB					2P	RO-11

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	*D*s	*ℓ*c	Product page
X series	For general steels	5 6 8 11 12	XSP	SNXR012O	SP	P3	110	12	2.5P	SP-15
			XSL	SNXR012OL	SL				5P	SL-1
	TiN coated	7 8 11 12	AUXSP	VSAXR012O	SP	P3	110	12	2.5P	SP-25
			AUXSL	VSAXR012OL	SL				5P	SL-5
	For stainless steels	6 7 8	SUXSP	SUXR012O	SP	P3	110	12	2.5P	SP-38
			SUXSL	SUXS012OL	SL	P4			5P	SL-9
High speed tapping		5 6 8 11 12 13	F-SP	VFSHMR012O	SP	P3	82	8.5	2.5P	SP-62
			F-SL	VFSHMR012OL	SL				5P	SL-11
Ultra fast tapping (with coolant hole)	For steels	5 6 8	HFIHS	HFIHSS012O	SP	P4	82	12	2.5P	SP-64
		1 5 6	HFISP	HFISPS012O	SP	P4	82	12	2.5P	SP-65
	Carbide taps for cast irons	1 12	HFICT-B	HFICTBR012O	HT	P3	82	12	2.5P	CT-20
			HFICT-P	HFICTPR012O					4P	CT-19
	For non-ferrous materials	11 12	HFAHS	HFAHSS012O	SP	P4	82	12	2.5P	SP-66
			HFASP	HFASPS012O						SP-67
	Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR012O	HT	P3	82	12	2.5P	CT-18
			HFACT-P	HFACTPR012O					4P	CT-17
For dry tapping (with coolant hole)	For steels	1 5 6	HDISP	HDISPS012O	SP	P4	82	12	2.5P	SP-68
	For non-ferrous materials	11 12	HDASP	HDASPS012O	SP	P4	82	12	2.5P	SP-69
Ultra fast tapping (with coolant hole)	For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLS012O	SL	P4	82	12	5P	SL-13
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM8012OP	RO	G8	82	8.5	4P	RO-21
				HRZM8012OB					2P	RO-21
				HRZM9012OP		G9			4P	RO-21
				HRZM9012OB					2P	RO-21
For deep hole use		5 6 8	S-SP	SSMQ012O	SP	P2	82	8.5	2.5P	SP-43
			S-PO	PSMR012O	PO	P3			5P	PO-27
Low spiral		1 5 6 11 12	LS-LO-SP	LSHMQ012OL15	SP	P2	150	8.5	2.5P	SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW012O1LEN	SP	1b	88	10.5	2.5P	SP-52
			AL-HT	TW012O1LEB5	HT				5P	HT-49
				TW012O1LEBA					1.5P	HT-49
With coolant hole		5 6 8 11 12	MC-SP	MSHQ012OL10	SP	P2	100	8.5	2.5P	SP-57
		1 5 6 11 12	MC-PO	MPHR012OL10	PO	P3	100	8.5	5P	PO-32
				MPHR012OL15			150			PO-32
			MC-HT	ML10012O5-Q	HT	P2	100			HT-53
				ML15012O5-Q			150			HT-53
				ML20012O5-Q			200			HT-53
				ML10012O1-Q			100		1.5P	HT-53
				ML15012O1-Q			150			HT-53
				ML20012O1-Q			200			HT-53
Nut taps		6 8 11 12	NT	NH2012O	HT	II	160	9	25P	ST-1
Taps M12×1.25										
Standard		5 6 8 11 12	SP	SPQ012N	SP	P2	82	8.5	2.5P	SP-6
			+SP	SNPQ012N						SP-14
			SP 1.5P	SY012NQNEBA		P2			1.5P	SP-12
			PO	POS012N	PO	P4			5P	PO-5
		1 5 6 12	HT	TNMS012N5	HT	P4	82	8.5	5P	HT-8
				TNMS012N1					1.5P	HT-8
	Oversize	5 6 8 11 12	SP	SPR012N	SP	P3	82	8.5	2.5P	SP-6
				SPS012N		P4				SP-6
			+SP	SNPR012N		P3				SP-14
				SNPS012N		P4				SP-14
			PO	POT012N	PO	P5			5P	PO-5

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For left hand threads	5 6 8 11 12	SP LH	SPQ012N--L	SP	P2	82	8.5	2.5P	SP-20
		PO LH	POS012N--L	PO	P4			5P	PO-14
	1 5 6 12	HT LH	TNMS012N5-L	HT	P4	82	8.5	5P	HT-20
			TNMS012N1-L					1.5P	HT-20
Oxidizing	5 6 8	SP OX	SPQ012NX	SP	P2	82	8.5	2.5P	SP-17
		PO OX	POS012NX	PO	P4			5P	PO-12
TiN coated	7 8 11 12	AU+SP	VSAPR012N	SP	P3	82	8.5	2.5P	SP-24
		AU+SL	VSAPR012NL	SL				5P	SL-4
	5 6 8 11 12	PO V	VPOS012N	PO	P4	82	8.5	5P	PO-16
Long shank	5 6 8 11 12	LS-SP	SPQ012NL10	SP	P2	100	8.5	2.5P	SP-27
			SPQ012NL12			120			SP-27
			SPQ012NL15			150			SP-27
			SPQ012NL20			200			SP-27
		LS-PO	POS012NL10	PO	P4	100		5P	PO-18
			POS012NL15			150			PO-18
			POS012NL20			200			PO-18
	1 5 6 12	LS-HT	TNMQ012N510	HT	P2	100	8.5	5P	HT-24
			TNMQ012N512			120			HT-24
			TNMQ012N515			150			HT-24
			TNMQ012N520			200			HT-24
			TNMQ012N110			100		1.5P	HT-24
			TNMQ012N112			120			HT-24
			TNMQ012N115			150			HT-24
			TNMQ012N120			200			HT-24
Oversize	1 5 6 12	LS-HT	TNMS012N515	HT	P4	150	8.5	5P	HT-24
			TNMS012N520			200			HT-24
			TNMS012N115			150		1.5P	HT-24
			TNMS012N120			200			HT-24
For left hand threads	5 6 8 11 12	LS-SP LH	SPQ012NL15-L	SP	P2	150	8.5	2.5P	SP-30
	1 5 6 12	LS-HT LH	TNMQ012N515L	HT	P2	150	8.5	5P	HT-30
			TNMQ012N115L					1.5P	HT-30
TiN coated	5 6 8 11 12	LS-SP V	VSPQ012NL15	SP	P2	150	8.5	2.5P	SP-31
		LS-PO V	VPOS012NL15	PO	P4			5P	PO-21
	1 5 6 12	LS-HT V	TNMQ012N510V	HT	P2	100	8.5	5P	HT-32
			TNMQ012N515V			150			HT-32
			TNMQ012N110V			100		1.5P	HT-32
			TNMQ012N115V			150			HT-32
For soft structural steels	8	E-SP	ESHMQ012N	SP	P2	82	8.5	2.5P	SP-45
Thread forming taps for steels	6 8	N-RZ	NRZM8012NP	RO	G8	82	8.5	4P	RO-5
			NRZM8012NB					2P	RO-5
			NRZM9012NP		G9			4P	RO-5
			NRZM9012NB					2P	RO-5
For high carbon steels	5 6	HC-SP	SCMQ012N	SP	P2	82	8.5	2.5P	SP-47
	1 5 6	HC-PO	PCMS012N	PO	P4	82	8.5	5P	PO-30
For hard-to-machine materials	1 4 5	EH-PO	EPHMS012N	PO	P4	82	8.5	4.5P	PO-33
		EH-HT	ETHMS012N5	HT				5P	HT-55
			ETHMS012N1					2.5P	HT-55
For titanium alloys	4 5 6 9	ZET-B	ZETBMR012N	SP	P3	82	8.5	3P	SP-58
		ZET-P	ZETPMT012N	SL	P5			5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR012N	SP	P3	82	8.5	3P	SP-59
		ZEN-P	ZENPMT012N	PO	P5			4.5P	PO-34
For medium hardness carbon steels	5 6	MHSL	MHSLT012N7	SL	P5	82	8.5	7P	SL-16

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Cemented carbide taps for hard materials	2	UH-CT	UHCS012N5	HT	P4	82	10.5	5P	CT-16
For stainless steels	6 7 8	SU-SP	SUMQ012N	SP	P2	82	8.5	2.5P	SP-35
		SU-PO	PUMS012N	PO	P4			5P	PO-24
		SU-HT	TUMS012N4	HT				4P	HT-34
			TUMS012N1					1.5P	HT-34
Oversize	6 7 8	SU-SP	SUMR012N	SP	P3	82	8.5	2.5P	SP-35
		SU-PO	PUMT012N	PO	P5			5P	PO-24
For hard-to-machine-materials	5 6 7	SU2-SP	SU2MR012N	SP	P3	82	8.5	3P	SP-39
For cast irons	1	FC-HT	TY012NSAEN5	HT	P4	82	8.5	5P	HT-36
			TY012NSAENA					1.5P	HT-36
		FC-O	TFCM012N5		70~40			5P	HT-39
			TFCM012N1					1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNR012N3	HT	P3	80	8.5	3P	CT-6
			TCNR012N1					1.5P	CT-6
			TCNS012N3		P4			3P	CT-6
			TCNS012N1					1.5P	CT-6
For aluminum alloys	11 12 13	AL-SP	ASHMR012N	SP	P3	82	8.5	2.5P	SP-52
		AL-SP 1.5P	SY012NRLENA					1.5P	SP-54
	11 12	LA-HT	TY012NSLEN5	HT	P4	82	8.5	5P	HT-41
			TY012NSLENA					1.5P	HT-41
		LA-O	TLAM012N5		75~45			5P	HT-43
			TLAM012N1					1.5P	HT-43
AXE	12	AXE-HT	TAXEMR012N1	HT	P3	82	8.5	1.5P	HT-46
Carbide	11 12 13	N-CT LA	TCNR012N3A	HT	P3	80	8.5	3P	CT-2
			TCNR012N1A					1.5P	CT-2
			TCNS012N3A		P4			3P	CT-2
			TCNS012N1A					1.5P	CT-2
Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P4	80	8.5	2.5P	CT-9
For aluminum alloys (with coolant hole) Carbide	11 12	MC-AD-CT	MCADS012N1	HT	P4	100	8.5	1.5P	CT-12
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM8012NP	RO	G8	82	8.5	4P	RO-11
			NRSM8012NB					2P	RO-11
			NRSM9012NP		G9			4P	RO-12
			NRSM9012NB					2P	RO-12
X series For general steels	5 6 8 11 12	XSP	SNXR012N	SP	P3	110	12	2.5P	SP-15
		XSL	SNXR012NL	SL				5P	SL-1
TiN coated	7 8 11 12	AUXSP	VSAXR012N	SP	P3	110	12	2.5P	SP-25
		AUXSL	VSAXR012NL	SL				5P	SL-5
For stainless steels	6 7 8	SUXSP	SUXR012N	SP	P3	110	12	2.5P	SP-38
		SUXSL	SUXS012NL	SL	P4			5P	SL-9
High speed tapping	5 6 8 11 12 13	F-SP	VFSHMS012N	SP	P4	82	8.5	2.5P	SP-62
		F-SL	VFSHMS012NL	SL				5P	SL-11
Ultra fast tapping (with coolant hole) For steels	5 6 8	HFIHS	HFIHSS012N	SP	P4	82	12	2.5P	SP-64
	1 5 6	HFISP	HFISPS012N	SP	P4	82	12	2.5P	SP-65
Carbide taps for cast irons	1 12	HFICT-B	HFICTBR012N	HT	P3	82	12	2.5P	CT-20
		HFICT-P	HFICTPR012N					4P	CT-19
For non-ferrous materials	11 12	HFAHS	HFAHSS012N	SP	P4	82	12	2.5P	SP-66
		HFASP	HFASPS012N						SP-67
Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR012N	HT	P3	82	12	2.5P	CT-18
		HFACT-P	HFACTPR012N					4P	CT-17
For dry tapping(with coolant hole) For steels	1 5 6	HDISP	HDISPS012N	SP	P4	82	12	2.5P	SP-68
For non-ferrous materials	11 12	HDASP	HDASPS012N	SP	P4	82	12	2.5P	SP-69
Ultra fast tapping (with coolant hole) For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLS012N	SL	P4	82	12	5P	SL-13

Think threads with YAMAWA

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channmfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	HRZM8012NP	RO	G8	82	8.5	4P	RO-21
			HRZM8012NB					2P	RO-21
			HRZM9012NP		G9			4P	RO-21
			HRZM9012NB					2P	RO-21
For deep hole use	5 6 8	S-SP	SSMQ012N	SP	P2	82	8.5	2.5P	SP-44
		S-PO	PSMS012N	PO	P4			5P	PO-27
Low spiral	1 5 6 11 12	LS-LO-SP	LSHMQ012NL15	SP	P2	150	8.5	2.5P	SP-56
For helical coil wire screw thread inserts	11 12	AL-SP	SW012N1LEN	SP	1b	88	10.5	2.5P	SP-53
		AL-HT	TW012N1LEB5	HT				5P	HT-49
			TW012N1LEBA					1.5P	HT-49
With coolant hole	1 5 6 11 12	MC-HT	ML10012N5-Q	HT	P2	100	8.5	5P	HT-53
			ML15012N5-Q			150			HT-53
			ML20012N5-Q			200			HT-53
			ML10012N1-Q			100		1.5P	HT-53
			ML15012N1-Q			150			HT-53
			ML20012N1-Q			200			HT-53
		MC-SP	MSHQ012L10	SP		100		2.5P	SP-57
		MC-PO	MPHS012NL10	PO	P4			5P	PO-32
			MPHS012NL15			150			PO-32
Nut taps	6 8 11 12	NT	NH2012N	HT	II	160	9	27P	ST-1
Taps M12×1									
Standard	5 6 8 11 12	SP	SPQ012M	SP	P2	82	8.5	2.5P	SP-6
		PO	POR012M	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR012M5	HT	P3	82	8.5	5P	HT-8
			TNMR012M1					1.5P	HT-8
Oversize	5 6 8 11 12	SP	SPR012M	SP	P3	82	8.5	2.5P	SP-6
			SPS012M		P4				SP-6
		PO	POS012M	PO				5P	PO-5
For left hand threads	5 6 8 11 12	SP LH	SPQ012M-L	SP	P2	82	8.5	2.5P	SP-20
	1 5 6 12	HT LH	TNMR012M5-L	HT	P3	82	8.5	5P	HT-20
			TNMR012M1-L					1.5P	HT-20
Oxidizing	5 6 8	SP OX	SPQ012MX	SP	P2	82	8.5	2.5P	SP-17
Long shank	5 6 8 11 12	LS-SP	SPQ012ML12	SP	P2	120	8.5	2.5P	SP-27
			SPQ012ML15			150			SP-27
		LS-PO	POR012ML10	PO	P3	100		5P	PO-18
			POR012ML15			150			PO-18
	1 5 6 12	LS-HT	TNMQ012M510	HT	P2	100	8.5	5P	HT-24
			TNMQ012M515			150			HT-24
			TNMQ012M110			100		1.5P	HT-24
			TNMQ012M115			150			HT-24
Thread forming taps for steels	6 8	N-RZ	NRZM7012MP	RO	G7	82	8.5	4P	RO-5
			NRZM7012MB					2P	RO-5
For high carbon steels	5 6	HC-SP	SCMQ012M	SP	P2	82	8.5	2.5P	SP-47
For stainless steels	6 7 8	SU-SP	SUMQ012M	SP	P2	82	8.5	2.5P	SP-35
		SU-PO	PUMR012M	PO	P3			5P	PO-24
		SU-HT	TUMR012M4	HT				4P	HT-34
			TUMR012M1					1.5P	HT-34
For hard-to-machine-materials	5 6 7	SU2-SP	SU2MR012M	SP	P3	82	8.5	3P	SP-39
For cast irons	1	FC-HT	TY012MRAEN5	HT	P3	82	8.5	5P	HT-36
			TY012MRAENA					1.5P	HT-37
		FC-O	TFCM012M5		60~35			5P	HT-39

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
For cast irons	1	FC-O	TFCM012M1	HT	60~35	82	8.5	1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNR012M3	HT	P3	70	8.5	3P	CT-6
			TCNR012M1					1.5P	CT-6
			TCNS012M3		P4			3P	CT-6
			TCNS012M1					1.5P	CT-6
For aluminum alloys	11 12 13	AL-SP	ASHMR012M	SP	P3	82	8.5	2.5P	SP-52
		AL-SP 1.5P	SY012MRLENA					1.5P	SP-54
	11 12	LA-HT	TY012MRLEN5	HT	P3	82	8.5	5P	HT-41
			TY012MRLENA					1.5P	HT-41
		LA-O	TLAM012M5		65~35			5P	HT-43
			TLAM012M1					1.5P	HT-43
Carbide	11 12 13	N-CT LA	TCNR012M3A	HT	P3	70	8.5	3P	CT-2
			TCNR012M1A					1.5P	CT-2
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM7012MP	RO	G7	82	8.5	4P	RO-12
			NRSM7012MB					2P	RO-12
For deep hole use	5 6 8	S-SP	SSMQ012M	SP	P2	82	8.5	2.5P	SP-44
		S-PO	PSMR012M	PO	P3			5P	PO-27
Nut taps	6 8 11 12	NT	NH2012M	HT	II	150	9	25P	ST-1
Taps M12×0.75									
Standard	5 6 8 11 12	SP	SPQ012J	SP	P2	82	8.5	2.5P	SP-6
		PO	POR012J	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR012J5	HT	P3	82	8.5	5P	HT-8
			TNMR012J1					1.5P	HT-8
Taps M12×0.5									
Standard	5 6 8 11 12	SP	SPQ012G	SP	P2	82	8.5	2.5P	SP-6
		PO	POQ012G	PO				5P	PO-5
	1 5 6 12	HT	TNMQ012G5	HT	P2	82	8.5	5P	HT-8
			TNMQ012G1					1.5P	HT-8

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Dies selection		Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies	**M12×1.75**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ012PDNEBC	Di-4
						50	16		TYM012PDNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ012PDNEBC	Di-11
Dies	**M12×1.5**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ012ODNEBC	Di-4
						50	16		TYM012ODNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ012ODNEBC	Di-11
Dies	**M12×1.25**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ012NDNEBC	Di-4
						50	16		TYM012NDNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ012NDNEBC	Di-11
Dies	**M12×1**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ012MDNEBC	Di-4
						50	16		TYM012MDNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ012MDNEBC	Di-11
Dies	**M12×0.75**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ012JDNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ012JDNEBC	Di-11
Dies	**M12×0.5**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ012GDNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ012GDNEBC	Di-11

Explanation of catalogue contents

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
General purpose	8	R-Y	RY2.0E3	RO	6HX	42	3	3P	RO-1
Standard	5 6 8 11 12	SP	SPP2.0E	SP	P1	42	3	2.5P	SP-4
		+SP	SNPP2.0E						SP-13
		SP 1.5P	SY2.0EPNEBA					1.5P	SP-11
		PO	POQ2.0E	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMP2.0E5	HT	P1	42	3	5P	HT-4

Page shown in line-ups depending on products

Classification of materials

Kind	Chip shape after boring (drilling)		No.	Examples of materials
Ferrous		Chip or powder like ↕ Continuous	①	Cast iron, Ductile cast iron, Sintered material
			②	High hardness material
			③	Heat treated steel (45-55HRC)
			④	Heat treated steel (25-45HRC)
			⑤	High carbon steel, Tool steel, Alloy steel, Heat treated steel
			⑥	Medium carbon steel, Cast steel
			⑦	Stainless steel
			⑧	Low carbon steel
Non-ferrous		Continuous ↕ Chip or powder like	⑨	Titanium alloy
			⑩	Nickel base alloy
			⑪	Rolled aluminum, Copper, Copper alloy
			⑫	Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
			⑬	Thermosetting plastic

Hardness of materials : Please refer to material composition table shown in technical data.

Flute shape of taps and chip ejection

SP= Spiral	PO= Spiral point	SL= LH spiral	HT= Straight	RO= Forming
Continuous chips	Chip ejection		Broken chips stored in flutes	No chips thread forming

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps M1×0.25										
Standard		1 5 6 12	HT	TNMP1.0B5	HT	P1	36	3	5P	HT-4
				TNMP1.0B1					1.5P	HT-4
For left hand threads		1 5 6 12	HT LH	TNMP1.0B5-L	HT	P1	36	3	5P	HT-18
				TNMP1.0B1-L					1.5P	HT-18
TiN coated		6 7 8 11 12	R+V	RVP41.0BP	RO	G4	36	3	4P	RO-16
				RVP41.0BB					2P	RO-16
				RVP51.0BP		G5			4P	RO-16
				RVP51.0BB					2P	RO-16
Thread forming taps for steels		6 8	N+RZ	NRZP41.0BP	RO	G4	36	3	4P	RO-3
				NRZP41.0BB					2P	RO-3
				NRZP51.0BP		G5			4P	RO-3
				NRZP51.0BB					2P	RO-3
Thread forming taps for non-ferrous metals		11 12	N+RS	NRSP41.0BP	RO	G4	36	3	4P	RO-9
				NRSP41.0BB					2P	RO-9
				NRSP51.0BP		G5			4P	RO-9
				NRSP51.0BB					2P	RO-9
Thread forming taps for dry tapping		5 6 7 11 12	OL+RZ	OLRZP41.0BP	RO	G4	36	3	4P	RO-18
Thread forming taps for high carbon steels		5 6 7 11 12	HP+RZ	HRZP41.0BB	RO	G4	36	3	2P	RO-20
Torqueless thread forming taps	Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM41.0B1	RO	G4	36	3	1P	RO-24
	Seamless	6 7 8 11 12	SURZ	SURZ41.0BB	RO	G4	36	3	2P	RO-26
Taps M1×0.2										
Standard		1 5 6 12	HT	TNMP1.0A5	HT	P1	36	3	5P	HT-4
				TNMP1.0A1					1.5P	HT-4
Taps M1.1×0.25										
Standard		1 5 6 12	HT	TNMP1.1B5	HT	P1	36	3	5P	HT-4
				TNMP1.1B1					1.5P	HT-4
Taps M1.1×0.2										
Standard		1 5 6 12	HT	TNMP1.1A5	HT	P1	36	3	5P	HT-4
				TNMP1.1A1					1.5P	HT-4
Taps M1.2×0.25										
Standard		5 6 8 11 12	SP	SPP1.2B	SP	P1	36	3	2.5P	SP-4
			SP 1.5P	SY1.2BPNEBA					1.5P	SP-11
			PO	POP1.2B	PO				5P	PO-4
		1 5 6 12	HT	TNMP1.2B5	HT	P1	36	3	5P	HT-4
				TNMP1.2B1					1.5P	HT-4
	Oversize	1 5 6 12	HT	TNMR1.2B5	HT	P3	36	3	5P	HT-4
				TNMR1.2B1					1.5P	HT-4
For left hand threads		1 5 6 12	HT LH	TNMP1.2B5-L	HT	P1	36	3	5P	HT-18
				TNMP1.2B1-L					1.5P	HT-18
TiN coated		6 7 8 11 12	R+V	RVP41.2BP	RO	G4	36	3	4P	RO-16
				RVP41.2BB					2P	RO-16
				RVP51.2BP		G5			4P	RO-16
				RVP51.2BB					2P	RO-16
Thread forming taps for steels		6 8	N+RZ	NRZP41.2BP	RO	G4	36	3	4P	RO-3
				NRZP41.2BB					2P	RO-3
				NRZP51.2BP		G5			4P	RO-3
Thread forming taps for steels		6 8	N+RZ	NRZP51.2BB	RO	G5	36	3	2P	RO-3
Thread forming taps for non-ferrous materials		11 12	N+RS	NRSP41.2BP	RO	G4	36	3	4P	RO-9
				NRSP41.2BB					2P	RO-9
				NRSP51.2BP		G5			4P	RO-9
				NRSP51.2BB					2P	RO-9
Thread forming taps for dry tapping		5 6 7 11 12	OL+RZ	OLRZP41.2BP	RO	G4	36	3	4P	RO-18
Thread forming taps for high carbon steels		5 6 7 11 12	HP+RZ	HRZP41.2BB	RO	G4	36	3	2P	RO-20
Torqueless thread forming taps	Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM41.2B1	RO	G4	36	3	1P	RO-24
	Seamless	6 7 8 11 12	SURZ	SURZ41.2BB	RO	G4	36	3	2P	RO-26
Taps M1.2×0.2										
Standard		1 5 6 12	HT	TNMP1.2A5	HT	P1	36	3	5P	HT-4
				TNMP1.2A1					1.5P	HT-4
Taps M1.4×0.3										
Standard		5 6 8 11 12	SP	SPP1.4C	SP	P1	36	3	2.5P	SP-4
			SP 1.5P	SY1.4CPNEBA					1.5P	SP-11
			PO	POP1.4C	PO				5P	PO-4
		1 5 6 12	HT	TNMP1.4C5	HT	P1	36	3	5P	HT-4
				TNMP1.4C1					1.5P	HT-4
	Oversize	5 6 8 11 12	PO	POQ1.4C	PO	P2	36	3	5P	PO-4
				POR1.4C		P3				PO-4
		1 5 6 12	HT	TNMR1.4C5	HT	P3	36	3	5P	HT-4
				TNMR1.4C1					1.5P	HT-4
For left hand threads		1 5 6 12	HT LH	TNMP1.4C5-L	HT	P1	36	3	5P	HT-18
				TNMP1.4C1-L					1.5P	HT-18
Oxidizing		5 6 8	SP OX	SPP1.4CX	SP	P1	36	3	2.5P	SP-16
			PO OX	POP1.4CX	PO				5P	PO-11
	Oversize	5 6 8	PO OX	POQ1.4CX	PO	P2	36	3	5P	PO-11
TiN coated		6 7 8 11 12	R+V	RVP41.4CP	RO	G4	36	3	4P	RO-16
				RVP41.4CB					2P	RO-16
				RVP51.4CP		G5			4P	RO-16
				RVP51.4CB					2P	RO-16
Thread forming taps for steels		6 8	N+RZ	NRZP41.4CP	RO	G4	36	3	4P	RO-3
				NRZP41.4CB					2P	RO-3
				NRZP51.4CP		G5			4P	RO-3
				NRZP51.4CB					2P	RO-3
For high carbon steels		1 5 6 12	HC+PO	PCPP1.4C	PO	P1	36	3	5P	PO-29
For stainless steels		6 7 8	SU-SP	SUMP1.4C	SP	P1	36	3	2.5P	SP-34
			SU+PO	PUPP1.4C	PO				5P	PO-23
For cast irons	Carbide	1 12 13	N-CT FC	TCNR1.4C3	HT	P3	34	3	3P	CT-4
				TCNR1.4C1					1.5P	CT-4
For aluminum alloys		11 12	LA-HT	TY1.4CQLEN5	HT	P2	36	3	5P	HT-40
				TY1.4CQLENA					1.5P	HT-40
			LA-O	TLAM1.4C5		36~21			5P	HT-42
				TLAM1.4C1					1.5P	HT-42
	Carbide	11 12 13	N-CT LA	TCNR1.4C3A	HT	P3	34	3	3P	CT-1
				TCNR1.4C1A					1.5P	CT-1
Thread forming taps for non-ferrous metals		11 12	N+RS	NRSP41.4CP	RO	G4	36	3	4P	RO-9
				NRSP41.4CB					2P	RO-9
				NRSP51.4CP		G5			4P	RO-9
				NRSP51.4CB					2P	RO-9

Think threads with YAMAWA

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Short chamfer		11 12	MG-HT	TMGMQ1.4C1	HT	P2	36	3	1P	HT-47
Thread forming taps for dry tapping		5 6 7 11 12	OL+RZ	OLRZP41.4CP	RO	G4	36	3	4P	RO-18
Thread forming taps for high carbon steels		5 6 7 11 12	HP+RZ	HRZP41.4CB	RO	G4	36	3	2P	RO-20
Torqueless thread forming taps	Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM41.4C1	RO	G4	36	3	1P	RO-24
	Seamless	6 7 8 11 12	SURZ	SURZ41.4CB	RO	G4	36	3	2P	RO-26
Taps M1.4×0.2										
Standard		1 5 6 12	HT	TNMP1.4A5	HT	P1	36	3	5P	HT-4
				TNMP1.4A1					1.5P	HT-4
Torqueless thread forming taps		6 7 8 11 12	SC-TL-RZ	SRZM31.4A1	RO	G3	36	3	1P	RO-24
Taps M1.6×0.35										
Standard		5 6 8 11 12	SP	SPP1.6D	SP	P1	36	3	2.5P	SP-4
			SP 1.5P	SY1.6DPNEBA					1.5P	SP-11
			PO	POQ1.6D	PO	P2			5P	PO-4
		1 5 6 12	HT	TNMQ1.6D5	HT	P2	36	3	5P	HT-4
				TNMQ1.6D1					1.5P	HT-4
	Oversize	5 6 8 11 12	PO	POR1.6D	PO	P3	36	3	5P	PO-4
For left hand threads		1 5 6 12	HT LH	TNMQ1.6D5-L	HT	P2	36	3	5P	HT-18
				TNMQ1.6D1-L					1.5P	HT-18
Oxidizing		5 6 8	SP OX	SPP1.6DX	SP	P1	36	3	2.5P	SP-16
			PO OX	POQ1.6DX	PO	P2			5P	PO-11
TiN coated		6 7 8 11 12	R+V	RVP41.6DP	RO	G4	36	3	4P	RO-16
				RVP41.6DB					2P	RO-16
				RVP51.6DP		G5			4P	RO-16
				RVP51.6DB					2P	RO-16
				RVP61.6DB		G6				RO-16
Thread forming taps for steels		6 8	N+RZ	NRZP41.6DP	RO	G4	36	3	4P	RO-3
				NRZP41.6DB					2P	RO-3
				NRZP51.6DP		G5			4P	RO-3
				NRZP51.6DB					2P	RO-3
For high carbon steels		1 5 6 12	HC+PO	PCPQ1.6D	PO	P2	36	3	5P	PO-29
For stainless steels		6 7 8	SU+PO	PUPQ1.6D	PO	P2	36	3	5P	PO-23
For cast irons		1	FC-O	TFCM1.6D5	HT	40~25	36	3	5P	HT-38
				TFCM1.6D1					1.5P	HT-38
	Carbide	1 12 13	N-CT FC	TCNR1.6D3	HT	P3	36	3	3P	CT-4
				TCNR1.6D1					1.5P	CT-4
For aluminum alloys		11 12	LA-HT	TY1.6DQLEN5	HT	P2	36	3	5P	HT-40
				TY1.6DQLENA					1.5P	HT-40
			LA-O	TLAM1.6D5		40~25			5P	HT-42
				TLAM1.6D1					1.5P	HT-42
	Carbide	11 12 13	N-CT LA	TCNR1.6D3A	HT	P3	36	3	3P	CT-1
				TCNR1.6D1A					1.5P	CT-1
Thread forming taps for non-ferrous materials		11 12	N+RS	NRSP41.6DP	RO	G4	36	3	4P	RO-9
				NRSP41.6DB					2P	RO-9
				NRSP51.6DP		G5			4P	RO-9
				NRSP51.6DB					2P	RO-9
Short chamfer		11 12	MG-HT	TMGMQ1.6D1	HT	P2	36	3	1P	HT-47
Thread forming taps for dry tapping		5 6 7 11 12	OL+RZ	OLRZP41.6DP	RO	G4	36	3	4P	RO-18
Thread forming taps for high carbon steels		5 6 7 11 12	HP+RZ	HRZP41.6DB	RO	G4	36	3	2P	RO-20
Torqueless thread forming taps	Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM41.6D1	RO	G4	36	3	1P	RO-24
	Seamless	6 7 8 11 12	SURZ	SURZ41.6DB	RO	G4	36	3	2P	RO-26

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M1.6×0.2										
Standard		1 5 6 12	HT	TNMP1.6A5	HT	P1	36	3	5P	HT-4
				TNMP1.6A1					1.5P	HT-4
Torqueless thread forming taps	Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM31.6A1	RO	G3	36	3	1P	RO-24
	Seamless	6 7 8 11 12	SURZ	SURZ31.6AB	RO	G3	36	3	2P	RO-26
Taps M1.7×0.35										
Standard		5 6 8 11 12	SP	SPP1.7D	SP	P1	36	3	2.5P	SP-4
			SP 1.5P	SY1.7DPNEBA					1.5P	SP-11
			PO	POQ1.7D	PO	P2			5P	PO-4
		1 5 6 12	HT	TNMP1.7D5	HT	P1	36	3	5P	HT-4
				TNMP1.7D1					1.5P	HT-4
	Oversize	5 6 8 11 12	SP	SPQ1.7D	SP	P2	36	3	2.5P	SP-4
				SPR1.7D		P3				SP-4
			PO	POR1.7D	PO				5P	PO-4
				POS1.7D		P4				PO-4
		1 5 6 12	HT	TNMR1.7D5	HT	P3	36	3	5P	HT-4
				TNMR1.7D1					1.5P	HT-4
For left hand threads		1 5 6 12	HT LH	TNMP1.7D5-L	HT	P1	36	3	5P	HT-19
				TNMP1.7D1-L					1.5P	HT-19
Oxidizing		5 6 8	SP OX	SPP1.7DX	SP	P1	36	3	2.5P	SP-16
			PO OX	POQ1.7DX	PO	P2			5P	PO-11
TiN coated		6 7 8 11 12	R+V	RVP41.7DP	RO	G4	36	3	4P	RO-16
				RVP41.7DB					2P	RO-17
				RVP51.7DP		G5			4P	RO-17
				RVP51.7DB					2P	RO-17
				RVP61.7DP		G6			4P	RO-17
				RVP61.7DB					2P	RO-17
Thread forming taps for steels		6 8	N+RZ	NRZP41.7DP	RO	G4	36	3	4P	RO-3
				NRZP41.7DB					2P	RO-3
				NRZP51.7DP		G5			4P	RO-3
				NRZP51.7DB					2P	RO-3
				NRZP61.7DP		G6			4P	RO-3
				NRZP61.7DB					2P	RO-3
For high carbon steels		1 5 6 12	HC+PO	PCPQ1.7D	PO	P2	36	3	5P	PO-29
For stainless steels		6 7 8	SU-SP	SUMP1.7D	SP	P1	36	3	2.5P	SP-34
			SU+PO	PUPQ1.7D	PO	P2			5P	PO-23
	Oversize	6 7 8	SU-SP	SUMQ1.7D	SP	P2	36	3	2.5P	SP-34
For cast irons	Carbide	1 12 13	N-CT FC	TCNR1.7D3	HT	P3	36	3	3P	CT-4
				TCNR1.7D1					1.5P	CT-4
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR1.7D3A	HT	P3	36	3	3P	CT-1
				TCNR1.7D1A					1.5P	CT-1
Thread forming taps for non-ferrous materials		11 12	N+RS	NRSP41.7DP	RO	G4	36	3	4P	RO-9
				NRSP41.7DB					2P	RO-9
				NRSP51.7DP		G5			4P	RO-9
				NRSP51.7DB					2P	RO-9
				NRSP61.7DP		G6			4P	RO-9
				NRSP61.7DB					2P	RO-9
Short chamfer		11 12	MG-HT	TMGMQ1.7D1	HT	P2	36	3	1P	HT-47
Thread forming taps for dry tapping		5 6 7 11 12	OL+RZ	OLRZP41.7DP	RO	G4	36	3	4P	RO-18
Thread forming taps for high carbon steels		5 6 7 11 12	HP+RZ	HRZP41.7DB	RO	G4	36	3	2P	RO-20

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Torqueless thread forming taps	Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM41.7D1	RO	G4	36	3	1P	RO-24
	Seamless	6 7 8 11 12	SURZ	SURZ41.7DB	RO	G4	36	3	2P	RO-26
Taps M1.7×0.2										
Standard		1 5 6 12	HT	TNMP1.7A5	HT	P1	36	3	5P	HT-4
				TNMP1.7A1					1.5P	HT-4
Taps M1.8×0.35										
Standard		5 6 8 11 12	SP	SPP1.8D	SP	P1	42	3	2.5P	SP-4
			SP 1.5P	SY1.8DPNEBA					1.5P	SP-11
			PO	POQ1.8D	PO	P2			5P	PO-4
		1 5 6 12	HT	TNMQ1.8D5	HT	P2	42	3	5P	HT-4
				TNMQ1.8D1					1.5P	HT-4
Thread forming taps for steels		6 8	N+RZ	NRZP41.8DP	RO	G4	42	3	4P	RO-3
				NRZP41.8DB					2P	RO-3
				NRZP51.8DP		G5			4P	RO-3
				NRZP51.8DB					2P	RO-3
Thread forming taps for non-ferrous materials		11 12	N+RS	NRSP41.8DP	RO	G4	42	3	4P	RO-9
				NRSP41.8DB					2P	RO-9
				NRSP51.8DP		G5			4P	RO-9
				NRSP51.8DB					2P	RO-9
Taps M1.8×0.2										
Standard		1 5 6 12	HT	TNMP1.8A5	HT	P1	42	3	5P	HT-4
				TNMP1.8A1					1.5P	HT-4
Taps M2.2×0.45										
Standard		5 6 8 11 12	SP	SPP2.2F	SP	P1	42	3	2.5P	SP-4
			+SP	SNPP2.2F						SP-13
			PO	POQ2.2F	PO	P2			5P	PO-4
		1 5 6 12	HT	TNMQ2.2F5	HT	P2	42	3	5P	HT-4
				TNMQ2.2F1					1.5P	HT-4
	Oversize	5 6 8 11 12	SP	SPR2.2F	SP	P3	42	3	2.5P	SP-4
			+SP	SPPR2.2F						XXXX
Thread forming taps for steels		6 8	N+RZ	NRZP52.5Z2FP	RO	G5	42	3	4P	RO-3
				NRZP52.5Z2FB					2P	RO-3
For cast irons	Carbide	1 12 13	N-CT FC	TCNR2.2F3	HT	P3	42	3	3P	CT-4
				TCNR2.2F1					1.5P	CT-4
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR2.2F3A	HT	P3	42	3	3P	CT-1
				TCNR2.2F1A					1.5P	CT-1
Taps M2.2×0.25										
Standard		5 6 8 11 12	PO	POQ2.2B	PO	P2	42	3	5P	PO-4
		1 5 6 12	HT	TNMP2.2B5	HT	P1	42	3	5P	HT-4
				TNMP2.2B1					1.5P	HT-4
Taps M2.3×0.4										
Standard		5 6 8 11 12	SP	SPP2.3E	SP	P1	42	3	2.5P	SP-4
			+SP	SNPP2.3E						SP-13
			SP 1.5P	SY2.3EPNEBA					1.5P	SP-11
			PO	POQ2.3E	PO	P2			5P	PO-4
		1 5 6 12	HT	TNMP2.3E5	HT	P1	42	3	5P	HT-4

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Standard		1 5 6 12	HT	TNMP2.3E1	HT	P1	42	3	1.5P	HT-4
	Oversize	5 6 8 11 12	SP	SPQ2.3E	SP	P2	42	3	2.5P	SP-4
				SPR2.3E		P3				SP-4
				SPS2.3E		P4				SP-4
			+SP	SNPQ2.3E		P2				SP-13
				SNPR2.3E		P3				SP-13
				SNPS2.3E		P4				SP-13
			PO	POR2.3E	PO	P3			5P	PO-4
				POS2.3E		P4				PO-4
		1 5 6 12	HT	TNMR2.3E5	HT	P3	42	3	5P	HT-5
				TNMR2.3E1					1.5P	HT-5
				TNMS2.3E5		P4			5P	HT-5
				TNMS2.3E1					1.5P	HT-5
For left hand threads		5 6 8 11 12	SP LH	SPP2.3E--L	SP	P1	42	3	2.5P	SP-20
		1 5 6 12	HT LH	TNMP2.3E5-L	HT	P1	42	3	5P	HT-19
				TNMP2.3E1-L					1.5P	HT-19
Oxidizing		5 6 8	PO OX	POQ2.3EX	PO	P2	42	3	5P	PO-11
TiN coated		6 7 8 11 12	R+V	RVP42.3EP	RO	G4	42	3	4P	RO-17
				RVP42.3EB					2P	RO-17
				RVP52.3EP		G5			4P	RO-17
				RVP52.3EB					2P	RO-17
Long shank		5 6 8 11 12	LS-SP	SPP2.3EL07	SP	P1	70	3	2.5P	SP-26
				SPP2.3EL10			100			SP-26
			LS-PO	POQ2.3EL07	PO	P2	70		5P	PO-17
				POQ2.3EL10			100			PO-17
		1 5 6 12	LS-HT	TNMP2.3E507	HT	P1	70	3	5P	HT-21
				TNMP2.3E107					1.5P	HT-21
Thread forming taps for steels		6 8	N+RZ	NRZP42.3EP	RO	G4	42	3	4P	RO-3
				NRZP42.3EB					2P	RO-3
				NRZP52.3EP		G5			4P	RO-3
				NRZP52.3EB					2P	RO-3
				NRZP62.3EP		G6			4P	RO-3
				NRZP62.3EB					2P	RO-3
For stainless steels		6 7 8	SU+SP	SUPP2.3E	SP	P1	42	3	2.5P	SP-34
			SU+PO	PUPQ2.3E	PO	P2			5P	PO-23
			SU-HT	TUMQ2.3E4	HT				4P	HT-33
				TUMQ2.3E1					1.5P	HT-33
	Oversize	6 7 8	SU+SP	SUPQ2.3E	SP	P2	42	3	2.5P	SP-34
				SUPR2.3E		P3				SP-34
			SU+PO	PUPR2.3E	PO				5P	PO-23
For cast irons		1	FC-O	TFCM2.3E5	HT	40~45	42	3	5P	HT-38
				TFCM2.3E1					1.5P	HT-38
	Carbide	1 12 13	N-CT FC	TCNR2.3E3	HT	P3	42	3	3P	CT-4
				TCNR2.3E1					1.5P	CT-4
For aluminum alloys		11 12 13	AL+SP	ASHPQ2.3E	SP	P2	42	3	2.5P	SP-52
			AL-SP 1.5P	SY2.3EQLENA					1.5P	SP-54
		11 12	LA-HT	TY2.3EQLEN5	HT	P2	42	3	5P	HT-40
				TY2.3EQLENA					1.5P	HT-40
			LA-O	TLAM2.3E5		40~45			5P	HT-42
				TLAM2.3E1					1.5P	HT-42
	Carbide	11 12 13	N-CT LA	TCNR2.3E3A	HT	P3	42	3	3P	CT-1
				TCNR2.3E1A					1.5P	CT-1

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Thread forming taps for non-ferrous materials	11 12	N+RS	NRSP42.3EP	RO	G4	42	3	4P	RO-9
			NRSP42.3EB					2P	RO-9
			NRSP52.3EP		G5			4P	RO-9
			NRSP52.3EB					2P	RO-9
			NRSP62.3EP		G6			4P	RO-9
			NRSP62.3EB					2P	RO-9
For thermosetting plastics	13	PL1	TPLM2.3E3	HT	P4	42	3	3P	HT-51
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP42.3EP	RO	G4	42	3	4P	RO-18
			OLRZP52.3EP		G5				RO-18
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP42.3EB	RO	G4	42	3	2P	RO-20
			HRZP52.3EB		G5				RO-20
Torqueless thread forming taps — Seamless	6 7 8 11 12	SURZ	SURZ42.3EB	RO	G4	42	3	2P	RO-26
For deep hole use	5 6 8	S-SP	SSMP2.3E	SP	P1	42	3	2.5P	SP-43
		S-PO	PSMQ2.3E	PO	P2			5P	PO-27
Nut taps	6 8 11 12	NT	NH22.3E	HT	II b	80	1.7	25P	ST-1
Taps M2.3×0.25									
Standard	5 6 8 11 12	SP	SPP2.3B	SP	P1	42	3	2.5P	SP-4
	1 5 6 12	HT	TNMP2.3B5	HT	P1	42	3	5P	HT-5
			TNMP2.3B1					1.5P	HT-5
Taps M2.5×0.45									
Standard	5 6 8 11 12	SP	SPP2.5F	SP	P1	46	3	2.5P	SP-4
		+SP	SNPP2.5F						SP-13
		SP 1.5P	SY2.5FPNEBA	SP				1.5P	SP-11
		PO	POQ2.5F	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMQ2.5F5	HT	P2	46	3	5P	HT-5
			TNMQ2.5F1					1.5P	HT-5
	8	R-Y	RY2.5F3	RO	6HX	44	3	3P	RO-1
Oversize	5 6 8 11 12	SP	SPQ2.5F	SP	P2	46	3	2.5P	SP-4
			SPR2.5F		P3				SP-4
			SPS2.5F		P4				SP-4
		+SP	SNPQ2.5F		P2				SP-13
			SNPR2.5F		P3				SP-13
			SNPS2.5F		P4				SP-13
		PO	POR2.5F	PO	P3			5P	PO-4
			POS2.5F		P4				PO-4
	1 5 6 12	HT	TNMR2.5F5	HT	P3	46	3	5P	HT-5
			TNMR2.5F1					1.5P	HT-5
			TNMS2.5F5		P4			5P	HT-5
			TNMS2.5F1					1.5P	HT-5
For left hand threads	5 6 8 11 12	SP LH	SPP2.5F--L	SP	P1	46	3	2.5P	SP-20
	1 5 6 12	HT LH	TNMQ2.5F5-L	HT	P2	46	3	5P	HT-19
			TNMQ2.5F1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPP2.5FX	SP	P1	46	3	2.5P	SP-16
		+SP OX	SNPP2.5FX						SP-19
		PO OX	POQ2.5FX	PO	P2			5P	PO-11
Oversize	5 6 8	+SP OX	SNPQ2.5FX	SP	P2	46	3	2.5P	SP-19
			SNPR2.5FX		P3				SP-19
			SNPS2.5FX		P4				SP-19
		PO OX	POR2.5FX	PO	P3			5P	PO-11

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
TiN coated	7 8 11 12	AU+SP	VSAPQ2.5F	SP	P2	46	3	2.5P	SP-24
	6 7 8 11 12	R+V	RVP52.5FP	RO	G5	46	3	4P	RO-17
			RVP52.5FB					2P	RO-17
			RVP62.5FP		G6			4P	RO-17
			RVP62.5FB					2P	RO-17
Long shank	5 6 8 11 12	LS-SP	SPP2.5FL07	SP	P1	70	3	2.5P	SP-26
			SPP2.5FL10			100			SP-26
		LS-PO	POQ2.5FL07	PO	P2	70		5P	PO-17
			POQ2.5FL10			100			PO-17
	1 5 6 12	LS-HT	TNMP2.5F507	HT	P1	70	3	5P	HT-21
			TNMP2.5F107					1.5P	HT-21
Thread forming taps for steels	6 8	N+RZ	NRZP52.5FP	RO	G5	46	3	4P	RO-3
			NRZP52.5FB					2P	RO-3
			NRZP62.5FP		G6			4P	RO-4
			NRZP62.5FB					2P	RO-4
For high carbon steels	1 5 6 12	HC+PO	PCPQ2.5F	PO	P2	46	3	5P	PO-29
Carbide taps for hard materials	2	UH-CT	UHCR2.5F5	HT	P3	44	4	5P	CT-16
For stainless steels	6 7 8	SU+SP	SUPP2.5F	SP	P1	46	3	2.5P	SP-34
		SU+PO	PUPQ2.5F	PO	P2			5P	PO-23
		SU-HT	TUMQ2.5F4	HT				4P	HT-33
			TUMQ2.5F1					1.5P	HT-33
Oversize	6 7 8	SU+SP	SUPQ2.5F	SP	P2	46	3	2.5P	SP-34
			SUPR2.5F		P3				SP-34
		SU+PO	PUPR2.5F	PO				5P	PO-23
For cast irons	1	FC-O	TFCM2.5F5	HT	40~25	46	3	5P	HT-38
			TFCM2.5F1					1.5P	HT-38
Carbide	1 12 13	N-CT FC	TCNR2.5F3	HT	P3	44	3	3P	CT-4
			TCNR2.5F1					1.5P	CT-4
For aluminum alloys	11 12 13	AL+SP	ASHPQ2.5F	SP	P2	46	3	2.5P	SP-52
		AL-SP 1.5P	SY2.5FQLENA					1.5P	SP-54
	11 12	LA-HT	TY2.5FQLEN5	HT	P2	46	3	5P	HT-40
			TY2.5FQLENA					1.5P	HT-40
		LA-O	TLAM2.5F5		40~25			5P	HT-42
			TLAM2.5F1					1.5P	HT-42
Carbide	11 12 13	N-CT LA	TCNR2.5F3A	HT	P3	44	3	3P	CT-1
			TCNR2.5F1A					1.5P	CT-1
Thread forming taps for non-ferrous materials	11 12	N+RS	NRSP52.5FP	RO	G5	46	3	4P	RO-9
			NRSP52.5FB					2P	RO-9
			NRSP62.5FP		G6			4P	RO-9
			NRSP62.5FB					2P	RO-9
Short chamfer	11 12	MG-HT	TMGMQ2.5F1	HT	P2	46	3	1P	HT-47
For thermosetting plastics	13	PL1	TPLM2.5F3	HT	P4	46	3	3P	HT-51
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP52.5FP	RO	G5	46	3	4P	RO-18
			OLRZP62.5FP		G6				RO-18
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP52.5FB	RO	G5	46	3	2P	RO-20
			HRZP62.5FB		G6				RO-20
Torqueless thread forming taps — Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM52.5F1	RO	G5	46	3	1P	RO-24
Seamless	6 7 8 11 12	SURZ	SURZ42.5FB	RO	G4	46	3	2P	RO-26
For deep hole use	5 6 8	S-SP	SSMP2.5F	SP	P1	46	3	2.5P	SP-43
		S-PO	PSMQ2.5F	PO	P2			5P	PO-27
Nut taps	6 8 11 12	NT	NH22.5F	HT	II b	85	2	24P	ST-1

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps M2.5×0.35									
Standard	5 6 8 11 12	SP	SPP2.5D	SP	P1	46	3	2.5P	SP-4
		PO	POQ2.5D	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMQ2.5D5	HT	P2	46	3	5P	HT-5
			TNMQ2.5D1					1.5P	HT-5
Thread forming taps for steels	6 8	N-RZ	NRZM52.5DP	RO	G5	46	3	4P	RO-4
			NRZM52.5DB					2P	RO-4
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM42.5DP	RO	G4	46	3	4P	RO-9
			NRSM42.5DB					2P	RO-9
			NRSM52.5DP		G5			4P	RO-10
			NRSM52.5DB					2P	RO-10
Taps M2.6×0.45									
Standard	5 6 8 11 12	SP	SPP2.6F	SP	P1	46	3	2.5P	SP-4
		+SP	SNPP2.6F						SP-13
		SP 1.5P	SY2.6FPNEBA					1.5P	SP-11
		PO	POQ2.6F	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMP2.6F5	HT	P1	46	3	5P	HT-5
			TNMP2.6F1					1.5P	HT-5
	8	R-Y	RY2.6F3	RO	6HX	44	3	3P	RO-1
Oversize	5 6 8 11 12	SP	SPQ2.6F	SP	P2	46	3	2.5P	SP-4
			SPR2.6F		P3				SP-4
			SPS2.6F		P4				SP-4
		+SP	SNPQ2.6F		P2				SP-13
			SNPR2.6F		P3				SP-13
			SNPS2.6F		P4				SP-13
		PO	POR2.6F	PO	P3			5P	PO-4
			POS2.6F		P4				PO-4
	1 5 6 12	HT	TNMR2.6F5	HT	P3	46	3	5P	HT-5
			TNMR2.6F1					1.5P	HT-5
			TNMS2.6F5		P4			5P	HT-5
			TNMS2.6F1					1.5P	HT-5
For left hand threads	5 6 8 11 12	SP LH	SPP2.6F--L	SP	P1	46	3	2.5P	SP-20
	1 5 6 12	HT LH	TNMP2.6F5-L	HT	P1	46	3	5P	HT-19
			TNMP2.6F1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPP2.6FX	SP	P1	46	3	2.5P	SP-16
		+SP OX	SNPP2.6FX						SP-19
		PO OX	POQ2.6FX	PO	P2			5P	PO-11
Oversize	5 6 8	+SP OX	SNPQ2.6FX	SP	P2	46	3	2.5P	SP-19
			SNPR2.6FX		P3				SP-19
			SNPS2.6FX		P4				SP-19
		PO OX	POR2.6FX	PO	P3			5P	PO-11
TiN coated	7 8 11 12	AU+SP	VSAPQ2.6F	SP	P2	46	3	2.5P	SP-24
	6 7 8 11 12	R+V	RVP52.6FP	RO	G5	46	3	4P	RO-17
			RVP52.6FB					2P	RO-17
			RVP62.6FP		G6			4P	RO-17
			RVP62.6FB					2P	RO-17
Long shank	5 6 8 11 12	LS-SP	SPP2.6FL07	SP	P1	70	3	2.5P	SP-26
			SPP2.6FL10			100			SP-26
		LS-PO	POQ2.6FL07	PO	P2	70		5P	PO-17
			POQ2.6FL10			100			PO-17
Long shank	1 5 6 12	LS-HT	TNMP2.6F507	HT	P1	70	3	5P	HT-21
			TNMP2.6F107					1.5P	HT-21
Thread forming taps for steels	6 8	N+RZ	NRZP52.6FP	RO	G5	46	3	4P	RO-4
			NRZP52.6FB					2P	RO-4
			NRZP62.6FP		G6			4P	RO-4
			NRZP62.6FB					2P	RO-4
For high carbon steels	1 5 6 12	HC+PO	PCPQ2.6F	PO	P2	46	3	5P	PO-29
Carbide taps for hard materials	2	UH-CT	UHCR2.6F5	HT	P3	44	4	5P	CT-16
For stainless steels	6 7 8	SU+SP	SUPP2.6F	SP	P1	46	3	2.5P	SP-34
		SU+PO	PUPQ2.6F	PO	P2			5P	PO-23
		SU-HT	TUMQ2.6F4	HT				4P	HT-33
			TUMQ2.6F1					1.5P	HT-33
Oversize	6 7 8	SU+SP	SUPQ2.6F	SP	P2	46	3	2.5P	SP-34
			SUPR2.6F		P3				SP-34
		SU+PO	PUPR2.6F	PO				5P	PO-23
For cast irons	1	FC-O	TFCM2.6F5	HT	40~25	46	3	5P	HT-38
			TFCM2.6F1					1.5P	HT-38
Carbide	1 12 13	N-CT FC	TCNR2.6F3	HT	P3	44	3	3P	CT-4
			TCNR2.6F1					1.5P	CT-4
For aluminum alloys	11 12 13	AL+SP	ASHPQ2.6F	SP	P2	46	3	2.5P	SP-52
		AL-SP 1.5P	SY2.6FQLENA					1.5P	SP-54
	11 12	LA-HT	TY2.6FQLEN5	HT	P2	46	3	5P	HT-40
			TY2.6FQLENA					1.5P	HT-40
		LA-O	TLAM2.6F5		40~25			5P	HT-42
			TLAM2.6F1					1.5P	HT-42
Thread forming taps for non-ferrous materials	11 12	N+RS	NRSP52.6FP	RO	G5	46	3	4P	RO-10
			NRSP52.6FB					2P	RO-10
			NRSP62.6FP		G6			4P	RO-10
			NRSP62.6FB					2P	RO-10
Short chamfer	11 12	MG-HT	TMGMQ2.6F1	HT	P2	46	3	1P	HT-47
For thermosetting plastics	13	PL1	TPLM2.6F3	HT	P4	46	3	3P	HT-51
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP52.6FP	RO	G5	46	3	4P	RO-18
			OLRZP62.6FP		G6				RO-18
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP52.6FB	RO	G5	46	3	2P	RO-21
			HRZP62.6FB		G6				RO-21
Torqueless thread forming taps — Short chamfer	6 7 8 11 12	SC-TL-RZ	SRZM52.6F1	RO	G5	46	3	1P	RO-24
Torqueless thread forming taps — Seamless	6 7 8 11 12	SURZ	SURZ52.6FB	RO	G5	46	3	2P	RO-26
For deep hole use	5 6 8	S-SP	SSMP2.6F	SP	P1	46	3	2.5P	SP-43
		S-PO	PSMQ2.6F	PO	P2			5P	PO-27
For helical coil wire screw thread inserts	11 12	AL-HT	TW2.6F1LEB5	HT	1b	52	5	5P	HT-48
			TW2.6F1LEBA					1.5P	HT-48
Nut taps	6 8 11 12	NT	NH22.6F	HT	II b	85	2	24P	ST-1
Taps M2.6×0.35									
Standard	5 6 8 11 12	SP	SPP2.6D	SP	P1	46	3	2.5P	SP-4
		PO	POQ2.6D	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMQ2.6D5	HT	P2	46	3	5P	HT-5
			TNMQ2.6D1					1.5P	HT-5
Thread forming taps for steels	6 8	N-RZ	NRZM52.6DP	RO	G5	46	3	4P	RO-4
			NRZM52.6DB					2P	RO-4
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM52.6DP	RO	G5	46	3	4P	RO-10
			NRSM52.6DB					2P	RO-10

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM62.6DP	RO	G6	46	3	4P	RO-10
			NRSM62.6DB					2P	RO-10
Taps M3.5×0.6									
Standard	5 6 8 11 12	SP	SPP3.5H	SP	P1	52	5	2.5P	SP-4
		+SP	SNPP3.5H						SP-13
		SP 1.5P	SY3.5HPNEBA					1.5P	SP-11
		PO	POQ3.5H	PO	P2			5P	PO-4
		+PO	PNPQ3.5H						PO-10
	1 5 6 12	HT	TNMQ3.5H5	HT	P2	52	5	5P	HT-5
			TNMQ3.5H1					1.5P	HT-5
Oversize	5 6 8 11 12	SP	SPQ3.5H	SP	P2	52	5	2.5P	SP-4
			SPR3.5H		P3				SP-4
			SPS3.5H		P4				SP-4
		+SP	SNPQ3.5H		P2				SP-13
			SNPR3.5H		P3				SP-13
			SNPS3.5H		P4				SP-13
		PO	POR3.5H	PO	P3			5P	PO-4
			POS3.5H		P4				PO-4
	1 5 6 12	HT	TNMR3.5H5	HT	P3	52	5	5P	HT-5
			TNMR3.5H1					1.5P	HT-5
			TNMS3.5H5		P4			5P	HT-5
			TNMS3.5H1					1.5P	HT-5
For left hand threads	1 5 6 12	HT LH	TNMQ3.5H5-L	HT	P2	52	5	5P	HT-19
			TNMQ3.5H1-L					1.5P	HT-19
Oxidizing	5 6 8	SP OX	SPP3.5HX	SP	P1	52	5	2.5P	SP-16
		+SP OX	SNPP3.5HX						SP-19
		PO OX	POQ3.5HX	PO	P2			5P	PO-12
		+PO OX	PNPQ3.5HX						PO-13
Soft structural steels	8	E-SP	ESHMP3.5H	SP	P1	52	5	2.5P	SP-45
Thread forming taps for steels	6 8	N+RZ	NRZP53.5HP	RO	G5	52	5	4P	RO-4
			NRZP53.5HB					2P	RO-4
			NRZP63.5HP		G6			4P	RO-4
			NRZP63.5HB					2P	RO-4
			NRZP73.5HP		G7			4P	RO-4
			NRZP73.5HB					2P	RO-4
For stainless steels	6 7 8	SU+SP	SUPP3.5H	SP	P1	52	5	2.5P	SP-34
		SU-PO	PUMQ3.5H	PO	P2			5P	PO-24
		SU-HT	TUMQ3.5H4	HT				4P	HT-33
			TUMQ3.5H1					1.5P	HT-33
Oversize	6 7 8	SU+SP	SUPR3.5H	SP	P3	52	5	2.5P	SP-34
For hard-to-machine materials	5 6 7	SU2-SP	SU2MQ3.5H	SP	P2	52	5	3P	SP-39
For cast irons	1	FC-HT	TY3.5HRAEN5	HT	P3	52	5	5P	HT-36
			TY3.5HRAENA					1.5P	HT-36
		FC-O	TFCM3.5H5		40~25			5P	HT-38
			TFCM3.5H1					1.5P	HT-38
Carbide	1 12 13	N-CT FC	TCNR3.5H3	HT	P3	48	4	3P	CT-5
			TCNR3.5H1					1.5P	CT-5
For aluminum alloys	11 12 13	AL+SP	ASHPQ3.5H	SP	P2	52	5	2.5P	SP-52
		AL-SP 1.5P	SY3.5HQLENA					1.5P	SP-54
	11 12	LA-HT	TY3.5HQLEN5	HT	P2	52	5	5P	HT-40
			TY3.5HQLENA					1.5P	HT-40

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
For aluminum alloys	11 12	LA-O	TLAM3.5H5	HT	40~25	52	5	5P	HT-42
			TLAM3.5H1					1.5P	HT-43
Carbide	11 12 13	N-CT LA	TCNR3.5H3A	HT	P3	48	4	3P	CT-1
			TCNR3.5H1A					1.5P	CT-1
Thread forming taps for non-ferrous materials	11 12	N+RS	NRSP53.5HP	RO	G5	52	5	4P	RO-10
			NRSP53.5HB					2P	RO-10
			NRSP63.5HP		G6			4P	RO-10
			NRSP63.5HB					2P	RO-10
			NRSP73.5HP		G7			4P	RO-10
For thermosetting plastics	13	PL1	TPLM3.5H3	HT	P5	52	5	3P	HT-51
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP53.5HP	RO	G5	52	5	4P	RO-18
			OLRZP63.5HP		G6				RO-18
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP53.5HP	RO	G5	52	5	4P	RO-21
			HRZP53.5HB					2P	RO-21
			HRZP63.5HP		G6			4P	RO-21
			HRZP63.5HB					2P	RO-21
For deep hole use	5 6 8	S-SP	SSMP3.5H-3	SP	P1	52	5	2.5P	SP-43
		S-PO	PSMQ3.5H	PO	P2			5P	PO-27
Taps M3.5×0.35									
Standard	5 6 8 11 12	SP	SPP3.5D	SP	P1	52	5	2.5P	SP-4
		PO	POQ3.5D	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMQ3.5D5	HT	P2	52	5	5P	HT-5
			TNMQ3.5D1					1.5P	HT-5
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM53.5DP	RO	G5	52	5	4P	RO-10
			NRSM53.5DB					2P	RO-10
			NRSM63.5DP		G6			4P	RO-10
			NRSM63.5DB					2P	RO-10
Taps M4.5×0.75									
Standard	5 6 8 11 12	SP	SPQ4.5J	SP	P2	60	5.5	2.5P	SP-4
		PO	POQ4.5J	PO				5P	PO-4
	1 5 6 12	HT	TNMQ4.5J5	HT	P2	60	5.5	5P	HT-6
			TNMQ4.5J1					1.5P	HT-6
Taps M4.5×0.5									
Standard	5 6 8 11 12	SP	SPP4.5G	SP	P1	60	5.5	2.5P	SP-4
		PO	POQ4.5G	PO	P2			5P	PO-4
	1 5 6 12	HT	TNMQ4.5G5	HT	P2	60	5.5	5P	HT-6
			TNMQ4.5G1					1.5P	HT-6
Oxidizing	5 6 8	SP OX	SPP4.5GX	SP	P1	60	5.5	2.5P	SP-17
Taps M5.5×0.9									
Standard	5 6 8 11 12	SP	SPQ5.5L	SP	P2	62	6	2.5P	SP-5
		PO	POQ5.5L	PO				5P	PO-5
	1 5 6 12	HT	TNMQ5.5L5	HT	P2	62	6	5P	HT-6
			TNMQ5.5L1					1.5P	HT-6
Taps M5.5×0.75									
Standard	1 5 6 12	HT	TNMQ5.5J5	HT	P2	62	6	5P	HT-6
			TNMQ5.5J1					1.5P	HT-6

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps M5.5×0.5									
Standard	5 6 8 11 12	SP	SPP5.5G	SP	P1	62	6	2.5P	SP-5
		PO	POQ5.5G	PO	P2			5P	PO-5
	1 5 6 12	HT	TNMQ5.5G5	HT	P2	62	6	5P	HT-6
			TNMQ5.5G1					1.5P	HT-6
Taps M7×1									
Standard	5 6 8 11 12	SP	SPQ7.0M	SP	P2	70	6.2	2.5P	SP-5
		PO	POQ7.0M	PO				5P	PO-5
	1 5 6 12	HT	TNMQ7.0M5	HT	P2	70	6.2	5P	HT-7
			TNMQ7.0M1					1.5P	HT-7
Oversize	5 6 8 11 12	SP	SPR7.0M	SP	P3	70	6.2	2.5P	SP-5
			SPS7.0M		P4				SP-5
		PO	POR7.0M	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMS7.0M5	HT	P4	70	6.2	5P	HT-7
			TNMS7.0M1					1.5P	HT-7
For left hand threads	5 6 8 11 12	SP LH	SPQ7.0M--L	SP	P2	70	6.2	2.5P	SP-20
Oxidizing	5 6 8	SP OX	SPQ7.0MX	SP	P2	70	6.2	2.5P	SP-17
Thread forming taps for steels	6 8	N-RZ	NRZM77.0MP	RO	G7	70	6.2	4P	RO-5
			NRZM77.0MB					2P	RO-5
For stainless steels	6 7 8	SU-PO	PUMQ7.0M	PO	P2	70	6.2	5P	PO-24
For cast irons Carbide	1 12 13	N-CT FC	TCNR7.0M3	HT	P3	65	6.2	3P	CT-5
			TCNR7.0M1					1.5P	CT-5
For aluminum alloys Carbide	11 12 13	N-CT LA	TCNR7.0M3A	HT	P3	65	6.2	3P	CT-2
			TCNR7.0M1A					1.5P	CT-2
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM67.0MP	RO	G6	70	6.2	4P	RO-11
			NRSM67.0MB					2P	RO-11
			NRSM77.0MP		G7			4P	RO-11
			NRSM77.0MB					2P	RO-11
Taps M7×0.75									
Standard	5 6 8 11 12	SP	SPQ7.0J	SP	P2	70	6.2	2.5P	SP-5
		PO	POQ7.0J	PO				5P	PO-5
	1 5 6 12	HT	TNMQ7.0J5	HT	P2	70	6.2	5P	HT-7
			TNMQ7.0J1					1.5P	HT-7
Oversize	5 6 8 11 12	PO	POR7.0J	PO	P3	70	6.2	5P	PO-5
For left hand threads	1 5 6 12	HT LH	TNMQ7.0J5-L	HT	P2	70	6.2	5P	HT-19
			TNMQ7.0J1-L					1.5P	HT-19
Thread forming taps for steels	6 8	N-RZ	NRZM77.0JP	RO	G7	70	6.2	4P	RO-5
			NRZM77.0JB					2P	RO-5
For cast irons Carbide	1 12 13	N-CT FC	TCNR7.0J3	HT	P3	62	6.2	3P	CT-5
			TCNR7.0J1					1.5P	CT-5
For aluminum alloys Carbide	11 12 13	N-CT LA	TCNR7.0J3A	HT	P3	62	6.2	3P	CT-2
			TCNR7.0J1A					1.5P	CT-2
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM77.0JP	RO	G7	70	6.2	4P	RO-11
			NRSM77.0JB					2P	RO-11

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps M7×0.5									
Standard	5 6 8 11 12	SP	SPQ7.0G	SP	P2	70	6.2	2.5P	SP-5
		PO	POQ7.0G	PO				5P	PO-5
	1 5 6 12	HT	TNMQ7.0G5	HT	P2	70	6.2	5P	HT-7
			TNMQ7.0G1					1.5P	HT-7

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M1×0.25									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD1.0BDNEBC	Di-2
					20	7		TYE1.0BDNEBC	Di-2
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE1.0BDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R2	10	3.5	–	RBQ1.0B	Di-21
				R3				RBR1.0B	Di-21
				R4				RBS1.0B	Di-21
Dies M1×0.2									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE1.0ADNEBC	Di-2
Dies M1.1×0.25									
Rolling dies	HSS	6 7 8 11 12	RS-D	R3	10	3.5	—	RBR1.1B	Di-21
Dies M1.2×0.25									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD1.2BDNEBC	Di-2
					20	7		TYE1.2BDNEBC	Di-2
Rolling dies	HSS	6 7 8 11 12	RS-D	R2	10	3.5	—	RBQ1.2B	Di-21
				R3				RBR1.2B	Di-21
				R4				RBS1.2B	Di-21
Dies M1.2×0.2									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE1.2ADNEBC	Di-2
Dies M1.4×0.3									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD1.4CDNEBC	Di-2
					20	7		TYE1.4CDNEBC	Di-2
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE1.4CDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R2	10	3.5	—	RBQ1.4C	Di-21
				R3				RBR1.4C	Di-21
				R4				RBS1.4C	Di-21
				R2	16	5		RDQ1.4C	Di-21
				R3				RDR1.4C	Di-21
				R4				RDS1.4C	Di-21
Dies M1.4×0.2									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE1.4ADNEBC	Di-2
Dies M1.6×0.35									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD1.6DDNEBC	Di-2
					20	7		TYE1.6DDNEBC	Di-2
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE1.6DDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R2	16	5	—	RDQ1.6D	Di-21
				R3				RDR1.6D	Di-21
				R4				RDS1.6D	Di-21
Dies M1.6×0.2									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE1.6ADNEBC	Di-2

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M1.7×0.35									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD1.7DDNEBC	Di-2
					20	7		TYE1.7DDNEBC	Di-2
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE1.7DDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R2	16	5	—	RDQ1.7D	Di-21
				R3				RDR1.7D	Di-21
				R4				RDS1.7D	Di-21
Dies M1.7×0.2									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE1.7ADNEBC	Di-2
Dies M1.8×0.35									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD1.8DDNEBC	Di-2
					20	7		TYE1.8DDNEBC	Di-2
Rolling dies	HSS	6 7 8 11 12	RS-D	R3	16	5	—	RDR1.8D	Di-21
Dies M1.8×0.2									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE1.8ADNEBC	Di-2
Dies M2.2×0.45									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD2.2FDNEBC	Di-2
					20	7		TYE2.2FDNEBC	Di-2
Dies M2.2×0.25									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD2.2BDNEBC	Di-2
Dies M2.3×0.4									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYD2.3EDNEBC	Di-2
					20	7		TYE2.3EDNEBC	Di-2
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE2.3EDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R2	16	5	—	RDQ2.3E	Di-22
				R3				RDR2.3E	Di-22
				R4				RDS2.3E	Di-22
Dies M2.3×0.25									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE2.3BDNEBC	Di-2
Rolling dies	HSS	6 7 8 11 12	RS-D	R3	16	5	—	RDR2.3B	Di-22
Dies M2.5×0.45									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE2.5FDNEBC	Di-2
					25	9		TYG2.5FDNEBC	Di-2
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE2.5FDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R2	16	5	—	RDQ2.5F	Di-22
				R4				RDS2.5F	Di-22
				R5				RDT2.5F	Di-22
				R2	20	7		REQ2.5F	Di-22
				R4				RES2.5F	Di-22
				R5				RET2.5F	Di-22

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Dies selection	Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M2.5×0.35									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE2.5DDNEBC	Di-2
Rolling dies	HSS	6 7 8 11 12	RS-D	R2	16	5	—	RDQ2.5D	Di-22
				R3				RDR2.5D	Di-22
				R4				RDS2.5D	Di-22
Dies M2.6×0.45									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE2.6FDNEBC	Di-2
					25	9		TYG2.6FDNEBC	Di-2
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE2.6FDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R2	16	5	—	RDQ2.6F	Di-22
				R4				RDS2.6F	Di-22
				R5				RDT2.6F	Di-22
				R2	20	7		REQ2.6F	Di-22
				R4				RES2.6F	Di-22
Dies M2.6×0.35									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE2.6DDNEBC	Di-2
Rolling dies	HSS	6 7 8 11 12	RS-D	R4	16	5	—	RDS2.6D	Di-22
Dies M3.5×0.6									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE3.5HDNEBC	Di-3
					25	9		TYG3.5HDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE3.5HDNEBC	Di-10
Dies M3.5×0.5									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE3.5GDNEBC	Di-3
Dies M3.5×0.35									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE3.5DDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYE3.5DDNEBC	Di-10
Rolling dies	HSS	6 7 8 11 12	RS-D	R4	20	7	—	RES3.5D	Di-22
				R5				RET3.5D	Di-22
Dies M4.5×0.75									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE4.5JDNEBC	Di-3
Dies M4.5×0.5									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE4.5GDNEBC	Di-3
Dies M5.5×0.9									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE5.5LDNEBC	Di-3
Dies M5.5×0.5									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYE5.5GDNEBC	Di-3
Dies M7×1									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG7.0MDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG7.0MDNEBC	Di-10

Dies selection	Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M7×0.75									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG7.0JDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG7.0JDNEBC	Di-10
Dies M7×0.5									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG7.0GDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG7.0GDNEBC	Di-10

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M9×1.25									
Standard	5 6 8 11 12	SP	SPQ9.0N	SP	P2	75	7	2.5P	SP-5
		PO	POR9.0N	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR9.0N5	HT	P3	75	7	5P	HT-7
			TNMR9.0N1					1.5P	HT-7
Taps M9×1									
Standard	5 6 8 11 12	SP	SPQ9.0M	SP	P2	75	7	2.5P	SP-5
		PO	POR9.0M	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMQ9.0M5	HT	P2	75	7	5P	HT-7
			TNMQ9.0M1					1.5P	HT-7
For left hand threads	1 5 6 12	HT LH	TNMQ9.0M5-L	HT	P2	75	7	5P	HT-19
			TNMQ9.0M1-L					1.5P	HT-19
Taps M9×0.75									
Standard	5 6 8 11 12	SP	SPQ9.0J	SP	P2	75	7	2.5P	SP-5
		PO	POR9.0J	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMQ9.0J5	HT	P2	75	7	5P	HT-7
			TNMQ9.0J1					1.5P	HT-7
For left hand threads	1 5 6 12	HT LH	TNMQ9.0J5-L	HT	P2	75	7	5P	HT-19
			TNMQ9.0J1-L					1.5P	HT-19
Taps M9×0.5									
Standard	5 6 8 11 12	SP	SPQ9.0G	SP	P2	75	7	2.5P	SP-5
		PO	POQ9.0G	PO				5P	PO-5
	1 5 6 12	HT	TNMQ9.0G5	HT	P2	75	7	5P	HT-7
			TNMQ9.0G1					1.5P	HT-7
Taps M11×1.5									
Standard	5 6 8 11 12	SP	SPQ011O	SP	P2	82	8.5	2.5P	SP-5
		PO	POS011O	PO	P4			5P	PO-5
	1 5 6 12	HT	TNMS011O5	HT	P4	82	8.5	5P	HT-8
			TNMS011O1					1.5P	HT-8
Taps M11×1.25									
Standard	5 6 8 11 12	SP	SPQ011N	SP	P2	82	8.5	2.5P	SP-5
		PO	POR011N	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR011N5	HT	P3	82	8.5	5P	HT-8
			TNMR011N1					1.5P	HT-8
For left hand threads	1 5 6 12	HT LH	TNMR011N5-L	HT	P3	82	8.5	5P	HT-20
			TNMR011N1-L					1.5P	HT-20
Taps M11×1									
Standard	5 6 8 11 12	SP	SPQ011M	SP	P2	82	8.5	2.5P	SP-5
		PO	POR011M	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR011M5	HT	P3	82	8.5	5P	HT-8
			TNMR011M1					1.5P	HT-8
For left hand threads	1 5 6 12	HT LH	TNMR011M5-L	HT	P3	82	8.5	5P	HT-20
			TNMR011M1-L					1.5P	HT-20

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M11×0.75									
Standard	5 6 8 11 12	SP	SPQ011J	SP	P2	82	8.5	2.5P	SP-5
		PO	POR011J	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR011J5	HT	P3	82	8.5	5P	HT-8
			TNMR011J1					1.5P	HT-8
Taps M11×0.5									
Standard	5 6 8 11 12	PO	POQ011G	PO	P2	82	8.5	5P	PO-5
	1 5 6 12	HT	TNMQ011G5	HT	P2	82	8.5	5P	HT-8
			TNMQ011G1					1.5P	HT-8
Taps M13×1.75									
Standard	1 5 6 12	HT	TNMR013P5	HT	P3	88	10.5	5P	HT-8
			TNMR013P1					1.5P	HT-8
Taps M13×1.5									
Standard	5 6 8 11 12	PO	POR013O	PO	P3	88	10.5	5P	PO-5
	1 5 6 12	HT	TNMR013O5	HT	P3	88	10.5	5P	HT-8
			TNMR013O1					1.5P	HT-8
Taps M13×1.25									
Standard	1 5 6 12	HT	TNMS013N5	HT	P4	88	10.5	5P	HT-8
			TNMS013N1					1.5P	HT-8
Taps M13×1									
Standard	5 6 8 11 12	SP	SPQ013M	SP	P2	88	10.5	2.5P	SP-6
		PO	POR013M	PO	P3			5P	PO-5
	1 5 6 12	HT	TNMR013M5	HT	P3	88	10.5	5P	HT-8
			TNMR013M1					1.5P	HT-8
Taps M13×0.75									
Standard	1 5 6 12	HT	TNMR013J5	HT	P3	88	10.5	5P	HT-8
			TNMR013J1					1.5P	HT-8
Taps M13×0.5									
Standard	1 5 6 12	HT	TNMQ013G5	HT	P2	88	10.5	5P	HT-8
			TNMQ013G1					1.5P	HT-8
Taps M14×2									
Standard	5 6 8 11 12	SP	SPQ014Q	SP	P2	88	10.5	2.5P	SP-6
		SP 1.5P	SY014QQNEBA					1.5P	SP-12
		PO	POS014Q	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMR014Q5	HT	P3	88	10.5	5P	HT-8
			TNMR014Q1					1.5P	HT-8
Oversize	5 6 8 11 12	SP	SPR014Q	SP	P3	88	10.5	2.5P	SP-6
			SPS014Q		P4				SP-6
		PO	POT014Q	PO	P5			5P	PO-6
	1 5 6 12	HT	TNMS014Q5	HT	P4	88	10.5	5P	HT-8
			TNMS014Q1					1.5P	HT-8
For left hand threads	5 6 8 11 12	SP LH	SPQ014Q--L	SP	P2	88	10.5	2.5P	SP-20
		PO LH	POS014Q--L	PO	P4			5P	PO-14

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For left hand threads	1 5 6 12	HT LH	TNMR014Q5-L	HT	P3	88	10.5	5P	HT-20
			TNMR014Q1-L					1.5P	HT-20
Oxidizing	5 6 8	SP OX	SPQ014QX	SP	P2	88	10.5	2.5P	SP-17
		PO OX	POS014QX	PO	P4			5P	PO-12
TiN coated	5 6 8 11 12	SP V	VSPQ014Q	SP	P2	88	10.5	2.5P	SP-22
Long shank	5 6 8 11 12	LS-SP	SPQ014QL12	SP	P2	120	10.5	2.5P	SP-27
			SPQ014QL15			150			SP-27
			SPQ014QL20			200			SP-27
		LS-PO	POS014QL12	PO	P4	120		5P	PO-18
			POS014QL15			150			PO-18
			POS014QL20			200			PO-18
	1 5 6 12	LS-HT	TNMQ014Q512	HT	P2	120	10.5	5P	HT-24
			TNMQ014Q515			150			HT-24
			TNMQ014Q520			200			HT-24
			TNMQ014Q525			250			HT-24
			TNMQ014Q112			120		1.5P	HT-24
			TNMQ014Q115			150			HT-24
			TNMQ014Q120			200			HT-24
			TNMQ014Q125			250			HT-24
Oversize	5 6 8 11 12	LS-PO	POT014QL15	PO	P5	150	10.5	5P	PO-18
	1 5 6 12	LS-HT	TNMR014Q515	HT	P3	150	10.5	5P	HT-24
			TNMR014Q115					1.5P	HT-24
For left hand threads	5 6 8 11 12	LS-SP LH	SPQ014QL15-L	SP	P2	150	10.5	2.5P	SP-30
	1 5 6 12	LS-HT LH	TNMQ014Q515L	HT	P2	150	10.5	5P	HT-30
			TNMQ014Q115L					1.5P	HT-30
For soft structural steels	8	E-SP	ESHMQ014Q	SP	P2	88	10.5	2.5P	SP-45
Thread forming taps or steels	6 8	N-RZ	NRZM9014QP	RO	G9	88	10.5	4P	RO-5
			NRZM9014QB					2P	RO-5
			NRZM0014QP		G10			4P	RO-5
			NRZM0014QB					2P	RO-5
For high carbon steels	5 6	HC-SP	SCMQ014Q	SP	P2	88	10.5	2.5P	SP-47
	1 5 6	HC-PO	PCMS014Q	PO	P4	88	10.5	5P	PO-30
For hard-to-machine materials	1 4 5	EH-PO	EPHMT014Q	PO	P5	88	10.5	4.5P	PO-33
		EH-HT	ETHMT014Q5	HT				5P	HT-55
			ETHMT014Q1					2.5P	HT-55
For titanium alloys	4 5 6 9	ZET-B	ZETBMR014Q	SP	P3	88	10.5	3P	SP-58
		ZET-P	ZETPMT014Q	SL	P5			5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR014Q	SP	P3	88	10.5	3P	SP-59
		ZEN-P	ZENPMT014Q	PO	P5			4.5P	PO-34
Carbide taps for hard materials	2	UH-CT	UHCS014Q5	HT	P4	88	12.5	5P	CT-16
For stainless steels	6 7 8	SU-SP	SUMQ014Q	SP	P2	88	10.5	2.5P	SP-35
		SU-PO	PUMS014Q	PO	P4			5P	PO-24
		SU-HT	TUMS014Q4	HT				4P	HT-34
			TUMS014Q1					1.5P	HT-34
Oversize	6 7 8	SU-SP	SUMR014Q	SP	P3	88	10.5	2.5P	SP-35
			SUMS014Q		P4				SP-35
		SU-PO	PUMT014Q	PO	P5			5P	PO-24
For deep hole use	6 7 8	SU-S-SP	SSMQ014Q-SU	SP	P2	88	10.5	2.5P	SP-41
		LS-SU-S-SP	-			150			SP-42
For hard-to-machine materials	5 6 7	SU2-SP	SU2MR014Q	SP	P3	88	10.5	3P	SP-39
For cast irons	1	FC-HT	TY014QSAEN5	HT	P4	88	10.5	5P	HT-37
			TY014QSAENA					1.5P	HT-37

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For cast irons	1	FC-O	TFCM014Q5	HT	70~40	88	10.5	5P	HT-39
			TFCM014Q1					1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNR014Q3	HT	P3	88	10.5	3P	CT-6
			TCNR014Q1					1.5P	CT-6
			TCNS014Q3		P4			3P	CT-6
			TCNS014Q1					1.5P	CT-6
For aluminum alloys	11 12 13	AL-SP	ASHMR014Q	SP	P3	88	10.5	2.5P	SP-52
		AL-SP 1.5P	SY014QRLENA					1.5P	SP-54
	11 12	LA-HT	TY014QSLEN5	HT	P4	88	10.5	5P	HT-41
			TY014QSLENA					1.5P	HT-41
		LA-O	TLAM014Q5		75~45			5P	HT-43
			TLAM014Q1					1.5P	HT-43
Carbide	11 12 13	N-CT LA	TCNR014Q3A	HT	P3	88	10.5	3P	CT-2
			TCNR014Q1A					1.5P	CT-2
			TCNS014Q3A		P4			3P	CT-2
			TCNS014Q1A					1.5P	CT-2
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM9014QP	RO	G9	88	10.5	4P	RO-12
			NRSM9014QB					2P	RO-12
			NRSM0014QP		G10			4P	RO-12
			NRSM0014QB					2P	RO-12
For deep hole use	5 6 8	S-SP	SSMQ014Q	SP	P2	88	10.5	2.5P	SP-44
		S-PO	PSMS014Q	PO	P4			5P	PO-27
Low spiral	1 5 6 11 12	LS-LO-SP	LSHMQ014QL15	SP	P2	150	10.5	2.5P	SP-56
For helical coil wire screw thread inserts	11 12	AL-SP	SW014Q1LEN	SP	1b	100	14	2.5P	SP-53
		AL-HT	TW014Q1LEB5	HT				5P	HT-49
			TW014Q1LEBA					1.5P	HT-49
With coolant hole	5 6 8 11 12	MC-SP	MSHQ014QL15	SP	P2	150	10.5	2.5P	SP-57
	1 5 6 11 12	MC-PO	MPHS014QL15	PO	P4	150	10.5	5P	PO-32
		MC-HT	ML15014Q5-Q	HT	P2				HT-53
			ML20014Q5-Q			200			HT-53
			ML15014Q1-Q			150		1.5P	HT-53
			ML20014Q1-Q			200			HT-53
Nut taps	6 8 11 12	NT	NH2014Q	HT	II b	190	11	25P	ST-1

Taps M14×1.5

Standard	5 6 8 11 12	SP	SPQ014O	SP	P2	88	10.5	2.5P	SP-6
		SP 1.5P	SY014OQNEBA					1.5P	SP-12
		PO	POR014O	PO	P3			5P	PO-6
	1 5 6 12	HT	TNMR014O5	HT	P3	88	10.5	5P	HT-8
			TNMR014O1					1.5P	HT-8
Oversize	5 6 8 11 12	SP	SPR014O	SP	P3	88	10.5	2.5P	SP-6
			SPS014O		P4				SP-6
		PO	POS014O	PO				5P	PO-6
			POT014O		P5				PO-6
	1 5 6 12	HT	TNMS014O5	HT	P4	88	10.5	5P	HT-9
			TNMS014O1					1.5P	HT-9
For left hand threads	5 6 8 11 12	SP LH	SPQ014O--L	SP	P2	88	10.5	2.5P	SP-20
		PO LH	POR014O--L	PO	P3			5P	PO-14
For left hand threads	1 5 6 12	HT LH	TNMR014O5-L	HT	P3	88	10.5	5P	HT-20
			TNMR014O1-L					1.5P	HT-20
Oxidizing	5 6 8	SP OX	SPQ014OX	SP	P2	88	10.5	2.5P	SP-17
		PO OX	POR014OX	PO	P3			5P	PO-12

Think threads with YAMAWA

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Long shank		5 6 8 11 12	LS-SP	SPQ014OL12	SP	P2	120	10.5	2.5P	SP-27
				SPQ014OL15			150			SP-28
				SPQ014OL20			200			SP-28
			LS-PO	POR014OL15	PO	P3	150		5P	PO-18
				POR014OL20			200			PO-18
		1 5 6 12	LS-HT	TNMQ014O512	HT	P2	120	10.5	5P	HT-24
				TNMQ014O515			150			HT-24
				TNMQ014O520			200			HT-24
				TNMQ014O112			120		1.5P	HT-24
				TNMQ014O115			150			HT-24
				TNMQ014O120			200			HT-25
	For left hand threads	5 6 8 11 12	LS-SP LH	SPQ014OL15-L	SP	P2	150	10.5	2.5P	SP-30
		1 5 6 12	LS-HT LH	TNMQ014O515L	HT	P2	150	10.5	5P	HT-30
				TNMQ014O115L					1.5P	HT-30
For soft structural steels		8	E-SP	ESHMQ014O	SP	P2	88	10.5	2.5P	SP-45
Thread forming taps for steels		6 8	N-RZ	NRZM9014OP	RO	G9	88	10.5	4P	RO-6
				NRZM9014OB					2P	RO-6
For high carbon steels		5 6	HC-SP	SCMQ014O	SP	P2	88	10.5	2.5P	SP-47
		1 5 6	HC-PO	PCMR014O	PO	P3	88	10.5	5P	PO-30
For hard-to-machine materials		1 4 5	EH-PO	EPHMS014O	PO	P4	88	10.5	4.5P	PO-33
			EH-HT	ETHMS014O5	HT				5P	HT-55
				ETHMS014O1					2.5P	HT-55
For titanium alloys		4 5 6 9	ZET-B	ZETBMR014O	SP	P3	88	10.5	3P	SP-58
			ZET-P	ZETPMS014O	SL	P4			5P	SL-10
For nickel base alloys		6 7 8 10	ZEN-B	ZENBMR014O	SP	P3	88	10.5	3P	SP-59
			ZEN-P	ZENPMS014O	PO	P4			4.5P	PO-34
For medium hardness carbon steels		5 6	MHSL	MHSLT014O7	SL	P5	88	10.5	7P	SL-16
Carbide taps for hard materials		2	UH-CT	UHCS014O5	HT	P4	88	12.5	5P	CT-16
For stainless steels	Standard	6 7 8	SU-SP	SUMQ014O	SP	P2	88	10.5	2.5P	SP-35
			SU-PO	PUMR014O	PO	P3			5P	PO-24
			SU-HT	TUMR014O4	HT				4P	HT-34
				TUMR014O1					1.5P	HT-34
	Oversize	6 7 8	SU-SP	SUMS014O	SP	P4	88	10.5	2.5P	SP-35
	For hard-to-machine materials	5 6 7	SU2-SP	SU2MR014O	SP	P3	88	10.5	3P	SP-39
For cast irons		1	FC-HT	TY014OSAEN5	HT	P4	88	10.5	5P	HT-37
				TY014OSAENA					1.5P	HT-37
			FC-O	TFCM014O5		70~40			5P	HT-39
				TFCM014O1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNR014O3	HT	P3	88	10.5	3P	CT-6
				TCNR014O1					1.5P	CT-6
				TCNS014O3		P4			3P	CT-6
				TCNS014O1					1.5P	CT-6
For aluminum alloys		11 12 13	AL-SP	ASHMR014O	SP	P3	88	10.5	2.5P	SP-52
			AL-SP 1.5P	SY014ORLENA					1.5P	SP-54
		11 12	LA-HT	TY014OSLEN5	HT	P4	88	10.5	5P	HT-41
				TY014OSLENA					1.5P	HT-41
			LA-O	TLAM014O5		75~45			5P	HT-43
				TLAM014O1					1.5P	HT-43
	Carbide	11 12 13	N-CT LA	TCNR014O3A	HT	P3	88	10.5	3P	CT-2
				TCNR014O1A					1.5P	CT-2
				TCNS014O3A		P4			3P	CT-2
				TCNS014O1A					1.5P	CT-2

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM9014OP	RO	G9	88	10.5	4P	RO-12
				NRSM9014OB					2P	RO-12
For ultra fast tapping (with internal coolant hole)	For steels	5 6 8	HFIHS	HFIHSS014O	SP	P4	88	12	2.5P	SP-64
		1 5 6	HFISP	HFISPS014O	SP	P4	88	12	2.5P	SP-65
	For non-ferrous metals	11 12	HFAHS	HFAHSS014O	SP	P4	88	12	2.5P	SP-66
			HFASP	HFASPS014O						SP-67
For dry tapping(with internal coolant hole)	For steels	11 12	HDISP	HDISPS014O	SP	P4	88	12	2.5P	SP-68
	For non-ferrous metals	11 12	HDASP	HDASPS014O	SP	P4	88	12	2.5P	SP-69
For ultra fast tapping (with internal coolant hole)	For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLS014O	SL	P4	88	12	5P	SL-13
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM9014OP	RO	G9	88	10.5	4P	RO-21
				HRZM9014OB					2P	RO-21
For deep hole use		5 6 8	S-SP	SSMQ014O	SP	P2	88	10.5	2.5P	SP-44
			S-PO	PSMR014O	PO	P3			5P	PO-27
Low spiral		1 5 6 11 12	LS-LO-SP	LSHMQ014OL15	SP	P2	150	10.5	2.5P	SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW014O1LEN	SP	1b	95	12.5	2.5P	SP-53
			AL-HT	TW014O1LEB5	HT				5P	HT-49
				TW014O1LEBA					1.5P	HT-49
With coolant hole		1 5 6 11 12	MC-PO	MPHR014OL15	PO	P3	150	10.5	5P	PO-32
			MC-HT	ML15014O5-Q	HT	P2				HT-53
				ML20014O5-Q			200			HT-53
				ML15014O1-Q			150		1.5P	HT-53
				ML20014O1-Q			200			HT-53
Nut taps		6 8 11 12	NT	NH2014O	HT	II	170	11	25P	ST-1

Taps M14×1.25

Standard		5 6 8 11 12	SP	SPQ014N	SP	P2	88	10.5	2.5P	SP-6
			PO	POR014N	PO	P3			5P	PO-6
		1 5 6 12	HT	TNMS014N5	HT	P4	88	10.5	5P	HT-9
				TNMS014N1					1.5P	HT-9
For high carbon steels		5 6	HC-SP	SCMQ014N	SP	P2	88	10.5	2.5P	SP-47
For stainless steels		6 7 8	SU-HT	TUMR014N4	HT	P3	88	10.5	4P	HT-34
				TUMR014N1					1.5P	HT-34
For cast irons	Carbide	1 12 13	N-CT FC	TCNR014N3	HT	P3	88	10.5	3P	CT-6
				TCNR014N1					1.5P	CT-6
				TCNS014N3		P4			3P	CT-6
				TCNS014N1					1.5P	CT-6

Taps M14×1

Standard		5 6 8 11 12	SP	SPQ014M	SP	P2	88	10.5	2.5P	SP-6
			PO	POR014M	PO	P3			5P	PO-6
		1 5 6 12	HT	TNMR014M5	HT	P3	88	10.5	5P	HT-9
				TNMR014M1					1.5P	HT-9
	Oversize	1 5 6 12	HT	TNMS014M5	HT	P4	88	10.5	5P	HT-9
				TNMS014M1					1.5P	HT-9
For left hand threads		1 5 6 12	HT LH	TNMR014M5-L	HT	P3	88	10.5	5P	HT-20
				TNMR014M1-L					1.5P	HT-20
Oxidizing		5 6 8	SP OX	SPQ014MX	SP	P2	88	10.5	2.5P	SP-17
			PO OX	POR014MX	PO	P3			5P	PO-12
Long shank	Standard	1 5 6 12	LS-HT	TNMQ014M515	HT	P2	150	10.5	5P	HT-25
				TNMQ014M115					1.5P	HT-25

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material; 2 High hardness material; 3 Heat treated steel (45-55HRC); 4 Heat treated steel (25-45HRC); 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel; 6 Medium carbon steel, Cast steel; 7 Stainless steel; 8 Low carbon steel; 9 Titanium alloy; 10 Nickel base alloy; 11 Rolled aluminum, Copper, Copper alloy; 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze; 13 Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Thread forming taps for steels		6 8	N-RZ	NRZM8014MP	RO	G8	88	10.5	4P	RO-6
				NRZM8014MB					2P	RO-6
For high carbon steels		5 6	HC-SP	SCMQ014M	SP	P2	88	10.5	2.5P	SP-47
For stainless steels		6 7 8	SU-SP	SUMQ014M	SP	P2	88	10.5	2.5P	SP-35
			SU-HT	TUMR014M4	HT	P3			4P	HT-34
				TUMR014M1					1.5P	HT-34
For cast irons	Carbide	1 12 13	N-CT FC	TCNR014M3	HT	P3	70	10.5	3P	CT-6
				TCNR014M1					1.5P	CT-6
				TCNS014M3		P4			3P	CT-6
				TCNS014M1					1.5P	CT-6
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM8014MP	RO	G8	88	10.5	4P	RO-12
				NRSM8014MB					2P	RO-12
For deep hole use		5 6 8	S-SP	SSMQ014M	SP	P2	88	10.5	2.5P	SP-44
Taps M14×0.75										
Standard		5 6 8 11 12	PO	POR014J	PO	P3	88	10.5	5P	PO-6
		1 5 6 12	HT	TNMR014J5	HT	P3	88	10.5	5P	HT-9
				TNMR014J1					1.5P	HT-9
Taps M14×0.5										
Standard		1 5 6 12	HT	TNMQ014G5	HT	P2	88	10.5	5P	HT-9
				TNMQ014G1					1.5P	HT-9
Taps M15×2										
Standard		5 6 8 11 12	SP	SPQ015Q	SP	P2	95	12.5	2.5P	SP-6
			PO	POS015Q	PO	P4			5P	PO-6
		1 5 6 12	HT	TNMR015Q5	HT	P3	95	12.5	5P	HT-9
				TNMR015Q1					1.5P	HT-9
Taps M15×1.5										
Standard		5 6 8 11 12	SP	SPQ015O	SP	P2	95	12.5	2.5P	SP-6
			PO	POR015O	PO	P3			5P	PO-6
		1 5 6 12	HT	TNMR015O5	HT	P3	95	12.5	5P	HT-9
				TNMR015O1					1.5P	HT-9
Taps M15×1.25										
Standard		1 5 6 12	HT	TNMS015N5	HT	P4	95	12.5	5P	HT-9
				TNMS015N1					1.5P	HT-9
Taps M15×1										
Standard		5 6 8 11 12	SP	SPQ015M	SP	P2	95	12.5	2.5P	SP-6
			PO	POR015M	PO	P3			5P	PO-6
		1 5 6 12	HT	TNMR015M5	HT	P3	95	12.5	5P	HT-9
				TNMR015M1					1.5P	HT-9
Taps M15×0.75										
Standard		1 5 6 12	HT	TNMR015J5	HT	P3	95	12.5	5P	HT-9
				TNMR015J1					1.5P	HT-9
Taps M15×0.5										
Standard		1 5 6 12	HT	TNMQ015G5	HT	P2	95	12.5	5P	HT-9
				TNMQ015G1					1.5P	HT-9

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps M16×2										
Standard		5 6 8 11 12	SP	SPQ016Q	SP	P2	95	12.5	2.5P	SP-6
			SP 1.5P	SY016QQNEBA					1.5P	SP-12
			PO	POS016Q	PO	P4			5P	PO-6
		1 5 6 12	HT	TNMR016Q5	HT	P3	95	12.5	5P	HT-9
				TNMR016Q1					1.5P	HT-9
	Oversize	5 6 8 11 12	SP	SPR016Q	SP	P3	95	12.5	2.5P	SP-6
				SPS016Q		P4				SP-6
				SPT016Q		P5				SP-6
			PO	POT016Q	PO				5P	PO-6
		1 5 6 12	HT	TNMS016Q5	HT	P4	95	12.5	5P	HT-9
				TNMS016Q1					1.5P	HT-9
For left hand threads		5 6 8 11 12	SP LH	SPQ016Q--L	SP	P2	95	12.5	2.5P	SP-20
			PO LH	POS016Q--L	PO	P4			5P	PO-14
		1 5 6 12	HT LH	TNMR016Q5-L	HT	P3	95	12.5	5P	HT-20
				TNMR016Q1-L					1.5P	HT-20
Oxidizing		5 6 8	SP OX	SPQ016QX	SP	P2	95	12.5	2.5P	SP-17
			PO OX	POS016QX	PO	P4			5P	PO-12
TiN coated		5 6 8 11 12	SP V	VSPQ016Q	SP	P2	95	12.5	2.5P	SP-22
Long shank		5 6 8 11 12	LS-SP	SPQ016QL15	SP	P2	150	12.5	2.5P	SP-28
				SPQ016QL20			200			SP-28
				SPQ016QL25			250			SP-28
			LS-PO	POS016QL15	PO	P4	150		5P	PO-19
				POS016QL20			200			PO-19
				POS016QL25			250			PO-19
		1 5 6 12	LS-HT	TNMQ016Q515	HT	P2	150	12.5	5P	HT-25
				TNMQ016Q520			200			HT-25
				TNMQ016Q525			250			HT-25
				TNMQ016Q115			150		1.5P	HT-25
				TNMQ016Q120			200			HT-25
				TNMQ016Q125			250			HT-25
	Oversize	5 6 8 11 12	LS-PO	POT016QL15	PO	P5	150	12.5	5P	PO-19
		1 5 6 12	LS-HT	TNMR016Q515	HT	P3	150	12.5	5P	HT-25
				TNMR016Q115					1.5P	HT-25
	For left hand threads	5 6 8 11 12	LS-SP LH	SPQ016QL15-L	SP	P2	150	12.5	2.5P	SP-30
		1 5 6 12	LS-HT LH	TNMQ016Q515L	HT	P2	150	12.5	5P	HT-30
				TNMQ016Q520L			200			HT-30
				TNMQ016Q115L			150		1.5P	HT-30
				TNMQ016Q120L			200			HT-30
For soft structural steels		8	E-SP	ESHMQ016Q	SP	P2	95	12.5	2.5P	SP-45
Thread forming taps for steels		6 8	N-RZ	NRZM9016QP	RO	G9	95	12.5	4P	RO-6
				NRZM9016QB					2P	RO-6
				NRZM0016QP		G10			4P	RO-6
				NRZM0016QB					2P	RO-6
For high carbon steels		5 6	HC-SP	SCMQ016Q	SP	P2	95	12.5	2.5P	SP-47
		1 5 6	HC-PO	PCMS016Q	PO	P4	95	12.5	5P	PO-30
	Oxidizing	5 6	HC-SP OX	SCMQ016QX	SP	P2	95	12.5	2.5P	SP-49
For hard-to-machine materials		1 4 5	EH-PO	EPHMT016Q	PO	P5	95	12.5	4.5P	PO-33
			EH-HT	ETHMT016Q5	HT				5P	HT-56
				ETHMT016Q1					2.5P	HT-56

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
For hard-to-machine materials	Powder HSS	4 5	PM-SP	-	SP	P4	95	12.5	2.75P	SP-60
			LS-PM-SP	-			150			SP-61
For titanium alloys		4 5 6 9	ZET-B	ZETBMR016Q	SP	P3	95	12.5	3P	SP-58
			ZET-P	ZETPMT016Q	SL	P5			5P	SL-10
For nickel base alloys		6 7 8 10	ZEN-B	ZENBMR016Q	SP	P3	95	12.5	3P	SP-59
			ZEN-P	ZENPMT016Q	PO	P5			4.5P	PO-34
Carbide taps for hard materials		2	UH-CT	UHCS016Q5	HT	P4	95	14	5P	CT-16
For stainless steels		6 7 8	SU-SP	SUMQ016Q	SP	P2	95	12.5	2.5P	SP-35
			SU-PO	PUMS016Q	PO	P4			5P	PO-24
			SU-HT	TUMS016Q4	HT				4P	HT-34
				TUMS016Q1					1.5P	HT-34
	Oversize	6 7 8	SU-SP	SUMR016Q	SP	P3	95	12.5	2.5P	SP-35
				SUMS016Q		P4				SP-35
			SU-PO	PUMT016Q	PO	P5			5P	PO-24
				PUMU016Q		P6				PO-24
	For deep hole use	6 7 8	SU-S-SP	SSMQ016Q-SU	SP	P2	95	12.5	2.5P	SP-41
			LS-SU-S-SP	-			150			SP-42
			LS-SU-S-PO	-	PO	P4			5P	PO-26
	For hard-to-machine materials	5 6 7	SU2-SP	SU2MR016Q	SP	P3	95	12.5	3P	SP-39
For cast irons		1	FC-HT	TY016QSAEN5	HT	P4	95	12.5	5P	HT-37
				TY016QSAENA					1.5P	HT-37
			FC-O	TFCM016Q5		70~40			5P	HT-39
				TFCM016Q1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNS016Q3	HT	P4	95	12.5	3P	CT-6
				TCNS016Q1					1.5P	CT-6
For aluminum alloys		11 12 13	AL-SP	ASHMR016Q	SP	P3	95	12.5	2.5P	SP-52
			AL-SP 1.5P	SY016QRLENA					1.5P	SP-54
		11 12	LA-HT	TY016QSLEN5	HT	P4	95	12.5	5P	HT-41
				TY016QSLENA					1.5P	HT-41
			LA-O	TLAM016Q5		75~45			5P	HT-43
				TLAM016Q1					1.5P	HT-43
	Carbide	11 12 13	N-CT LA	TCNS016Q3A	HT	P4	95	12.5	3P	CT-2
				TCNS016Q1A					1.5P	CT-2
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM9016QP	RO	G9	95	12.5	4P	RO-12
				NRSM9016QB					2P	RO-12
				NRSM0016QP		G10			4P	RO-12
				NRSM0016QB					2P	RO-12
For high speed		5 6 8 11 12 13	F-SP	-	SP	P4	95	12.5	2.5P	SP-62
			LS-F-SP	-			150			SP-63
For deep hole use		5 6 8	S-SP	SSMQ016Q	SP	P2	95	12.5	2.5P	SP-44
			S-PO	PSMS016Q	PO	P4			5P	PO-27
Low spiral		1 5 6 11 12	LS-LO-SP	LSHMQ016QL15	SP	P2	150	12.5	2.5P	SP-56
				LSHMQ016QL20			200			SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW016Q1LEN	SP	1b	105	15	2.5P	SP-53
			AL-HT	TW016Q1LEB5	HT				5P	HT-49
				TW016Q1LEBA					1.5P	HT-49
With coolant hole		5 6 8 11 12	MC-SP	MSHQ016QL15	SP	P2	150	12.5	2.5P	SP-57
		1 5 6 11 12	MC-PO	MPHS016QL15	PO	P4	150	12.5	5P	PO-32
			MC-HT	ML15016Q5-Q	HT	P2				HT-53
				ML20016Q5-Q			200			HT-53
				ML15016Q1-Q			150		1.5P	HT-53
				ML20016Q1-Q			200			HT-53

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Nut taps		6 8 11 12	NT	NH2016Q	HT	II b	200	13	26P	ST-1
Taps M16×1.5										
Standard		5 6 8 11 12	SP	SPQ016O	SP	P2	95	12.5	2.5P	SP-6
			SP 1.5P	SY016OQNEBA					1.5P	SP-12
			PO	POR016O	PO	P3			5P	PO-6
		1 5 6 12	HT	TNMR016O5	HT	P3	95	12.5	5P	HT-9
				TNMR016O1					1.5P	HT-9
	Oversize	5 6 8 11 12	SP	SPR016O	SP	P3	95	12.5	2.5P	SP-6
				SPS016O		P4				SP-6
			PO	POS016O	PO				5P	PO-6
				POT016O		P5				PO-6
		1 5 6 12	HT	TNMS016O5	HT	P4	95	12.5	5P	HT-9
				TNMS016O1					1.5P	HT-9
For left hand threads		5 6 8 11 12	SP LH	SPQ016O--L	SP	P2	95	12.5	2.5P	SP-20
			PO LH	POR016O--L	PO	P3			5P	PO-14
		1 5 6 12	HT LH	TNMR016O5-L	HT	P3	95	12.5	5P	HT-20
				TNMR016O1-L					1.5P	HT-20
Oxidizing		5 6 8	SP OX	SPQ016OX	SP	P2	95	12.5	2.5P	SP-17
			PO OX	POR016OX	PO	P3			5P	PO-12
Long shank		5 6 8 11 12	LS-SP	SPQ016OL15	SP	P2	150	12.5	2.5P	SP-28
				SPQ016OL20			200			SP-28
			LS-PO	POR016OL15	PO	P3	150		5P	PO-19
				POR016OL20			200			PO-19
		1 5 6 12	LS-HT	TNMQ016O515	HT	P2	150	12.5	5P	HT-25
				TNMQ016O520			200			HT-25
				TNMQ016O115			150		1.5P	HT-25
				TNMQ016O120			200			HT-25
	For left hand threads	5 6 8 11 12	LS-SP LH	SPQ016OL15-L	SP	P2	150	12.5	2.5P	SP-30
		1 5 6 12	LS-HT LH	TNMQ016O515L	HT	P2	150	12.5	5P	HT-30
				TNMQ016O115L					1.5P	HT-30
For soft structural steels		8	E-SP	ESHMQ016O	SP	P2	95	12.5	2.5P	SP-45
Thread forming taps for steels		6 8	N-RZ	NRZM9016OP	RO	G9	95	12.5	4P	RO-6
				NRZM9016OB					2P	RO-6
For high carbon steels		5 6	HC-SP	SCMQ016O	SP	P2	95	12.5	2.5P	SP-47
		1 5 6	HC-PO	PCMR016O	PO	P3	95	12.5	5P	PO-30
For hard-to-machine materials		1 4 5	EH-PO	EPHMS016O	PO	P4	95	12.5	4.5P	PO-33
			EH-HT	ETHMS016O5	HT				5P	HT-56
				ETHMS016O1					2.5P	HT-56
	Powder HSS	4 5	PM-SP	-	SP	P3	95	12.5	2.75P	SP-60
For titanium alloys		4 5 6 9	ZET-B	ZETBMR016O	SP	P3	95	12.5	3P	SP-58
			ZET-P	ZETPMS016O	SL	P4			5P	SL-10
For nickel base alloys		6 7 8 10	ZEN-B	ZENBMR016O	SP	P3	95	12.5	3P	SP-59
			ZEN-P	ZENPMS016O	PO	P4			4.5P	PO-34
For medium hardness carbon steels		5 6	MHSL	MHSLT016O7	SL	P5	95	12.5	7P	SL-16
Carbide taps for hard materials		2	UH-CT	UHCS016O5	HT	P4	95	14	5P	CT-16
For stainless steels		6 7 8	SU-SP	SUMQ016O	SP	P2	95	12.5	2.5P	SP-35
			SU-PO	PUMR016O	PO	P3			5P	PO-24
			SU-HT	TUMR016O4	HT				4P	HT-34
				TUMR016O1					1.5P	HT-34
	Oversize	6 7 8	SU-SP	SUMS016O	SP	P4	95	12.5	2.5P	SP-35
	For hard-to-machine materials	5 6 7	SU2-SP	SU2MR016O	SP	P3	95	12.5	3P	SP-39

Icons of main materials

[1] Cast iron, Ductile cast iron, Sintered material [2] High hardness material [3] Heat treated steel (45-55HRC) [4] Heat treated steel (25-45HRC) [5] High carbon steel, Tool steel, Alloy steel, Heat treated steel [6] Medium carbon steel, Cast steel [7] Stainless steel

[8] Low carbon steel [9] Titanium alloy [10] Nickel base alloy [11] Rolled aluminum, Copper, Copper alloy [12] Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze [13] Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For cast irons		[1]	FC-HT	TY016OSAEN5	HT	P4	95	12.5	5P	HT-37
				TY016OSAENA					1.5P	HT-37
			FC-O	TFCM016O5		70~40			5P	HT-39
				TFCM016O1					1.5P	HT-39
	Carbide	[1][12][13]	N-CT FC	TCNR016O3	HT	P3	95	12.5	3P	CT-6
				TCNR016O1					1.5P	CT-6
				TCNS016O3		P4			3P	CT-6
				TCNS016O1					1.5P	CT-6
For aluminum alloys		[11][12][13]	AL-SP	ASHMR016O	SP	P3	95	12.5	2.5P	SP-52
			AL-SP 1.5P	SY016ORLENA					1.5P	SP-54
		[11][12]	LA-HT	TY016OSLEN5	HT	P4	95	12.5	5P	HT-41
				TY016OSLENA					1.5P	HT-41
			LA-O	TLAM016O5		75~45			5P	HT-43
				TLAM016O1					1.5P	HT-43
	Carbide	[11][12][13]	N-CT LA	TCNR016O3A	HT	P3	95	12.5	3P	CT-3
				TCNR016O1A					1.5P	CT-3
				TCNS016O3A		P4			3P	CT-3
				TCNS016O1A					1.5P	CT-3
Thread forming taps for non-ferrous materials		[11][12]	N-RS	NRSM9016OP	RO	G9	95	12.5	4P	RO-12
				NRSM9016OB					2P	RO-12
For ultra fast tapping (with internal coolant hole)	For steels	[5][6][8]	HFIHS	HFIHSS016O	SP	P4	95	16	2.5P	SP-64
		[1][5][6]	HFISP	HFISPS016O	SP	P4	95	16	2.5P	SP-65
	For non-ferrous metals	[11][12]	HFAHS	HFAHSS016O	SP	P4	95	16	2.5P	SP-66
			HFASP	HFASPS016O						SP-67
For dry tapping(with internal coolant hole)	For steels	[1][5][6]	HDISP	HDISPS016O	SP	P4	95	16	2.5P	SP-68
	For non-ferrous metals	[11][12]	HDASP	HDASPS016O	SP	P4	95	16	2.5P	SP-69
For ultra fast tapping (with internal coolant hole)	For both steels and non ferrous materials	[1][5][6][11][12]	HDISL	HDISLS016O	SL	P4	95	16	5P	SL-13
Thread forming taps for high carbon steels		[5][6][7][11][12]	HP-RZ	HRZM9016OP	RO	G9	95	12.5	4P	RO-21
				HRZM9016OB					2P	RO-21
For deep hole use		[5][6][8]	S-SP	SSMQ016O	SP	P2	95	12.5	2.5P	SP-44
			S-PO	PSMR016O	PO	P3			5P	PO-27
Low spiral		[1][5][6][11][12]	LS-LO-SP	LSHMQ016OL15	SP	P2	150	12.5	2.5P	SP-56
				LSHMQ016OL20			200			SP-56
For helical coil wire screw thread inserts		[11][12]	AL-SP	SW016O1LEN	SP	1b	100	14	2.5P	SP-53
			AL-HT	TW016O1LEB5	HT				5P	HT-49
				TW016O1LEBA					1.5P	HT-49
With coolant hole		[1][5][6][11][12]	MC-PO	MPHR016OL15	PO	P3	150	12.5	5P	PO-32
			MC-HT	ML15016O5-Q	HT					HT-53
				ML20016O5-Q			200			HT-53
				ML15016O1-Q			150		1.5P	HT-53
				ML20016O1-Q			200			HT-53
Nut taps		[6][8][11][12]	NT	NH2016O	HT	II	180	13	25P	ST-1
Taps M16×1.25										
Standard		[1][5][6][12]	HT	TNMS016N5	HT	P4	95	12.5	5P	HT-9
				TNMS016N1					1.5P	HT-9
Taps M16×1										
Standard		[5][6][8][11][12]	SP	SPQ016M	SP	P2	95	12.5	2.5P	SP-6
			PO	POR016M	PO	P3			5P	PO-6
		[1][5][6][12]	HT	TNMR016M5	HT	P3	95	12.5	5P	HT-9
				TNMR016M1					1.5P	HT-9

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Standard	Oversize	[1][5][6][12]	HT	TNMS016M5	HT	P4	95	12.5	5P	HT-9
				TNMS016M1					1.5P	HT-9
For left hand threads		[1][5][6][12]	HT LH	TNMR016M5-L	HT	P3	95	12.5	5P	HT-20
				TNMR016M1-L					1.5P	HT-20
Long shank		[1][5][6][12]	LS-HT	TNMQ016M515	HT	P2	150	12.5	5P	HT-25
				TNMQ016M115					1.5P	HT-25
For high carbon steels		[5][6]	HC-SP	SCMQ016M	SP	P2	95	12.5	2.5P	SP-47
For stainless steels		[6][7][8]	SU-PO	PUMR016M	PO	P3	95	12.5	5P	PO-24
			SU-HT	TUMR016M4	HT				4P	HT-34
				TUMR016M1					1.5P	HT-34
For cast irons	Carbide	[1][12][13]	N-CT FC	TCNS016M3	HT	P4	75	12.5	3P	CT-6
				TCNS016M1					1.5P	CT-6
Thread forming taps for non-ferrous materials		[11][12]	N-RS	NRSM8016MP	RO	G8	95	12.5	4P	RO-12
				NRSM8016MB					2P	RO-12
For deep hole use		[5][6][8]	S-SP	SSMQ016M	SP	P2	95	12.5	2.5P	SP-44
Taps M16×0.5										
Standard		[1][5][6][12]	HT	TNMQ016G5	HT	P2	95	12.5	5P	HT-9
				TNMQ016G1					1.5P	HT-9
Taps M17×1.5										
Standard		[5][6][8][11][12]	SP	SPQ017O	SP	P2	100	14	2.5P	SP-6
		[1][5][6][12]	HT	TNMS017O5	HT	P4	100	14	5P	HT-9
				TNMS017O1					1.5P	HT-9
Taps M17×1										
Standard		[5][6][8][11][12]	SP	SPQ017M	SP	P2	100	14	2.5P	SP-6
		[1][5][6][12]	HT	TNMR017M5	HT	P3	100	14	5P	HT-9
				TNMR017M1					1.5P	HT-9
Taps M18×2.5										
Standard		[5][6][8][11][12]	SP	SPR018R	SP	P3	100	14	2.5P	SP-6
			PO	POS018R	PO	P4			5P	PO-6
		[1][5][6][12]	HT	TNMS018R5	HT	P4	100	14	5P	HT-9
				TNMS018R1					1.5P	HT-9
	Oversize	[5][6][8][11][12]	SP	SPS018R	SP	P4	100	14	2.5P	SP-6
			PO	POT018R	PO	P5			5P	PO-6
		[1][5][6][12]	HT	TNMT018R5	HT	P5	100	14	5P	HT-9
				TNMT018R1					1.5P	HT-9
For left hand threads		[5][6][8][11][12]	SP LH	SPR018R--L	SP	P3	100	14	2.5P	SP-20
			PO LH	POS018R--L	PO	P4			5P	PO-14
		[1][5][6][12]	HT LH	TNMS018R5-L	HT	P4	100	14	5P	HT-20
				TNMS018R1-L					1.5P	HT-20
Oxidizing		[5][6][8]	SP OX	SPR018RX	SP	P3	100	14	2.5P	SP-17
			PO OX	POS018RX	PO	P4			5P	PO-12
Long shank		[5][6][8][11][12]	LS-SP	SPR018RL15	SP	P3	150	14	2.5P	SP-28
				SPR018RL20			200			SP-28
				SPR018RL25			250			SP-28
			LS-PO	POS018RL15	PO	P4	150		5P	PO-19
				POS018RL20			200			PO-19
		[1][5][6][12]	LS-HT	TNMR018R515	HT	P3	150	14	5P	HT-25
				TNMR018R520			200			HT-25

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Long shank	1 5 6 12	LS-HT	TNMR018R525	HT	P3	250	14	5P	HT-25
			TNMR018R115			150		1.5P	HT-25
			TNMR018R120			200			HT-25
			TNMR018R125			250			HT-25
Oversize	5 6 8 11 12	LS-PO	POT018RL15	PO	P5	150	14	5P	PO-19
	1 5 6 12	LS-HT	TNMS018R515	HT	P4	150	14	5P	HT-25
			TNMS018R115					1.5P	HT-25
For left hand threads	1 5 6 12	LS-HT LH	TNMR018R515L	HT	P3	150	14	5P	HT-30
			TNMR018R115L					1.5P	HT-30
For soft structural steels	8	E-SP	ESHMR018R	SP	P3	100	14	2.5P	SP-45
For high carbon steels	5 6	HC-SP	SCMR018R	SP	P3	100	14	2.5P	SP-47
	1 5 6	HC-PO	PCMS018R	PO	P4	100	14	5P	PO-30
For hard-to-machine materials	1 4 5	EH-PO	EPHMT018R	PO	P5	100	14	4.5P	PO-33
		EH-HT	ETHMT018R5	HT				5P	HT-56
			ETHMT018R1					2.5P	HT-56
For titanium alloys	4 5 6 9	ZET-B	ZETBMS018R	SP	P4	100	14	3P	SP-58
		ZET-P	ZETPMT018R	SL	P5			5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMS018R	SP	P4	100	14	3P	SP-59
		ZEN-P	ZENPMT018R	PO	P5			4.5P	PO-34
Carbide taps for hard materials	2	UH-CT	UHCS018R5	HT	P4	100	15	5P	CT-16
For stainless steels	6 7 8	SU-SP	SUMR018R	SP	P3	100	14	2.5P	SP-35
		SU-PO	PUMS018R	PO	P4			5P	PO-24
		SU-HT	TUMS018R4	HT				4P	HT-34
			TUMS018R1					1.5P	HT-34
Oversize	6 7 8	SU-SP	SUMS018R	SP	P4	100	14	2.5P	SP-35
		SU-PO	PUMT018R	PO	P5			5P	PO-24
			PUMU018R		P6				PO-24
For deep hole use	6 7 8	SU-S-SP	SSMR018R-SU	SP	P3	100	14	2.5P	SP-41
For hard-to-machine materials	5 6 7	SU2-SP	SU2MS018R	SP	P4	100	14	3P	SP-39
For cast irons	1	FC-HT	TY018RTAEN5	HT	P5	100	14	5P	HT-37
			TY018RTAENA					1.5P	HT-37
		FC-O	TFCM018R5		80~45			5P	HT-39
			TFCM018R1					1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNS018R3	HT	P4	100	14	3P	CT-6
			TCNS018R1					1.5P	CT-6
For aluminum alloys	11 12	LA-O	TLAM018R5	HT	85~50	100	14	5P	HT-43
			TLAM018R1					1.5P	HT-43
Carbide	11 12 13	N-CT LA	TCNS018R3A	HT	P4	100	14	3P	CT-3
			TCNS018R1A					1.5P	CT-3
For deep hole use	5 6 8	S-SP	SSMR018R	SP	P3	100	14	2.5P	SP-44
		S-PO	PSMS018R	PO	P4			5P	PO-27
Low spiral	1 5 6 11 12	LS-LO-SP	LSHMR018RL20	SP	P3	200	14	2.5P	SP-56
For helical coil wire screw thread inserts	11 12	AL-SP	SW018R1LEN	SP	1b	115	17	2.5P	SP-53
		AL-HT	TW018R1LEB5	HT				5P	HT-49
			TW018R1LEBA					1.5P	HT-49
With coolant hole	5 6 8 11 12	MC-SP	MSHR018RL15	SP	P3	150	14	2.5P	SP-57
	1 5 6 11 12	MC-PO	MPHS018RL15	PO	P4	150	14	5P	PO-32
		MC-HT	ML15018R5-R	HT	P3				HT-53
			ML20018R5-R			200			HT-53
			ML15018R1-R			150		1.5P	HT-53
			ML20018R1-R			200			HT-53
Nut taps	6 8 11 12	NT	NH2018R	HT	II b	220	14	24P	ST-1

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M18×2									
Standard	5 6 8 11 12	SP	SPR018Q	SP	P3	100	14	2.5P	SP-6
		PO	POS018Q	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMS018Q5	HT	P4	100	14	5P	HT-9
			TNMS018Q1					1.5P	HT-9
Long shank	1 5 6 12	LS-HT	TNMR018Q520	HT	P3	200	14	5P	HT-25
			TNMR018Q120					1.5P	HT-25
For high carbon steels	5 6	HC-SP	SCMR018Q	SP	P3	100	14	2.5P	SP-47
For deep hole use	5 6 8	S-SP	SSMR018Q	SP	P3	100	14	2.5P	SP-44
Taps M18×1.5									
Standard	5 6 8 11 12	SP	SPQ018O	SP	P2	100	14	2.5P	SP-6
		PO	POS018O	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMR018O5	HT	P3	100	14	5P	HT-10
			TNMR018O1					1.5P	HT-10
Oversize	5 6 8 11 12	SP	SPR018O	SP	P3	100	14	2.5P	SP-6
			SPS018O		P4				SP-6
		PO	POT018O	PO	P5			5P	PO-6
	1 5 6 12	HT	TNMS018O5	HT	P4	100	14	5P	HT-10
			TNMS018O1					1.5P	HT-10
For left hand threads	5 6 8 11 12	SP LH	SPQ018O--L	SP	P2	100	14	2.5P	SP-21
		PO LH	POS018O--L	PO	P4			5P	PO-14
	1 5 6 12	HT LH	TNMR018O5-L	HT	P3	100	14	5P	HT-20
			TNMR018O1-L					1.5P	HT-20
Oxidizing	5 6 8	SP OX	SPQ018OX	SP	P2	100	14	2.5P	SP-17
		PO OX	POS018OX	PO	P4			5P	PO-12
Long shank	5 6 8 11 12	LS-SP	SPQ018OL15	SP	P2	150	14	2.5P	SP-28
			SPQ018OL20			200			SP-28
		LS-PO	POS018OL15	PO	P4	150		5P	PO-19
			POS018OL20			200			PO-19
	1 5 6 12	LS-HT	TNMQ018O515	HT	P2	150	14	5P	HT-25
			TNMQ018O520			200			HT-25
			TNMQ018O115			150		1.5P	HT-25
			TNMQ018O120			200			HT-25
For left hand threads	1 5 6 12	LS-HT LH	TNMQ018O515L	HT	P2	150	14	5P	HT-30
			TNMQ018O115L					1.5P	HT-30
For soft structural steels	8	E-SP	ESHMQ018O	SP	P2	100	14	2.5P	SP-45
For high carbon steels	5 6	HC-SP	SCMQ018O	SP	P2	100	14	2.5P	SP-47
	1 5 6	HC-PO	PCMS018O	PO	P4	100	14	5P	PO-30
For hard-to-machine materials	1 4 5	EH-PO	EPHMS018O	PO	P4	100	14	4.5P	PO-33
		EH-HT	ETHMS018O5	HT				5P	HT-56
			ETHMS018O1					2.5P	HT-56
For titanium alloys	4 5 6 9	ZET-B	ZETBMR018O	SP	P3	100	14	3P	SP-58
		ZET-P	ZETPMT018O	SL	P5			5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR018O	SP	P3	100	14	3P	SP-59
Carbide taps for hard materials	2	UH-CT	UHCS018O5	HT	P4	100	15	5P	CT-16
For stainless steels	6 7 8	SU-SP	SUMQ018O	SP	P2	100	14	2.5P	SP-35
		SU-PO	PUMS018O	PO	P4			5P	PO-24
		SU-HT	TUMS018O4	HT				4P	HT-34
			TUMS018O1					1.5P	HT-34
Oversize	6 7 8	SU-SP	SUMS018O	SP	P4	100	14	2.5P	SP-35

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For stainless steels	For hard-to-machine materials	5 6 7	SU2-SP	SU2MR018O	SP	P3	100	14	3P	SP-39
For cast irons		1	FC-HT	TY018OSAEN5	HT	P4	100	14	5P	HT-37
				TY018OSAENA					1.5P	HT-37
			FC-O	TFCM018O5		70~40			5P	HT-39
				TFCM018O1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNS018O3	HT	P4	95	14	3P	CT-6
				TCNS018O1					1.5P	CT-6
For aluminum alloys		11 12	LA-O	TLAM018O5	HT	75~45	100	14	5P	HT-43
				TLAM018O1					1.5P	HT-43
	Carbide	11 12 13	N-CT LA	TCNS018O3A	HT	P4	95	14	3P	CT-3
				TCNS018O1A					1.5P	CT-3
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM9018OP	RO	G9	100	14	4P	RO-12
				NRSM9018OB					2P	RO-12
For ultra fast tapping (with internal coolant hole)	For steels	5 6 8	HFIHS	HFIHSS018O	SP	P4	100	16	2.5P	SP-64
		1 5 6	HFISP	HFISPS018O	SP	P4	100	16	2.5P	SP-65
	For non-ferrous metals	11 12	HFAHS	HFAHSS018O	SP	P4	100	16	2.5P	SP-66
			HFASP	HFASPS018O						SP-67
For dry tapping(with internal coolant hole)	For steels	1 5 6	HDISP	HDISPS018O	SP	P4	100	16	2.5P	SP-68
	For non-ferrous metals	11 12	HDASP	HDASPS018O	SP	P4	100	16	2.5P	SP-69
For ultra fast tapping (with internal coolant hole)	For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLS018O	SL	P4	100	16	5P	SL-13
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM9018OP	RO	G9	100	14	4P	RO-22
				HRZM9018OB					2P	RO-22
For deep hole use		5 6 8	S-SP	SSMQ018O	SP	P2	100	14	2.5P	SP-44
			S-PO	PSMS018O	PO	P4			5P	PO-28
Low spiral		1 5 6 11 12	LS-LO-SP	LSHMQ018OL20	SP	P2	200	14	2.5P	SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW018O1LEN	SP	1b	105	15	2.5P	SP-53
			AL-HT	TW018O1LEB5	HT				5P	HT-49
				TW018O1LEBA					1.5P	HT-49
With coolant hole		1 5 6 11 12	MC-PO	MPHS018OL15	PO	P4	150	14	5P	PO-32
			MC-HT	ML15018O5-Q	HT	P2				HT-53
				ML20018O5-Q			200			HT-53
				ML15018O1-Q			150		1.5P	HT-53
				ML20018O1-Q			200			HT-53
Nut taps		6 8 11 12	NT	NH2018O	HT	II	190	14	25P	ST-2
Taps M18×1.25										
Standard		5 6 8 11 12	SP	SPQ018N	SP	P2	100	14	2.5P	SP-6
Taps M18×1										
Standard		5 6 8 11 12	SP	SPQ018M	SP	P2	100	14	2.5P	SP-6
			PO	POR018M	PO	P3			5P	PO-6
		1 5 6 12	HT	TNMR018M5	HT	P3	100	14	5P	HT-10
				TNMR018M1					1.5P	HT-10
For high carbon steels		5 6	HC-SP	SCMQ018M	SP	P2	100	14	2.5P	SP-48
For deep hole use		5 6 8	S-SP	SSMQ018M	SP	P2	100	14	2.5P	SP-44
Taps M18×0.5										
Standard		1 5 6 12	HT	TNMQ018G5	HT	P2	100	13	5P	HT-10
				TNMQ018G1					1.5P	HT-10
Taps M19×1.5										
Standard		5 6 8 11 12	SP	SPR019O	SP	P3	105	15	2.5P	SP-6

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Standard		1 5 6 12	HT	TNMR019O5	HT	P3	105	15	5P	HT-10
				TNMR019O1					1.5P	HT-10
Taps M19×1										
Standard		5 6 8 11 12	SP	SPQ019M	SP	P2	105	15	2.5P	SP-6
		1 5 6 12	HT	TNMR019M5	HT	P3	105	15	5P	HT-10
				TNMR019M1					1.5P	HT-10
Taps M20×2.5										
Standard		5 6 8 11 12	SP	SPR020R	SP	P3	105	15	2.5P	SP-6
			PO	POS020R	PO	P4			5P	PO-6
		1 5 6 12	HT	TNMS020R5	HT	P4	105	15	5P	HT-10
				TNMS020R1					1.5P	HT-10
	Oversize	5 6 8 11 12	SP	SPS020R	SP	P4	105	15	2.5P	SP-6
			PO	POT020R	PO	P5			5P	PO-6
		1 5 6 12	HT	TNMT020R5	HT	P5	105	15	5P	HT-10
				TNMT020R1					1.5P	HT-10
For left hand threads		5 6 8 11 12	SP LH	SPR020R--L	SP	P3	105	15	2.5P	SP-21
			PO LH	POS020R--L	PO	P4			5P	PO-14
		1 5 6 12	HT LH	TNMS020R5-L	HT	P4	105	15	5P	HT-20
				TNMS020R1-L					1.5P	HT-20
Oxidizing		5 6 8	SP OX	SPR020RX	SP	P3	105	15	2.5P	SP-17
			PO OX	POS020RX	PO	P4			5P	PO-12
TiN coated		5 6 8 11 12	SP V	VSPR020R	SP	P3	105	15	2.5P	SP-22
Long shank		5 6 8 11 12	LS-SP	SPR020RL15	SP	P3	150	15	2.5P	SP-28
				SPR020RL20			200			SP-28
				SPR020RL25			250			SP-28
			LS-PO	POS020RL15	PO	P4	150		5P	PO-19
				POS020RL20			200			PO-19
				POS020RL25			250			PO-19
		1 5 6 12	LS-HT	TNMR020R515	HT	P3	150	15	5P	HT-25
				TNMR020R520			200			HT-25
				TNMR020R525			250			HT-25
				TNMR020R115			150		1.5P	HT-25
				TNMR020R120			200			HT-25
				TNMR020R125			250			HT-25
	Oversize	5 6 8 11 12	LS-PO	POT020RL15	PO	P5	150	15	5P	PO-19
		1 5 6 12	LS-HT	TNMS020R515	HT	P4	150	15	5P	HT-25
				TNMS020R115					1.5P	HT-25
	For left hand threads	1 5 6 12	LS-HT LH	TNMR020R515L	HT	P3	150	15	5P	HT-30
				TNMR020R520L			200			HT-30
				TNMR020R115L			150		1.5P	HT-30
				TNMR020R120L			200			HT-30
For soft structural steels		8	E-SP	ESHMR020R	SP	P3	105	15	2.5P	SP-45
For high carbon steels		5 6	HC-SP	SCMR020R	SP	P3	105	15	2.5P	SP-48
		1 5 6	HC-PO	PCMS020R	PO	P4	105	15	5P	PO-30
For hard-to-machine materials		1 4 5	EH-PO	EPHMT020R	PO	P5	105	15	4.5P	PO-33
			EH-HT	ETHMT020R5	HT				5P	HT-56
				ETHMT020R1					2.5P	HT-56
	Powder HSS	4 5	PM-SP	-	SP	P4	105	15	2.75P	SP-60
			LS-PM-SP	-			150			SP-61

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
For titanium alloys	4 5 6 9	ZET-B	ZETBMS020R	SP	P4	105	15	3P	SP-58
		ZET-P	ZETPMT020R	SL	P5			5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMS020R	SP	P4	105	15	3P	SP-59
		ZEN-P	ZENPMT020R	PO	P5			4.5P	PO-34
Carbide taps for hard materials	2	UH-CT	UHCS020R5	HT	P4	105	17	5P	CT-16
For stainless steels	6 7 8	SU-SP	SUMR020R	SP	P3	105	15	2.5P	SP-35
		SU-PO	PUMS020R	PO	P4			5P	PO-24
		SU-HT	TUMS020R4	HT				4P	HT-34
			TUMS020R1					1.5P	HT-34
Oversize	6 7 8	SU-SP	SUMS020R	SP	P4	105	15	2.5P	SP-35
		SU-PO	PUMT020R	PO	P5			5P	PO-24
			PUMU020R		P6				PO-24
For deep hole use	6 7 8	SU-S-SP	SSMR020R-SU	SP	P3	105	15	2.5P	SP-41
		LS-SU-S-SP	-			150			SP-42
		LS-SU-S-PO	-	PO	P4			5P	PO-26
For hard-to-machine materials	5 6 7	SU2-SP	SU2MS020R	SP	P4	105	15	3P	SP-39
For cast irons	1	FC-O	TFCM020R5	HT	80~45	105	15	5P	HT-39
			TFCM020R1					1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNS020R3	HT	P4	105	15	3P	CT-6
			TCNS020R1					1.5P	CT-6
For aluminum alloys	11 12	LA-O	TLAM020R5	HT	85~50	105	15	5P	HT-43
			TLAM020R1					1.5P	HT-43
Carbide	11 12 13	N-CT LA	TCNS020R3A	HT	P4	105	15	3P	CT-3
			TCNS020R1A					1.5P	CT-3
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM1020RP	RO	G11	105	15	4P	RO-12
			NRSM1020RB					2P	RO-12
For high speed	5 6 8 11 12 13	F-SP	-	SP	P4	105	15	2.5P	SP-62
For deep hole use	5 6 8	S-SP	SSMR020R	SP	P3	105	15	2.5P	SP-44
		S-PO	PSMS020R	PO	P4			5P	PO-28
Low spiral	1 5 6 11 12	LS-LO-SP	LSHMR020RL20	SP	P3	200	15	2.5P	SP-56
For helical coil wire screw thread inserts	11 12	AL-SP	SW020R1LEN	SP	1b	120	19	2.5P	SP-53
		AL-HT	TW020R1LEB5	HT				5P	HT-49
			TW020R1LEBA					1.5P	HT-49
With coolant hole	5 6 8 11 12	MC-SP	MSHR020RL15	SP	P3	150	15	2.5P	SP-57
	1 5 6 11 12	MC-PO	MPHS020RL15	PO	P4	150	15	5P	PO-32
		MC-HT	ML15020R5-R	HT	P3				HT-53
			ML20020R5-R			200			HT-53
			ML15020R1-R			150		1.5P	HT-53
			ML20020R1-R			200			HT-53
Nut taps	6 8 11 12	NT	NH2020R	HT	II b	230	16	26P	ST-2

Taps M20×2

Standard	5 6 8 11 12	SP	SPR020Q	SP	P3	105	15	2.5P	SP-6
		PO	POS020Q	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMS020Q5	HT	P4	105	15	5P	HT-10
			TNMS020Q1					1.5P	HT-10
For high carbon steels	5 6	HC-SP	SCMR020Q	SP	P3	105	15	2.5P	SP-48
For deep hole use	5 6 8	S-SP	SSMR020Q	SP	P3	105	15	2.5P	SP-44

Taps M20×1.5

Standard	5 6 8 11 12	SP	SPR020O	SP	P3	105	15	2.5P	SP-6
		PO	POS020O	PO	P4			5P	PO-6

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Standard	1 5 6 12	HT	TNMR020O5	HT	P3	105	15	5P	HT-10
			TNMR020O1					1.5P	HT-10
Oversize	5 6 8 11 12	SP	SPS020O	SP	P4	105	15	2.5P	SP-6
		SPT020O		P5					SP-7
		PO	POT020O	PO				5P	PO-6
	1 5 6 12	HT	TNMS020O5	HT	P4	105	15	5P	HT-10
			TNMS020O1					1.5P	HT-10
For left hand threads	5 6 8 11 12	SP LH	SPR020O--L	SP	P3	105	15	2.5P	SP-21
		PO LH	POS020O--L	PO	P4			5P	PO-14
	1 5 6 12	HT LH	TNMR020O5-L	HT	P3	105	15	5P	HT-20
			TNMR020O1-L					1.5P	HT-20
Oxidizing	5 6 8	SP OX	SPR020OX	SP	P3	105	15	2.5P	SP-17
		PO OX	POS020OX	PO	P4			5P	PO-12
Long shank	5 6 8 11 12	LS-SP	SPR020OL15	SP	P3	150	15	2.5P	SP-28
			SPR020OL20			200			SP-28
		LS-PO	POS020OL15	PO	P4	150		5P	PO-19
			POS020OL20			200			PO-19
	1 5 6 12	LS-HT	TNMR020O515	HT	P3	150	15	5P	HT-25
			TNMR020O520			200			HT-25
			TNMR020O115			150		1.5P	HT-25
			TNMR020O120			200			HT-25
Oversize	1 5 6 12	LS-HT	TNMS020O515	HT	P4	150	15	5P	HT-25
			TNMS020O115					1.5P	HT-25
For left hand threads	1 5 6 12	LS-HT LH	TNMR020O515L	HT	P3	150	15	5P	HT-30
			TNMR020O520L			200			HT-30
			TNMR020O115L			150		1.5P	HT-30
			TNMR020O120L			200			HT-30
For soft structural steels	8	E-SP	ESHMR020O	SP	P3	105	15	2.5P	SP-45
Thread forming taps for steels	6 8	N-RZ	NRZM9020OP	RO	G9	105	15	4P	RO-6
			NRZM9020OB					2P	RO-6
			NRZM0020OP		G10			4P	RO-6
			NRZM0020OB					2P	RO-6
For high carbon steels	5 6	HC-SP	SCMR020O	SP	P3	105	15	2.5P	SP-48
	1 5 6	HC-PO	PCMS020O	PO	P4	105	15	5P	PO-30
For hard-to-machine materials	1 4 5	EH-PO	EPHMS020O	PO	P4	105	15	4.5P	PO-33
		EH-HT	ETHMS020O5	HT				5P	HT-56
			ETHMS020O1					2.5P	HT-56
For titanium alloys	4 5 6 9	ZET-B	ZETBMS020O	SP	P4	105	15	3P	SP-58
		ZET-P	ZETPMT020O	SL	P5			5P	SL-10
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMS020O	SP	P4	105	15	3P	SP-59
		ZEN-P	ZENPMT020O	PO	P5			4.5P	PO-34
Carbide taps for hard materials	2	UH-CT	UHCS020O5	HT	P4	105	17	5P	CT-16
For stainless steels	6 7 8	SU-SP	SUMR020O	SP	P3	105	15	2.5P	SP-35
		SU-PO	PUMS020O	PO	P4			5P	PO-24
		SU-HT	TUMS020O4	HT				4P	HT-34
			TUMS020O1					1.5P	HT-34
Oversize	6 7 8	SU-SP	SUMS020O	SP	P4	105	15	2.5P	SP-35
For hard-to-machine materials	5 6 7	SU2-SP	SU2MS020O	SP	P4	105	15	3P	SP-39
For cast irons	1	FC-O	TFCM020O5	HT	75~40	105	15	5P	HT-39
			TFCM020O1					1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNS020O3	HT	P4	95	15	3P	CT-6
			TCNS020O1					1.5P	CT-6

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For aluminum alloys		11 12	LA-O	TLAM020O5	HT	80~45	105	15	5P	HT-43
				TLAM020O1					1.5P	HT-43
	Carbide	11 12 13	N-CT LA	TCNS020O3A	HT	P4	95	15	3P	CT-3
				TCNS020O1A					1.5P	CT-3
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM9020OP	RO	G9	105	15	4P	RO-12
				NRSM9020OB					2P	RO-12
For ultra fast tapping (with internal coolant hole)	For steels	5 6 8	HFIHS	HFIHST020O	SP	P5	105	16	2.5P	SP-64
		1 5 6	HFISP	HFISPT020O	SP	P5	105	16	2.5P	SP-65
	For non-ferrous metals	11 12	HFAHS	HFAHST020O	SP	P5	105	16	2.5P	SP-66
			HFASP	HFASPT020O						SP-67
For dry tapping(with internal coolant hole)	For steels	1 5 6	HDISP	HDISPT020O	SP	P5	105	16	2.5P	SP-68
	For non-ferrous metals	11 12	HDASP	HDASPT020O	SP	P5	105	16	2.5P	SP-69
For ultra fast tapping (with internal coolant hole)	For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISLT020O	SL	P5	105	16	5P	SL-13
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM9020OP	RO	G9	105	15	4P	RO-22
				HRZM9020OB					2P	RO-22
For deep hole use		5 6 8	S-SP	SSMR020O	SP	P3	105	15	2.5P	SP-44
			S-PO	PSMS020O	PO	P4			5P	PO-28
Low spiral		1 5 6 11 12	LS-LO-SP	LSHMR020OL20	SP	P3	200	15	2.5P	SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW020O1LEN	SP	1b	115	17	2.5P	SP-53
			AL-HT	TW020O1LEB5	HT				5P	HT-49
				TW020O1LEBA					1.5P	HT-49
With coolant hole		1 5 6 11 12	MC-PO	MPHS020OL15	PO	P4	150	15	5P	PO-32
			MC-HT	ML15020O5-R	HT	P3				HT-53
				ML20020O5-R			200			HT-53
				ML15020O1-R			150		1.5P	HT-53
				ML20020O1-R			200			HT-53
Nut taps		6 8 11 12	NT	NH2020O	HT	II	200	16	25P	ST-2
Taps M20×1.25										
Standard		5 6 8 11 12	SP	SPQ020N	SP	P2	105	15	2.5P	SP-7
Taps M20×1										
Standard		5 6 8 11 12	SP	SPQ020M	SP	P2	105	15	2.5P	SP-7
			PO	POR020M	PO	P3			5P	PO-6
		1 5 6 12	HT	TNMR020M5	HT	P3	105	15	5P	HT-10
				TNMR020M1					1.5P	HT-10
For high carbon steels		5 6	HC-SP	SCMQ020M	SP	P2	105	15	2.5P	SP-48
For deep hole use		5 6 8	S-SP	SSMQ020M	SP	P2	105	15	2.5P	SP-44
Taps M22×2.5										
Standard		5 6 8 11 12	SP	SPR022R	SP	P3	115	17	2.5P	SP-7
			PO	POS022R	PO	P4			5P	PO-6
		1 5 6 12	HT	TNMS022R5	HT	P4	115	17	5P	HT-10
				TNMS022R1					1.5P	HT-10
	Oversize	5 6 8 11 12	SP	SPS022R	SP	P4	115	17	2.5P	SP-7
			PO	POT022R	PO	P5			5P	PO-6
For left hand threads		5 6 8 11 12	SP LH	SPR022R--L	SP	P3	115	17	2.5P	SP-21
			PO LH	POS022R--L	PO	P4			5P	PO-14
		1 5 6 12	HT LH	TNMS022R5-L	HT	P4	115	17	5P	HT-20
				TNMS022R1-L					1.5P	HT-20
Oxidizing		5 6 8	SP OX	SPR022RX	SP	P3	115	17	2.5P	SP-17
			PO OX	POS022RX	PO	P4			5P	PO-12

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Long shank		5 6 8 11 12	LS-SP	SPR022RL15	SP	P3	150	17	2.5P	SP-28
				SPR022RL20			200			SP-28
			LS-PO	POS022RL15	PO	P4	150		5P	PO-19
				POS022RL20			200			PO-19
		1 5 6 12	LS-HT	TNMR022R515	HT	P3	150	17	5P	HT-25
				TNMR022R520			200			HT-25
				TNMR022R525			250			HT-25
				TNMR022R115			150		1.5P	HT-25
				TNMR022R120			200			HT-25
				TNMR022R125			250			HT-26
	Oversize	1 5 6 12	LS-HT	TNMS022R515	HT	P4	150	17	5P	HT-26
				TNMS022R115					1.5P	HT-26
	For left hand threads	1 5 6 12	LS-HT LH	TNMR022R515L	HT	P3	150	17	5P	HT-30
				TNMR022R520L			200			HT-30
				TNMR022R115L			150		1.5P	HT-30
				TNMR022R120L			200			HT-30
For soft structural steels		8	E-SP	ESHMR022R	SP	P3	115	17	2.5P	SP-45
For high carbon steels		5 6	HC-SP	SCMR022R	SP	P3	115	17	2.5P	SP-48
		1 5 6	HC-PO	PCMS022R	PO	P4	115	17	5P	PO-30
For hard-to-machine materials		1 4 5	EH-PO	EPHMT022R	PO	P5	115	17	4.5P	PO-33
			EH-HT	ETHMT022R5	HT				5P	HT-56
				ETHMT022R1					2.5P	HT-56
For stainless steels		6 7 8	SU-SP	SUMR022R	SP	P3	115	17	2.5P	SP-36
			SU-PO	PUMS022R	PO	P4			5P	PO-24
			SU-HT	TUMS022R4	HT				4P	HT-34
				TUMS022R1					1.5P	HT-34
	Oversize	6 7 8	SU-SP	SUMS022R	SP	P4	115	17	2.5P	SP-36
				SUMT022R		P5				SP-36
			SU-PO	PUMT022R	PO				5P	PO-24
				PUMU022R		P6				PO-24
	For hard-to-machine materials	5 6 7	SU2-SP	SU2MS022R	SP	P4	115	17	3P	SP-39
For cast irons		1	FC-O	TFCM022R5	HT	80~45	115	17	5P	HT-39
				TFCM022R1					1.5P	HT-39
	Carbide	1 12 13	N-CT FC	TCNS022R3	HT	P4	115	17	3P	CT-6
				TCNS022R1					1.5P	CT-6
For aluminum alloys		11 12	LA-O	TLAM022R5	HT	85~50	115	17	5P	HT-43
				TLAM022R1					1.5P	HT-43
For deep hole use		5 6 8	S-SP	SSMR022R	SP	P3	115	17	2.5P	SP-44
			S-PO	PSMS022R	PO	P4			5P	PO-28
Low spiral		1 5 6 11 12	LS-LO-SP	LSHMR022RL20	SP	P3	200	17	2.5P	SP-56
For helical coil wire screw thread inserts		11 12	AL-SP	SW022R1LEN	SP	1b	125	19	2.5P	SP-53
			AL-HT	TW022R1LEB5	HT				5P	HT-49
				TW022R1LEBA					1.5P	HT-49
With coolant hole		5 6 8 11 12	MC-SP	MSHR022RL15	SP	P3	150	17	2.5P	SP-57
		1 5 6 11 12	MC-PO	MPHS022RL15	PO	P4	150	17	5P	PO-32
			MC-HT	ML15022R5-R	HT	P3				HT-53
				ML20022R5-R			200			HT-53
				ML15022R1-R			150		1.5P	HT-53
				ML20022R1-R			200			HT-54
Nut taps		6 8 11 12	NT	NH2022R	HT	II b	250	18	27P	ST-2

Think threads with YAMAWA

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M22×2									
Standard	5 6 8 11 12	SP	SPR022Q	SP	P3	115	17	2.5P	SP-7
		PO	POS022Q	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMS022Q5	HT	P4	115	17	5P	HT-10
			TNMS022Q1					1.5P	HT-10
For high carbon steels	5 6	HC-SP	SCMR022Q	SP	P3	115	17	2.5P	SP-48
For deep hole use	5 6 8	S-SP	SSMR022Q	SP	P3	115	17	2.5P	SP-44
Taps M22×1.5									
Standard	5 6 8 11 12	SP	SPR022O	SP	P3	115	17	2.5P	SP-7
		PO	POS022O	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMR022O5	HT	P3	115	17	5P	HT-10
			TNMR022O1					1.5P	HT-10
Oversize	5 6 8 11 12	SP	SPS022O	SP	P4	115	17	2.5P	SP-7
			SPT022O		P5				SP-7
		PO	POT022O	PO				5P	PO-6
For left hand threads	5 6 8 11 12	SP LH	SPR022O--L	SP	P3	115	17	2.5P	SP-21
		PO LH	POS022O--L	PO	P4			5P	PO-14
Oxidizing	5 6 8	SP OX	SPR022OX	SP	P3	115	17	2.5P	SP-17
		PO OX	POS022OX	PO	P4			5P	PO-12
Long shank	5 6 8 11 12	LS-SP	SPR022OL15	SP	P3	150	17	2.5P	SP-28
			SPR022OL20			200			SP-28
		LS-PO	POS022OL15	PO	P4	150		5P	PO-19
			POS022OL20			200			PO-19
	1 5 6 12	LS-HT	TNMR022O515	HT	P3	150	17	5P	HT-26
			TNMR022O520			200			HT-26
			TNMR022O115			150		1.5P	HT-26
			TNMR022O120			200			HT-26
For soft structural steels	8	E-SP	ESHMR022O	SP	P3	115	17	2.5P	SP-45
For high carbon steels	5 6	HC-SP	SCMR022O	SP	P3	115	17	2.5P	SP-48
For hard-to-machine materials	1 4 5	EH-PO	EPHMS022O	PO	P4	115	17	4.5P	PO-33
		EH-HT	ETHMS022O5	HT				5P	HT-56
			ETHMS022O1					2.5P	HT-56
For stainless steels	6 7 8	SU-SP	SUMR022O	SP	P3	115	17	2.5P	SP-36
		SU-PO	PUMS022O	PO	P4			5P	PO-25
		SU-HT	TUMS022O4	HT				4P	HT-34
			TUMS022O1					1.5P	HT-34
Oversize	6 7 8	SU-SP	SUMS022O	SP	P4	115	17	2.5P	SP-36
For hard-to-machine materials	5 6 7	SU2-SP	SU2MS022O	SP	P4	115	17	3P	SP-39
For cast irons	1	FC-O	TFCM022O5	HT	75~40	115	17	5P	HT-39
			TFCM022O1					1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNS022O3	HT	P4	95	17	3P	CT-6
			TCNS022O1					1.5P	CT-6
For aluminum alloys	11 12	LA-O	TLAM022O5	HT	80~45	115	17	5P	HT-43
			TLAM022O1					1.5P	HT-43
For deep hole use	5 6 8	S-SP	SSMR022O	SP	P3	115	17	2.5P	SP-44
		S-PO	PSMS022O	PO	P4			5P	PO-28
Low spiral	1 5 6 11 12	LS-LO-SP	LSHMR022OL20	SP	P3	200	17	2.5P	SP-56
For helical coil wire screw thread inserts	11 12	AL-HT	TW022O1LEB5	HT	1b	120	19	5P	HT-49
			TW022O1LEBA					1.5P	HT-49

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
With coolant hole	1 5 6 11 12	MC-HT	ML15022O5-R	HT	P3	150	17	5P	HT-54
			ML20022O5-R			200			HT-54
			ML15022O1-R			150		1.5P	HT-54
			ML20022O1-R			200			HT-54
Taps M22×1									
Standard	5 6 8 11 12	SP	SPQ022M	SP	P2	115	17	2.5P	SP-7
		PO	POR022M	PO	P3			5P	PO-6
	1 5 6 12	HT	TNMR022M5	HT	P3	115	17	5P	HT-10
			TNMR022M1					1.5P	HT-10
Taps M23×1.5									
Standard	5 6 8 11 12	SP	SPR023O	SP	P3	120	19	2.5P	SP-7
Taps M24×3									
Standard	5 6 8 11 12	SP	SPR024S	SP	P3	120	19	2.5P	SP-7
		PO	POS024S	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMS024S5	HT	P4	120	19	5P	HT-10
			TNMS024S1					1.5P	HT-10
Oversize	5 6 8 11 12	SP	SPS024S	SP	P4	120	19	2.5P	SP-7
		PO	POT024S	PO	P5			5P	PO-6
For left hand threads	5 6 8 11 12	SP LH	SPR024S--L	SP	P3	120	19	2.5P	SP-21
		PO LH	POS024S--L	PO	P4			5P	PO-14
	1 5 6 12	HT LH	TNMS024S5-L	HT	P4	120	19	5P	HT-20
			TNMS024S1-L					1.5P	HT-20
Oxidizing	5 6 8	SP OX	SPR024SX	SP	P3	120	19	2.5P	SP-17
		PO OX	POS024SX	PO	P4			5P	PO-12
Long shank	5 6 8 11 12	LS-SP	SPR024SL15	SP	P3	150	19	2.5P	SP-28
			SPR024SL20			200			SP-28
			SPR024SL25			250			SP-28
		LS-PO	POS024SL15	PO	P4	150		5P	PO-19
			POS024SL20			200			PO-19
			POS024SL25			250			PO-19
	1 5 6 11 12	LS-HT	TNMR024S515	HT	P3	150	19	5P	HT-26
			TNMR024S520			200			HT-26
			TNMR024S525			250			HT-26
			TNMR024S115			150		1.5P	HT-26
			TNMR024S120			200			HT-26
			TNMR024S125			250			HT-26
Oversize	1 5 6 11 12	LS-HT	TNMS024S515	HT	P4	150	19	5P	HT-26
			TNMS024S115					1.5P	HT-26
For left hand threads	1 5 6 11 12	LS-HT LH	TNMR024S515L	HT	P3	150	19	5P	HT-30
			TNMR024S520L			200			HT-30
			TNMR024S115L			150		1.5P	HT-30
			TNMR024S120L			200			HT-30
For soft structural steels	8	E-SP	ESHMR024S	SP	P3	120	19	2.5P	SP-45
For high carbon steels	5 6	HC-SP	SCMR024S	SP	P3	120	19	2.5P	SP-48
	1 5 6	HC-PO	PCMS024S	PO	P4	120	19	5P	PO-30
For hard-to-machine materials	1 4 5	EH-PO	EPHMT024S	PO	P5	120	19	4.5P	PO-33
		EH-HT	ETHMT024S5	HT				5P	HT-56
			ETHMT024S1					2.5P	HT-56
Powder HSS	4 5	PM-SP	-	SP	P4	120	19	2.75P	SP-60

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For stainless steels	6 7 8	SU-SP	SUMR024S	SP	P3	120	19	2.5P	SP-36
		SU-PO	PUMS024S	PO	P4			5P	PO-25
		SU-HT	TUMS024S4	HT				4P	HT-34
			TUMS024S1					1.5P	HT-34
Oversize	6 7 8	SU-SP	SUMS024S	SP	P4	120	19	2.5P	SP-36
			SUMT024S		P5				SP-36
		SU-PO	PUMT024S	PO				5P	PO-25
			PUMU024S		P6				PO-25
For deep hole use	6 7 8	LS-SU-S-SP	-	SP	P3	150	19	2.5P	SP-42
For hard-to-machine materials	5 6 7	SU2-SP	SU2MS024S	SP	P4	120	19	3P	SP-40
For cast irons	1	FC-O	TFCM024S5	HT	90~50	120	19	5P	HT-39
			TFCM024S1					1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNS024S3	HT	P4	120	19	3P	CT-6
			TCNS024S1					1.5P	CT-6
For aluminum alloys	11 12	LA-O	TLAM024S5	HT	90~50	120	19	5P	HT-43
			TLAM024S1					1.5P	HT-43
For deep hole use	5 6 8	S-SP	SSMR024S	SP	P3	120	19	2.5P	SP-44
		S-PO	PSMS024S	PO	P4			5P	PO-28
Low spiral	1 5 6 11 12	LS-LO-SP	LSHMR024SL20	SP	P3	200	19	2.5P	SP-56
For helical coil wire screw thread inserts	11 12	AL-SP	SW024S1LEN	SP	1b	135	23	2.5P	SP-53
		AL-HT	TW024S1LEB5	HT				5P	HT-49
			TW024S1LEBA					1.5P	HT-49
With coolant hole	5 6 8 11 12	MC-SP	MSHR024SL15	SP	P3	150	19	2.5P	SP-57
	1 5 6 11 12	MC-PO	MPHS024SL15	PO	P4	150	19	5P	PO-32
		MC-HT	ML15024S5-R	HT	P3				HT-54
			ML20024S5-R			200			HT-54
			ML15024S1-R			150		1.5P	HT-54
			ML20024S1-R			200			HT-54
Nut taps	6 8 11 12	NT	NH2024S	HT	II b	260	19	25P	ST-2
Taps M24×2									
Standard	5 6 8 11 12	SP	SPR024Q	SP	P3	120	19	2.5P	SP-7
		PO	POS024Q	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMS024Q5	HT	P4	120	19	5P	HT-10
			TNMS024Q1					1.5P	HT-10
Long shank	5 6 8 11 12	LS-SP	SPR024QL20	SP	P3	200	19	2.5P	SP-28
	1 5 6 12	LS-HT	TNMR024Q520	HT	P3	200	19	5P	HT-26
			TNMR024Q120					1.5P	HT-26
For high carbon steels	5 6	HC-SP	SCMR024Q	SP	P3	120	19	2.5P	SP-48
For deep hole use	5 6 8	S-SP	SSMR024Q	SP	P3	120	19	2.5P	SP-44
Taps M24×1.5									
Standard	5 6 8 11 12	SP	SPR024O	SP	P3	120	19	2.5P	SP-7
		PO	POS024O	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMR024O5	HT	P3	120	19	5P	HT-10
			TNMR024O1					1.5P	HT-10
Oversize	5 6 8 11 12	SP	SPS024O	SP	P4	120	19	2.5P	SP-7
		PO	POT024O	PO	P5			5P	PO-6
For left hand threads	5 6 8 11 12	SP LH	SPR024O--L	SP	P3	120	19	2.5P	SP-21
		PO LH	POS024O--L	PO	P4			5P	PO-15
Oxidizing	5 6 8	SP OX	SPR024OX	SP	P3	120	19	2.5P	SP-17

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Long shank	5 6 8 11 12	LS-SP	SPR024OL15	SP	P3	150	19	2.5P	SP-28
			SPR024OL20			200			SP-28
		LS-PO	POS024OL15	PO	P4	150		5P	PO-19
			POS024OL20			200			PO-19
	1 5 6 12	LS-HT	TNMR024O515	HT	P3	150	19	5P	HT-26
			TNMR024O520			200			HT-26
			TNMR024O115			150		1.5P	HT-26
			TNMR024O120			200			HT-26
For soft structural steels	8	E-SP	ESHMR024O	SP	P3	120	19	2.5P	SP-46
For high carbon steels	5 6	HC-SP	SCMR024O	SP	P3	120	19	2.5P	SP-48
For hard-to-machine materials	1 4 5	EH-PO	EPHMS024O	PO	P4	120	19	4.5P	PO-33
		EH-HT	ETHMS024O5	HT				5P	HT-56
			ETHMS024O1					2.5P	HT-56
For stainless steels	6 7 8	SU-SP	SUMR024O	SP	P3	120	19	2.5P	SP-36
		SU-PO	PUMS024O	PO	P4			5P	PO-25
		SU-HT	TUMS024O4	HT				4P	HT-34
			TUMS024O1					1.5P	HT-34
Oversize	6 7 8	SU-SP	SUMS024O	SP	P4	120	19	2.5P	SP-36
For hard-to-machine materials	5 6 7	SU2-SP	SU2MS024O	SP	P4	120	19	3P	SP-40
For cast irons	1	FC-O	TFCM024O5	HT	75~40	120	19	5P	HT-39
			TFCM024O1					1.5P	HT-39
Carbide	1 12 13	N-CT FC	TCNS024O3	HT	P4	95	19	3P	CT-6
			TCNS024O1					1.5P	CT-6
For aluminum alloys	11 12	LA-O	TLAM024O5	HT	80~45	120	19	5P	HT-43
			TLAM024O1					1.5P	HT-43
For deep hole use	5 6 8	S-SP	SSMR024O	SP	P3	120	19	2.5P	SP-44
		S-PO	PSMS024O	PO	P4			5P	PO-28
Low spiral	1 5 6 11 12	LS-LO-SP	LSHMR024OL20	SP	P3	200	19	2.5P	SP-56
For helical coil wire screw thread inserts	11 12	AL-HT	TW024O1LEB5	HT	1b	130	20	5P	HT-49
			TW024O1LEBA					1.5P	HT-49
With coolant hole	1 5 6 11 12	MC-HT	ML15024O5-R	HT	P3	150	19	5P	HT-54
			ML20024O5-R			200			HT-54
			ML15024O1-R			150		1.5P	HT-54
			ML20024O1-R			200			HT-54
Nut taps	6 8 11 12	NT	NH2024O	HT	II	220	19	25P	ST-2
Taps M24×1									
Standard	5 6 8 11 12	SP	SPQ024M	SP	P2	120	19	2.5P	SP-7
		PO	POR024M	PO	P3			5P	PO-6
	1 5 6 12	HT	TNMR024M5	HT	P3	120	19	5P	HT-10
			TNMR024M1					1.5P	HT-10

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M9×1.25									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG9.0NDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG9.0NDNEBC	Di-11
Dies M9×1									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG9.0MDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG9.0MDNEBC	Di-11
Dies M9×0.75									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG9.0JDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG9.0JDNEBC	Di-11
Dies M9×0.5									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYG9.0GDNEBC	Di-3
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYG9.0GDNEBC	Di-11
Dies M11×1.5									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ011ODNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ011ODNEBC	Di-11
Dies M11×1.25									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ011NDNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ011NDNEBC	Di-11
Dies M11×1									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ011MDNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ011MDNEBC	Di-11
Dies M11×0.75									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ011JDNEBC	Di-4
Dies M11×0.5									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ011GDNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ011GDNEBC	Di-11
Dies M13×1.5									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ013ODNEBC	Di-4
Dies M13×1.25									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ013NDNEBC	Di-4
Dies M13×1									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ013MDNEBC	Di-4
Dies M13×0.75									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ013JDNEBC	Di-4
Dies M13×0.5									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ013GDNEBC	Di-4

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M14×2									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ014QDNEBC	Di-4
					50	16		TYM014QDNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ014QDNEBC	Di-11
Dies M14×1.5									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ014ODNEBC	Di-4
					50	16		TYM014ODNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ014ODNEBC	Di-11
Dies M14×1.25									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ014NDNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ014NDNEBC	Di-11
Dies M14×1									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ014MDNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ014MDNEBC	Di-11
Dies M14×0.75									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ014JDNEBC	Di-4
Dies M14×0.5									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ014GDNEBC	Di-4
Dies M15×2									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ015QDNEBC	Di-4
Dies M15×1.5									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ015ODNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ015ODNEBC	Di-11
Dies M15×1.25									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ015NDNEBC	Di-4
Dies M15×1									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ015MDNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ015MDNEBC	Di-11
Dies M15×0.75									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ015JDNEBC	Di-4
Dies M15×0.5									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ015GDNEBC	Di-4
Dies M16×2									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ016QDNEBC	Di-4
					50	16		TYM016QDNEBC	Di-4
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ016QDNEBC	Di-11
					50	16		GYM016QDNEBC	Di-11

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Dies selection		Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies	**M16×1.5**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ016ODNEBC	Di-4
						50	16		TYM016ODNEBC	Di-4
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ016ODNEBC	Di-11
						50	16		GYM016ODNEBC	Di-11
Dies	**M16×1.25**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ016NDNEBC	Di-5
Dies	**M16×1**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ016MDNEBC	Di-5
						50	16		TYM016MDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJ016MDNEBC	Di-11
						50	16		GYM016MDNEBC	Di-11
Dies	**M16×0.75**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ016JDNEBC	Di-5
Dies	**M16×0.5**									
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJ016GDNEBC	Di-5
Dies	**M17×2**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM017QDNEBC	Di-5
Dies	**M17×1.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM017ODNEBC	Di-5
Dies	**M17×1**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM017MDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM017MDNEBC	Di-11
Dies	**M17×0.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM017GDNEBC	Di-5
Dies	**M18×2.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM018RDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM018RDNEBC	Di-11
Dies	**M18×2**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM018QDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM018QDNEBC	Di-11
Dies	**M18×1.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM018ODNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM018ODNEBC	Di-11
Dies	**M18×1**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM018MDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM018MDNEBC	Di-11

Dies selection		Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies	**M18×0.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM018GDNEBC	Di-5
Dies	**M19×1.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM019ODNEBC	Di-5
Dies	**M19×1**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM019MDNEBC	Di-5
Dies	**M20×2.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM020RDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM020RDNEBC	Di-11
Dies	**M20×2**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM020QDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM020QDNEBC	Di-11
Dies	**M20×1.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM020ODNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM020ODNEBC	Di-11
Dies	**M20×1.25**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM020NDNEBC	Di-5
Dies	**M20×1**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM020MDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM020MDNEBC	Di-11
Dies	**M20×0.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM020GDNEBC	Di-5
Dies	**M21×1.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM021ODNEBC	Di-5
Dies	**M21×1**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM021MDNEBC	Di-5
Dies	**M22×2.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM022RDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM022RDNEBC	Di-11
Dies	**M22×2**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM022QDNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM022QDNEBC	Di-11
Dies	**M22×1.5**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM022ODNEBC	Di-5
	For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM022ODNEBC	Di-11
Dies	**M22×1.25**									
Solid dies		HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM022NDNEBC	Di-5

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channmfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M22×1									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM022MDNEBC	Di-5
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM022MDNEBC	Di-12
Dies M22×0.5									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM022GDNEBC	Di-5
Dies M23×1.5									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM023ODNEBC	Di-5
Dies M23×1									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM023MDNEBC	Di-5
Dies M24×3									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM024SDNEBC	Di-5
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM024SDNEBC	Di-12
Dies M24×2									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM024QDNEBC	Di-5
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM024QDNEBC	Di-12
Dies M24×1.5									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM024ODNEBC	Di-5
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM024ODNEBC	Di-12
Dies M24×1.25									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM024NDNEBC	Di-5
Dies M24×1									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM024MDNEBC	Di-5
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM024MDNEBC	Di-12

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M25×3									
Standard	1 5 6 12	HT	TNMS025S5	HT	P4	125	19	5P	HT-10
			TNMS025S1					1.5P	HT-10
Taps M25×2									
Standard	5 6 8 11 12	SP	SPR025Q	SP	P3	125	19	2.5P	SP-7
		PO	POS025Q	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMS025Q5	HT	P4	125	19	5P	HT-10
			TNMS025Q1					1.5P	HT-10
Taps M25×1.5									
Standard	5 6 8 11 12	SP	SPR025O	SP	P3	125	19	2.5P	SP-7
		PO	POS025O	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMR025O5	HT	P3	125	19	5P	HT-10
			TNMR025O1					1.5P	HT-10
For high carbon steels	5 6	HC-SP	SCMR025O	SP	P3	125	19	2.5P	SP-48
Taps M25×1									
Standard	5 6 8 11 12	SP	SPQ025M	SP	P2	125	19	2.5P	SP-7
	1 5 6 12	HT	TNMR025M5	HT	P3	125	19	5P	HT-10
			TNMR025M1					1.5P	HT-10
Taps M26×3									
Standard	5 6 8 11 12	SP	SPR026S	SP	P3	130	20	2.5P	SP-7
	1 5 6 12	HT	TNMS026S5	HT	P4	130	20	5P	HT-10
			TNMS026S1					1.5P	HT-10
Taps M26×2									
Standard	5 6 8 11 12	SP	SPR026Q	SP	P3	130	20	2.5P	SP-7
		PO	POS026Q	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMS026Q5	HT	P4	130	20	5P	HT-11
			TNMS026Q1					1.5P	HT-11
Taps M26×1.5									
Standard	5 6 8 11 12	SP	SPR026O	SP	P3	130	20	2.5P	SP-7
		PO	POS026O	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMR026O5	HT	P3	130	20	5P	HT-11
			TNMR026O1					1.5P	HT-11
For high carbon steels	5 6	HC-SP	SCMR026O	SP	P3	130	20	2.5P	SP-48
Nut taps	6 8 11 12	NT	NH2026O	HT	II	230	21	30P	ST-2
Taps M26×1									
Standard	5 6 8 11 12	SP	SPQ026M	SP	P2	130	20	2.5P	SP-7
		PO	POR026M	PO	P3			5P	PO-6
Taps M27×3									
Standard	5 6 8 11 12	SP	SPR027S	SP	P3	130	20	2.5P	SP-7
		PO	POS027S	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMS027S5	HT	P4	130	20	5P	HT-11
			TNMS027S1					1.5P	HT-11

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For left hand threads	5 6 8 11 12	SP LH	SPR027S--L	SP	P3	130	20	2.5P	SP-21
		PO LH	POS027S--L	PO	P4			5P	PO-15
Oxidizing	5 6 8	SP OX	SPR027SX	SP	P3	130	20	2.5P	SP-17
		PO OX	POS027SX	PO	P4			5P	PO-12
Long shank	5 6 8 11 12	LS-SP	SPR027SL20	SP	P3	200	20	2.5P	SP-28
			SPR027SL25			250			SP-28
		LS-PO	POS027SL20	PO	P4	200		5P	PO-19
	1 5 6 12	LS-HT	TNMR027S520	HT	P3	200	20	5P	HT-26
			TNMR027S525			250			HT-26
			TNMR027S120			200		1.5P	HT-26
			TNMR027S125			250			HT-26
For left hand threads	1 5 6 12	LS-HT LH	TNMR027S520L	HT	P3	200	20	5P	HT-30
			TNMR027S120L					1.5P	HT-30
For high carbon steels	5 6	HC-SP	SCMR027S	SP	P3	130	20	2.5P	SP-48
For hard-to-machine materials	1 4 5	EH-HT	ETHMT027S5	HT	P5	130	20	5P	HT-56
			ETHMT027S1					2.5P	HT-56
For stainless steels	6 7 8	SU-SP	SUMR027S	SP	P3	130	20	2.5P	SP-36
		SU-PO	PUMS027S	PO	P4			5P	PO-25
		SU-HT	TUMS027S4	HT				4P	HT-34
			TUMS027S1					1.5P	HT-34
For deep hole use	5 6 8	S-SP	SSMR027S	SP	P3	130	20	2.5P	SP-44
		S-PO	PSMS027S	PO	P4			5P	PO-28
With coolant hole		MC-HT	ML20027S5-R	HT	P3	200	20	5P	HT-54
			ML20027S1-R					1.5P	HT-54
Nut taps	6 8 11 12	NT	NH2027S	HT	II b	280	22	27P	ST-2
Taps M27×2									
Standard	5 6 8 11 12	SP	SPR027Q	SP	P3	130	20	2.5P	SP-7
	1 5 6 12	HT	TNMT027Q5	HT	P5	130	20	5P	HT-11
			TNMT027Q1					1.5P	HT-11
Long shank	5 6 8 11 12	LS-SP	SPR027QL20	SP	P3	200	20	2.5P	SP-28
	1 5 6 12	LS-HT	TNMR027Q525	HT	P3	250	20	5P	HT-26
			TNMR027Q125					1.5P	HT-26
For deep hole use	5 6 8	S-SP	SSMR027Q	SP	P3	130	20	2.5P	SP-44
Taps M27×1.5									
Standard	5 6 8 11 12	SP	SPR027O	SP	P3	130	20	2.5P	SP-7
		PO	POS027O	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMR027O5	HT	P3	130	20	5P	HT-11
			TNMR027O1					1.5P	HT-11
For left hand threads	5 6 8 11 12	PO LH	POS027O--L	PO	P4	130	20	5P	PO-15
Long shank	5 6 8 11 12	LS-SP	SPR027OL20	SP	P3	200	20	2.5P	SP-28
			SPR027OL25			250			SP-28
		LS-PO	POS027OL20	PO	P4	200		5P	PO-19
			POS027OL25			250			PO-19
	1 5 6 12	LS-HT	TNMR027O520	HT	P3	200	20	5P	HT-26
			TNMR027O525			250			HT-26
			TNMR027O120			200		1.5P	HT-26
			TNMR027O125			250			HT-26
For high carbon steels	5 6	HC-SP	SCMR027O	SP	P3	130	20	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMR027O	SP	P3	130	20	2.5P	SP-36
		SU-PO	PUMS027O	PO	P4			5P	PO-25

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For stainless steels	6 7 8	SU-HT	TUMS027O4	HT	P4	130	20	4P	HT-34
			TUMS027O1					1.5P	HT-34
For deep hole use	5 6 8	S-SP	SSMR027O	SP	P3	130	20	2.5P	SP-44
		S-PO	PSMS027O	PO	P4			5P	PO-28
With coolant hole		MC-HT	ML20027O5-R	HT	P3	200	20	5P	HT-54
			ML20027O1-R					1.5P	HT-54
Taps M27×1									
Standard	5 6 8 11 12	SP	SPQ027M	SP	P2	130	20	2.5P	SP-7
		PO	POR027M	PO	P3			5P	PO-6
	1 5 6 12	HT	TNMR027M5	HT	P3	130	20	5P	HT-11
			TNMR027M1					1.5P	HT-11
Taps M28×3									
Standard	1 5 6 12	HT	TNMS028S5	HT	P4	135	23	5P	HT-11
			TNMS028S1					1.5P	HT-11
Taps M28×2									
Standard	5 6 8 11 12	SP	SPR028Q	SP	P3	135	23	2.5P	SP-7
		PO	POS028Q	PO	P4			5P	PO-6
	1 5 6 12	HT	TNMS028Q5	HT	P4	135	23	5P	HT-11
			TNMS028Q1					1.5P	HT-11
Taps M28×1.5									
Standard	5 6 8 11 12	SP	SPR028O	SP	P3	135	23	2.5P	SP-7
		PO	POS028O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMR028O5	HT	P3	135	23	5P	HT-11
			TNMR028O1					1.5P	HT-11
For high carbon steels	5 6	HC-SP	SCMR028O	SP	P3	135	23	2.5P	SP-48
Taps M28×1									
Standard	5 6 8 11 12	SP	SPQ028M	SP	P2	135	23	2.5P	SP-7
	1 5 6 12	HT	TNMR028M5	HT	P3	135	23	5P	HT-11
			TNMR028M1					1.5P	HT-11
Taps M30×3.5									
Standard	5 6 8 11 12	SP	SPS030T	SP	P4	135	23	2.5P	SP-7
		PO	POT030T	PO	P5			5P	PO-7
	1 5 6 12	HT	TNMS030T5	HT	P4	135	23	5P	HT-11
			TNMS030T1					1.5P	HT-11
For left hand threads	5 6 8 11 12	SP LH	SPS030T--L	SP	P4	135	23	2.5P	SP-21
		PO LH	POT030T--L	PO	P5			5P	PO-15
	1 5 6 12	HT LH	TNMS030T5-L	HT	P4	135	23	5P	HT-20
			TNMS030T1-L					1.5P	HT-20
Oxidizing	5 6 8	SP OX	SPS030TX	SP	P4	135	23	2.5P	SP-17
		PO OX	POT030TX	PO	P5			5P	PO-12
Long shank	5 6 8 11 12	LS-SP	SPS030TL20	SP	P4	200	23	2.5P	SP-28
			SPS030TL25			250			SP-28
			SPS030TL30			300			SP-28
		LS-PO	POT030TL20	PO	P5	200		5P	PO-19
			POT030TL25			250			PO-19
			POT030TL30			300			PO-19

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Long shank	1 5 6 12	LS-HT	TNMS030T520	HT	P4	200	23	5P	HT-26
			TNMS030T525			250			HT-26
			TNMS030T530			300			HT-26
			TNMS030T120			200		1.5P	HT-26
			TNMS030T125			250			HT-26
			TNMS030T130			300			HT-26
For left hand threads	1 5 6 12	LS-HT LH	TNMS030T520L	HT	P4	200	23	5P	HT-30
			TNMS030T120L					1.5P	HT-30
For high carbon steels	5 6	HC-SP	SCMS030T	SP	P4	135	23	2.5P	SP-48
For hard-to-machine materials	1 4 5	EH-HT	ETHMT030T5	HT	P5	135	23	5P	HT-56
			ETHMT030T1					2.5P	HT-56
For stainless steels	6 7 8	SU-SP	SUMS030T	SP	P4	135	23	2.5P	SP-36
		SU-PO	PUMT030T	PO	P5			5P	PO-25
		SU-HT	TUMT030T4	HT				4P	HT-34
			TUMT030T1					1.5P	HT-34
For deep hole use	5 6 8	S-SP	SSMS030T	SP	P4	135	23	2.5P	SP-44
		S-PO	PSMT030T	PO	P5			5P	PO-28
With coolant hole		MC-HT	ML20030T5-S	HT	P4	200	23	5P	HT-54
			ML20030T1-S					1.5P	HT-54
Nut taps	6 8 11 12	NT	NH2030T	HT	II b	300	24	26P	ST-2
Taps M30×3									
Standard	5 6 8 11 12	SP	SPR030S	SP	P3	135	23	2.5P	SP-7
		PO	POS030S	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMT030S5	HT	P5	135	23	5P	HT-11
			TNMT030S1					1.5P	HT-11
Long shank	1 5 6 12	LS-HT	TNMR030S525	HT	P3	250	23	5P	HT-26
			TNMR030S125					1.5P	HT-26
For deep hole use	5 6 8	S-SP	SSMR030S	SP	P3	135	23	2.5P	SP-44
Taps M30×2									
Standard	5 6 8 11 12	SP	SPR030Q	SP	P3	135	23	2.5P	SP-7
		PO	POS030Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS030Q5	HT	P4	135	23	5P	HT-11
			TNMS030Q1					1.5P	HT-11
For left hand threads	5 6 8 11 12	SP LH	SPR030Q--L	SP	P3	135	23	2.5P	SP-21
Long shank	1 5 6 12	LS-HT	TNMR030Q520	HT	P3	200	23	5P	HT-26
			TNMR030Q525			250			HT-26
			TNMR030Q120			200		1.5P	HT-26
			TNMR030Q125			250			HT-26
For deep hole use	5 6 8	S-SP	SSMR030Q	SP	P3	135	23	2.5P	SP-44
Taps M30×1.5									
Standard	5 6 8 11 12	SP	SPR030O	SP	P3	135	23	2.5P	SP-7
		PO	POS030O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMR030O5	HT	P3	135	23	5P	HT-11
			TNMR030O1					1.5P	HT-11
For left hand threads	5 6 8 11 12	SP LH	SPR030O--L	SP	P3	135	23	2.5P	SP-21
		PO LH	POS030O--L	PO	P4			5P	PO-15
Oxidizing	5 6 8	SP OX	SPR030OX	SP	P3	135	23	2.5P	SP-17

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Long shank	5 6 8 11 12	LS-SP	SPR030OL20	SP	P3	200	23	2.5P	SP-28
			SPR030OL25			250			SP-28
		LS-PO	POS030OL20	PO	P4	200		5P	PO-19
			POS030OL25			250			PO-19
	1 5 6 12	LS-HT	TNMR030O520	HT	P3	200	23	5P	HT-26
			TNMR030O525			250			HT-26
			TNMR030O120			200		1.5P	HT-26
			TNMR030O125			250			HT-26
For high carbon steels	5 6	HC-SP	SCMR030O	SP	P3	135	23	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMR030O	SP	P3	135	23	2.5P	SP-36
		SU-PO	PUMS030O	PO	P4			5P	PO-25
		SU-HT	TUMS030O4	HT				4P	HT-35
			TUMS030O1					1.5P	HT-35
For deep hole use	5 6 8	S-SP	SSMR030O	SP	P3	135	23	2.5P	SP-44
		S-PO	PSMS030O	PO	P4			5P	PO-28
With coolant hole		MC-HT	ML20030O5-R	HT	P3	200	23	5P	HT-54
			ML20030O1-R					1.5P	HT-54
Nut taps	6 8 11 12	NT	NH2030O	HT	II	240	24	25P	ST-2
Taps M30×1									
Standard	5 6 8 11 12	SP	SPQ030M	SP	P2	135	23	2.5P	SP-7
		PO	POR030M	PO	P3			5P	PO-7
	1 5 6 12	HT	TNMR030M5	HT	P3	135	23	5P	HT-11
			TNMR030M1					1.5P	HT-11
Taps M32×3									
Standard	5 6 8 11 12	SP	SPMR032S	SP	P3	145	24	2.5P	SP-7
		PO	POMS032S	PO	P4			5P	PO-7
Taps M32×2									
Standard	5 6 8 11 12	SP	SPMR032Q	SP	P3	145	24	2.5P	SP-7
		PO	POMS032Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS032Q5	HT	P4	145	24	5P	HT-11
			TNMS032Q1					1.5P	HT-11
Taps M32×1.5									
Standard	5 6 8 11 12	SP	SPMR032O	SP	P3	145	24	2.5P	SP-7
		PO	POMS032O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS032O5	HT	P4	145	24	5P	HT-11
			TNMS032O1					1.5P	HT-11
Taps M32×1									
Standard	5 6 8 11 12	SP	SPMQ032M	SP	P2	145	24	2.5P	SP-7
	1 5 6 12	HT	TNMR032M5	HT	P3	145	24	5P	HT-11
			TNMR032M1					1.5P	HT-11
Taps M33×3.5									
Standard	5 6 8 11 12	SP	SPMS033T	SP	P4	145	25	2.5P	SP-7
		PO	POMT033T	PO	P5			5P	PO-7
	1 5 6 12	HT	TNMS033T5	HT	P4	145	25	5P	HT-11
			TNMS033T1					1.5P	HT-11

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Oxidizing	5 6 8	SP OX	SPS033TX	SP	P4	145	25	2.5P	SP-17
		PO OX	POMT033TX	PO	P5			5P	PO-12
For stainless steels	6 7 8	SU-SP	SUMS033T	SP	P4	145	25	2.5P	SP-36
		SU-PO	PUMT033T	PO	P5			5P	PO-25
For deep hole use	5 6 8	S-SP	SSMS033T	SP	P4	145	25	2.5P	SP-44
		S-PO	PSMT033T	PO	P5			5P	PO-28
Taps M33×3									
Standard	5 6 8 11 12	SP	SPMR033S	SP	P3	145	25	2.5P	SP-7
		PO	POMS033S	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMT033S5	HT	P5	145	25	5P	HT-11
			TNMT033S1					1.5P	HT-11
For deep hole use	5 6 8	S-SP	SSMR033S	SP	P3	145	25	2.5P	SP-44
Taps M33×2									
Standard	5 6 8 11 12	SP	SPMR033Q	SP	P3	145	25	2.5P	SP-7
		PO	POMS033Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS033Q5	HT	P4	145	25	5P	HT-11
			TNMS033Q1					1.5P	HT-11
For deep hole use	5 6 8	S-SP	SSMR033Q	SP	P3	135	25	2.5P	SP-44
Taps M33×1.5									
Standard	5 6 8 11 12	SP	SPMR033O	SP	P3	145	25	2.5P	SP-7
		PO	POMS033O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS033O5	HT	P4	145	25	5P	HT-11
			TNMS033O1					1.5P	HT-11
For deep hole use	5 6 8	S-SP	SSMR033O	SP	P3	135	25	2.5P	SP-44
Taps M33×1									
Standard	5 6 8 11 12	SP	SPMQ033M	SP	P2	145	25	2.5P	SP-7
	1 5 6 12	HT	TNMR033M5	HT	P3	145	25	5P	HT-11
			TNMR033M1					1.5P	HT-11
Taps M34×3									
Standard	5 6 8 11 12	SP	SPMR034S	SP	P3	155	28	2.5P	SP-7
Taps M34×2									
Standard	5 6 8 11 12	SP	SPMR034Q	SP	P3	155	28	2.5P	SP-7
	1 5 6 12	HT	TNMS034Q5	HT	P4	155	28	5P	HT-11
			TNMS034Q1					1.5P	HT-11
Taps M34×1.5									
Standard	5 6 8 11 12	SP	SPMR034O	SP	P3	155	28	2.5P	SP-7
	1 5 6 12	HT	TNMS034O5	HT	P4	155	28	5P	HT-11
			TNMS034O1					1.5P	HT-11
Taps M34×1									
Standard	5 6 8 11 12	SP	SPMQ034M	SP	P2	155	28	2.5P	SP-7
	1 5 6 12	HT	TNMR034M5	HT	P3	155	28	5P	HT-12
			TNMR034M1					1.5P	HT-12

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps M35×3									
Standard	5 6 8 11 12	SP	SPMR035S	SP	P3	155	28	2.5P	SP-7
Taps M35×2									
Standard	5 6 8 11 12	SP	SPMR035Q	SP	P3	155	28	2.5P	SP-8
		PO	POMS035Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMT035Q5	HT	P5	155	28	5P	HT-12
			TNMT035Q1					1.5P	HT-12
Taps M35×1.5									
Standard	5 6 8 11 12	SP	SPMR035O	SP	P3	155	28	2.5P	SP-8
		PO	POMS035O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS035O5	HT	P4	155	28	5P	HT-12
			TNMS035O1					1.5P	HT-12
Taps M35×1									
Standard	5 6 8 11 12	SP	SPMQ035M	SP	P2	155	28	2.5P	SP-8
Taps M36×4									
Standard	5 6 8 11 12	SP	SPMS036U	SP	P4	155	28	2.5P	SP-8
		PO	POMT036U	PO	P5			5P	PO-7
	1 5 6 12	HT	TNMT036U5	HT	P5	155	28	5P	HT-12
			TNMT036U1					1.5P	HT-12
Oxidizing	5 6 8	SP OX	SPS036UX	SP	P4	155	28	2.5P	SP-17
		PO OX	POMT036UX	PO	P5			5P	PO-12
For stainless steels	6 7 8	SU-SP	SUMS036U	SP	P4	155	28	2.5P	SP-36
		SU-PO	PUMT036U	PO	P5			5P	PO-25
For deep hole use	5 6 8	S-SP	SSMS036U	SP	P4	155	28	2.5P	SP-44
		S-PO	PSMT036U	PO	P5			5P	PO-28
Taps M36×3									
Standard	5 6 8 11 12	SP	SPMR036S	SP	P3	155	28	2.5P	SP-8
		PO	POMS036S	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMT036S5	HT	P5	155	28	5P	HT-12
			TNMT036S1					1.5P	HT-12
For deep hole use	5 6 8	S-SP	SSMR036S	SP	P3	155	28	2.5P	SP-44
Taps M36×2									
Standard	5 6 8 11 12	SP	SPMR036Q	SP	P3	155	28	2.5P	SP-8
		PO	POMS036Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS036Q5	HT	P4	155	28	5P	HT-12
			TNMS036Q1					1.5P	HT-12
Taps M36×1.5									
Standard	5 6 8 11 12	SP	SPMR036O	SP	P3	155	28	2.5P	SP-8
		PO	POMS036O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS036O5	HT	P4	155	28	5P	HT-12
			TNMS036O1					1.5P	HT-12
For deep hole use	5 6 8	S-SP	SSMR036O	SP	P3	135	28	2.5P	SP-44

Think threads with YAMAWA
Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M36×1									
Standard	5 6 8 11 12	SP	SPMQ036M	SP	P2	155	28	2.5P	SP-8
	1 5 6 12	HT	TNMR036M5	HT	P3	155	28	5P	HT-12
			TNMR036M1					1.5P	HT-12
Taps M37×1.5									
Standard	1 5 6 12	HT	TNMS037O5	HT	P4	165	30	5P	HT-12
			TNMS037O1					1.5P	HT-12
Taps M38×3									
Standard	5 6 8 11 12	SP	SPMR038S	SP	P3	165	30	2.5P	SP-8
Taps M38×2									
Standard	5 6 8 11 12	SP	SPMR038Q	SP	P3	165	30	2.5P	SP-8
		PO	POMS038Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS038Q5	HT	P4	165	30	5P	HT-12
			TNMS038Q1					1.5P	HT-12
Taps M38×1.5									
Standard	5 6 8 11 12	SP	SPMR038O	SP	P3	165	30	2.5P	SP-8
		PO	POMS038O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS038O5	HT	P4	165	30	5P	HT-12
			TNMS038O1					1.5P	HT-12
Taps M38×1									
Standard	1 5 6 12	HT	TNMR038M5	HT	P3	165	30	5P	HT-12
			TNMR038M1					1.5P	HT-12
Taps M39×4									
Standard	5 6 8 11 12	SP	SPMS039U	SP	P4	165	30	2.5P	SP-8
		PO	POMT039U	PO	P5			5P	PO-7
	1 5 6 12	HT	TNMT039U5	HT	P5	165	30	5P	HT-12
			TNMT039U1					1.5P	HT-12
For stainless steels	6 7 8	SU-SP	SUMS039U	SP	P4	165	30	2.5P	SP-36
		SU-PO	PUMT039U	PO	P5			5P	PO-25
For deep hole use	5 6 8	S-SP	SSMS039U	SP	P4	165	30	2.5P	SP-44
		S-PO	PSMT039U	PO	P5			5P	PO-28
Taps M39×3									
Standard	5 6 8 11 12	SP	SPMR039S	SP	P3	165	30	2.5P	SP-8
	1 5 6 12	HT	TNMT039S5	HT	P5	165	30	5P	HT-12
			TNMT039S1					1.5P	HT-12
Taps M39×2									
Standard	5 6 8 11 12	SP	SPMR039Q	SP	P3	165	30	2.5P	SP-8
		PO	POMS039Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMT039Q5	HT	P5	165	30	5P	HT-12
			TNMT039Q1					1.5P	HT-12

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps M39×1.5									
Standard	5 6 8 11 12	SP	SPMR039O	SP	P3	165	30	2.5P	SP-8
		PO	POMS039O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS039O5	HT	P4	165	30	5P	HT-12
			TNMS039O1					1.5P	HT-12
Taps M39×1									
Standard	1 5 6 12	HT	TNMR039M5	HT	P3	165	30	5P	HT-12
			TNMR039M1					1.5P	HT-12
Taps M40×4									
Standard	1 5 6 12	HT	TNMT040U5	HT	P5	175	32	5P	HT-12
			TNMT040U1					1.5P	HT-12
Taps M40×3									
Standard	5 6 8 11 12	SP	SPMR040S	SP	P3	175	32	2.5P	SP-8
		PO	POMS040S	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMT040S5	HT	P5	175	32	5P	HT-12
			TNMT040S1					1.5P	HT-12
Taps M40×2									
Standard	5 6 8 11 12	SP	SPMR040Q	SP	P3	175	32	2.5P	SP-8
		PO	POMS040Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS040Q5	HT	P4	175	32	5P	HT-12
			TNMS040Q1					1.5P	HT-12
Taps M40×1.5									
Standard	5 6 8 11 12	SP	SPMR040O	SP	P3	175	32	2.5P	SP-8
		PO	POMS040O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS040O5	HT	P4	175	32	5P	HT-12
			TNMS040O1					1.5P	HT-12
Taps M42×4.5									
Standard	5 6 8 11 12	SP	SPMS042V	SP	P4	175	32	2.5P	SP-8
		PO	POMT042V	PO	P5			5P	PO-7
	1 5 6 12	HT	TNMT042V5	HT	P5	175	32	5P	HT-12
			TNMT042V1					1.5P	HT-12
Oxidizing	5 6 8	PO OX	POMT042VX	PO	P5	175	32	5P	PO-12
For stainless steels	6 7 8	SU-SP	SUMS042V	SP	P4	175	32	2.5P	SP-36
		SU-PO	PUMT042V	PO	P5			5P	PO-25
For deep hole use	5 6 8	S-SP	SSMS042V	SP	P4	175	32	2.5P	SP-44
		S-PO	PSMT042V	PO	P5			5P	PO-28
Taps M42×4									
Standard	1 5 6 12	HT	TNMU042U5	HT	P6	175	32	5P	HT-12
			TNMU042U1					1.5P	HT-12
Taps M42×3									
Standard	5 6 8 11 12	SP	SPMR042S	SP	P3	175	32	2.5P	SP-8
	1 5 6 12	HT	TNMT042S5	HT	P5	175	32	5P	HT-12
			TNMT042S1					1.5P	HT-12

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps M42×2									
Standard	5 6 8 11 12	SP	SPMR042Q	SP	P3	175	32	2.5P	SP-8
		PO	POMS042Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS042Q5	HT	P4	175	32	5P	HT-12
			TNMS042Q1					1.5P	HT-12
Taps M42×1.5									
Standard	5 6 8 11 12	SP	SPMR042O	SP	P3	175	32	2.5P	SP-8
		PO	POMS042O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS042O5	HT	P4	175	32	5P	HT-13
			TNMS042O1					1.5P	HT-13
For stainless steels	6 7 8	SU-SP	SUMR042O	SP	P3	175	32	2.5P	SP-36
Taps M44×4									
Standard	1 5 6 12	HT	TNMU044U5	HT	P6	180	35	5P	HT-13
			TNMU044U1					1.5P	HT-13
Taps M44×3									
Standard	1 5 6 12	HT	TNMT044S5	HT	P5	180	35	5P	HT-13
			TNMT044S1					1.5P	HT-13
Taps M44×2									
Standard	1 5 6 12	HT	TNMS044Q5	HT	P4	180	35	5P	HT-13
			TNMS044Q1					1.5P	HT-13
Taps M44×1.5									
Standard	1 5 6 12	HT	TNMS044O5	HT	P4	180	35	5P	HT-13
			TNMS044O1					1.5P	HT-13
Taps M45×4.5									
Standard	5 6 8 11 12	SP	SPMS045V	SP	P4	180	35	2.5P	SP-8
		PO	POMT045V	PO	P5			5P	PO-7
	1 5 6 12	HT	TNMT045V5	HT	P5	180	35	5P	HT-13
			TNMT045V1					1.5P	HT-13
For stainless steels	6 7 8	SU-SP	SUMS045V	SP	P4	180	35	2.5P	SP-36
For deep hole use	5 6 8	S-SP	SSMS045V	SP	P4	180	35	2.5P	SP-44
Taps M45×4									
Standard	1 5 6 12	HT	TNMU045U5	HT	P6	180	35	5P	HT-13
			TNMU045U1					1.5P	HT-13
Taps M45×3									
Standard	5 6 8 11 12	SP	SPMR045S	SP	P3	180	35	2.5P	SP-8
	1 5 6 12	HT	TNMT045S5	HT	P5	180	35	5P	HT-13
			TNMT045S1					1.5P	HT-13
Taps M45×2									
Standard	5 6 8 11 12	SP	SPMR045Q	SP	P3	180	35	2.5P	SP-8
		PO	POMS045Q	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS045Q5	HT	P4	180	35	5P	HT-13
			TNMS045Q1					1.5P	HT-13

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps M45×1.5									
Standard	5 6 8 11 12	SP	SPMR045O	SP	P3	180	35	2.5P	SP-8
		PO	POMS045O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS045O5	HT	P4	180	35	5P	HT-13
			TNMS045O1					1.5P	HT-13
Taps M45×1									
Standard	1 5 6 12	HT	TNMR045M5	HT	P3	180	35	5P	HT-13
			TNMR045M1					1.5P	HT-13
Taps M46×1.5									
Standard	1 5 6 12	HT	TNMS046O5	HT	P4	185	38	5P	HT-13
			TNMS046O1					1.5P	HT-13
Taps M48×5									
Standard	5 6 8 11 12	SP	SPMS048W	SP	P4	185	38	2.5P	SP-8
		PO	POMT048W	PO	P5			5P	PO-7
	1 5 6 12	HT	TNMT048W5	HT	P5	185	38	5P	HT-13
			TNMT048W1					1.5P	HT-13
Taps M48×4									
Standard	5 6 8 11 12	SP	SPMS048U	SP	P4	185	38	2.5P	SP-8
	1 5 6 12	HT	TNMU048U5	HT	P6	185	38	5P	HT-13
			TNMU048U1					1.5P	HT-13
Taps M48×3									
Standard	5 6 8 11 12	SP	SPMR048S	SP	P3	185	38	2.5P	SP-8
		PO	POMS048S	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMU048S5	HT	P6	185	38	5P	HT-13
			TNMU048S1					1.5P	HT-13
Taps M48×2									
Standard	5 6 8 11 12	SP	SPMR048Q	SP	P3	185	38	2.5P	SP-8
	1 5 6 12	HT	TNMS048Q5	HT	P4	185	38	5P	HT-13
			TNMS048Q1					1.5P	HT-13
Taps M48×1.5									
Standard	5 6 8 11 12	SP	SPMR048O	SP	P3	185	38	2.5P	SP-8
		PO	POMS048O	PO	P4			5P	PO-7
	1 5 6 12	HT	TNMS048O5	HT	P4	185	38	5P	HT-13
			TNMS048O1					1.5P	HT-13

Think threads with YAMAWA

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M25×3									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM025SDNEBC	Di-5
Dies M25×2									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM025QDNEBC	Di-5
Dies M25×1.5									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM025ODNEBC	Di-5
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYM025ODNEBC	Di-12
Dies M25×1.25									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM025NDNEBC	Di-5
Dies M25×1									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYM025MDNEBC	Di-5
Dies M26×2									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR026QDNEBC	Di-5
Dies M26×1.5									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR026ODNEBC	Di-5
For left hand threads	HSS	6 8 11 12	D LH	II	63	20	2～2.5P	GYR026ODNEBC	Di-12
Dies M26×1									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR026MDNEBC	Di-5
Dies M27×3									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR027SDNEBC	Di-5
For left hand threads	HSS	6 8 11 12	D LH	II	63	20	2～2.5P	GYR027SDNEBC	Di-12
Dies M27×2									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR027QDNEBC	Di-5
Dies M27×1.5									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR027ODNEBC	Di-5
For left hand threads	HSS	6 8 11 12	D LH	II	63	20	2～2.5P	GYR027ODNEBC	Di-12
Dies M27×1									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR027MDNEBC	Di-5
Dies M28×2									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR028QDNEBC	Di-6
Dies M28×1.5									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR028ODNEBC	Di-6
For left hand threads	HSS	6 8 11 12	D LH	II	63	20	2～2.5P	GYR028ODNEBC	Di-12
Dies M28×1									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR028MDNEBC	Di-6

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M30×3.5									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR030TDNEBC	Di-6
For left hand threads	HSS	6 8 11 12	D LH	II	63	20	2～2.5P	GYR030TDNEBC	Di-12
Dies M30×3									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR030SDNEBC	Di-6
For left hand threads	HSS	6 8 11 12	D LH	II	63	20	2～2.5P	GYR030SDNEBC	Di-12
Dies M30×2									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR030QDNEBC	Di-6
For left hand threads	HSS	6 8 11 12	D LH	II	63	20	2～2.5P	GYR030QDNEBC	Di-12
Dies M30×1.5									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR030ODNEBC	Di-6
For left hand threads	HSS	6 8 11 12	D LH	II	63	20	2～2.5P	GYR030ODNEBC	Di-12
Dies M30×1									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR030MDNEBC	Di-6
Dies M32×3									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR032SDNEBC	Di-6
Dies M32×2									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR032QDNEBC	Di-6
Dies M32×1.5									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR032ODNEBC	Di-6
Dies M32×1									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR032MDNEBC	Di-6
Dies M33×3.5									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR033TDNEBC	Di-6
Dies M33×3									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR033SDNEBC	Di-6
Dies M33×2									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR033QDNEBC	Di-6
Dies M33×1.5									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR033ODNEBC	Di-6
Dies M33×1									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYR033MDNEBC	Di-6
Dies M34×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU034SDNEBC	Di-6
Dies M34×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU034QDNEBC	Di-6

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Dies selection	Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M34×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU034ODNEBC	Di-6
Dies M34×1									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU034MDNEBC	Di-6
Dies M35×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU035DNEBC	Di-6
Dies M35×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU035QDNEBC	Di-6
Dies M35×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU035ODNEBC	Di-6
Dies M35×1									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU035MDNEBC	Di-6
Dies M36×4									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU036UDNEBC	Di-6
For left hand threads	HSS	6 8 11 12	D LH	II	75	25	2～2.5P	GYU036UDNEBC	Di-12
Dies M36×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU036DNEBC	Di-6
Dies M36×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU036QDNEBC	Di-6
Dies M36×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU036ODNEBC	Di-6
Dies M36×1									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU036MDNEBC	Di-6
Dies M38×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU038DNEBC	Di-6
Dies M38×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU038QDNEBC	Di-6
Dies M38×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU038ODNEBC	Di-6
Dies M38×1									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU038MDNEBC	Di-6
Dies M39×4									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU039UDNEBC	Di-6
Dies M39×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU039SDNEBC	Di-6

Dies selection	Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M39×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU039QDNEBC	Di-6
Dies M39×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU039ODNEBC	Di-6
Dies M39×1									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU039MDNEBC	Di-6
Dies M40×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU040SDNEBC	Di-6
Dies M40×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU040QDNEBC	Di-6
Dies M40×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU040ODNEBC	Di-6
Dies M40×1									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU040MDNEBC	Di-6
Dies M42×4.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU042VDNEBC	Di-6
Dies M42×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU042SDNEBC	Di-6
Dies M42×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU042QDNEBC	Di-6
Dies M42×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU042ODNEBC	Di-6
Dies M42×1									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU042MDNEBC	Di-6
Dies M44×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU044ODNEBC	Di-6
Dies M45×4.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU045VDNEBC	Di-7
Dies M45×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU045SDNEBC	Di-7
Dies M45×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU045QDNEBC	Di-7
Dies M45×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU045ODNEBC	Di-7

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	*D*s	ℓc

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M48×5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU048WDNEBC	Di-7
For left hand threads	HSS	6 8 11 12	D LH	II	75	25	2～2.5P	GYU048WDNEBC	Di-12
Dies M48×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU048SDNEBC	Di-7
Dies M48×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU048QDNEBC	Di-7
Dies M48×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYU048ODNEBC	Di-7
Dies M50×3									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5	TYU050SDNEBC	Di-7
Dies M50×2									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5	TYU050QDNEBC	Di-7
Dies M50×1.5									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5	TYU050ODNEBC	Di-7

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	*D*s	ℓc	Product page
Taps No.0-80UNF									
Standard	5 6 8 11 12	PO	POPUN0B	PO	P1	36	3	5P	PO-7
	1 5 6 12	HT	TNMPUN0B5	HT	P1	36	3	5P	HT-13
			TNMPUN0B1					1.5P	HT-13
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM5UN0BP	RO	G5	36	3	4P	RO-12
			NRSM5UN0BB					2P	RO-12
Taps No.1-64UNC									
Standard	5 6 8 11 12	SP	SPPUN1D	SP	P1	42	3	2.5P	SP-8
		PO	POPUN1D	PO				5P	PO-7
	1 5 6 12	HT	TNMPUN1D5	HT	P1	42	3	5P	HT-13
			TNMPUN1D1					1.5P	HT-13
Taps No.1-72UNF									
Standard	5 6 8 11 12	PO	POPUN1C	PO	P1	42	3	5P	PO-7
	1 5 6 12	HT	TNMPUN1C5	HT	P1	42	3	5P	HT-13
			TNMPUN1C1					1.5P	HT-13
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM5UN1CP	RO	G5	42	3	4P	RO-12
			NRSM5UN1CB					2P	RO-12
Taps No.2-56UNC									
Standard	5 6 8 11 12	SP	SPPUN2E	SP	P1	42	3	2.5P	SP-8
		PO	POPUN2E	PO				5P	PO-7
	1 5 6 12	HT	TNMPUN2E5	HT	P1	42	3	5P	HT-13
			TNMPUN2E1					1.5P	HT-13
Oxidizing	5 6 8	SP OX	SPPUN2EX	SP	P1	42	3	2.5P	SP-17
For stainless steels	6 7 8	SU-SP	SUMPUN2E	SP	P1	42	3	2.5P	SP-36
		SU-PO	PUMPUN2E	PO				5P	PO-25
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM4UN2EP	RO	G4	42	3	4P	RO-12
			NRSM4UN2EB					2P	RO-12
			NRSM5UN2EP		G5			4P	RO-12
			NRSM5UN2EB					2P	RO-12
			NRSM7UN2EP		G7			4P	RO-12
			NRSM7UN2EB					2P	RO-12
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM4UN2EP	RO	G4	42	3	4P	RO-19
			OLRZM5UN2EP		G5				RO-19
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	HRZM4UN2EB	RO	G4	42	3	2P	RO-22
			HRZM5UN2EB		G5				RO-22
Torqueless Thread forming taps — Seamless	6 7 8 11 12	SURZ	SURZ4UN2EB	RO	G4	42	3	2P	RO-26
Taps No.2-64UNF									
Standard	5 6 8 11 12	SP	SPPUN2D	SP	P1	42	3	2.5P	SP-8
		PO	POPUN2D	PO				5P	PO-7
	1 5 6 12	HT	TNMPUN2D5	HT	P1	42	3	5P	HT-13
			TNMPUN2D1					1.5P	HT-13
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM4UN2DP	RO	G4	42	3	4P	RO-19
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	HRZM4UN2DB	RO	G4	42	3	2P	RO-22
Taps No.3-48UNC									
Standard	5 6 8 11 12	SP	SPPUN3F	SP	P1	46	3	2.5P	SP-8
		PO	POPUN3F	PO				5P	PO-7

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Standard		1 5 6 12	HT	TNMPUN3F5	HT	P1	46	3	5P	HT-13
				TNMPUN3F1					1.5P	HT-13
For stainless steels		6 7 8	SU-SP	SUMPUN3F	SP	P1	46	3	2.5P	SP-36
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM4UN3FP	RO	G4	46	3	4P	RO-12
				NRSM4UN3FB					2P	RO-12
				NRSM5UN3FP		G5			4P	RO-12
				NRSM5UN3FB					2P	RO-12
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM4UN3FP	RO	G4	46	3	4P	RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM4UN3FB	RO	G4	46	3	2P	RO-22

Taps No.3-56UNF

Standard		5 6 8 11 12	SP	SPPUN3E	SP	P1	46	3	2.5P	SP-8
			PO	POPUN3E	PO				5P	PO-7
		1 5 6 12	HT	TNMPUN3E5	HT	P1	46	3	5P	HT-13
				TNMPUN3E1					1.5P	HT-13
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM4UN3EP	RO	G4	46	3	4P	RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM4UN3EB	RO	G4	46	3	2P	RO-22

Taps No.4-40UNC

Standard		5 6 8 11 12	SP	SPPUN4H	SP	P1	46	4	2.5P	SP-8
			PO	POQUN4H	PO	P2			5P	PO-7
		1 5 6 12	HT	TNMQUN4H5	HT	P2	46	4	5P	HT-14
				TNMQUN4H1					1.5P	HT-14
	Oversize	1 5 6 12	HT	TNMRUN4H5	HT	P3	46	4	5P	HT-14
				TNMRUN4H1					1.5P	HT-14
Oxidizing		5 6 8	SP OX	SPPUN4HX	SP	P1	46	4	2.5P	SP-17
For stainless steels		6 7 8	SU-SP	SUMPUN4H	SP	P1	46	4	2.5P	SP-36
			SU-PO	PUMQUN4H	PO	P2			5P	PO-25
For cast irons	Carbide	1 12 13	N-CT FC	TCNRUN4H3	HT	P3	44	3	3P	CT-7
				TCNRUN4H1					1.5P	CT-7
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM5UN4HP	RO	G5	46	4	4P	RO-12
				NRSM5UN4HB					2P	RO-12
				NRSM6UN4HP		G6			4P	RO-12
				NRSM6UN4HB					2P	RO-12
				NRSM7UN4HP		G7			4P	RO-12
				NRSM7UN4HB					2P	RO-12
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM5UN4HP	RO	G5	46	4	4P	RO-19
				OLRZM6UN4HP		G6				RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM5UN4HB	RO	G5	46	4	2P	RO-22
				HRZM6UN4HB		G6				RO-22
Torqueless Thread forming taps	Seamless	6 7 8 11 12	SURZ	SURZ5UN4HB	RO	G5	46	4	2P	RO-26
For helical coil wire screw thread inserts		11 12	AL-HT	TWUN4H1LEB5	HT	1b	52	5	5P	HT-49
				TWUN4H1LEBA					1.5P	HT-49

Taps No.4-48UNF

Standard		5 6 8 11 12	SP	SPPUN4F	SP	P1	46	4	2.5P	SP-8
			PO	POPUN4F	PO				5P	PO-7
		1 5 6 12	HT	TNMPUN4F5	HT	P1	46	4	5P	HT-14
				TNMPUN4F1					1.5P	HT-14
	Oversize	1 5 6 12	HT	TNMRUN4F5	HT	P3	46	4	5P	HT-14
				TNMRUN4F1					1.5P	HT-14
For stainless steels		6 7 8	SU-SP	SUMPUN4F	SP	P1	46	4	2.5P	SP-36
			SU-PO	PUMPUN4F	PO				5P	PO-25
For cast irons	Carbide	1 12 13	N-CT FC	TCNRUN4F3	HT	P3	44	3	3P	CT-7
				TCNRUN4F1					1.5P	CT-7
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM5UN4FP	RO	G5	46	4	4P	RO-12
				NRSM5UN4FB					2P	RO-12
				NRSM6UN4FP		G6			4P	RO-13
				NRSM6UN4FB					2P	RO-13
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM5UN4FP	RO	G5	46	4	4P	RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM5UN4FB	RO	G5	46	4	2P	RO-22
For helical coil wire screw thread inserts		11 12	AL-HT	TWUN4F1LEB5	HT	1b	52	5	5P	HT-49
				TWUN4F1LEBA					1.5P	HT-49

Taps No.5-40UNC

Standard		5 6 8 11 12	SP	SPPUN5H	SP	P1	52	5	2.5P	SP-8
			PO	POQUN5H	PO	P2			5P	PO-7
		1 5 6 12	HT	TNMQUN5H5	HT	P2	52	5	5P	HT-14
				TNMQUN5H1					1.5P	HT-14
	Oversize	1 5 6 12	HT	TNMRUN5H5	HT	P3	52	5	5P	HT-14
				TNMRUN5H1					1.5P	HT-14
Oxidizing		5 6 8	SP OX	SPPUN5HX	SP	P1	52	5	2.5P	SP-17
For stainless steels		6 7 8	SU-SP	SUMPUN5H	SP	P1	52	5	2.5P	SP-36
			SU-PO	PUMQUN5H	PO	P2			5P	PO-25
For cast irons	Carbide	1 12 13	N-CT FC	TCNRUN5H3	HT	P3	46	4	3P	CT-7
				TCNRUN5H1					1.5P	CT-7
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM5UN5HP	RO	G5	52	5	4P	RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM5UN5HP	RO	G5	52	5	4P	RO-22
				HRZM5UN5HB					2P	RO-22
For helical coil wire screw thread inserts		11 12	AL-HT	TWUN5H1LEB5	HT	1b	52	5	5P	HT-49
				TWUN5H1LEBA					1.5P	HT-49

Taps No.5-44UNF

Standard		5 6 8 11 12	SP	SPPUN5G	SP	P1	52	5	2.5P	SP-8
			PO	POPUN5G	PO				5P	PO-7
		1 5 6 12	HT	TNMPUN5G5	HT				5P	HT-14
				TNMPUN5G1					1.5P	HT-14
	Oversize	1 5 6 12	HT	TNMRUN5G5	HT	P3	52	5	5P	HT-14
				TNMRUN5G1					1.5P	HT-14
For stainless steels		6 7 8	SU-SP	SUMPUN5G	SP	P1	52	5	2.5P	SP-36
			SU-PO	PUMPUN5G	PO	P1			5P	PO-25
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM5UN5GP	RO	G5	52	5	4P	RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM5UN5GP	RO	G5	52	5	4P	RO-22
				HRZM5UN5GB					2P	RO-22

Taps No.6-32UNC

Standard		5 6 8 11 12	SP	SPQUN6J	SP	P2	52	5	2.5P	SP-8
			PO	POQUN6J	PO				5P	PO-7
		1 5 6 12	HT	TNMQUN6J5	HT	P2	52	5	5P	HT-14
				TNMQUN6J1					1.5P	HT-14
	Oversize	1 5 6 12	HT	TNMRUN6J5	HT	P3	52	5	5P	HT-14
				TNMRUN6J1					1.5P	HT-14

Think threads with YAMAWA
Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Oxidizing		5 6 8	SP OX	SPQUN6JX	SP	P2	52	5	2.5P	SP-17
For stainless steels		6 7 8	SU-SP	SUMQUN6J	SP	P2	52	5	2.5P	SP-36
			SU-PO	PUMQUN6J	PO				5P	PO-25
For cast irons	Carbide	1 12 13	N-CT FC	TCNRUN6J3	HT	P3	48	4	3P	CT-7
				TCNRUN6J1					1.5P	CT-7
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM5UN6JP	RO	G5	52	5	4P	RO-13
				NRSM5UN6JB					2P	RO-13
				NRSM6UN6JP		G6			4P	RO-13
				NRSM6UN6JB					2P	RO-13
				NRSM7UN6JP		G7			4P	RO-13
				NRSM7UN6JB					2P	RO-13
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM5UN6JP	RO	G5	52	5	4P	RO-19
				OLRZM6UN6JP		G6				RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM5UN6JP	RO	G5	52	5	4P	RO-22
				HRZM5UN6JB					2P	RO-22
				HRZM6UN6JP		G6			4P	RO-22
				HRZM6UN6JB					2P	RO-22
Torqueless Thread forming taps	Seamless	6 7 8 11 12	SURZ	SURZ5UN6JB	RO	G5	52	5	2P	RO-26
For helical coil wire screw thread inserts		11 12	AL-HT	TWUN6J1LEB5	HT	1b	60	5.5	5P	HT-49
				TWUN6J1LEBA					1.5P	HT-49

Taps No.6-40UNF

Standard		5 6 8 11 12	SP	SPPUN6H	SP	P1	52	5	2.5P	SP-8
			PO	POQUN6H	PO	P2			5P	PO-8
		1 5 6 12	HT	TNMQUN6H5	HT	P2	52	5	5P	HT-14
				TNMQUN6H1					1.5P	HT-14
	Oversize	1 5 6 12	HT	TNMRUN6H5	HT	P3	52	5	5P	HT-14
				TNMRUN6H1					1.5P	HT-14
For stainless steels		6 7 8	SU-SP	SUMPUN6H	SP	P1	52	5	2.5P	SP-36
			SU-PO	PUMQUN6H	PO	P2			5P	PO-25
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM5UN6HP	RO	G5	52	5	4P	RO-13
				NRSM5UN6HB					2P	RO-13
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM5UN6HP	RO	G5	52	5	4P	RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM5UN6HP	RO	G5	52	5	4P	RO-22
				HRZM5UN6HB					2P	RO-22
For helical coil wire screw thread inserts		11 12	AL-HT	TWUN6H1LEB5	HT	1b	60	5.5	5P	HT-49
				TWUN6H1LEBA					1.5P	HT-49

Taps No.8-32UNC

Standard		5 6 8 11 12	SP	SPQUN8J	SP	P2	60	5.5	2.5P	SP-8
			PO	POQUN8J	PO				5P	PO-8
		1 5 6 12	HT	TNMQUN8J5	HT	P2	60	5.5	5P	HT-14
				TNMQUN8J1					1.5P	HT-14
	Oversize	1 5 6 12	HT	TNMRUN8J5	HT	P3	60	5.5	5P	HT-14
				TNMRUN8J1					1.5P	HT-14
Oxidizing		5 6 8	SP OX	SPQUN8JX	SP	P2	60	5.5	2.5P	SP-17
For stainless steels		6 7 8	SU-SP	SUMQUN8J	SP	P2	60	5.5	2.5P	SP-36
			SU-PO	PUMQUN8J	PO				5P	PO-25
For cast irons	Carbide	1 12 13	N-CT FC	TCNRUN8J3	HT	P3	52	5	3P	CT-7
				TCNRUN8J1					1.5P	CT-7

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM6UN8JP	RO	G6	60	5.5	4P	RO-13
				NRSM6UN8JB					2P	RO-13
				NRSM7UN8JP		G7			4P	RO-13
				NRSM7UN8JB					2P	RO-13
				NRSM8UN8JP		G8			4P	RO-13
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM6UN8JP	RO	G6	60	5.5	4P	RO-19
				OLRZM7UN8JP		G7				RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM6UN8JP	RO	G6	60	5.5	4P	RO-22
				HRZM6UN8JB					2P	RO-22
				HRZM7UN8JP		G7			4P	RO-22
				HRZM7UN8JB					2P	RO-22
For helical coil wire screw thread inserts		11 12	AL-HT	TWUN8J1LEB5	HT	1b	62	6	5P	HT-49
				TWUN8J1LEBA					1.5P	HT-49

Taps No.8-36UNF

Standard		5 6 8 11 12	SP	SPQUN8I	SP	P2	60	5.5	2.5P	SP-8
			PO	POQUN8I	PO				5P	PO-8
		1 5 6 12	HT	TNMQUN8I5	HT	P2	60	5.5	5P	HT-14
				TNMQUN8I1					1.5P	HT-14
	Oversize	1 5 6 12	HT	TNMRUN8I5	HT	P3	60	5.5	5P	HT-14
				TNMRUN8I1					1.5P	HT-14
For stainless steels		6 7 8	SU-SP	SUMQUN8I	SP	P2	60	5.5	2.5P	SP-36
			SU-PO	PUMQUN8I	PO				5P	PO-25
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM5UN8IP	RO	G5	60	5.5	4P	RO-13
				NRSM5UN8IB					2P	RO-13
				NRSM6UN8IB		G6				RO-13
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM6UN8IP	RO	G6	60	5.5	4P	RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM6UN8IP	RO	G6	60	5.5	4P	RO-22
				HRZM6UN8IB					2P	RO-22
For helical coil wire screw thread inserts		11 12	AL-HT	TWUN8I1LEB5	HT	1b	62	6	5P	HT-49
				TWUN8I1LEBA					1.5P	HT-49

Taps No.10-24UNC

Standard		5 6 8 11 12	SP	SPQUNAM	SP	P2	60	5.5	2.5P	SP-8
			PO	POQUNAM	PO				5P	PO-8
		1 5 6 12	HT	TNMQUNAM5	HT	P2	60	5.5	5P	HT-14
				TNMQUNAM1					1.5P	HT-14
	Oversize	1 5 6 12	HT	TNMRUNAM5	HT	P3	60	5.5	5P	HT-14
				TNMRUNAM1					1.5P	HT-14
Oxidizing		5 6 8	SP OX	SPQUNAMX	SP	P2	60	5.5	2.5P	SP-18
For stainless steels		6 7 8	SU-SP	SUMQUNAM	SP	P2	60	5.5	2.5P	SP-36
			SU-PO	PUMQUNAM	PO				5P	PO-25
For cast irons	Carbide	1 12 13	N-CT FC	TCNRUNAM3	HT	P3	60	5.5	3P	CT-7
				TCNRUNAM1					1.5P	CT-7
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM6UNAMP	RO	G6	60	5.5	4P	RO-13
				NRSM6UNAMB					2P	RO-13
				NRSM7UNAMP		G7			4P	RO-13
				NRSM7UNAMB					2P	RO-13
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM6UNAMP	RO	G6	60	5.5	4P	RO-19
				OLRZM7UNAMP		G7				RO-19

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	HRZM6UNAMP	RO	G6	60	5.5	4P	RO-22
			HRZM6UNAMB					2P	RO-22
			HRZM7UNAMP		G7			4P	RO-22
			HRZM7UNAMB					2P	RO-22
For helical coil wire screw thread inserts	11 12	AL-HT	TWUNAM1LEB5	HT	1b	62	6	5P	HT-49
			TWUNAM1LEBA					1.5P	HT-49
Taps No.10-32UNF									
Standard	5 6 8 11 12	SP	SPQUNAJ	SP	P2	60	5.5	2.5P	SP-8
		PO	POQUNAJ	PO				5P	PO-8
	1 5 6 12	HT	TNMQUNAJ5	HT	P2	60	5.5	5P	HT-14
			TNMQUNAJ1					1.5P	HT-14
Oversize	1 5 6 12	HT	TNMRUNAJ5	HT	P3	60	5.5	5P	HT-14
			TNMRUNAJ1					1.5P	HT-14
Oxidizing	5 6 8	SP OX	SPQUNAJX	SP	P2	60	5.5	2.5P	SP-18
For stainless steels	6 7 8	SU-SP	SUMQUNAJ	SP	P2	60	5.5	2.5P	SP-36
		SU-PO	PUMQUNAJ	PO				5P	PO-25
For cast irons — Carbide	1 12 13	N-CT FC	TCNRUNAJ3	HT	P3	60	5.5	3P	CT-7
			TCNRUNAJ1					1.5P	CT-7
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM6UNAJP	RO	G6	60	5.5	4P	RO-13
			NRSM6UNAJB					2P	RO-13
			NRSM7UNAJP		G7			4P	RO-13
			NRSM7UNAJB					2P	RO-13
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM6UNAJP	RO	G6	60	5.5	4P	RO-19
			OLRZM7UNAJP		G7				RO-19
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	HRZM6UNAJP	RO	G6	60	5.5	4P	RO-22
			HRZM6UNAJB					2P	RO-22
			HRZM7UNAJP		G7			4P	RO-22
			HRZM7UNAJB					2P	RO-22
For helical coil wire screw thread inserts	11 12	AL-HT	TWUNAJ1LEB5	HT	1b	62	6	5P	HT-49
			TWUNAJ1LEBA					1.5P	HT-49
Taps No.12-24UNC									
Standard	5 6 8 11 12	SP	SPQUNCM	SP	P2	62	6	2.5P	SP-8
		PO	POQUNCM	PO				5P	PO-8
	1 5 6 12	HT	TNMQUNCM5	HT	P2	62	6	5P	HT-14
			TNMQUNCM1					1.5P	HT-14
Oversize	1 5 6 12	HT	TNMRUNCM5	HT	P3	62	6	5P	HT-14
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM6UNCMP	RO	G6	62	6	4P	RO-19
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	HRZM6UNCMP	RO	G6	62	6	4P	RO-22
			HRZM6UNCMB					2P	RO-22
For helical coil wire screw thread inserts	11 12	AL-HT	TWUNCM1LEB5	HT	1b	70	6.2	5P	HT-50
			TWUNCM1LEBA					1.5P	HT-50
Taps No.12-28UNF									
Standard	5 6 8 11 12	SP	SPQUNCK	SP	P2	62	6	2.5P	SP-8
		PO	POQUNCK	PO				5P	PO-8
	1 5 6 12	HT	TNMQUNCK5	HT	P2	62	6	5P	HT-14
			TNMQUNCK1					1.5P	HT-14
Oversize	1 5 6 12	HT	TNMRUNCK5	HT	P3	62	6	5P	HT-14
			TNMRUNCK1					1.5P	HT-14
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM6UNCKP	RO	G6	62	6	4P	RO-19

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	HRZM6UNCKP	RO	G6	62	6	4P	RO-22
			HRZM6UNCKB					2P	RO-22
Taps No.12-32UNEF									
Standard	1 5 6 12	HT	TNMQUNCJ5	HT	P2	62	6	5P	HT-14
			TNMQUNCJ1					1.5P	HT-14
Taps 1/4-20UNC									
Standard	5 6 8 11 12	SP	SPQU04N	SP	P2	62	6	2.5P	SP-9
		PO	POQU04N	PO				5P	PO-8
	1 5 6 12	HT	TNMQU04N5	HT	P2	62	6	5P	HT-14
			TNMQU04N1					1.5P	HT-15
For left hand threads	5 6 8 11 12	SP LH	SPQU04N--L	SP	P2	62	6	2.5P	SP-21
		PO LH	POQU04N--L	PO				5P	PO-15
Oxidizing	5 6 8	SP OX	SPQU04NX	SP	P2	62	6	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPQU04NL10	SP	P2	100	6	2.5P	SP-28
			SPQU04NL15			150			SP-28
		LS-PO	POQU04NL10	PO		100		5P	PO-19
			POQU04NL15			150			PO-19
	1 5 6 12	LS-HT	TNMQU04N515	HT	P2	150	6	5P	HT-27
			TNMQU04N520			200			HT-27
			TNMQU04N115			150		1.5P	HT-27
			TNMQU04N120			200			HT-27
For stainless steels	6 7 8	SU-SP	SUMQU04N	SP	P2	62	6	2.5P	SP-36
		SU-PO	PUMQU04N	PO				5P	PO-25
		SU-HT	TUMQU04N4	HT				4P	HT-35
			TUMQU04N1					1.5P	HT-35
For cast irons — Carbide	1	N-CT FC	TCNRU04N3	HT	P3	62	6	3P	CT-7
			TCNRU04N1					1.5P	CT-7
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM6U04NP	RO	G6	62	6	4P	RO-13
			NRSM6U04NB					2P	RO-13
			NRSM7U04NP		G7			4P	RO-13
			NRSM7U04NB					2P	RO-13
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM7U04NP	RO	G7	62	6	4P	RO-19
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	HRZM7U04NP	RO	G7	62	6	4P	RO-22
			HRZM7U04NB					2P	RO-22
For helical coil wire screw thread inserts	11 12	AL-HT	TWU04N1LEB5	HT	1b	70	6.2	5P	HT-50
			TWU04N1LEBA					1.5P	HT-50
For tripod threads	11 12	HT	TYU04N0KEB3	HT	-	62	6	3P	ST-6
			TYU04N0KEBA					1.5P	ST-6
	5 6 8 11 12	SP	SYU04N0KEB	SP	-	62	6	2.5P	ST-7
Taps 1/4-28UNF									
Standard	5 6 8 11 12	SP	SPQU04K	SP	P2	62	6	2.5P	SP-9
		PO	POQU04K	PO				5P	PO-8
	1 5 6 12	HT	TNMQU04K5	HT	P2	62	6	5P	HT-15
			TNMQU04K1					1.5P	HT-15
For left hand threads	5 6 8 11 12	SP LH	SPQU04K--L	SP	P2	62	6	2.5P	SP-21
		PO LH	POQU04K--L	PO				5P	PO-15
Oxidizing	5 6 8	SP OX	SPQU04KX	SP	P2	62	6	2.5P	SP-18

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Long shank		5 6 8 11 12	LS-SP	SPQU04KL10	SP	P2	100	6	2.5P	SP-28
				SPQU04KL15			150			SP-28
			LS-PO	POQU04KL10	PO		100		5P	PO-19
				POQU04KL15			150			PO-19
		1 5 6 12	LS-HT	TNMQU04K515	HT	P2	150	6	5P	HT-27
				TNMQU04K520			200			HT-27
				TNMQU04K115			150		1.5P	HT-27
				TNMQU04K120			200			HT-27
For stainless steels		6 7 8	SU-SP	SUMQU04K	SP	P2	62	6	2.5P	SP-36
			SU-PO	PUMQU04K	PO				5P	PO-25
			SU-HT	TUMQU04K4	HT				4P	HT-35
				TUMQU04K1					1.5P	HT-35
For cast irons	Carbide	1 12 13	N-CT FC	TCNRU04K3	HT	P3	62	6	3P	CT-7
				TCNRU04K1					1.5P	CT-7
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM6U04KP	RO	G6	62	6	4P	RO-13
				NRSM6U04KB					2P	RO-13
Thread forming taps for dry tapping		5 6 7 11 12	OL-RZ	OLRZM7U04KP	RO	G7	62	6	4P	RO-19
Thread forming taps for high carbon steels		5 6 7 11 12	HP-RZ	HRZM7U04KP	RO	G7	62	6	4P	RO-22
				HRZM7U04KB					2P	RO-22
For helical coil wire screw thread inserts		11 12	AL-HT	TWU04K1LEB5	HT	1b	70	6.2	5P	HT-50
				TWU04K1LEBA					1.5P	HT-50
Taps 1/4-32UNEF										
Standard		5 6 8 11 12	SP	SPQU04J	SP	P2	62	6	2.5P	SP-9
			PO	POQU04J	PO				5P	PO-8
		1 5 6 12	HT	TNMQU04J5	HT	P2	62	6	5P	HT-15
				TNMQU04J1					1.5P	HT-15
Taps 5/16-18UNC										
Standard		5 6 8 11 12	SP	SPQU05O	SP	P2	70	6.2	2.5P	SP-9
			PO	PORU05O	PO	P3			5P	PO-8
		1 5 6 12	HT	TNMRU05O5	HT	P3	70	6.2	5P	HT-15
				TNMRU05O1					1.5P	HT-15
For left hand threads		5 6 8 11 12	SP LH	SPQU05O--L	SP	P2	70	6.2	2.5P	SP-21
			PO LH	PORU05O--L	PO	P3			5P	PO-15
Oxidizing		5 6 8	SP OX	SPQU05OX	SP	P2	70	6.2	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPQU05OL10	SP	P2	100	6.2	2.5P	SP-28
				SPQU05OL15			150			SP-28
			LS-PO	PORU05OL10	PO	P3	100		5P	PO-19
				PORU05OL15			150			PO-19
		1 5 6 12	LS-HT	TNMQU05O515	HT	P2	150	6.2	5P	HT-27
				TNMQU05O520			200			HT-27
				TNMQU05O115			150		1.5P	HT-27
				TNMQU05O120			200			HT-27
For stainless steels		6 7 8	SU-SP	SUMQU05O	SP	P2	70	6.2	2.5P	SP-36
			SU-PO	PUMRU05O	PO	P3			5P	PO-25
			SU-HT	TUMRU05O4	HT				4P	HT-35
				TUMRU05O1					1.5P	HT-35
For cast irons	Carbide	1 12 13	N-CT FC	TCNRU05O3	HT	P3	70	6.1	3P	CT-7
				TCNRU05O1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU05O1LEB5	HT	1b	75	7	5P	HT-50
				TWU05O1LEBA					1.5P	HT-50

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps 5/16-24UNF										
Standard		5 6 8 11 12	SP	SPQU05M	SP	P2	70	6.2	2.5P	SP-9
			PO	POQU05M	PO				5P	PO-8
		1 5 6 12	HT	TNMQU05M5	HT	P2	70	6.2	5P	HT-15
				TNMQU05M1					1.5P	HT-15
For left hand threads		5 6 8 11 12	SP LH	SPQU05M--L	SP	P2	70	6.2	2.5P	SP-21
			PO LH	POQU05M--L	PO				5P	PO-15
Oxidizing		5 6 8	SP OX	SPQU05MX	SP	P2	70	6.2	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPQU05ML10	SP	P2	100	6.2	2.5P	SP-28
				SPQU05ML15			150			SP-28
			LS-PO	POQU05ML10	PO		100		5P	PO-19
				POQU05ML15			150			PO-19
		1 5 6 12	LS-HT	TNMQU05M515	HT	P2	150	6.2	5P	HT-27
				TNMQU05M520			200			HT-27
				TNMQU05M115			150		1.5P	HT-27
				TNMQU05M120			200			HT-27
For stainless steels		6 7 8	SU-SP	SUMQU05M	SP	P2	70	6.2	2.5P	SP-36
			SU-PO	PUMQU05M	PO				5P	PO-25
			SU-HT	TUMQU05M4	HT				4P	HT-35
				TUMQU05M1					1.5P	HT-35
For cast irons	Carbide	1 12 13	N-CT FC	TCNRU05M3	HT	P3	70	6.1	3P	CT-7
				TCNRU05M1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU05M1LEB5	HT	1b	75	7	5P	HT-50
				TWU05M1LEBA					1.5P	HT-50
Taps 5/16-32UNEF										
Standard		5 6 8 11 12	SP	SPQU05J	SP	P2	70	6.2	2.5P	SP-9
			PO	POQU05J	PO				5P	PO-8
		1 5 6 12	HT	TNMQU05J5	HT	P2	70	6.2	5P	HT-15
				TNMQU05J1					1.5P	HT-15
Taps 3/8-16UNC										
Standard		5 6 8 11 12	SP	SPQU06P	SP	P2	75	7	2.5P	SP-9
			PO	PORU06P	PO	P3			5P	PO-8
		1 5 6 12	HT	TNMRU06P5	HT	P3	75	7	5P	HT-15
				TNMRU06P1					1.5P	HT-15
For left hand threads		5 6 8 11 12	SP LH	SPQU06P--L	SP	P2	75	7	2.5P	SP-21
			PO LH	PORU06P--L	PO	P3			5P	PO-15
Oxidizing		5 6 8	SP OX	SPQU06PX	SP	P2	75	7	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPQU06PL10	SP	P2	100	7	2.5P	SP-28
				SPQU06PL15			150			SP-28
				SPQU06PL20			200			SP-28
			LS-PO	PORU06PL10	PO	P3	100		5P	PO-19
				PORU06PL15			150			PO-19
		1 5 6 12	LS-HT	TNMQU06P515	HT	P2	150	7	5P	HT-27
				TNMQU06P520			200			HT-27
				TNMQU06P115			150		1.5P	HT-27
				TNMQU06P120			200			HT-27
For stainless steels		6 7 8	SU-SP	SUMQU06P	SP	P2	75	7	2.5P	SP-36
			SU-PO	PUMRU06P	PO	P3			5P	PO-25

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For stainless steels		6 7 8	SU-HT	TUMRU06P4	HT	P3	75	7	4P	HT-35
				TUMRU06P1					1.5P	HT-35
For cast irons	Carbide	1 12 13	N-CT FC	TCNRU06P3	HT	P3	75	7	3P	CT-7
				TCNRU06P1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU06P1LEB5	HT	1b	82	8.5	5P	HT-50
				TWU06P1LEBA					1.5P	HT-50
Taps 3/8-24UNF										
Standard		5 6 8 11 12	SP	SPQU06M	SP	P2	75	7	2.5P	SP-9
			PO	POQU06M	PO				5P	PO-8
		1 5 6 12	HT	TNMRU06M5	HT	P3	75	7	5P	HT-15
				TNMRU06M1					1.5P	HT-15
For left hand threads		5 6 8 11 12	SP LH	SPQU06M--L	SP	P2	75	7	2.5P	SP-21
			PO LH	POQU06M--L	PO				5P	PO-15
Oxidizing		5 6 8	SP OX	SPQU06MX	SP	P2	75	7	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPQU06ML10	SP	P2	100	7	2.5P	SP-29
				SPQU06ML15			150			SP-29
			LS-PO	POQU06ML10	PO		100		5P	PO-19
				POQU06ML15			150			PO-19
		1 5 6 12	LS-HT	TNMQU06M515	HT	P2	150	7	5P	HT-27
				TNMQU06M520			200			HT-27
				TNMQU06M115			150		1.5P	HT-27
				TNMQU06M120			200			HT-27
For stainless steels		6 7 8	SU-SP	SUMQU06M	SP	P2	75	7	2.5P	SP-36
			SU-PO	PUMQU06M	PO				5P	PO-25
			SU-HT	TUMQU06M4	HT				4P	HT-35
				TUMQU06M1					1.5P	HT-35
For cast irons	Carbide	1	N-CT FC	TCNRU06M3	HT	P3	75	7	3P	CT-7
				TCNRU06M1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU06M1LEB5	HT	1b	82	8.5	5P	HT-50
				TWU06M1LEBA					1.5P	HT-50
Taps 3/8-32UNEF										
Standard		5 6 8 11 12	PO	POQU06J	PO	P2	75	7	5P	PO-8
		1 5 6 12	HT	TNMQU06J5	HT	P2	75	7	5P	HT-15
				TNMQU06J1					1.5P	HT-15
Taps 7/16-14UNC										
Standard		5 6 8 11 12	SP	SPRU07Q	SP	P3	82	8.5	2.5P	SP-9
			PO	PORU07Q	PO				5P	PO-8
		1 5 6 12	HT	TNMRU07Q5	HT	P3	82	8.5	5P	HT-15
				TNMRU07Q1					1.5P	HT-15
For left hand threads		5 6 8 11 12	SP LH	SPRU07Q--L	SP	P3	82	8.5	2.5P	SP-21
			PO LH	PORU07Q--L	PO				5P	PO-15
Oxidizing		5 6 8	SP OX	SPRU07QX	SP	P3	82	8.5	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPRU07QL15	SP	P3	150	8.5	2.5P	SP-29
			LS-PO	PORU07QL15	PO				5P	PO-19
		1 5 6 12	LS-HT	TNMRU07Q515	HT	P3	150	8.5	5P	HT-27
				TNMRU07Q115					1.5P	HT-27

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
For stainless steels		6 7 8	SU-SP	SUMRU07Q	SP	P3	82	8.5	2.5P	SP-36
			SU-PO	PUMRU07Q	PO				5P	PO-25
			SU-HT	TUMRU07Q4	HT				4P	HT-35
				TUMRU07Q1					1.5P	HT-35
For cast irons	Carbide	1 12 13	N-CT FC	TCNRU07Q3	HT	P3	80	8	3P	CT-7
				TCNRU07Q1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU07Q1LEB5	HT	1b	88	10.5	5P	HT-50
				TWU07Q1LEBA					1.5P	HT-50
Taps 7/16-20UNF										
Standard		5 6 8 11 12	SP	SPQU07N	SP	P2	82	8.5	2.5P	SP-9
			PO	PORU07N	PO	P3			5P	PO-8
		1 5 6 12	HT	TNMRU07N5	HT	P3	82	8.5	5P	HT-15
				TNMRU07N1					1.5P	HT-15
For left hand threads		5 6 8 11 12	SP LH	SPQU07N--L	SP	P2	82	8.5	2.5P	SP-21
			PO LH	PORU07N--L	PO	P3			5P	PO-15
Oxidizing		5 6 8	SP OX	SPQU07NX	SP	P2	82	8.5	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPQU07NL15	SP	P2	150	8.5	2.5P	SP-29
			LS-PO	PORU07NL15	PO	P3			5P	PO-20
		1 5 6 12	LS-HT	TNMQU07N515	HT	P2	150	8.5	5P	HT-27
				TNMQU07N520			200			HT-27
				TNMQU07N115			150		1.5P	HT-27
				TNMQU07N120			200			HT-27
For stainless steels		6 7 8	SU-SP	SUMQU07N	SP	P2	82	8.5	2.5P	SP-36
			SU-PO	PUMRU07N	PO	P3			5P	PO-25
			SU-HT	TUMRU07N4	HT				4P	HT-35
				TUMRU07N1					1.5P	HT-35
For cast irons	Carbide	1	N-CT FC	TCNRU07N3	HT	P3	80	8	3P	CT-7
				TCNRU07N1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU07N1LEB5	HT	1b	88	10.5	5P	HT-50
				TWU07N1LEBA					1.5P	HT-50
Taps 7/16-28UNEF										
Standard		5 6 8 11 12	PO	POQU07K	PO	P2	82	8.5	5P	PO-8
		1 5 6 12	HT	TNMQU07K5	HT	P2	82	8.5	5P	HT-15
				TNMQU07K1					1.5P	HT-15
Taps 1/2-13UNC										
Standard		5 6 8 11 12	SP	SPRU08R	SP	P3	88	10.5	2.5P	SP-9
			PO	PORU08R	PO				5P	PO-8
		1 5 6 12	HT	TNMRU08R5	HT	P3	88	10.5	5P	HT-15
				TNMRU08R1					1.5P	HT-15
For left hand threads		5 6 8 11 12	SP LH	SPRU08R--L	SP	P3	88	10.5	2.5P	SP-21
			PO LH	PORU08R--L	PO				5P	PO-15
Oxidizing		5 6 8	SP OX	SPRU08RX	SP	P2	88	10.5	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPRU08RL15	SP	P3	150	10.5	2.5P	SP-29
				SPRU08RL20			200			SP-29
			LS-PO	PORU08RL15	PO		150		5P	PO-20
				PORU08RL20			200			PO-20

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	*Ds*	*ℓc*

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	*Ds*	*ℓc*	Product page
Long shank		1 5 6 12	LS-HT	TNMRU08R515	HT	P3	150	10.5	5P	HT-27
				TNMRU08R520			200			HT-27
				TNMRU08R115			150		1.5P	HT-27
				TNMRU08R120			200			HT-27
For stainless steels		6 7 8	SU-SP	SUMRU08R	SP	P3	88	10.5	2.5P	SP-36
			SU-PO	PUMRU08R	PO				5P	PO-25
				TUMRU08R4	HT				4P	HT-35
				TUMRU08R1					1.5P	HT-35
For cast irons	Carbide	1 12 13	N-CT FC	TCNRU08R3	HT	P3	85	9	3P	CT-7
				TCNRU08R1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU08R1LEB5	HT	1b	95	12.5	5P	HT-50
				TWU08R1LEBA					1.5P	HT-50
Taps 1/2-20UNF										
Standard		5 6 8 11 12	SP	SPQU08N	SP	P2	88	10.5	2.5P	SP-9
			PO	PORU08N	PO	P3			5P	PO-8
		1 5 6 12	HT	TNMRU08N5	HT	P3	88	10.5	5P	HT-15
				TNMRU08N1					1.5P	HT-15
For left hand threads		5 6 8 11 12	SP LH	SPQU08N--L	SP	P2	88	10.5	2.5P	SP-21
			PO LH	PORU08N--L	PO	P3			5P	PO-15
Oxidizing		5 6 8	SP OX	SPQU08NX	SP	P2	88	10.5	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPQU08NL15	SP	P2	150	10.5	2.5P	SP-29
			LS-PO	PORU08NL15	PO	P3			5P	PO-20
				PORU08NL20			200			PO-20
		1 5 6 12	LS-HT	TNMQU08N515	HT	P2	150	10.5	5P	HT-27
				TNMQU08N520			200			HT-27
				TNMQU08N115			150		1.5P	HT-27
				TNMQU08N120			200			HT-27
For stainless steels		6 7 8	SU-SP	SUMQU08N	SP	P2	88	10.5	2.5P	SP-36
			SU-PO	PUMRU08N	PO	P3			5P	PO-25
			SU-HT	TUMRU08N4	HT				4P	HT-35
				TUMRU08N1					1.5P	HT-35
For cast irons	Carbide	1	N-CT FC	TCNRU08N3	HT	P3	85	9	3P	CT-7
				TCNRU08N1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU08N1LEB5	HT	1b	95	12.5	5P	HT-50
				TWU08N1LEBA					1.5P	HT-50
Taps 1/2-28UNEF										
Standard		5 6 8 11 12	PO	POQU08K	PO	P2	88	10.5	5P	PO-8
		1 5 6 12	HT	TNMQU08K5	HT	P2	88	10.5	5P	HT-15
				TNMQU08K1					1.5P	HT-15
Taps 9/16-12UNC										
Standard		5 6 8 11 12	SP	SPRU09S	SP	P3	95	12.5	2.5P	SP-9
			PO	PORU09S	PO				5P	PO-8
		1 5 6 12	HT	TNMRU09S5	HT	P3	95	12.5	5P	HT-15
				TNMRU09S1					1.5P	HT-15
Taps 9/16-18UNF										
Standard		5 6 8 11 12	SP	SPQU09O	SP	P2	95	12.5	2.5P	SP-9
			PO	PORU09O	PO	P3			5P	PO-8

Tap selection		Main material	Symbol (Note 1)	Code	Flute	Class	*L*	*Ds*	*ℓc*	Product page
Standard		1 5 6 12	HT	TNMRU09O5	HT	P3	95	12.5	5P	HT-15
				TNMRU09O1					1.5P	HT-15
Long shank		1 5 6 12	LS-HT	TNMQU09O515	HT	P2	150	12.5	5P	HT-27
				TNMQU09O115					1.5P	HT-27
For stainless steels		6 7 8	SU-PO	PUMRU09O	PO	P3	95	12.5	5P	PO-25
Taps 9/16-24UNEF										
Standard		5 6 8 11 12	SP	SPQU09M	SP	P2	95	12.5	2.5P	SP-9
Taps 5/8-11UNC										
Standard		5 6 8 11 12	SP	SPRU10U	SP	P3	95	12.5	2.5P	SP-9
			PO	PORU10U	PO				5P	PO-8
		1 5 6 12	HT	TNMSU10U5	HT	P4	95	12.5	5P	HT-15
				TNMSU10U1					1.5P	HT-15
Oxidizing		5 6 8	SP OX	SPRU10UX	SP	P3	95	12.5	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPRU10UL15	SP	P3	150	12.5	2.5P	SP-29
				SPRU10UL20			200			SP-29
			LS-PO	PORU10UL15	PO		150		5P	PO-20
				PORU10UL20			200			PO-20
		1 5 6 12	LS-HT	TNMRU10U515	HT	P3	150	12.5	5P	HT-27
				TNMRU10U520			200			HT-27
				TNMRU10U115			150		1.5P	HT-27
				TNMRU10U120			200			HT-27
For stainless steels		6 7 8	SU-SP	SUMRU10U	SP	P3	95	12.5	2.5P	SP-36
			SU-PO	PUMRU10U	PO				5P	PO-25
			SU-HT	TUMRU10U4	HT				4P	HT-35
				TUMRU10U1					1.5P	HT-35
For cast irons	Carbide	1	N-CT FC	TCNSU10U3	HT	P4	95	12	3P	CT-7
				TCNSU10U1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU10U1LEB5	HT	1b	105	15	5P	HT-50
				TWU10U1LEBA					1.5P	HT-50
Taps 5/8-18UNF										
Standard		5 6 8 11 12	SP	SPQU10O	SP	P2	95	12.5	2.5P	SP-9
			PO	PORU10O	PO	P3			5P	PO-8
		1 5 6 12	HT	TNMRU10O5	HT	P3	95	12.5	5P	HT-15
				TNMRU10O1					1.5P	HT-15
Oxidizing		5 6 8	SP OX	SPQU10OX	SP	P2	95	12.5	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPQU10OL15	SP	P2	150	12.5	2.5P	SP-29
			LS-PO	PORU10OL15	PO	P3			5P	PO-20
				PORU10OL20			200			PO-20
		1 5 6 12	LS-HT	TNMQU10O515	HT	P2	150	12.5	5P	HT-27
				TNMQU10O115					1.5P	HT-27
For stainless steels		6 7 8	SU-SP	SUMQU10O	SP	P2	95	12.5	2.5P	SP-36
			SU-HT	TUMRU10O4	HT	P3			4P	HT-35
				TUMRU10O1					1.5P	HT-35
For cast irons	Carbide	1 12 13	N-CT FC	TCNSU10O3	HT	P4	95	12	3P	CT-7
				TCNSU10O1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU10O1LEB5	HT	1b	100	14	5P	HT-50
				TWU10O1LEBA					1.5P	HT-50

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps 5/8-24UNEF										
Standard		5 6 8 11 12	SP	SPQU10M	SP	P2	95	12.5	2.5P	SP-9
		1 5 6 12	HT	TNMRU10M5	HT	P3	95	12.5	5P	HT-15
				TNMRU10M1					1.5P	HT-15
Taps 3/4-10UNC										
Standard		5 6 8 11 12	SP	SPRU12V	SP	P3	105	15	2.5P	SP-9
			PO	POSU12V	PO	P4			5P	PO-8
		1 5 6 12	HT	TNMSU12V5	HT	P4	105	15	5P	HT-15
				TNMSU12V1					1.5P	HT-15
Oxidizing		5 6 8	SP OX	SPRU12VX	SP	P3	105	15	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPRU12VL15	SP	P3	150	15	2.5P	SP-29
				SPRU12VL20			200			SP-29
			LS-PO	POSU12VL15	PO	P4	150		5P	PO-20
				POSU12VL20			200			PO-20
		1 5 6 12	LS-HT	TNMRU12V515	HT	P3	150	15	5P	HT-27
				TNMRU12V520			200			HT-27
				TNMRU12V115			150		1.5P	HT-27
				TNMRU12V120			200			HT-28
For stainless steels		6 7 8	SU-SP	SUMRU12V	SP	P3	105	15	2.5P	SP-36
			SU-HT	TUMSU12V4	HT	P4			4P	HT-35
				TUMSU12V1					1.5P	HT-35
For cast irons	Carbide	1	N-CT FC	TCNSU12V3	HT	P4	105	14	3P	CT-7
				TCNSU12V1					1.5P	CT-7
Taps 3/4-16UNF										
Standard		5 6 8 11 12	SP	SPRU12P	SP	P3	105	15	2.5P	SP-9
			PO	PORU12P	PO				5P	PO-8
		1 5 6 12	HT	TNMRU12P5	HT	P3	105	15	5P	HT-15
				TNMRU12P1					1.5P	HT-15
Oxidizing		5 6 8	SP OX	SPRU12PX	SP	P3	105	15	2.5P	SP-18
Long shank		5 6 8 11 12	LS-SP	SPRU12PL15	SP	P3	150	15	2.5P	SP-29
			LS-PO	PORU12PL15	PO				5P	PO-20
				PORU12PL20			200			PO-20
		1 5 6 12	LS-HT	TNMRU12P515	HT	P3	150	15	5P	HT-28
				TNMRU12P115					1.5P	HT-28
For stainless steels		6 7 8	SU-SP	SUMRU12P	SP	P3	105	15	2.5P	SP-36
			SU-HT	TUMRU12P4	HT				4P	HT-35
				TUMRU12P1					1.5P	HT-35
For cast irons	Carbide	1	N-CT FC	TCNSU12P3	HT	P4	95	14	3P	CT-7
				TCNSU12P1					1.5P	CT-7
For helical coil wire screw thread inserts		11 12	AL-HT	TWU12P1LEB5	HT	1b	115	17	5P	HT-50
				TWU12P1LEBA					1.5P	HT-50
Taps 3/4-20UNEF										
Standard		5 6 8 11 12	SP	SPQU12N	SP	P2	105	15	2.5P	SP-9
			PO	PORU12N	PO	P3			5P	PO-8
		1 5 6 12	HT	TNMRU12N5	HT	P3	105	15	5P	HT-15
				TNMRU12N1					1.5P	HT-15

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps 7/8-9UNC									
Standard	5 6 8 11 12	SP	SPRU14W	SP	P3	115	17	2.5P	SP-9
		PO	POSU14W	PO	P4			5P	PO-8
	1 5 6 12	HT	TNMSU14W5	HT	P4	115	17	5P	HT-15
			TNMSU14W1					1.5P	HT-15
Oxidizing	5 6 8	SP OX	SPRU14WX	SP	P3	115	17	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPRU14WL15	SP	P3	150	17	2.5P	SP-29
			SPRU14WL20			200			SP-29
		LS-PO	POSU14WL20	PO	P4			5P	PO-20
	1 5 6 12	LS-HT	TNMRU14W520	HT	P3	200	17	5P	HT-28
			TNMRU14W120					1.5P	HT-28
For stainless steels	6 7 8	SU-SP	SUMRU14W	SP	P3	115	17	2.5P	SP-36
Taps 7/8-14UNF									
Standard	5 6 8 11 12	SP	SPRU14Q	SP	P3	115	17	2.5P	SP-9
		PO	PORU14Q	PO				5P	PO-8
	1 5 6 12	HT	TNMSU14Q5	HT	P4	115	17	5P	HT-15
			TNMSU14Q1					1.5P	HT-15
Oxidizing	5 6 8	SP OX	SPRU14QX	SP	P3	115	17	2.5P	SP-18
Long shank	5 6 8 11 12	LS-PO	PORU14QL20	PO	P3	200	17	5P	PO-20
For stainless steels	6 7 8	SU-SP	SUMRU14Q	SP	P3	115	17	2.5P	SP-36
Taps 7/8-20UNEF									
Standard	5 6 8 11 12	SP	SPQU14N	SP	P2	115	17	2.5P	SP-9
	1 5 6 12	HT	TNMRU14N5	HT	P3	115	17	5P	HT-15
			TNMRU14N1					1.5P	HT-16
Taps 1-8UNC									
Standard	5 6 8 11 12	SP	SPRU16X	SP	P3	125	19	2.5P	SP-9
		PO	POSU16X	PO	P4			5P	PO-8
	1 5 6 12	HT	TNMSU16X5	HT	P4	125	19	5P	HT-16
			TNMSU16X1					1.5P	HT-16
Oxidizing	5 6 8	SP OX	SPRU16XX	SP	P3	125	19	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPRU16XL15	SP	P3	150	19	2.5P	SP-29
			SPRU16XL20			200			SP-29
		LS-PO	POSU16XL20	PO	P4			5P	PO-20
	1 5 6 12	LS-HT	TNMRU16X515	HT	P3	150	19	5P	HT-28
			TNMRU16X520			200			HT-28
			TNMRU16X115			150		1.5P	HT-28
			TNMRU16X120			200			HT-28
For stainless steels	6 7 8	SU-SP	SUMRU16X	SP	P3	125	19	2.5P	SP-37
Taps 1-12UNF									
Standard	5 6 8 11 12	SP	SPRU16S	SP	P3	125	19	2.5P	SP-9
		PO	POSU16S	PO	P4			5P	PO-8
	1 5 6 12	HT	TNMSU16S5	HT	P4	125	19	5P	HT-16
			TNMSU16S1					1.5P	HT-16
Oxidizing	5 6 8	SP OX	SPRU16SX	SP	P3	125	19	2.5P	SP-18
Long shank	5 6 8 11 12	LS-PO	POSU16SL20	PO	P4	200	19	5P	PO-20
For stainless steels	6 7 8	SU-SP	SUMRU16S	SP	P3	125	19	2.5P	SP-37

Think threads with YAMAWA
Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps 1-14UNS									
Standard	5 6 8 11 12	SP	SPRU16Q	SP	P3	125	19	2.5P	SP-9
		PO	POSU16Q	PO	P4			5P	PO-8
	1 5 6 12	HT	TNMSU16Q5	HT	P4	125	19	5P	HT-16
			TNMSU16Q1					1.5P	HT-16
Taps 1-20UNEF									
Standard	5 6 8 11 12	SP	SPQU16N	SP	P2	125	19	2.5P	SP-9
	1 5 6 12	HT	TNMRU16N5	HT	P3	125	19	5P	HT-16
			TNMRU16N1					1.5P	HT-16
Taps 1 1/8-7UNC									
Standard	5 6 8 11 12	SP	SPSU18Y	SP	P4	135	23	2.5P	SP-9
		PO	POSU18Y	PO				5P	PO-8
	1 5 6 12	HT	TNMTU18Y5	HT	P5	135	23	5P	HT-16
			TNMTU18Y1					1.5P	HT-16
Taps 1 1/8-12UNF									
Standard	5 6 8 11 12	SP	SPRU18S	SP	P3	135	23	2.5P	SP-9
Taps 1 1/4-7UNC									
Standard	5 6 8 11 12	SP	SPMSU20Y	SP	P4	145	24	2.5P	SP-9
		PO	POMSU20Y	PO				5P	PO-8
	1 5 6 12	HT	TNMTU20Y5	HT	P5	145	24	5P	HT-16
			TNMTU20Y1					1.5P	HT-16
Taps 1 1/4-8UN									
Standard	5 6 8 11 12	SP	SPMRU20X	SP	P3	145	24	2.5P	SP-9
	1 5 6 12	HT	TNMTU20X5	HT	P5	145	24	5P	HT-16
			TNMTU20X1					1.5P	HT-16
Taps 1 1/4-12UNF									
Standard	5 6 8 11 12	SP	SPMRU20S	SP	P3	145	24	2.5P	SP-9
	1 5 6 12	HT	TNMSU20S5	HT	P4	145	24	5P	HT-16
			TNMSU20S1					1.5P	HT-16
Taps 1 3/8-6UNC									
Standard	5 6 8 11 12	SP	SPMSU22Z	SP	P4	155	28	2.5P	SP-9
		PO	POMTU22Z	PO	P5			5P	PO-8
	1 5 6 12	HT	TNMTU22Z5	HT	P5	155	28	5P	HT-16
			TNMTU22Z1					1.5P	HT-16
Taps 1 3/8-8UN									
Standard	5 6 8 11 12	SP	SPMRU22X	SP	P3	155	28	2.5P	SP-9
	1 5 6 12	HT	TNMTU22X5	HT	P5	155	28	5P	HT-16
			TNMTU22X1					1.5P	HT-16
Taps 1 3/8-12UNF									
Standard	5 6 8 11 12	SP	SPMRU22S	SP	P3	155	28	2.5P	SP-9
	1 5 6 12	HT	TNMSU22S5	HT	P4	155	28	5P	HT-16
			TNMSU22S1					1.5P	HT-16

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps 1 1/2-6UNC									
Standard	5 6 8 11 12	SP	SPMSU24Z	SP	P4	165	30	2.5P	SP-9
		PO	POMTU24Z	PO	P5			5P	PO-8
	1 5 6 12	HT	TNMTU24Z5	HT	P5	165	30	5P	HT-16
			TNMTU24Z1					1.5P	HT-16
Taps 1 1/2-12UNF									
Standard	5 6 8 11 12	SP	SPMRU24S	SP	P3	165	30	2.5P	SP-9
	1 5 6 12	HT	TNMSU24S5	HT	P4	165	30	5P	HT-16
			TNMSU24S1					1.5P	HT-16
Taps 1 3/4-5UNC									
Standard	5 6 8 11 12	SP	SPMSU280	SP	P4	180	35	2.5P	SP-9
	1 5 6 12	HT	TNMUU280S	HT	P6	180	35	5P	HT-16
			TNMUU2801					1.5P	HT-16
Taps 1 3/4-12UNC									
Standard	5 6 8 11 12	SP	SPMRU28S	SP	P3	180	35	2.5P	SP-9
	1 5 6 12	HT	TNMSU28S5	HT	P4	180	35	5P	HT-16
			TNMSU28S1					1.5P	HT-16

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies NO.0-80UNF									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYDUN0BDNEBC	Di-7
					20	7		TYEUN0BDNEBC	Di-7
Dies NO.1-64UNC									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN1DDNEBC	Di-7
Dies NO.1-72UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN1CDNEBC	Di-7
Dies NO.2-56UNC									
Solid dies	HSS	6 8 11 12	D	II	16	5	2～2.5P	TYDUN2EDNEBC	Di-7
					20	7		TYEUN2EDNEBC	Di-7
Dies NO.2-64UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN2DDNEBC	Di-7
Dies NO.3-48UNC									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN3FDNEBC	Di-7
Dies NO.3-56UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN3EDNEBC	Di-7
Dies NO.4-40UNC									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN4HDNEBC	Di-7
Dies NO.4-48UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN4FDNEBC	Di-7
Dies NO.5-40UNC									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN5HDNEBC	Di-7
Dies NO.5-44UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN5GDNEBC	Di-7
Dies NO.6-32UNC									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN6JDNEBC	Di-7
Dies NO.6-40UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN6HDNEBC	Di-7
Dies NO.8-32UNC									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN8JDNEBC	Di-7
Dies NO.8-36UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUN8IDNEBC	Di-7
Dies NO.10-24UNC									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUNAMDNEBC	Di-7
Dies NO.10-32UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUNAJDNEBC	Di-7
Dies NO.12-24UNC									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUNCMDNEBC	Di-7
Dies NO.12-28UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEUNCKDNEBC	Di-7
Dies 1/4-20UNC									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEU04NDNEBC	Di-7
					25	9		TYGU04NDNEBC	Di-7
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYGU04NDNEBC	Di-12
Dies 1/4-28UNF									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEU04KDNEBC	Di-7
					25	9		TYGU04KDNEBC	Di-7
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYGU04KDNEBC	Di-12
Dies 1/4-32UNEF									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYGU04JDNEBC	Di-7
Dies 5/16-18UNC									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYGU05ODNEBC	Di-7
					38	13		TYJU05ODNEBC	Di-7
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYGU05ODNEBC	Di-12
Dies 5/16-24UNF									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYGU05MDNEBC	Di-7
					38	13		TYJU05MDNEBC	Di-7
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYGU05MDNEBC	Di-12
Dies 5/16-32UNEF									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYGU05JDNEBC	Di-7
Dies 3/8-16UNC									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYGU06PDNEBC	Di-7
					38	13		TYJU06PDNEBC	Di-7
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYGU06PDNEBC	Di-12
Dies 3/8-24UNF									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYGU06MDNEBC	Di-7
					38	13		TYJU06MDNEBC	Di-7
For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYGU06MDNEBC	Di-12
				II	38	13		GYJU06MDNEBC	Di-12
Dies 3/8-32UNEF									
Solid dies	HSS	6 8 11 12	D	II	25	9	2～2.5P	TYGU06JDNEBC	Di-7
Dies 7/16-14UNC									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU07QDNEBC	Di-8

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 7/16-20UNF									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU07NDNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJU07NDNEBC	Di-12
Dies 7/16-24UN									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU07MDNEBC	Di-8
Dies 7/16-28UNEF									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU07KDNEBC	Di-8
Dies 1/2-13UNC									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU08RDNEBC	Di-8
					50	16		TYMU08RDNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJU08RDNEBC	Di-12
Dies 1/2-20UNF									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU08NDNEBC	Di-8
					50	16		TYMU08NDNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJU08NDNEBC	Di-12
Dies 1/2-28UNEF									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU08KDNEBC	Di-8
Dies 9/16-12UNC									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU09SDNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJU09SDNEBC	Di-12
Dies 9/16-18UNF									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU09ODNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJU09ODNEBC	Di-12
Dies 9/16-20UN									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU09NDNEBC	Di-8
Dies 9/16-24UNEF									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU09MDNEBC	Di-8
Dies 5/8-11UNC									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU10UDNEBC	Di-8
					50	16		TYMU10UDNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYMU10UDNEBC	Di-12
Dies 5/8-18UNF									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU10ODNEBC	Di-8
					50	16		TYMU10ODNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYMU10ODNEBC	Di-12
Dies 5/8-24UNEF									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJU10MDNEBC	Di-8

Dies selection	Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 3/4-10UNC									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMU12VDNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYMU12VDNEBC	Di-12
Dies 3/4-16UNF									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMU12PDNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYMU12PDNEBC	Di-12
Dies 3/4-20UNEF									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMU12NDNEBC	Di-8
Dies 7/8-9UNC									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMU14WDNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYMU14WDNEBC	Di-12
Dies 7/8-14UNF									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMU14QDNEBC	Di-8
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYMU14QDNEBC	Di-12
Dies 1-8UNC									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMU16XDNEBC	Di-8
Dies 1-12UNF									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMU16SDNEBC	Di-8
Dies 1-14UNS									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMU16QDNEBC	Di-8
Dies 1-20UNEF									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMU16NDNEBC	Di-8
Dies 1 1/8-7UN									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYRU18YDNEBC	Di-8
Dies 1 1/8-8UN									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYRU18XDNEBC	Di-8
Dies 1 1/8-12UNF									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYRU18SDNEBC	Di-8
Dies 1 1/4-7UNC									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYRU20YDNEBC	Di-8
Dies 1 1/4-8UN									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYRU20XDNEBC	Di-8
Dies 1 1/4-12UNF									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYRU20SDNEBC	Di-8
Dies 1 3/8-6UNC									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUU22ZDNEBC	Di-8

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 1 3/8-12UNF									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUU22SDNEBC	Di-8
Dies 1 1/2-6UNC									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUU24ZDNEBC	Di-8
Dies 1 1/2-8UN									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUU24XDNEBC	Di-8
Dies 1 1/2-12UNF									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUU24SDNEBC	Di-8
Dies 1 5/8-12UN									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUU26SDNEBC	Di-8
Dies 1 3/4-5UNC									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUU287DNEBC	Di-8
Dies 1 3/4-12UN									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUU28SDNEBC	Di-8
Dies 2-12UN									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUU32SDNEBC	Di-8

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps 1/8W40									
Standard	5 6 8 11 12	SP	SPPW02H	SP	P1	52	5	2.5P	SP-9
		PO	POQW02H	PO	P2			5P	PO-8
Taps 5/32W32									
Standard	5 6 8 11 12	SP	SPQW2HJ	SP	P2	52	5	2.5P	SP-9
		PO	POQW2HJ	PO				5P	PO-8
Taps 3/16W24									
Standard	5 6 8 11 12	SP	SPQW03M	SP	P2	60	5.5	2.5P	SP-9
		PO	POQW03M	PO				5P	PO-8
Oxidizing	5 6 8	SP OX	SPQW03MX	SP	P2	60	5.5	2.5P	SP-18
For stainless steels	6 7 8	SU-SP	SUMQW03M	SP	P2	60	5.5	2.5P	SP-37
		SU-PO	PUMQW03M	PO				5P	PO-25
Taps 7/32W24									
Standard	5 6 8 11 12	SP	SPQW3HM	SP	P2	62	6	2.5P	SP-9
		PO	POQW3HM	PO				5P	PO-8
Taps 1/4W20									
Standard	5 6 8 11 12	SP	SPQW04N	SP	P2	62	6	2.5P	SP-9
		PO	PORW04N	PO	P3			5P	PO-8
For left hand threads	5 6 8 11 12	SP LH	SPQW04N--L	SP	P2	62	6	2.5P	SP-21
		PO LH	PORW04N--L	PO	P3			5P	PO-15
Oxidizing	5 6 8	SP OX	SPQW04NX	SP	P2	62	6	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPQW04NL10	SP	P2	100	6	2.5P	SP-29
			SPQW04NL15			150			SP-29
		LS-PO	PORW04NL10	PO	P3	100		5P	PO-20
			PORW04NL15			150			PO-20
For high carbon steels	5 6	HC-SP	SCMQW04N	SP	P2	62	6	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMQW04N	SP	P2	62	6	2.5P	SP-37
		SU-PO	PUMRW04N	PO	P3			5P	PO-25
		SU-HT	TUMRW04N4	HT				4P	HT-35
			TUMRW04N1					1.5P	HT-35
Taps 5/16W18									
Standard	5 6 8 11 12	SP	SPQW05O	SP	P2	70	6.2	2.5P	SP-9
		PO	PORW05O	PO	P3			5P	PO-8
For left hand threads	5 6 8 11 12	SP LH	SPQW05O--L	SP	P2	70	6.2	2.5P	SP-21
		PO LH	PORW05O--L	PO	P3			5P	PO-15
Oxidizing	5 6 8	SP OX	SPQW05OX	SP	P2	70	6.2	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPQW05OL10	SP	P2	100	6.2	2.5P	SP-29
			SPQW05OL15			150			SP-29
		LS-PO	PORW05OL10	PO	P3	100		5P	PO-20
			PORW05OL15			150			PO-20
For high carbon steels	5 6	HC-SP	SCMQW05O	SP	P2	70	6.2	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMQW05O	SP	P2	70	6.2	2.5P	SP-37
		SU-PO	PUMRW05O	PO	P3			5P	PO-25
		SU-HT	TUMRW05O4	HT				4P	HT-35
			TUMRW05O1					1.5P	HT-35

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps 3/8W16									
Standard	5 6 8 11 12	SP	SPQW06P	SP	P2	75	7	2.5P	SP-9
		PO	PORW06P	PO	P3			5P	PO-8
For left hand threads	5 6 8 11 12	SP LH	SPQW06P--L	SP	P2	75	7	2.5P	SP-21
		PO LH	PORW06P--L	PO	P3			5P	PO-15
Oxidizing	5 6 8	SP OX	SPQW06PX	SP	P2	75	7	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPQW06PL10	SP	P2	100	7	2.5P	SP-29
			SPQW06PL15			150			SP-29
			SPQW06PL20			200			SP-29
		LS-PO	PORW06PL10	PO	P3	100		5P	PO-20
			PORW06PL15			150			PO-20
For high carbon steels	5 6	HC-SP	SCMQW06P	SP	P2	75	7	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMQW06P	SP	P2	75	7	2.5P	SP-37
		SU-PO	PUMRW06P	PO	P3			5P	PO-25
		SU-HT	TUMRW06P4	HT				4P	HT-35
			TUMRW06P1					1.5P	HT-35
Taps 7/16W14									
Standard	5 6 8 11 12	SP	SPRW07Q	SP	P3	82	8.5	2.5P	SP-10
		PO	PORW07Q	PO				5P	PO-8
For left hand threads	5 6 8 11 12	SP LH	SPRW07Q--L	SP	P3	82	8.5	2.5P	SP-21
Oxidizing	5 6 8	SP OX	SPRW07QX	SP	P3	82	8.5	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPRW07QL15	SP	P3	150	8.5	2.5P	SP-29
		LS-PO	PORW07QL15	PO				5P	PO-20
For stainless steels	6 7 8	SU-SP	SUMRW07Q	SP	P3	82	8.5	2.5P	SP-37
		SU-PO	PUMRW07Q	PO				5P	PO-25
		SU-HT	TUMRW07Q4	HT				4P	HT-35
			TUMRW07Q1					1.5P	HT-35
Taps 1/2W12									
Standard	5 6 8 11 12	SP	SPRW08S	SP	P3	88	10.5	2.5P	SP-10
		PO	PORW08S	PO				5P	PO-8
For left hand threads	5 6 8 11 12	SP LH	SPRW08S--L	SP	P3	88	10.5	2.5P	SP-21
		PO LH	PORW08S--L	PO				5P	PO-15
Oxidizing	5 6 8	SP OX	SPRW08SX	SP	P3	88	10.5	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPRW08SL15	SP	P3	150	10.5	2.5P	SP-29
			SPRW08SL20			200			SP-29
		LS-PO	PORW08SL15	PO		150		5P	PO-20
			PORW08SL20			200			PO-20
For high carbon steels	5 6	HC-SP	SCMRW08S	SP	P3	88	10.5	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMRW08S	SP	P3	88	10.5	2.5P	SP-37
		SU-PO	PUMRW08S	PO				5P	PO-25
		SU-HT	TUMRW08S4	HT				4P	HT-35
			TUMRW08S1					1.5P	HT-35
Taps 9/16W12									
Standard	5 6 8 11 12	SP	SPRW09S	SP	P3	95	12.5	2.5P	SP-10
		PO	PORW09S	PO				5P	PO-8
For stainless steels	6 7 8	SU-SP	SUMRW09S	SP	P3	95	12.5	2.5P	SP-37

Tap selection	Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps 5/8W11									
Standard	5 6 8 11 12	SP	SPRW10U	SP	P3	95	12.5	2.5P	SP-10
		PO	PORW10U	PO				5P	PO-9
For left hand threads	5 6 8 11 12	SP LH	SPRW10U--L	SP	P3	95	12.5	2.5P	SP-21
		PO LH	PORW10U--L	PO				5P	PO-15
Oxidizing	5 6 8	SP OX	SPRW10UX	SP	P3	95	12.5	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPRW10UL15	SP	P3	150	12.5	2.5P	SP-29
			SPRW10UL20			200			SP-29
		LS-PO	PORW10UL15	PO		150		5P	PO-20
			PORW10UL20			200			PO-20
For high carbon steels	5 6	HC-SP	SCMRW10U	SP	P3	95	12.5	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMRW10U	SP	P3	95	12.5	2.5P	SP-37
		SU-PO	PUMRW10U	PO				5P	PO-25
		SU-HT	TUMRW10U4	HT				4P	HT-35
			TUMRW10U1					1.5P	HT-35
Taps 3/4W10									
Standard	5 6 8 11 12	SP	SPRW12V	SP	P3	105	15	2.5P	SP-10
		PO	POSW12V	PO	P4			5P	PO-9
For left hand threads	5 6 8 11 12	SP LH	SPRW12V--L	SP	P3	105	15	2.5P	SP-21
		PO LH	POSW12V--L	PO	P4			5P	PO-15
Oxidizing	5 6 8	SP OX	SPRW12VX	SP	P3	105	15	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPRW12VL15	SP	P3	150	15	2.5P	SP-29
			SPRW12VL20			200			SP-29
		LS-PO	POSW12VL15	PO	P4	150		5P	PO-20
			POSW12VL20			200			PO-20
For high carbon steels	5 6	HC-SP	SCMRW12V	SP	P3	105	15	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMRW12V	SP	P3	105	15	2.5P	SP-37
		SU-PO	PUMSW12V	PO	P4			5P	PO-25
		SU-HT	TUMSW12V4	HT	P4			4P	HT-35
			TUMSW12V1					1.5P	HT-35
Taps 7/8W9									
Standard	5 6 8 11 12	SP	SPRW14W	SP	P3	115	17	2.5P	SP-10
		PO	POSW14W	PO	P4			5P	PO-9
Oxidizing	5 6 8	SP OX	SPRW14WX	SP	P3	115	17	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPRW14WL15	SP	P3	150	17	2.5P	SP-29
			SPRW14WL20			200			SP-29
		LS-PO	POSW14WL15	PO	P4	150		5P	PO-20
			POSW14WL20			200			PO-20
For high carbon steels	5 6	HC-SP	SCMRW14W	SP	P3	115	17	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMRW14W	SP	P3	115	17	2.5P	SP-37
Taps 1W8									
Standard	5 6 8 11 12	SP	SPRW16X	SP	P3	125	19	2.5P	SP-10
		PO	POSW16X	PO	P4			5P	PO-9
Oxidizing	5 6 8	SP OX	SPRW16XX	SP	P3	125	19	2.5P	SP-18
Long shank	5 6 8 11 12	LS-SP	SPRW16XL15	SP	P3	150	19	2.5P	SP-29
			SPRW16XL20			200			SP-29

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Long shank	5 6 8 11 12	LS-PO	POSW16XL15	PO	P4	150	19	5P	PO-20
			POSW16XL20			200			PO-20
For high carbon steels	5 6	HC-SP	SCMRW16X	SP	P3	125	19	2.5P	SP-48
For stainless steels	6 7 8	SU-SP	SUMRW16X	SP	P3	125	19	2.5P	SP-37
Taps 1 1/8W7									
Standard	5 6 8 11 12	SP	SPSW18Y	SP	P4	135	23	2.5P	SP-10
		PO	POSW18Y	PO				5P	PO-9
Taps 1 1/4W7									
Standard	5 6 8 11 12	SP	SPMSW20Y	SP	P4	145	24	2.5P	SP-10
		PO	POMSW20Y	PO				5P	PO-9
Taps 1 3/8W6									
Standard	5 6 8 11 12	SP	SPMSW22Z	SP	P4	155	28	2.5P	SP-10
		PO	POMTW22Z	PO	P5			5P	PO-9
Taps 1 1/2W6									
Standard	5 6 8 11 12	SP	SPMSW24Z	SP	P4	165	30	2.5P	SP-10
		PO	POMTW24Z	PO	P5			5P	PO-9
Taps 1 5/8W5									
Standard	5 6 8 11 12	SP	SPMSW260	SP	P4	175	32	2.5P	SP-10
Taps 1 3/4W5									
Standard	5 6 8 11 12	SP	SPMSW280	SP	P4	180	35	2.5P	SP-10

Dies selection		Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 1/16W60										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEW019DNEBC	Di-8
Dies 3/32W48										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEW1HFDNEBC	Di-8
Dies 1/8W40										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEW02HDNEBC	Di-8
Dies 5/32W32										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEW2HJDNEBC	Di-8
Dies 3/16W24										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEW03MDNEBC	Di-9
						25	9		TYGW03MDNEBC	Di-9
	For left hand threads	HSS	6 8 11 12	D LH	II	20	7	2～2.5P	GYEW03MDNEBC	Di-12
Dies 7/32W24										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEW3HMDNEBC	Di-9
Dies 1/4W20										
Solid dies		HSS	6 8 11 12	D	II	20	7	2～2.5P	TYEW04NDNEBC	Di-9
						25	9		TYGW04NDNEBC	Di-9
						38	13		TYJW04NDNEBC	Di-9
Dies 5/16W18										
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYGW05ODNEBC	Di-9
						38	13		TYJW05ODNEBC	Di-9
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYGW05ODNEBC	Di-12
Dies 3/8W16										
Solid dies		HSS	6 8 11 12	D	II	25	9	2～2.5P	TYGW06PDNEBC	Di-9
						38	13		TYJW06PDNEBC	Di-9
						50	16		TYMW06PDNEBC	Di-9
	For left hand threads	HSS	6 8 11 12	D LH	II	25	9	2～2.5P	GYGW06PDNEBC	Di-12
						38	13		GYJW06PDNEBC	Di-12
Dies 7/16W14										
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJW07QDNEBC	Di-9
						50	16		TYMW07QDNEBC	Di-9
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJW07QDNEBC	Di-12
Dies 1/2W12										
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJW08SDNEBC	Di-9
						50	16		TYMW08SDNEBC	Di-9
	For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJW08SDNEBC	Di-12
Dies 9/16W12										
Solid dies		HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJW09SDNEBC	Di-9

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channmfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 5/8W11									
Solid dies	HSS	6 8 11 12	D	II	38	13	2～2.5P	TYJW10UDNEBC	Di-9
					50	16		TYMW10UDNEBC	Di-9
For left hand threads	HSS	6 8 11 12	D LH	II	38	13	2～2.5P	GYJW10UDNEBC	Di-12
Dies 3/4W10									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMW12VDNEBC	Di-9
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYMW12VDNEBC	Di-12
Dies 7/8W9									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMW14WDNEBC	Di-9
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYMW14WDNEBC	Di-12
Dies 1W8									
Solid dies	HSS	6 8 11 12	D	II	50	16	2～2.5P	TYMW16XDNEBC	Di-9
For left hand threads	HSS	6 8 11 12	D LH	II	50	16	2～2.5P	GYMW16XDNEBC	Di-12
Dies 1 1/8W7									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYRW18YDNEBC	Di-9
Dies 1 1/4W7									
Solid dies	HSS	6 8 11 12	D	II	63	20	2～2.5P	TYRW20YDNEBC	Di-9
Dies 1 3/8W6									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUW22ZDNEBC	Di-9
Dies 1 1/2W6									
Solid dies	HSS	6 8 11 12	D	II	75	25	2～2.5P	TYUW24ZDNEBC	Di-9

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps 1/16SM80									
Standard	1 5 6 12	HT	TNMPS04B5	HT	P1	36	3	5P	HT-16
			TNMPS04B1					1.5P	HT-16
Taps 5/64SM64									
Standard	1 5 6 12	HT	TNMPS05D5	HT	P1	42	3	5P	HT-16
			TNMPS05D1					1.5P	HT-16
Taps 3/32SM56									
Standard	5 6 8 11 12	SP	SPPS06E	SP	P1	46	3	2.5P	SP-10
		PO	POPS06E	PO				5P	PO-9
	1 5 6 12	HT	TNMPS06E5	HT	P1	46	3	5P	HT-16
			TNMPS06E1					1.5P	HT-16
Taps 3/32SM100									
Standard	1 5 6 12	HT	TNMPS06A5	HT	P1	46	3	5P	HT-16
			TNMPS06A1					1.5P	HT-16
Taps 1/8SM40									
Standard	5 6 8 11 12	SP	SPPS08H	SP	P1	52	5	2.5P	SP-10
		PO	POQS08H	PO	P2			5P	PO-9
	1 5 6 12	HT	TNMQS08H5	HT	P2	52	5	5P	HT-16
			TNMQS08H1					1.5P	HT-16
Taps 1/8SM44									
Standard	5 6 8 11 12	SP	SPPS08G	SP	P1	52	5	2.5P	SP-10
		PO	POQS08G	PO	P2			5P	PO-9
	1 5 6 12	HT	TNMQS08G5	HT	P2	52	5	5P	HT-16
			TNMQS08G1					1.5P	HT-16
Taps 9/64SM40									
Standard	5 6 8 11 12	SP	SPPS09H	SP	P1	52	5	2.5P	SP-10
		PO	POQS09H	PO	P2			5P	PO-9
	1 5 6 12	HT	TNMQS09H5	HT	P2	52	5	5P	HT-16
			TNMQS09H1					1.5P	HT-16
Taps 11/64SM40									
Standard	5 6 8 11 12	SP	SPPS11H	SP	P1	60	5.5	2.5P	SP-10
		PO	POQS11H	PO	P2			5P	PO-9
	1 5 6 12	HT	TNMQS11H5	HT	P2	60	5.5	5P	HT-16
			TNMQS11H1					1.5P	HT-16
Taps 3/16SM24									
Standard	1 5 6 12	HT	TNMQS12M5	HT	P2	60	5.5	5P	HT-16
			TNMQS12M1					1.5P	HT-17
Taps 3/16SM28									
Standard	5 6 8 11 12	SP	SPQS12K	SP	P2	60	5.5	2.5P	SP-10
		PO	POQS12K	PO				5P	PO-9
	1 5 6 12	HT	TNMQS12K5	HT	P2	60	5.5	5P	HT-17
			TNMQS12K1					1.5P	HT-17

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps 3/16SM32									
Standard	5 6 8 11 12	SP	SPQS12J	SP	P2	60	5.5	2.5P	SP-10
		PO	POQS12J	PO				5P	PO-9
	1 5 6 12	HT	TNMQS12J5	HT	P2	60	5.5	5P	HT-17
			TNMQS12J1					1.5P	HT-17
Taps 3/16SM40									
Standard	1 5 6 12	HT	TNMQS12H5	HT	P2	60	5.5	5P	HT-17
			TNMQS12H1					1.5P	HT-17
Taps 7/32SM32									
Standard	5 6 8 11 12	SP	SPQS14J	SP	P2	62	6	2.5P	SP-10
		PO	POQS14J	PO				5P	PO-9
Taps 15/64SM28									
Standard	5 6 8 11 12	SP	SPQS15K	SP	P2	62	6	2.5P	SP-10
		PO	POQS15K	PO				5P	PO-9
	1 5 6 12	HT	TNMQS15K5	HT	P2	62	6	5P	HT-17
			TNMQS15K1					1.5P	HT-17
Taps 1/4SM24									
Standard	5 6 8 11 12	SP	SPQS16M	SP	P2	62	6	2.5P	SP-10
		PO	POQS16M	PO				5P	PO-9
Taps 1/4SM40									
Standard	5 6 8 11 12	SP	SPPS16H	SP	P1	62	6	2.5P	SP-10
		PO	POQS16H	PO	P2			5P	PO-9

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 3/32SM56									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES06EDNEBC	Di-9
Dies 1/8SM40									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES08HDNEBC	Di-9
Dies 1/8SM44									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES08GDNEBC	Di-9
Dies 9/64SM40									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES09HDNEBC	Di-9
Dies 11/64SM40									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES11HDNEBC	Di-9
Dies 3/16SM28									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES12KDNEBC	Di-9
Dies 3/16SM32									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES12JDNEBC	Di-9
Dies 7/32SM32									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES14JDNEBC	Di-9
Dies 15/64SM28									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES15KDNEBC	Di-9
Dies 1/4SM24									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES16MDNEBC	Di-9
Dies 1/4SM40									
Solid dies	HSS	6 8 11 12	D	II	20	7	2～2.5P	TYES16HDNEBC	Di-9

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Taps 1/16-28

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Rc	Standard (ISO standard)	Standard	1 5 6 11 12	Rc	TH2RC01K	HT	II	59	8	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T01K-8	HT	II	55	8	2.5P	Pipe-2
			5 6 8 11 12	SP-PT	SH2T01K-8	SP	II	55	8	2.5P	Pipe-9
		For PT threads short (lg) type	1 5 6 11 12	S-PT	TSPT01K-8	HT	II	55	8	2.5P	Pipe-5
				PT-X	THX2T01K-8			75			Pipe-4
			5 6 8 11 12	SP-PT-X	SHX2T01K-8	SP	II	75	8	2.5P	Pipe-11
	Long shank	For PT threads	1 5 6 11 12	LS-PT	L10T01K-8	HT	II	100	8	2.5P	Pipe-7
	Interrupted	For PT threads	6 7 8	INT-PT	TINT01K-8	SL	II	55	8	3P	Pipe-14
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST01K-8	SL	II	55	8	3P	Pipe-15
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT01K-8	HT	II	55	8	2.5P	Pipe-24
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT01K-8	HT	II	55	8	2.5P	Pipe-25
Rp	Standard (ISO standard)		1 5 6 11 12	Rp	TH2RP01K	HT	II	59	8	3.5P	Pipe-28
PS	Standard		1 5 6 11 12	PS	TH2P01K-8	HT	II	55	8	3.5P	Pipe-29
G	Standard (ISO standard)		1 5 6 11 12	G	TH2G01K	HT	II	59	8	3.5P	Pipe-35
PF	Standard		1 5 6 11 12	PF	TH2F01K-8	HT	II	55	8	3.5P	Pipe-36

Taps 1/8-28

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Rc	Standard (ISO standard)	Standard	1 5 6 11 12	Rc	TH2RC02K	HT	II	59	8	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T02K	HT	II	55	8	2.5P	Pipe-2
			5 6 8 11 12	SP-PT	SH2T02K	SP	II	55	8	2.5P	Pipe-9
		For PT threads short (lg) type	1 5 6 11 12	S-PT	TSPT02K	HT	II	55	8	2.5P	Pipe-5
			5 6 8 11 12	SP-S-PT	SSPT02K	SP	II	55	8	2.5P	Pipe-10
			1 5 6 11 12	PT-X	THX2T02K	HT	II	75	8	2.5P	Pipe-4
			5 6 8 11 12	SP-PT-X	SHX2T02K	SP	II	75	8	2.5P	Pipe-11
	For left hand threads	For PT threads	1 5 6 11 12	PT LH	TH2T02K--L	HT	II	55	8	2.5P	Pipe-3
		For PT threads short (lg) type	1 5 6 11 12	S-PT LH	TSPT02K--L	HT	II	55	8	2.5P	Pipe-6
	Long shank	For PT threads	1 5 6 11 12	LS-PT	L10T02K	HT	II	100	8	2.5P	Pipe-7
					L15T02K			150			Pipe-7
					L20T02K			200			Pipe-7
			5 6 8 11 12	LS-SP-PT	SH2T02KL10	SP	II	100	8	2.5P	Pipe-12
					SH2T02KL12			120			Pipe-12
					SH2T02KL15			150			Pipe-12
		For PT threads short (lg) type	1 5 6 11 12	LS-S-PT	TSPT02KL10	HT	II	100	8	2.5P	Pipe-8
					TSPT02KL15			150			Pipe-8
					TSPT02KL20			200			Pipe-8
			5 6 8 11 12	LS-SP-S-PT	SSPT02KL10	SP	II	100	8	2.5P	Pipe-13
					SSPT02KL12			120			Pipe-13
					SSPT02KL15			150			Pipe-13
	Interrupted	For PT threads	6 7 8	INT-PT	TINT02K	SL	II	55	8	3P	Pipe-14
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST02K	SL	II	55	8	3P	Pipe-15
		Long shank for PT threads	6 7 8	LS-INT-PT	TINT02KL10	SL	II	100	8	3P	Pipe-16
					TINT02KL12			120			Pipe-16
					TINT02KL15			150			Pipe-16
		Long shank for PT threads short (lg) type	6 7 8	LS-INT-S-PT	TIST02KL10	SL	II	100	8	3P	Pipe-17
					TIST02KL12			120			Pipe-17
					TIST02KL15			150			Pipe-17
	For low carbon steels	For PT threads	6 8	LC-PT	LCPT02K	HT	II	55	8	2.5P	Pipe-18
		For PT threads short (lg) type	6 8	LC-S-PT	LCSPT02K	HT	II	55	8	2.5P	Pipe-19
	For stainless steels	For PT threads	6 7 8	SU-PT	TU2T02K	HT	II	55	8	2.5P	Pipe-20
				SU-SP-PT	-	SP				2P	Pipe-22
PT	For stainless steels	For PT threads short (lg) type	6 7 8	SU-S-PT	TUST02K	HT	II	55	8	2.5P	Pipe-21
				SU-SP-S-PT	-	SP				2P	Pipe-23
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT02K	HT	II	55	8	2.5P	Pipe-24
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT02K	HT	II	55	8	2.5P	Pipe-25
	Carbide	For PT threads	1 12 13	CT-PT	TCPT02K	HT	II	55	8	2.5P	Pipe-26
		For PT threads short (lg) type	1 12 13	CT-S-PT	TCST02K	HT	II	55	8	2.5P	Pipe-27
Rp	Standard (ISO standard)		1 5 6 11 12	Rp	TH2RP02K	HT	II	59	8	3.5P	Pipe-28
PS	Standard		1 5 6 11 12	PS	TH2P02K	HT	II	55	8	3.5P	Pipe-29
					TH2P02K1					1.5P	Pipe-29
			5 6 8 11 12	SP-PS	SH2P02K	SP	II	55	8	2.5P	Pipe-32
	For left hand threads		1 5 6 11 12	PS LH	TH2P02K--L	HT	II	55	8	3.5P	Pipe-30
	Long shank		1 5 6 11 12	LS-PS	L10P02K	HT	II	100	8	3.5P	Pipe-31
					L15P02K			150			Pipe-31
					L20P02K			200			Pipe-31
			5 6 8 11 12	LS-SP-PS	SH2P02KL10	SP	II	100	8	2.5P	Pipe-33
					SH2P02KL15			150			Pipe-33
	Carbide		1 12 13	CT-PS	TCPS02K	HT	II	55	8	3.5P	Pipe-34
G	Standard (ISO standard)		1 5 6 11 12	G	TH2G02K	HT	II	59	8	3.5P	Pipe-35
PF	Standard		5 6 8 11 12	PF	TH2F02K	HT	II	55	8	3.5P	Pipe-36
					TH2F02K1					1.5P	Pipe-36
			5 6 8 11 12	SP-PF	SH2F02K	SP	II	55	8	2.5P	Pipe-39
	For left hand threads		1 5 6 11 12	PF LH	TH2F02K--L	HT	II	55	8	3.5P	Pipe-37
	Long shank		5 6 8 11 12	LS-PF	L10F02K	HT	II	100	8	3.5P	Pipe-38
					L15F02K			150			Pipe-38
					L20F02K			200			Pipe-38
				LS-SP-PF	SH2F02KL10	SP	II	100	8	2.5P	Pipe-40
					SH2F02KL12			120			Pipe-40
					SH2F02KL15			150			Pipe-40
	For stainless steels		6 7 8	SU-PF	TU2F02K	HT	II	55	8	3.5P	Pipe-41
	For cast irons		1 4 5 12	FC-PF	FCPF02K	HT	II	55	8	3.5P	Pipe-42
	Carbide		1 12 13	CT-PF	TCPF02K	HT	II	55	8	3.5P	Pipe-43

Taps 1/4-19

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Rc	Standard (ISO standard)	Standard	1 5 6 11 12	Rc	TH2RC04-	HT	II	67	11	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T04-	HT	II	62	11	2.5P	Pipe-2
			5 6 8 11 12	SP-PT	SH2T04-	SP	II	62	11	2.5P	Pipe-9
		For PT threads short (lg) type	1 5 6 11 12	S-PT	TSPT04-	HT	II	62	11	2.5P	Pipe-5
			5 6 8 11 12	SP-S-PT	SSPT04-	SP	II	62	11	2.5P	Pipe-10
			1 5 6 11 12	PT-X	THX2T04-	HT	II	85	11	2.5P	Pipe-4
			5 6 8 11 12	SP-PT-X	SHX2T04-	SP	II	85	11	2.5P	Pipe-11
	For left hand threads	For PT threads	1 5 6 11 12	PT LH	TH2T04---L	HT	II	62	11	2.5P	Pipe-3
		For PT threads short (lg) type	1 5 6 11 12	S-PT LH	TSPT04---L	HT	II	62	11	2.5P	Pipe-6
	Long shank	For PT threads	1 5 6 11 12	LS-PT	L10T04-	HT	II	100	11	2.5P	Pipe-7
					L15T04-			150			Pipe-7
					L20T04-			200			Pipe-7
			5 6 8 11 12	LS-SP-PT	SH2T04-L10	SP	II	100	11	2.5P	Pipe-12
					SH2T04-L12			120			Pipe-12
					SH2T04-L15			150			Pipe-12
		For PT threads short (lg) type	1 5 6 11 12	LS-S-PT	TSPT04-L10	HT	II	100	11	2.5P	Pipe-8
					TSPT04-L15			150			Pipe-8
					TSPT04-L20			200			Pipe-8

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection			Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
PT	Long shank	For PT threads short (lg) type	5 6 8 11 12	LS-SP-S-PT	SSPT04-L10	SP	II	100	11	2.5P	Pipe-13
					SSPT04-L12			120			Pipe-13
					SSPT04-L15			150			Pipe-13
	Interrupted	For PT threads	6 7 8	INT-PT	TINT04-	SL	II	62	11	3P	Pipe-14
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST04-	SL	II	62	11	3P	Pipe-15
		Long shank for PT threads	6 7 8	LS-INT-PT	TINT04-L10	SL	II	100	11	3P	Pipe-16
					TINT04-L12			120			Pipe-16
					TINT04-L15			150			Pipe-16
		Long shank for PT threads short (lg) type	6 7 8	LS-INT-S-PT	TIST04-L10	SL	II	100	11	3P	Pipe-17
					TIST04-L12			120			Pipe-17
					TIST04-L15			150			Pipe-17
	For low carbon steels	For PT threads	6 8	LC-PT	LCPT04-	HT	II	62	11	2.5P	Pipe-18
		For PT threads short (lg) type	6 8	LC-S-PT	LCSPT04-	HT	II	62	11	2.5P	Pipe-19
	For stainless steels	For PT threads	6 7 8	SU-PT	TU2T04-	HT	II	62	11	2.5P	Pipe-20
				SU-SP-PT	-	SP				2P	Pipe-22
		For PT threads short (lg) type	6 7 8	SU-S-PT	TUST04-	HT	II	62	11	2.5P	Pipe-21
				SU-SP-S-PT	-	SP				2P	Pipe-23
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT04-	HT	II	62	11	2.5P	Pipe-24
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT04-	HT	II	62	11	2.5P	Pipe-25
	Carbide	For PT threads	1 12 13	CT-PT	TCPT04-	HT	II	62	11	2.5P	Pipe-26
		For PT threads short (lg) type	1 12 13	CT-S-PT	TCST04-	HT	II	62	11	2.5P	Pipe-27
Rp	Standard (ISO standard)		1 5 6 11 12	Rp	TH2RP04-	HT	II	67	11	3.5P	Pipe-28
PS	Standard		1 5 6 11 12	PS	TH2P04-	HT	II	62	11	3.5P	Pipe-29
					TH2P04-1					1.5P	Pipe-29
			5 6 8 11 12	SP-PS	SH2P04-	SP	II	62	11	2.5P	Pipe-32
	For left hand threads		1 5 6 11 12	PS LH	TH2P04---L	HT	II	62	11	3.5P	Pipe-30
	Long shank		1 5 6 11 12	LS-PS	L10P04-	HT	II	100	11	3.5P	Pipe-31
					L15P04-			150			Pipe-31
					L20P04-			200			Pipe-31
			5 6 8 11 12	LS-SP-PS	SH2P04-L10	SP	II	100	11	2.5P	Pipe-33
					SH2P04-L15			150			Pipe-33
	Carbide		1 12 13	CT-PS	TCPS04-	HT	II	62	11	3.5P	Pipe-34
G	Standard (ISO standard)		1 5 6 11 12	G	TH2G04-	HT	II	67	11	3.5P	Pipe-35
PF	Standard		1 5 6 11 12	PF	TH2F04-	HT	II	62	11	3.5P	Pipe-36
					TH2F04-1					1.5P	Pipe-36
			5 6 8 11 12	SP-PF	SH2F04-	SP	II	62	11	2.5P	Pipe-39
	For left hand threads		1 5 6 11 12	PF LH	TH2F04---L	HT	II	62	11	3.5P	Pipe-37
	Long shank		1 5 6 11 12	LS-PF	L10F04-	HT	II	100	11	3.5P	Pipe-38
					L15F04-			150			Pipe-38
					L20F04-			200			Pipe-38
			5 6 8 11 12	LS-SP-PF	SH2F04-L10	SP	II	100	11	2.5P	Pipe-40
					SH2F04-L12			120			Pipe-40
					SH2F04-L15			150			Pipe-40
	For stainless steels		6 7 8	SU-PF	TU2F04-	HT	II	62	11	3.5P	Pipe-41
	For cast irons		1 4 5 12	FC-PF	FCPF04-	HT	II	62	11	3.5P	Pipe-42
	Carbide		1 12 13	CT-PF	TCPF04-	HT	II	62	11	3.5P	Pipe-43

Taps 3/8-19

Tap selection			Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
Rc	Standard (ISO standard)	Standard	1 5 6 11 12	Rc	TH2RC06-	HT	II	75	14	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T06-	HT	II	65	14	2.5P	Pipe-2
			5 6 8 11 12	SP-PT	SH2T06-	SP	II	65	14	2.5P	Pipe-9
PT	Standard	For PT threads short (lg) type	1 5 6 11 12	S-PT	TSPT06-	HT	II	65	14	2.5P	Pipe-5
			5 6 8 11 12	SP-S-PT	SSPT06-	SP	II	65	14	2.5P	Pipe-10
			1 5 6 11 12	PT-X	THX2T06-	HT	II	95	14	2.5P	Pipe-4
			5 6 8 11 12	SP-PT-X	SHX2T06-	SP	II	95	14	2.5P	Pipe-11
	For left hand threads	For PT threads	1 5 6 11 12	PT LH	TH2T06---L	HT	II	65	14	2.5P	Pipe-3
		For PT threads short (lg) type	1 5 6 11 12	S-PT LH	TSPT06---L	HT	II	65	14	2.5P	Pipe-6
	Long shank	For PT threads	1 5 6 11 12	LS-PT	L10T06-	HT	II	100	14	2.5P	Pipe-7
					L12T06-			120			Pipe-7
					L15T06-			150			Pipe-7
					L20T06-			200			Pipe-7
			5 6 8 11 12	LS-SP-PT	SH2T06-L12	SP	II	120	14	2.5P	Pipe-12
					SH2T06-L15			150			Pipe-12
		For PT threads short (lg) type	1 5 6 11 12	LS-S-PT	TSPT06-L10	HT	II	100	14	2.5P	Pipe-8
					TSPT06-L12			120			Pipe-8
					TSPT06-L15			150			Pipe-8
					TSPT06-L20			200			Pipe-8
			5 6 8 11 12	LS-SP-S-PT	SSPT06-L12	SP	II	120	14	2.5P	Pipe-13
					SSPT06-L15			150			Pipe-13
	Interrupted	For PT threads	6 7 8	INT-PT	TINT06-	SL	II	65	14	3P	Pipe-14
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST06-	SL	II	65	14	3P	Pipe-15
		Long shank for PT threads	6 7 8	LS-INT-PT	TINT06-L10	SL	II	100	14	3P	Pipe-16
					TINT06-L12			120			Pipe-16
					TINT06-L15			150			Pipe-16
		Long shank for PT threads short (lg) type	6 7 8	LS-INT-S-PT	TIST06-L10	SL	II	100	14	3P	Pipe-17
					TIST06-L12			120			Pipe-17
					TIST06-L15			150			Pipe-17
	For low carbon steels	For PT threads	6 8	LC-PT	LCPT06-	HT	II	65	14	2.5P	Pipe-18
	For low carbon steels	For PT threads short (lg) type	6 8	LC-S-PT	LCSPT06-	HT	II	65	14	2.5P	Pipe-19
	For stainless steels	For PT threads	6 7 8	SU-PT	TU2T06-	HT	II	65	14	2.5P	Pipe-20
				SU-SP-PT	-	SP				2P	Pipe-22
		For PT threads short (lg) type	6 7 8	SU-S-PT	TUST06-	HT	II	65	14	2.5P	Pipe-21
				SU-SP-S-PT	-	SP				2P	Pipe-23
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT06-	HT	II	65	14	2.5P	Pipe-24
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT06-	HT	II	65	14	2.5P	Pipe-25
	Carbide	For PT threads	1 12 13	CT-PT	TCPT06-	HT	II	65	14	2.5P	Pipe-26
		For PT threads short (lg) type	1 12 13	CT-S-PT	TCST06-	HT	II	65	14	2.5P	Pipe-27
Rp	Standard (ISO standard)		1 5 6 11 12	Rp	TH2RP06-	HT	II	75	14	3.5P	Pipe-28
PS	Standard		1 5 6 11 12	PS	TH2P06-	HT	II	65	14	3.5P	Pipe-29
					TH2P06-1					1.5P	Pipe-29
			5 6 8 11 12	SP-PS	SH2P06-	SP	II	65	14	2.5P	Pipe-32
	For left hand threads		1 5 6 11 12	PS LH	TH2P06---L	HT	II	65	14	3.5P	Pipe-30
	Long shank		1 5 6 11 12	LS-PS	L10P06-	HT	II	100	14	3.5P	Pipe-31
					L15P06-			150			Pipe-31
					L20P06-			200			Pipe-31
			5 6 8 11 12	LS-SP-PS	SH2P06-L15	SP	II	150	14	2.5P	Pipe-33
	Carbide		1 12 13	CT-PS	TCPS06-	HT	II	65	14	3.5P	Pipe-34
G	Standard (ISO standard)		1 5 6 11 12	G	TH2G06-	HT	II	75	14	3.5P	Pipe-35
PF	Standard		1 5 6 11 12	PF	TH2F06-	HT	II	65	14	3.5P	Pipe-36
					TH2F06-1					1.5P	Pipe-36
			5 6 8 11 12	SP-PF	SH2F06-	SP	II	65	14	2.5P	Pipe-39
	For left hand threads		1 5 6 11 12	PF LH	TH2F06---L	HT	II	65	14	3.5P	Pipe-37

Think threads with YAMAWA

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chanmfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection			Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
PF	Long shank		1 5 6 11 12	LS-PF	L10F06-	HT	II	100	14	3.5P	Pipe-38
					L15F06-			150			Pipe-38
					L20F06-			200			Pipe-38
			5 6 8 11 12	LS-SP-PF	SH2F06-L12	SP	II	120	14	2.5P	Pipe-40
					SH2F06-L15			150			Pipe-40
	For stainless steels		6 7 8	SU-PF	TU2F06-	HT	II	65	14	3.5P	Pipe-41
	For cast irons		1 4 5 12	FC-PF	FCPF06-	HT	II	65	14	3.5P	Pipe-42
	Carbide		1 12 13	CT-PF	TCPF06-	HT	II	65	14	3.5P	Pipe-43

Taps 1/2-14

Tap selection			Main material	Symbol	Code	Flute	Class	L	D_s	ℓ_c	Product page
Rc	Standard (ISO standard)	Standard	1 5 6 11 12	Rc	TH2RC08Q	HT	II	87	18	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T08Q	HT	II	80	18	2.5P	Pipe-2
			5 6 8 11 12	SP-PT	SH2T08Q	SP	II	80	18	2.5P	Pipe-9
		For PT threads short (lg) type	1 5 6 11 12	S-PT	TSPT08Q	HT	II	80	18	2.5P	Pipe-5
			5 6 8 11 12	SP-S-PT	SSPT08Q	SP	II	80	18	2.5P	Pipe-10
			1 5 6 11 12	PT-X	THX2T08Q	HT	II	105	18	2.5P	Pipe-4
			5 6 8 11 12	SP-PT-X	SHX2T08Q	SP	II	105	18	2.5P	Pipe-11
	For left hand threads	For PT threads	1 5 6 11 12	PT LH	TH2T08Q--L	HT	II	80	18	2.5P	Pipe-3
		For PT threads short (lg) type	1 5 6 11 12	S-PT LH	TSPT08Q--L	HT	II	80	18	2.5P	Pipe-6
	Long shank	For PT threads	1 5 6 11 12	LS-PT	L15T08Q	HT	II	150	18	2.5P	Pipe-7
					L20T08Q			200			Pipe-7
			5 6 8 11 12	LS-SP-PT	SH2T08QL15	SP	II	150	18	2.5P	Pipe-12
		For PT threads short (lg) type	1 5 6 11 12	LS-S-PT	TSPT08QL15	HT	II	150	18	2.5P	Pipe-8
					TSPT08QL20			200			Pipe-8
			5 6 8 11 12	LS-SP-S-PT	SSPT08QL15	SP	II	150	18	2.5P	Pipe-13
	Interrupted	For PT threads	6 7 8	INT-PT	TINT08Q	SL	II	80	18	3P	Pipe-14
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST08Q	SL	II	80	18	3P	Pipe-15
		Long shank for PT threads	6 7 8	LS-INT-PT	TINT08QL15	SL	II	150	18	3P	Pipe-16
		Long shank for PT threads short (lg) type	6 7 8	LS-INT-S-PT	TIST08QL15	SL	II	150	18	3P	Pipe-17
	For low carbon steels	For PT threads	6 8	LC-PT	LCPT08Q	HT	II	80	18	2.5P	Pipe-18
		For PT threads short (lg) type	6 8	LC-S-PT	LCSPT08Q	HT	II	80	18	2.5P	Pipe-19
	For stainless steels	For PT threads	6 7 8	SU-PT	TU2T08Q	HT	II	80	18	2.5P	Pipe-20
				SU-SP-PT	-	SP				2P	Pipe-22
		For PT threads short (lg) type	6 7 8	SU-S-PT	TUST08Q	HT	II	80	18	2.5P	Pipe-21
				SU-SP-S-PT	-	SP				2P	Pipe-23
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT08Q	HT	II	80	18	2.5P	Pipe-24
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT08Q	HT	II	80	18	2.5P	Pipe-25
	Carbide	For PT threads	1 12 13	CT-PT	TCPT08Q	HT	II	80	18	2.5P	Pipe-26
		For PT threads short (lg) type	1 12 13	CT-S-PT	TCST08Q	HT	II	80	18	2.5P	Pipe-27
Rp	Standard (ISO standard)		1 5 6 11 12	Rp	TH2RP08Q	HT	II	87	18	3.5P	Pipe-28
PS	Standard		1 5 6 11 12	PS	TH2P08Q	HT	II	80	18	3.5P	Pipe-29
					TH2P08Q1					1.5P	Pipe-29
			5 6 8 11 12	SP-PS	SH2P08Q	SP	II	80	18	2.5P	Pipe-32
	For left hand threads		1 5 6 11 12	PS LH	TH2P08Q--L	HT	II	80	18	3.5P	Pipe-30
	Long shank		1 5 6 11 12	LS-PS	L15P08Q	HT	II	150	18	3.5P	Pipe-31
					L20P08Q			200			Pipe-31
			5 6 8 11 12	LS-SP-PS	SH2P08QL15	SP	II	150	18	2.5P	Pipe-33
	Carbide		1 12 13	CT-PS	TCPS08Q	HT	II	80	18	3.5P	Pipe-34
G	Standard (ISO standard)		1 5 6 11 12	G	TH2G08Q	HT	II	87	18	3.5P	Pipe-35
PF	Standard		1 5 6 11 12	PF	TH2F08Q	HT	II	80	18	3.5P	Pipe-36
					TH2F08Q1					1.5P	Pipe-36
			5 6 8 11 12	SP-PF	SH2F08Q	SP	II	80	18	2.5P	Pipe-39
PF	For left hand threads		1 5 6 11 12	PF LH	TH2F08Q--L	HT	II	80	18	3.5P	Pipe-37
	Long shank		1 5 6 11 12	LS-PF	L15F08Q	HT	II	150	18	3.5P	Pipe-38
					L20F08Q			200			Pipe-38
			5 6 8 11 12	LS-SP-PF	SH2F08QL15	SP	II	150	18	2.5P	Pipe-40
	For stainless steels		6 7 8	SU-PF	TU2F08Q	HT	II	80	18	3.5P	Pipe-41
	For cast irons		1 4 5 12	FC-PF	FCPF08Q	HT	II	80	18	3.5P	Pipe-42
	Carbide		1 12 13	CT-PF	TCPF08Q	HT	II	80	18	3.5P	Pipe-43

Taps 5/8-14

Tap selection			Main material	Symbol	Code	Flute	Class	L	D_s	ℓ_c	Product page
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T10Q	HT	II	82	19	2.5P	Pipe-2
PS	Standard		1 5 6 11 12	PS	TH2P10Q	HT	II	82	19	3.5P	Pipe-29
PF	Standard		1 5 6 11 12	PF	TH2F10Q	HT	II	82	19	3.5P	Pipe-36

Taps 3/4-14

Tap selection			Main material	Symbol	Code	Flute	Class	L	D_s	ℓ_c	Product page
Rc	Standard (ISO standard)	Standard	1 5 6 11 12	Rc	TH2RC12Q	HT	II	96	23	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T12Q	HT	II	85	23	2.5P	Pipe-2
			5 6 8 11 12	SP-PT	SH2T12Q	SP	II	85	23	2.5P	Pipe-9
		For PT threads short (lg) type	1 5 6 11 12	S-PT	TSPT12Q	HT	II	85	23	2.5P	Pipe-5
			5 6 8 11 12	SP-S-PT	SSPT12Q	SP	II	85	23	2.5P	Pipe-10
	For left hand threads	For PT threads	1 5 6 11 12	PT LH	TH2T12Q--L	HT	II	85	23	2.5P	Pipe-3
		For PT threads short (lg) type	1 5 6 11 12	S-PT LH	TSPT12Q--L	HT	II	85	23	2.5P	Pipe-6
	Long shank	For PT threads	1 5 6 11 12	LS-PT	L15T12Q	HT	II	150	23	2.5P	Pipe-7
					L20T12Q			200			Pipe-7
			5 6 8 11 12	LS-SP-PT	SH2T12QL15	SP	II	150	23	2.5P	Pipe-12
		For PT threads short (lg) type	1 5 6 11 12	LS-S-PT	TSPT12QL15	HT	II	150	23	2.5P	Pipe-8
					TSPT12QL20			200			Pipe-8
			5 6 8 11 12	LS-SP-S-PT	SSPT12QL15	SP	II	150	23	2.5P	Pipe-13
	Interrupted	For PT threads	6 7 8	INT-PT	TINT12Q	SL	II	85	23	3P	Pipe-14
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST12Q	SL	II	85	23	3P	Pipe-15
		Long shank for PT threads	6 7 8	LS-INT-PT	TINT12QL15	SL	II	150	23	3P	Pipe-16
		Long shank for PT threads short (lg) type	6 7 8	LS-INT-S-PT	TIST12QL15	SL	II	150	23	3P	Pipe-17
	For low carbon steels	For PT threads	6 8	LC-PT	LCPT12Q	HT	II	85	23	2.5P	Pipe-18
		For PT threads short (lg) type	6 8	LC-S-PT	LCSPT12Q	HT	II	85	23	2.5P	Pipe-19
	For stainless steels	For PT threads	6 7 8	SU-PT	TU2T12Q	HT	II	85	23	2.5P	Pipe-20
				SU-SP-PT	-	SP				2P	Pipe-22
		For PT threads short (lg) type	6 7 8	SU-S-PT	TUST12Q	HT	II	85	23	2.5P	Pipe-21
				SU-SP-S-PT	-	SP				2P	Pipe-23
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT12Q	HT	II	85	23	2.5P	Pipe-24
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT12Q	HT	II	85	23	2.5P	Pipe-25
	Carbide	For PT threads	1 12 13	CT-PT	TCPT12Q	HT	II	85	23	2.5P	Pipe-26
Rp	Standard (ISO standard)		1 5 6 11 12	Rp	TH2RP12Q	HT	II	96	23	3.5P	Pipe-28
PS	Standard		1 5 6 11 12	PS	TH2P12Q	HT	II	85	23	3.5P	Pipe-29
					TH2P12Q1					1.5P	Pipe-29
			5 6 8 11 12	SP-PS	SH2P12Q	SP	II	85	23	2.5P	Pipe-32
	For left hand threads		1 5 6 11 12	PS LH	TH2P12Q--L	HT	II	85	23	3.5P	Pipe-30
	Long shank		1 5 6 11 12	LS-PS	L15P12Q	HT	II	150	23	3.5P	Pipe-31
					L20P12Q			200			Pipe-31
			5 6 8 11 12	LS-SP-PS	SH2P12QL15	SP	II	150	23	2.5P	Pipe-33
	Carbide		1 12 13	CT-PS	TCPS12Q	HT	II	85	23	3.5P	Pipe-34
G	Standard (ISO standard)		1 5 6 11 12	G	TH2G12Q	HT	II	96	23	3.5P	Pipe-35
PF	Standard		1 5 6 11 12	PF	TH2F12Q	HT	II	85	23	3.5P	Pipe-36
					TH2F12Q1					1.5P	Pipe-36

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection			Main material	Symbol (Note 1)	Code	Flute	Class	L	D_s	ℓ_c	Product page
PF	Standard		5 6 8 11 12	SP-PF	SH2F12Q	SP	II	85	23	2.5P	Pipe-39
	For left hand threads		1 5 6 11 12	PF LH	TH2F12Q--L	HT	II	85	23	3.5P	Pipe-37
	Long shank		1 5 6 11 12	LS-PF	L15F12Q	HT	II	150	23	3.5P	Pipe-38
					L20F12Q			200			Pipe-38
			5 6 8 11 12	LS-SP-PF	SH2F12QL15	SP	II	150	23	2.5P	Pipe-40
	For stainless steels		6 7 8	SU-PF	TU2F12Q	HT	II	85	23	3.5P	Pipe-41
	For cast irons		1 4 5 12	FC-PF	FCPF12Q	HT	II	85	23	3.5P	Pipe-42
	Carbide		1 12 13	CT-PF	TCPF12Q	HT	II	85	23	3.5P	Pipe-43
Taps 7/8-14											
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T14Q	HT	II	90	24	2.5P	Pipe-2
PS	Standard		1 5 6 11 12	PS	TH2P14Q	HT	II	90	24	3.5P	Pipe-29
PF	Standard		1 5 6 11 12	PF	TH2F14Q	HT	II	90	24	3.5P	Pipe-36
Taps 1-11											
Rc	Standard (ISO standard)	Standard	1 5 6 11 12	Rc	TH2RC16U	HT	II	109	26	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T16U	HT	II	95	26	2.5P	Pipe-2
			5 6 8 11 12	SP-PT	SH2T16U	SP	II	95	26	2.5P	Pipe-9
		For PT threads short (lg) type	1 5 6 11 12	S-PT	TSPT16U	HT	II	95	26	2.5P	Pipe-5
			5 6 8 11 12	SP-S-PT	SSPT16U	SP	II	95	26	2.5P	Pipe-10
	For left hand threads	For PT threads	1 5 6 11 12	PT LH	TH2T16U--L	HT	II	95	26	2.5P	Pipe-3
		For PT threads short (lg) type	1 5 6 11 12	S-PT LH	TSPT16U--L	HT	II	95	26	2.5P	Pipe-6
	Long shank	For PT threads	1 5 6 11 12	LS-PT	L15T16U	HT	II	150	26	2.5P	Pipe-7
					L20T16U			200			Pipe-7
			5 6 8 11 12	LS-SP-PT	SH2T16UL15	SP	II	150	26	2.5P	Pipe-12
					SH2T16UL20			200			Pipe-12
		For PT threads short (lg) type	1 5 6 11 12	LS-S-PT	TSPT16UL15	HT	II	150	26	2.5P	Pipe-8
					TSPT16UL20			200			Pipe-8
			5 6 8 11 12	LS-SP-S-PT	SSPT16UL15	SP	II	150	26	2.5P	Pipe-13
					SSPT16UL20			200			Pipe-13
	Interrupted	For PT threads	6 7 8	INT-PT	TINT16U	SL	II	95	26	3P	Pipe-14
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST16U	SL	II	95	26	3P	Pipe-15
		Long shank for PT threads	6 7 8	LS-INT-PT	TINT16UL15	SL	II	150	26	3P	Pipe-16
					TINT16UL20			200			Pipe-16
		Long shank for PT threads short (lg) type	6 7 8	LS-INT-S-PT	TIST16UL15	SL	II	150	26	3P	Pipe-17
					TIST16UL20			200			Pipe-17
	For low carbon steels	For PT threads	6 8	LC-PT	LCPT16U	HT	II	95	26	2.5P	Pipe-18
		For PT threads short (lg) type	6 8	LC-S-PT	LCSPT16U	HT	II	95	26	2.5P	Pipe-19
	For stainless steels	For PT threads	6 7 8	SU-PT	TU2T16U	HT	II	95	26	2.5P	Pipe-20
				SU-SP-PT	-	SP				2P	Pipe-22
		For PT threads short (lg) type	6 7 8	SU-S-PT	TUST16U	HT	II	95	26	2.5P	Pipe-21
				SU-SP-S-PT	-	SP				2P	Pipe-23
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT16U	HT	II	95	26	2.5P	Pipe-24
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT16U	HT	II	95	26	2.5P	Pipe-25
	Carbide	For PT threads	1 12 13	CT-PT	TCPT16U	HT	II	95	26	2.5P	Pipe-26
Rp	Standard (ISO standard)		1 5 6 11 12	Rp	TH2RP16U	HT	II	109	26	3.5P	Pipe-28
PS	Standard		1 5 6 11 12	PS	TH2P16U	HT	II	95	26	3.5P	Pipe-29
					TH2P16U1					1.5P	Pipe-29
			5 6 8 11 12	SP-PS	SH2P16U	SP	II	95	26	2.5P	Pipe-32
	For left hand threads		1 5 6 11 12	PS LH	TH2P16U--L	HT	II	95	26	3.5P	Pipe-30
	Long shank		1 5 6 11 12	LS-PS	L15P16U	HT	II	150	26	3.5P	Pipe-31
					L20P16U			200			Pipe-31
PS	Long shank		5 6 8 11 12	LS-SP-PS	SH2P16UL15	SP	II	150	26	2.5P	Pipe-33
					SH2P16UL20			200			Pipe-33
	Carbide		1 12 13	CT-PS	TCPS16U	HT	II	95	26	3.5P	Pipe-34
G	Standard (ISO standard)		1 5 6 11 12	G	TH2G16U	HT	II	109	26	3.5P	Pipe-35
PF	Standard		1 5 6 11 12	PF	TH2F16U	HT	II	95	26	3.5P	Pipe-36
					TH2F16U1					1.5P	Pipe-36
			5 6 8 11 12	SP-PF	SH2F16U	SP	II	95	26	2.5P	Pipe-39
	For left hand threads		1 5 6 11 12	PF LH	TH2F16U--L	HT	II	95	26	3.5P	Pipe-37
	Long shank		1 5 6 11 12	LS-PF	L15F16U	HT	II	150	26	3.5P	Pipe-38
					L20F16U			200			Pipe-38
			5 6 8 11 12	LS-SP-PF	SH2F16UL15	SP	II	150	26	2.5P	Pipe-40
					SH2F16UL20			200			Pipe-40
	For stainless steels		6 7 8	SU-PF	TU2F16U	HT	II	95	26	3.5P	Pipe-41
	For cast irons		1 4 5 12	FC-PF	FCPF16U	HT	II	95	26	3.5P	Pipe-42
	Carbide		1 12 13	CT-PF	TCPF16U	HT	II	95	26	3.5P	Pipe-43
Taps 1 1/8-11											
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T18U	HT	II	100	28	2.5P	Pipe-2
Taps 1 1/4-11											
Rc	Standard (ISO standard)	Standard	1 5 6 11 12	Rc	TH2RC20U	HT	II	119	32	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T20U	HT	II	105	32	2.5P	Pipe-2
			5 6 8 11 12	SP-PT	SH2T20U	SP	II	105	32	2.5P	Pipe-9
		For PT threads short (lg) type	1 5 6 11 12	S-PT	TSPT20U	HT	II	105	32	2.5P	Pipe-5
			5 6 8 11 12	SP-S-PT	SSPT20U	SP	II	105	32	2.5P	Pipe-10
	For left hand threads	For PT threads	1 5 6 11 12	PT LH	TH2T20U--L	HT	II	105	32	2.5P	Pipe-3
		For PT threads short (lg) type	1 5 6 11 12	S-PT LH	TSPT20U--L	HT	II	105	32	2.5P	Pipe-6
	Long shank	For PT threads	1 5 6 11 12	LS-PT	-	HT	II	200	32	2.5P	Pipe-7
	Interrupted	For PT threads	6 7 8	INT-PT	TINT20U	SL	II	105	32	3P	Pipe-14
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST20U	SL	II	105	32	3P	Pipe-15
	For low carbon steels	For PT threads	6 8	LC-PT	LCPT20U	HT	II	105	32	2.5P	Pipe-18
	For stainless steels	For PT threads	6 7 8	SU-PT	TU2T20U	HT	II	105	32	2.5P	Pipe-20
		For PT threads short (lg) type	6 7 8	SU-S-PT	TUST20U	HT	II	105	32	2.5P	Pipe-21
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT20U	HT	II	105	32	2.5P	Pipe-24
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT20U	HT	II	105	32	2.5P	Pipe-25
Rp	Standard (ISO standard)		1 5 6 11 12	Rp	TH2RP20U	HT	II	119	32	3.5P	Pipe-28
PS	Standard		1 5 6 11 12	PS	TH2P20U	HT	II	105	32	3.5P	Pipe-29
					TH2P20U1					1.5P	Pipe-29
			5 6 8 11 12	SP-PS	SH2P20U	SP	II	105	32	2.5P	Pipe-32
	For left hand threads		1 5 6 11 12	PS LH	TH2P20U--L	HT	II	105	32	3.5P	Pipe-30
G	Standard (ISO standard)		1 5 6 11 12	G	TH2G20U	HT	II	119	32	3.5P	Pipe-35
PF	Standard		1 5 6 11 12	PF	TH2F20U	HT	II	105	32	3.5P	Pipe-36
					TH2F20U1					1.5P	Pipe-36
			5 6 8 11 12	SP-PF	SH2F20U	SP	II	105	32	2.5P	Pipe-39
	For left hand threads		1 5 6 11 12	PF LH	TH2F20U--L	HT	II	105	32	3.5P	Pipe-37
	For cast irons		1 4 5 12	FC-PF	FCPF20U	HT	II	105	32	3.5P	Pipe-42
Taps 1 1/2-11											
Rc	Standard (ISO standard)	Standard	1 5 6 11 12	Rc	TH2RC24U	HT	II	125	38	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 11 12	PT	TH2T24U	HT	II	110	38	2.5P	Pipe-2
			5 6 8 11 12	SP-PT	SH2T24U	SP	II	110	38	2.5P	Pipe-9

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection			Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
PT	Standard	For PT threads	①⑤⑥⑪⑫	S-PT	TSPT24U	HT	II	110	38	2.5P	Pipe-5
		For PT threads short (lg) type	⑤⑥⑧⑪⑫	SP-S-PT	SSPT24U	SP	II	110	38	2.5P	Pipe-10
	For left hand threads	For PT threads	①⑤⑥⑪⑫	PT LH	TH2T24U--L	HT	II	110	38	2.5P	Pipe-3
		For PT threads short (lg) type	①⑤⑥⑪⑫	S-PT LH	TSPT24U--L	HT	II	110	38	2.5P	Pipe-6
	Long shank	For PT threads	①⑤⑥⑪⑫	LS-PT	-	HT	II	200	32	2.5P	Pipe-7
	Interrupted	For PT threads	⑥⑦⑧	INT-PT	TINT24U	SL	II	110	38	3P	Pipe-14
		For PT threads short (lg) type	⑥⑦⑧	INT-S-PT	TIST24U	SL	II	110	38	3P	Pipe-15
	For low carbon steels	For PT threads	⑥⑧	LC-PT	LCPT24U	HT	II	110	38	2.5P	Pipe-18
	For stainless steels	For PT threads	⑥⑦⑧	SU-PT	TU2T24U	HT	II	110	38	2.5P	Pipe-20
		For PT threads short (lg) type	⑥⑦⑧	SU-S-PT	TUST24U	HT	II	110	38	2.5P	Pipe-21
	For cast irons	For PT threads	①④⑤⑫	FC-PT	FCPT24U	HT	II	110	38	2.5P	Pipe-24
		For PT threads short (lg) type	①④⑤⑫	FC-S-PT	FCSPT24U	HT	II	110	38	2.5P	Pipe-25
Rp	Standard (ISO standard)		①⑤⑥⑪⑫	Rp	TH2RP24U	HT	II	125	38	3.5P	Pipe-28
PS	Standard		①⑤⑥⑪⑫	PS	TH2P24U	HT	II	110	38	3.5P	Pipe-29
					TH2P24U1					1.5P	Pipe-29
			⑤⑥⑧⑪⑫	SP-PS	SH2P24U	SP	II	110	38	2.5P	Pipe-32
	For left hand threads		①⑤⑥⑪⑫	PS LH	TH2P24U--L	HT	II	110	38	3.5P	Pipe-30
G	Standard (ISO standard)		①⑤⑥⑪⑫	G	TH2G24U	HT	II	125	38	3.5P	Pipe-35
PF	Standard		①⑤⑥⑪⑫	PF	TH2F24U	HT	II	110	38	3.5P	Pipe-36
					TH2F24U1					1.5P	Pipe-36
			⑤⑥⑧⑪⑫	SP-PF	SH2F24U	SP	II	110	38	2.5P	Pipe-39
	For left hand threads		①⑤⑥⑪⑫	PF LH	TH2F24U--L	HT	II	110	38	3.5P	Pipe-37
	For cast irons		①④⑤⑫	FC-PF	FCPF24U	HT	II	110	38	3.5P	Pipe-42
Taps 1 3/4-11											
PT	Standard	For PT threads	①⑤⑥⑪⑫	PT	TH2T28U	HT	II	115	42	2.5P	Pipe-2
		For PT threads short (lg) type	①⑤⑥⑪⑫	S-PT	TSPT28U	HT	II	115	42	2.5P	Pipe-5
Taps 2-11											
Rc	Standard (ISO standard)	Standard	①⑤⑥⑪⑫	Rc	TH2RC32U	HT	II	140	46	2.5P	Pipe-1
PT	Standard	For PT threads	①⑤⑥⑪⑫	PT	TH2T32U	HT	II	120	46	2.5P	Pipe-2
			⑤⑥⑧⑪⑫	SP-PT	SH2T32U	SP	II	120	46	2.5P	Pipe-9
		For PT threads short (lg) type	①⑤⑥⑪⑫	S-PT	TSPT32U	HT	II	120	46	2.5P	Pipe-5
			⑤⑥⑧⑪⑫	SP-S-PT	SSPT32U	SP	II	120	46	2.5P	Pipe-10
	For left hand threads	For PT threads	①⑤⑥⑪⑫	PT LH	TH2T32U--L	HT	II	120	46	2.5P	Pipe-3
		For PT threads short (lg) type	①⑤⑥⑪⑫	S-PT LH	TSPT32U--L	HT	II	120	46	2.5P	Pipe-6
	Interrupted	For PT threads	⑥⑦⑧	INT-PT	TINT32U	SL	II	120	46	3P	Pipe-14
		For PT threads short (lg) type	⑥⑦⑧	INT-S-PT	TIST32U	SL	II	120	46	3P	Pipe-15
	For low carbon steels	For PT threads	⑥⑧	LC-PT	LCPT32U	HT	II	120	46	2.5P	Pipe-18
	For cast irons	For PT threads	①④⑤⑫	FC-PT	FCPT32U	HT	II	120	46	2.5P	Pipe-24
		For PT threads short (lg) type	①④⑤⑫	FC-S-PT	FCSPT32U	HT	II	120	46	2.5P	Pipe-25
Rp	Standard (ISO standard)		①⑤⑥⑪⑫	Rp	TH2RP32U	HT	II	140	46	3.5P	Pipe-28
PS	Standard		①⑤⑥⑪⑫	PS	TH2P32U	HT	II	120	46	3.5P	Pipe-29
			⑤⑥⑧⑪⑫	SP-PS	SH2P32U	SP	II	120	46	2.5P	Pipe-32
	For left hand threads		①⑤⑥⑪⑫	PS LH	TH2P32U--L	HT	II	120	46	3.5P	Pipe-30
G	Standard (ISO standard)		①⑤⑥⑪⑫	G	TH2G32U	HT	II	140	46	3.5P	Pipe-35
PF	Standard		①⑤⑥⑪⑫	PF	TH2F32U	HT	II	120	46	3.5P	Pipe-36
					TH2F32U1					1.5P	Pipe-36
			⑤⑥⑧⑪⑫	SP-PF	SH2F32U	SP	II	120	46	2.5P	Pipe-39
	For left hand threads		①⑤⑥⑪⑫	PF LH	TH2F32U--L	HT	II	120	46	3.5P	Pipe-37
	For cast irons		①④⑤⑫	FC-PF	FCPF32U	HT	II	120	46	3.5P	Pipe-42

Tap selection			Main material	Symbol (Note 1)	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps 2 1/4-11											
PT	Standard	For PT threads	①⑤⑥⑪⑫	PT	TH2T36U	HT	II	145	50	2.5P	Pipe-2
Taps 2 1/2-11											
PT	Standard	For PT threads	①⑤⑥⑪⑫	PT	TH2T40U	HT	II	145	55	2.5P	Pipe-2
		For PT threads short (lg) type	①⑤⑥⑪⑫	S-PT	TSPT40U	HT	II	145	55	2.5P	Pipe-5
PS	Standard		①⑤⑥⑪⑫	PS	TH2P40U	HT	II	145	55	3.5P	Pipe-29
PF	Standard		①⑤⑥⑪⑫	PF	TH2F40U	HT	II	145	55	3.5P	Pipe-36
Taps 3-11											
PT	Standard	For PT threads	①⑤⑥⑪⑫	PT	TH2T48U	HT	II	155	65	2.5P	Pipe-2
		For PT threads short (lg) type	①⑤⑥⑪⑫	S-PT	TSPT48U	HT	II	155	65	2.5P	Pipe-5
PS	Standard		①⑤⑥⑪⑫	PS	TH2P48U	HT	II	155	65	3.5P	Pipe-29
PF	Standard		①⑤⑥⑪⑫	PF	TH2F48U	HT	II	155	65	3.5P	Pipe-36
Taps 3 1/2-11											
PT	Standard	For PT threads	①⑤⑥⑪⑫	PT	TH2T56U	HT	II	165	70	2.5P	Pipe-2
PF	Standard		①⑤⑥⑪⑫	PF	TH2F56U	HT	II	165	70	3.5P	Pipe-36
Taps 4-11											
PT	Standard	For PT threads	①⑤⑥⑪⑫	PT	TH2T64U	HT	II	170	75	2.5P	Pipe-2
PS	Standard		①⑤⑥⑪⑫	PS	TH2P64U	HT	II	170	75	3.5P	Pipe-29
PF	Standard		①⑤⑥⑪⑫	PF	TH2F64U	HT	II	170	75	3.5P	Pipe-36

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Dies selection			Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies PT1/16-28											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	38	13	2～2.5P	TYJPT010NEBC	Di-16
Dies PF1/16-28											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	25	9	2～2.5P	TYGPF010NEBC	Di-13
Dies PT1/8-28											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	38	13	2～2.5P	TYJPT020NEBC	Di-16
	For PT left hand threads	Solid dies	HSS	6 8 11 12	D PT LH	II	38	13	2～2.5P	GYJPT020NEBC	Di-17
Dies PF1/8-28											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	25	9	2～2.5P	TYGPF020NEBC	Di-13
							38	13		TYJPF020NEBC	Di-13
	For PF left hand threads	Solid dies	HSS	6 8 11 12	D PF LH	II	38	13	2～2.5P	GYJPF020NEBC	Di-14
Dies PT1/4-19											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	38	18	2～2.5P	TYJPT040NEBC	Di-16
	For PT left hand threads	Solid dies	HSS	6 8 11 12	D PT LH	II	38	18	2～2.5P	GYJPT040NEBC	Di-17
Dies PF1/4-19											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	38	13	2～2.5P	TYJPF040NEBC	Di-13
	For PF left hand threads	Solid dies	HSS	6 8 11 12	D PF LH	II	38	13	2～2.5P	GYJPF040NEBC	Di-14
Dies PT3/8-19											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	50	22	2～2.5P	TYMPT060NEBC	Di-16
	For PT left hand threads	Solid dies	HSS	6 8 11 12	D PT LH	II	50	22	2～2.5P	GYMPT060NEBC	Di-17
Dies PF3/8-19											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	38	13	2～2.5P	TYJPF060NEBC	Di-13
							50	16		TYMPF060NEBC	Di-13
	For PF left hand threads	Solid dies	HSS	6 8 11 12	D PF LH	II	50	16	2～2.5P	GYMPF060NEBC	Di-14
Dies PT1/2-14											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	50	22	2～2.5P	TYMPT080NEBC	Di-16
	For PT left hand threads	Solid dies	HSS	6 8 11 12	D PT LH	II	50	22	2～2.5P	GYMPT080NEBC	Di-17
Dies PF1/2-14											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	50	16	2～2.5P	TYMPF080NEBC	Di-13
	For PF left hand threads	Solid dies	HSS	6 8 11 12	D PF LH	II	50	16	2～2.5P	GYMPF080NEBC	Di-14
Dies PT5/8-14											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	63	24	2～2.5P	TYRPT100NEBC	Di-16
Dies PF5/8-14											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	50	16	2～2.5P	TYMPF100NEBC	Di-13
Dies PT3/4-14											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	63	24	2～2.5P	TYRPT120NEBC	Di-16
	For PT left hand threads	Solid dies	HSS	6 8 11 12	D PT LH	II	63	24	2～2.5P	GYRPT120NEBC	Di-17

Dies selection			Material	Main material	Symbol (Note 1)	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies PF3/4-14											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	50	16	2～2.5P	TYMPF120NEBC	Di-13
							63	20		TYRPF120NEBC	Di-13
	For PF left hand threads	Solid dies	HSS	6 8 11 12	D PF LH	II	63	20	2～2.5P	GYRPF120NEBC	Di-14
Dies PT7/8-14											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	75	30	2～2.5P	TYUPT140NEBC	Di-16
Dies PT1-11											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	75	30	2～2.5P	TYUPT160NEBC	Di-16
	For PT left hand threads	Solid dies	HSS	6 8 11 12	D PT LH	II	75	30	2～2.5P	GYUPT160NEBC	Di-17
Dies PF1-11											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	75	25	2～2.5P	TYUPF160NEBC	Di-13
	For PF left hand threads	Solid dies	HSS	6 8 11 12	D PF LH	II	75	25	2～2.5P	GYUPF160NEBC	Di-14
Dies PT1 1/4-11											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	75	30	2～2.5P	TYUPT200NEBC	Di-16
Dies PF1 1/4-11											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	75	25	2～2.5P	TYUPF200NEBC	Di-13
Dies PT1 1/2-11											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	75	30	2～2.5P	TYUPT240NEBC	Di-16
Dies PF1 1/2-11											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	75	25	2～2.5P	TYUPF240NEBC	Di-13
Dies PF2-11											
PF	For PF threads	Solid dies	HSS	6 8 11 12	D PF	II	105	30	2～2.5P	TYYPF320NEBC	Di-13
Dies PT2-11											
PT	For PT threads	Solid dies	HSS	6 8 11 12	D PT	II	105	36	2～2.5P	TYYPT320NEBC	Di-16

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Taps 1/16-27

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
NPT	Standard	For PT threads	1 5 6 11 12	NPT	TNPT01L	HT	ANSI G	54	8	3P	Pipe-44
			5 6 8 11 12	SP-NPT	SNPT01L	SP	ANSI G	54	8	2.5P	Pipe-47
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT01L	HT	ANSI G	54	8	3P	Pipe-45
	Long shank	For NPT threads	1 5 6 11 12	LS-NPT	TNPT01LL10	HT	ANSI G	100	8	3P	Pipe-46
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT01L	SL	ANSI G	54	8	3P	Pipe-49
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT01L	SL	ANSI G	54	8	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF01L	HT	ANSI G	54	8	3P	Pipe-51
	Long shank		1 5 6 11 12	LS-NPTF	TNTF01LL10	HT	ANSI G	100	8	3P	Pipe-52
NPS	Standard		1 5 6 11 12	NPS	TNPS01L	HT	ANSI G	54	8	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF01L	HT	ANSI G	54	8	5P	Pipe-54

Taps 1/8-27

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT02L	HT	ANSI G	55	8	3P	Pipe-44
			5 6 8 11 12	SP-NPT	SNPT02L	SP	ANSI G	55	8	2.5P	Pipe-47
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT02L	HT	ANSI G	55	8	3P	Pipe-45
	Long shank	For NPT threads	1 5 6 11 12	LS-NPT	TNPT02LL10	HT	ANSI G	100	8	3P	Pipe-46
					TNPT02LL15			150			Pipe-46
		For NPT threads short (lg) type	5 6 8 11 12	LS-SP-S-NPT	SSNPT02LL10	SP	ANSI G	100	8	2.5P	Pipe-48
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT02L	SL	ANSI G	55	8	3P	Pipe-49
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT02L	SL	ANSI G	55	8	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF02L	HT	ANSI G	55	8	3P	Pipe-51
	Long shank		1 5 6 11 12	LS-NPTF	TNTF02LL10	HT	ANSI G	100	8	3P	Pipe-52
					TNTF02LL15			150			Pipe-52
NPS	Standard		1 5 6 11 12	NPS	TNPS02L	HT	ANSI G	55	8	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF02L	HT	ANSI G	55	8	5P	Pipe-54

Taps 1/4-18

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT04O	HT	ANSI G	62	11	3P	Pipe-44
			5 6 8 11 12	SP-NPT	SNPT04O	SP	ANSI G	62	11	2.5P	Pipe-47
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT04O	HT	ANSI G	62	11	3P	Pipe-45
	Long shank	For NPT threads	1 5 6 11 12	LS-NPT	TNPT04OL10	HT	ANSI G	100	11	3P	Pipe-46
					TNPT04OL15			150			Pipe-46
		For NPT threads short (lg) type	5 6 8 11 12	LS-SP-S-NPT	SSNPT04OL15	SP	ANSI G	150	11	2.5P	Pipe-48
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT04O	SL	ANSI G	62	11	3P	Pipe-49
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT04O	SL	ANSI G	62	11	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF04O	HT	ANSI G	62	11	3P	Pipe-51
	Long shank		1 5 6 11 12	LS-NPTF	TNTF04OL10	HT	ANSI G	100	11	3P	Pipe-52
					TNTF04OL15			150			Pipe-52
NPS	Standard		1 5 6 11 12	NPS	TNPS04O	HT	ANSI G	62	11	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF04O	HT	ANSI G	62	11	5P	Pipe-54

Taps 3/8-18

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT06O	HT	ANSI G	65	14	3P	Pipe-44
			5 6 8 11 12	SP-NPT	SNPT06O	SP	ANSI G	65	14	2.5P	Pipe-47
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT06O	HT	ANSI G	65	14	3P	Pipe-45
	Long shank	For NPT threads	1 5 6 11 12	LS-NPT	TNPT06OL10	HT	ANSI G	100	14	3P	Pipe-46
					TNPT06OL15			150			Pipe-46
		For NPT threads short (lg) type	5 6 8 11 12	LS-SP-S-NPT	SSNPT06OL15	SP	ANSI G	150	14	2.5P	Pipe-48
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT06O	SL	ANSI G	65	14	3P	Pipe-49
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT06O	SL	ANSI G	65	14	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF06O	HT	ANSI G	65	14	3P	Pipe-51
	Long shank		1 5 6 11 12	LS-NPTF	TNTF06OL10	HT	ANSI G	100	14	3P	Pipe-52
					TNTF06OL15			150			Pipe-52
NPS	Standard		1 5 6 11 12	NPS	TNPS06O	HT	ANSI G	65	14	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF06O	HT	ANSI G	65	14	5P	Pipe-54

Taps 1/2-14

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT08Q	HT	ANSI G	80	18	3P	Pipe-44
			5 6 8 11 12	SP-NPT	SNPT08Q	SP	ANSI G	80	18	2.5P	Pipe-47
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT08Q	HT	ANSI G	80	18	3P	Pipe-45
	Long shank	For NPT threads	1 5 6 11 12	LS-NPT	TNPT08QL15	HT	ANSI G	150	18	3P	Pipe-46
		For NPT threads short (lg) type	5 6 8 11 12	LS-SP-S-NPT	SSNPT08QL15	SP	ANSI G	150	18	2.5P	Pipe-48
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT08Q	SL	ANSI G	80	18	3P	Pipe-49
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT08Q	SL	ANSI G	80	18	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF08Q	HT	ANSI G	80	18	3P	Pipe-51
	Long shank		1 5 6 11 12	LS-NPTF	TNTF08QL15	HT	ANSI G	150	18	3P	Pipe-52
NPS	Standard		1 5 6 11 12	NPS	TNPS08Q	HT	ANSI G	80	18	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF08Q	HT	ANSI G	80	18	5P	Pipe-54

Taps 3/4-14

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT12Q	HT	ANSI G	85	23	3P	Pipe-44
			5 6 8 11 12	SP-NPT	SNPT12Q	SP	ANSI G	85	23	2.5P	Pipe-47
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT12Q	HT	ANSI G	85	23	3P	Pipe-45
	Long shank	For NPT threads	1 5 6 11 12	LS-NPT	TNPT12QL15	HT	ANSI G	150	23	3P	Pipe-46
		For NPT threads short (lg) type	5 6 8 11 12	LS-SP-S-NPT	SSNPT12QL15	SP	ANSI G	150	23	2.5P	Pipe-48
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT12Q	SL	ANSI G	85	23	3P	Pipe-49
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT12Q	SL	ANSI G	85	23	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF12Q	HT	ANSI G	85	23	3P	Pipe-51
	Long shank		1 5 6 11 12	LS-NPTF	TNTF12QL15	HT	ANSI G	150	23	3P	Pipe-52
NPS	Standard		1 5 6 11 12	NPS	TNPS12Q	HT	ANSI G	85	23	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF12Q	HT	ANSI G	85	23	5P	Pipe-54

Taps 1-11.5

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
NPT	Standard	For PT threads	1 5 6 11 12	NPT	TNPT16T	HT	ANSI G	95	26	3P	Pipe-44
			5 6 8 11 12	SP-NPT	SNPT16T	SP	ANSI G	95	26	2.5P	Pipe-47
		For PT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT16T	HT	ANSI G	95	26	3P	Pipe-45
	Long shank	For PT threads	1 5 6 11 12	LS-NPT	TNPT16TL15	HT	ANSI G	150	26	3P	Pipe-46
	Interrupted	For PT threads	6 7 8	INT-NPT	TINPT16T	SL	ANSI G	95	26	3P	Pipe-49
		For PT threads short (lg) type	6 7 8	INT-S-NPT	TISNT16T	SL	ANSI G	95	26	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF16T	HT	ANSI G	95	26	3P	Pipe-51
	Long shank		1 5 6 11 12	LS-NPTF	TNTF16TL15	HT	ANSI G	150	26	3P	Pipe-52
NPS	Standard		1 5 6 11 12	NPS	TNPS16T	HT	ANSI G	95	26	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF16T	HT	ANSI G	95	26	5P	Pipe-54

Taps 1 1/4-11.5

Tap selection			Main material	Symbol	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
NPT	Standard	For PT threads	1 5 6 11 12	NPT	TNPT20T	HT	ANSI G	105	32	3P	Pipe-44
		For PT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT20T	HT	ANSI G	105	32	3P	Pipe-45
	Interrupted	For PT threads	6 7 8	INT-NPT	TINPT20T	SL	ANSI G	105	32	3P	Pipe-49
		For PT threads short (lg) type	6 7 8	INT-S-NPT	TISNT20T	SL	ANSI G	105	32	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF20T	HT	ANSI G	105	32	3P	Pipe-51
NPS	Standard		1 5 6 11 12	NPS	TNPS20T	HT	ANSI G	105	32	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF20T	HT	ANSI G	105	32	5P	Pipe-54

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection			Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps 1 1/2-11.5											
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT24T	HT	ANSIG	110	38	3P	Pipe-44
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT24T	HT	ANSIG	110	38	3P	Pipe-45
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT24T	SL	ANSIG	110	38	3P	Pipe-49
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT24T	SL	ANSIG	110	38	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF24T	HT	ANSIG	110	38	3P	Pipe-51
NPS	Standard		1 5 6 11 12	NPS	TNPS24T	HT	ANSIG	110	38	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF24T	HT	ANSIG	110	38	5P	Pipe-54
Taps 2-11.5											
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT32T	HT	ANSIG	120	46	3P	Pipe-44
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT32T	HT	ANSIG	120	46	3P	Pipe-45
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT32T	SL	ANSIG	120	46	3P	Pipe-49
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT32T	SL	ANSIG	120	46	3P	Pipe-50
NPTF	Standard		1 5 6 11 12	NPTF	TNTF32T	HT	ANSIG	120	46	3P	Pipe-51
NPS	Standard		1 5 6 11 12	NPS	TNPS32T	HT	ANSIG	120	46	5P	Pipe-53
NPSF	Standard		1 5 6 11 12	NPSF	TNSF32T	HT	ANSIG	120	46	5P	Pipe-54
Taps 2 1/2-8											
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT40X	HT	ANSIG	145	55	3P	Pipe-44
Taps 3-8											
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT48X	HT	ANSIG	155	65	3P	Pipe-44

Dies selection			Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies NPT1/16-27											
NPT	For NPT threads	Solid dies	HSS	6 8 11 12	D NPT	II	38	13	2～2.5P	TYJNT010NEBC	Di-18
Dies NPTF1/16-27											
NPTF	For NPTF threads	Solid dies	HSS	6 8 11 12	D NPTF	II	38	13	2～2.5P	TYJNF010NEBC	Di-19
Dies NPSM1/16-27											
NPSM	For NPSM threads	Solid dies	HSS	6 8 11 12	D NPSM	II	38	13	2～2.5P	TYJSM010NEBC	Di-15
Dies NPT1/8-27											
NPT	For NPT threads	Solid dies	HSS	6 8 11 12	D NPT	II	38	13	2～2.5P	TYJNT020NEBC	Di-18
Dies NPTF1/8-27											
NPTF	For NPTF threads	Solid dies	HSS	6 8 11 12	D NPTF	II	38	13	2～2.5P	TYJNF020NEBC	Di-19
Dies NPSM1/8-27											
NPSM	For NPSM threads	Solid dies	HSS	6 8 11 12	D NPSM	II	38	13	2～2.5P	TYJSM020NEBC	Di-15
Dies NPT1/4-18											
NPT	For NPT threads	Solid dies	HSS	6 8 11 12	D NPT	II	38	18	2～2.5P	TYJNT040NEBC	Di-18
Dies NPTF1/4-18											
NPTF	For NPTF threads	Solid dies	HSS	6 8 11 12	D NPTF	II	38	18	2～2.5P	TYJNF040NEBC	Di-19
Dies NPSM1/4-18											
NPSM	For NPSM threads	Solid dies	HSS	6 8 11 12	D NPSM	II	38	13	2～2.5P	TYJSM040NEBC	Di-15
Dies NPT3/8-18											
NPT	For NPT threads	Solid dies	HSS	6 8 11 12	D NPT	II	50	22	2～2.5P	TYMNT060NEBC	Di-18
Dies NPTF3/8-18											
NPTF	For NPTF threads	Solid dies	HSS	6 8 11 12	D NPTF	II	50	22	2～2.5P	TYMNF060NEBC	Di-19
Dies NPSM3/8-18											
NPSM	For NPSM threads	Solid dies	HSS	6 8 11 12	D NPSM	II	50	16	2～2.5P	TYMSM060NEBC	Di-15
Dies NPT1/2-14											
NPT	For NPTF threads	Solid dies	HSS	6 8 11 12	D NPT	II	50	22	2～2.5P	TYMNT080NEBC	Di-18
Dies NPTF1/2-14											
NPTF	For NPTF threads	Solid dies	HSS	6 8 11 12	D NPTF	II	50	22	2～2.5P	TYMNF080NEBC	Di-19
Dies NPSM1/2-14											
NPSM	For NPSM threads	Solid dies	HSS	6 8 11 12	D NPSM	II	50	16	2～2.5P	TYMSM080NEBC	Di-15
Dies NPT3/4-14											
NPT	For NPT threads	Solid dies	HSS	6 8 11 12	D NPT	II	63	24	2～2.5P	TYRNT120NEBC	Di-18
Dies NPTF3/4-14											
NPTF	For NPTF threads	Solid dies	HSS	6 8 11 12	D NPTF	II	63	24	2～2.5P	TYRNF120NEBC	Di-19

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies NPSM3/4-14									
NPSM For NPSM threads	Solid dies	HSS	6 8 11 12	D NPSM	II	63	20	2～2.5P	TYRSM120NEBC	Di-15
Dies NPT1-11.5									
NPT For NPT threads	Solid dies	HSS	6 8 11 12	D NPT	II	75	30	2～2.5P	TYUNT160NEBC	Di-18
Dies NPT1 1/4-11.5									
NPT For NPT threads	Solid dies	HSS	6 8 11 12	D NPT	II	75	30	2～2.5P	TYUNT200NEBC	Di-18
Dies NPTF1-11.5									
NPTF For NPTF threads	Solid dies	HSS	6 8 11 12	D NPTF	II	75	30	2～2.5P	TYUNF160NEBC	Di-19
Dies NPTF1 1/4-11.5									
NPTF For NPTF threads	Solid dies	HSS	6 8 11 12	D NPTF	II	75	30	2～2.5P	TYUNF200NEBC	Di-19
Dies NPSM1-11.5									
NPSM For NPSM threads	Solid dies	HSS	6 8 11 12	D NPSM	II	75	25	2～2.5P	TYUSM160NEBC	Di-15
Dies NPSM1 1/4-11.5									
NPSM For NPSM threads	Solid dies	HSS	6 8 11 12	D NPSM	II	75	25	2～2.5P	TYUSM200NEBC	Di-15

Tap selection		Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps S0.6×0.15										
Cutting		8 11 12	MS+TR	GMHRP0.6-3	HT	-	36	3	3P	ST-5
Thread forming taps for non-ferrous materials	High performance	8 11 12	MS+RS	MSP20.6-B	RO	GS2	36	3	2P	ST-4
		8 11 12	HPsRZ	HPS20.6-B		GS2	36	3	2P	ST-4
Taps S0.7×0.175										
Cutting		8 11 12	MS+TR	GMHRP0.7-3	HT	-	36	3	3P	ST-5
Thread forming taps for non-ferrous materials	High performance	8 11 12	MS+RS	MSP30.7-B	RO	GS3	36	3	2P	ST-4
		8 11 12	HPsRZ	HPS30.7-B		GS3	36	3	2P	ST-4
Taps S0.8×0.2										
Cutting		8 11 12	MS+TR	GMHRP0.8-3	HT	-	36	3	3P	ST-5
Thread forming taps for non-ferrous materials	High performance	8 11 12	MS+RS	MSP30.8-B	RO	GS3	36	3	2P	ST-4
		8 11 12	HPsRZ	HPS30.8-B		GS3	36	3	2P	ST-4
Taps S0.9×0.225										
Cutting		8 11 12	MS+TR	GMHRP0.9-3	HT	-	36	3	3P	ST-5
Thread forming taps for non-ferrous materials	High performance	8 11 12	MS+RS	MSP40.9-B	RO	GS4	36	3	2P	ST-4
		8 11 12	HPsRZ	HPS40.9-B		GS4	36	3	2P	ST-4
Taps 5V1										
Standard		11 12	HT TV	TY05V10LEBA	HT	-	62	6	1.5P	ST-9
Taps 8V1										
Standard		11 12	HT TV	TY08V10LEBA	HT	-	70	6.2	1.5P	ST-9
Taps 8V2										
Standard		11 12	HT TV	TY08V20LEBA	HT	-	70	6.2	1.5P	ST-9
Taps 9V1										
Standard		11 12	HT TV	TY09V10LEBA	HT	-	75	7	1.5P	ST-9
Taps 10V1										
Standard		11 12	HT TV	TY10V10LEBA	HT	-	75	7	1.5P	ST-9
Taps 10V2										
Standard		11 12	HT TV	TY10V20LEBA	HT	-	82	8.5	1.5P	ST-9
Taps 11V1										
Standard		11 12	HT TV	TY11V10LEBA	HT	-	82	8.5	1.5P	ST-9
Taps 12V1										
Standard		11 12	HT TV	TY12V10LEBA	HT	-	88	10.5	1.5P	ST-9
Taps 13V1										
Standard		11 12	HT TV	TY13V10LEBA	HT	-	88	10.5	1.5P	ST-9
Taps 13V2										
Standard		11 12	HT TV	TY13V20LEBA	HT	-	88	10.5	1.5P	ST-9

Icons of main materials

1 Cast iron, Ductile cast iron, Sintered material
2 High hardness material
3 Heat treated steel (45-55HRC)
4 Heat treated steel (25-45HRC)
5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
6 Medium carbon steel, Cast steel
7 Stainless steel
8 Low carbon steel
9 Titanium alloy
10 Nickel base alloy
11 Rolled aluminum, Copper, Copper alloy
12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
13 Thermosetting plastic

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps 15V1									
Standard	11 12	HT TV	TY15V10LEBA	HT	-	95	12.5	1.5P	ST-9
Taps 16V1									
Standard	11 12	HT TV	TY16V10LEBA	HT	-	95	12.5	1.5P	ST-9
Taps 17V1									
Standard	11 12	HT TV	TY17V10LEBA	HT	-	100	14	1.5P	ST-9
Taps 17V2									
Standard	11 12	HT TV	TY17V20LEBA	HT	-	100	14	1.5P	ST-9
Taps 17V3									
Standard	11 12	HT TV	TY17V30LEBA	HT	-	100	14	1.5P	ST-9
Taps 19V1									
Standard	11 12	HT TV	TY19V10LEBA	HT	-	105	15	1.5P	ST-9
Taps 20V1									
Standard	11 12	HT TV	TY20V10LEBA	HT	-	115	17	1.5P	ST-9
Taps CTV5-36									
Standard	11 12	HT CTV	TYCV5I0LEBA	HT	-	62	6	1.5P	ST-11
Taps CTV5-24									
Standard	11 12	HT CTV	TYCV5M0LEBA	HT	-	62	6	1.5P	ST-11
Taps CTV8-32									
Standard	11 12	HT CTV	TYCV8J0LEBA	HT	-	70	6.2	1.5P	ST-11
Taps CTV8-30									
Standard	11 12	HT CTV	TYCV880LEBA	HT	-	75	7	1.5P	ST-11
Taps 5V2									
Standard	11 12	HT CTV	TY05V20LEBA	HT	-	62	6	1.5P	ST-11
Taps 6V1									
Standard	11 12	HT CTV	TY06V10LEBA	HT	-	62	6	1.5P	ST-11
Taps CTC19-16									
Standard	7 8	HT CTC	TYCC190HEB5	HT	-	105	15	5P	ST-12
Taps CTC25-16									
Standard	7 8	HT CTC	TYCC250HEB5	HT	-	125	19	5P	ST-12
Taps CTC31-16									
Standard	7 8	HT CTC	TYCC310HEB5	HT	-	145	24	5P	ST-12
Taps CTC39-16									
Standard	7 8	HT CTC	TYCC390HEB5	HT	-	165	30	5P	ST-12

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	L	D_s	ℓ_c	Product page
Taps CTG16-14									
Standard	7 8	HT CTG	TYCG160HEB5	HT	-	115	17	5P	ST-13
Taps CTG22-14									
Standard	7 8	HT CTG	TYCG220HEB5	HT	-	130	20	5P	ST-13
Taps CTG28-11									
Standard	7 8	HT CTG	TYCG280HEB5	HT	-	155	28	5P	ST-13
Taps CTG36-11									
Standard	7 8	HT CTG	TYCG360HEB5	HT	-	180	35	5P	ST-13
Taps CTG42-11									
Standard	7 8	HT CTG	TYCG420HEB5	HT	-	185	38	5P	ST-13
Taps BC5/16-26									
Standard	8	HT BC	TYBC010HEBA	HT	-	70	6.2	1.5P	ST-14
			TYBC010HEB5					5P	ST-14
Taps BC3/8-26									
Standard	8	HT BC	TYBC020HEBA	HT	-	75	7	1.5P	ST-14
			TYBC020HEB5					5P	ST-14
Taps BC7/16-26									
Standard	8	HT BC	TYBC030HEBA	HT	-	82	8.5	1.5P	ST-14
			TYBC030HEB5					5P	ST-14
Taps BC1/2-20									
Standard	8	HT BC	TYBC040HEBA	HT	-	88	10.5	1.5P	ST-14
			TYBC040HEB5					5P	ST-14
Taps BC9/16-20									
Standard	8	HT BC	TYBC050HEBA	HT	-	95	12.5	1.5P	ST-14
			TYBC050HEB5					5P	ST-14
Taps BC5/8-20									
Standard	8	HT BC	TYBC060HEBA	HT	-	95	12.5	1.5P	ST-14
			TYBC060HEB5					5P	ST-14
Taps BC11/16-24									
Standard	8	HT BC	TYBC070HEBA	HT	-	100	14	1.5P	ST-14
			TYBC070HEB5					5P	ST-14
Taps BC3/4-30									
Standard	8	HT BC	TYBC080HEBA	HT	-	105	15	1.5P	ST-14
			TYBC080HEB5					5P	ST-14
Taps BC31/32-30									
Standard	8	HT BC	TYBC090HEBA	HT	-	125	19	1.5P	ST-14
			TYBC090HEB5					5P	ST-14

Codes shown in ( ) are available while supplies last.

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Channfer length
L	D_s	ℓ_c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol Note 1	Code	Flute	Class	*L*	D_s	ℓ_c	Product page
Taps BC1- 24									
Standard	8	HT BC	TYBC100HEBA	HT	-	125	19	1.5P	ST-14
			TYBC100HEB5					5P	ST-14
Taps BC1.29-24									
Standard	8	HT BC	TYBC110HEBA	HT	-	145	25	1.5P	ST-14
			TYBC110HEB5					5P	ST-14
Taps BC1.37-24									
Standard	8	HT BC	TYBC120HEBA	HT	-	155	28	1.5P	ST-14
			TYBC120HEB5					5P	ST-14
Taps BC1·7/16-24									
Standard	8	HT BC	TYBC130HEBA	HT	-	165	30	1.5P	ST-15
			TYBC130HEB5					5P	ST-14
Taps BC1.45-24									
Standard	8	HT BC	TYBC140HEBA	HT	-	165	30	1.5P	ST-15
			TYBC140HEB5					5P	ST-14
Taps BC1·9/16-24									
Standard	8	HT BC	TYBC150HEBA	HT	-	175	32	1.5P	ST-15
			TYBC150HEB5					5P	ST-14
Taps 3.4×0.5×28°									
For camera release threads	12	RLS-HT	TY3.4G0LEB	HT	-	52	4	-	ST-8

Dies selection		Material	Main material	Symbol Note 1	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies S0.5×0.125										
Rolling dies	For miniature screw threads	HSS	6 7 8 11 12	MS-RS-D	R2	6	2	-	RA20.5-	Di-21
Dies S0.6×0.15										
Rolling dies	For miniature screw threads	HSS	6 7 8 11 12	MS-RS-D	R2	6	2	-	RA20.6-	Di-21
Dies S0.7×0.175										
Rolling dies	For miniature screw threads	HSS	6 7 8 11 12	MS-RS-D	R3	6	2	-	RA20.7-	Di-21
Dies S0.8×0.2										
Rolling dies	For miniature screw threads	HSS	6 7 8 11 12	MS-RS-D	R3	8	3	-	RO20.8-	Di-21

MEMO

MEMO

MEMO

PRAD system Solution tool

Product Reborn According to Demand

What is PRAD system ?

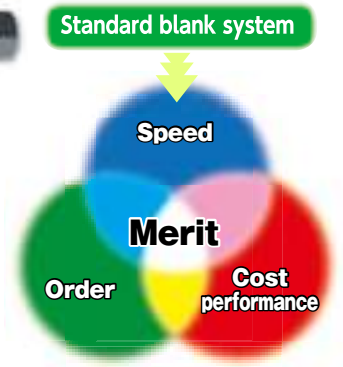
PRAD system is the new system which has never been seen before.
PRAD enables us to make the tap most suitable for specified applications by using taps in Yamawa or those stocked at customers' hands.
It also enables us to manufacture special taps by using Yamawa standard tap blanks.

Efficient use of limited resources.

- **P** Product
- **R** Reborn
- **A** According
- **D** Demand

What is standard blank ? ・・・

- Blank is generic designation of semi-finished product before forming a tap.
- Standard blank is the blank for manufacturing standard tap.
- Special taps will be completed only after the process of edging (on flute,thread and chamfer), by using the blanks which are already heat treated and shank ground.
- 5 kinds of thread standard(unified, whitworth, SM-sewing machine screw, STI metric, STI unified)



For 5 kinds of thread standard, let's use Metric thread blanks.

Unified (U)	Whitworth (W)	Sewing machine screw(SM)
STI metric	STI unified	

Metric thread blanks

Standardization can realize commonization of tap collets.

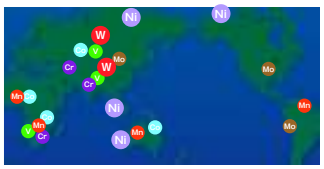
Commonization of tap collets. (Example) In the case of M20 x2.5 and 3/4-10 UNC

Before Dimension of old blanks

After Dimension of new blanks

Circumstances surrounding tool materials

Depletion of resources



Main tool materials for Yamawa taps use a lot of rare metals as the substrate.
Today market price of rare metals has risen due to collapse of the balance between supply and demand.

In the world, rare metals omnipresent.
Political situation can make it more difficult for us to obtain these rare metals.
So, it is quite important to assure stable supply and recycling technique.

PRAD system is globally- friendly and stands on customer's eye.

Product Reborn According to Demand

Solution tool

PRAD system

Version of recycling

Through PRAD system, taps at your hand or taps at Yamawa may be used effectively.

PRAD uses tap stock effectively.

Consulting (check of customer's demand)

Problem analysis and design (design proposal corresponding to the cutting condition)

Manufacturing of recycling product

Yamawa standard tap or tap at your hand

+

oxide coating

TiN coating

coolant hole to be added

guide to be added

threads to be ground off

heal cut

relief adjustment on chamfer

rake angle adjustment

• • • applicable to more than 1000 kinds of adjustments by combining various modifications.

Delivery

Follow-up-consulting (Analysis of result of use)

PRAD responds to demands for versatile products

Industries needing threads are various, and requests to YAMAWA are getting quite diversified.Yamawa is widely offering products from standard products to special products. However, standard taps sometimes cannot come at the exact truth of customer's demand, and special taps developed and manufactured specially ask for longer delivery and higher cost.

PRAD sytem was born in this situation.

Using standard products can restrict the rise of cost, and customer can choose what he really wants from more than 1000 kinds of modifications such as dimension change, surface treatment and cutting angle change (intensive support). PRAD system has simultaneously realized high productivity of special products and economy on price and delivery of standard products.

Chasing the most suitalbe product

PRAD system is much different from previous additional modifications such as regrinding and surface treatment. Consulting is the start of PRAD system. We try to fully understand customer' s true intention, and carefully analyse current cutting condition and problems. Based on this observation, we propose optimal design, and manufacture the product which meets customer needs. Further after delivery, we try to collect the result after use and connect our analysis of the result to future proposals to our customers.Through the process of this combination, we aim to continuously improve quality and manufacture optimal products for customers.

Environmentally friendly products for recycling of resouces.

Don't you have taps which you think you cannot use any further and are sleeping in your warehouse ? In PRAD system, it is even possible to recycle your stocked products. Yamawa's PRAD system makes sleeping products reborn by receiving your products and recycling/modifying them into what you need.

Product Reborn According to Demand

Solution tool

PRAD system

Version of special tap manufacturing

Manufacturing system of special taps beginnig from the use of standard blanks.

Manufacturing of special taps usually starts from cutting-off process of materials to finished product through tens of manufacturing processes.
If we use standard blanks to make special taps, we can complete finished product only by edging (on flutes, thread and chamfer).

1 Flow chart of special tap manufacturing

By not using YAMAWA standard blanks, we make special taps.

Step1. material supplier

Step2. blank manufacturing

Step3. edging

Step4. delivery

BY using YAMAWA standard blanks, we make special taps.

Step1. edging

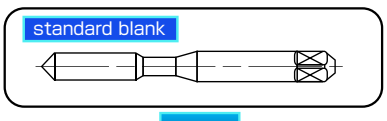
Step2. delivery

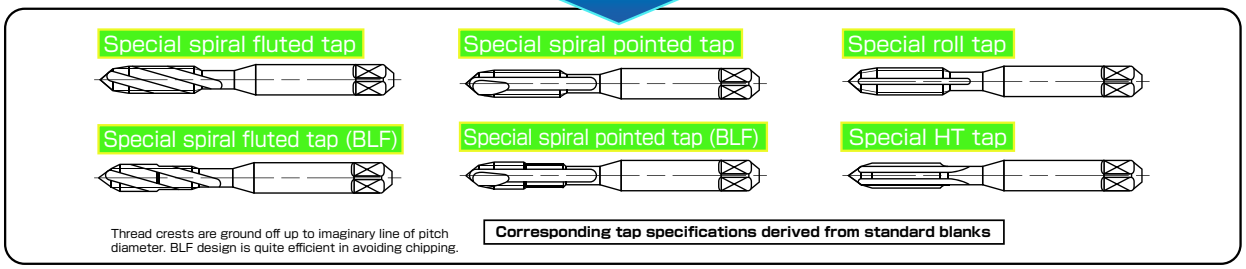
By using YAMAWA standard blanks, we can start only from the process of edging.

USER

2 Corresponding tap specifications derived from standard blanks

Standard blanks can be modified into various tap geometries.





Thread crests are ground off up to imaginary line of pitch diameter. BLF design is quite efficient in avoiding chipping.

Corresponding tap specifications derived from standard blanks

Solution tool
PRAD system

Specification corresponding with standard blanks(for Japanese market)

HSS HSS-P

Material Symbols　HSS : ○　HSS-E : ●　HSS-P : ◎

Main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	⑤ STI (metric)	⑥ STI (unified)
M1×0.25					
M1×0.2					
M1.2×0.25					
M1.2×0.2					
M1.4×0.3					
M1.4×0.2					
M1.6×0.35	№0-80UNF	W1/16-60	SM1/16-80		
M1.6×0.2					
M1.7×0.35					
M1.7×0.2					
M1.8×0.35					
M1.8×0.2					
M2×0.4	№1-64UNC №1-72UNF		SM5/64-64		
M2×0.25					
M2.2×0.45	№2-56UNC №2-64UNF				
M2.2×0.25					
M2.3×0.4					
M2.3×0.25					
M2.5×0.45		W3/32-48	SM3/32-56		
M2.5×0.35					
			SM3/32-100		
M2.6×0.45	№3-48UNC №3-56UNF				
M2.6×0.35					
M3×0.5	№4-40UNC №4-48UNF			STI_M2.2×0.45	STI_№2-56UNC
M3×0.35					
M3×0.6					
M3.5×0.6	№5-40UNF №5-44UNF №6-32UNC №6-40UNF	W1/8-40	SM1/8-40 SM1/8-44		
				STI_M2.5×0.45 STI_M2.6×0.45	
M3.5×0.35					
M4×0.7 M4×0.75		W5/32-32	SM9/64-40		STI_№4-40UNC STI_№5-40UNF
M4×0.5					
				STI_M3×0.5	
M4.5×0.75	№8-32UNC №8-36UNF		SM11/64-40		STI_№6-40UNF
M4.5×0.5				STI_M3.5×0.6	
M5×0.8 M5×0.75 M5×0.9	№10-24UNC №10-32UNF	W3/16-24	SM3/16-24 SM3/16-28 SM3/16-32 SM3/16-40	STI_M4×0.7	STI_№6-32UNC
M5×0.5					

＊Corresponding pitches meet with the pitches of other kinds.
＊Concerning Hand of threads, both right and left are applicable in the same blank.
＊Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.
＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

Main size designation and specification						Overall length of standard type and long type, and corresponding Materials					Max. thread length	Applicable class		TYPE
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L	Length of long type : L					Cutting	Forming	
4.5 3.6	-	(24)	3	2.5	5	36 ○◎	-	-	-	-	4.5	~P4	~G5	a
4.5 3.6	-	(24)	3	2.5	5	36 ○◎	-	-	-	-	4.5	~P4	~G5	a
5.4 3.6	-	(24)	3	2.5	5	36 ○◎	-	-	-	-	5.4	~P4	~G5	a
6.3 3.6	-	(24)	3	2.5	5	36 ○◎	-	-	-	-	6.3	~P4	~G5	a
6.3 3.6	-	(24)	3	2.5	5	36 ○◎	-	-	-	-	6.3	~P4	~G5	a
6.3 3.6	-	(27)	3	2.5	5	42 ○	-	-	-	-	6.3	~P4	~G5	b
7.2 4.5	12	(27)	3	2.5	5	42 ○◎	-	-	-	-	7.2	~P4	~G5	c b(ROLL) c-1
8.1 4.5	12	(27)	3	2.5	5	42 ○◎	-	-	-	-	8.1	~P4	~G5	c b(ROLL) c-1
7.2 4.5	12	(27)	3	2.5	5	42 ○◎	-	-	-	-	7.2	~P4	~G5	c b(ROLL) c-1
8.1 6.3 3.4	14	(29)	3	2.5	5	46 ○◎	-	-	-	-	8.1	~P4	~G5	c c-1 c-1
8.1 6.3	14	(29)	3	2.5	5	46 ○◎	-	-	-	-	8.1	~P4	~G5	c c-1
9 6.5 9	14	26	4	3.2	6	46 ○●◎	70 ○	100 ○	120 ○	150 ○	9	~P7	~G8	c c-1 c
11 6.8 6.5	16	29	5	4	7	52 ○●◎	70 ○	100 ○	120 ○	150 ○	11	~P6	~G7	c c-1
11 9 7.5	17	29	5	4	7	52 ○●◎	70 ○	100 ○	120 ○	150 ○	11	~P6	~G7	c c-1
13 9	21	33	5.5	4.5	7	60 ○●◎	70 ○	100 ○	120 ○	150 ○	13	~P6	~G7	c c-1
13 9	22	33	5.5	4.5	7	60 ○●◎	70 ○	100 ○	120 ○	150 ○	13	~P6	~G7	c c-1

Solution tool
PRAD system

Specification corresponding with standard blanks(for Japanese market)

HSS HSS-P

Material Symbols　HSS : ○　HSS-E : ●　HSS-P : ◎

Main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	⑤ STI (metric)	⑥ STI (unified)
M5.5×0.5					
M6×1	№12-24UNC №12-28UNF №12-32UNEF	W7/32-24	SM15/64-28 SM7/32-32	STI_M4.5×0.75 STI_M5×0.8	STI_№8-32UNC STI_№10-24UNC STI_№10-32UNF
M6×0.75					
					STI_№8-36UNF
M6×0.5					
	1/4-20UNC 1/4-28UNF	W1/4-20	SM1/4-24 SM1/4-28		
			SM1/4-40		
M7×1					STI_№12-24UNC STI_№12-28UNF
M7×0.75				STI_M6×0.75	
M7×0.5					
M8×1.25	5/16-18UNC 5/16-20UN	W5/16-18			STI_1/4-20UNC
M8×1	5/16-24UNF 5/16-28UN			STI_M6×1	STI_1/4-28UNF
M8×0.75	5/16-32UNEF				
M8×0.5					
M9×1.25 M9×1					
M9×0.75					
M9×0.5					
M10×1.5 M10×1.25 M10×1	3/8-16UNC 3/8-20UN 3/8-24UNF 3/8-28UN	W3/8-16		STI_M8×1.25 STI_M8×1	STI_5/16-18UNC STI_5/16-24UNF
M10×0.75	3/8-32UNEF				
M10×0.5					
M11×1.5 M11×1.25 M11×1				STI_M9×1.25 STI_M9×1	STI_3/8-24UNF
M11×0.75					
M11×0.5					
M12×1.75 M12×1.5 M12×1.25 M12×1	7/16-14UNC 7/16-16UN 7/16-20UNF 7/16-28UNEF	W7/16-14		STI_M10×1.5 STI_M10×1.25 STI_M10×1	STI_3/8-16UNC
M12×0.75	7/16-32UN				
M12×0.5					
M13×1.75 M13×1.5 M13×1.25 M13×1	1/2-13UNC 1/2-16UN 1/2-20UNF 1/2-28UNEF	W1/2-12		STI_M11×1.5 STI_M11×1.25	STI_7/16-20UNF
M13×0.75	1/2-32UN				
M13×0.5					

＊Corresponding pitches meet with the pitches of other kinds.
＊Concerning Hand of threads, both right and left are applicable in the same blank.
＊Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.
＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

Main size designation and specification						Overall length of standard type and long type, and corresponding Materials					Max. thread length	Applicable class		TYPE
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L	Length of long type : L					Cutting	Forming	
9	26	33	6	4.5	7	62 ○●◎	-	100 ○	120 ○	150 ○	9	~P6	~G7	c-1
15	26	33	6	4.5	7	62 ○●◎	-	100 ○	120 ○	150 ○	15	~P4	~G7	c
9.5														
9														c-1
15	26	33	6	4.5	7	62 ○	-	-	-	-	15	~P5	~G6	c
8.6														c-1
19	34	36	6.2	5	8	70 ○●◎	-	100 ○	120 ○	150 ○	19	~P4	~G7	e
10														e-1
19	34	36	6.2	5	8	70 ○●◎	-	100 ○	120 ○	150 ○	19	~P4	~G7	e
10														e-1
23	37	38	7	5.5	8	75 ○●◎	-	100 ○	120 ○	150 ○	23	~P5	~G7	e
13														
11														e-1
23	37	38	7	5.5	8	75 ○●◎	-	100 ○	120 ○	150 ○	23	~P5	~G7	e
13														
11														e-1
26	40	42	8.5	6.5	9	82 ○●◎	-	100 ○	120 ○	150 ○	26	~P5	~G9	e
14														
12														e-1
26	40	42	8.5	6.5	9	82 ○●◎	-	100 ○	120 ○	150 ○	26	~P5	~G9	e
14														
12														e-1
26	43	45	10.5	8	11	88 ○◎	-	-	120 ○	150 ○	26	~P5	~G9	e
14														
12														e-1

Solution tool
PRAD system

Specification corresponding with standard blanks(for Japanese market)

HSS HSS-P

Material Symbols　HSS : ○　HSS-E : ●　HSS-P : ◎

Main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	⑤ STI (metric)	⑥ STI (unified)
M14×2 M14×1.5 M14×1.25 M14×1				STI_M12×1.5 STI_M12×1.25 STI_M12×1	STI_7/16-14UNC
M14×0.75					
M14×0.5					
M15×2 M15×1.5 M15×1.25 M15×1	9/16-12UNC 9/16-16UN 9/16-18UNF 9/16-20UN 9/16-24UNEF 9/16-28UN	W9/16-12		 STI_M12×1.75 STI_M13×1.5	 STI_1/2-20UNF
M15×0.75	9/16-32UN				
M15×0.5					
M16×2 M16×1.5 M16×1.25 M16×1	5/8-11UNC 5/8-12UN 5/8-16UN 5/8-18UNF 5/8-20UN 5/8-24UNEF 5/8-28UN	W5/8-11		 STI_M13×1.75 STI_M14×1.5 STI_M14×1.25	STI_1/2-13UNC
M16×0.75	5/8-32UN				
M16×0.5					
 M17×1.5				STI_M14×2	 STI_9/16-18UNF
M17×1					
M17×0.5					
M18×2.5 M18×2 M18×1.5 M18×1.25				 STI_M16×1.5	 STI_9/16-12UNC STI_5/8-18UNF
M18×1				STI_M16×1	
M18×0.75					
M18×0.5					
M19×2.5 M19×2 M19×1.5	3/4-10UNC 3/4-12UN 3/4-16UNF 3/4-20UNEF	W3/4-10		 STI_M16×2	 STI_5/8-11UNC
M19×1	3/4-28UN 3/4-32UN				
M20×2.5 M20×2 M20×1.5				 STI_M18×1.5	
M20×1.25 M20×1					

＊Corresponding pitches meet with the pitches of other kinds.
＊Concerning Hand of threads, both right and left are applicable in the same blank.
＊Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.
＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

Main size designation and specification						Overall length of standard type and long type, and corresponding Materials					Max. thread length	Applicable class		TYPE
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L	Length of long type : L					Cutting	Forming	
26	43	45	10.5	8	11	88 ○◎	-	-	120 ○	150 ○	26	~P5	~G9	e
15 12														e-1
26	47	48	12.5	10	13	95 ○◎	-	-	-	150 ○	26	~P5	~G9	e
15 13														e-1
26	47	48	12.5	10	13	95 ○◎	-	-	-	150 ○	26	~P5	~G9	e
15 13														e-1
33	49	51	14	11	14	100 ○	-	-	-	150 ○	33	~P5	~G8	e
18 13														e-1
33	49	51	14	11	14	100 ○	-	-	-	150 ○	33	~P5	~G8	e
18 16 13														e-1
33	55	50	15	12	15	105 ○	-	-	-	-	33	~P5	~G12	e
18														e-2
33	55	50	15	12	15	105 ○	-	-	-	-	33	~P5	~G12	e
18														e-2

Solution tool
PRAD system

Specification corresponding with standard blanks(for Japanese market)

HSS HSS-P

Material Symbols　HSS : ○　HSS-E : ●　HSS-P : ◎

Main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	⑤ STI (metric)	⑥ STI (unified)
M21×1.5					
M21×1					
M22×2.5 M22×2 M22×1.5	7/8-9UNC 7/8-12UN 7/8-14UNF 7/8-16UN 7/8-20UNEF	W7/8-9		STI_M18×2.5 STI_M20×1.5	STI_3/4-10UNC STI_3/4-16UNF
M22×1	7/8-28UN 7/8-32UN				
M22×0.5					
M23×2 M23×1.5				STI_M20×2	
M23×1					
M24×3 M24×2 M24×1.5				STI_M20×2.5 STI_M22×1.5	
M24×1.25 M24×1					
M24×0.5					
M25×3 M25×2 M25×1.5	1-8UNC 1-12UNF 1-16UN 1-20UNEF	W1-8		STI_M22×2.5	 STI_7/8-14UNF
M25×1	1-28UN 1-32UN				
M25×0.5					
M26×3 M26×2 M26×1.5				 STI_M24×1.5	STI_7/8-9UNC
M26×1					
M26×0.5					
M27×3 M27×2 M27×1.5				STI_M24×2	
M27×1					
M28×3 M28×2 M28×1.5					STI_1-12UNF
M28×1					
M28×0.5					
M30×3.5 M30×3 M30×2 M30×1.5	1'1/8-7UNC 1'1/8-8UN 1'1/8-12UNF 1'1/8-16UN 1'1/8-18UNEF	W1'1/8-7		 STI_M24×3 STI_M27×2 STI_M28×1.5	 STI_1-8UNC
M30×1	1'1/8-20UN 1'1/8-28UN				
M30×0.5					

＊Corresponding pitches meet with the pitches of other kinds.
＊Concerning Hand of threads, both right and left are applicable in the same blank.
＊Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.
＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

Main size designation and specification						Overall length of standard type and long type, and corresponding Materials					Max. thread length	Applicable class		TYPE
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L	Length of long type : L					Cutting	Forming	
33 19	60	55	17	13	16	115 ○	-	-	-	-	33	~P5	~G12	e e-2
33 19 14	60	55	17	13	16	115 ○	-	-	-	-	33	~P5	~G12	e e-2
39 19	65	55	19	15	18	120 ○	-	-	-	-	39	~P5	~G12	e e-2
39 19 15	65	55	19	15	18	120 ○	-	-	-	-	39	~P5	~G12	e e-2
39 20 15	67	58	19	15	18	125 ○	-	-	-	-	39	~P5	~G12	e e-2
39 20 15	70	60	20	15	18	130 ○	-	-	-	-	39	~P5	~G12	e e-2
39 20	70	60	20	15	18	130 ○	-	-	-	-	39	~P5	~G12	e e-2
46 20 15	73	62	23	17	20	135 ○	-	-	-	-	46	~P5	~G13	e e-2
46 21 16	73	62	23	17	20	135 ○	-	-	-	-	46	~P5	~G13	e e-2

Solution tool
PRAD system

Specification corresponding with standard blanks(for Japanese market)

HSS HSS-P

Material Symbols　HSS : ○　HSS-E : ●　HSS-P : ◎

Main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	⑤ STI (metric)	⑥ STI (unified)
M32×3 M32×2 M32×1.5	1'1/4-7UNC 1'1/4-8UN 1'1/4-12UNF 1'1/4-18UNEF	W1'1/4-7		STI_M27×3	STI_1'1/8-12UNEF
M32×1 M32×0.5	1'1/4-20UN 1'1/4-28UN				
M33×3.5 M33×3 M33×2 M33×1.5				STI_M30×2	
M33×1					
M34×3 M34×2				STI_M30×3	STI_1'1/8-7UNC
M34×1.5 M34×1					
M35×3 M35×2	1'3/8-6UNC 1'3/8-8UN 1'3/8-12UNF	W1'3/8-6		STI_M30×3.5	STI_1'1/4-12UNF
M35×1.5 M35×1	1'3/8-16UN 1'3/8-18UNEF 1'3/8-20UN 1'3/8-28UN				
M36×4 M36×3 M36×2				STI_M33×2	
M36×1.5 M36×1 M36×0.5					
M37×1.5					
M38×3 M38×2				STI_M33×3.5	STI_1'1/4-7UNC
M38×1.5 M38×1 M38×0.5					STI_1'3/8-12UNF
M39×4 M39×3 M39×2	1'1/2-6UNC 1'1/2-8UN 1'1/2-12UNF	W1'1/2-6		STI_M36×2	
M39×1.5 M39×1	1'1/2-16UN 1'1/2-18UNEF 1'1/2-20UN 1'1/2-28UN				
M40×4 M40×3 M40×2				STI_M36×3	
M40×1.5 M40×1					

＊Corresponding pitches meet with the pitches of other kinds.
＊Concerning Hand of threads, both right and left are applicable in the same blank.
＊Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.
＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

Main size designation and specification						Overall length of standard type and long type, and corresponding Materials					Max. thread length	Applicable class		TYPE
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L	Length of long type : L					Cutting	Forming	
46 21 16	78	67	24	19	22	145 ○	-	-	-	-	46	~P5	~G13	e e-2
46 21	78	67	25	19	22	145 ○	-	-	-	-	46	~P5	~G13	e e-2
52 26	84	71	28	21	24	155 ○	-	-	-	-	52	~P6	~G14	e e-2
52 26 17	84	71	28	21	24	155 ○	-	-	-	-	52	~P6	~G14	e e-2
52 26 17	84	71	28	21	24	155 ○	-	-	-	-	52	~P6	~G14	e e-2
26	89	76	30	23	26	165 ○	-	-	-	-	52	~P6	~G14	e-2
52 26 17	89	76	30	23	26	165 ○	-	-	-	-	52	~P6	~G14	e e-2
52 26 17	89	76	30	23	26	165 ○	-	-	-	-	52	~P6	~G14	e e-2
59 27	94	81	32	26	30	175 ○	-	-	-	-	59	~P6	~G15	e e-2

Solution tool
PRAD system

Specification corresponding with standard blanks(for Japanese market)

HSS HSS-P

Material Symbols	HSS : ○	HSS-E : ●	HSS-P : ◎

Main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	⑤ STI (metric)	⑥ STI (unified)
M42×4.5 M42×4 M42×3 M42×2 M42×1.5 M42×1		W1'5/8-5		STI_M36×4 STI_M39×2	STI_1'3/8-6UNC STI_1'1/2-12UNF
M44×2 M44×1.5					
M45×4.5 M45×4 M45×3 M45×2 M45×1.5 M45×1	1'3/4-5UNC 1'3/4-6UN 1'3/4-8UN 1'3/4-12UN 1'3/4-16UN 1'3/4-20UN	W1'3/4-5		STI_M39×4 STI_M39×3	STI_1'1/2-6UNC
M46×4 M46×3 M46×2 M46×1.5					
M48×5 M48×4 M48×3 M48×2 M48×1.5 M48×1					

＊Corresponding pitches meet with the pitches of other kinds.
＊Concerning Hand of threads, both right and left are applicable in the same blank.
＊Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.
＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

Main size designation and specification						Overall length of standard type and long type, and corresponding Materials					Max. thread length	Applicable class		TYPE
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L	Length of long type : L					Cutting	Forming	
59	94	81	32	26	30	175 ○	-	-	-	-	59	~P6	~G15	e
27														e-2
59	94	81	35	26	30	180 ○	-	-	-	-	59	~P6	~G15	e
27														e-2
59	97	83	35	26	30	180 ○	-	-	-	-	59	~P6	~G15	e
27														e-2
65	100	85	38	29	32	185 ○	-	-	-	-	65	~P6	~G15	e
28														e-2
65	100	85	38	29	32	185 ○	-	-	-	-	65	~P6	~G15	e
28														e-2

Solution tool
PRAD system

HF

Specification corresponding with standard blanks(for Japanese market)

Main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	⑤ STI (metric)	⑥ STI (unified)
M2×0.4	№1-64UNC №1-72UNF		SM5/64-64		
M2×0.25					
M2.2×0.45	№2-56UNC №2-64UNF				
M2.2×0.25					
M2.3×0.4					
M2.3×0.25					
M2.5×0.45		W3/32-48	SM3/32-56		
M2.5×0.35			SM3/32-100		
M2.6×0.45	№3-48UNC №3-56UNF				
M2.6×0.35					
M3×0.5	№4-40UNC №4-48UNF			STI_M2×0.4 STI_M2.2×0.45	STI_№2-56UNC
M3×0.35					
M3.5×0.6	№5-40UNC №5-44UNF №6-32UNC №6-40UNF	W1/8-40	SM1/8-40 SM1/8-44	STI_M2.5×0.45 STI_M2.6×0.45	
M3.5×0.35					
M4×0.7		W5/32-32	SM9/64-40	STI_M3×0.5	STI_№4-40UNC STI_№5-40UNC
M4×0.5					
M4.5×0.75	№8-32UNC №8-36UNF		SM11/64-40	STI_M3.5×0.6	STI_№6-40UNF
M4.5×0.5					
M5×0.8 M5×0.75	№10-24UNC №10-32UNF	W3/16-24	SM3/16-24 SM3/16-28 SM3/16-32	STI_M4×0.7	STI_№6-32UNC
M5×0.5					
M6×1	№12-24UNC №12-28UNF	W7/32-24	SM15/64-28	STI_M4.5×0.75 STI_M5×0.8	STI_№8-32UNC STI_№8-36UNF STI_№10-32UNF
M6×0.75			SM7/32-32		
M6×0.5					

＊Corresponding pitches meet with the pitches of other kinds.
＊Concerning Hand of threads, both right and left are applicable in the same blank.
＊Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.
＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

Main size designation and specification						Overall length of standard type and long type, and corresponding Materials					Max. thread length	Applicable class		TYPE
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L	Length of long type : L					Cutting	Forming	
8	9.1	(25)	3	2.5	5	40	-	-	-	-	8	~P5	~G6	p
5.5														
9.5	11.7	(28)	3	2.5	5	44	-	-	-	-	9.5	~P5	~G6	p
5.5														
8	10.1	(30)									8			
5.5														
9.5	10.8										9.5			
8														
9.5	10.9										9.5			
8														
11	12.5	(27)	4	3.2	6	46	-	-	-	-	11	~P5	~G6	p
8														
11	15.0	(30)	5	4	7	52	-	-	-	-	11	~P5	~G7	p
8														
13											13			
11														
13	18.1	(37)	5.5	4.5	7	60	-	-	-	-	13	~P5	~G7	p
11														
16											16			
11														
19	-	(43)	6	4.5	7	62	-	-	-	-	19	~P6	~G8	q
13														
11														

Solution tool
PRAD system

HF

Specification corresponding with standard blanks(for Japanese market)

Main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	⑤ STI (metric)	⑥ STI (unified)
M8×1.25	5/16-18UNC	W5/16-18	SM9/32-20 SM5/16-18	STI_M6×1	STI_№10-24UNC STI_№12-24UNC STI_№12-28UNF STI_1/4-20UNC STI_1/4-28UNF
M8×1	1/4-20UNC 1/4-28UNF 5/16-24UNF	W1/4-20			
M8×0.75					
M10×1.5	3/8-16UNC	W3/8-16	SM11/32-28	STI_M8×1.25	STI_5/16-18UNC STI_5/16-24UNF
M10×1.25					
M10×1	3/8-24UNF				
M12×1.75		W7/16-14	SM7/16-16	STI_M10×1.5	STI_3/8-16UNC STI_3/8-24UNF
M12×1.5	7/16-14UNC			STI_M10×1.25	
M12×1.25				STI_M10×1	
M12×1	7/16-20UNF				
M12×0.75					

HF

Specification corresponding with standard blanks(DIN)

Main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	⑤ STI (metric)	⑥ STI (unified)
M6×1	№12-24UNC №12-28UNF	W7/32-24	SM15/64-28	STI_M4.5×0.75 STI_M5×0.8	STI_№8-32UNC STI_№8-36UNF STI_№10-32UNF
M8×1.25 M8×1	1/4-20UNC 1/4-28UNF 5/16-18UNC 5/16-24UNF	W1/4-20 W5/16-18	SM1/4-20 SM1/4-28 SM9/32-20 SM5/16-18	STI_M6×1	STI_№10-24UNC STI_№12-24UNC STI_№12-28UNF STI_1/4-20UNC STI_1/4-28UNF
M10×1.5 M10×1.25	3/8-16UNC 3/8-24UNF	W3/8-16	SM11/32-28	STI_M8×1.25	STI_5/16-18UNC STI_5/16-24UNF
M12×1.5 M12×1.25	7/16-14UNC 7/16-20UNF	W7/16-14	SM7/16-16	STI_M10×1.5 STI_M10×1.25 STI_M10×1	STI_3/8-16UNC STI_3/8-24UNF

＊Corresponding pitches meet with the pitches of other kinds.
＊Concerning Hand of threads, both right and left are applicable in the same blank.
＊Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.
＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

Main size designation and specification						Overall length of standard type and long type, and corresponding Materials					Max. thread length	Applicable class		TYPE
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L	Length of long type : L					Cutting	Forming	
22 19 13	-	(46)	6.2	5	8	70	-	-	-	-	22	~P6	~G8	r
24 22 19	-	(48)	7	5.5	8	75	-	-	-	-	24	~P6	~G8	r
30 24 22 19 13	-	(49)	8.5	6.5	9	82	-	-	-	-	30	~P7	~G10	r

Main size designation and specification							Max. thread length	Applicable class			TYPE
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L		Cutting		Forming	
								(P class)	(ISO class)		
12	27.4	(48)	6	-	-	80	12	P6	ISO3	G9	s
15	30	(54)	8	-	-	90	15	P6	ISO3	G8	s
18	35.9	(57)	10	-	-	100	18	P6	ISO3	G8	s
21	39.9	(63)	12	-	-	110	21	P7	ISO3	G10	s

Solution tool
PRAD system

Specification of corresponding standard blanks(for European market)

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
Size	L	ℓ	ℓ_n	D	K	ℓ_k		HSS	HSS-E	SKH56	HSS-P	Cutting	Forming	
M3	56	6.5	18	3.5	2.7	6	c		●			ISO3	G7	SP,PO,HT,ROLL
M4	63	9	21	4.5	3.4	6	c		●			ISO3	G7	SP,PO,HT,ROLL
M5	70	10.5	25	6	4.9	8	c		●			ISO3	G7	SP,PO,HT,ROLL
M6	80	15	30	6	4.9	8	g		●			ISO2X	-	SP,PO,HT
M8	90	19	35	8	6.2	9	g		●			ISO3	G7	SP,PO,HT,ROLL
M10	100	23	39	10	8	11	g		●			ISO3	G7	SP,PO,HT,ROLL
M12	110	26	45	12	9	12	g		●			ISO3	G9	SP,PO,HT,ROLL

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
Size	L	ℓ	ℓ_n	D	K	ℓ_k		HSS	HSS-E	SKH56	HSS-P	Cutting	Forming	
M1.4	40	7	-	2.5	2.1	5	DIN371		●			ISO3	G5	SP,PO,HT,ROLL
M1.6	40	8	-	2.5	2.1	5			●			ISO3	G5	SP,PO,HT,ROLL
M2	45	8	-	2.8	2.1	5			●	●	●	ISO3	G5	SP,PO,HT,ROLL
M2.5	50	9	-	2.8	2.1	5			●		●	ISO3	G6	SP,PO,HT,ROLL
M3	56	11	18	3.5	2.7	6			●	●	●	ISO3	G7	SP,PO,HT,ROLL
M4	63	13	21	4.5	3.4	6			●	●	●	ISO3	G7	SP,PO,HT,ROLL
M5	70	16	25	6	4.9	8			●	●	●	ISO3	G7	SP,PO,HT,ROLL
M6	80	19	30	6	4.9	8			●	●	●	ISO2X	-	SP,PO,HT
M7	80	19	30	7	5.5	8			●			ISO3	G11	SP,PO,HT,ROLL
M8	90	22	35	8	6.2	9			●	●	●	ISO3	G7	SP,PO,HT,ROLL
M10	100	24	39	10	8	11			●	●	●	ISO3	G7	SP,PO,HT,ROLL

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
Size	L	ℓ	ℓ_n	D	K	ℓ_k		HSS	HSS-E	SKH56	HSS-P	Cutting	Forming	
M3	56	11	-	2.2	-	-	DIN376		●			ISO3	G7	SP,PO,HT,ROLL
M4	63	13	-	2.8	2.1	5			●			ISO3	G7	SP,PO,HT,ROLL
M5	70	16	-	3.5	2.7	6			●			ISO3	G7	SP,PO,HT,ROLL
M6	80	19	-	4.5	3.4	6			●			ISO2X	-	SP,PO,HT
M8	90	22	-	6	4.9	8			●			ISO3	G7	SP,PO,HT,ROLL
M10	100	24	-	7	5.5	8			●			ISO3	G7	SP,PO,HT,ROLL
M12	110	29	-	9	7	10			●		●	ISO3	G9	SP,PO,HT,ROLL
M14	110	30	-	11	9	12			●		●	ISO3	G9	SP,PO,HT,ROLL
M16	110	32	-	12	9	12			●		●	ISO3	G9	SP,PO,HT,ROLL
M20	140	34	-	16	12	15			●		●	ISO3	G13	SP,PO,HT,ROLL

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
Size	L	ℓ	ℓ_n	D	K	ℓ_k		HSS	HSS-E	SKH56	HSS-P	Cutting	Forming	
M8×1	90	22	-	6	4.9	8	DIN374		●			ISO3	G7	SP,PO,HT,ROLL
M10×1	90	20	-	7	5.5	8			●			ISO3	G8	SP,PO,HT,ROLL
M12×1.5	100	22	-	9	7	10			●			ISO3	G10	SP,PO,HT,ROLL
M14×1.5	100	22	-	11	9	12			●			ISO3	G10	SP,PO,HT,ROLL
M16×1.5	100	22	-	12	9	12						ISO3	G10	SP,PO,HT,ROLL

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
Size	L	ℓ	ℓ_n	D	K	ℓ_k		HSS	HSS-E	SKH56	HSS-P	Cutting	Forming	
G1/8	90	20	-	7	5.5	8	DIN5156		●			-	-	SP,PO,HT
G1/4	100	22	-	11	9	12			●			-	-	SP,PO,HT
G3/8	100	22	-	12	9	12			●			-	-	SP,PO,HT
G1/2	125	25	-	16	12	15			●			-	-	SP,PO,HT

＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

Specification of corresponding standard blanks(for American market)

unit : mm

YAMAWA standard	Applicable dimension							TYPE	Material				Applicable class			Corresponding products
Size	L	ℓ	ℓ_n	ℓ_S (reference)	D	K	ℓ_k		HSS	HSS-E	SKH56	HSS-P	Cutting	Forming		
No.4	47.6	8.5	14.3	28	3.58	2.79	4.7	c		●		●	GH8	G5		SP,PO,HT,ROLL
No.5	49.2	9.5	15.9	29	3.58	2.79	4.7	c		●			GH8	G8		SP,PO,HT,ROLL
No.6	50.8	10.5	17.5	29	3.58	2.79	4.7	c		●		●	GH6	G3		SP,PO,HT,ROLL
No.8	54	11.5	19.1	31	4.26	3.32	6.3	c		●		●	GH6	G3		SP,PO,HT,ROLL
No.10	60.3	13.5	22.2	33	4.92	3.86	6.3	c		●		●	GH6	G4		SP,PO,HT,ROLL
No.12	60.3	14.5	23.8	31	5.58	4.19	7.1	c		●			GH6	-		SP,PO,HT
U1/4	63.5	15	25.4	32	6.47	4.85	7.9	c		●		●	GH6	G4:20UNC	G6:28UNF	SP,PO,HT,ROLL
U5/16	69.1	17	28.6	32	8.07	6.04	9.5	c		●		●	GH9	G8		SP,PO,HT,ROLL
U3/8	74.6	19	31.8	33	9.67	7.26	11.1	c		●		●	GH6	-	G7:24UNF	SP,PO,HT,ROLL
U7/16	80.2	22	-	-	8.2	6.14	10.3	e		●			GH6	-	G6:20UNF	SP,PO,HT,ROLL
U1/2	85.7	25	-	-	9.32	6.98	11.1	e		●			GH9	-	G7:20UNF	SP,PO,HT,ROLL
M3	49.2	9.5	15.9	29	3.58	2.79	4.7	c		●			D10			SP,PO,HT,ROLL
M4	54	11.5	19.1	30	4.26	3.32	6.3	c		●			D11			SP,PO,HT,ROLL
M5	60.3	13.5	22.2	34	4.92	3.86	6.3	c		●			D7			SP,PO,HT,ROLL
M6	63.5	15	25.4	32	6.47	4.85	7.9	c		●		●	D8			SP,PO,HT,ROLL
M8	69.1	17	28.6	34	8.07	6.04	9.5	c		●			D8	-		SP,PO,HT
M10	74.6	19	31.8	36	9.67	7.26	11.1	e		●			D9	-		SP,PO,HT
M12	85.7	25	-	-	9.32	6.98	11.1	e		●			D9	-		SP,PO,HT

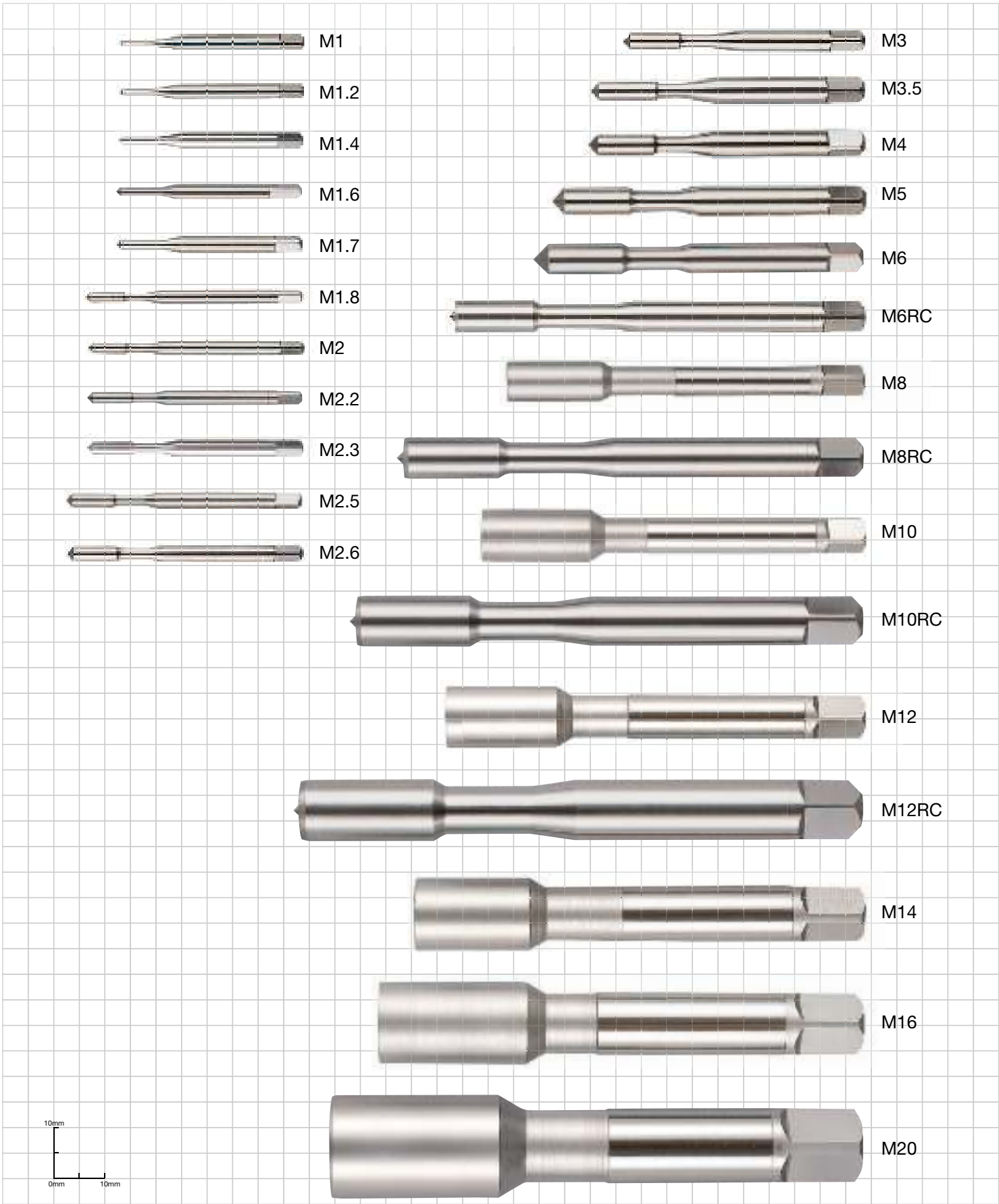
Specification of corresponding standard blanks(for American market)
Overall length : DIN, Shank dia. : ANSI

unit : mm

YAMAWA standard	Applicable dimension							TYPE	Material				Applicable class		Corresponding products
Size	L	ℓ	ℓ_n	ℓ_S (reference)	D	K	ℓ_k		HSS	HSS-E	SKH56	HSS-P	Cutting	Forming	
No.0	45	6	8.2	29	3.58	2.79	4.7	b		●			GH9	G8	SP,PO,HT,ROLL
No.2	45	8	10.7	29	3.58	2.79	4.7	b		●			GH8	G6	SP,PO,HT,ROLL
No.4	56	9	18	32	3.58	2.79	4.7	c		●		●	GH8	G5	SP,PO,HT,ROLL
No.5	56	11	18	34	3.58	2.79	4.7	c		●			GH8	G8	SP,PO,HT,ROLL
No.6	56	11	19	34	3.58	2.79	4.7	c		●		●	GH6	G3	SP,PO,HT,ROLL
No.8	63	13	21	39	4.26	3.32	6.3	c		●		●	GH9	G7	SP,PO,HT,ROLL
No.10	70	14	24	42	4.92	3.86	6.3	c		●		●	GH7	G7	SP,PO,HT,ROLL
No.12	80	15	25	49	5.58	4.19	7.1	c		●			GH6	-	SP,PO,HT
U1/4	80	15	30	43	6.47	4.85	7.9	c		●		●	GH6	G4	SP,PO,HT,ROLL
U5/16	90	19	35	46	8.07	6.04	9.5	c		●		●	GH9	G8	SP,PO,HT,ROLL
U3/8	100	23	39	51	9.67	7.26	11.1	c		●		●	GH6	24UNF:G7	SP,PO,HT,ROLL
U7/16	100	23	49	51	8.2	6.14	10.3	c		●			GH6	20UNF:G6	SP,PO,HT,ROLL
U1/2	110	26	54	56	9.32	6.98	11.1	c		●			GH9	20UNF:G7	SP,PO,HT,ROLL
M3	56	11	18	34	3.58	2.79	4.7	c		●			D12	D12	SP,PO,HT,ROLL
M4	63	13	21	39	4.26	3.32	6.3	c		●			D12	D12	SP,PO,HT,ROLL
M5	80	15	25	49	5.58	4.19	7.1	c		●			D12	D12	SP,PO,HT,ROLL
M6	80	15	30	43	6.47	4.85	7.9	c		●		●	D11	D11	SP,PO,HT,ROLL
M8	90	19	35	46	8.07	6.04	9.5	c		●			D7	-	SP,PO,HT
M10	100	23	49	51	8.2	6.14	10.3	e		●			D12	D12	SP,PO,HT,ROLL
M12	110	26	54	56	9.32	6.98	11.1	e		●			D11	D11	SP,PO,HT,ROLL

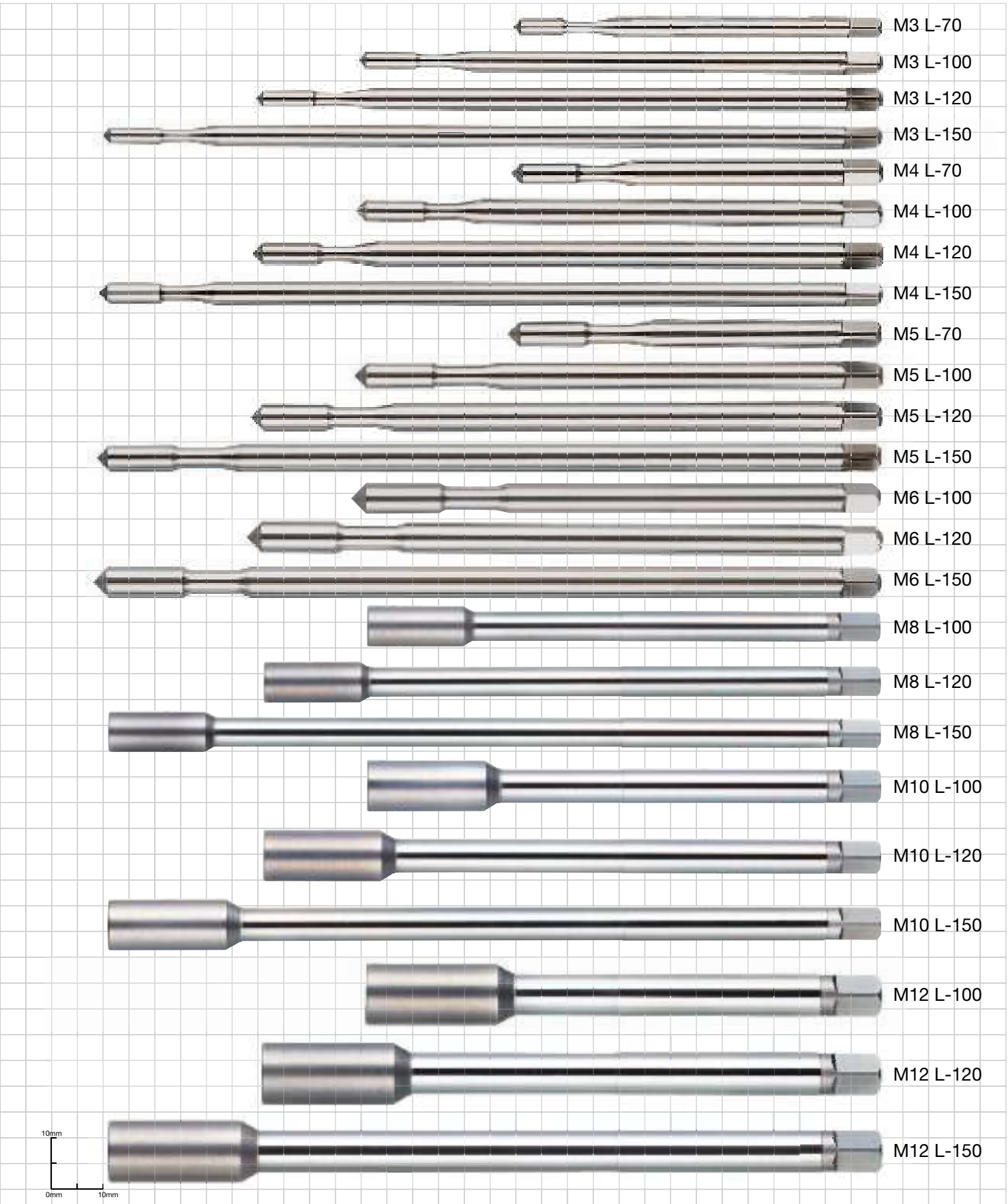
＊Concerning applicable thread limits, maximum applicable thread limits for metric coase threads are listed.

YAMAWA Standard blank Line UP

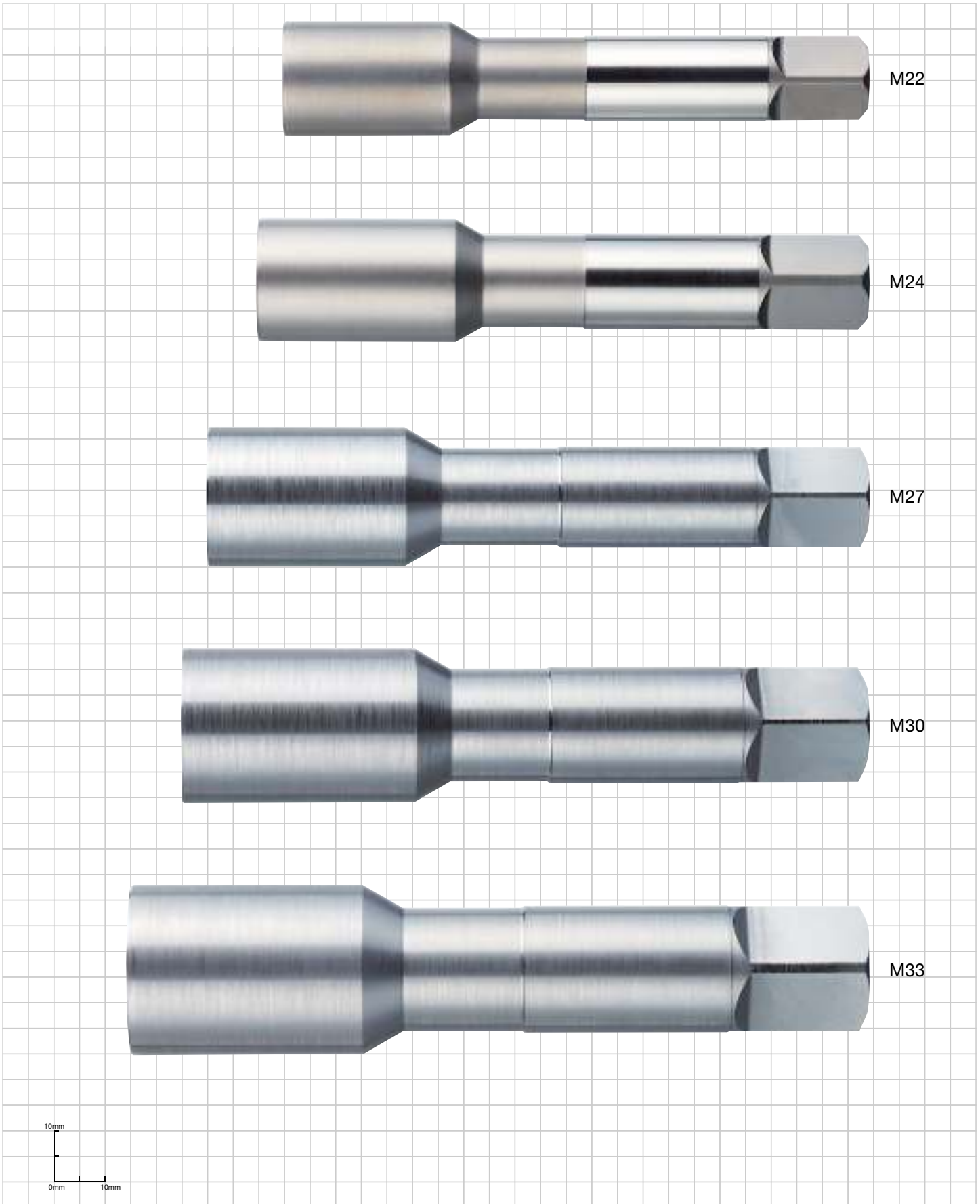


Think threads with YAMAWA
For improvement, spec may change without advance notice.

YAMAWA Standard Longshank blank Line UP



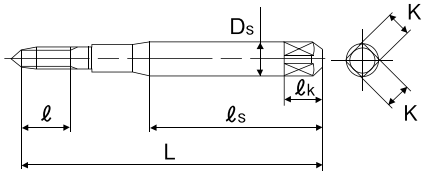
YAMAWA Standard Larger size blank Line UP



For improvement, spec may change without advance notice.

Table for tap dimensions and type

TYPE a



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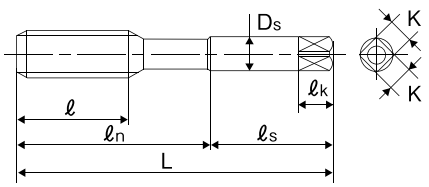
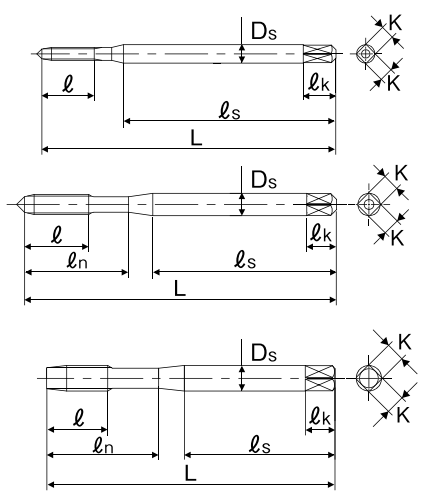


DIN371



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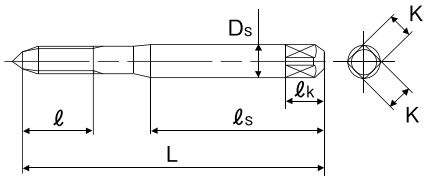

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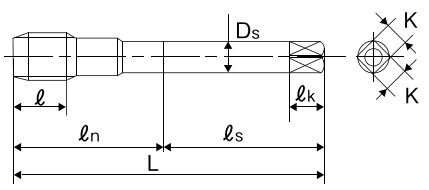
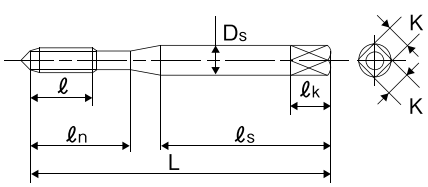


TYPE c



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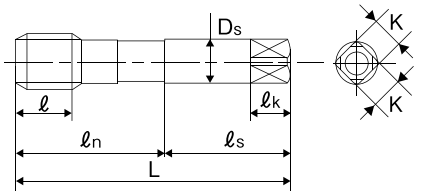
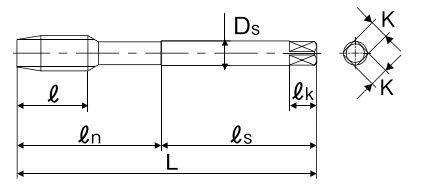


DIN374/376



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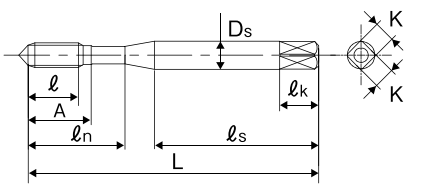
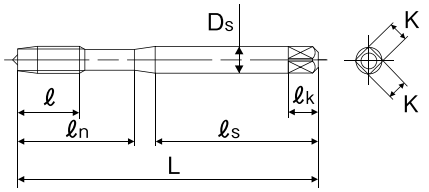
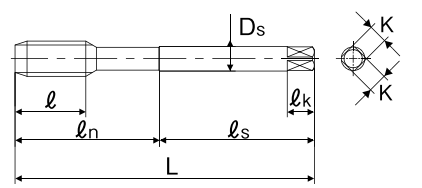


TYPE g



DIN5156



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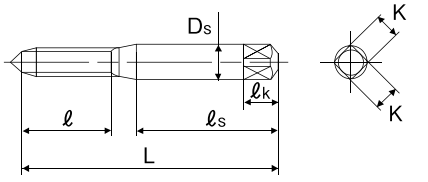

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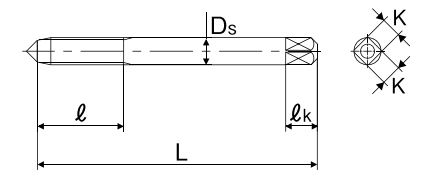
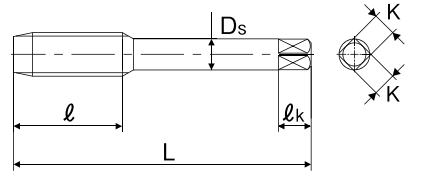
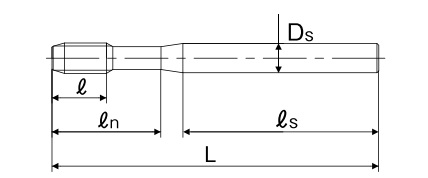


TYPE r



TYPE s



PRAD system Inquiry sheet

Please fill in the blanks and send it to us by e-mail or FAX

※Referring to Yamawa Web http://yamawa.jp/, please send your tapping information as a PDF to our Web window "Mail request"
Please fill the information table as much as possible. Our staff will contact you by return.

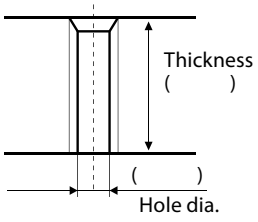
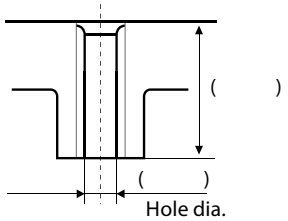
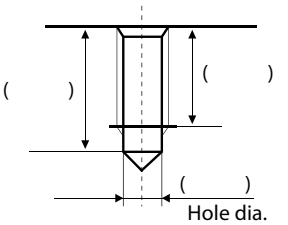
FAX +81(3)3564-6838

■ Company name		
■ Department · Name	Department	Name
■ TEL · FAX	TEL	FAX
■ e-mail address		

Customer's request

■ Thread type	M : Metric U : Unified W : Whitworth Special( )		
■ Size and pitch		■ Hand of thread	· Right hand · Left hand
■ Tap type	· SP · PO · HT · ROLL · Other item( )		
■ Overall length	· YMW standard · L-70 · L-100 · L-120 · L-150 · L-( )other length		
■ Tap Material	· HSS(HSS) · HSS-E · HSS-P		
■ Tolerance	· P( )Class · GH( )Class · JIS II Class · Request Class( )		
■ Thread length	· YMW standard · Request length( )	■ Shank dia.	· YMW standard · Request dia. ( )
■ Chamfer length	· YMW standard · Taper · Plug · Bottoming · 4P(P) · 2P(B) · Request chamfer( )		
■ Surface treatment	· Oxide · Nitride · Nitride-Oxide · TiN · TiCN · CrN · Bright finished		

Condition of Workpiece Material

■ Tapping part	· ( ) · Unclear	■ Hardness	· ( )HRB · ( )HRC · Unclear
■ Work Material	· FC( ) · SS( ) · SPC( ) · SUS( ) · ADC( ) · AC( ) · BSBM( ) · BC( ) · S( )C · SCM( ) · Plastics( ) · Other( ) · Unclear		
■ Parts shape	  		■ Direction · Vertical · Horizontal · inclined · Unclear
■ How to make hole	· Drill · Press · Reamer · Molding · Other( ) · Unclear		
■ Gauge	· GP( ) · NP(WP)( ) · No check · Unclear		

Machine, cutting condition

■ Tapping machine	· Drill press · Automatic lathe · Special machine · Tapping machine · Machining Center · Else( ) · Unclear
■ Holder	· Drill chuck type · Tapping holder(with spring) type · Complete fixed holder type · Else( ) · Unclear
■ Feed	· Manual feed · Gear feed system · Master lead screw feed system · Non-synchronous system by approximation · Fully synchronous feed system · Else( ) · Unclear
■ Cutting speed	( )SFM or Revolution( )rpm · Unclear
■ Cutting oil	· Oil · Water soluble oil · Paste · Else( ) · Unclear

<Comment>

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For improvement, spec may change without advance notice.

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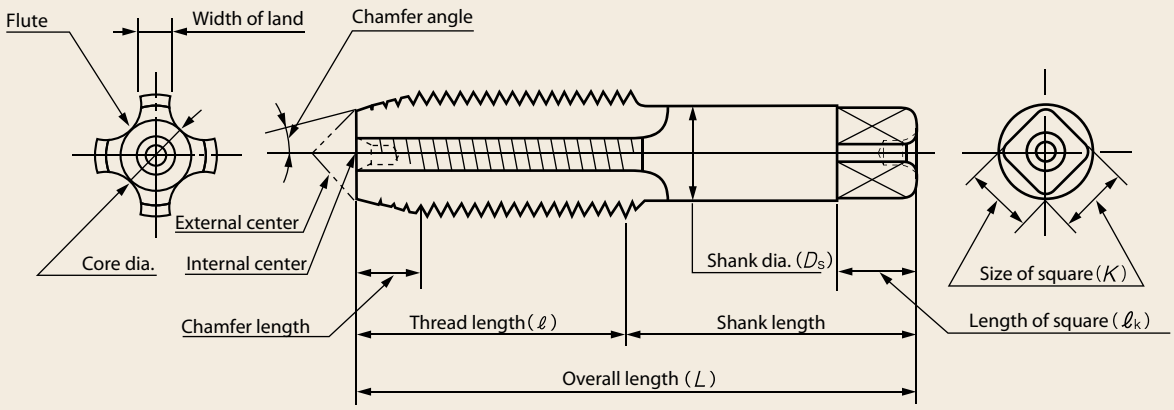
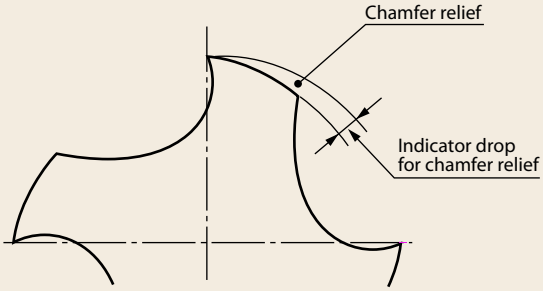
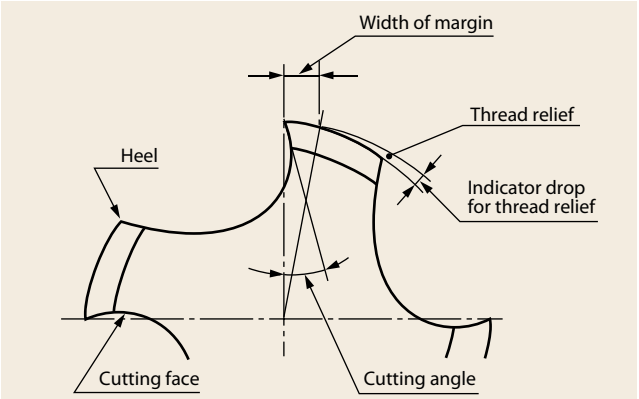
1. Terminology of Taps



■Chamfer relief

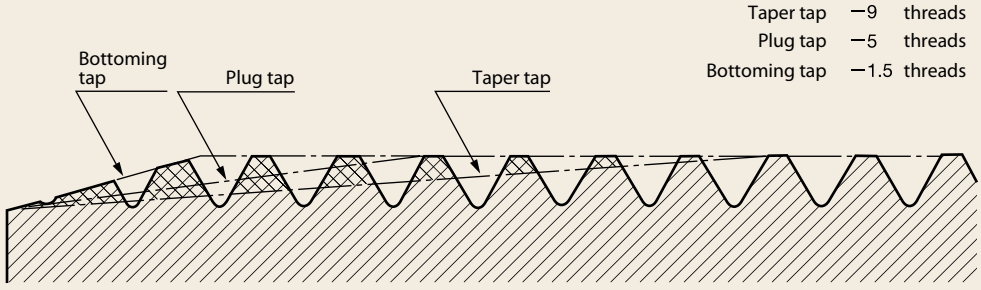


■Thread relief and cutting angle



Edge angle, including chamfer relief, thread relief, cutting angle and others, as well as heat treatment, have important functions affecting workpiece shape, tool life, surface finish of internal screw thread, and so on.

■Chamfer of hand tap

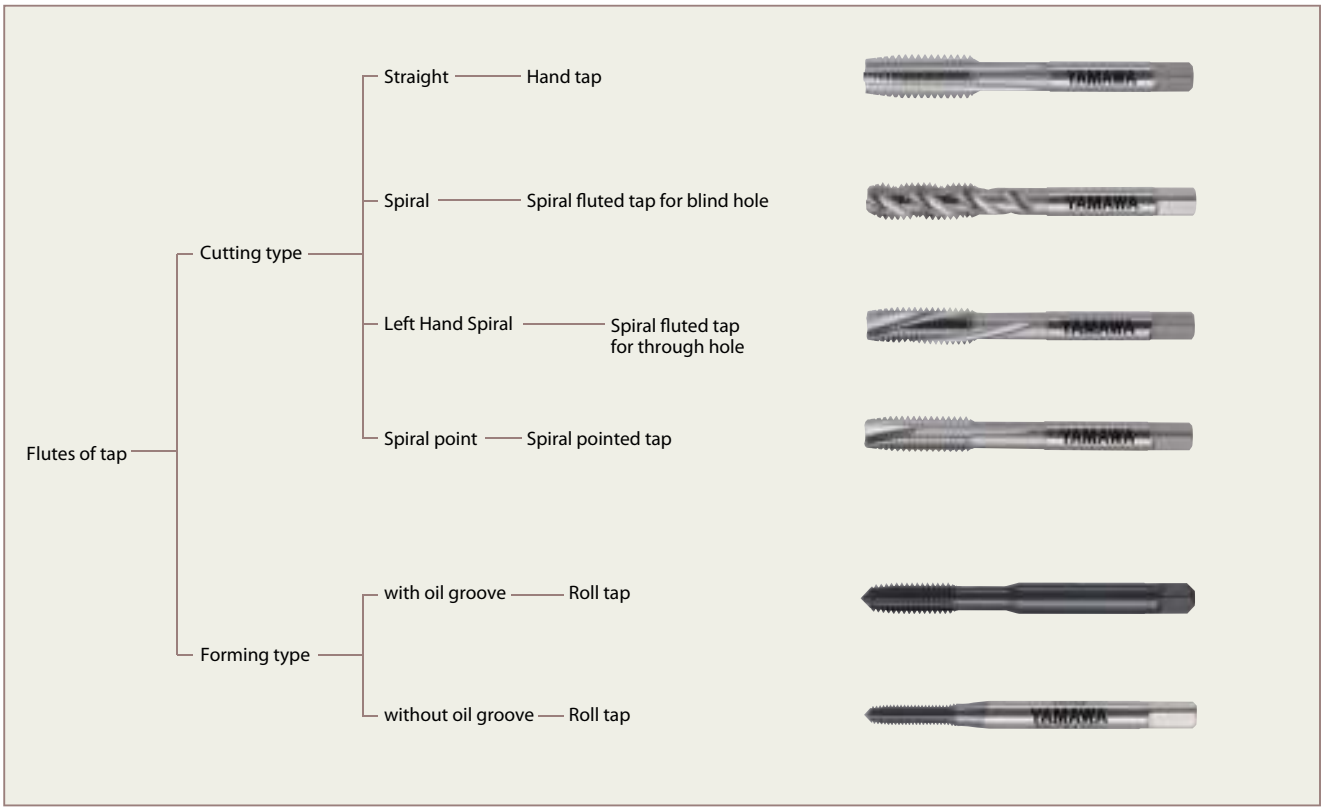


In general, tap chamfer is the most important part of taps to create internal thread. The function of full thread part of taps is to make a guidance.

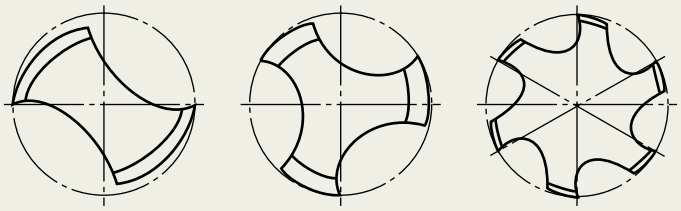
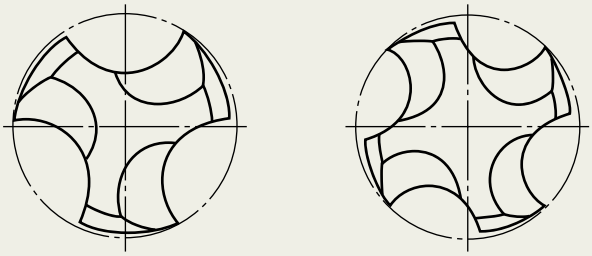
2. Flutes

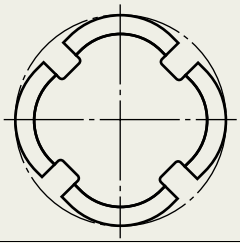
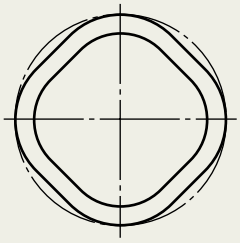
■Major functions of flutes are :

1) Chips' pocket, 2) lubricant supply route, 3) rake angle formation, 4) to determine cutting amount in relation to the number of chamfer threads. And all are very important. Taps' flutes are classified into following groups by tapping methods, fluting method, tapping direction, and hand of screw thread.



■Type of Flute

Type of Taps / Flute	Cutting type
Straight Flute Spiral Flute	
Spiral Point Flute	

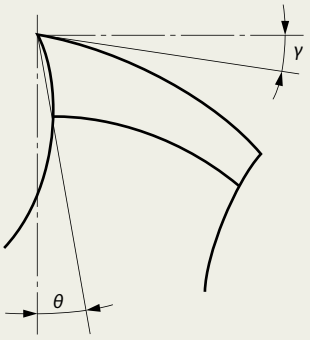
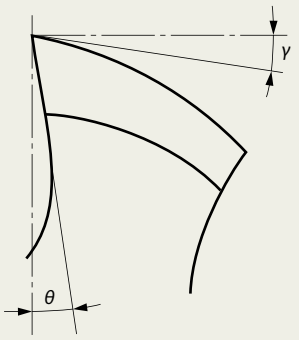
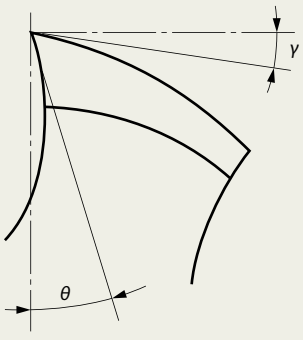
Type of Taps / Flute	Forming type
With oil groove	
Without oil groove	

In general, the number of flutes for cutting type taps are usually increased as O.D. becomes larger. However, it is also influenced by tap's strength and rigidity, the accomodation of chip, the amount of cutting, and lubricant supply system.

3. Edge angle and Cutting allowance of taps

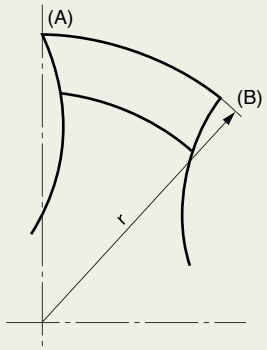
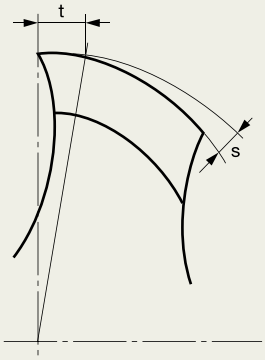
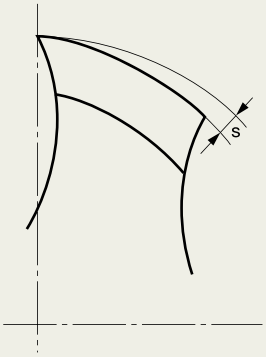
■Cutting angle and Chamfer relief angle

θ : Cutting angle γ : Chamfer relief angle

Chordal Hook Angle	Rake Angle	Tangential Hook Angle
		
Cutting angle of hook face. The angle between the center line passing the cutting edge and the straight line linking the cutting edge with the thread root.	Cutting angle of rake face. The angle between the center line passing the cutting edge and the straight line linking the cutting edge with thread root.	Cutting angle of hook face. The angle between the center line passing the cutting edge and the straight line tangent to the rake face on the cutting edge.

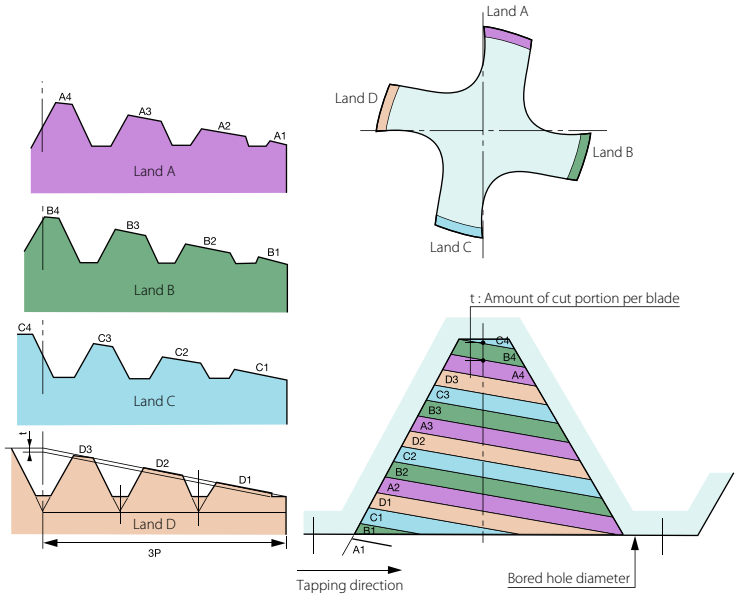
■Thread relief

S : Indicator drop for thread relief

Concentric-unrelieved	Con-eccentric thread relief	Eccentric thread relief
		
No relief exists at land. Start (A) and heel (B) of thread land have same concentricy.	Radial relief in the thread form starts at the back of a concentric margin.	Radial relief in the thread form starts at the cutting edge and continues to the heel.

■The amount of cut portion

Please refer to the pictures shown.
In such taps as have 4 flutes and 3 thread chamfer, the cutting operation progresses in order from the edge of A1, B1, C1, D1…A2, B2…A4. Tap end is usually smaller than the size of bored hole, and A1 may not make any cutting operation.



4. Recommended Tapping Speeds

■Tapping Speeds

Following usage conditions affect tapping speeds : kind of taps, workpieces, number of chamfered threads, materials, hole condition and fluid. It is necessary to select the suitable tapping speed by paying attention to these conditions.
When work material has excellent workability, when there is a little depth of tapping, or when tapping fluid can be sufficient, select rather higher tapping speed. When workability of work material is unknown, to be safe, try nearly the lowest tapping speed at first, and then increase the speed gradually.

* Following speed is basically for the cutting condition under the use of insoluble cutting oil. Under the use of water soluble cutting oil, please choose 30% slower speed.

Unit : m/min

Workpiece Materials		Tapping Speed				
		Spiral Fluted	Spiral Pointed	Roll Taps	Straight Fluted	Cemented Carbide
Low Carbon Steels	SS400 S10C～S25C	8～15	10～20	8～15	6～10	—
Medium Carbon Steels	S25C～S45C	6～12	8～14	7～12	5～9	—
High Carbon Steels	S45C～S58C	5～10	8～12	5～10	5～8	—
Alloy Steels	SCM・SNCM	5～10	7～10	5～10	5～8	—
Thermal refined steels	20～45HRC	3～5	4～7	—	3～6	—
Stainless Steels	SUS	3～8	4～9	6～15	3～7	—
Tool Steels	SKD	5～8	6～10	—	5～9	—
Cast Steels	SC	6～10	8～13	—	6～10	—
Cast Irons	FC	—	—	—	12～17	15～25
Ductile Cast Irons	FCD	5～10	5～10	—	5～8	12～20
Coppers	Cu	8～12	8～13	25～35	7～11	15～33
Brass・Brass Casting	Bs・BsC	11～22	13～25	25～35	10～20	23～33
Phosphor Bronze・Phosphor Bronze Casting	PB・PBC	8～15	10～18	25～35	8～15	18～33
Wrought Aluminum	Al	15～25	20～25	25～35	15～20	23～40
Aluminum Alloy Castings	AC・ADC	11～22	12～24	15～25	10～20	15～25
Magnesium Alloy Castings	MC	7～15	10～20	—	7～15	12～20
Zinc Alloy Diecastings	ZDC	7～15	10～20	15～25	7～15	12～20
Thermosetting Plastic	Bakelite (Phenol-PF)	11～17	12～18	—	10～15	15～25
Thermoplastic resin	PVC, Nylon	11～17	12～18	—	10～15	15～25
Titanium Alloys	Ti-6Al-4V etc	6～9	6～9	—	—	—
Nickel Base Alloys	Hastelloy, Inconel, Waspaloy	3～6	3～6	—	—	—

■Formula

Tapping Speed (Vc)

$$Vc = \frac{\pi \cdot Dc \cdot n}{1000} \ (m/min)$$

n : Revolution of tap (min^{-1})
π : 3.14
Dc : Nominal dia. of tap (mm)

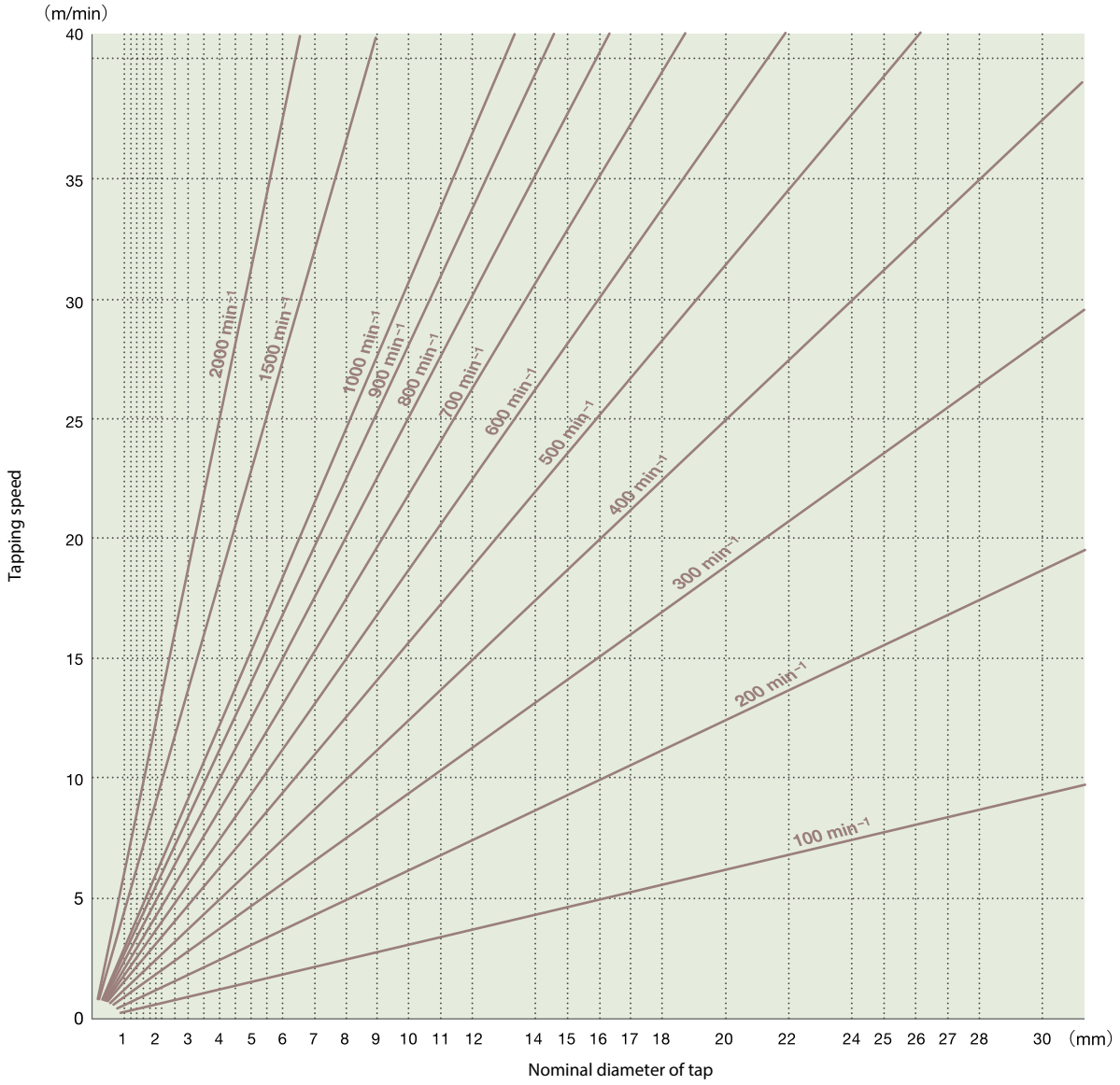
Revolution of tap (n)

$$n = \frac{1000 \cdot Vc}{\pi \cdot Dc} \ (min^{-1})$$

Vc : Tapping Speed (m/min)
Dc : Nominal dia. of tap (mm)
π : 3.14

5. Tapping speed and Revolution

■Conversion table



6. Tapping Torque

■Tapping Torque of Cutting type Taps

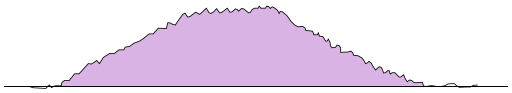
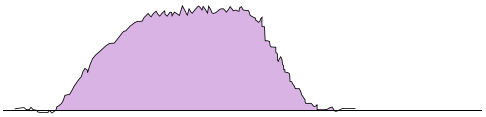
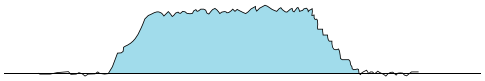
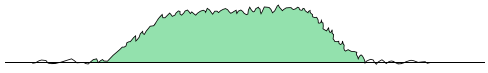
The torque starts increasing as the threads of chamfer enter the workpiece material. It becomes highest when all threads of chamfer cut into workpiece material, and is in plateau until the chamfer cuts through the workpiece. After that, the torque will decrease until the end of tapping.

■Cutting Torque Line

Cutting torque lines in the test of different kinds of taps, hand tap, spiral fluted tap, spiral pointed tap are shown below.

Tapping Condition

Tap : HSS P2 M8×1.25	Bored hole size : 6.8mm
Cutting speed : 6.1m/min	Cutting oil : Water insoluble oil
Workpiece material : S50C	Machine : Drilling machine
Tapping type : 10mm Through hole	Measurement equipment : Piezoelectric torque tester

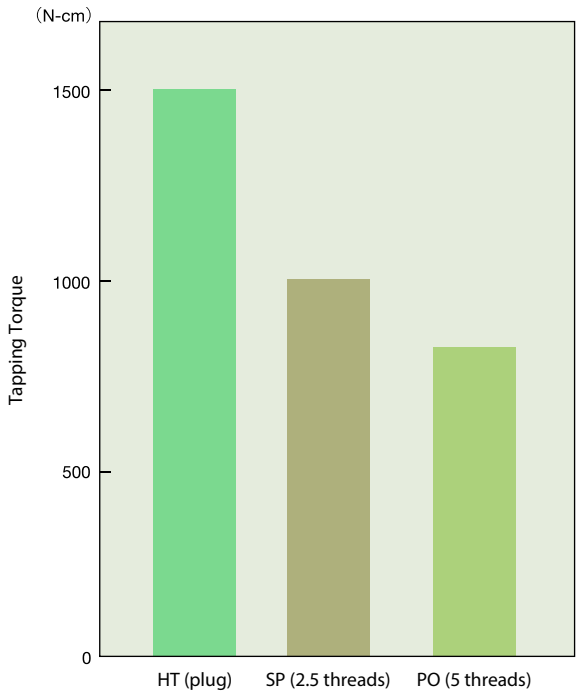
Type of tap		Torque lines	Description
Hand tap (P2)	Taper tap (9 threads)		Gentle slope is observed because of less cutting by each cutting chamfer, but longer tapping time is taken than in the other hand taps.
	Plug tap (5 threads)		Plateau is observed since whole chamfer threads enter the workpiece material. Tapping time is much shorter than that of the taper tap.
	Bottoming tap (1.5 threads)		Plateau is also observed since whole short chamfer threads enter the workpiece material. Tapping process time is shorter than that of the plug tap.
Spiral fluted tap (P2, 2.5 threads)			Spiral fluted tap pulls out the chips, good choice for blind hole tapping. The cutting torque of spiral fluted taps is smaller than that of the hand taps.
Spiral pointed tap (P2, 5 threads)			Spiral pointed tap pushes out the chips forward. It is good choice for through hole use. Cutting torque is smallest in all taps.

The cutting torque will change depending on the kind of taps, cutting chamfer, number of flutes, workpiece materials and their hardness, lubrication types, and chips.

6. Tapping Torque

■Comparison of Cutting Torque by Different Type of Taps

Cutting torque of hand tap (HT), and spiral fluted tap (SP), and spiral pointed tap (PO) differs, shown in the chart below.



Tapping Condition

Tap : HSS P2 M10×1.5
Cutting speed : 10m/min
Workpiece material : S50C
Hole condition : 20mm through hole
Bored hole size : ϕ8.5, drill
Lubrication : Water insoluble oil
Machine : Radial drilling machine
Measurement equipment : Piezoelectric torque tester

If the cutting torque of hand tap is assumed as 100, the cutting torque of other taps is as follows :

Hand Tap : 100
Spiral fluted Tap : 70~75
Spiral Pointed Tap : 60~65

■Tapping Torque of Forming type Taps

■Calculation for Tapping Torque of Roll Taps

○It is hard to calculate tapping torque for roll taps because they contain more complicated factor than the cutting taps.
According to our experience, tapping torque of roll taps is twice or three times larger than that of the cutting taps in general.
○Major factors increasing or decreasing tapping torque of roll taps are :
(1) Mechanical characteristic of workpiece (Tensile strength, hardness, spring back feature, work hardening index) : As the tensile strength gets larger, the threading torque becomes larger.
(2) Size and length of bored hole: Bored hole size is usually defined to obtain 75% thread height of basic thread profile. Roll taps may be shuttered due to the excessive tapping torque when the bored hole size is made smaller to obtain higher thread height. Tapping torque gets larger as the efficient length of internal screw becomes longer because there is an increase in friction coefficient caused by spring back of workpiece material.
(3) Tapping process (tapping speed, lubricant, and rigidity of main spindle).
(4) Surface treatment of taps (oxidizing, nitriding, TiN, and TiCN coatings).

○Tapping Torque Equation for Forming Taps

Based on the tensile strength of workpiece material, we prepare following equation to obtain tapping torque of standard formig taps.
Condition : Effective length of internal screw is 1.5D. Thread height is 75%.

Tapping Torque Equation for Forming Taps

$$T = Kf \times Dc \times P^2/1000$$

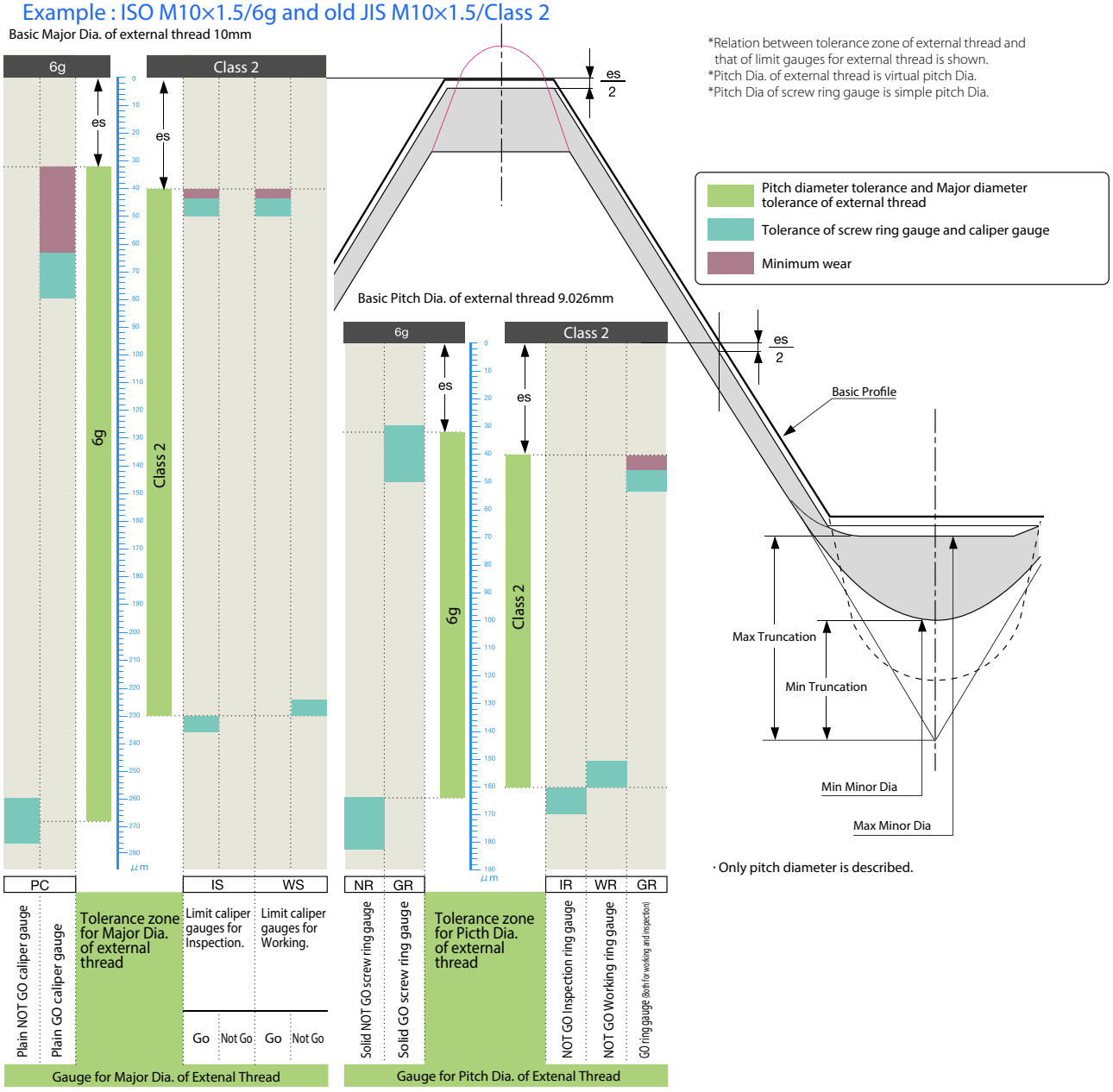
T : Tapping Torque (N-m)
Dc : Nominal Diameter of Tap (mm)
P : Pitch (mm)
Kf : Deforming resistance (N/mm^2)

Workpiece Materials	Deforming resistance (N/mm^2)
General Structure Steels, Low Carbon Steels	750~850
Medium Carbon Steels, Alloy Steels	1150~1350
Stainless Steels	1100~1300
Wrought Aluminum	250~350
Aluminum Die Castings	380~530
Coppers, Wrought Copper Alloys	750~1050

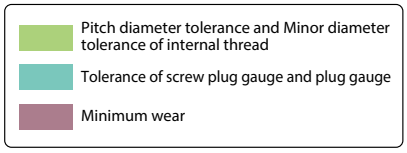
7. Metric Thread and Gauge Profile

Relation of tolerance position between screw thread classes and thread gauge classes in ISO(new JIS) and old JIS standard.

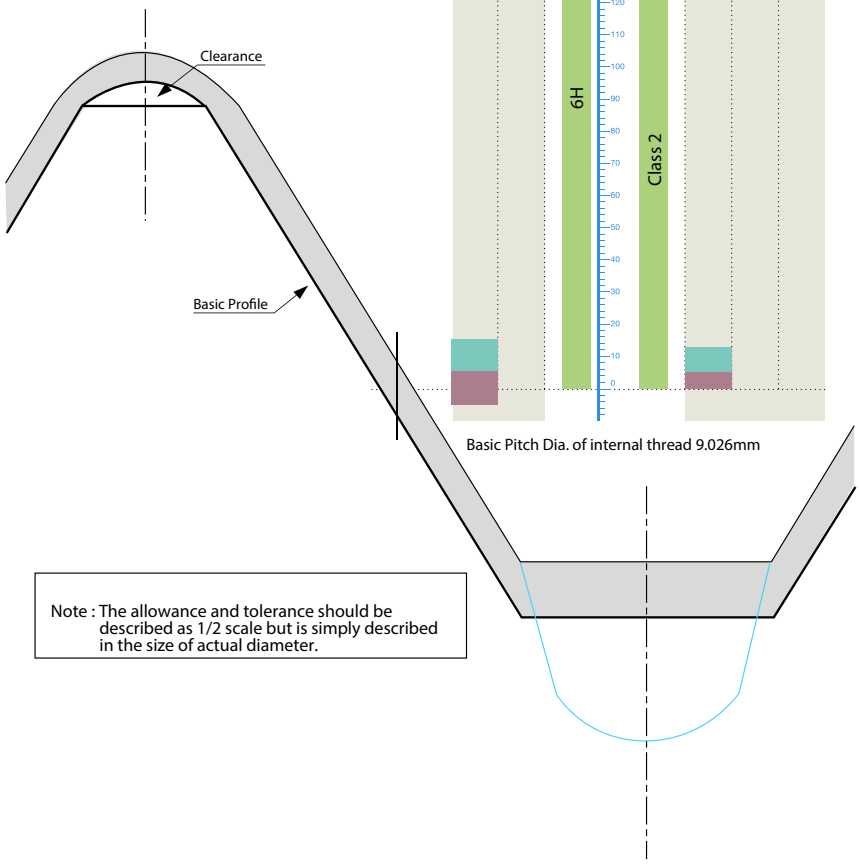
External threads and Limit gauges for external threads
Example : ISO M10×1.5/6g and old JIS M10×1.5/Class 2



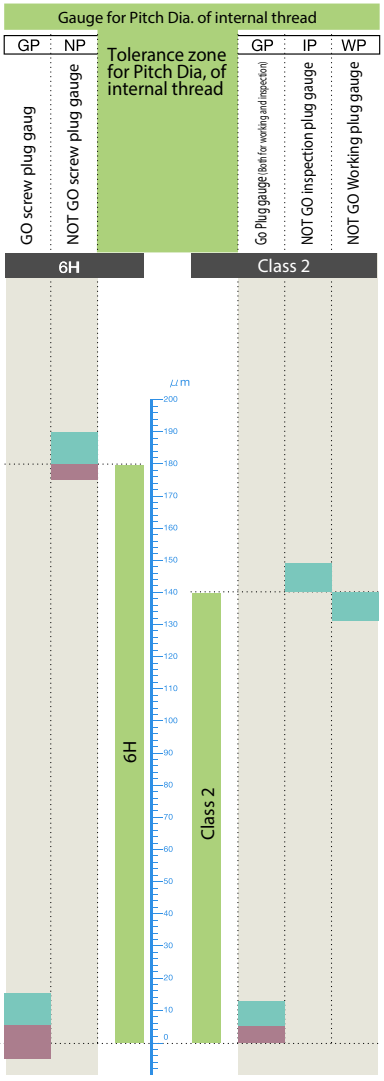
Internal threads and Limit gauges for internal threads
Example : ISO M10×1.5/6H and old JIS M10×1.5/Class 2



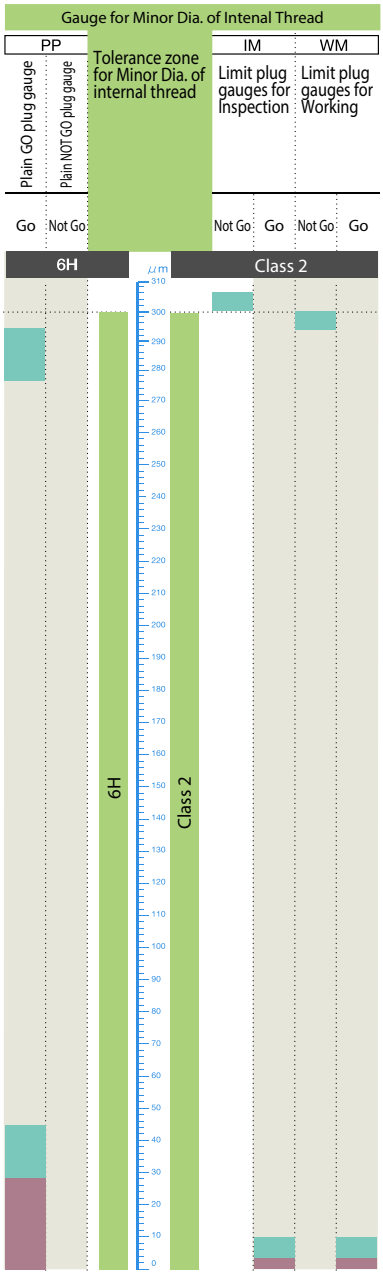
*Relation between tolerance zone of internal thread and that of limit gauges for internal thread is shown :
*Pitch diameter of internal thread is virtual pitch diameter.
*Pitch diameter of screw plug gauge is simple pitch diameter.



Note : The allowance and tolerance should be described as 1/2 scale but is simply described in the size of actual diameter.



Basic Pitch Dia. of internal thread 9.026mm



Basic Minor Dia. of internal thread 8.376mm

- Limit gauges for screw threads

JIS B 0251-2008 Limit gauges for metric screw threads

JIS B 0251-1975 Limit gauges for metric coarse screw threads Appendix

JIS B 0252-1996 Limit gauges for metric fine screw threads

JIS B 0253-1985 Gauges for taper pipe threads

JIS B 0254-1985 Gauges for parallel pipe threads

JIS B 0255-1975 Limit gauges for unified coarse screw threads

JIS B 0256-1975 Limit gauges for unified fine screw threads

8. Length of engagement

■Length of engagement

Thread tolerance class is chosen in consideration of "engagement classification" and "engagement length". To realize the stable tapping, it is necessary to fully understand the relation between these factors and to choose the suitable tolerance class.

On "engagement calssification : middle", the tolerance class 6H is almost always chosen for standard internal threads. However, in case of "engagement length : L", tolerance class 7H can also be chosen.

On M12x1.75, the tolerance of 7H is 25% (50μm) larger than that of 6H. And this widens the selection range of the tolerance class for taps to customer's advantage.

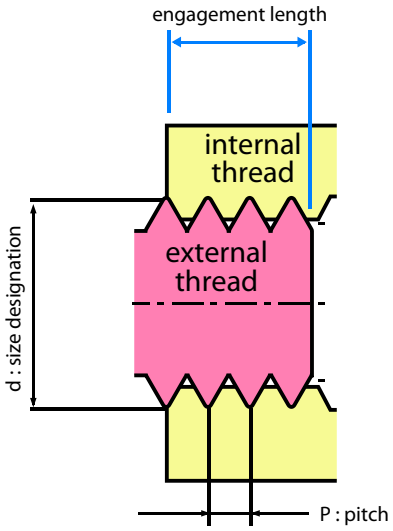
【M12x1.75】
6H Pitch diameter : 10.863 ~ 11.063mm (tolerance 0.200 mm)
7H Pitch diameter : 10.863 ~ 11.113mm (tolerance 0.250 mm)

1) Engagement classification

classification	application
fine	precise screw threads with a little allowance
middle	standard screw threads used for machines, apparatuses and constructions bodies
coarse	screw threads used for construction and building installation, and screw threads for which threading operation is very difficult such as threading of hot rolled steel bars.

2) Classification of engagement length

symbol	classification	limit size
S	short	up to and including $2.24Pd^{0.2}$
N	normal	over $2.24Pd^{0.2}$ up to and including $6.7Pd^{0.2}$
L	long	over $6.7Pd^{0.2}$



3) Selection rule of internal threads and external threads

Selection rule of the tolerance class of internal threads

tolerance position	H		
engagement length / engagement classification	S	N	L
fine	4H	5H	6H
middle	5H	6H	7H
coarse	-	7H	8H

Selection rule of the tolerance class of external threads

tolerance position	h			g		
engagement length / engagement classification	S	N	L	S	N	L
fine	(3h4h)	4h	(5h4h)	-	-	-
middle	(5h6h)	6h	(7h6h)	(5g6g)	6g	(7g6g)
coarse	-	-	-	-	8g	(9g8g)

4) Engagement length

Unit : mm

size	pitch	S	N		L
		up to and including	over	up to and including	over
M1	0.25	0.6	0.6	1.7	1.7
M1	0.2	0.5	0.5	1.4	1.4
M1.1	0.25	0.6	0.6	1.7	1.7
M1.1	0.2	0.5	0.5	1.4	1.4
M1.2	0.25	0.6	0.6	1.7	1.7
M1.2	0.2	0.5	0.5	1.4	1.4
M1.4	0.3	0.7	0.7	2	2
M1.4	0.2	0.5	0.5	1.4	1.4
M1.6	0.35	0.8	0.8	2.6	2.6
M1.6	0.2	0.5	0.5	1.5	1.5
M1.8	0.35	0.8	0.8	2.6	2.6
M1.8	0.2	0.5	0.5	1.5	1.5
M2	0.4	1	1	3	3
M2	0.25	0.6	0.6	1.9	1.9
M2.2	0.45	1.3	1.3	3.8	3.8
M2.2	0.25	0.6	0.6	1.9	1.9
M2.5	0.45	1.3	1.3	3.8	3.8
M2.5	0.35	0.8	0.8	2.6	2.6
M3	0.5	1.5	1.5	4.5	4.5
M3	0.35	1	1	3	3
M3.5	0.6	1.7	1.7	5	5
M3.5	0.35	1	1	3	3
M4	0.7	2	2	6	6
M4	0.5	1.5	1.5	4.5	4.5
M4.5	0.75	2.2	2.2	6.7	6.7
M4.5	0.5	1.5	1.5	4.5	4.5
M5	0.8	2.5	2.5	7.5	7.5
M5	0.5	1.5	1.5	4.5	4.5
M5.5	0.5	1.5	1.5	4.5	4.5
M6	1	3	3	9	9
M6	0.75	2.4	2.4	7.1	7.1
M7	1	3	3	9	9
M7	0.75	2.4	2.4	7.1	7.1
M8	1.25	4	4	12	12
M8	1	3	3	9	9
M8	0.75	2.4	2.4	7.1	7.1
M9	1.25	4	4	12	12
M9	1	3	3	9	9
M9	0.75	2.4	2.4	7.1	7.1
M10	1.5	5	5	15	15
M10	1.25	4	4	12	12
M10	1	3	3	9	9
M10	0.75	2.4	2.4	7.1	7.1
M11	1.5	5	5	15	15
M11	1	3	3	9	9
M11	0.75	2.4	2.4	7.1	7.1
M12	1.75	6	6	18	18
M12	1.5	5.6	5.6	16	16
M12	1.25	4.5	4.5	13	13
M12	1	3.8	3.8	11	11
M14	2	8	8	24	24
M14	1.5	5.6	5.6	16	16
M14	1	3.8	3.8	11	11
M15	1.5	5.6	5.6	16	16
M15	1	3.8	3.8	11	11
M16	2	8	8	24	24
M16	1.5	5.6	5.6	16	16
M16	1	3.8	3.8	11	11
M17	1.5	5.6	5.6	16	16
M17	1	3.8	3.8	11	11
M18	2.5	10	10	30	30
M18	2	8	8	24	24
M18	1.5	5.6	5.6	16	16
M18	1	3.8	3.8	11	11
M20	2.5	10	10	30	30
M20	2	8	8	24	24
M20	1.5	5.6	5.6	16	16
M20	1	3.8	3.8	11	11
M22	2.5	10	10	30	30
M22	2	8	8	24	24
M22	1.5	5.6	5.6	16	16
M22	1	3.8	3.8	11	11
M24	3	12	12	36	36
M24	2	8.5	8.5	25	25
M24	1.5	6.3	6.3	19	19
M24	1	4	4	12	12

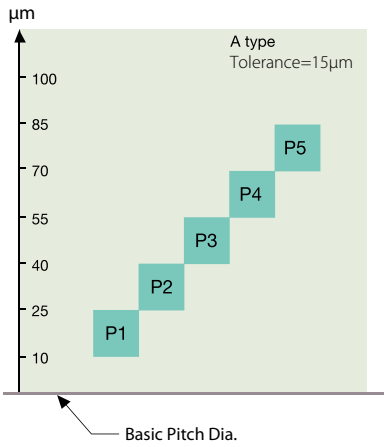
9. Classes of Internal Threads and Classes of Taps

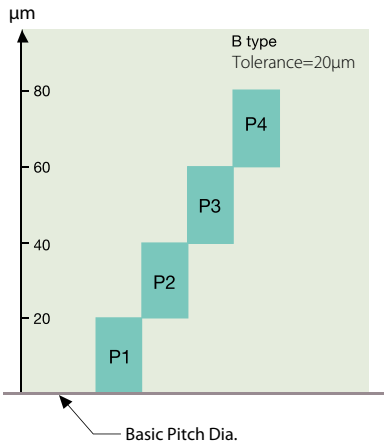
1. YAMAWA P Class System

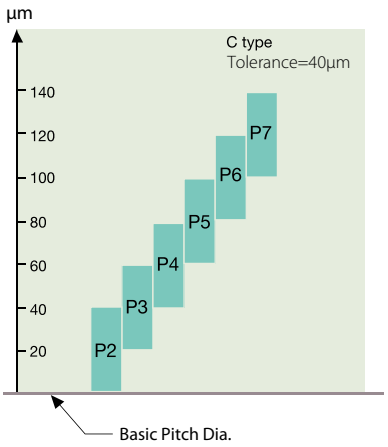
YAMAWA P Class system for thread limits is specified in accordance with JSCTA (The Japan Solid Cutting Tools' Association). Pitch diameter tolerance zones for normal size M1～M52 (U,W up to 2") are shown in the table below. Depending on pitch diameter tolerance and tolerance position, pitch diameter tolerance zones are classified into three types, A , B and C.
(1) A type : 15μm tolerance. The tolerance of P1, P2, P3… is defined as basic +10～+25μm, +25～+40μm, +40～+55μm and so on, respectively.
(2) B type : 20μm tolerance. The tolerance of P1, P2, P3… is defined as basic +0～+20μm, +20～+40μm, +40～+60μm and so on, respectively.
(3) C type : 40μm tolerance. The tolerance of P2, P3, P4… is defined as basic +0～+40μm, +20～+60μm, +40～+80μm and so on, respectively.
YAMAWA P class system is made in a step form. It can be used to select depending on the tapping conditions.

■ Pitch Tolerance zone for P Class with Nominal size and Pitch

Pitch \ Nominal Size	1mm≦Size≦24mm (7/8)	24mm (7/8)＜Size≦30mm	30mm (1 1/4)＜Size≦52mm (2)
≦0.6mm (40TPI)	A type	B type	B type
0.6mm (40TPI)＜Pitch≦1.75mm (14TPI)	B type	B type	B type
1.75mm (14TPI)＜Pitch≦2mm (11TPI)	B type	B type	C type
2mm (11TPI)＜Pitch≦5mm (5TPI)	B type	C type	C type

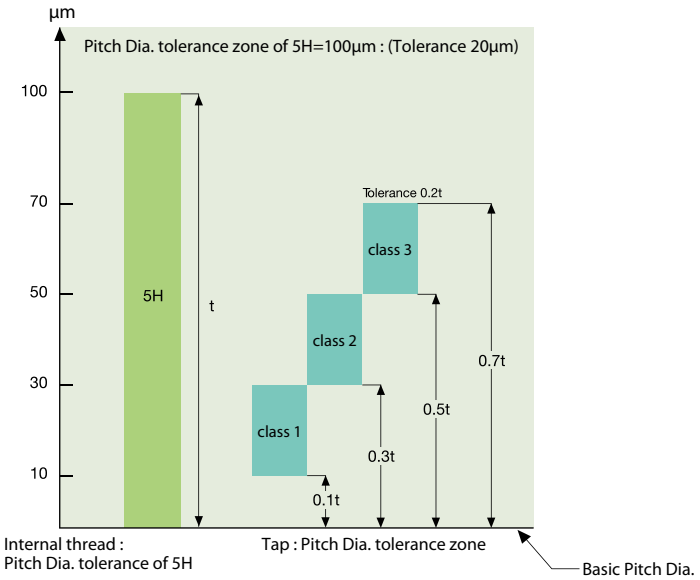






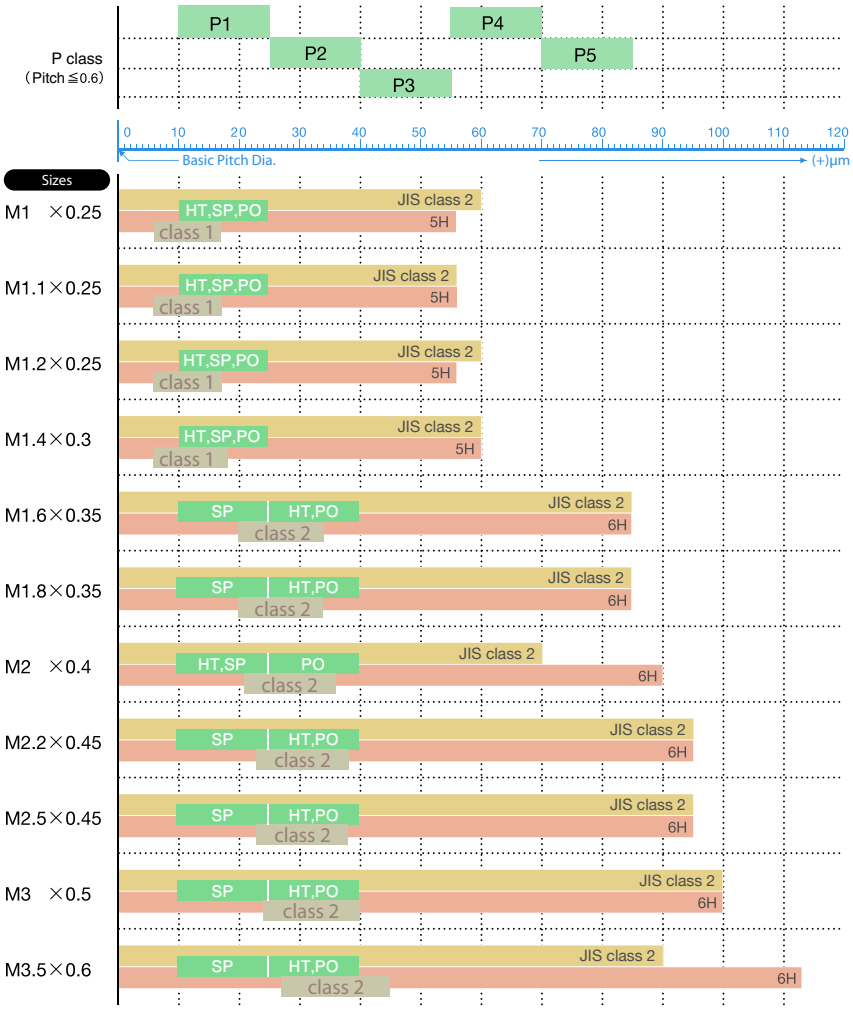
2. JIS Limit

Thread limits of taps for metric threads : Today the thread limits of ISO2857 are specified in the main book of JIS, and those of old 1st class, 2nd class and 3rd class are specified in JIS Appendix. In the thread limits of 1st, 2nd and 3rd classes (old JIS), the pitch diameter tolerances change depending on nominal size and pitch even if the class is same. On the other hand, in the thread limit of ISO2857 (current JIS), the pitch diameter tolerance is same and only the tolerance position changes as far as the nominal size is same.
The tolerance, as shown in the next picture (Page 669), is specified as X% of internal thread tolerance and it changes depending on nominal diameter and pitch. Thread classes of the main book of JIS will be said to be a system located in the middle of YAMAWA P class and old JIS class. To show clearly, thread limit classification is called Class 1, Class 2 and Class 3 in current JIS, and 1st class, 2nd class and3rd class in old JIS.



3. Comparison of pitch diameter tolerance zone for the classes of internal thread and tap.

Following graph shows :
In metric coarse threads
(1) Tap limit classes of YAMAWA P class.
(2) Pitch diameter tolerance zone of 2nd class (Tap) of JIS Appendix (old JIS) and that of class 2 (Tap) ＜class 1 for M1.4 and smaller＞of the main book of JIS (current JIS).
(3) Pitch diameter tolerance zone of old JIS 2nd class (Internal thread) and that of JIS 6Hclass (Internal thread) ＜5H class for M1.4 and smaller＞
(4) Pitch diameter tolerance zone of standard classes of YAMAWA P class.



P class
Pitch diameter tolerance zone of recommended class for YAMAWA P class

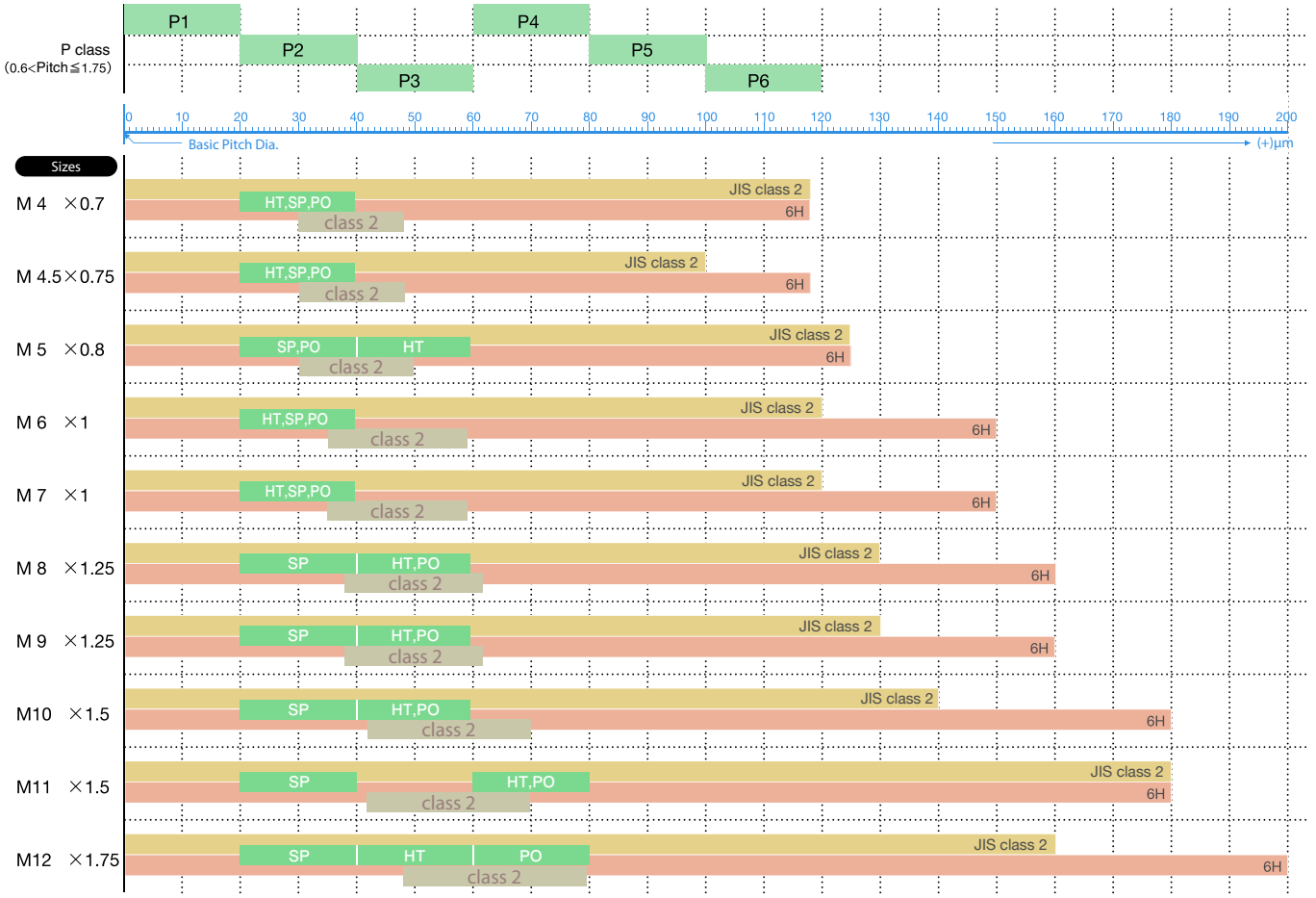
- SP — Standard class of YAMAWA Spiral Fluted Tap
- PO — Standard class of YAMAWA Spiral Pointed Tap
- HT

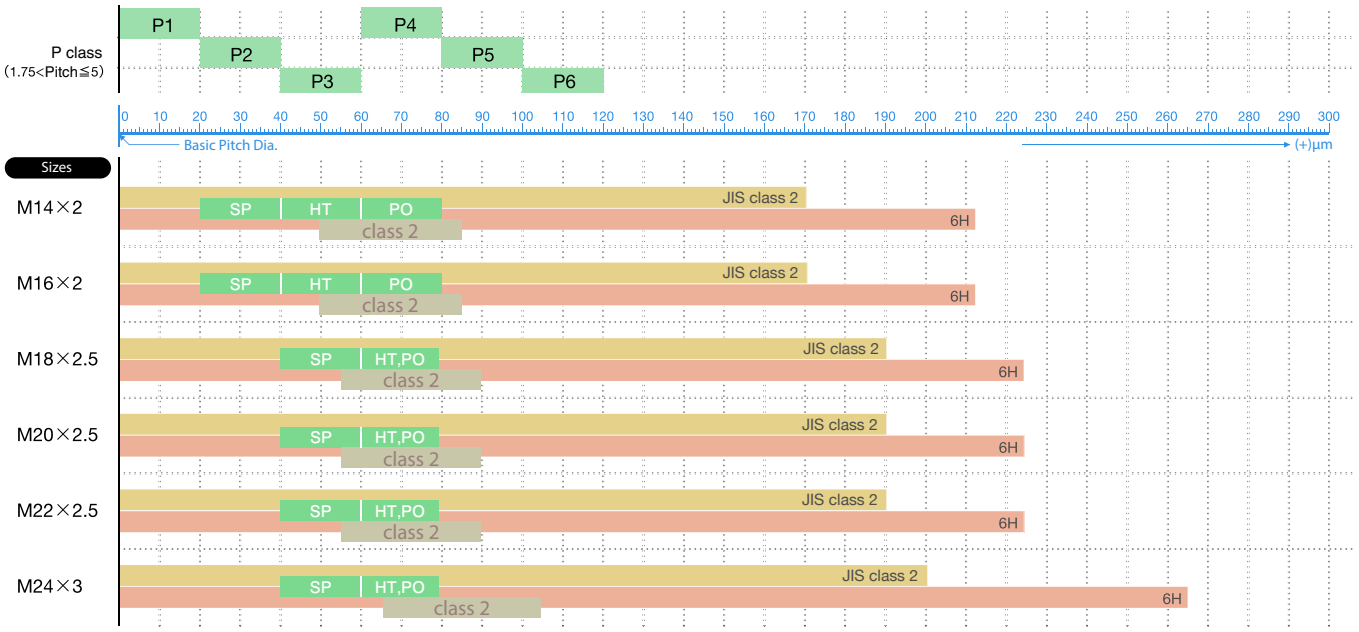
class
Pitch diameter tolerance zone of tap in the main book of JIS (current JIS).
Class 1 for M1.4 and smaller, class 2 for M1.6 and larger

Pitch diameter tolerance zone of internal threads in old JIS class 2.

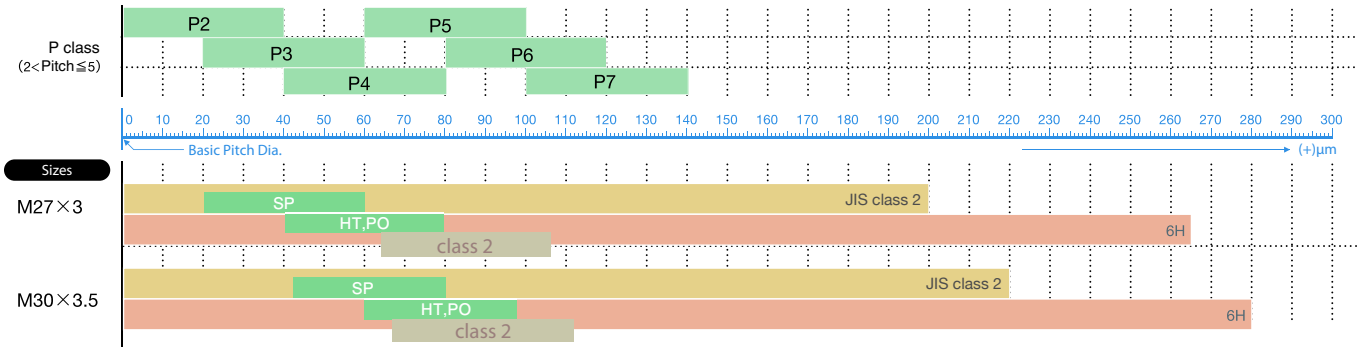
Pitch diameter tolerance zone of internal thread in current JIS (ISO)
Class 5H for M1.4 and smaller, class 6H for M1.6 and larger

9. Classes of Internal Threads and Classes of Taps





Think threads with YAMAWA



4. Standard Class and Oversize

The standard class of the tap which we have been manufacturing for general use is JIS 2nd class. This JIS 2nd class is basically defined as the thread limit of the tap which can cut the internal thread of old JIS 2nd class. With technical innovation such as various tap classification, high precision tapping machines, workpiece materials and diversity of workpieces' dimension, conventional products having JIS 2nd class could not always satisfy customers' requirement due to following situations.

(1) In cutting taps, the shape of flutes influences the thrust of axial direction. We explain about oversize cutting tendency caused by the thrust force of axial direction by referring to that of Straight fluted hand taps as a basic. Spiral pointed taps have little tendency of oversize cutting, but Spiral fluted taps have a tendency of oversize cutting.

(2) Due to the relation between pitch diameter of JIS 2nd class tap and that of GO thread plug gauge for the internal thread of old JIS 2nd class, if the cutting edge of tap wears normally, threads cut by the tap will become gauge out quickly resulting in short tool life.

(3) Due to the material or shape of workpiece, the material can shrink. In these cases, it would be better to use oversized taps to compensate for shinkage after tapping.

(4) When plating is to be applied to internal threads after threading, we should use oversized taps to compensate for the thickness amount of plating.

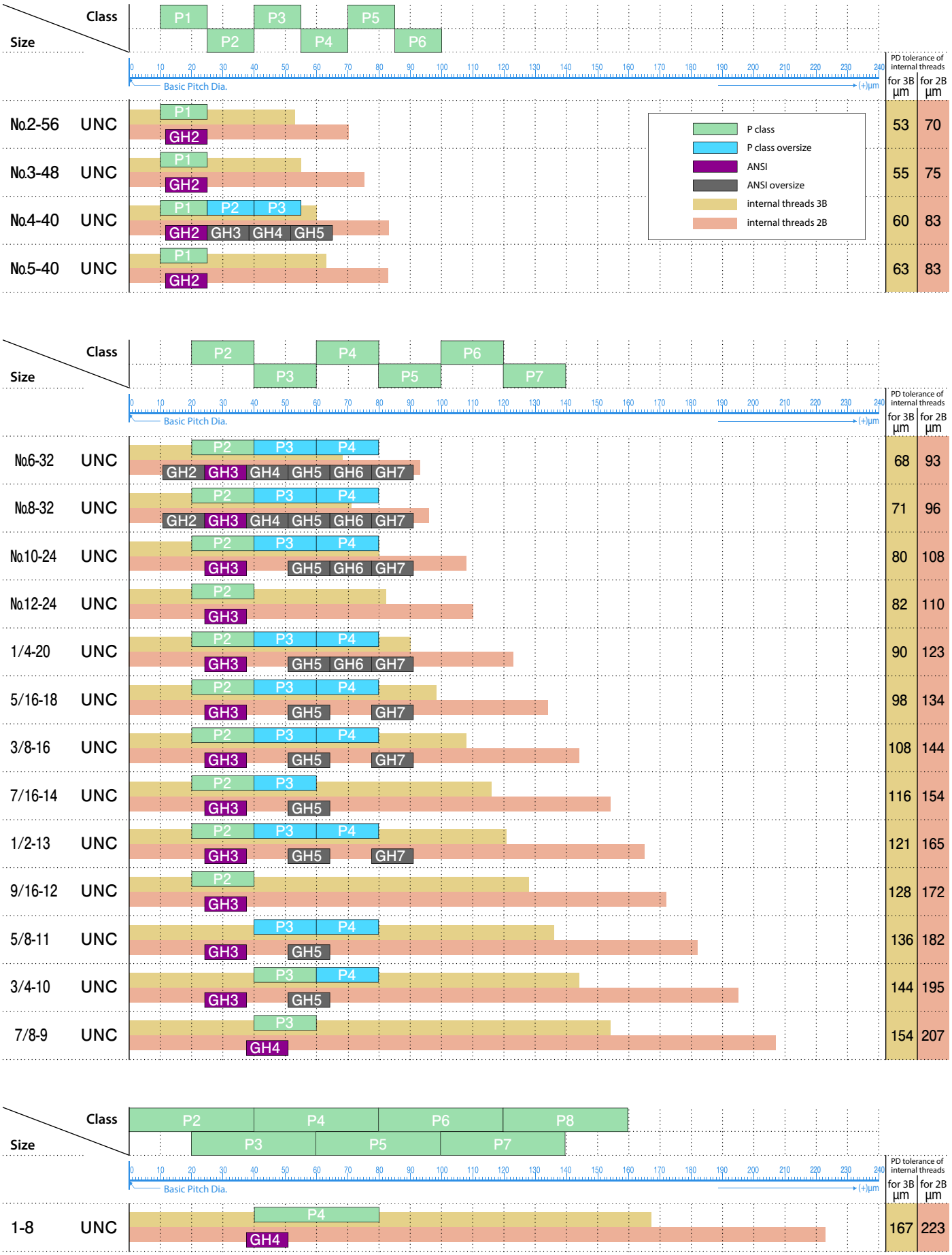
(5) Where little tendency of oversize cutting is expected, but large wear in tools is expected during tapping operation, it is better to consider using oversized taps as much as possible.

From these situations, in spiral pointed taps, spiral fluted taps and various types of special purpose taps, YAMAWA has adopted the P class limit system which is explained in previous pages. Depending on the type and designation of taps, YAMAWA has selected from the P class system the tap's thread limit which the tap manufacturer recommends for general tapping operation. From the reason of (1) stated above, even in the same tap designation, the recommendation for spiral pointed taps is different from that for spiral fluted taps. Especially in the standard products of spiral pointed taps and spiral fluted taps, YAMAWA has specified the recommendation differently in the relation to oversize cutting tendency. Oversize taps mean the taps of which thread limits are oversize above the recommendation. This is due to the reasons (3), (4) and (5) stated above. Usually for oversize taps, YAMAWA recommends the taps which thread tolerance classes are one or two steps above the standard recommendation.

As you can see in the picture drawn in previous pages, the recommendation can be used for cutting JIS (ISO) 6H internal threads.

9. Classes of Internal Threads and Classes of Taps

5. Comparison of PD tolerances for tap classes for American market, for Yamawa P classes and for unified internal thread classes.



10. About UNJ Threads

UNJ Threads are Unified Threads used for Aircrafts.

<Features of UNJ Threads>

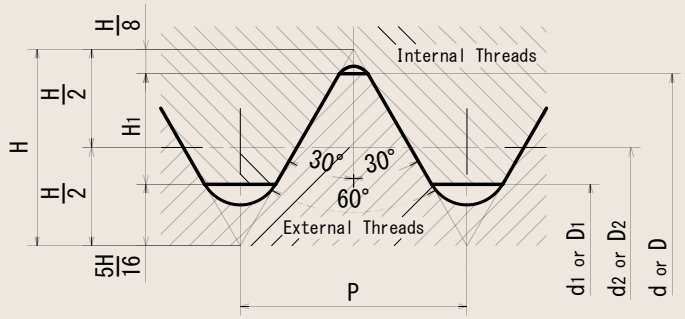
In order to protect the breakage from thread bottom of external threads, UNJ thread defines the minor diameter larger than Unified thread and the range of root bottom R.
And accuracy of threads is only defined in highest classes of unified threads, 3A of external threads and 3B of internal threads.
UNJ Threads were initially defined as a MIL Standard (American Millitary Standard). It is now superseded by American SAE Standard (Automobile Engineers Association).
Standard Numbers are as follows:

SAE AS8879D Screw Threads - UNJ Profile, Inch
Controlled Radius Root with Increased Minor Diameter

<Basic Profile of UNJ Thread>

Basic profile of UNJ thread is shown in the drawing below. Truncation on thread root of external threads is 5H/16, that is, H/16 larger than H/4 of normal Unified Thread's truncation.
And radius of thread root is 0.18042P~0.15011P.

■ Basic Profile of UNJ Thread



H =0.866025P
H1 =9H/16
d2 =d-0.649519P
d1 =d-0.974278P

D =d
D2 =d2
D1 =d1
P =25.4/n
n =Threads per inch

【reference】
9H/16 =0.487139P
H/2 (8H/16)=0.433013P
5H/16 =0.270633P
H/8 (2H/16)=0.108253P

<Bored hole size>

Bored hole size is recommended to be a little larger than that for normal unified threads considering that the minor diameter of UNJ series is larger than that of normal Unified Threads.

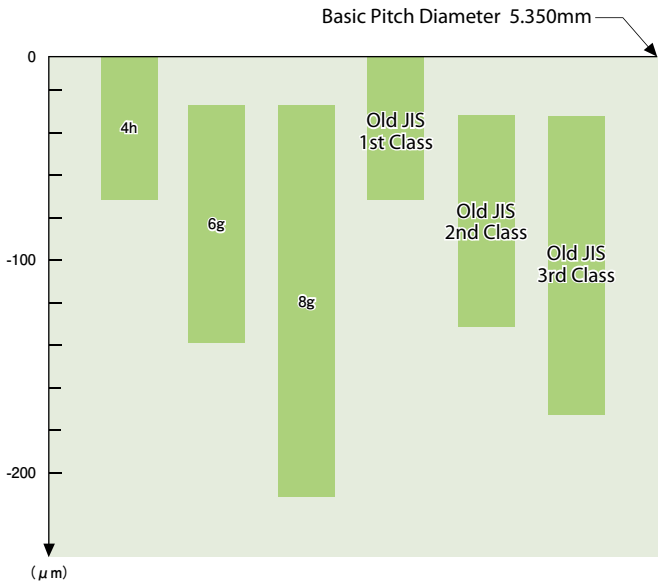
unit: mm

Size	Minor Diameter		Bored Hole Size
	Maximum	Minimum	
No.6 - 32 UNJC	2.938	2.734	2.89
No.6 - 40 UNJF	3.053	2.888	3.01
No.8 - 32 UNJC	3.599	3.394	3.55
No.8 - 36 UNJF	3.662	3.480	3.62
No.10 - 24 UNJC	4.064	3.795	4.00
No.10 - 32 UNJF	4.254	4.054	4.20
No.12 - 24 UNJC	4.704	4.456	4.64
No.12 - 28 UNJF	4.815	4.603	4.76
1/4 - 20 UNJC	5.387	5.114	5.32
1/4 - 28 UNJF	5.661	5.467	5.61
5/16 - 18 UNJC	6.832	6.564	6.76
5/16 - 24 UNJF	7.109	6.907	7.06
3/8 - 16 UNJC	8.255	7.979	8.19
3/8 - 24 UNJF	8.679	8.494	8.63
7/16 - 14 UNJC	9.639	9.348	9.57
7/16 - 20 UNJF	10.083	9.876	10.03
1/2 - 13 UNJC	11.094	10.798	11.02
1/2 - 20 UNJF	11.661	11.464	11.61

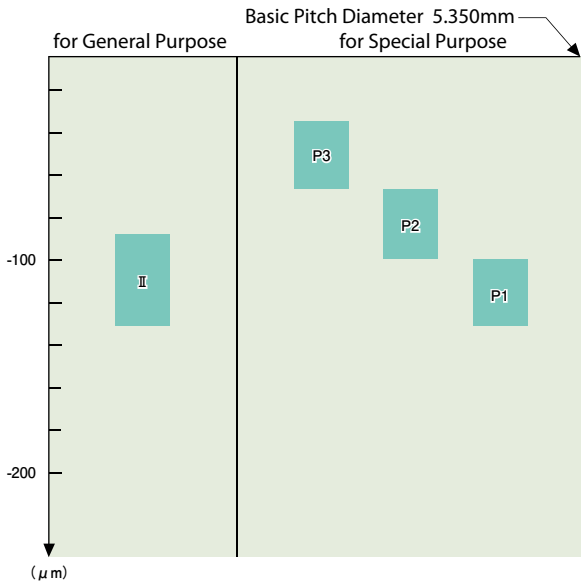
11. Accuracy of external threads and accuracy of Dies

Example : M6X1

Accuracy of external threads



Accuracy of Die



Class of Die shows pitch diameter tolerance of Testpiece External Threads cut by the die.

Class of die	Application
Ⅱ	for Class 2 or 6g
P3	when aiming at the tolerance area close to the maximum of Class 2 or 6g,
P2	when aiming at the tolerance area close to middle of Class 2 or 6g,
P1 (Standards)	when aiming at the tolerance area close to the minimum of Class 2 or 6g,

12. Guide to Thread Forming Taps (Roll Taps)

Thread Forming Taps are the tools used for producing internal threads by a thread forming process. Currently, YAMAWA's Thread Forming Taps have a good reputation by being used in large area. They are widely used along with the diversity of workpieces and with the change into miniaturization of workpieces. Followings are the characteristics and features of Thread Forming Taps (Roll Tap) which cutting type taps do not have.

<Features of Roll Taps>

○**Tapping without producing chips.** They are suitable for blind hole tapping. In producing internal threads with no chips, they save you a time for chip disposal.

○**Roll taps are stronger than cutting taps due to their design.** The effect of fluteless design gives a large cross-section area to the tap, and there is no worry of chip jamming, which makes Roll taps very tough against breakage.

○**Roll taps produce excellent pitch diameter well within pitch diameter tolerances.** Material deformation process produces the internal threads with good surface finish as well as precise pitch diameter.

○**High efficiency and tool life** The configuration of the lobes at the crests of the tap threads makes high speed tapping possible and extends tool life compared with cutting type taps. The addition of a supplemental tap surface treatment, such as Oxidizing, Nitriding, TiN, and TiCN can extend tool life 2 to 20 times over an uncoated (bright) tap performance.

<Points to note during a Roll tapping operation>

○Tapping torque is 2 to 3 times larger than that of cutting type taps.

○Roll tapping is only applicable to stringy materials.

○The deviation of hole size before tapping should be about 5% of pitch. The control of hole size before tapping should be more severe than that of cutting type taps.

○The selection of lubricants is important to prevent sticking or welding.

○Burrs at the face of an internal thread are larger than those produced by cutting type taps. In some cases it is necessary to take additional counter-sink processing at the top of hole.

○In the minor diameter of internal thread, U-shape form (Tine form) at the hole entrance can be seen. U-shape form is never seen when using cutting type taps.

<Selection of YAMAWA Roll Taps>

○**Types of Roll Taps** YAMAWA produces various types of Roll Taps which include General purpose taps, Special purpose taps for non-ferrous and steel, as well as special purpose taps with surface treatment for the specified applications. To provide for longer tool life, specially developed premium materials are also used together with physical vapor deposition (PVD) such as TiN and TiCN. In particular, OL-RZ is superior product developed for dry machining with good regards to tapping environment and performance.

○**Tap Materials** YAMAWA's standard tap material is SKH58 designed for improving torque, superior anti-friction properties as well as toughness. To extend tool life, we use SKH56, or SKH10(Powder HSS) which is the best tap material for antifriction.

○**Tolerance Class** Using the datum 12.7μm in a step form, in accordance with ANSI standard GH class, we made up YAMAWA's G class system. The differences in materials being Roll tapped, as well as hole size, contribute to differences in thread forming. YAMAWA offers 2 to 3 oversized tap tolerance classes in order to achieve the most suitable internal thread pitch diameter size.

○**Chamfer length** Chamfer lengths : 2 pitches for blind hole use and 4 pitches for through hole use. Basically 4 pitches have longer tool life than 2 pitches because force applied on one blade at 4 pitch chamfer is smaller than that at 2 pitch chamfer. However, it is difficult to say about tool life in a few words because each different tapping condition influences the tool life.

<Shape of internal threads and the ratio of thread engagement affected by bored hole diameter>

Compared with the basic height of thread engagement, the actual height of the thread engagement is called "thread engagement ratio" in percentage.

Depending on the bored hole diameter, internal threads and thread engagement ratio will change.

In tapping, the tapping condition must be chosen by referring to the thread engagemet ratio.

In tapping, it can reduce cutting space and forming space to make bored hole diameters as large as possible. This, through reducing the load on taps, can restrict tap's wear and damage.

S50C, minor diameter of threads cut

M24x3
minor dia tolerance of internal threads
ϕ20.752~ϕ21.252

【S50C internal threads cut ①】 M24x3 bored hole size : ϕ20.652 minor dia tolerance of internal threads NG thread engagement ratio : 103.1%	
【S50C internal threads cut ③】 M24x3 bored hole size : ϕ21.000 minor dia tolerance of internal threads: Middle thread engagement ratio : 92.4%	
【S50C internal threads cut ⑤】 M24x3 bored hole size : ϕ21.352 minor dia tolerance of internal threads NG thread engagement ratio : 81.5%	

Aluminum, minor diameter of threads formed

M25x2
minor dia tolerance of internal threads
ϕ22.835~ϕ23.210

【Aluminum, internal threads formed ①】 M25x2 bored hole size : ϕ23.903 minor diameter of finished internal threads : 22.723mm minor dia tolerance of internal threads NG thread engagement ratio : 105.2%	
【Aluminum, internal threads formed ③】 M25x2 bored hole size : ϕ24.042mm minor diameter of finished internal threads : 23.067mm minor dia tolerance of internal threads : Middle thread engagement ratio : 89.3%	
【Aluminum, internal threads formed ⑤】 M25x2 bored hole size : ϕ24.240mm minor diameter of finished internal threads : 23.462mm minor dia tolerance of internal threads NG thread engagement ratio : 71.0%	

<Condition of use>

○Relation between tapping speed and tapping lubricant depending on work materials.

Work Material		Tapping Speed (m/min)	Tapping lubricant
Aluminum and Aluminum Alloy	Die Cast Materials	15～25	Insoluble oil
	Cold Drawn, Cold Forged, Cast	25～35	
Zinc and Zinc Alloy	Die Cast Materials	15～25	
	Cold Drawn, Cold Forged, Cast	25～35	
Copper	Cold Forged, Cast	25～35	
Brass	Cold Drawn, Cold Forged	25～35	
Steel	Mild Steel, Medium Carbon Steel, Stainless Steel	6～15	
	Free Cutting Steel, Soft Magnetic Iron	15～25	

Note : It is necessary to carefully select a suitable tapping speed taking into consideration : machining conditions, style of tap, number of tap chamfered threads, work piece design, material being tapped, hole condition and type of tapping fluid.

<Accuracy of roll taps>

■YAMAWA G class system Thread Forming Taps

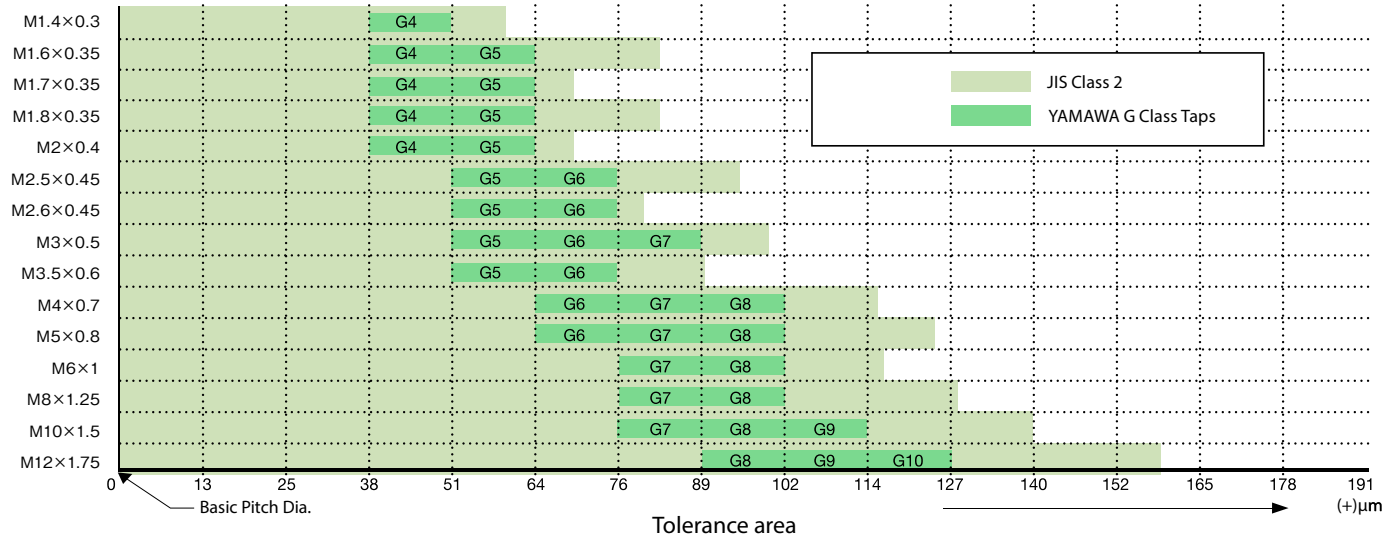
○YAMAWA G class system is made by using the datum 0.0005 inch (12.7μm) in a step form in accordance with ANSI standard GH class.

○The upper deviation of G class is decided by rounding off the grade No.× 12.7 to 1 decimal.

○The lower deviation of G class is specified in the same upper tolerance of one lower step.

○The tolerances are either 12 μm or 13μm.

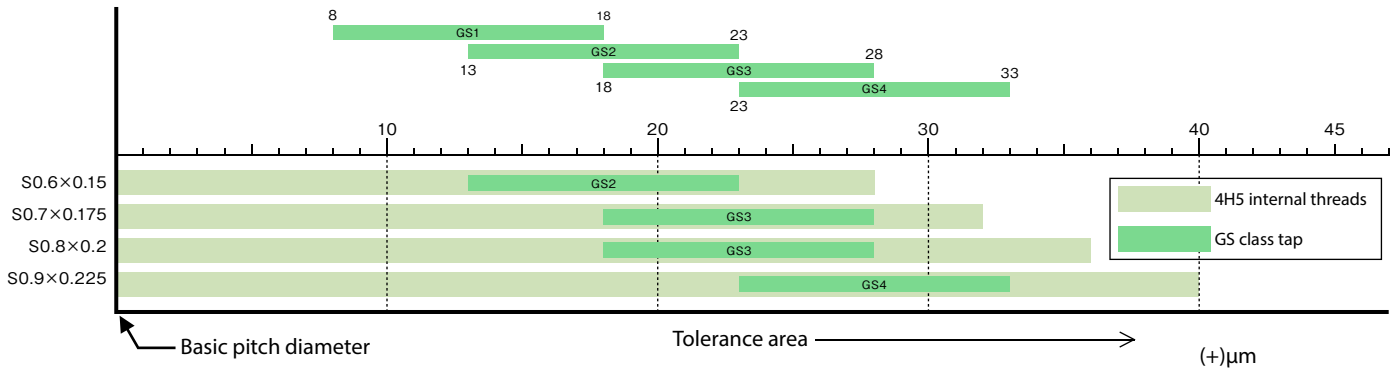
■Comparison of pitch tolerance zone between class 2 internal threads and recommended Roll Taps G Class.



■Roll taps for miniature threads, Accuracy GS class

○GS class is the accuracy class special for roll taps for miniature threads.

Comparison table of PD tolerance of GS class of roll taps for miniature threads and 4H5 internal threads.



Think threads with YAMAWA

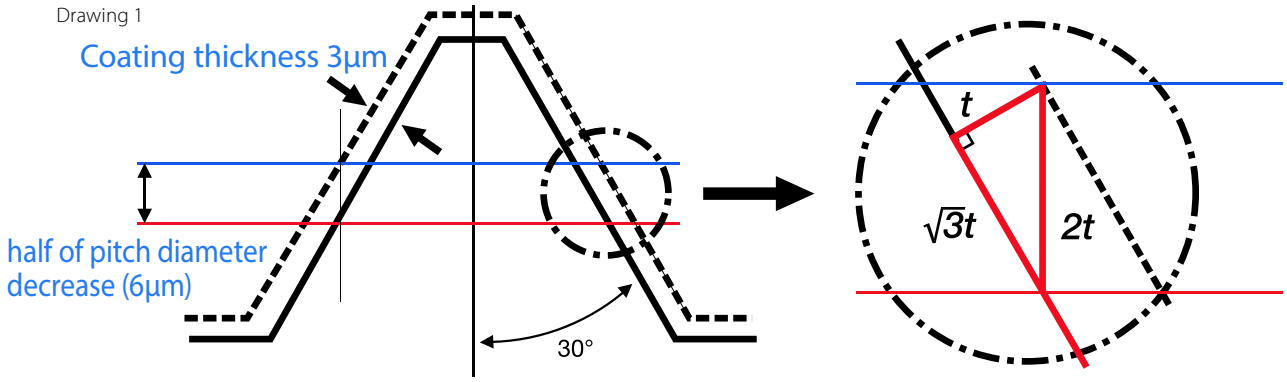
13. How to set the tap's oversize to meet with the coating margin of internal threads

1) Relation between coating thickness and pitch diameter when applied with coating

Dwg.1 shows the relation between coated internal thread and pitch diameter

* Thickness of coating is measured at right angle to flank face. Pitch diameter is measured at right angle to axis (radially).

Drawing 1

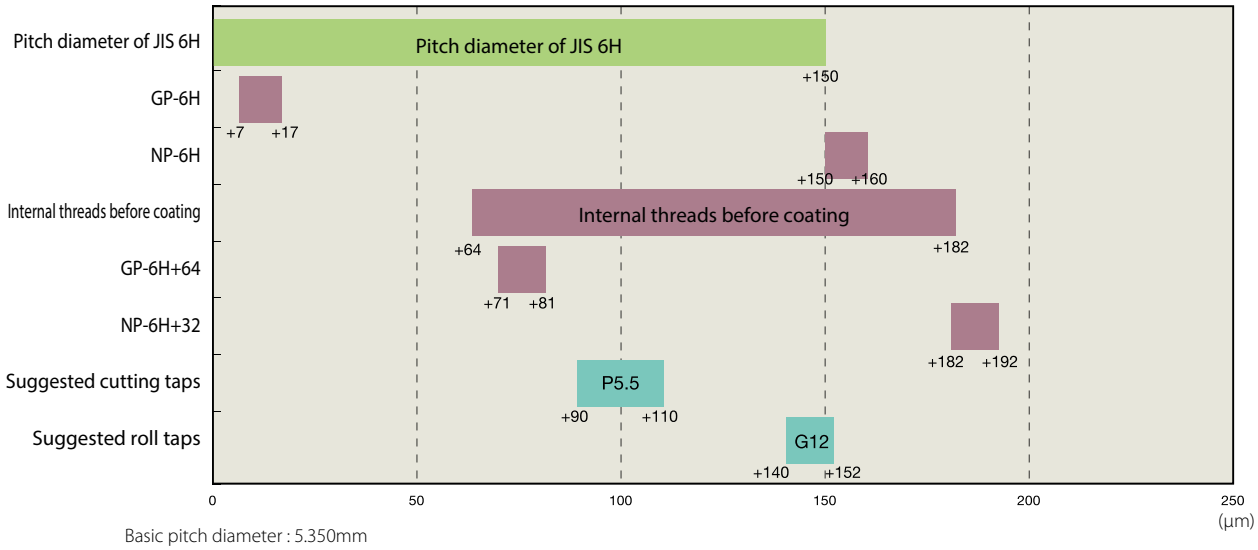


Where t (coating thickness) equals 3μm, by using following formula, oversize is roughly caluculated.
Pitch diameter decrease 2t×2 (both side of threads) = 3μm×2×2 =12 μm (rough over size)

2) How to specify taps for coating

1. We suppose the accuracy of finished internal threads is 6H class, and inspection is done with GP-6H and NP-6H.
2. We suppose the disperse of coating thickness is controlled within the tolerance of 8~16μm.
   The disperse of coating thickness, when it is exchanged into pitch diameter, will become the disperse of 32~64μm.
3. Accuracy of internal threads before coating is the thread accuracy which GP-6H goes through (OK), even when max coating (64μm) is applied.
   And this accuracy is the thread accuray which NP-6H does not go through (OK), when min coating (32μm) is applied.
4. We propose followings for inspecting the accuracy of internal threads before coating :
   GO gauge before coating : GP-6H+64
5. Next, based on GO gauge before coating and NOT GO gauge before coating, we study to specify the suitable accuracy of the tap before coating.

M6×1 How to specify the accuracy of tap before coating (Coating thickness 8~16μm)



Basic pitch diameter : 5.350mm

M6×1 Basic pitch diameter	: 5.350mm		
Internal thread tolerance 6H	: 0~+150μm (Tolerance : 150μm)		
Accuracy GP-6H	: +7~+17μm	Accuracy NP-6H	: +150~+160μm
Internal thread tolerance before coating	: +64~+182μm (Tolerance : 118μm)		
Accuracy GP-6H+64	: +71~+81μm	Accuracy NP-6H+32	: +182~+192μm
Accuracy of suggested cutting taps (P5.5)	: +90~+110μm		
Accuracy of suggested roll taps (G12)	: +140~+152μm		

14. Tap, Thread Limits

for Metric Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 1 ×0.25	P1	1.000	0.838	25	10	0.729
	G4			51	38	
	ISO2			28	17	
M 1 ×0.2	P1	1.000	0.870	25	10	0.783
M 1.1 ×0.25	P1	1.100	0.938	25	10	0.829
	ISO2			28	17	
M 1.1 ×0.2	P1	1.100	0.970	25	10	0.883
M 1.2 ×0.25	P1	1.200	1.038	25	10	0.929
	ISO2			28	17	
M 1.2 ×0.2	P1	1.200	1.070	25	10	0.983
M 1.4 ×0.3	P1	1.400	1.205	25	10	1.075
	G4			51	38	
	ISO2			30	18	
M 1.4 ×0.2	P1	1.400	1.270	25	10	1.183
M 1.6 ×0.35	P2	1.600	1.373	40	25	1.221
	G4			51	38	
	ISO2			34	20	
	D3			39	24	
M 1.6 ×0.2	P1	1.600	1.470	25	10	1.383
M 1.7 ×0.35	P1	1.700	1.473	25	10	1.321
	G4			51	38	
	ISO2			34	20	
M 1.7 ×0.2	P1	1.700	1.570	25	10	1.483
M 1.8 ×0.35	P2	1.800	1.573	40	25	1.421
	G4			51	38	
	ISO2			34	20	
	D3			39	24	
M 1.8 ×0.2	P1	1.800	1.670	25	10	1.583
M 2 ×0.4	P1	2.000	1.740	25	10	1.567
	Ⅱb			20	5	
	G4			51	38	
	ISO2			36	21	
	D3			39	24	
M 2 ×0.25	P1	2.000	1.838	25	10	1.729
M 2.2 ×0.45	P2	2.200	1.908	40	25	1.713
	G5			64	51	
	ISO2			38	23	
	D3			39	24	
M 2.2 ×0.25	P1	2.200	2.038	25	10	1.929
M 2.3 ×0.4	P1	2.300	2.040	25	10	1.867
	Ⅱb			20	5	
	G4			51	38	
	ISO2			36	21	
M 2.3 ×0.25	P1	2.300	2.138	25	10	2.029
M 2.5 ×0.45	P2	2.500	2.208	40	25	2.013
	Ⅱb			20	5	
	G5			64	51	
	ISO2			38	23	
	D3			39	24	
M 2.5 ×0.35	P1	2.500	2.273	25	10	2.121
M 2.6 ×0.45	P1	2.600	2.308	25	10	2.113
	Ⅱb			20	5	
	G5			64	51	
	ISO2			38	23	
M 2.6 ×0.35	P1	2.600	2.373	25	10	2.221
M 3 ×0.5	P2	3.000	2.675	40	25	2.459
	Ⅱb			20	5	
	G5			64	51	
	ISO2			40	24	
	D3			39	24	
M 3 ×0.6	P1	3.000	2.610	25	10	2.350
M 3 ×0.35	P2	3.000	2.773	40	25	2.621
	G5			64	51	
	ISO2			36	21	
M 3.5 ×0.6	P2	3.500	3.110	40	25	2.850
	Ⅱb			20	5	
	G5			64	51	
	ISO2			45	27	
	D4			52	32	
M 3.5 ×0.35	P2	3.500	3.273	40	25	3.121
	G5			64	51	
	ISO2			36	21	
M 4 ×0.7	P2	4.000	3.545	40	20	3.242
	Ⅱb			25	5	
	G6			76	64	
	ISO2			48	29	
	D4			52	32	
M 4 ×0.75	P2	4.000	3.513	40	20	3.188
M 4 ×0.5	P2	4.000	3.675	40	25	3.459
	G6			76	64	
	ISO2			40	24	

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 4.5 × 0.75	P2	4.500	4.013	40	20	3.688
M 4.5 × 0.5	P2	4.500	4.175	40	25	3.959
	G6			76	64	
	ISO2			40	24	
M 5 × 0.8	P3	5.000	4.480	60	40	4.134
	Ⅱb			25	5	
	G6			76	64	
	ISO2			50	30	
	D4			52	32	
M 5 × 0.9	P2	5.000	4.415	40	20	4.026
M 5 × 0.75	P2	5.000	4.513	40	20	4.188
M 5 × 0.5	P2	5.000	4.675	40	25	4.459
	G6			76	64	
	ISO2			40	24	
M 5.5 × 0.75	P2	5.500	5.013	40	20	4.688
M 5.5 × 0.5	P2	5.500	5.175	40	25	4.959
	ISO2			40	24	
M 6 × 1	P2	6.000	5.350	40	20	4.917
	Ⅱb			25	5	
	G7			89	76	
	ISO2			59	35	
	D5			65	40	
M 6 × 0.75	P2	6.000	5.513	40	20	5.188
	Ⅱ			30	10	
	G6			76	64	
	ISO2			53	32	
M 6 × 0.5	P2	6.000	5.675	40	25	5.459
	G6			76	64	
	ISO2			40	27	
M 7 × 1	P2	7.000	6.350	40	20	5.917
	G7			89	76	
	ISO2			59	35	
	D5			65	40	
M 7 × 0.75	P2	7.000	6.513	40	20	6.188
	G7			89	76	
	ISO2			53	32	
M 7 × 0.5	P2	7.000	6.675	40	25	6.459

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 8 × 1.25	P3	8.000	7.188	60	40	6.647
	Ⅱb			30	5	
	G7			89	76	
	ISO2			63	38	
	D5			65	34	
M 8 × 1	P2	8.000	7.350	40	20	6.917
	Ⅱ			35	10	
	G7			89	76	
	ISO2			59	35	
	D5			65	40	
M 8 × 0.75	P2	8.000	7.513	40	20	7.188
	Ⅱ			37	12	
	G7			89	76	
	ISO2			53	32	
M 8 × 0.5	P2	8.000	7.675	40	25	7.459
	ISO2			40	27	
M 9 × 1.25	P3	9.000	8.188	60	40	7.647
	ISO2			63	38	
M 9 × 1	P2	9.000	8.350	40	20	7.917
	ISO2			59	35	
M 9 × 0.75	P2	9.000	8.513	40	20	8.188
	ISO2			53	32	
M 9 × 0.5	P2	9.000	8.675	40	25	8.459
M 10 × 1.5	P3	10.000	9.026	60	40	8.376
	Ⅱb			30	5	
	G7			89	76	
	ISO2			70	42	
	D6			78	47	
M 10 × 1.25	P3	10.000	9.188	60	40	8.647
	Ⅱ			35	10	
	G7			89	76	
	ISO2			63	38	
	D5			65	34	
M 10 × 1	P3	10.000	9.350	60	40	8.917
	Ⅱ			37	12	
	G7			89	76	
	ISO2			59	35	
M 10 × 0.75	P3	10.000	9.513	60	40	9.188
	ISO2			53	32	
M 10 × 0.5	P2	10.000	9.675	40	25	9.459
	ISO2			40	27	

for Metric Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 11 ×1.5	P4	11.000	10.026	80	60	9.376
	ISO2			70	42	
M 11 ×1.25	P3	11.000	10.188	60	40	9.647
M 11 ×1	P3	11.000	10.350	60	40	9.917
	ISO2			59	35	
M 11 ×0.75	P3	11.000	10.513	60	40	10.188
M 11 ×0.5	P2	11.000	10.675	40	25	10.459
M 12 ×1.75	P3	12.000	10.863	60	40	10.106
	Ⅱb			35	5	
	G8			102	89	
	ISO2			80	48	
	D6			78	47	
M 12 ×1.5	P3	12.000	11.026	60	40	10.376
	Ⅱ			45	15	
	G8			102	89	
	ISO2			75	45	
M 12 ×1.25	P4	12.000	11.188	80	60	10.647
	Ⅱ			45	15	
	G9			114	102	
	ISO2			70	42	
	D6			78	47	
M 12 ×1	P3	12.000	11.350	60	40	10.917
	Ⅱ			45	15	
	ISO2			63	38	
M 12 ×0.75	P3	12.000	11.513	60	40	11.188
	ISO2			56	34	
M 12 ×0.5	P2	12.000	11.675	40	25	11.459
M 13 ×1.75	P3	13.000	11.863	60	40	11.106
M 13 ×1.5	P3	13.000	12.026	60	40	11.376
M 13 ×1.25	P4	13.000	12.188	80	60	11.647
M 13 ×1	P3	13.000	12.350	60	40	11.917
M 13 ×0.75	P3	13.000	12.513	60	40	12.188
M 13 ×0.5	P2	13.000	12.675	40	25	12.459

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 14 ×2	P3	14.000	12.701	60	40	11.835
	Ⅱb			35	5	
	G10			127	114	
	ISO2			85	51	
	D7			91	50	
M 14 ×1.5	P3	14.000	13.026	60	40	12.376
	Ⅱ			45	15	
	G9			114	102	
	ISO2			75	45	
	D7			91	60	
M 14 ×1.25	P4	14.000	13.188	80	60	12.647
	ISO2			70	42	
M 14 ×1	P3	14.000	13.350	60	40	12.917
	G9			114	102	
	ISO2			63	38	
M 14 ×0.75	P3	14.000	13.513	60	40	13.188
M 14 ×0.5	P2	14.000	13.675	40	25	13.459
M 15 ×2	P3	15.000	13.701	60	40	12.835
M 15 ×1.5	P3	15.000	14.026	60	40	13.376
M 15 ×1.25	P4	15.000	14.188	80	60	13.647
M 15 ×1	P3	15.000	14.350	60	40	13.917
M 15 ×0.75	P3	15.000	14.513	60	40	14.188
M 15 ×0.5	P2	15.000	14.675	40	25	14.459
M 16 ×2	P3	16.000	14.701	60	40	13.835
	Ⅱb			35	5	
	G10			127	114	
	ISO2			85	51	
	D7			91	50	
M 16 ×1.5	P3	16.000	15.026	60	40	14.376
	Ⅱ			45	15	
	G9			114	102	
	ISO2			75	45	
	D6			78	47	
M 16 ×1.25	P4	16.000	15.188	80	60	14.647
	ISO2			75	45	
M 16 ×1	P3	16.000	15.350	60	40	14.917
	G8			102	89	
	ISO2			75	45	
M 16 ×0.5	P2	16.000	15.675	40	25	15.459
M 17 ×1.5	P4	17.000	16.026	80	60	15.376
M 17 ×1	P3	17.000	16.350	60	40	15.917

Think threads with YAMAWA

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 18 ×2.5	P4	18.000	16.376	80	60	15.294
	Ⅱb			40	5	
	ISO2			90	54	
	D7			91	50	
M 18 ×2	P4	18.000	16.701	80	60	15.835
	ISO2			85	51	
M 18 ×1.5	P3	18.000	17.026	60	40	16.376
	Ⅱ			45	15	
	G9			114	102	
	ISO2			75	45	
	D6			78	47	
M 18 ×1	P3	18.000	17.350	60	40	16.917
	ISO2			63	38	
M 18 ×0.5	P2	18.000	17.675	40	25	17.459
M 19 ×1.5	P3	19.000	18.026	60	40	17.376
M 19 ×1	P3	19.000	18.350	60	40	17.917
M 20 ×2.5	P4	20.000	18.376	80	60	17.294
	Ⅱb			40	5	
	G11			140	127	
	ISO2			90	54	
	D7			91	50	
M 20 ×2	P4	20.000	18.701	80	60	17.835
	ISO2			85	51	
M 20 ×1.5	P3	20.000	19.026	60	40	18.376
	Ⅱ			50	15	
	G10			127	114	
	ISO2			75	45	
	D6			78	47	
M 20 ×1	P3	20.000	19.350	60	40	18.917
	ISO2			63	38	
M 22 ×2.5	P4	22.000	20.376	80	60	19.294
	Ⅱb			40	5	
	ISO2			90	54	
	D7			91	50	
M 22 ×2	P4	22.000	20.701	80	60	19.835
	ISO2			85	51	
M 22 ×1.5	P3	22.000	21.026	60	40	20.376
	ISO2			75	45	
	D6			78	47	
M 22 ×1	P3	22.000	21.350	60	40	20.917
	ISO2			63	38	
M 23 ×1.5	P3	23.000	22.026	60	40	21.376

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 24 ×3	P4	24.000	22.051	80	60	20.752
	Ⅱb			45	5	
	ISO2			106	64	
	D8			104	63	
M 24 ×2	P4	24.000	22.701	80	60	21.835
	ISO2			90	54	
	D8			104	63	
M 24 ×1.5	P3	24.000	23.026	60	40	22.376
	Ⅱ			50	15	
	ISO2			80	48	
M 24 ×1	P3	24.000	23.350	60	40	22.917
	ISO2			66	40	
M 25 ×3	P4	25.000	23.051	80	40	21.752
M 25 ×2	P4	25.000	23.701	80	60	22.835
	ISO2			90	54	
M 25 ×1.5	P3	25.000	24.026	60	40	23.376
	ISO2			80	48	
M 25 ×1	P3	25.000	24.350	60	40	23.917
M 26 ×3	P4	26.000	24.051	80	40	22.752
M 26 ×2	P4	26.000	24.701	80	60	23.835
M 26 ×1.5	P3	26.000	25.026	60	40	24.376
	Ⅱ			50	15	
	ISO2			80	48	
M 26 ×1	P2	26.000	25.350	40	20	24.917
M 27 ×3	P4	27.000	25.051	80	40	23.752
	Ⅱb			45	5	
	ISO2			106	64	
	D8			104	52	
M 27 ×2	P5	27.000	25.701	100	80	24.835
	ISO2			90	54	
	D7			91	50	
M 27 ×1.5	P3	27.000	26.026	60	40	25.376
	ISO2			80	48	
M 27 ×1	P3	27.000	26.350	60	40	25.917
M 28 ×3	P4	28.000	26.051	80	40	24.752
M 28 ×2	P4	28.000	26.701	80	60	25.835
	ISO2			90	54	
M 28 ×1.5	P3	28.000	27.026	60	40	26.376
	ISO2			80	48	
M 28 ×1	P3	28.000	27.350	60	40	26.917

for Metric Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 30 ×3.5	P4	30.000	27.727	80	40	26.211
	Ⅱb			45	5	
	ISO2			112	67	
	D9			117	65	
M 30 ×3	P5	30.000	28.051	100	60	26.752
M 30 ×2	P4	30.000	28.701	80	60	27.835
	ISO2			90	54	
	D7			91	50	
M 30 ×1.5	P3	30.000	29.026	60	40	28.376
	Ⅱ			50	15	
	ISO2			80	48	
M 30 ×1	P3	30.000	29.350	60	40	28.917
M 32 ×3	P3	32.000	30.051	60	20	28.752
M 32 ×2	P4	32.000	30.701	80	40	29.835
M 32 ×1.5	P4	32.000	31.026	80	60	30.376
	ISO2			80	48	
M 32 ×1	P3	32.000	31.350	60	40	30.917
M 33 ×3.5	P4	33.000	30.727	80	40	29.211
	ISO2			112	67	
	D9			117	65	
M 33 ×3	P5	33.000	31.051	100	60	29.752
M 33 ×2	P4	33.000	31.701	80	40	30.835
	ISO2			80	48	
	D7			91	50	
M 33 ×1.5	P3	33.000	32.026	60	40	31.376
	ISO2			80	48	
M 33 ×1	P3	33.000	32.350	60	40	31.917
M 34 ×3	P3	34.000	32.051	60	20	30.752
M 34 ×2	P4	34.000	32.701	80	40	31.835
M 34 ×1.5	P4	34.000	33.026	80	60	32.376
	ISO2			80	48	
M 34 ×1	P3	34.000	33.350	60	40	32.917
M 35 ×3	P3	35.000	33.051	60	20	31.752
M 35 ×2	P5	35.000	33.701	100	60	32.835
M 35 ×1.5	P4	35.000	34.026	80	60	33.376
	ISO2			80	48	
M 35 ×1	P2	35.000	34.350	40	20	33.917

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 36 ×4	P5	36.000	33.402	100	60	31.670
	ISO2			118	71	
	D9			117	65	
M 36 ×3	P5	36.000	34.051	100	60	32.752
	ISO2			106	64	
	D8			104	52	
M 36 ×2	P4	36.000	34.701	80	40	33.835
	ISO2			90	54	
M 36 ×1.5	P3	36.000	35.026	60	40	34.376
	ISO2			80	48	
M 36 ×1	P3	36.000	35.350	60	40	34.917
M 37 ×1.5	P4	37.000	36.026	80	60	35.376
M 38 ×3	P3	38.000	36.051	60	20	34.752
M 38 ×2	P4	38.000	36.701	80	40	35.835
M 38 ×1.5	P4	38.000	37.026	80	60	36.376
	ISO2			80	48	
M 38 ×1	P3	38.000	37.350	60	40	36.917
M 39 ×4	P5	39.000	36.402	100	60	34.670
	ISO2			118	71	
	D10			130	78	
M 39 ×3	P5	39.000	37.051	100	60	35.752
	D8			104	52	
M 39 ×2	P4	39.000	37.701	80	40	36.835
M 39 ×1.5	P3	39.000	38.026	60	40	37.376
	ISO2			80	48	
M 39 ×1	P3	39.000	38.350	60	40	37.917
M 40 ×4	P5	40.000	37.402	100	60	35.670
M 40 ×3	P5	40.000	38.051	100	60	36.752
M 40 ×2	P4	40.000	38.701	80	40	37.835
	ISO2			90	54	
M 40 ×1.5	P4	40.000	39.026	80	60	38.376
	ISO2			80	48	
M 42 ×4.5	P5	42.000	39.077	100	60	37.129
	ISO2			125	75	
M 42 ×4	P6	42.000	39.402	120	80	37.670
M 42 ×3	P5	42.000	40.051	100	60	38.752
	ISO2			106	64	
M 42 ×2	P4	42.000	40.701	80	40	39.835
	ISO2			90	54	
M 42 ×1.5	P4	42.000	41.026	80	60	40.376
	ISO2			80	48	

Think threads with YAMAWA

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
M 44 × 4	P6	44.000	41.402	120	80	39.670
M 44 × 3	P5	44.000	42.051	100	60	40.752
M 44 × 2	P4	44.000	42.701	80	40	41.835
M 44 × 1.5	P4	44.000	43.026	80	60	42.376
M 45 × 4.5	P5	45.000	42.077	100	60	40.129
	ISO2			125	75	
M 45 × 4	P6	45.000	42.402	120	80	40.670
M 45 × 3	P5	45.000	43.051	100	60	41.752
	ISO2			106	64	
M 45 × 2	P4	45.000	43.701	80	40	42.835
	ISO2			90	54	
M 45 × 1.5	P4	45.000	44.026	80	60	43.376
	ISO2			80	48	
M 45 × 1	P3	45.000	44.350	60	40	43.917
M 48 × 5	P5	48.000	44.752	100	60	42.587
	ISO2			133	80	
M 48 × 4	P6	48.000	45.402	120	80	43.670
M 48 × 3	P6	48.000	46.051	120	80	44.752
	ISO2			112	67	
M 48 × 2	P4	48.000	46.701	80	40	45.835
	ISO2			95	57	
M 48 × 1.5	P4	48.000	47.026	80	60	46.376
	ISO2			85	51	

for Unified Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
No. 0 - 80 UNF	P1	1.524	1.318	25	10	1.181
	G5			64	51	
	2B			26	11	
	GH1			12.7	0	
No. 1 - 64 UNC	P1	1.854	1.598	25	10	1.425
	2B			28	12	
	GH1			12.7	0	
No. 1 - 72 UNF	P1	1.854	1.626	25	10	1.473
	G5			64	51	
	2B			28	12	
	GH1			12.7	0	
No. 2 - 56 UNC	P1	2.184	1.890	25	10	1.694
	G4			51	38	
	2B			30	13	
	GH1			12.7	0	
No. 2 - 64 UNF	P1	2.184	1.928	25	10	1.755
	2B			29	12	
	GH1			12.7	0	
No. 3 - 48 UNC	P1	2.515	2.172	25	10	1.941
	G4			51	38	
	2B			32	14	
	GH1			12.7	0	
No. 3 - 56 UNF	P1	2.515	2.220	25	10	2.024
	2B			31	13	
	GH1			12.7	0	
No. 4 - 40 UNC	P2	2.845	2.433	40	25	2.156
	G5			64	51	
	2B			34	16	
	GH1			12.7	0	
No. 4 - 48 UNF	P1	2.845	2.502	25	10	2.271
	G5			64	51	
	2B			32	14	
	GH1			12.7	0	
No. 4 - 36 UNS	GH1	2.845	2.387	12.7	0	2.081
No. 5 - 40 UNC	P2	3.175	2.764	40	25	2.487
	2B			35	16	
	GH1			12.7	0	
No. 5 - 44 UNF	P1	3.175	2.799	25	10	2.550
	2B			34	15	
	GH1			12.7	0	

for Unified Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
No. 6 - 32 UNC	P2	3.505	2.990	40	20	2.647
	G5			64	51	
	2B			38	18	
	GH1			12.7	0	
No. 6 - 40 UNF	P2	3.505	3.094	40	25	2.817
	G5			64	51	
	2B			36	16	
	GH1			12.7	0	
No. 8 - 32 UNC	P2	4.166	3.650	40	20	3.307
	G6			76	64	
	2B			39	18	
	GH1			12.7	0	
No. 8 - 36 UNF	P2	4.166	3.708	40	20	3.401
	G5			64	51	
	2B			38	17	
	GH1			12.7	0	
No. 10 - 24 UNC	P2	4.826	4.138	40	20	3.680
	G6			76	64	
	2B			42	20	
	GH1			12.7	0	
No. 10 - 32 UNF	P2	4.826	4.310	40	20	3.967
	G5			64	51	
	2B			40	18	
	GH1			12.7	0	
No. 12 - 24 UNC	P2	5.486	4.798	40	20	4.341
	2B			43	20	
	GH1			12.7	0	
No. 12 - 28 UNF	P2	5.486	4.897	40	20	4.503
	2B			42	19	
	GH1			12.7	0	
No. 12 - 32 UNEF	P2	5.486	4.971	40	20	4.627
1/4 - 20 UNC	P2	6.350	5.524	40	20	4.976
	G7			89	76	
	2B			46	22	
	GH1			12.7	0	
1/4 - 28 UNF	P2	6.350	5.761	40	20	5.367
	G6			76	64	
	2B			43	19	
	GH1			12.7	0	
1/4 - 32 UNEF	P2	6.350	5.834	40	20	5.491
	2B			42	18	

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
5/16 - 18 UNC	P3	7.938	7.021	60	40	6.411
	2B			49	23	
	GH1			12.7	0	
5/16 - 24 UNF	P2	7.938	7.249	40	20	6.792
	2B			46	20	
	GH1			12.7	0	
5/16 - 32 UNEF	P2	7.938	7.422	40	20	7.079
	2B			44	18	
3/8 - 16 UNC	P3	9.525	8.494	60	40	7.805
	2B			53	25	
	GH1			12.7	0	
3/8 - 24 UNF	P3	9.525	8.837	60	40	8.379
	2B			48	20	
	GH2			25.4	12.7	
3/8 - 32 UNEF	P2	9.525	9.009	40	20	8.666
	2B			46	18	
7/16 - 14 UNC	P3	11.112	9.934	60	40	9.149
	2B			56	27	
	GH1			12.7	0	
7/16 - 20 UNF	P3	11.112	10.287	60	40	9.738
	2B			51	22	
	GH1			12.7	0	
7/16 - 28 UNEF	P2	11.112	10.523	40	20	10.130
1/2 - 13 UNC	P3	12.700	11.430	60	40	10.584
	2B			58	28	
	GH1			12.7	0	
1/2 - 20 UNF	P3	12.700	11.874	60	40	11.326
	2B			52	23	
	GH1			12.7	0	
1/2 - 28 UNEF	P2	12.700	12.111	40	20	11.717
9/16 - 12 UNC	P3	14.288	12.913	60	40	11.996
	2B			60	29	
	GH3			38.1	25.4	
9/16 - 18 UNF	P3	14.288	13.371	60	40	12.761
	2B			54	23	
	GH2			25.4	12.7	
9/16 - 24 UNEF	P2	14.288	13.599	40	20	13.142

Think threads with YAMAWA

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
5/8 - 11 UNC	P4	15.875	14.376	80	60	13.376
	2B			63	30	
	GH1			12.7	0	
5/8 - 18 UNF	P3	15.875	14.958	60	40	14.348
	2B			56	23	
	GH1			12.7	0	
5/8 - 24 UNEF	P3	15.875	15.187	60	40	14.729
11/16 - 11 UNS	GH3	17.462	15.964	38.1	25.4	14.963
11/16 - 16 UNS	GH3	17.462	16.431	38.1	25.4	15.743
3/4 - 10 UNC	P4	19.050	17.399	80	60	16.299
	2B			66	31	
	GH2			25.4	12.7	
3/4 - 16 UNF	P3	19.050	18.019	60	40	17.330
	2B			60	25	
	GH1			12.7	0	
3/4 - 20 UNEF	P3	19.050	18.224	60	40	17.676
7/8 - 9 UNC	P4	22.225	20.391	80	60	19.169
	2B			70	33	
	GH2			25.4	12.7	
7/8 - 14 UNF	P3	22.225	21.046	60	40	20.262
	2B			64	27	
	GH1			12.7	0	
7/8 - 20 UNEF	P3	22.225	21.400	60	40	20.851
1 - 8 UNC	P4	25.400	23.338	80	40	21.963
	2B			73	35	
	GH2			25.4	12.7	
1 - 12 UNF	P4	25.400	24.026	80	60	23.109
	2B			67	29	
	GH4			50.8	38.1	
1 - 14 UNS	P4	25.400	24.221	80	60	23.437
	2B			65	38	
	GH2			25.4	12.7	
1 - 20 UNEF	P3	25.400	24.574	60	40	24.026
1 1/8 - 7 UNC	P5	28.575	26.218	100	60	24.648
	GH4			50.8	38.1	
1 1/8 - 12 UNF	P3	28.575	27.201	60	40	26.284
	2B			69	29	
	GH4			50.8	38.1	
1 1/8 - 18 UNEF	P3	28.575	27.658	60	40	27.048

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
1 1/4 - 7 UNC	P5	31.750	29.393	100	60	27.823
	2B			79	38	
	GH4			50.8	38.1	
1 1/4 - 8 UN	P5	31.750	29.688	100	60	28.313
1 1/4 - 12 UNF	P4	31.750	30.376	80	60	29.459
	2B			70	29	
	GH4			50.8	38.1	
1 3/8 - 6 UNC	P5	34.925	32.174	100	60	30.343
	GH4			50.8	38.1	
1 3/8 - 8 UN	P5	34.925	32.863	100	60	31.488
1 3/8 - 12 UNF	P4	34.925	33.551	80	40	32.634
	2B			71	29	
	GH4			50.8	38.1	
1 1/2 - 6 UNC	P5	38.100	35.349	100	60	33.518
	GH4			50.8	38.1	
1 1/2 - 12 UNF	P4	38.100	36.726	80	40	35.809
	2B			73	29	
	GH4			50.8	38.1	
1 3/4 - 5 UNC	P6	44.450	41.151	120	80	38.951
1 3/4 - 12 UN	P4	44.450	43.076	80	40	42.159
2 - 4.5 UNC	P6	50.800	47.135	120	80	44.689
2 - 12 UN	P4	50.800	49.426	80	40	48.509

for Whitworth Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
1/8 W 40	P1	3.175	2.768	25	10	2.362
5/32 W 32	P2	3.969	3.460	40	20	2.952
3/16 W 24	P2	4.762	4.085	40	20	3.407
7/32 W 24	P2	5.556	4.879	40	20	4.201
1/4 W 20	P2	6.350	5.537	40	20	4.724
5/16 W 18	P2	7.938	7.034	40	20	6.130
3/8 W 16	P2	9.525	8.509	40	20	7.493
7/16 W 14	P3	11.112	9.950	60	40	8.788
1/2 W 12	P3	12.700	11.345	60	40	9.990
9/16 W 12	P3	14.288	12.933	60	40	11.578
5/8 W 11	P3	15.875	14.396	60	40	12.917
3/4 W 10	P3	19.050	17.424	60	40	15.798
7/8 W 9	P3	22.225	20.418	60	40	18.611
1 W 8	P3	25.400	23.367	60	20	21.334
1 1/8 W 7	P4	28.575	26.252	80	40	23.929
1 1/4 W 7	P4	31.750	29.427	80	40	27.104
1 3/8 W 6	P4	34.925	32.214	80	40	29.503
1 1/2 W 6	P4	38.100	35.389	80	40	32.678
1 5/8 W 5	P4	41.275	38.022	80	40	34.769
1 3/4 W 5	P4	44.450	41.197	80	40	37.944
1 7/8 W 4.5	P4	47.625	44.011	80	40	40.397
2 W 4.5	P4	50.800	47.186	80	40	43.572

for Sewing Machine Screw Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
1/16 SM 80	P1	1.588	1.382	25	10	1.176
5/64 SM 64	P1	1.984	1.726	25	10	1.468
3/32 SM 56	P1	2.381	2.086	25	10	1.791
3/32 SM 100	P1	2.381	2.216	25	10	2.051
1/8 SM 40	P2	3.175	2.763	40	25	2.351
1/8 SM 44	P2	3.175	2.800	40	25	2.425
9/64 SM 40	P2	3.572	3.160	40	25	2.748
11/64 SM 40	P2	4.366	3.954	40	25	3.542
3/16 SM 24	P2	4.762	4.075	40	20	3.388
3/16 SM 28	P2	4.762	4.173	40	20	3.584
3/16 SM 32	P2	4.762	4.246	40	20	3.730
3/16 SM 40	P2	4.762	4.350	40	25	3.938
7/32 SM 32	P2	5.556	5.040	40	20	4.524
15/64 SM 28	P2	5.953	5.364	40	20	4.775
1/4 SM 24	P2	6.350	5.663	40	20	4.976
1/4 SM 40	P1	6.350	5.938	25	10	5.526

Think threads with YAMAWA

for Parallel Pipe Threads (PF·G)

unit: mm

Size		Class	Major Diameter	Pitch Diameter			Minor Diameter
			Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
PF	1/16 - 28	II	7.723	7.142	40	20	6.561
PF	1/8 - 28	II	9.728	9.147	40	20	8.566
PF	1/4 - 19	II	13.157	12.301	50	25	11.445
PF	3/8 - 19	II	16.662	15.806	50	25	14.950
PF	1/2 - 14	II	20.955	19.793	55	25	18.631
PF	5/8 - 14	II	22.911	21.749	55	25	20.587
PF	3/4 - 14	II	26.441	25.279	55	25	24.117
PF	7/8 - 14	II	30.201	29.039	55	25	27.877
PF	1 - 11	II	33.249	31.770	60	30	30.291
PF	1 1/4 - 11	II	41.910	40.431	65	30	38.952
PF	1 1/2 - 11	II	47.803	46.324	65	30	44.845
PF	2 - 11	II	59.614	58.135	75	35	56.656
PF	2 1/2 - 11	II	75.184	73.705	80	40	72.226
PF	3 - 11	II	87.884	86.405	85	40	84.926
PF	3 1/2 - 11	II	100.330	98.851	85	40	97.372
PF	4 - 11	II	113.030	111.551	85	40	110.072

for Parallel Pipe Threads (PS·Rp)

unit: mm

Size		Class	Major Diameter	Pitch Diameter			Minor Diameter
			Basic Size	Basic Size	Upper Tolerance (μm) −	Lower Tolerance (μm) −	Basic Size
PS	1/16 - 28	II	7.723	7.142	30	50	6.561
PS	1/8 - 28	II	9.728	9.147	30	50	8.566
PS	1/4 - 19	II	13.157	12.301	50	75	11.445
PS	3/8 - 19	II	16.662	15.806	50	75	14.950
PS	1/2 - 14	II	20.955	19.793	85	115	18.631
PS	5/8 - 14	II	22.911	21.749	85	115	20.587
PS	3/4 - 14	II	26.441	25.279	85	115	24.117
PS	7/8 - 14	II	30.201	29.039	85	115	27.877
PS	1 - 11	II	33.249	31.770	120	150	30.291
PS	1 1/4 - 11	II	41.910	40.431	115	150	38.952
PS	1 1/2 - 11	II	47.803	46.324	115	150	44.845
PS	2-11	II	59.614	58.135	105	145	56.656
PS	2 1/2 - 11	II	75.184	73.705	140	180	72.226
PS	3 - 11	II	87.884	86.405	135	180	84.926
PS	4 - 11	II	113.030	111.551	135	180	110.072

for Taper Pipe Threads (PT·Rc)

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
PT 1/16 - 28	7.723	7.142	6.561
PT 1/8 - 28	9.728	9.147	8.566
PT 1/4 - 19	13.157	12.301	11.445
PT 3/8 - 19	16.662	15.806	14.950
PT 1/2 - 14	20.955	19.793	18.631
PT 5/8 - 14	22.911	21.749	20.587
PT 3/4 - 14	26.441	25.279	24.117
PT 7/8 - 14	30.201	29.039	27.877
PT 1 - 11	33.249	31.770	30.291
PT 1 1/8 - 11	37.897	36.418	34.939
PT 1 1/4 - 11	41.910	40.431	38.952
PT 1 1/2 - 11	47.803	46.324	44.845
PT 1 3/4 - 11	53.746	52.267	50.788
PT 2 - 11	59.614	58.135	56.656
PT 2 1/4 - 11	65.710	64.231	62.752
PT 2 1/2 - 11	75.184	73.705	72.226
PT 3 - 11	87.884	86.405	84.926
PT 3 1/2 - 11	100.330	98.851	97.372
PT 4 - 11	113.030	111.551	110.072

for Miniature Screw Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
S 0.5 × 0.125	-	0.500	0.419	15	7	0.380
S 0.6 × 0.15	-	0.600	0.503	15	7	0.456
	GS2			23	13	
S 0.7 × 0.175	-	0.700	0.586	20	10	0.532
	GS3			28	18	
S 0.8 × 0.2	-	0.800	0.670	20	10	0.608
	GS3			28	18	
S 0.9 × 0.225	-	0.900	0.754	20	10	0.684
	GS4			33	23	

Think threads with YAMAWA

for Helical Coil Wire Thread Inserts, Metric Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
STI M 2.6×0.45	Ⅰb	3.185	2.892	18	6	2.698
STI M 3 ×0.5	Ⅰb	3.650	3.324	18	6	3.108
	G3			38	25	
STI M 4 ×0.7	Ⅰb	4.909	4.454	18	6	4.151
	G4			51	38	
STI M 5 ×0.8	Ⅰb	6.039	5.519	18	6	5.173
	G4			51	38	
STI M 6 ×1	Ⅰb	7.299	6.649	18	6	6.216
	G4			51	38	
STI M 8 ×1.25	Ⅰb	9.624	8.812	18	6	8.271
	G4			51	38	
STI M 10 ×1.5	Ⅰb	11.948	10.974	22	7	10.324
	G5			64	51	
STI M 10 ×1.25	Ⅰb	11.624	10.812	18	6	10.271
STI M 10 ×1	Ⅰb	11.299	10.649	18	6	10.216
STI M 12 ×1.75	Ⅰb	14.273	13.136	22	7	12.379
	G6			76	64	
STI M 12 ×1.5	Ⅰb	13.948	12.974	21	7	12.324
STI M 12 ×1.25	Ⅰb	13.624	12.812	21	7	12.271
STI M 14 ×2	Ⅰb	16.598	15.299	22	7	14.433
STI M 14 ×1.5	Ⅰb	15.948	14.974	21	7	14.324
STI M 16 ×2	Ⅰb	18.598	17.299	22	7	16.433
STI M 16 ×1.5	Ⅰb	17.948	16.974	21	7	16.324
STI M 18 ×2.5	Ⅰb	21.248	19.624	30	10	18.542
STI M 18 ×1.5	Ⅰb	19.948	18.974	24	8	18.324
STI M 20 ×2.5	Ⅰb	23.248	21.624	30	10	20.542
STI M 20 ×1.5	Ⅰb	21.948	20.974	24	8	20.324
STI M 22 ×2.5	Ⅰb	25.248	23.624	30	10	22.542
STI M 22 ×1.5	Ⅰb	23.948	22.974	24	8	22.324
STI M 24 ×3	Ⅰb	27.897	25.948	30	10	24.649
STI M 24 ×1.5	Ⅰb	25.948	24.974	24	8	24.324

for Helical Coil Wire Thread Inserts, Unified Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
STI No. 2 -56 UNC	Ⅰb	2.773	2.479	18	6	2.283
	GH2			25.4	12.7	
STI No. 4 -40 UNC	Ⅰb	3.670	3.258	18	6	2.981
	GH2			25.4	12.7	
STI No. 4 -48 UNF	Ⅰb	3.532	3.189	18	6	2.958
STI No. 5 -40 UNC	Ⅰb	4.000	3.589	18	6	3.312
STI No. 6 -32 UNC	Ⅰb	4.536	4.021	18	6	3.678
	GH3			38.1	25.4	
STI No. 6 -40 UNF	Ⅰb	4.330	3.919	18	6	3.642
STI No. 8 -32 UNC	Ⅰb	5.197	4.681	18	6	4.338
	GH3			38.1	25.4	
STI No. 8 -36 UNF	Ⅰb	5.083	4.625	18	6	4.318
STI No. 10 -24 UNC	Ⅰb	6.201	5.513	18	6	5.055
	GH2			25.4	12.7	
STI No. 10 -32 UNF	Ⅰb	5.857	5.341	18	6	4.998
	GH2			25.4	12.7	
STI No. 12 -24 UNC	Ⅰb	6.861	6.173	18	6	5.716
STI 1/4 - 20 UNC	Ⅰb	8.000	7.174	22	7	6.626
	GH3			38.1	25.4	
STI 1/4 - 28 UNF	Ⅰb	7.528	6.939	18	6	6.545
	GH2			25.4	12.7	
STI 5/16 - 18 UNC	Ⅰb	9.771	8.854	22	7	8.244
	GH3			38.1	25.4	
STI 5/16 - 24 UNF	Ⅰb	9.313	8.624	18	6	8.167
STI 3/8 - 16 UNC	Ⅰb	11.587	10.556	22	7	9.867
	GH3			38.1	25.4	
STI 3/8 - 24 UNF	Ⅰb	10.900	10.212	18	6	9.754
STI 7/16 - 14 UNC	Ⅰb	13.469	12.291	30	10	11.506
	GH3			38.1	25.4	
STI 7/16 - 20 UNF	Ⅰb	12.762	11.937	18	6	11.388
	GH3			38.1	25.4	
STI 1/2 - 13 UNC	Ⅰb	15.238	13.968	30	10	13.122
	GH3			38.1	25.4	
STI 1/2 - 20 UNF	Ⅰb	14.350	13.524	18	6	12.976
STI 5/8 - 11 UNC	Ⅰb	18.875	17.376	30	10	16.376
STI 5/8 - 18 UNF	Ⅰb	17.708	16.791	21	7	16.181
STI 3/4 - 16 UNF	Ⅰb	21.112	20.081	21	7	19.392

for Tripod Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
1/4 - 20	-	6.350	5.525	230	210	4.975

for Thick Steel Conduit Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
CTG 16 - 14	20.955	19.793	18.922
CTG 22 - 14	26.441	25.279	24.408
CTG 28 - 11	33.249	31.770	30.661
CTG 36 - 11	41.910	40.431	39.322
CTG 42 - 11	47.803	46.324	45.215
CTG 54 - 11	59.614	58.135	57.026
CTG 70 - 11	75.184	73.705	72.596
CTG 82 - 11	87.884	86.405	85.296
CTG 92 - 11	100.330	98.851	97.742
CTG 104 - 11	113.030	111.551	110.442

for Steel Conduit Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
CTC 19 - 16	19.100	18.343	17.708
CTC 25 - 16	25.400	24.643	24.008
CTC 31 - 16	31.800	31.043	30.408
CTC 39 - 16	38.100	37.343	36.708
CTC 51 - 16	50.800	50.043	49.408
CTC 63 - 16	63.500	62.743	62.108
CTC 75 - 16	76.200	75.443	74.808

for Tire Valve Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
5 V 1	5.334	4.869	4.597
8 V 1	7.798	7.284	7.036
8 V 2	7.938	7.250	6.782
9 V 1	9.525	9.010	8.661
10 V 1	9.800	9.380	8.750
10 V 2	10.414	9.815	9.350
11 V 1	11.113	10.287	9.729
12 V 1	12.319	11.669	11.176
13 V 1	12.700	11.875	11.328
13 V 2	12.700	12.185	11.837
15 V 1	15.137	14.380	13.750
16 V 1	15.875	15.263	14.869
17 V 1	17.137	16.380	15.750
17 V 2	17.463	16.775	16.307
17 V 3	17.463	16.432	15.748
19 V 1	19.050	18.019	17.323
20 V 1	20.642	19.885	19.250

for Bicycle Tire Valve Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
CTV 5 - 36	5.330	4.872	4.566
CTV 5 - 24	5.100	4.413	3.954
CTV 8 - 32	7.900	7.384	7.041
CTV 8 - 30	8.100	7.550	7.183
5 V 2	5.370	4.760	4.400
6 V 1	6.160	5.725	5.440

for BSW Threads

unit: mm

Size	Class	Major Diameter	Pitch Diameter			Minor Diameter
		Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
3/32 BSW 48	-	2.381	2.042	32	15	1.704
1/8 BSW 40	-	3.175	2.768	35	15	2.362
5/32 BSW 32	-	3.969	3.460	40	18	2.952
3/16 BSW 24	-	4.762	4.085	44	21	3.407
7/32 BSW 24	-	5.556	4.879	44	21	4.201
1/4 BSW 20	-	6.350	5.537	46	23	4.724
5/16 BSW 18	-	7.938	7.034	49	23	6.130
3/8 BSW 16	-	9.525	8.509	51	25	7.493
7/16 BSW 14	-	11.112	9.950	56	28	8.788
1/2 BSW 12	-	12.700	11.345	61	30	9.990
9/16 BSW 12	-	14.288	12.933	61	30	11.578
5/8 BSW 11	-	15.875	14.396	63	30	12.917
3/4 BSW 10	-	19.050	17.424	69	33	15.798
7/8 BSW 9	-	22.225	20.418	69	33	18.611
1 BSW 8	-	25.400	23.367	74	36	21.334

for Bicycle Threads

unit: mm

Size	Major Diameter	Pitch Diameter	Minor Diameter
	Basic Size	Basic Size	Basic Size
BC 5/16 - 26	7.94	7.42	6.90
BC 3/8 - 26	9.53	9.01	8.49
BC 7/16 - 26	11.11	10.59	10.07
BC 1/2 - 20	12.70	12.02	11.34
BC 9/16 - 20	14.29	13.61	12.93
BC 5/8 - 20	15.88	15.20	14.52
BC 11/16 - 24	17.46	16.90	16.34
BC 3/4 - 30	19.05	18.60	18.15
BC 31/32 - 30	24.61	24.16	23.71
BC 1 - 24	25.40	24.84	24.28
BC 1.29 - 24	32.77	32.21	31.65
BC 1.37 - 24	34.80	34.24	33.68
BC 1 7/16 - 24	36.51	35.95	35.39
BC 1.45 - 24	36.83	36.27	35.71
BC 1 9/16 - 24	39.69	39.13	38.57

for European Parallel Pipe Threads (G)

unit: mm

Size		Class	Major Diameter	Pitch Diameter			Minor Diameter
			Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
G	1/8 - 28	-	9.728	9.147	43	21	8.566
G	1/4 - 19	-	13.157	12.301	50	25	11.445
G	3/8 - 19	-	16.662	15.806	50	25	14.950
G	1/2 - 14	-	20.955	19.793	57	28	18.631
G	5/8 - 14	-	22.911	21.749	57	28	20.587
G	3/4 - 14	-	26.441	25.279	57	28	24.117
G	7/8 - 14	-	30.201	29.039	57	28	27.877
G	1 - 11	-	33.249	31.770	72	36	30.291
G	1 1/4 - 11	-	41.910	40.431	72	36	38.952
G	1 1/2 - 11	-	47.803	46.324	72	36	44.845

for European Steel Conduit Threads (Pg)

unit: mm

Size		Class	Major Diameter	Pitch Diameter			Minor Diameter
			Basic Size	Basic Size	Upper Tolerance (μm) +	Lower Tolerance (μm) +	Basic Size
Pg	7 - 20	-	12.50	11.89	60	30	11.28
Pg	9 - 18	-	15.20	14.53	60	30	13.86
Pg	11 - 18	-	18.60	17.93	60	30	17.26
Pg	13.5 - 18	-	20.40	19.73	60	30	19.06
Pg	16 - 18	-	22.50	21.83	60	30	21.16
Pg	21 - 16	-	28.30	27.54	100	50	26.78
Pg	29 - 16	-	37.00	36.24	100	50	35.48

15. Bored hole size before tapping (for thread cutting)

for Metric Threads

Unit : mm

Size	Minor diameter of internal threads (D_1)		Bored hole size (ref.)
	Max.	Min.	
M1 ×0.25	(0.785)	(0.729)	0.77
M1 ×0.2	(0.821)	(0.783)	0.81
M1.1×0.25	(0.885)	(0.829)	0.87
M1.1×0.2	(0.921)	(0.883)	0.91
M1.2×0.25	(0.985)	(0.929)	0.97
M1.2×0.2	(1.021)	(0.983)	1.01
M1.4×0.3	(1.142)	(1.075)	1.13
M1.4×0.2	(1.221)	(1.183)	1.21
M1.6×0.35	1.321	1.221	1.30
M1.6×0.2	(1.421)	(1.383)	1.41
※ M1.7×0.35	1.421	1.321	1.40
※ M1.7×0.2	1.521	1.483	1.51
M1.8×0.35	1.521	1.421	1.50
M1.8×0.2	(1.621)	(1.583)	1.61
M2 ×0.4	1.679	1.567	1.65
M2 ×0.25	(1.785)	(1.729)	1.77
M2.2×0.45	1.838	1.713	1.81
M2.2×0.25	(1.985)	(1.929)	1.97
※ M2.3×0.4	1.979	1.867	1.95
※ M2.3×0.25	2.085	2.029	2.07
M2.5×0.45	2.138	2.013	2.11
M2.5×0.35	2.221	2.121	2.20
※ M2.6×0.45	2.238	2.113	2.21
※ M2.6×0.35	2.321	2.221	2.30
M3 ×0.5	2.599	2.459	2.56
M3 ×0.35	2.721	2.621	2.70
M3.5×0.6	3.010	2.850	2.97
M3.5×0.35	3.221	3.121	3.20
M4 ×0.7	3.422	3.242	3.38
M4 ×0.5	3.599	3.459	3.56
M4.5×0.75	3.878	3.688	3.83
M4.5×0.5	4.099	3.959	4.06
M5 ×0.8	4.334	4.134	4.28
M5 ×0.5	4.599	4.459	4.56
M5.5×0.5	5.099	4.959	5.06
M6 ×1	5.153	4.917	5.09
M6 ×0.75	5.378	5.188	5.33
※ M6 ×0.5	5.599	5.459	5.56
M7 ×1	6.153	5.917	6.09

Size	Minor diameter of internal threads (D_1)		Bored hole size (ref.)
	Max.	Min.	
M7 ×0.75	6.378	6.188	6.33
※ M7 ×0.5	6.599	6.459	6.56
M8 ×1.25	6.912	6.647	6.85
M8 ×1	7.153	6.917	7.09
M 8×0.75	7.378	7.188	7.33
※ M 8×0.5	7.599	7.459	7.56
M 9×1.25	7.912	7.647	7.85
M 9×1	8.153	7.917	8.09
M 9×0.75	8.378	8.188	8.33
M10×1.5	8.676	8.376	8.60
M10×1.25	8.912	8.647	8.85
M10×1	9.153	8.917	9.09
M10×0.75	9.378	9.188	9.33
※ M10×0.5	9.599	9.459	9.56
M11×1.5	9.676	9.376	9.60
M11×1	10.153	9.917	10.10
M11×0.75	10.378	10.188	10.33
※ M11×0.5	10.599	10.459	10.56
M12×1.75	10.441	10.106	10.4
M12×1.5	10.676	10.376	10.6
M12×1.25	10.912	10.647	10.85
M12×1	11.153	10.917	11.09
※ M12×0.5	11.599	11.459	11.56
M14×2	12.210	11.835	12.1
M14×1.5	12.676	12.376	12.6
M14×1	13.153	12.917	13.09
M15×1.5	13.676	13.376	13.60
M15×1	14.153	13.917	14.09
M16×2	14.210	13.835	14.1
M16×1.5	14.676	14.376	14.6
M16×1	15.153	14.917	15.09
M17×1.5	15.676	15.376	15.60
M17×1	16.153	15.917	16.09
M18×2.5	15.744	15.294	15.6
M18×2	16.210	15.835	16.1
M18×1.5	16.676	16.376	16.6
M18×1	17.153	16.917	17.09
M20×2.5	17.744	17.294	17.6

The recommended tap drill sizes indicated above are for JIS 6H (Class 2) Metric Threads.
- D1: Minor diameter of JIS 6H (Class 2) internal thread. The Minor diameters D1 shown in ( ) are of 5H (Class 2) for coarse threads and of 4H • 5H (Class 1) for fine threads.
- ※Marked sizes have been eliminated from JIS.

Unit : mm

Size	Minor diameter of internal threads (D_1)		Bored hole size (ref.)
	Max.	Min.	
M20×2	18.210	17.835	18.1
M20×1.5	18.676	18.376	18.6
M20×1	19.153	18.917	19.09
M22×2.5	19.744	19.294	19.6
M22×2	20.210	19.835	20.1
M22×1.5	20.676	20.376	20.6
M22×1	21.153	20.917	21.09
M24×3	21.252	20.752	21.1
M24×2	22.210	21.835	22.1
M24×1.5	22.676	22.376	22.6
M24×1	23.153	22.917	23.09
M25×2	23.210	22.835	23.1
M25×1.5	23.676	23.376	23.6
M25×1	24.153	23.917	24.09
M26×1.5	24.676	24.376	24.6
M27×3	24.252	23.752	24.1
M27×2	25.210	24.835	25.1
M27×1.5	25.676	25.376	25.6
M27×1	26.153	25.917	26.09
M28×2	26.210	25.835	26.1
M28×1.5	26.676	26.376	26.6
M28×1	27.153	26.917	27.09
M30×3.5	26.771	26.211	26.6
M30×3	27.252	26.752	27.1
M30×2	28.210	27.835	28.1
M30×1.5	28.676	28.376	28.6
M30×1	29.153	28.917	29.09
M32×2	30.210	29.835	30.1
M32×1.5	30.676	30.376	30.6
M33×3.5	29.771	29.211	29.6
M33×3	30.252	29.752	30.1
M33×2	31.210	30.835	31.1
M33×1.5	31.676	31.376	31.6
M35×1.5	33.676	33.376	33.6
M36×4	32.270	31.670	32.1
M36×3	33.252	32.752	33.1
M36×2	34.210	33.835	34.1
M36×1.5	34.676	34.376	34.6

• D1: Minor diameter of JIS 6H (Class 2) internal thread.

Size	Minor diameter of internal threads (D_1)		Bored hole size (ref.)
	Max.	Min.	
M38×1.5	36.676	36.376	36.6
M39×4	35.270	34.670	35.1
M39×3	36.252	35.752	36.1
M39×2	37.210	36.835	37.1
M39×1.5	37.676	37.376	37.6
M40×3	37.252	36.752	37.1
M40×2	38.210	37.835	38.1
M40×1.5	38.676	38.376	38.6
M42×4.5	37.799	37.129	37.6
M42×4	38.270	37.670	38.1
M42×3	39.252	38.752	39.1
M42×2	40.210	39.835	40.1
M42×1.5	40.676	40.376	40.6
M45×4.5	40.799	40.129	40.6
M45×4	41.270	40.670	41.1
M45×3	42.252	41.752	42.1
M45×2	43.210	42.835	43.1
M45×1.5	43.676	43.376	43.6
M48×5	43.297	42.587	43.1
M48×4	44.270	43.670	44.1
M48×3	45.252	44.752	45.1
M48×2	46.210	45.835	46.1
M48×1.5	46.676	46.376	46.6
M50×3	47.252	46.752	47.1
M50×2	48.210	47.835	48.1
M50×1.5	48.676	48.376	48.6
M52×5	47.297	46.587	47.1
M52×4	48.270	47.670	48.1
M52×3	49.252	48.752	49.1
M52×2	50.210	49.835	50.1
M52×1.5	50.676	50.376	50.6
M55×4	51.270	50.670	51.1
M55×3	52.252	51.752	52.1
M55×2	53.210	52.835	53.1
M55×1.5	53.676	53.376	53.6
M56×5.5	50.796	50.046	50.6
M56×4	52.270	51.670	52.1
M56×3	53.252	52.752	53.1
M56×2	54.210	53.835	54.1
M56×1.5	54.676	54.376	54.6

15. Bored hole size before tapping (for thread cutting)

for Metric Threads

unit: mm

Size	Minor diameter of internal threads (D_1)		Bored hole size (ref.)
	Max.	Min.	
M58×4	54.270	53.670	54.1
M58×3	55.252	54.752	55.1
M58×2	56.210	55.835	56.1
M58×1.5	56.676	56.376	56.6
M60×5.5	54.796	54.046	54.6
M60×4	56.270	55.670	56.1
M60×3	57.252	56.752	57.1
M60×2	58.210	57.835	58.1
M60×1.5	58.676	58.376	58.6
M62×4	58.270	57.670	58.1
M62×3	59.252	58.752	59.1
M62×2	60.210	59.835	60.1
M62×1.5	60.676	60.376	60.6
M64×6	58.305	57.505	58.1
M64×4	60.270	59.670	60.1
M64×3	61.252	60.752	61.1
M64×2	62.210	61.835	62.1
M64×1.5	62.676	62.376	62.6
M65×4	61.270	60.670	61.1
M65×3	62.252	61.752	62.1
M65×2	63.210	62.835	63.1
M65×1.5	63.676	63.376	63.6
M68×6	62.305	61.505	62.1
M68×4	64.270	63.670	64.1
M68×3	65.252	64.752	65.1
M68×2	66.210	65.835	66.1
M68×1.5	66.676	66.376	66.6
M70×6	64.305	63.505	64.1
M70×4	66.270	65.670	66.1
M70×3	67.252	66.752	67.1
M70×2	68.210	67.835	68.1
M70×1.5	68.676	68.376	68.6
M72×6	66.305	65.505	66.1
M72×4	68.270	67.670	68.1
M72×3	69.252	68.752	69.1
M72×2	70.210	69.835	70.1
M72×1.5	70.676	70.376	70.6
M75×4	71.270	70.670	71.1
M75×3	72.252	71.752	72.1
M75×2	73.210	72.835	73.1
M75×1.5	73.676	73.376	73.6
M76×6	70.305	69.505	70.1
M76×4	72.270	71.670	72.1
M76×3	73.252	72.752	73.1
M76×2	74.210	73.835	74.1
M76×1.5	74.676	74.376	74.6
M78×2	76.210	75.835	76.1
M80×6	74.305	73.505	74.1
M80×4	76.270	75.670	76.1
M80×3	77.252	76.752	77.1
M80×2	78.210	77.835	78.1
M80×1.5	78.676	78.376	78.6
M82×2	80.210	79.835	80.1
M85×6	79.305	78.505	79.1
M85×4	81.270	80.670	81.1
M85×3	82.252	81.752	82.1
M85×2	83.210	82.835	83.1
M90×6	84.305	83.505	84.1
M90×4	86.270	85.670	86.1
M90×3	87.252	86.752	87.1
M90×2	88.210	87.835	88.1
M95×6	89.305	88.505	89.1
M95×4	91.270	90.670	91.1
M95×3	92.252	91.752	92.1
M95×2	93.210	92.835	93.1
M100×6	94.305	93.505	94.1
M100×4	96.270	95.670	96.1
M100×3	97.252	96.752	97.1
M100×2	98.210	97.835	98.1

• D1: Minor diameter of JIS 6H (Class 2) internal thread.

for Unified Threads

Unit : mm

Size	Minor diameter of internal threads (D_1)		Bored hole size (ref.)
	Max.	Min.	
No. 0 - 80UNF	1.305	1.182	1.27
No. 1 - 64UNC	1.582	1.425	1.54
No. 1 - 72UNF	1.612	1.474	1.58
No. 2 - 56UNC	1.871	1.695	1.83
No. 2 - 64UNF	1.912	1.756	1.87
No. 3 - 48UNC	2.146	1.941	2.09
No. 3 - 56UNF	2.197	2.025	2.15
No. 4 - 40UNC	2.385	2.157	2.33
No. 4 - 48UNF	2.458	2.271	2.41
No. 5 - 40UNC	2.697	2.487	2.64
No. 5 - 44UNF	2.740	2.551	2.69
No. 6 - 32UNC	2.895	2.642	2.83
No. 6 - 40UNF	3.022	2.820	2.97
No. 8 - 32UNC	3.530	3.302	3.47
No. 8 - 36UNF	3.606	3.404	3.55
No.10 - 24UNC	3.962	3.683	3.89
No.10 - 32UNF	4.165	3.963	4.12
No.12 - 24UNC	4.597	4.344	4.53
No.12 - 28UNF	4.724	4.496	4.67
No.12 - 32UNEF	4.826	4.623	4.78
1/4 - 20UNC	5.257	4.979	5.19
1/4 - 28UNF	5.588	5.360	5.53
1/4 - 32UNEF	5.689	5.487	5.64
5/16 - 18UNC	6.731	6.401	6.65
5/16 - 24UNF	7.035	6.782	6.97
5/16 - 32UNEF	7.264	7.087	7.22
3/8 - 16UNC	8.153	7.798	8.07
3/8 - 24UNF	8.636	8.382	8.57
3/8 - 32UNEF	8.864	8.662	8.81
7/16 - 14UNC	9.550	9.144	9.5
7/16 - 20UNF	10.033	9.729	9.96
7/16 - 28UNEF	10.337	10.135	10.29
1/2 - 13UNC	11.023	10.592	10.9
1/2 - 20UNF	11.607	11.329	11.54
1/2 - 28UNEF	11.938	11.710	11.88
9/16 - 12UNC	12.446	11.989	12.3
9/16 - 18UNF	13.081	12.751	13.00
9/16 - 24UNEF	13.385	13.132	13.32

Size	Minor diameter of internal threads (D_1)		Bored hole size (ref.)
	Max.	Min.	
5/8 - 11UNC	13.868	13.386	13.8
5/8 - 18UNF	14.681	14.351	14.60
5/8 - 24UNEF	14.986	14.732	14.92
3/4 - 10UNC	16.840	16.307	16.7
3/4 - 16UNF	17.678	17.323	17.59
3/4 - 20UNEF	17.957	17.679	17.89
7/8 - 9UNC	19.761	19.177	19.6
7/8 - 14UNF	20.675	20.270	20.6
7/8 - 20UNEF	21.132	20.854	21.06
1 - 8UNC	22.606	21.971	22.5
1 - 12UNF	23.571	23.114	23.5
1 - 14UNS	23.825	23.445	23.7
1 - 20UNEF	24.307	24.029	24.24
1 1/8 - 7UNC	25.349	24.638	25.2
1 1/8 - 8UN	25.781	25.146	25.6
1 1/8-12UNF	26.746	26.289	26.6
1 1/8-18UNEF	27.381	27.051	27.30
1 1/4 - 7UNC	28.524	27.813	28.4
1 1/4 - 8UN	28.956	28.321	28.8
1 1/4-12UNF	29.921	29.464	29.8
1 1/4-18UNEF	30.556	30.226	30.47
1 3/8 - 6UNC	31.115	30.353	30.9
1 3/8 - 8UN	32.131	31.496	32.0
1 3/8-12UNF	33.096	32.639	33.0
1 3/8-18UNEF	33.731	33.401	33.65
1 1/2 - 6UNC	34.290	33.528	34.1
1 1/2 - 8UN	35.306	34.671	35.2
1 1/2-12UNF	36.271	35.814	36.2
1 1/2-18UNEF	36.906	36.576	36.82
1 5/8 - 8UN	38.481	37.846	38.3
1 5/8-12UN	39.446	38.989	39.3
1 5/8-18UNEF	40.081	39.751	40.00
1 3/4 - 5UNC	39.827	38.964	39.6
1 3/4 - 8UN	41.656	41.021	41.5
1 3/4-12UN	42.621	42.164	42.5
2 - 4.5UNC	45.593	44.679	45.4
2 - 8UN	48.006	47.371	47.9
2 - 12UN	48.971	48.514	48.9

• The recommended tap drill sizes indicated above are for JIS Class 2B UNC & UNF threads, and ANSI B1.1 Class 2B UNEF, UN & UNS threads.

15. Bored hole size before tapping (for thread cutting)

for Helical Coil Wire Thread Inserts, Metric Threads

Unit : mm

Nominal size	Bored hole size		Bored hole size (ref.)
	Max.	Min.	
STI M 2 ×0.4	2.16	2.10	2.15
STI M 2.5×0.45	2.68	2.60	2.66
STI M 2.6×0.45	2.78	2.70	2.76
STI M 3 ×0.5	3.20	3.12	3.18
STI M 4 ×0.7	4.30	4.17	4.27
STI M 5 ×0.8	5.33	5.16	5.29
STI M 6 ×1	6.42	6.25	6.38
STI M 8 ×1.25	8.52	8.31	8.47
STI M10 ×1.5	10.62	10.37	10.56
STI M10 ×1.25	10.52	10.31	10.47
STI M10×1	10.42	10.25	10.38
STI M12×1.75	12.73	12.43	12.66
STI M12×1.5	12.62	12.37	12.56
STI M12×1.25	12.52	12.31	12.47
STI M14×2	14.83	14.49	14.75
STI M14×1.5	14.62	14.37	14.56
STI M14×1.25	14.52	14.31	14.47
STI M16×2	16.83	16.49	16.75
STI M16×1.5	16.62	16.37	16.56
STI M18×2.5	19.04	18.58	18.93
STI M18×1.5	18.62	18.37	18.56
STI M20×2.5	21.04	20.58	20.93
STI M20×1.5	20.62	20.37	20.56
STI M22×2.5	23.04	22.58	22.93
STI M22×1.5	22.62	22.37	22.56
STI M24×3	25.25	24.70	25.11
STI M24×1.5	24.62	24.37	24.56

for Helical Coil Wire Thread Inserts, Unified Threads

unit: mm

Size	Minor diameter of internal threads (D_1)		Bored hole size (ref.)
	Max.	Min.	
STI No. 2 - 56 UNC	2.440	2.284	2.40
STI No. 4 - 40 UNC	3.180	2.985	3.13
STI No. 4 - 48 UNF	3.121	2.962	3.08
STI No. 5 - 40 UNC	3.487	3.315	3.44
STI No. 6 - 32 UNC	3.878	3.678	3.83
STI No. 6 - 40 UNF	3.817	3.645	3.77
STI No. 8 - 32 UNC	4.523	4.339	4.48
STI No. 8 - 36 UNF	4.498	4.321	4.45
STI No. 10 - 24 UNC	5.283	5.055	5.23
STI No. 10 - 32 UNF	5.184	4.999	5.14
STI No. 12 - 24 UNC	5.943	5.715	5.89
STI 1/4 - 20 UNC	6.868	6.625	6.81
STI 1/4 - 28 UNF	6.720	6.546	6.68
STI 5/16 - 18 UNC	8.488	8.243	8.43
STI 5/16 - 24 UNF	8.351	8.167	8.31
STI 3/8 - 16 UNC	10.126	9.868	10.06
STI 3/8 - 24 UNF	9.931	9.754	9.89
STI 7/16 - 14 UNC	11.783	11.507	11.71
STI 7/16 - 20 UNF	11.584	11.387	11.53
STI 1/2 - 13 UNC	13.393	13.122	13.33
STI 1/2 - 20 UNF	13.172	12.975	13.12
STI 5/8 - 11 UNC	16.672	16.376	16.60
STI 5/8 - 18 UNF	16.385	16.180	16.33
STI 3/4 - 16 UNF	19.608	19.393	19.55

• The figures listed above are according to the data provided by helical coil wire insert manufacturers.

■ for Whitworth Threads

Unit : mm

Size	Minor diameter of internal threads (D1)		Bored hole size (ref.)
	Max.	Min.	
※ 1/8 W 40	(2.591)	(2.362)	2.53
※ 3/16 W 24	(3.744)	(3.406)	3.66
1/4 W 20	5.204	4.914	5.13
5/16 W 18	6.670	6.340	6.59
3/8 W 16	8.113	7.733	8.02
7/16 W 14	9.508	9.048	9.4
1/2 W 12	10.830	10.310	10.7
9/16 W 12	12.418	11.898	12.3
5/8 W 11	13.817	13.257	13.7
3/4 W 10	16.778	16.178	16.6
7/8 W 9	19.691	19.031	19.5
1 W 8	22.514	21.814	22.3

- D1: Minor diameter of JIS Class 2 internal thread.
- Whitworth Threads have been eliminated from JIS.
- ※Marked sizes are in accordance with BSW.

■ for Sewing Machine Threads

Unit : mm

Size	Minor diameter of internal threads (D1)		Bored hole size (ref.)
	Max.	Min.	
1/16 SM 80	1.281	1.211	1.26
5/64 SM 64	1.593	1.513	1.57
3/32 SM 56	1.936	1.841	1.91
3/32 SM 100	2.156	2.081	2.14
1/8 SM 40	2.551	2.421	2.52
1/8 SM 44	2.605	2.485	2.58
9/64 SM 40	2.948	2.818	2.92
11/64 SM 40	3.742	3.612	3.71
3/16 SM 24	3.658	3.498	3.62
3/16 SM 28	3.844	3.684	3.80
3/16 SM 32	3.980	3.820	3.94
3/16 SM 40	4.138	4.008	4.11
7/32 SM 32	4.774	4.614	4.73
15/64 SM 28	5.055	4.875	5.01
1/4 SM 24	5.266	5.086	5.22
1/4 SM 40	5.726	5.596	5.69

■ for Pipe Threads

○PS, Rp

Unit : mm

Size	Minor Diameter of JIS internal thread (D1)		Bored hole size (ref.)
	Max.	Min.	
PS 1/16 - 28	6.632	6.490	6.50
PS 1/8 - 28	8.637	8.495	8.50
PS 1/4 - 19	11.549	11.341	11.30
PS 3/8 - 19	15.054	14.846	14.90
PS 1/2 - 14	18.773	18.489	18.5
PS 3/4 - 14	24.259	23.975	24.0
PS 1 - 11	30.472	30.110	30.2
PS 1 1/4-11	39.133	38.771	38.8
PS 1 1/2-11	45.026	44.664	44.7
PS 2 - 11	56.837	56.475	56.5

○PF, G

Unit : mm

Size	Minor Diameter of JIS internal thread (D1)		Bored hole size (ref.)
	Max.	Min.	
PF 1/16 - 28	6.843	6.561	6.77
PF 1/8 - 28	8.848	8.566	8.78
PF 1/4 - 19	11.890	11.445	11.78
PF 3/8 - 19	15.395	14.950	15.28
PF 1/2 - 14	19.172	18.631	19.0
PF 5/8 - 14	21.128	20.587	21.0
PF 3/4 - 14	24.658	24.117	24.5
PF 7/8 - 14	28.418	27.877	28.3
PF 1 - 11	30.931	30.291	30.8
PF 1 1/8-11	35.579	34.939	35.4
PF 1 1/4-11	39.592	38.952	39.4
PF 1 1/2-11	45.485	44.845	45.3
PF 1 3/4-11	51.428	50.788	51.3
PF 2 - 11	57.296	56.656	57.1

15. Bored hole size before tapping (for thread cutting)

for American Standard Pipe Thread

unit: mm

Size	Minor diameter of internal threads		Bored hole size (ref.)
	Max.	Min.	
NPSC 1/8 - 27	8.813	8.636	8.77
NPSC 1/4 - 18	11.592	11.329	11.53
NPSC 3/8 - 18	14.919	14.656	14.85
NPSC 1/2 - 14	18.501	18.161	18.4
NPSC 3/4 - 14	23.835	23.495	23.7
NPSC 1 - 11.5	29.903	29.490	29.8

unit: mm

Size	Minor diameter of internal threads		Bored hole size (ref.)
	Max.	Min.	
NPSM 1/8 - 27	9.246	9.094	9.21
NPSM 1/4 - 18	12.217	11.888	12.13
NPSM 3/8 - 18	15.554	15.317	15.49
NPSM 1/2 - 14	19.278	18.974	19.2
NPSM 3/4 - 14	24.638	24.334	24.5
NPSM 1 - 11.5	30.759	30.506	30.7

for Dryseal American Standard Pipe Thread

unit: mm

Size	Minor diameter of internal threads		Bored hole size (ref.)
	Max.	Min.	
NPSF 1/8 - 27	8.740	8.652	8.72
NPSF 1/4 - 18	11.363	11.232	11.33
NPSF 3/8 - 18	14.803	14.672	14.77
NPSF 1/2 - 14	18.288	18.118	18.2
NPSF 3/4 - 14	23.634	23.465	23.5
NPSF 1 - 11.5	29.669	29.464	29.6

■ Recommended Bored Hole Size Table for Taper Pipe Threads (PT) (refer to JIS B 0203)

<Remarks during tapping>

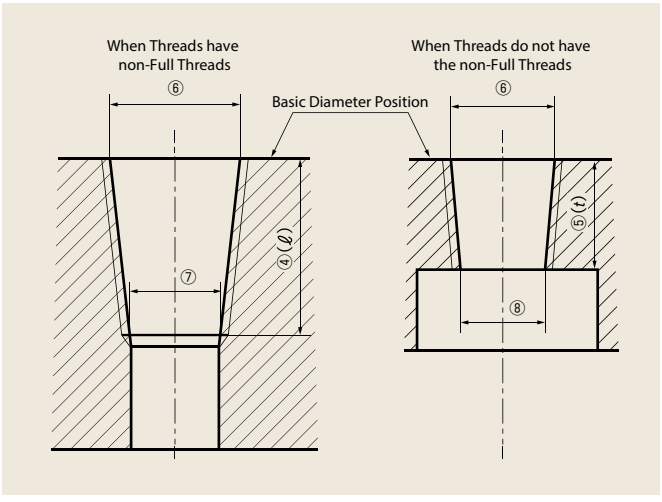
・PT internal threads have R design on their crests. The taps should cut threads with their thread root.

・On thread having non-full threads, if you are going to cut effective thread length ℓ, use the tap of long type.

unit: mm

Size	Thread Standards				Minor Diameter			Recommended Bored Hole Sizes (reference)		reference	
	Basic Diameter	Basic Diameter Position	Effective Thread Length (Minimum)		Pipe End (Workpiece Face) (Basic Diamater)	When Threads have non-Full Threads	When Threads do not have the non-Full Threads	Maximum Size of Straight Bored Hole		Tap	
		Pipe End	When Threads have non-Full Threads[1] ℓ	When Threads do not have the non-Full Threads[1] t		Position away from Pipe End by ℓ	Position away from Pipe End by t	When Threads have non-Full Threads	When Threads do not have the non-Full Threads	Basic Diameter Position, ℓg	
	Tolerance in radial direction	Tolerance in axial direction c			Basic Size	Basic Size	Basic Size			Long Thread Type	Short Thread Type
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
PT 1/16 - 28	± 0.071	± 1.13	6.2	4.4	6.561	6.174	6.286	6.1	6.2	13.0	10.5
PT 1/8 - 28	± 0.071	± 1.13	6.2	4.4	8.566	8.179	8.291	8.1	8.2	13.0	10.5
PT 1/4 - 19	± 0.104	± 1.67	9.4	6.7	11.445	10.858	11.026	10.7	10.9	21.0	12.5
PT 3/8 - 19	± 0.104	± 1.67	9.7	7.0	14.950	14.344	14.513	14.2	14.4	21.0	14.0
PT 1/2 - 14	± 0.142	± 2.27	12.7	9.1	18.631	17.837	18.062	17.6	17.9	25.0	17.0
PT 3/4 - 14	± 0.142	± 2.27	14.1	10.2	24.117	23.236	23.480	23.0	23.3	25.0	19.0
PT 1 - 11	± 0.181	± 2.89	16.2	11.6	30.291	29.279	29.566	29.0	29.3	32.0	22.0
PT 1 1/4 - 11	± 0.181	± 2.89	18.5	13.4	38.952	37.796	38.115	37.6	37.9	32.0	24.5
PT 1 1/2 - 11	± 0.181	± 2.89	18.5	13.4	44.845	43.689	44.008	43.5	43.8	32.0	25.5
PT 2 - 11	± 0.181	± 2.89	22.8	16.9	56.656	55.231	55.600	55.0	55.4	35.0	28.0

Note 1) Length toward End of Smaller Diameter from Baisc Diameter Position



Remarks 1. Opening of Internal Thread (Face of workpiece) is Basic Diameter Position.

Remarks 2. Effective Thread Length has 2 types, with non-Full Thread Type and without non-Full Thread Type.

Remarks 3. Concerning bored hole shape, considering load on taps, taper bored hole is recommended.

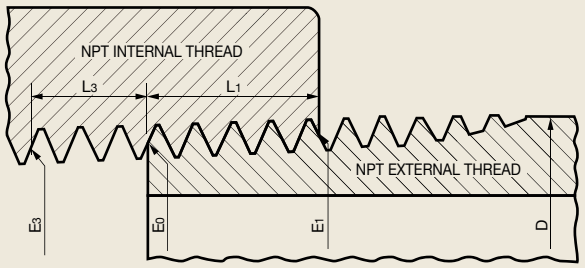
Remarks 4. When applying taper bored hole, by referring to values shown in columns ②·⑥~⑧, prepare the taper hole by using pipe reamer (1/16 taper). By referring to values shown in columns ⑨ and ⑩, select the drill diameter before reaming by taking reamer's margin into account.

Remarks 5. When preparing straight bored hole, by referring to values shown in columns ⑨ and ⑩, select drill diameter.

Recommended Bored Hole Size Table for American Taper Pipe Threads (NPT) (Refer to ANSI/ASME B1.20.1-1983)

unit: mm

Size	L1	L3	L1+L3	Minor Diameter						Bored Hole Size (reference)	reference Tap
				Pipe End (Basic Diameter Position)			Position away from Pipe End by (L1+L3)			Maximum Size of Straight Bored Hole	Basic Diameter Position ℓg
				Maximum Value	Minimum Value	Tolerance	Maximum Value	Minimum Value	Tolerance		
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
NPT 1/16 - 27	4.064	2.822	6.886	6.510	6.388	0.122	6.080	5.958	0.122	6.05	12.00
NPT 1/8 - 27	4.102	2.822	6.924	8.857	8.736	0.122	8.425	8.303	0.122	8.39	12.05
NPT 1/4 - 18	5.786	4.234	10.020	11.514	11.357	0.157	10.888	10.730	0.157	10.85	17.45
NPT 3/8 - 18	6.096	4.234	10.330	14.953	14.796	0.157	14.308	14.150	0.157	14.27	17.65
NPT 1/2 - 14	8.128	5.443	13.571	18.485	18.323	0.163	17.637	17.475	0.163	17.60	22.85
NPT 3/4 - 14	8.611	5.443	14.054	23.831	23.668	0.163	22.952	22.790	0.163	22.91	22.95
NPT 1 - 11.5	10.160	6.627	16.787	29.868	29.696	0.173	28.819	28.647	0.173	28.78	27.40
NPT 1 1/4 - 11.5	10.668	6.627	17.295	38.625	38.452	0.173	37.544	37.372	0.173	37.50	28.10
NPT 1 1/2 - 11.5	10.668	6.627	17.295	44.695	44.522	0.173	43.614	43.441	0.173	43.57	28.40
NPT 2 - 11.5	11.074	6.627	17.701	56.732	56.560	0.173	55.626	55.454	0.173	55.58	28.00



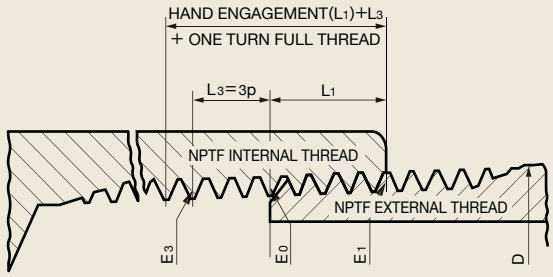
Remarks 1. Pipe End is Basic Diameter Position (E1).
Remarks 2. Effective Thread Length is the length away from Pipe End by (L1+L3).
Remarks 3. Concerning bored hole shape, considering load on taps, taper bored hole is recommended.
Remarks 4. When applying taper bored hole, by referring to values in shown columns ⑤, ⑥ and ⑧, ⑨, prepare the taper hole by using pipe reamer (1/16 taper). By referring to values shown in column ⑪, select the drill diameter before reaming by taking reamer's margin into account.
Remarks 5. When preparing straight bored hole, by referring to values shown in column ⑪, select drill diameter.

Think threads with YAMAWA

■ Recommended Bored Hole Size Table for American Dryseal Taper Pipe Threads (NPTF) (Refer to ANSI B1.20.3-1976, re-confirmed in 1982)

unit: mm

Size	L1	L3 (3P)	L1+L3+1P	Minor Diameter						Bored Hole Size (reference)	reference
				Pipe End (Basic Diameter Position)			Position of (L1+L3+1P)				Tap
				Maximum Value	Minimum Value	Tolerance	Maximum Value	Minimum Value	Tolerance	Maximum Size of Straight Bored Hole	Basic Diameter Position ℓg
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
NPTF 1/16 - 27	4.064	2.822	7.827	6.505	6.414	0.091	6.015	5.923	0.091	5.99	12.00
NPTF 1/8 - 27	4.102	2.822	7.865	8.852	8.761	0.091	8.362	8.270	0.091	8.34	12.05
NPTF 1/4 - 18	5.786	4.234	11.431	11.484	11.397	0.086	10.770	10.684	0.086	10.75	17.45
NPTF 3/8 - 18	6.096	4.234	11.741	14.923	14.836	0.086	14.189	14.103	0.086	14.17	17.65
NPTF 1/2 - 14	8.128	5.443	15.386	18.419	18.333	0.086	17.459	17.373	0.086	17.44	22.85
NPTF 3/4 - 14	8.611	5.443	15.868	23.764	23.678	0.086	22.773	22.687	0.086	22.75	22.95
NPTF 1 - 11.5	10.160	6.627	18.996	29.812	29.726	0.086	28.625	28.538	0.086	28.60	27.40
NPTF 1 1/4 - 11.5	10.668	6.627	19.504	38.569	38.483	0.086	37.350	37.263	0.086	37.33	28.10
NPTF 1 1/2 - 11.5	10.668	6.627	19.504	44.639	44.552	0.086	43.420	43.334	0.086	43.40	28.40
NPTF 2 - 11.5	11.074	6.627	19.910	56.677	56.590	0.086	55.432	55.345	0.086	55.41	28.00



Remarks 1. Pipe End is Basic Diameter Position (E1).
Remarks 2. Effective Thread Length is the length away from Pipe End by (L1+L3+1P).
Remarks 3. Concerning bored hole shape, considering load on taps, taper bored hole is recommended.
Remarks 4. When applying taper bored hole, by referring to values shown in columns ⑤, ⑥ and ⑧, ⑨, prepare the taper hole by using pipe reamer (1/16 taper). By referring to values in shown column ⑪, select the drill diameter before reaming by taking reamer's margin into account.
Remarks 5. When preparing straight bored hole, by referring to values shown in column ⑪, select drill diameter.

■ Percentage of Thread Engagement & Relation between Percentage of Thread Height and Area Removed at A Thread Height

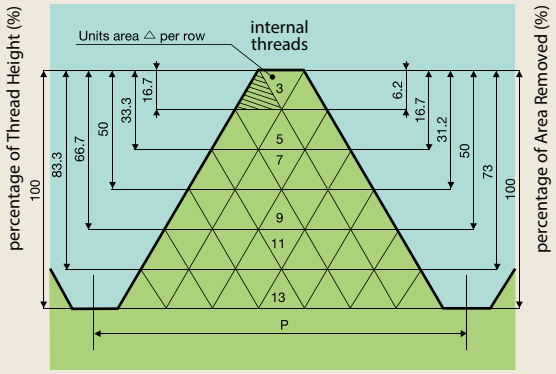
Percentage of Thread Engagement

$$\frac{\text{Basic Major Dia.} - \text{Hole Size Before Tapping}}{2\times (\text{Basic Thread Overlap})} \times 100$$

Basic Thread Overlap

Metric & Unified Thread	0.5413P
Whitworth Thread	0.5664P
Pipe Thread (Rc, Rp, G, PT, PS, PF)	0.6403P

P=Pitch



As shown above, when the thread height increases, the amount of material to be removed increases rapidly, so it is an advantage to tap users to keep the hole size (thread minor diameter) as large as possible.

16. Bored hole size before tapping (for thread forming)

for Metric Threads

unit: mm

Size	Class	Hole size depending on percentage of thread engagement			ref. Minor diameter of internal threads (5H/6H)	
		100%	90%	80%	Max.	Min.
M1 × 0.25	G4	0.89	0.90	0.92	0.785	0.729
	G5	0.90	0.91	0.93		
M1.2 × 0.25	G4	1.09	1.10	1.11	0.983	0.929
	G5	1.10	1.11	1.13		
M1.4 × 0.3	G4	1.26	1.28	1.30	1.142	1.075
	G5	1.28	1.29	1.31		
M1.6 × 0.35	G4	1.43	1.44	1.46	1.321	1.221
	G5	1.44	1.46	1.48		
※ M1.7 × 0.35	G4	1.52	1.54	1.56	1.421	1.321
	G5	1.54	1.56	1.58		
	G6	1.55	1.57	1.59		
M1.8 × 0.35	G4	1.62	1.64	1.66	1.521	1.421
	G5	1.64	1.66	1.68		
M2 × 0.4	G4	1.79	1.81	1.83	1.679	1.567
	G5	1.80	1.82	1.84		
	G6	1.81	1.83	1.86		
M2 × 0.25	G4	1.89	1.90	1.91	1.785	1.729
	G5	1.90	1.91	1.93		
M2.2 × 0.45	G5	1.98	2.00	2.02	1.838	1.713
※ M2.3 × 0.4	G4	2.09	2.11	2.13	1.979	1.867
	G5	2.10	2.12	2.14		
	G6	2.11	2.13	2.16		
M2.5 × 0.45	G5	2.27	2.30	2.32	2.138	2.013
	G6	2.29	2.31	2.44		
M2.5 × 0.35	G5	2.34	2.36	2.37	2.221	2.121
※ M2.6 × 0.45	G5	2.37	2.40	2.42	2.238	2.113
	G6	2.39	2.41	2.44		
※ M2.6 × 0.35	G5	2.44	2.45	2.47	2.321	2.221
M3 × 0.5	G5	2.75	2.78	2.80	2.599	2.459
	G6	2.76	2.79	2.82		
	G7	2.77	2.80	2.83		
	G8	2.79	2.81	2.84		
M3 × 0.35	G5	2.79	2.84	2.86	2.721	2.621
M3.5 × 0.6	G5	3.19	3.22	3.25	3.010	2.850
	G6	3.20	3.23	3.26		
	G7	3.21	3.24	3.28		
M3.5 × 0.35	G5	3.32	3.34	3.36	3.221	3.121
	G6	3.33	3.35	3.37		
M4 × 0.7	G5	3.65	3.67	3.71	3.422	3.242
	G6	3.65	3.69	3.72		
	G7	3.66	3.70	3.74		
	G8	3.67	3.71	3.75		
M4 × 0.5	G5	3.75	3.77	3.80	3.599	3.459
	G6	3.76	3.79	3.81		

Size	Class	Hole size depending on percentage of thread engagement			ref. Minor diameter of internal threads (5H/6H)	
		100%	90%	80%	Max.	Min.
M5 × 0.8	G5	4.57	4.62	4.66	4.334	4.134
	G6	4.59	4.63	4.67		
	G7	4.60	4.64	4.68		
	G8	4.61	4.65	4.70		
M5 × 0.5	G7	4.77	4.80	4.82	4.599	4.459
M6 × 1	G5	5.46	5.51	5.57	5.153	4.917
	G6	5.47	5.53	5.58		
	G7	5.49	5.54	5.59		
	G8	5.50	5.55	5.61		
M6 × 0.75	G6	5.61	5.65	5.69	5.378	5.188
	G7	5.62	5.66	5.70		
※ M6 × 0.5	G6	5.76	5.78	5.81	5.599	5.459
M7 × 1	G6	6.47	6.52	6.58	6.153	5.917
	G7	6.48	6.54	6.59		
M7 × 0.75	G7	6.62	6.66	6.70	6.378	6.188
M8 × 1.25	G7	7.36	7.43	7.49	6.912	6.647
	G8	7.37	7.44	7.51		
M8 × 1	G7	7.48	7.54	7.59	7.153	6.917
M8 × 0.75	G7	7.62	7.66	7.70	7.378	7.188
M10 × 1.5	G7	9.22	9.30	9.38	8.676	8.376
	G8	9.23	9.31	9.39		
M10 × 1.25	G7	9.35	9.42	9.49	8.912	8.647
	G8	9.37	9.43	9.50		
M10 × 1	G7	9.48	9.53	9.59	9.153	8.917
M12 × 1.75	G8	11.09	11.19	11.28	10.441	10.106
	G9	11.11	11.20	11.29		
M12 × 1.5	G8	11.22	11.30	11.38	10.676	10.376
	G9	11.23	11.31	11.39		
M12 × 1.25	G8	11.35	11.42	11.49	10.912	10.647
	G9	11.36	11.43	11.50		
M12 × 1	G7	11.47	11.53	11.58	11.153	10.917
M14 × 2	G9	12.97	13.07	13.18	12.210	11.835
	G10	12.98	13.09	13.19		
M14 × 1.5	G9	13.22	13.31	13.39	12.676	12.376
M14 × 1	G8	13.48	13.54	13.59	13.153	12.917
M16 × 2	G9	14.96	15.07	15.18	14.210	13.835
	G10	14.97	15.08	15.19		
M16 × 1.5	G9	15.22	15.30	15.38	14.676	14.376
M16 × 1	G8	15.48	15.53	15.59	15.153	14.917
M18 × 1.5	G9	17.22	17.30	17.38	16.676	16.376
M20 × 2.5	G11	18.72	18.86	18.99	17.744	17.294
M20 × 1.5	G9	19.21	19.29	19.37	18.676	18.376
	G10	19.22	19.31	19.39		

Sizes with * mark are deleted from JIS.

for Unified Threads

unit: mm

Size	Class	Hole size depending on percentage of thread engagement			ref. Minor diameter of internal threads (2B)	
		100%	90%	80%	Max.	Min.
No. 0 - 80UNF	G5	1.39	1.41	1.42	1.305	1.182
No. 1 - 64UNC	G5	1.68	1.70	1.72	1.582	1.425
No. 1 - 72UNF	G5	1.70	1.72	1.74	1.612	1.474
No. 2 - 56UNC	G4	1.96	1.98	2.01	1.871	1.695
	G5	1.97	1.99	2.02		
	G6	1.98	2.01	2.03		
	G7	2.00	2.02	2.04		
No. 2 - 64UNF	G4	1.98	2.01	2.03	1.912	1.756
	G5	2.00	2.02	2.04		
No. 3 - 48UNC	G4	2.25	2.28	2.31	2.146	1.941
	G5	2.26	2.29	2.32		
No. 3 - 56UNF	G4	2.29	2.31	2.34	2.197	2.025
	G5	2.30	2.32	2.35		
No. 4 - 40UNC	G5	2.54	2.57	2.61	2.385	2.157
	G6	2.55	2.59	2.62		
	G7	2.57	2.60	2.63		
No. 4 - 48UNF	G5	2.59	2.62	2.65	2.458	2.271
	G6	2.61	2.63	2.66		
No. 5 - 40UNC	G5	2.87	2.90	2.94	2.697	2.487
	G6	2.88	2.92	2.95		
No. 5 - 44UNC	G5	2.90	2.93	2.96	2.740	2.551
	G6	2.91	2.94	2.97		
No. 6 - 32UNC	G5	3.11	3.15	3.19	2.895	2.642
	G6	3.12	3.16	3.21		
	G7	3.13	3.18	3.22		
No. 6 - 40UNF	G5	3.19	3.22	3.26	3.022	2.820
	G6	3.20	3.23	3.27		
	G7	3.21	3.25	3.28		
No. 8 - 32UNC	G6	3.78	3.82	3.87	3.530	3.302
	G7	3.79	3.84	3.88		
	G8	3.81	3.85	3.89		
No. 8 - 36UNF	G5	3.81	3.85	3.89	3.606	3.404
	G6	3.82	3.86	3.90		
No. 10 - 24UNC	G6	4.30	4.35	4.41	3.962	3.683
	G7	4.31	4.37	4.42		
No. 10 - 32UNF	G6	4.44	4.48	4.53	4.165	3.963
	G7	4.45	4.50	4.54		
No. 12 - 24UNC	G6	4.96	5.01	5.07	4.597	4.344
	G7	4.97	5.03	5.08		
No. 12 - 28UNF	G6	5.03	5.08	5.13	4.724	4.496
	G7	5.04	5.09	5.14		
1/4 - 20UNC	G6	5.71	5.78	5.85	5.257	4.979
	G7	5.73	5.80	5.86		
	G8	5.74	5.81	5.88		
1/4 - 28UNF	G6	5.89	5.94	5.99	5.588	5.360
	G7	5.91	5.95	6.00		
5/16 - 18UNC	G7	7.23	7.31	7.38	6.731	6.401
5/16 - 24UNF	G7	7.42	7.47	7.53	7.035	6.782
3/ 8 - 16UNC	G7	8.72	8.80	8.89	8.153	7.798
	G8	8.73	8.81	8.90		
3/ 8 - 24UNF	G7	8.99	9.04	9.10	8.636	8.382
	G8	9.00	9.06	9.11		
7/16 - 14UNC	G8	10.20	10.30	10.40	9.550	9.144
7/16 - 20UNF	G8	10.48	10.55	10.62	10.033	9.729
1/ 2 - 13UNC	G8	11.70	11.81	11.92	11.023	10.592
1/ 2 - 20UNF	G8	12.06	12.13	12.20	11.607	11.329

for Helical Coil Wire Screw Thread Inserts

unit: mm

Size	Class	Hole size depending on percentage of thread engagement			
		Min.		Max.	
STI M3 × 0.5	G3	3.40	100%	3.45	80%
STI M4 × 0.7	G4	4.56	100%	4.61	85%
STI M5 × 0.8	G4	5.63	100%	5.70	85%
STI M6 × 1	G4	6.82	100%	6.90	85%
STI M8 × 1.25	G4	9.00	100%	9.11	85%
STI M10 × 1.5	G5	11.21	100%	11.30	90%
STI M12 × 1.75	G6	13.42	100%	13.57	85%

for Miniature Screw Threads

unit: mm

Size	Class	Max.	Min.
S0.6 × 0.15	GS2	0.55	0.54
S0.7 × 0.175	GS3	0.64	0.62
S0.8 × 0.2	GS3	0.73	0.71
S0.9 × 0.225	GS4	0.82	0.80

Concerning bored hole sizes for metric extra fine screw series, please contact Yamawa or The Japan Research Institute for Screw Thread and Fastener.

SURZ

SURZ adopts special design on the thread root of tap, and is applicable to the control of minor diameter of internal threads and seams of thread crests.

unit: mm

Size	Class	Recommended bored hole sizes
M1 × 0.25	G4	0.90
M1.2 × 0.25	G4	1.10
M1.4 × 0.3	G4	1.28
M1.6 × 0.35	G4	1.46
M1.6 × 0.2	G3	1.52
M1.7 × 0.35	G4	1.56
M2 × 0.4	G4	1.82
M2.3 × 0.4	G4	2.12
M2.5 × 0.45	G4	2.30
M2.6 × 0.45	G5	2.40
M3 × 0.5	G5	2.77
No. 2 - 56UNC	G4	1.98
No. 4 - 40UNC	G5	2.55
No. 6 - 32UNC	G5	3.14

*Recommended bored hole sizes shown above aim at 90% percentage of thread engagement, and are decided by paying attention to tap breakage possibility based on our test results.

*Material deformation can slightly change depending on material, hardness and shape of workpiece and cutting condition, and hole sizes should be changed accordingly. Please choose the suitable bored hole size.

17. Bar diameter for external threads (for cutting type dies)

Metric threads

unit: mm

Size	major diameter of external threads				bar diameter (ref.)	
	ISO		old JIS			
	*d*max	*d*min	*d*max	*d*min	ISO	old JIS
M1 ×0.25	1.000	0.933	0.985	0.940	0.95	0.95
M1 ×0.2	1.000	0.944	0.980	0.930	0.96	0.94
M1.1 ×0.25	1.100	1.033	1.100	1.033	1.05	1.05
M1.1 ×0.2	1.100	1.044	1.100	1.044	1.06	1.06
M1.2 ×0.25	1.200	1.133	1.185	1.140	1.15	1.15
M1.2 ×0.2	1.200	1.144	1.180	1.130	1.16	1.14
M1.4 ×0.3	1.400	1.325	1.380	1.320	1.34	1.34
M1.4 ×0.2	1.400	1.344	1.380	1.330	1.36	1.34
M1.6 ×0.35	1.581	1.496	1.581	1.496	1.52	1.52
M1.6 ×0.2	1.583	1.527	1.583	1.527	1.54	1.54
M1.7 ×0.35	1.681	1.596	1.680	1.610	1.62	1.63
M1.7 ×0.2	1.683	1.627	1.680	1.630	1.64	1.64
M1.8 ×0.35	1.781	1.696	1.781	1.696	1.72	1.72
M1.8 ×0.2	1.783	1.727	1.783	1.727	1.74	1.74
M2 ×0.4	1.981	1.886	1.980	1.890	1.91	1.91
M2 ×0.25	1.982	1.915	1.980	1.930	1.93	1.94
M2.2 ×0.45	2.180	2.080	2.180	2.080	2.11	2.11
M2.2 ×0.25	2.182	2.115	2.182	2.115	2.13	2.13
M2.3 ×0.4	2.281	2.186	2.280	2.190	2.21	2.21
M2.3 ×0.25	2.282	2.215	2.280	2.230	2.23	2.24
M2.5 ×0.45	2.480	2.380	2.480	2.380	2.41	2.41
M2.5 ×0.35	2.481	2.396	2.481	2.396	2.42	2.42
M2.6 ×0.45	2.580	2.480	2.580	2.480	2.51	2.51
M2.6 ×0.35	2.581	2.496	2.580	2.480	2.52	2.51
M3 ×0.5	2.980	2.874	2.980	2.874	2.90	2.90
M3 ×0.35	2.981	2.896	2.980	2.880	2.92	2.91
M3.5 ×0.6	3.479	3.354	3.470	3.360	3.39	3.39
M3.5 ×0.35	3.481	3.396	3.480	3.380	3.42	3.41
M4 ×0.7	3.978	3.838	3.978	3.838	3.87	3.87
M4 ×0.5	3.980	3.874	3.970	3.860	3.90	3.89
M4.5 ×0.75	4.478	4.338	4.470	4.340	4.37	4.37
M4.5 ×0.5	4.480	4.374	4.470	4.360	4.40	4.39
M5 ×0.8	4.976	4.826	4.976	4.826	4.86	4.86
M5 ×0.5	4.980	4.874	4.970	4.860	4.90	4.89
M5.5 ×0.5	5.480	5.374	5.470	5.360	5.40	5.39
M6 ×1	5.974	5.794	5.970	5.820	5.84	5.86
M6 ×0.75	5.978	5.838	5.970	5.850	5.87	5.88
M7 ×1	6.974	6.794	6.970	6.820	6.84	6.86
M7 ×0.75	6.978	6.838	6.970	6.850	6.87	6.88
M8 ×1.25	7.972	7.760	7.960	7.790	7.81	7.83
M8 ×1	7.974	7.794	7.970	7.830	7.84	7.87
M8 ×0.75	7.978	7.838	7.970	7.830	7.87	7.87
M9 ×1.25	8.972	8.760	8.960	8.790	8.81	8.83
M9 ×1	8.974	8.794	8.970	8.830	8.84	8.87
M9 ×0.75	8.978	8.838	8.970	8.830	8.87	8.87
M10 ×1.5	9.968	9.732	9.960	9.770	9.79	9.82
M10 ×1.25	9.972	9.760	9.960	9.810	9.81	9.85
M10 ×1	9.974	9.794	9.970	9.820	9.84	9.86
M10 ×0.75	9.978	9.838	9.978	9.838	9.87	9.87
M11 ×1.5	10.968	10.732	10.968	10.732	10.79	10.79
M11 ×1	10.974	10.794	10.970	10.820	10.84	10.86
M11 ×0.75	10.978	10.838	10.978	10.838	10.87	10.87
M12 ×1.75	11.966	11.701	11.950	11.760	11.8	11.8
M12 ×1.5	11.968	11.732	11.960	11.790	11.8	11.8
M12 ×1.25	11.972	11.760	11.972	11.760	11.8	11.8
M12 ×1	11.974	11.794	11.960	11.810	11.84	11.85
M14 ×2	13.962	13.682	13.950	13.740	13.8	13.8
M14 ×1.5	13.968	13.732	13.960	13.790	13.8	13.8
M14 ×1	13.974	13.794	13.960	13.810	13.84	13.85
M15 ×1.5	14.968	14.732	14.960	14.790	14.8	14.8
M15 ×1	14.974	14.794	14.960	14.810	14.84	14.85
M16 ×2	15.962	15.682	15.950	15.740	15.8	15.8
M16 ×1.5	15.968	15.732	15.960	15.790	15.8	15.8
M16 ×1	15.974	15.794	15.960	15.810	15.84	15.85
M17 ×1.5	16.968	16.732	16.968	16.732	16.8	16.8
M17 ×1	16.974	16.794	16.974	16.794	16.84	16.84
M18 ×2.5	17.958	17.623	17.950	17.710	17.7	17.8
M18 ×2	17.962	17.682	17.950	17.650	17.8	17.7
M18 ×1.5	17.968	17.732	17.950	17.780	17.8	17.8
M18 ×1	17.974	17.794	17.960	17.810	17.84	17.85
M20 ×2.5	19.958	19.623	19.950	19.710	19.7	19.8
M20 ×2	19.962	19.682	19.950	19.650	19.8	19.7
M20 ×1.5	19.968	19.732	19.950	19.780	19.8	19.8
M20 ×1	19.974	19.794	19.960	19.810	19.84	19.85
M22 ×2.5	21.958	21.623	21.950	21.710	21.7	21.8
M22 ×2	21.962	21.682	21.950	21.650	21.8	21.7
M22 ×1.5	21.968	21.732	21.950	21.780	21.8	21.8
M22 ×1	21.974	21.794	21.960	21.810	21.84	21.85
M24 ×3	23.952	23.577	23.940	23.680	23.7	23.7
M24 ×2	23.962	23.682	23.940	23.640	23.8	23.7
M24 ×1.5	23.968	23.732	23.950	23.780	23.8	23.8
M24 ×1	23.974	23.794	23.960	23.810	23.84	23.85
M25 ×2	24.962	24.682	24.940	24.640	24.8	24.7
M25 ×1.5	24.968	24.732	24.950	24.780	24.8	24.8
M25 ×1	24.974	24.794	24.960	24.810	24.84	24.85
M26 ×1.5	25.968	25.732	25.950	25.780	25.8	25.8
M27 ×3	26.952	26.577	26.940	26.680	26.7	26.7
M27 ×2	26.962	26.682	26.962	26.682	26.8	26.8
M27 ×1.5	26.968	26.732	26.950	26.780	26.8	26.8
M27 ×1	26.974	26.794	26.974	26.794	26.84	26.84
M28 ×2	27.962	27.682	27.940	27.640	27.8	27.7
M28 ×1.5	27.968	27.732	27.950	27.780	27.8	27.8
M28 ×1	27.974	27.794	27.960	27.810	27.84	27.85
M30 ×3.5	29.947	29.522	29.940	29.660	29.6	29.7
M30 ×3	29.952	29.577	29.952	29.577	29.7	29.7

ISO tolerance area Class 6g (M1.6 and larger) 6h (M1.4 and smaller) old JIS 2nd class
old JIS 2nd class

- ISO : from table 2 JIS B0209-2 and from table 1 JIS B0209-3
- Old JIS : from the tolerable limit size and the tolerance of metric coarse threads (for 2nd class external threads, JIS B 0209-1982 appendix 1, appendix 1 attachment 4. from the tolerable limit size and the tolerance of metric fine threads (for 2nd class external threads), JIS B 0211-1982 appendix, appendix attachment 4

unit: mm

Size	major diameter of external threads				bar diameter (ref.)	
	ISO		old JIS			
	*d*max	*d*min	*d*max	*d*min	ISO	old JIS
M30 ×2	29.962	29.682	29.940	29.640	29.8	29.7
M30 ×1.5	29.968	29.732	29.950	29.780	29.8	29.8
M30 ×1	29.974	29.794	29.960	29.810	29.84	29.85
M32 ×2	31.962	31.682	31.940	31.640	31.8	31.7
M32 ×1.5	31.968	31.732	31.950	31.780	31.8	31.8
M33 ×3.5	32.947	32.522	32.940	32.660	32.6	32.7
M33 ×3	32.952	32.577	32.952	32.577	32.7	32.7
M33 ×2	32.962	32.682	32.962	32.682	32.8	32.8
M33 ×1.5	32.968	32.732	32.950	32.780	32.8	32.8
M35 ×1.5	34.968	34.732	34.950	34.780	34.8	34.8
M36 ×4	35.940	35.465	35.930	35.630	35.6	35.7
M36 ×3	35.952	35.577	35.952	35.577	35.7	35.7
M36 ×2	35.962	35.682	35.940	35.640	35.8	35.7
M36 ×1.5	35.968	35.732	35.950	35.780	35.8	35.8
M38 ×1.5	37.968	37.732	37.950	37.780	37.8	37.8
M39 ×4	38.940	38.465	38.930	38.630	38.6	38.7
M39 ×3	38.952	38.577	38.952	38.577	38.7	38.7
M39 ×2	38.962	38.682	38.962	38.682	38.8	38.8
M39 ×1.5	38.968	38.732	38.968	38.732	38.8	38.8
M40 ×3	39.952	39.577	39.952	39.577	39.7	39.7
M40 ×2	39.962	39.682	39.940	39.640	39.8	39.7
M40 ×1.5	39.968	39.732	39.950	39.780	39.8	39.8
M42 ×4.5	41.937	41.437	41.930	41.610	41.6	41.7
M42 ×4	41.940	41.465	41.940	41.465	41.6	41.6
M42 ×3	41.952	41.577	41.952	41.577	41.7	41.7
M42 ×2	41.962	41.682	41.940	41.640	41.8	41.7
M42 ×1.5	41.968	41.732	41.950	41.780	41.8	41.8
M45 ×4.5	44.937	44.437	44.930	44.610	44.6	44.7
M45 ×4	44.940	44.465	44.940	44.465	44.6	44.6
M45 ×3	44.952	44.577	44.952	44.577	44.7	44.7
M45 ×2	44.962	44.682	44.940	44.640	44.8	44.7
M45 ×1.5	44.968	44.732	44.950	44.780	44.8	44.8
M48 ×5	47.929	47.399	47.930	47.590	47.5	47.7
M48 ×4	47.940	47.465	47.940	47.465	47.6	47.6
M48 ×3	47.952	47.577	47.952	47.577	47.7	47.7
M48 ×2	47.962	47.682	47.940	47.640	47.8	47.7
M48 ×1.5	47.968	47.732	47.950	47.780	47.8	47.8

Unified threads (for 2A class)

Unit : mm

size	major diameter of external threads		bar diameter (ref.)
	*d*max	*d*min	
No.0-80UNF	1.511	1.431	1.45
No.1-64UNC	1.838	1.743	1.77
No.1-72UNF	1.838	1.751	1.77
No.2-56UNC	2.169	2.066	2.09
No.2-64UNF	2.169	2.073	2.10
No.3-48UNC	2.496	2.383	2.41
No.3-56UNF	2.496	2.393	2.42
No.4-40UNC	2.824	2.695	2.73
No.4-48UNF	2.827	2.713	2.74
No.5-40UNC	3.154	3.026	3.06
No.5-44UNF	3.157	3.036	3.07
No.6-32UNC	3.484	3.333	3.37
No.6-40UNF	3.484	3.356	3.39
No.8-32UNC	4.142	3.991	4.03
No.8-36UNF	4.145	4.006	4.04
No.10-24UNC	4.800	4.618	4.66
No.10-32UNF	4.803	4.651	4.69
No.12-24UNC	5.461	5.279	5.32
No.12-28UNF	5.461	5.296	5.34
1/4-20UNC	6.322	6.117	6.17
1/4-28UNF	6.324	6.160	6.20
5/16-18UNC	7.907	7.687	7.74
5/16-24UNF	7.909	7.727	7.77
3/8-16UNC	9.491	9.254	9.31
3/8-24UNF	9.497	9.315	9.36
7/16-14UNC	11.076	10.816	10.88
7/16-20UNF	11.079	10.874	10.93
1/2-13UNC	12.611	12.386	12.4
1/2-20UNF	12.666	12.462	12.5
9/16-12UNC	14.246	13.958	14.0
9/16-18UNF	14.251	14.031	14.1
5/8-11UNC	15.834	15.528	15.6
5/8-18UNF	15.839	15.619	15.7
3/4-10UNC	19.004	18.677	18.8
3/4-16UNF	19.011	18.774	18.8
7/8-9UNC	22.176	21.824	21.9
7/8-14UNF	22.184	21.923	22.0
1-8UNC	25.349	24.969	25.1
1-12UNF	25.354	25.065	25.1
1 1/8-7UNC	28.519	28.103	28.2
1 1/8-12UNF	28.529	28.240	28.3
1 1/4-7UNC	31.694	31.278	31.4
1 1/4-12UNF	31.704	31.415	31.5
1 3/8-6UNC	34.864	34.402	34.5
1 3/8-12UNF	34.876	34.588	34.7
1 1/2-6UNC	38.039	37.577	37.7
1 1/2-12UNF	38.051	37.763	37.8
1 3/4-5UNC	44.381	43.861	44.0
2-4.5UNC	50.726	50.168	50.3

· from table 4 JIS B 0210 and table 4 JIS B 0212

17. Bar diameter for external threads (for cutting type dies)

■Sewing machine screw threads (for 2nd class)

Unit : mm

Size	major diameter of external threads		bar diameter (ref.)
	*d*max	*d*min	
1/16 SM 80	1.588	1.518	1.54
5/64 SM 64	1.984	1.904	1.92
3/32 SM 56	2.381	2.286	2.31
3/32 SM 100	2.381	2.306	2.32
1/8 SM 40	3.175	3.045	3.08
1/8 SM 44	3.175	3.055	3.09
9/64 SM 40	3.572	3.442	3.47
11/64 SM 40	4.366	4.236	4.27
3/16 SM 24	4.762	4.602	4.64
3/16 SM 28	4.762	4.602	4.64
3/16 SM 32	4.762	4.602	4.64
7/32 SM 32	5.556	5.396	5.44
15/64 SM 28	5.953	5.773	5.82
1/4 SM 24	6.350	6.170	6.22
1/4 SM 40	6.350	6.220	6.25

・from table 2 JIS B 0226 (void in 2001)

■Taper pipe threads (PT, R)

Unit : mm

Size	bar diameter (ref.)	
	taper (dia of thread end)	Straight
PT 1/16 - 28	7.5	7.9
PT 1/8 - 28	9.5	9.9
PT 1/4 - 19	12.8	13.4
PT 3/8 - 19	16.3	16.9
PT 1/2 - 14	20.5	21.3
PT 3/4 - 14	25.9	26.8
PT 1 - 11	32.7	33.7
PT 1 1/4 - 11	41.2	42.3
PT 1 1/2 - 11	47.1	48.2
PT 2 - 11	58.7	60.1

■Parallel pipe threads (PF · G)(for A class)

Unit : mm

Size	major diameter of external threads		bar diameter (ref.)
	*d*max	*d*min	
PF 1/16 - 28	7.723	7.509	7.56
PF 1/8 - 28	9.728	9.514	9.57
PF 1/4 - 19	13.157	12.907	13.0
PF 3/8 - 19	16.662	16.412	16.5
PF 1/2 - 14	20.955	20.671	20.7
PF 5/8 - 14	22.911	22.627	22.7
PF 3/4 - 14	26.441	26.157	26.2
PF 7/8 - 14	30.201	29.917	30.0
PF 1 - 11	33.249	32.889	33.0
PF 1 1/8 - 11	37.897	37.537	37.6
PF 1 1/4 - 11	41.910	41.550	41.6
PF 1 1/2 - 11	47.803	47.443	47.5
PF 2 - 11	59.614	59.254	59.3

18. Bar diameter of external threads (for thread rolling dies)

○NRS-D recommendation for bar diameter for metric external threads

Unit : mm

size	recommended bar diameter	
	Max.	Min.
M3×0.5	2.64	2.62
M4×0.7	3.54	3.52
M5×0.8	4.40	4.38
M6×1	5.30	5.28
M8×1.25	7.10	7.07

○RS-D recommendation for bar diameter for metric external threads

Unit : mm

size	recommended bar diameter	
	Max.	Min.
M1×0.25	0.808	0.785
M1.1×0.25	0.918	0.891
M1.2×0.25	1.007	0.984
M1.4×0.3	1.168	1.142
M1.6×0.35	1.332	1.300
M1.7×0.35	1.432	1.401
M1.8×0.35	1.530	1.498
M2×0.4	1.699	1.669
M2×0.25	1.796	1.771
M2.2×0.45	1.863	1.827

size	recommended bar diameter	
	Max.	Min.
M2.3×0.4	1.998	1.968
M2.3×0.25	2.096	2.071
M2.5×0.45	2.162	2.126
M2.5×0.35	2.228	2.196
M2.6×0.45	2.262	2.226
M2.6×0.35	2.318	2.278
M3×0.5	2.627	2.589
M3×0.35	2.718	2.677
M4×0.5	3.607	3.561
M5×0.5	4.606	4.560

○MS-RS-D recommendation for bar diameter for miniature external threads

Unit : mm

size	recommended bar diameter	
	Max.	Min.
S0.5×0.125	0.410	0.396
S0.6×0.15	0.494	0.479
S0.7×0.175	0.575	0.559
S0.8×0.2	0.658	0.640
S0.9×0.225	0.741	0.720

19. Surface Treatment

The best surface treatment is applied to each tap depending on the tapping purpose.
Characteristics and effectiveness of surface treatment are introduced at next section.

■Oxidizing

○This treatment was processed by using HOMO furnace being made by LEED AND NORTHUP company USA in 1938, and it is called HOMO treatment. This treatment is also called vapor treatment and steam treatment. Through this treatment, Fe_3O_4 layer of blue black color is produced over the tool surface.

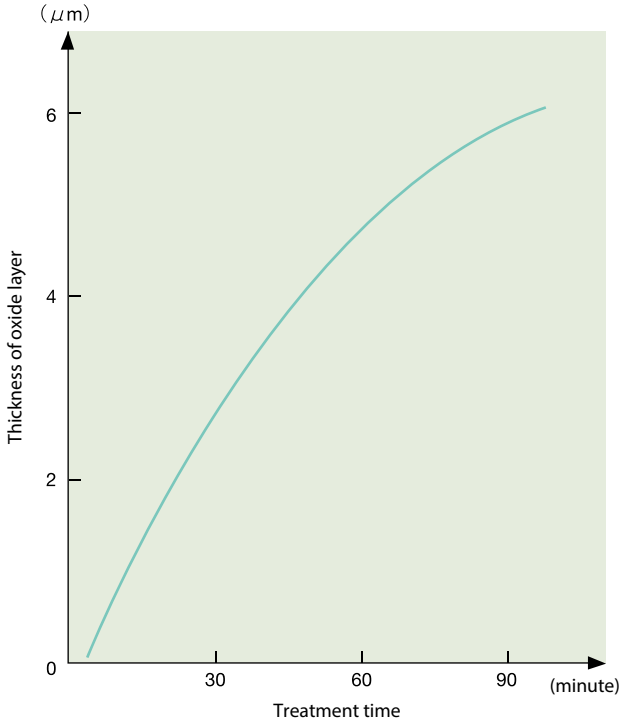
○Oxidization treatment produces porous layer on tool's surface. This porous layer works as oil pocket to reduce friction, to avoid welding and to improve the surface roughness of internal screw. Moreover, longer tool life is expected because the treatment reduces the remaining stress of HSS tools.

○This treatment does not increase the hardness on tool surface. Using the furnace of YAMAWA original design and choosing the proper treatment time, we have marked good result of oxidizing for YAMAWA HSS tools.

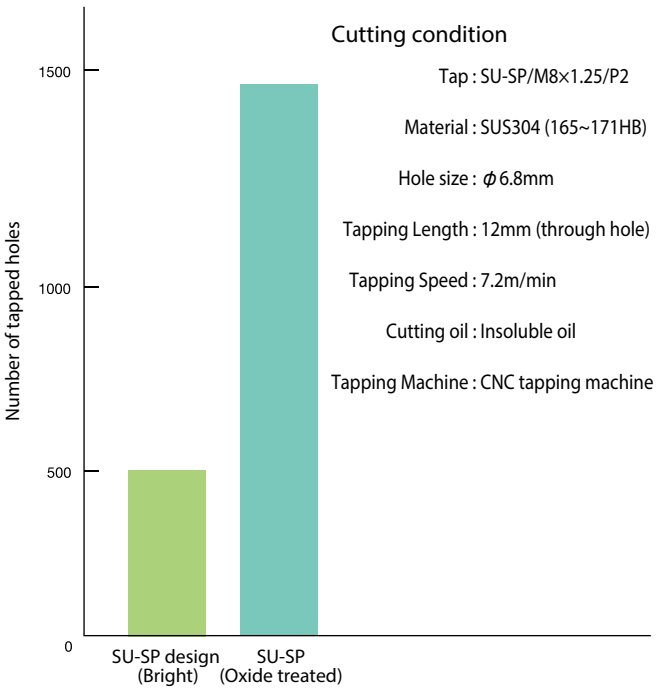
○Stainless steel and low carbon steel are the materials that are easy to get welding. We are applying this treatment to the special purpose taps for these materials to get good result. Further due to the reduction of friction force, this treatment has good result for wide range of steel type material.

○We combine oxidizing with nitriding for the taps designed for thermal refined steels of high carbon steels and alloy steels. This double treatment wins good reputation of the market.

■Thickness of oxide layer and the time of treatment



■Comparison between bright and oxide treated



■Nitriding

○In this treatment, we have Nitrogen and Carbon soak into the surface of HSS tools, and react with chemical of HSS material to produce hard nitride. There are 3 methods in the treatment, composition gas method, salt bath nitride method and ion nitride method.

○Salt bath nitride treatment is shifted into gas nitride treatment method because of cyanic environmental pollution.

○The temperature of treatment is 500 to 550 degree. Hardness and depth of the treatment can be controlled by active nitrogen concentration and reaction time.

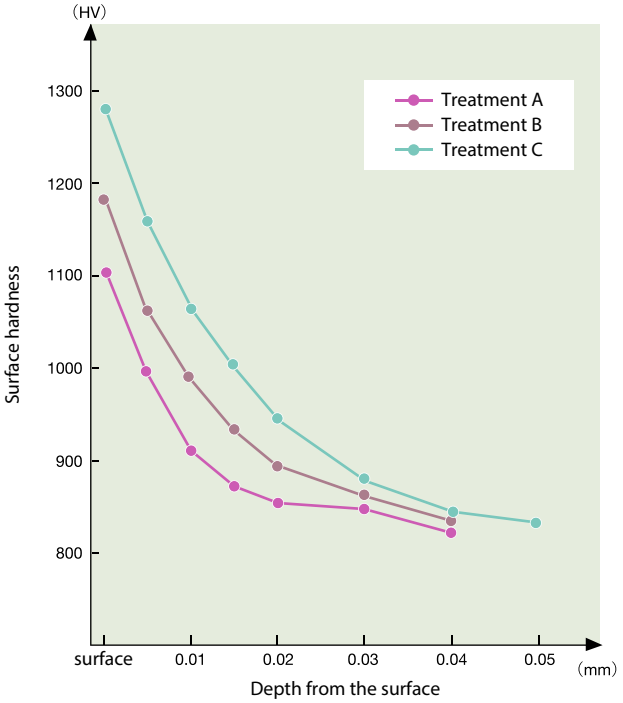
○The high hardness of tool surface minimizes chemical attraction. Result is less welding and friction reduction. Great improvement is expected in tool's performance.

○We have found out the best combinations of hardness and toughness through our treatment technology

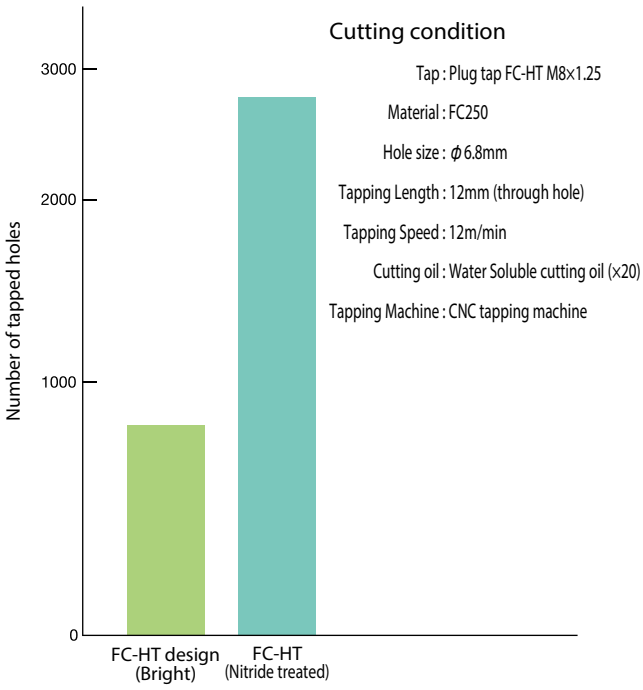
○The nitride treatment will be widely applicable to the taps for such workpiece materials as gray cast irons, special cast irons, aluminum diecastings with higher silicone content, copper alloys, and resinoids (plastics). These materials produce small segmental chips and are very abrasive.

○We combine nitrogen and oxidizing for comparatively sticky material such as thermal refined steels of high carbon steel and alloy steel. This double treatment improves the chipping resistance and have won good reputation.

■Depth and hardness of Nitride Surface Treatment



■Comparison between bright and nitride treated



■Hard coating

High speed cutting and hard-to-machine material cutting are the recent technology. To meet this tendency, the hard layer coating by vapor deposition over tool's surface has become popular. There are two coating methods, CVD and PVD. PVD is mainly used for tap.

■Physical Vapor Deposition

○Inside of the container of high vacuum, are vapor deposition materials heated. And we vapor-deposit particles ionized by electric discharge on tool's surface.

○Due to its low reaction temperature (lower than 500°C), PVD makes little change in shape and hardness of HSS tools.

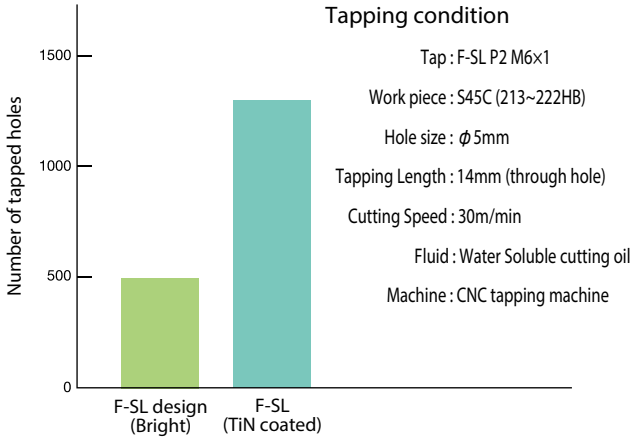
○We have adopted iron plating method, and are coating thin layer (1-4um) over our HSS and carbide tools. The layer processed by this method is very high in its adherence and its wear resistance.

■The features and classification of coating

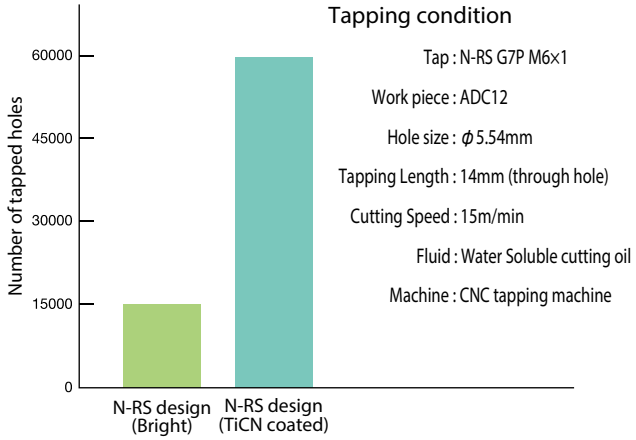
Classification / Features	Titanium nitride (TiN)	Titanium carbonitride (TiCN)	Titanium nitride aluminum (TiAlN)	Chromium nitride (CrN)
Vickers Hardness	2000～2400	3000～3500	2300～2700	1800～2200
Wear resistance	Good	Excellent	Excellent	Normal
Welding resistance	Good	Good	Good	Excellent
Heat resistance	Good	Normal	Excellent	Excellent
Acid resistance	Good	Normal	Excellent	Good
Slippery	Good	Excellent	Good	Excellent
Color	Gold	Blue Dray Violet	Violet	Silver
Workpiece materials	Carbon Steels Aluminum forging	Carbon Steels Hard Steels Stainless Steels Aluminum forging Cast Irons Brass・Bronze	Stainless Steels Cast Irons	Copper

Note: Evaluation (tri-level) of characteristic features is just comparative of these four coatings, TiN, TiCN, TiAlN, and CrN, in the table. These coatings have great advantages of wear resistance, welding resistance, and friction reduction. The values of vickers hardness are also higher than the heat treatment or nitriding of HSS cutting tools from the table.

■Comparison between bright and TiN coated



■Comparison between bright and TiCN coated



Think threads with YAMAWA

20. Carbide Taps

Technological advances in CNC machines and machining centers, and machining automation have helped improve the overall tapping process. YAMAWA was quick to respond to evolving customer needs resulting from technological innovations.
We can now recommend carbide taps, which provide tremendous improvements in mass-production and in reducing costs. It is estimated that carbide taps have 50 times more durability than HSS taps in tapping, when used properly. YAMAWA engineering believes the best carbide materials suitable for taps are ultramicro grain tungsten carbide, or ultrafine grain carbide made of high cobalt.

■Features of Carbide Taps

(1)Excellent durability with high toughness is obtainable.
(2)High anti-friction features are provided by the material's high hardness and comparatively high toughness, which ultimately results in a longer tool life.
(3)Specially designed cutting angle and other dimensional features produce the internal threads with high tolerance accuracy and consistency.
(4)Under certain tapping condition, YAMAWA carbide taps can be used even for tapping hard-to-machine materials.

■Points to note during tapping with Carbide taps:

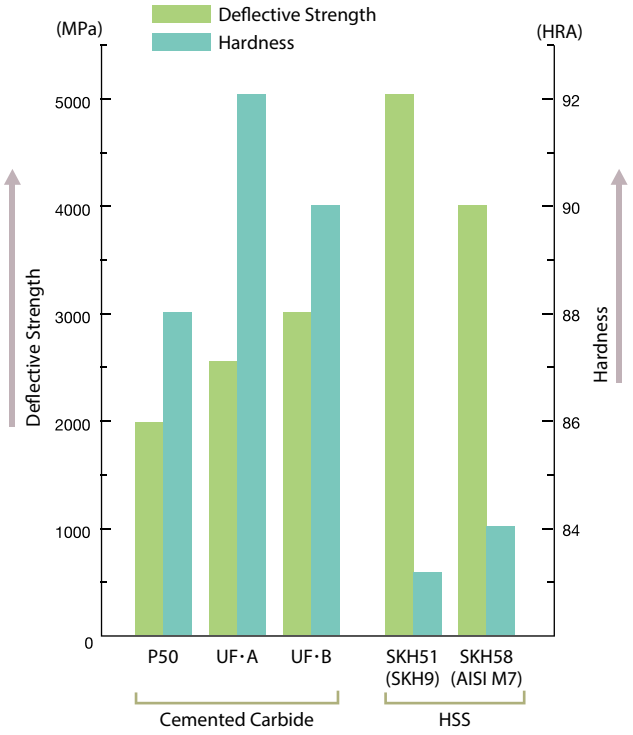
(1) Machine vibration, or run-out, can lead to Carbide tap chipping and premature failure. Tapping vibrations need to be kept to a minimum.
(2) Tap holder should be a rigid type for a Carbide tap. A holder attachment with axial float, or radial float tends to promote Carbide tap breakage and chipping.
(3) The hole to be tapped must be located correctly and on center ; any centering off or non-straight drilled hole tends to cause Carbide tap breakage due to deflection. Select correct hole depth with respect to tapping length (for blind hole only). It is especially important to prevent tap damage from chip packing and bottom thrusting in blind hole tapping.
(4) Cutting lubricants - select grade of lubricant. Improper flow of coolant, or lack of sufficient amount of lubricant, or cooling can increase the likelihood of Carbide tap chipping due to work material welding. Caution must be taken during dry machining to prevent chip welding to the tap.
(5) Work pieces - we provide Carbide taps with increased toughness, but Carbide taps are inferior to High Speed Steel (HSS) in the area of toughness. As a matter of fact Carbide taps have limited application due to this difference in toughness to HSS.

■Commonly used materials and cutting conditions.

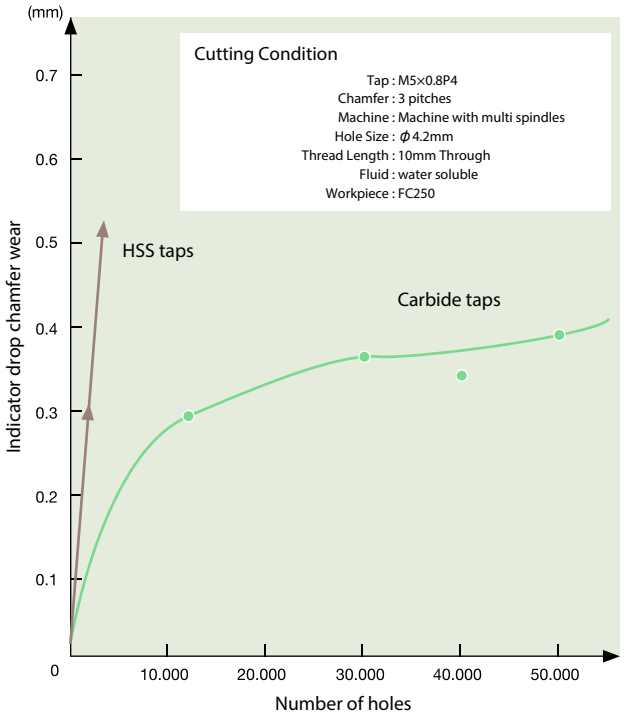
Work Materials		Cutting Speed (m/min)	Cutting Fluid (General recommendation)
Cast Iron	Ordinary	15～25	Dry, light oil, water soluble oil
	Nodular Graphite	10～20	Light oil, water soluble oil
	Malleable	10～20	Water soluble oil
Aluminum		20～40	Light oil, water soluble oil
Copper		15～30	Light oil, water soluble oil
Copper Alloy	Brass	20～30	Light oil, water soluble oil
	Phosphor Bronze	15～30	Light oil, water soluble oil
Die-Cast	Aluminum Alloy	15～25	Mixed oil of lard oil and kerosene
	Zinc Alloy	12～20	Mixed oil of lard oil and kerosene
Plastic	Thermosetting	15～25	Water soluble oil, air
	Thermo Plastic	15～25	Water soluble oil, air
Hard Rubber		15～30	Dry, air

Note : The table shows only general conditions. As for actual cutting operation, please consider the following points : (1) Machine Capacity, (2) Work piece(s), (3) Work Shape, (4) Setup (5) other factors.

■Toughness and Hardness of Cemented Carbide and HSS



■Chamfer wear and number of holes of Carbide taps and HSS taps



■Carbide Tap examples and comparison of tool life

Classification \ Size		M2×0.4	M8×1.25	M6×1	M8×1.25	M10×1.25
Workpiece	Material	Plastic with glass fibre	ADC12	FC250	FC250	FC250
	Part's name	Electric Parts	Car Parts	Electric Parts	Car Parts	Car Parts
Thread Condition	Tapping Hole. condition	ϕ1.6 Through	ϕ6.7 Blind	ϕ5.0 Blind	ϕ6.7 Blind	ϕ8.7 Blind
	Tapping Length	4mm	18mm	10mm	16mm	18mm
Condition of Use	Machine	Special Machine	Special Machine	4 spindle Machine	Multi Spindle Machine	Special Machine
	Cutting Speed	6.3m/min	8.5m/min	8m/min	6m/min	5.7m/min
	Fluid	Dry	Water soluble	Water soluble	Water soluble	Water soluble
Number of Holes	Carbide Tap	10.000	75.400	53.000	18.860	38.500
	HSS Tap	200	1.000	1.000	300	500
	Comparison of Life	50	75.4	53	62.9	77

Note : In all situations, HSS taps being used are standard oues.
Carbide taps, when used properly, bring out a long tool life.
These datum have come from end users of carbide taps.

Think threads with YAMAWA

21. Taps for Pipe Threads

1. JIS Pipe Taps

The pipe thread standard (JIS B 0202,0203) was revised in 1982 to meet ISO standard. In the same year, JIS B 4445 (straight pipe thread taps) and JIS B 4446 (taper pipe thread taps) were also revised.

○A part of the pipe thread standard was revised in 1966 to meet ISO, but in the 1982 revision, the ISO standard was defined in the main book of JIS and the old 1966 standard was defined in JIS Appendix. For Pipe Threads specified in the main book of JIS and JIS Appendix, thread symbols are different but the nominal size 1/8 to 6 inch are same. In the 1998 revision, the contents of the main book of JIS and JIS Appendix are not changed.

○ISO tap standard for pipe threads is different from the JIS tap standard in style, size and thread limit. Like the pipe thread standard, in JIS tap standards for pipe threads, style, size and thread limits of ISO standard are adopted in the main book of JIS and those of old JIS standard are in the JIS Appendix. For ISO standard (style and size), please refer to the next page.

○Thread limits of Rp and G taps are the same as the ISO standard. The thread limit of Rc taps is the same as the JIS class 2 of PT taps shown in JIS Appendix because Rc is not specified in the ISO standard. Therefore, both Rc taps and PT taps can be used interchangeably. For the relation between thread limit of internal threads and tap thread limit, please refer to the table below.

○Pipe Tap standard was revised in 1987. And tap designations shown in JIS Appendix were changed to PF taps for Parallel Pipe Thread, PT taps for Taper Pipe Thread, and PS taps for Parallel Pipe Thread.

■Symbol of Pipe threads

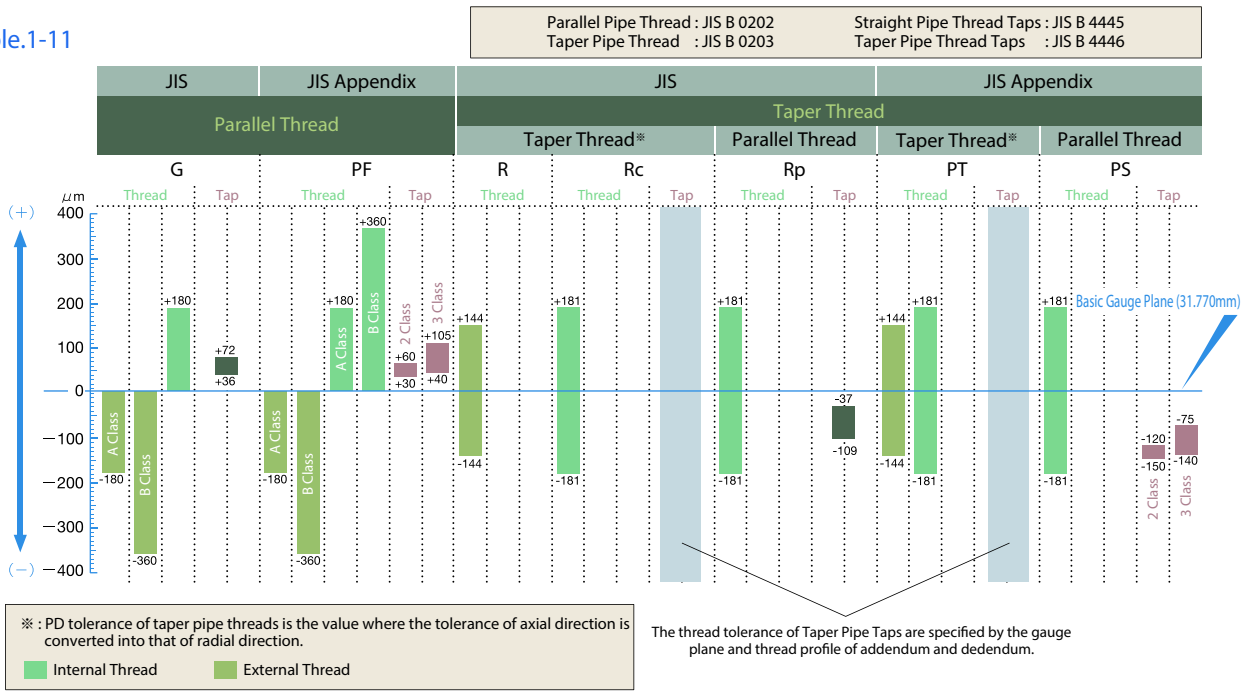
Type	Classification		Standard	JIS (ISO)	JIS Appendix
Taper Thread	Taper Thread	Internal Thread	JIS B 0203—1982	Rc	PT
		External Thread		R	PT
	Parallel Thread	Internal Thread		Rp	PS
		External Thread		—	—
Parallel Thread	Parallel Thread	Internal Thread	JIS B 0202—1982	G	PF, A class
				—	PF, B class
		External Thread		G, A class	PF, A class
				G, B class	PF, B class

■Relation between classification/engagement of pipe threads and taps

Kind of thread	Classification	Main usage	type		Engagement	Pipe taps
Pipe thread	Taper pipe threads	In connection of pips, pipe parts and fluid parts they are used mainly for the purpose of pressure type joints.	Internal threads	Parallel PS (Rp)	Parallel internal thread	PS
				Taper PT (Rc)	Basic diameter position; Taper internal thread; Taper internal thread	PT
			External threads	Taper PT (R)	a, f; Taper external thread	S-PT
	Parallel pipe threads	In connection of pipes, pipe parts and fluid parts, they are used mainly for the purpose of mechanical type joints.	Internal threads	PF (G)	Parallel internal thread	PF
			External threads	PF (G)	Parallel external thread	

■Relation of pitch diameter tolerance zone between thread and tap

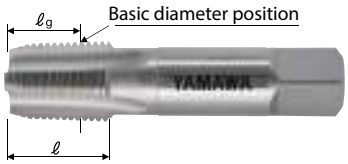
Example.1-11



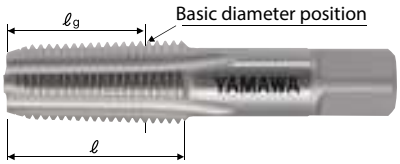
Think threads with YAMAWA

■Comparison of the thread limit of taper pipe tap

Rc

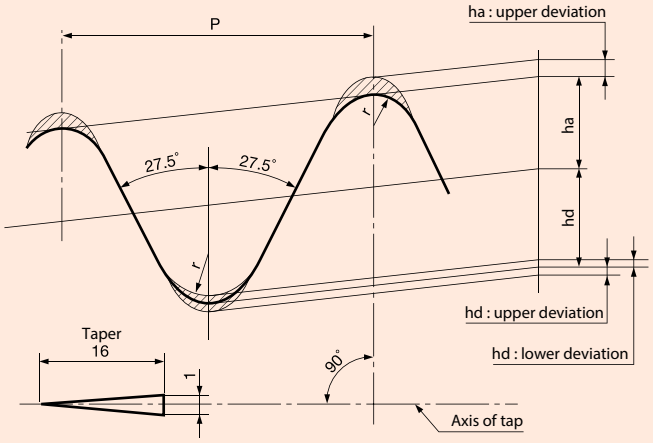


PT



S-PT

P = 25.4/n
n = Number of threads



Unit : mm

Size	Basic major Dia. of Gauge Plane	Number of Threads※	ISO (Rc)		Appendix (PT)				Thread Limit			
					PT Thread		S-PT Thread		ha		hd	
			Thread Length ℓ	Basic Diameter Position ℓg	Thread Length ℓ	Basic Diameter Position ℓg	Thread Length ℓ	Basic Diameter Position ℓg	Basic Size	Tolerance (μm)	Basic Size	Tolerance (μm)
1/16	7.723	28	14	10.1	—	—	—	—	0.291	0～+30	0.291	±15
1/8	9.728	28	15	10.1	19	13	16.5	10.5	0.291	0～+30	0.291	±15
1/4	13.157	19	19	15	28	21	19.5	12.5	0.428	0～+40	0.428	±20
3/8	16.662	19	21	15.4	28	21	21	14	0.428	0～+40	0.428	±20
1/2	20.955	14	26	20.5	35	25	27	17	0.581	0～+50	0.581	±25
3/4	26.441	14	28	21.8	35	25	29	19	0.581	0～+50	0.581	±25
1	33.249	11	33	26	45	32	35	22	0.740	0～+60	0.740	±30
1 1/4	41.910	11	36	28.3	45	32	37.5	24.5	0.740	0～+60	0.740	±30
1 1/2	47.803	11	37	28.3	45	32	38.5	25.5	0.740	0～+60	0.740	±30
2	59.614	11	41	32.7	50	35	42.5	27.5	0.740	0～+60	0.740	±30
2 1/2	75.184	11	45	37.1	—	—	—	—	0.740	0～+60	0.740	±30
3	87.884	11	48	40.2	—	—	—	—	0.740	0～+70	0.740	±35
4	113.030	11	53	46.2	—	—	—	—	0.740	0～+70	0.740	±35

Note : JIS standard has 2 types of Taper pipe thread, PT and S-PT taps. ISO standard has one type of Taper pipe thread Rc.

※ : Threads per inch

■Comparison of the thread limit for straight pipe taps

Unit : μm

Size	Number of Threads※	Pitch (mm)	The Thread Limit of ISO (G)								The Thread Limit of Appendix of PF							
			Major Dia		Pitch Dia				Minor Dia		Major Dia		Pitch Dia				Minor Dia	
			Basic Size (mm)	LT (+)	Basic Size (mm)	UT (+)	LT (+)	Tolerance	Basic Size (mm)	UT	Basic Size (mm)	LT (+)	Basic Size (mm)	UT (+)	LT (+)	Tolerance	Basic Size (mm)	UT (+)
1/16	28	0.9071	7.723	32	7.142	43	21	22	6.561	Not Specified	—		—				—	
1/8	28	0.9071	9.728	32	9.147	43	21	22	8.566		9.728	65	9.147	40	20	20	8.566	40
1/4	19	1.3368	13.157	37	12.301	50	25	25	11.445		13.157	90	12.301	50	25	25	11.445	50
3/8	19	1.3368	16.662	37	15.806	50	25	25	14.950		16.662	90	15.806	50	25	25	14.950	50
1/2	14	1.8143	20.955	43	19.793	57	28	29	18.631		20.955	115	19.793	55	25	30	18.631	55
5/8	14	1.8143	22.911	43	21.749	57	28	29	20.587		22.911	115	21.749	55	25	30	20.587	55
3/4	14	1.8143	26.441	43	25.279	57	28	29	24.117		26.441	115	25.279	55	25	30	24.117	55
7/8	14	1.8143	30.201	43	29.039	57	28	29	27.877		30.201	115	29.039	55	25	30	27.877	55
1	11	2.3091	33.249	54	31.770	72	36	36	30.291		33.249	145	31.770	60	30	30	30.291	60
1 1/8	11	2.3091	37.897	54	36.418	72	36	36	34.939		37.897	145	36.418	60	30	30	34.939	60
1 1/4	11	2.3091	41.910	54	40.431	72	36	36	38.952		41.910	145	40.431	65	30	35	38.952	65
1 1/2	11	2.3091	47.803	54	46.324	72	36	36	44.845		47.803	145	46.324	65	30	35	44.845	65
1 3/4	11	2.3091	53.746	54	52.267	72	36	36	50.788		53.746	145	52.267	65	30	35	50.788	65
2	11	2.3091	59.614	54	58.135	72	36	36	56.656		59.614	150	58.135	75	35	40	56.656	75
2 1/4	11	2.3091	65.710	65	64.231	87	43	44	62.752									
2 1/2	11	2.3091	75.184	65	73.705	87	43	44	72.226									
2 3/4	11	2.3091	81.534	65	80.055	87	43	44	78.576									
3	11	2.3091	87.884	65	86.405	87	43	44	84.926									
3 1/2	11	2.3091	100.330	65	98.851	87	43	44	97.372									
4	11	2.3091	113.030	65	111.551	87	43	44	110.072									

※ : Threads per inch
UT : The upper deviation
LT : The lower deviation

■Comparison of the thread limit of taper pipe taps

Unit : μm

Size	Number of Threads※	Pitch (mm)	The Thread Limit of ISO (Rp)								The Thread Limit of Appendix of PS									
			Major Dia		Pitch Dia				Minor Dia		Major Dia			Pitch Dia				Minor Dia		
			Basic Size (mm)	LT (–)	Basic Size (mm)	UT (–)	LT (–)	Tolerance	Basic Size (mm)	UT	Basic Size (mm)	UT	LT (–)	Basic Size (mm)	UT (–)	LT (–)	Tolerance	Basic Size (mm)	UT	LT (–)
1/16	28	0.9071	7.723	43	7.142	14	43	29	6.561	Not Specified	—			—				—		
1/8	28	0.9071	9.728	43	9.147	14	43	29	8.566		9.728	+10	50	9.147	30	50	20	8.566	+10	50
1/4	19	1.3368	13.157	63	12.301	21	63	42	11.445		13.157	+ 5	75	12.301	50	75	25	11.445	+ 5	75
3/8	19	1.3368	16.662	63	15.806	21	63	42	14.950		16.662	+ 5	75	15.806	50	75	25	14.950	+ 5	75
1/2	14	1.8143	20.955	86	19.793	29	86	57	18.631		20.955	- 25	115	19.793	85	115	30	18.631	- 25	115
3/4	14	1.8143	26.441	86	25.279	29	86	57	24.117		26.441	- 25	115	25.279	85	115	30	24.117	- 25	115
1	11	2.3091	33.249	109	31.770	37	109	72	30.291		33.249	- 50	150	31.770	120	150	30	30.291	- 50	150
1 1/4	11	2.3091	41.910	109	40.431	37	109	72	38.952		41.910	- 50	150	40.431	115	150	35	38.952	- 50	150
1 1/2	11	2.3091	47.803	109	46.324	37	109	72	44.845		47.803	- 50	150	46.324	115	150	35	44.845	- 50	150
2	11	2.3091	59.614	109	58.135	37	109	72	56.656		59.614	- 45	145	58.135	105	145	40	56.656	- 45	145
2 1/2	11	2.3091	75.184	130	73.705	43	130	87	72.226											
3	11	2.3091	87.884	130	86.405	43	130	87	84.926											
4	11	2.3091	113.030	130	111.551	43	130	87	110.072											

※ : Threads per inch
UT : The upper deviation
LT : The lower deviation

Think threads with YAMAWA

2. American Pipe Thread Taps

American standard pipe thread has various types. We show their symbols and engagement of threads as follows.

■Pair groups of external thread and internal thread.

Standard	Symbol	Internal Thread	Mating Thread	External Thread	Mating Thread
Pipe Threads, General Purpose (ANSI/ASME B1.20.1)	American Standard Taper Pipe Thread for General Use	NPT	NPT	NPT	NPT NPSC
	American Standard Straight Pipe Thread in Pipe Couplings	NPSC	NPT	—	—
	American Standard Taper Pipe Threads for Railing Joints	NPTR	NPTR	NPTR	NPTR
	American Standard Straight Pipe Thread for Free-Fitting Mechanical Joints for Fixtures	NPSM	NPSM	NPSM	NPSM
	American Standard Straight Pipe Thread for Loose-Fitting Mechanical Joints with Locknuts	NPSL	NPSL	NPSL	NPSL
	American Standard Straight Pipe Threads for Loose-Fitting Mechanical Joints for Hose Couplings	NPSH	NPSH	NPSH	NPSH
Dryseal Pipe Threads (ANSI B1.20.3)	Dryseal American Standard Taper Pipe Thread	NPTF	NPTF PTF-SAE-SHORT	NPTF	NPTF,NPSF,NPSI PTF-SAE-SHORT
	Dryseal SAE Short Taper Pipe Thread	PTF-SAE-SHORT	NPTF	PTF-SAE-SHORT	NPTF NPSI
	Dryseal American Standard Fuel Internal Straight Pipe Thread	NPSF	NPTF	—	—
	Dryseal American Standard Intermediate Internal Straight Pipe Thread	NPSI	NPTF PTF-SAE-SHORT	—	—

Note : These symbols correspond to the name of American pipe thread.

These threads are

(1) Thread angle is 60°

(2) Taper of Taper Thread is 3/4" per foot.

(3) Fundamental height of triangle : H=Height of triangle thread profile H=0.866025P

(4) The difference between American Standard Pipe Thread for general use and Dryseal American Standard Pipe

- Crests and roots truncation of thread is different.
- The length of engagement for pipe thread is different by types.
- With regard to standard, Dryseal American Standard Pipe Thread is available in right hand.

In accordance with ANSI B 94.9, 4 types of pipe thread are specified in American Pipe Thread Standard.

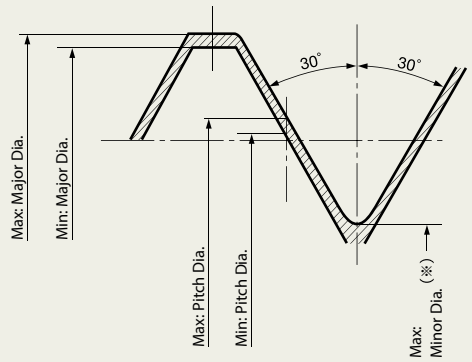
Please refer to next page about the relation between taps and threads and about thread tolerance.

○Classification of American pipe thread taps

Designation	Symbol	Class	Material	Threads to be cut	Range
Straight Pipe Thread Tap	NPS	Ground Thread	HSS	NPSC,NPSM	1/8～1
Dryseal Straight Pipe Thread Tap	NPSF	Ground Thread	HSS	NPSF	1/8～3/4
Taper Pipe Thread Tap	NPT	Ground Thread	HSS	NPT	1/16～2
Dryseal Taper Pipe Thread Tap	NPTF	Ground Thread	HSS	NPTF	1/16～2

■Thread limit of American Pipe Thread Taps

○Straight pipe thread taps for (NPS) G Class



Unit : mm

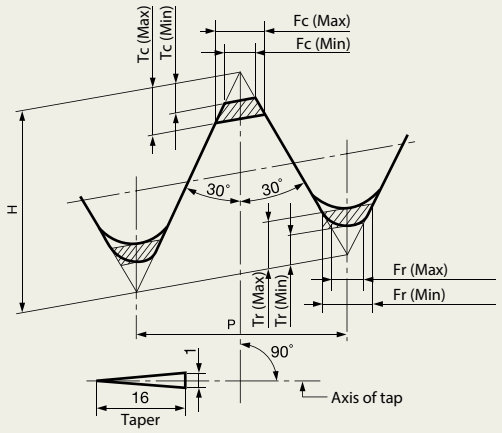
Size	Major diameter			Pitch diameter			Minor diameter※
	Max.	Min.	Tolerance	Max.	Min.	Tolerance	Max.
NPS 1/8 - 27	10.241	10.216	0.025	9.527	9.515	0.012	M−0.653
NPS 1/4 - 18	13.606	13.582	0.024	12.542	12.530	0.012	M−1.019
NPS 3/8 - 18	17.045	17.021	0.024	15.981	15.969	0.012	M−1.019
NPS 1/2 - 14	21.226	21.202	0.024	19.840	19.828	0.012	M−1.334
NPS 3/4 - 14	26.560	26.536	0.024	25.186	25.162	0.024	M−1.334
NPS 1 - 11.5	33.215	33.178	0.037	31.526	31.502	0.024	M−1.644

※ : Above dimensions change depending on actually measured.

○Taper pipe thread taps (NPT) G Class

p = 25.4/n
n = Number of threads

H = 0.866025P



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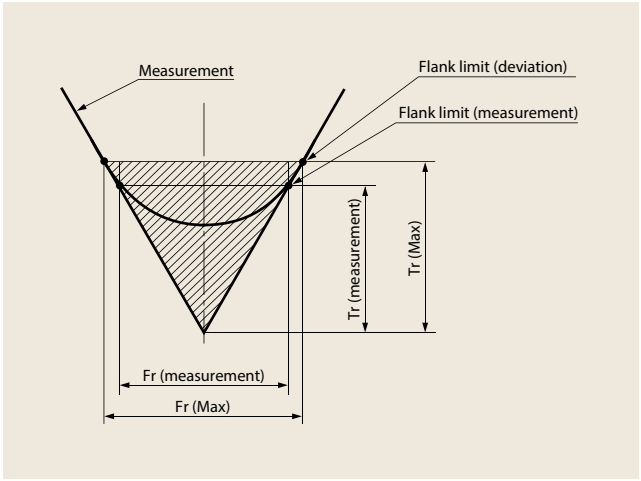
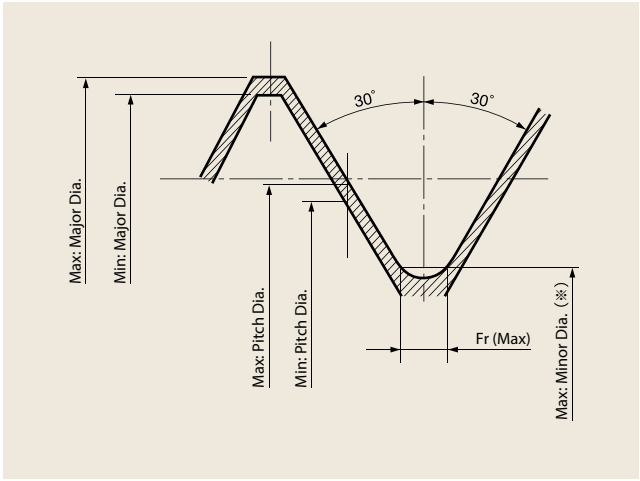
Unit : μm

Size	Crest				Root			
	Tc		Fc		Tr		Fr	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
NPT 1/16 - 27	68	32	78	37	80	32	92	37
NPT 1/8 - 27	68	32	78	37	80	32	92	37
NPT 1/4 - 18	92	48	106	56	101	48	116	56
NPT 3/8 - 18	92	48	106	56	101	48	116	56
NPT 1/2 - 14	106	61	122	71	118	61	136	71
NPT 3/4 - 14	106	61	122	71	118	61	136	71
NPT 1 - 11.5	120	74	138	85	134	74	154	85
NPT 1 1/4-11.5	120	74	138	85	134	74	154	85
NPT 1 1/2-11.5	120	74	138	85	134	74	154	85
NPT 2 - 11.5	120	74	138	85	134	74	154	85
NPT 2 1/2 - 8	147	105	169	122	173	105	199	122
NPT 3 - 8	147	105	169	122	173	105	199	122

■Thread limit of Dryseal American Pipe Thread Taps

○Straight pipe thread taps (NPSF) G Class



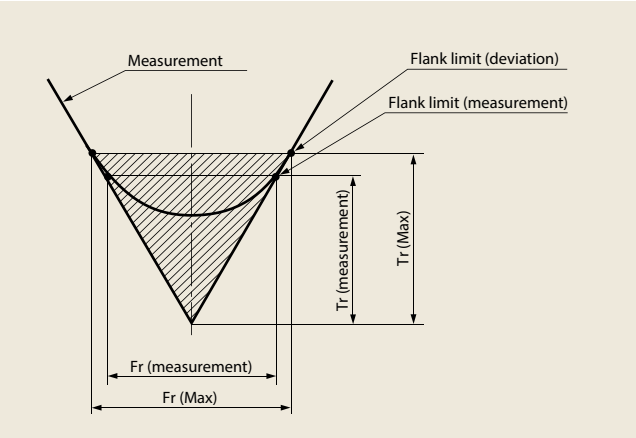


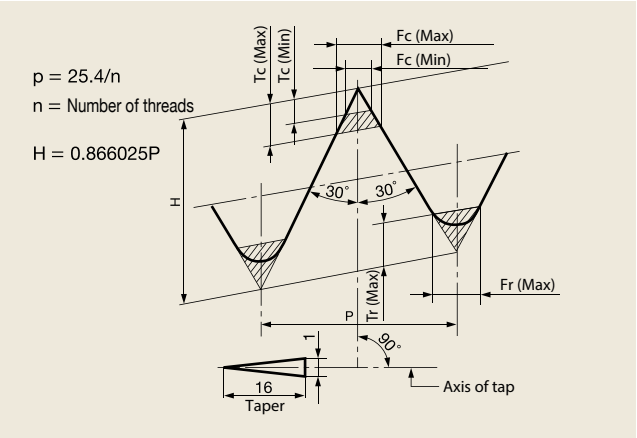
Unit : mm

Size	Major diameter			Pitch diameter			Minor diameter※		
	Max.	Min.	Tolerance	Max .	Min.	Tolerance	Max.	Fr (Max)	Tr (Max)
NPSF 1/16 - 27	7.665	7.641	0.024	7.053	7.041	0.012	M−0.638	0.101	0.086
NPSF 1/8 - 27	10.012	9.988	0.024	9.400	9.388	0.012	M−0.638	0.101	0.086
NPSF 1/4 - 18	13.332	13.308	0.024	12.354	12.342	0.012	M−1.004	0.127	0.109
NPSF 3/8 - 18	16.771	16.747	0.024	15.793	15.781	0.012	M−1.004	0.127	0.109
NPSF 1/2 - 14	20.929	20.905	0.024	19.601	19.589	0.012	M−1.354	0.127	0.109
NPSF 3/4 - 14	26.276	26.251	0.025	24.947	24.936	0.011	M−1.354	0.127	0.109

※ : Above dimensions change depending on actually measured.

○Taper pipe thread taps (NPTF) G Class





Unit : μm

Size	Crest				Root	
	Tc		Fc		Tr	Fr
	Max.	Min.	Max.	Min.	Max.	Min.
NPTF 1/16 - 27	110	89	127	103	86	101
NPTF 1/8 - 27	110	89	127	103	86	101
NPTF 1/4 - 18	132	110	152	127	109	125
NPTF 3/8 - 18	132	110	152	127	109	125
NPTF 1/2 - 14	131	109	151	126	108	124
NPTF 3/4 - 14	131	109	151	126	108	124
NPTF 1 - 11.5	176	133	203	154	132	152
NPTF 1 1/4-11.5	176	133	203	154	132	152
NPTF 1 1/2-11.5	176	133	203	154	132	152
NPTF 2 - 11.5	176	133	203	154	132	152

Think threads with YAMAWA

3. Troubles on taper pipe thread tapping, and their solution

Taper pipe thread tapping such as for PT thread and for NPT thread is quite different from parallel thread tapping such as for metric thread.
There, the trouble particularly special in taper thread tapping tends to happen.
Following is the explanation about tapping troubles on taper pipe thread tapping and their solution:

Materials and troubles

material / trouble	low carbon steel	middle carbon steel	tool steel, alloy steel, high carbon steel, heat treated steel of lower than 35HRC	stainless steel	cast iron, tough cast iron	aluminum alloy, zinc alloy, brass	thermosetting resin, thermoplastic resin	nickel base alloy, titanium alloy, heat treated steel of lower than 35HRC
tap wear, cutting performace decreased		▲	●	▲	●			—
welding on tap	●			●	▲	●	●	—
chipping on tap	▲	▲	●	●				—
rough surface	▲	▲	▲	▲	●	▲	▲	—
torn threads	●			●	▲	●	▲	—
chip clogging	●			●			▲	—

● Trouble occurs quite frequently ▲ Trouble occurs rather frequently — Hard-to-macine material

Trouble shooting

check point / trouble	Over-cutting of intenal threads	Shrinkage of internal threads	Rough surface, Torn threads	Stop line	tap wear, cutting performace decreased	welding on tap	chipping on tap	chip clogging
Machine	Select machine suitable for tapping size		Use machine with more power		Use machine with more power			
Jigs, Holders	Fix workpiece firmly			Use tap holder of floating type, Prevent vibrating of axis of tap, Prevent centering-off with workpiece				
Cutting condition	Adjust properly the stroke of tapping / Reduce cutting speed, Adjust a feed		Reduce cutting speed		Reduce cutting speed			
Lubricant		Change to insoluble oil from water soluble, Use other cutting oil which prevents cold welding			Change to insoluble oil from water soluble, Use other cutting oil when prevents cold welding		Adjust oil volume, supply oil properly	
On process				Prevent slanting of hole		Use taper reamer for boring hole	Provide deeper tapping hole, Remove unnecessary chips during tapping	Provide deeper tapping hole, Check the viscosity, Use taper reamer for boring hole
Tap — Selection			Use spiral fluted tap, Use interrupted tap	Use thread mill cutters	Use carbide tap (depending on materials being cut)	Use interrupted taps	Use spiral fluted tap, Use interrupted tap	
Tap — Design				Reconsider of number of flutes of tap	Change material of tap	Provide oxide surface treatment, Provide TiN or TiCN on taps, Provide larger cutting angle	Select long shank tap when ejecting chips interferes with tap holder in the case of SP tapping	

Examples of trouble shooting

1) Torn thread trouble was solved by changing cutting speed

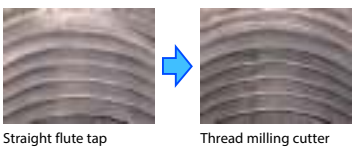
Tapping condition
size : PT 1/4-19
tap : Straight flute tap
material : SS400
machine : Machining center
holder : fixed type
lubricant : water soluble

Tapping speed: 5m/min
Torn threads

Tapping speed: 2m/min
No torn threads

2) Stop line trouble was solved by using Thread milling cutter

Cutting condition
size : PT1/4-19
tap : Straight flute tap
milling cutter : 08153X19G
material : SS400
machine : Machining center
holder : fixed
lubricant : water soluble

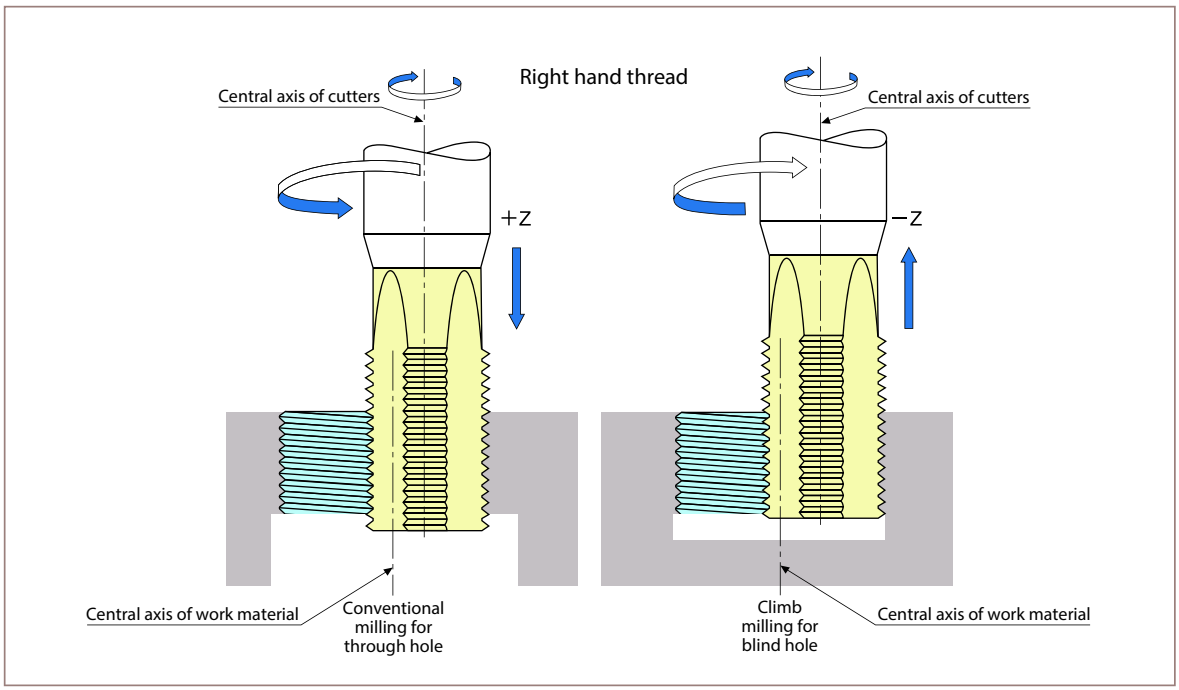


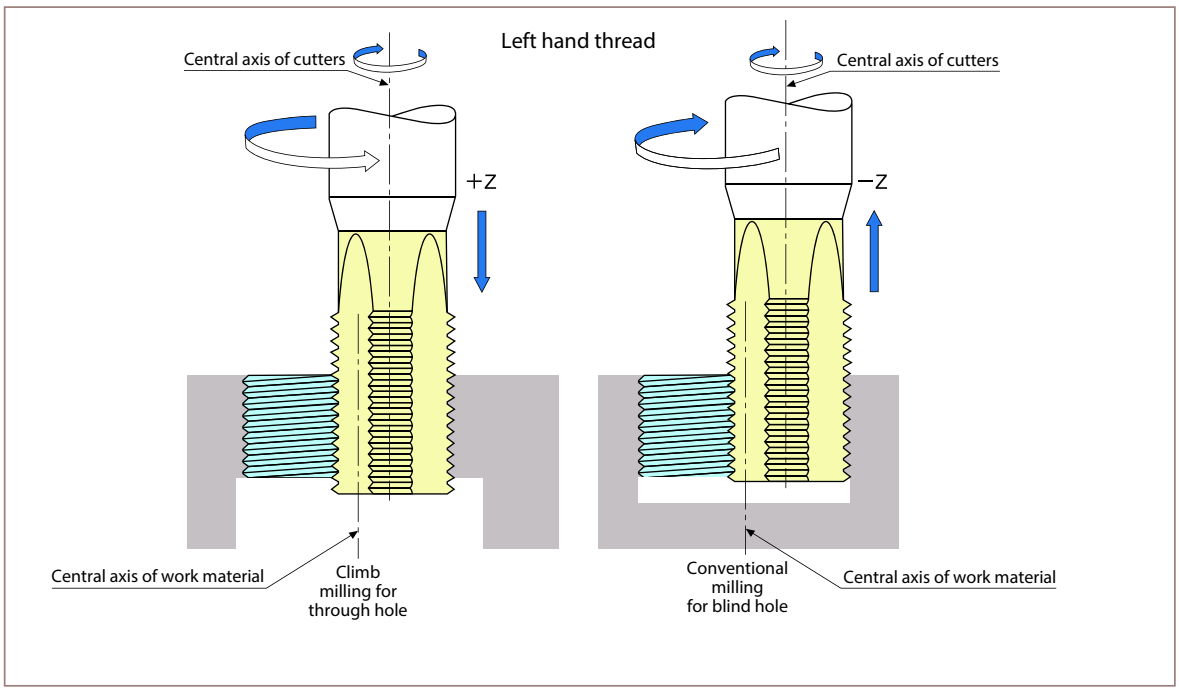
Straight flute tap
There is the stop line

Thread milling cutter
There is no stop line

22. Features of MC-Helical Thread Mills

○Various nominal diameter internal threads of the same pitch can be produced with the same thread mills.
○The same mill can be used for both right-hand and left-hand internal threads.
○Chips become very minute, and troubles caused by chips are rarely expected.
○Internal threads of large diameter are obtainable even with low power machines.
○Size control (undersize or oversize) is easy on programming process. Thus, internal threads with voluntary thread limits can be obtained.
○When using MC-Helical threads mills for producing taper pipe threads, the threads are produced in a perfect cutting circle.
With no stop marks (stop marks are inevitable in taper pipe thread tapping), high quality pressure-tight joint can be made.





Note : Basically, conventional milling is recommended due to excellent chip ejection. However, climb milling is recommended in the case of poor horse power and poor rigidity of the machine.

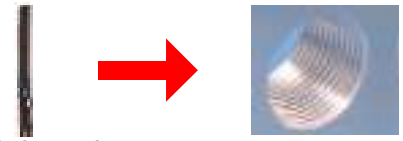
■Comparison of internal threads cut by helical cutter and by PT tap

■Pipe thread cutting by tap

When PT tap cuts internal threads, the tap cuts the threads with all cutting edges and the tap reverses from the position where each cutting edge on lands sticks into the material wall of internal threads. This results in the stop line due to a step caused by this sticking.

■Pipe thread cutting by helical cutter

Due to the thread cutting of 3 axis movement without reversing, the internal thread has no stop line.



■Selection of tool diameter against the size of the internal threads

When cutting internal threads with MC-HLC, please choose the tool which diameter is smaller than 70% of internal threads diameter. The cutter having larger outside diameter is preferable due to its high rigidity.
Thread milling cutters do not have screw lead. Please select thread milling cutters by referring to product specification table to avoid poor threads caused by interference.

■Cutting Condition

○Carbide helical cutter

Material	Cutting Speed (m/min)	Feed per tooth (mm/t)
Structural Steel	50~250	0.02~0.1
Carbon Steel	50~200	0.02~0.1
Alloy Steel	30~180	0.02~0.1
Tool Steel	30~150	0.02~0.1
Stainless Steel	30~200	0.03~0.1
Cast Iron	50~150	0.03~0.15
Aluminum, Aluminum Alloy	50~300	0.03~0.15
Copper, Copper Alloy	50~180	0.03~0.15

○HSS helical cutter

Material	Cutting Speed (m/min)	Feed per tooth (mm/t)
Structural Steel	25~45	0.02~0.05
Carbon Steel	20~40	0.02~0.05
Alloy Steel	15~30	0.02~0.05
Tool Steel	10~15	0.02~0.04
Stainless Steel	10~15	0.03~0.05
Cast Iron	30~50	0.03~0.08
Aluminum, Aluminum Alloy	50~90	0.03~0.05
Copper, Copper Alloy	40~80	0.03~0.05

■Feed speed

Feed speed is decided by the characteristic of work materials. Feed speed is an important factor because machining time, thread finish and tool durability are getting influenced by the feed speed.
In the material of low tensile strength, feed per tooth can be set up rather large. However, if you set up feed per one tooth too large, thread milling cutters can cause deflection and may badly cause thread limit.

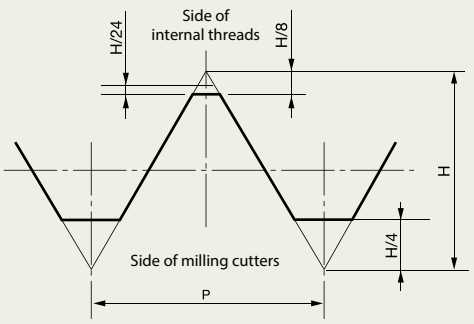
Feed speed of tool

$$F = fz \cdot Z \cdot n \cdot (Dc-d)/Dc \ (mm/min)$$

fz : Feed per tooth
z : Number of tooth
n : Spindle RPM
d : Diameter of tool
Dc : Nominal size of internal thread

■Cut of cutters

Generally, Cut of cutter is decided by the machine programming in which the machine enables the cutter to cut the thread height in one revolution. MC helical cutter is so designed that its minor diameter does not cut, and the same bored hole size as that for cutting tap is adopted.



—Metric thread

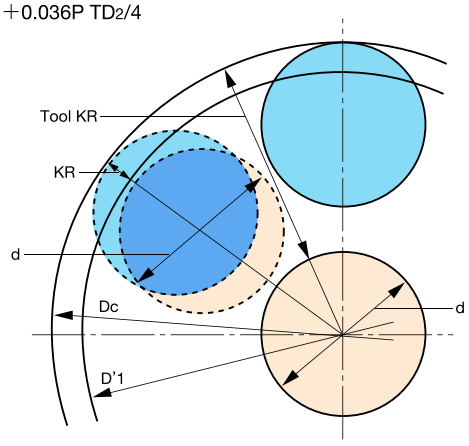
[Minor dia. basis]
Tool cut

$$KR = H - (H/8 + H/4) + H/24 + TD_2/4 - (D'_1 - D_1)/2$$
$$= (D_1 - D'_1)/2 + 2H/3 + TD_2/4$$
$$= (D_1 - D'_1)/2 + 0.577P + TD_2/4$$

—Metric thread

[Tool basis]
Tool transverse

$$\text{Tool } KR = Dc/2 - d/2 + H/24 + TD_2/4$$
$$= (Dc - d)/2 + H/24 + TD_2/4$$
$$= (Dc - d)/2 + 0.036P\ TD_2/4$$

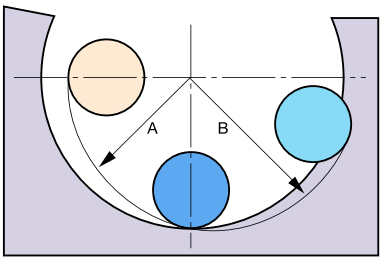


where,

Dc	: Nominal size of internal threads
D_1	: Basic minor diameter of internal threads
D'_1	: Minor diameter before cutting
d	: Outside diameter of tool
H	: 0.866025P
P	: Pitch
TD_2	: Tolerance of pitch diameter for producing internal thread
$TD_2/4$	: Shrinkage after cutting (Set up in the middle of pitch diameter tolerance)
H/24	: Difference between of basic thread profile and O.D. of the cutters.

■Approaching and leaving to and from work material

On approaching and leaving to and from work material, the cutter must always be traversed in helical interpolating movement so that the cutter enables smooth cutting in and out. And it is necessary to cut the material gradually by the lead of screw thread. Otherwise, threads can be thinned.



Initial cutting A＜B

MEMO

23. Selecting different tap holder combinations by machine feed system

The function of machine feed systems

Fully synchronous feed (Rigid) tapping system

Spindle revolution and machine feed are synchronized, a perfect thread lead and feed per revolution are realized.

Feed by lead screws

A better-feed condition is realized because the tap is fed by a master lead screw shaft that has the same thread lead as this tap.

Feed by gear

The tap is fed at the same thread lead by a combinations of gears. This creates a better-feed to thread lead condition.

Asynchronous feed system

Best used when the spindle rotation and the machine feed are set independently, especially, if the machine feed value cannot be accurately predicted to be that of the tap thread lead.

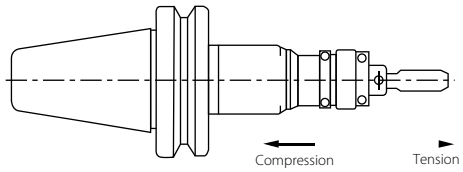
Hydraulic or Pneumatic pressure feed system

Feed is controlled by a pressure regulation system which normally results in an inaccurate feed per revolution compared to the tap thread lead.

Manual feed

Feed is controlled by operator which is difficult to keep a stable amount of feed per revolution.

Holders aspects



Spring direction

Completely rigid holder type

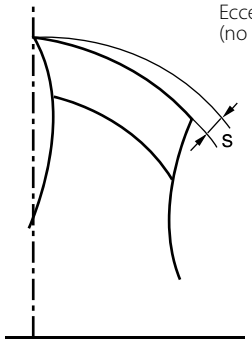
The tap is held with no axial or radial adjustment in the collet and holder.

Adjustable spring floating holder (Tension & Compression)

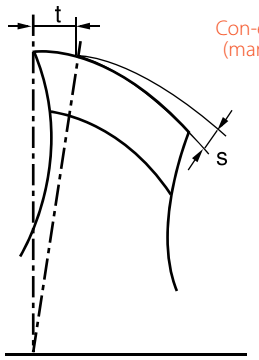
Machine feed and tap's thread lead errors are corrected by two types of spring system in the holder, the axial tension direction of the tap and the axial compression direction of the tap.

Characteristics of tap self-guiding behavior

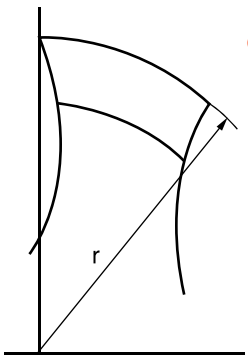
r=tap's radius, s=thread relief, t=margin width



Tap characteristics ; high cutting performance and machining performance, with little to no self-guiding features.
Operation ; A fully synchronous machining system with fixed rigid holder is needed.
Example : "High speed tapping" and "fully synchronous tapping."



Tap ; High level of self-guidance due to suitable tap diameter margin and thread relief. The combination of nice portion of margin and chamfer relief helps to make appropriate tap guidance.



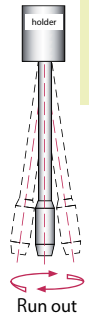
Tap ; A full thread land stays in contact with the thread major diameter at all times. Tap has no thread relief on major diameter, creating a high level of self-guidance even with unbalanced feeding conditions.

24. The mechanism for a tap to cut oversize on an internal thread

1. Run out, misalignment and tap cutting in non perpendicular to holes → Over-cutting at radial direction

Tool run out during tapping

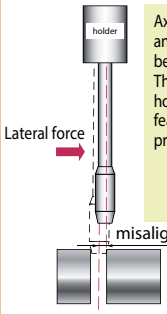
Holder needs to be adjusted. Tapping with run out can be observed and checked when idle running.



Misalignment during tapping

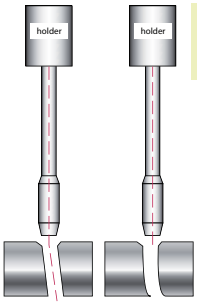
Axis of tapping process and bored hole should be lined up correctly. The use of adjustable holder with floating features will reduce this problem.

Solutions



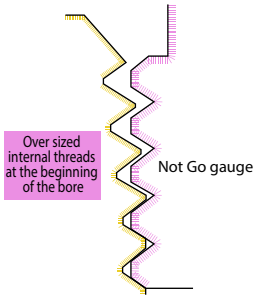
Tapping a non-parallel or non-perpendicular thread to the axis of the hole.

Verification of prepared hole condition.

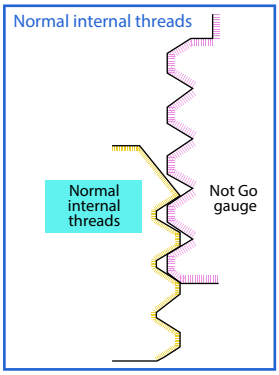


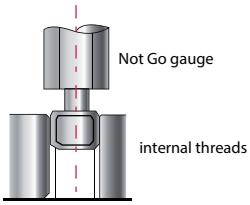
Excessive cutting in radial direction causes oversized internal threads. Since tapping proceeds along bored hole, in the depth of hole, oversize cutting is minimized, that is, oversize cutting in the beginning of the hole and normal cutting in the depth of the hole.

Excessive-cutting in the radial direction



Normal internal threads





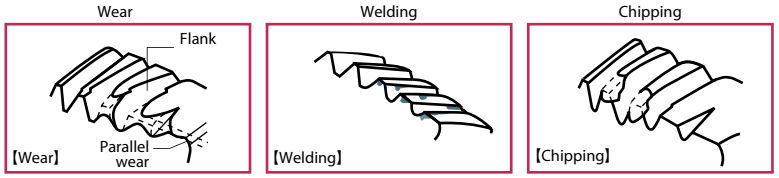
2. Using a tap not suitable for the operation or a tap with dull cutting edge may cause galling and result in over-cutting. → Over-cutting caused by galling and excess cutting

Using an incorrect tap for a specific workpiece material can cause problems

Select the correct Tap
- Straight fluted tap
- Spiral fluted tap
- Spiral pointed tap
- Roll tap

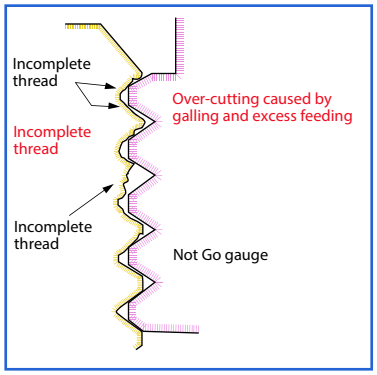
Selection of correct taps suitable for material being tapped is strongly recommended.

Tapping process with dull edge



Solution: Proper use of cutting oil, confirmation of a constant for tool life

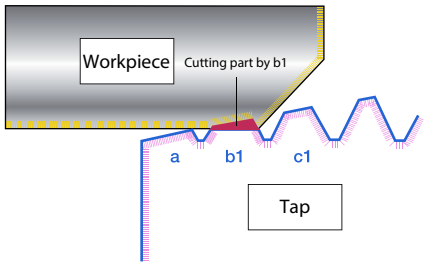
Torn threads occur on the thread flanks. If this situation gets worse, there occur large thread collapses or incomplete threads finally bringing out oversized internal threads.
Depending on the condition of collapsed threads such trouble tends to occur discontinuously as NOT-GO gouge enters.
Special attention needs to be taken so that random inspection should not miss this kind of trouble.



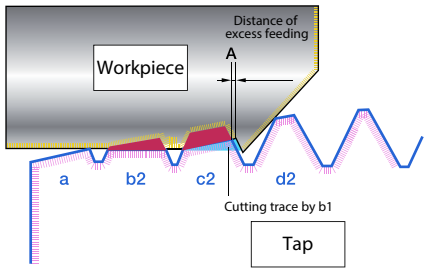
3. Tapping with an improper feed condition → over-cutting at axial direction

Process of over-cutting due to excessive feed

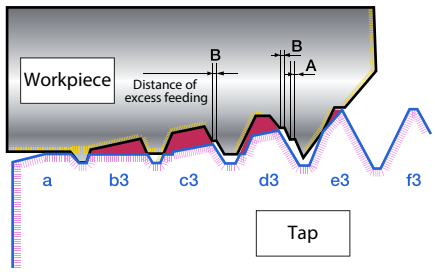
① With cutting edge b1, cutting starts.



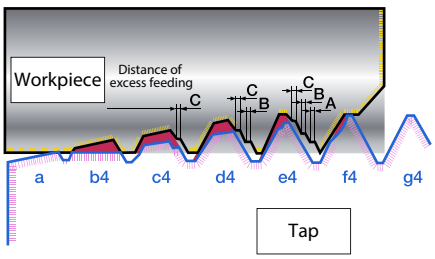
② Position between workpiece and tap after the tap rotates 1 turn.



③ Position between workpiece and tap after the tap rotates 2 turns.



④ The position between workpiece and tap after 3 rotations of tap.



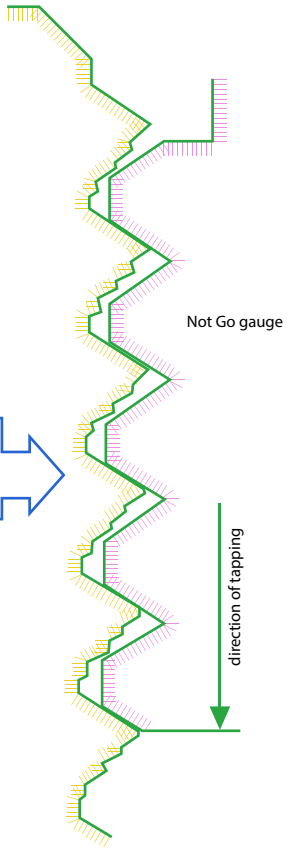
Solutions

Feed adjustment is strongly recommanded.

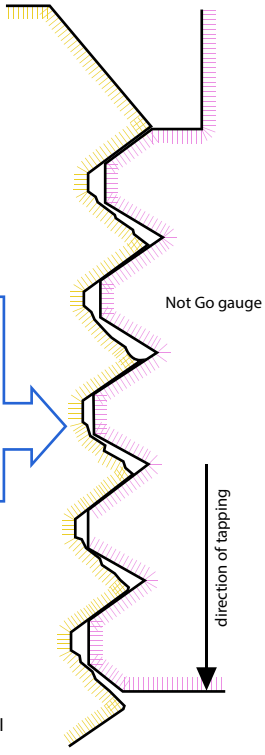
* (Use fully synchronous feed system and fixing holder)

When using machines that do not have the synchronous feed system, such as drilling machine.

* Adjust the correct weight balance of main spindle properly.
* Use an axial/radial floating holder for adjustment.



Excessive-cutting of the thread with excessive feeding



Over-cutting of the thread by too slow feeding

Process Opposite of excessive feeding Factors in fluencing extra material is cut at back frank.

over-cutting during tapping

① The tap mounting condition in the holder.
② The condition of bored hole.
③ The cutting oil selection.
④ Incorrect adjustment of feed balance.
⑤ Selection of the tap depending on material being cut.

25. Trouble Shooting

Troubles / Check point / Segments		Breakage			Excessive wear	
		Prevent excessive cutting torque	Prevent clogging of chips	Tap	Workpiece	Tap
Workpiece	Hardness	●Use workpiece which has even structure and hardness.			○Use workpiece which has even structure and hardness.	
	Shape	●Pay attention to tapping position and material thickness.			●Pay attention to tapping position and material thick-ness.	
	Bored hole	◎Provide bigger bored holes. ●Prevent work hardening.			○Provide bigger bored holes. ●Provide countersinking on hole entrance. ○Prevent work hardening.	
		◎Provide deeper tapping hole. ●Prevent slanting of hole.				
Machine		●Avoid inconsistent feed. ●Adjust feed stroke.				
Jigs, Holders		●Use tap holder of floating type. ◎Use tap holder with torque limitter.				
Cutting condition		○Reduce cutting speed.			○Reduce cutting speed.	
Lubricant		●Use the other cutting oil which prevents cold welding. ●Use insoluble type cutting oil.			●Provide proper timing for changing or filling-up of cutting oil. ●Prevent mixing of other oil into cutting oil. ●Use other cutting oil which prevents cold welding. ●Use cutting oil of insoluble type. ●Adjust flow of cutting oil and method of lubrication.	
On process			●Remove unnecessary chips during tapping. ●Provide bigger space for chips disposal.			
Tap	Selection			●Use PO tap(through hole). ●Use SP tap(blind hole). ●Use Roll tap.		
	Design		●Provide bigger chiproom.	●Change material of taps. ●Provide proper hardness on taps.		●Use serial set tap. ●Change material of taps. ●Provide proper hardness on taps.
		●Reconsider length of cutting chamfer. ●Use set tap.			●Reconsider length of cutting chamfer. ●Provide nitride on taps.	
	Re-grind	●Be careful about burning during re-sharpening. ●Provide proper land.			●Be careful about burning during re-sharpening. ●Increase re-sharpening frequency.	

◎ : Most suitable solution ○ : Second most suitable solution

Undersize cutting of internal thread			Bad surface, surface damaged		
Improve cutting performance	Selection and design of tap	Work material	Improve cutting performance	Prevent welding	Check cutting condition
		●Check workmaterial.			●Use workpiece which has even structure and hardness.
		●Pay attention to tapping position and material thickness.			●Pay attention to tapping position and material thickness.
●Adopt bigger bored hole. ●Prevent work hardening of material.					
			●Prevent work hardening.	●Provide bigger bored holes.	○Prevent slanting of hole.
					○Feed according to pitch.
					●Use the tap holder of floating type. ●Prevent vibrating of axis of tap ●Prevent centering-off with work piece.
			●Reduce cutting speed.		
			●Provide proper timing for changing or filling-up of cutting oil. ●Prevent mixing of other oil into cutting oil. ●Use other cutting oil which prevents cold welding. ●Use cutting oil of insoluble type. ●Adjust flow of cutting oil and method of lubrication.		
				●Remove unnecessary chips	
●Provide Nitride on taps.	◎Use oversiza taps.		●Use spiral pointed taps (for through hole).	◎Provide oxide coating on taps.	◎Use oil hole taps.
○Provide larger cutting angle.	●Adjust relief angle on cutting chamfer. ○Provide thread relief.		◎Provide larger cutting angle. ●Adjust relief angle on cutting chamfer. ○Provide more narrow margin.	●Change of no. of flutes on taps.	●Reconsider length of cutting chamfer.
●Increase re-sharpening frequency.			●Increase re-sharpening frequency.	●Provide better surface finishing on flutes.	
			●Provide precise re-sharpening. ●Be careful about burning during re-sharpening.		

Troubles / Check point / Segments		Over-cutting of internal thread				
		Prevent uneven in feed of tap	Prevent over cutting on thread	Prevent welding	Check cutting condition	Prevent unbalance on entering
Workpiece	Hardness					
	Shape					
	Bored hole			●Provide bigger bored hole.	●Prevent slanting of hole.	●Provide countersinking on the hole entrance.
Machine		●Adjust a feed. ◎Feed according to pitch.				
Jigs, Holders					○Use tap holder of floating type.	◎Prevent vibrating of axis of tap. ○Prevent centering-off with work piece. ●Use tap holder of floating type.
Cutting condition				●Reduce cutting speed.		
Lubricant				●Use other cutting lubricant which prevents cold welding. ●Check the viscosity.		
On process						
Tap	Selection			◎Provide oxide surface treatment. ○Use tap with oil hole.		
	Design		○Provide small cutting angle. ●Adjust chamfer relief angle. ◎Check the width of thread margin.	●Provide short thread length.	●Reconsider number of flules of tap.	●Reconsider length of cutting chamfer.
	Re-grind		●Remove burrs on teeth after re-grinding. ●Provide proper land.		●Provide precise re-sharpening.	◎Care for vibration.

◎ : Most suitable solution ○ : Second most suitable solution

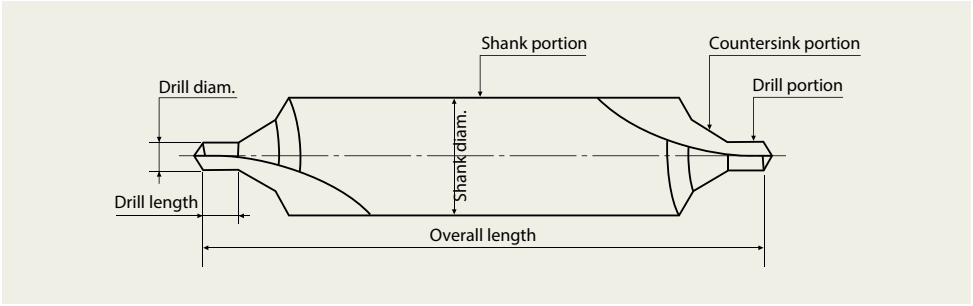
Think threads with YAMAWA

<table>
<tr><th colspan="4">Chipping</th><th colspan="2">Tapping operation</th></tr>
<tr><th>Prevent clogging of chips</th><th>Prevent excessive cutting torque</th><th>Improve tapping method</th><th>Tap</th><th>Prevent clogging of chips</th><th>Tap</th></tr>
<tr><td></td><td>●Use workpiece material which has even structure and hardness.</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>○Pay attention to tapping position and material thickness.</td><td></td><td colspan="2">●If possible, use finer pitch tap or shorter tapping length.</td></tr>
<tr><td>Provide deeper tapping hole (Blind hole).</td><td>◎Provide bigger bored hole.
●Prevent work hardnening.</td><td>●Prevent slanting of holes.</td><td></td><td>○Provide bigger bored hole.
◎Provide deeper tapping hole (Blind hole).</td><td></td></tr>
<tr><td colspan="3">●Provide countersinking on hole the entrance.</td><td></td><td></td><td></td></tr>
<tr><td></td><td>●Avoid inconsistent feed.</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>○Use tapping holder with torque limitter.</td><td>●Prevent centering-off with workpiece.
●Prevent vibration of axis of tap.
●Use the tap holder of floating type.</td><td></td><td></td><td>●Use the tap holder of floating type.
●Prevent vibration of axis of tap.
●Prevent centering-off with workpiece.</td></tr>
<tr><td colspan="3">●Reduce cutting speed.</td><td></td><td>●Reduce cutting speed.</td><td></td></tr>
<tr><td></td><td>●Use the other cutting oil which prevent cold welding.</td><td></td><td></td><td>●Check the viscosity.</td><td></td></tr>
<tr><td>●Remove unnecessary chips during tapping.
●Provide bigger space for chip disposal.</td><td></td><td></td><td></td><td colspan="2">●Remove unnecessary chips during tapping.
●Provide bigger space for chip disposal.</td></tr>
<tr><td></td><td></td><td></td><td>●Use PO taps (Through hole).
●Use SP taps (Blind hole).
●Use Roll tap.</td><td></td><td>●Use PO taps (Through hole).
●Use SP taps (Blind hole).
●Use Roll tap.</td></tr>
<tr><td>●Provide bigger chip room.</td><td></td><td></td><td>●Change material of tap.
●Provide smaller cutting angle.
●Provide proper hardness.</td><td colspan="2" rowspan="2">●Provide bigger chip room.
●Reconsider length of cutting chamfer.
◎Use oil hole tap.
●Provide shorter thread length to tap.</td></tr>
<tr><td colspan="3">●Reconsider length of cutting chamfer.
●Use set tap(Serial or conventional).
●Adjust relief angle on cutting chamfer.</td></tr>
<tr><td colspan="3">●Be careful about burning during re-sharpening.</td><td></td><td></td><td></td></tr>
</table>

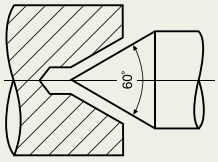
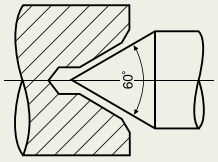
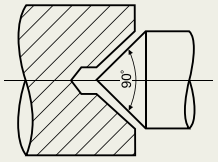
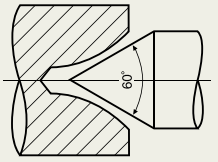
26. Center Drills

Center Drills are the tool for making center hole. Center Drills are also used for positioning before drilling, and for chamfering of the hole.

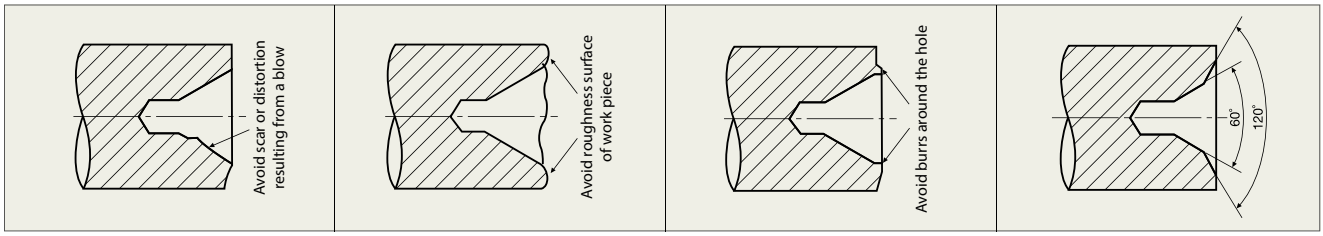
■Names of each part



■Shape of center hole and center

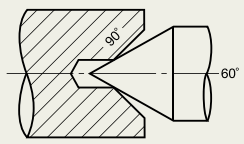
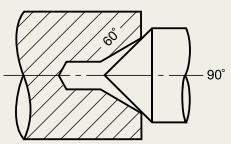
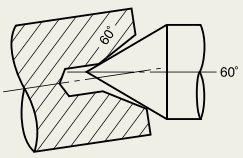
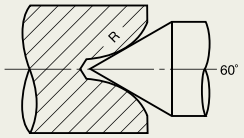
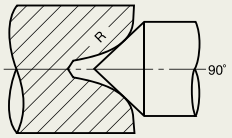
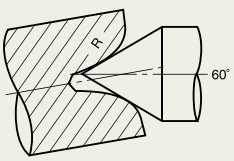
Type A (60°) Center hole & 60°center	Type B (60°) Center hole & 60°center	Type A (90°) Center hole & 90°center	Type R Center hole & 60°center
			

■Advantage of Type B Center holes



Note : Advantage of Type B center holes : B type center drill protect the 60° conical bearing surface from scar or distortion resulting from a blow, roughness of workpiece surface or burrs around the hole.

■Advantage of Type R Center holes

	Angle of center hole is higher than that of center.	Angle of center hole is lower than that of center.	Center hole and center are misaligned.
A type			
R type			

Note : R type center hole stably holds the center. It also some of advantage of B type center hole.

27. Table of recommend centering condition

■Table of recommend centering condition.

HSS (PE-Q PE-90˚)

Work material	Soft structural steels SS400		Carbon steels S50C		Alloy steels SCM440		Stainless steels SUS304		Aluminum alloy casting AC4B	
Cutting speed (m/min)	30~40		22~30		20~25		10~15		70~100	
Diameter (mm)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)
3	3700	0.04~0.08	2750	0.04~0.08	2400	0.04~0.08	1350	0.04~0.08	9000	0.10~0.22
4	2800	0.05~0.10	2050	0.05~0.10	1800	0.05~0.10	1000	0.05~0.10	6750	0.12~0.26
6	1850	0.06~0.12	1400	0.06~0.12	1200	0.06~0.12	850	0.06~0.12	4500	0.15~0.30
8	1400	0.08~0.15	1050	0.08~0.15	900	0.08~0.15	500	0.08~0.15	3400	0.18~0.35
10	1100	0.10~0.18	850	0.10~0.18	700	0.10~0.18	400	0.10~0.18	2700	0.21~0.40
12	950	0.12~0.22	700	0.12~0.22	600	0.12~0.22	350	0.12~0.22	2250	0.25~0.45
16	700	0.16~0.26	500	0.16~0.26	450	0.16~0.26	250	0.16~0.26	1700	0.32~0.50
20	550	0.20~0.35	400	0.20~0.35	350	0.20~0.35	200	0.20~0.35	1350	0.40~0.60

HSS+TiCN (PE-Q-V PE-90˚)

Work material	Soft structural steels SS400		Carbon steels S50C		Alloy steels SCM440		Thermal refined steels SCM440 (30~35HRC)		Stainless steels SUS304		Aluminum alloy casting AC4B	
Cutting speed (m/min)	38~48		28~38		26~33		13~17		13~20		84~120	
Diameter (mm)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)
3	4550	0.04~0.08	3500	0.04~0.08	3150	0.04~0.08	1800	0.03~0.06	1750	0.04~0.08	10800	0.10~0.22
4	3400	0.05~0.10	2650	0.05~0.10	2350	0.05~0.10	1200	0.04~0.08	1300	0.05~0.10	8100	0.12~0.26
6	2300	0.06~0.12	1750	0.06~0.12	1550	0.06~0.12	800	0.05~0.10	900	0.06~0.12	5400	0.15~0.30
8	1700	0.08~0.15	1300	0.08~0.15	1150	0.08~0.15	600	0.06~0.12	650	0.08~0.15	4050	0.18~0.35
10	1350	0.10~0.18	1050	0.10~0.18	950	0.10~0.18	500	0.08~0.15	500	0.10~0.18	3250	0.21~0.40
12	1150	0.12~0.22	900	0.12~0.22	800	0.12~0.22	400	0.10~0.18	450	0.12~0.22	2700	0.25~0.45
16	850	0.16~0.26	650	0.16~0.26	600	0.16~0.26	300	0.12~0.22	350	0.16~0.26	2050	0.32~0.50
20	700	0.20~0.35	500	0.20~0.35	450	0.20~0.35	250	0.16~0.26	250	0.20~0.35	1600	0.40~0.60

Carbide+TiAlN (C-PE-Q-V PE-90˚)

Work material	Soft structural steels SS400		Carbon steels S50C		Alloy steels SCM440		Thermal refined steels SCM440 (30~35HRC)		Stainless steels SUS304		Aluminum alloy casting AC4B	
Cutting speed (m/min)	87~102		65~78		60~70		32~40		35~45		120~160	
Diameter (mm)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)	Revolution (min^{-1})	Feed per revolution (mm/rev)
3	10050	0.04~0.08	7600	0.04~0.08	6900	0.04~0.08	3800	0.04~0.08	4250	0.04~0.08	14850	0.10~0.22
4	7500	0.05~0.10	5700	0.05~0.10	5150	0.05~0.10	2850	0.05~0.10	3200	0.05~0.10	11150	0.12~0.26
6	5000	0.06~0.12	3800	0.06~0.12	3450	0.06~0.12	1900	0.06~0.12	2100	0.06~0.12	7450	0.15~0.30
8	3750	0.08~0.15	2850	0.08~0.15	2600	0.08~0.15	1450	0.08~0.14	1800	0.08~0.15	5550	0.18~0.35
10	3000	0.10~0.18	2300	0.10~0.18	2050	0.10~0.18	1150	0.10~0.16	1250	0.10~0.18	4450	0.21~0.40
12	2500	0.12~0.22	1900	0.12~0.22	1700	0.12~0.22	950	0.10~0.18	1050	0.12~0.22	3700	0.25~0.45
16	1900	0.16~0.26	1400	0.16~0.26	1300	0.16~0.26	700	0.12~0.22	800	0.16~0.26	2800	0.32~0.50

1. Above condition done by Water Soluble oil.
2. 20% lower feed is recommended when centering prosess to inclined plane.
3. 20% lower feed is recommended in the case of long shank point drills.

27. Table of recommend centering condition

■Reference of drilling condition for Center drills (HSS)

Reference table of cutting speed and feed per revolution (when substrate is HSS)

・Drilling speed (Cone diameter at the larger end)

Workpiece materials	Drilling speed
Low carbon steels	15~30
Carbon steels	15~30
Alloy steels	10~25
Stainless steels	5~12
Cast iron	8~15

First diameter	Feed per revolution
1~ 3	0.02~0.07
3~ 4	0.04~0.12
4~ 6	0.06~0.17
6~ 8	0.10~0.20
8~10	0.14~0.23
10~12	0.18~0.26

■Reference of drilling condition for Center drills (Carbide)

Reference table of cutting speed and feed per revolution (when substrate is Carbide)

・Drilling speed (Cone diameter at the larger end)

Workpiece materials	Drilling speed
Low carbon steels	30~50
Carbon steels	30~50
Alloy steels	20~40
Stainless steels	15~25
Cast iron	30~50

First diameter	Feed per revolution
1	0.01 ~0.03
2	0.01 ~0.035
3	0.015~0.05
4	0.02 ~0.06
5	0.03 ~0.07
6	0.04 ~0.07

■Reference of drilling condition for NC-SD-V

Reference table of drilling speed, feed per revolution

・Drilling speed (Tool diameter)

Workpiece materials	Drilling speed
Low carbon steels	25~40
Carbon steels	25~32
Alloy steels	15~25
Alloy tool steels	7~12
Stainless steels	7~12
Cast iron	20~35
Aluminum	60~90

Drill diameter	Feed per revolution
3	0.03~0.06
4	0.05~0.10
6	0.08~0.15
8	0.10~0.18
10	0.15~0.20
12	0.15~0.25
16	0.15~0.30
20	0.20~0.30
25	0.20~0.30

■Reference of chamfering condition for Countersinks

Reference table of drilling speed, feed per revolution

・Cutting speed (Tool diameter)

Workpiece materials	Cutting speed	
	Single edge	Multiple edges
Low carbon steels	18~25	20~27
Carbon steels	18~25	20~25
Alloy steels	8~16	8~15
Alloy tool steels	8~16	8~15
Stainless steels	8~13	5~10
Cast iron	20~30	15~25
Aluminum	20~70	20~80

Tool diameter	Feed per revolution	
	Single edge	Multiple edges
4	0.02~0.04	0.03~0.10
6	0.03~0.05	0.05~0.12
8	0.05~0.07	0.07~0.15
10	0.06~0.09	0.10~0.16
12	0.07~0.10	0.10~0.20
16	0.08~0.13	0.10~0.20
20	0.09~0.15	0.10~0.25
25	0.10~0.16	0.15~0.30

28. Thread Series

Metric Threads

Unit : mm

Nominal Dia.			Pitch※														
Column 1	Column 2	Column 3	Coarse	Fine													
1			0.25														0.2
	1.1		0.25														0.2
1.2			0.25														0.2
	1.4		0.3														0.2
1.6			0.35														0.2
	1.8		0.35														0.2
2			0.4													0.25	
	2.2		0.45													0.25	
2.5			0.45												0.35		
3			0.5												0.35		
	3.5		0.6												0.35		
4			0.7											0.5			
	4.5		0.75											0.5			
5			0.8											0.5			
		5.5												0.5			
6			1										0.75				
	7		1										0.75				
8			1.25									1	0.75				
		9	1.25									1	0.75				
10			1.5								1.25	1	0.75				
		11	1.5									1	0.75				
12			1.75							1.5	1.25	1					
	14		2							1.5	1.25	1					
		15								1.5		1					
16			2							1.5		1					
		17								1.5		1					
	18		2.5						2	1.5		1					
20			2.5						2	1.5		1					
	22		2.5						2	1.5		1					
24			3						2	1.5		1					
		25							2	1.5		1					
		26								1.5							
	27		3						2	1.5		1					
		28							2	1.5		1					
30			3.5					3	2	1.5		1					
		32							2	1.5							
	33		3.5					3	2	1.5							
		35								1.5							
36			4					3	2	1.5							
		38								1.5							
	39		4					3	2	1.5							
		40						3	2	1.5							
42			4.5				4	3	2	1.5							
	45		4.5				4	3	2	1.5							
48			5				4	3	2	1.5							
		50						3	2	1.5							
	52		5				4	3	2	1.5							
		55					4	3	2	1.5							
56			5.5				4	3	2	1.5							
		58					4	3	2	1.5							
	60		5.5				4	3	2	1.5							
64			6				4	3	2	1.5							
		62					4	3	2	1.5							
		65					4	3	2	1.5							
	68		6				4	3	2	1.5							
		70			6		4	3	2	1.5							
72					6		4	3	2	1.5							
		75					4	3	2	1.5							
	76				6		4	3	2	1.5							
		78							2								
80					6		4	3	2	1.5							
		82							2								
	85				6		4	3	2								
90					6		4	3	2								
	95				6		4	3	2								
100					6		4	3	2								
110	105				6		4	3	2								
					6		4	3	2								
	115				6		4	3	2								
125	120				6		4	3	2								
				8	6		4	3	2								
	130			8	6		4	3	2								
		135			6		4	3	2								
140				8	6		4	3	2								
		145			6		4	3	2								
	150			8	6		4	3	2								

※ : Please select the first column by priority. And select second column and third column if necessary.

■Unifined Threads

Size		Nominal Dia.		Threads per inch										
Column 1	Column 2	inch	mm	Coarse	Fine	Extra Fine	Constant pitch series							
				UNC	UNF	UNEF	4UN	6UN	8UN	12UN	16UN	20UN	28UN	32UN
No. 0		0.0600	1.524		80									
	No. 1	0.0730	1.854	64	72									
No. 2		0.0860	2.184	56	64									
	No. 3	0.0990	2.515	48	56									
No. 4		0.1120	2.845	40	48									
No. 5		0.1250	3.175	40	44									
No. 6		0.1380	3.505	32	40									UNC
No. 8		0.1640	4.166	32	36									UNC
No.10		0.1900	4.826	24	32									UNF
	No.12	0.2160	5.486	24	28	32							UNF	UNEF
¼		0.2500	6.350	20	28	32						UNC	UNF	UNEF
5/16		0.3125	7.938	18	24	32						20	28	UNEF
3/8		0.3750	9.525	16	24	32					UNC	20	28	UNEF
7/16		0.4375	11.112	14	20	28					16	UNF	UNEF	32
½		0.5000	12.700	13	20	28					16	UNF	UNEF	32
9/16		0.5625	14.288	12	18	24				UNC	16	20	28	32
5/8		0.6250	15.875	11	18	24				12	16	20	28	32
	11/16	0.6875	17.462			24				12	16	20	28	32
¾		0.7500	19.050	10	16	20				12	UNF	UNEF	28	32
	13/16	0.8125	20.638			20				12	16	UNEF	28	32
⅞		0.8750	22.225	9	14	20				12	16	UNEF	28	32
	15/16	0.9375	23.812			20				12	16	UNEF	28	32
1		1.0000	25.400	8	12	20			UNC	UNF	16	UNEF	28	32
	1 1/16	1.0625	26.988			18			8	12	16	20	28	
1 1/8		1.1250	28.575	7	12	18			8	UNF	16	20	28	
	1 3/16	1.1875	30.162			18			8	12	16	20	28	
1 1/4		1.2500	31.750	7	12	18			8	UNF	16	20	28	
	1 5/16	1.3125	33.338			18			8	12	16	20	28	
1 3/8		1.3750	34.925	6	12	18		UNC	8	UNF	16	20	28	
	1 7/16	1.4375	36.512			18		6	8	12	16	20	28	
1 ½		1.5000	38.100	6	12	18		UNC	8	UNF	16	20	28	
	1 9/16	1.5625	39.688			18		6	8	12	16	20		
1 5/8		1.6250	41.275			18		6	8	12	16	20		
	1 11/16	1.6875	42.862			18		6	8	12	16	20		
1 ¾		1.7500	44.450	5				6	8	12	16	20		
	1 13/16	1.8125	46.038					6	8	12	16	20		
1 ⅞		1.8750	47.625					6	8	12	16	20		
	1 15/16	1.9375	49.212					6	8	12	16	20		
2		2.0000	50.800	4.5				6	8	12	16	20		
	2 1/8	2.1250	53.975					6	8	12	16	20		
2 ¼		2.2500	57.150	4.5				6	8	12	16	20		
	2 3/8	2.3750	60.325					6	8	12	16	20		
2 ½		2.5000	63.500	4			UNC	6	8	12	16	20		
	2 5/8	2.6250	66.675				4	6	8	12	16	20		
2 ¾		2.7500	69.850	4			UNC	6	8	12	16	20		
	2 7/8	2.8750	73.025				4	6	8	12	16	20		
3		3.0000	76.200	4			UNC	6	8	12	16	20		
	3 1/8	3.1250	79.375				4	6	8	12	16			
3 ¼		3.2500	82.550	4			UNC	6	8	12	16			
	3 3/8	3.3750	85.725				4	6	8	12	16			
3 ½		3.5000	88.900	4			UNC	6	8	12	16			
	3 5/8	3.6250	92.075				4	6	8	12	16			
3 ¾		3.7500	95.250	4			UNC	6	8	12	16			
	3 7/8	3.8750	98.425				4	6	8	12	16			
4		4.0000	101.600	4			UNC	6	8	12	16			
	4 1/8	4.1250	104.775				4	6	8	12	16			
4 ¼		4.2500	107.950				4	6	8	12	16			
	4 3/8	4.3750	111.125				4	6	8	12	16			
4 ½		4.5000	114.300				4	6	8	12	16			
	4 5/8	4.6250	117.475				4	6	8	12	16			
4 ¾		4.7500	120.650				4	6	8	12	16			
	4 7/8	4.8750	123.825				4	6	8	12	16			
5		5.0000	127.000				4	6	8	12	16			
	5 1/8	5.1250	130.175				4	6	8	12	16			
5 ¼		5.2500	133.350				4	6	8	12	16			
	5 3/8	5.3750	136.525				4	6	8	12	16			
5 ½		5.5000	139.700				4	6	8	12	16			
	5 5/8	5.6250	142.875				4	6	8	12	16			
5 ¾		5.7500	146.050				4	6	8	12	16			
	5 7/8	5.8750	149.225				4	6	8	12	16			
6		6.0000	152.400				4	6	8	12	16			

※ : Please select the first column by priority. And select second column and third column if necessary.

■Conversion Table

Threads per inch (25.4mm)	Pitch (mm)
100	0.2540
80	0.3175
72	0.3528
64	0.3969
60	0.4233
56	0.4536
48	0.5292
44	0.5773
40	0.6350
36	0.7056
32	0.7938
28	0.9071
27	0.9407
24	1.0583
20	1.2700
19	1.3368
18	1.4111
16	1.5875
14	1.8143
13	1.9538
12	2.1167
11.5	2.2087
11	2.3091
10	2.5400
9	2.8222
8	3.1750
7	3.6286
6	4.2333
5	5.0800
4.5	5.6444
4	6.3500

General size list of metric trapezoidal threads

Unit : mm

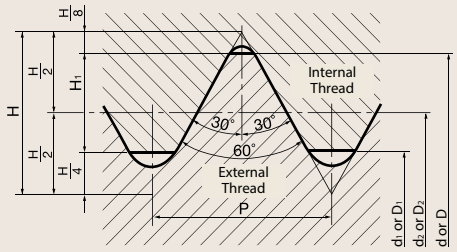
	1.5	2	3	4	5	6	7	8	10	12
Tr 8	1.5									
Tr 9	1.5	2								
Tr 10	1.5	2								
Tr 11		2	3							
Tr 12		2	3							
Tr 14		2	3							
Tr 16		2		4						
Tr 18		2		4						
Tr 20		2		4						
Tr 22			3		5			8		
Tr 24			3		5			8		
Tr 26			3		5			8		
Tr 28			3		5			8		
Tr 30			3			6			10	
Tr 32			3			6			10	
Tr 34			3			6			10	
Tr 36			3			6			10	
Tr 38			3				7		10	
Tr 40			3				7		10	
Tr 42			3				7		10	
Tr 44			3				7			12
Tr 46			3					8		12
Tr 48			3					8		12

When the tap for the trapezoidal threads not listed in the catalogue is required, please contance Yamawa sales.

Think threads with YAMAWA

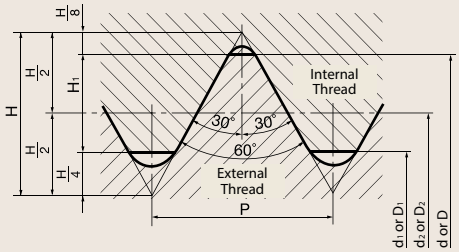
29. Basic profile of threads

■Metric Screw Threads



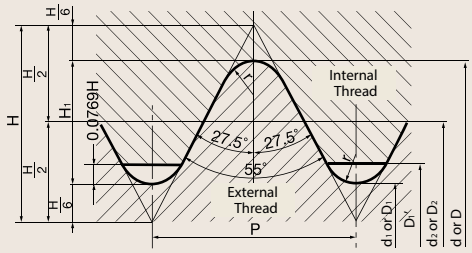
H =0.866025P
H₁ =0.541266P
d₂ =d−0.649519P
d₁ =d−1.082532P
D =d
D₂ =d₂
D₁ =d₁

■Unified Screw Threads



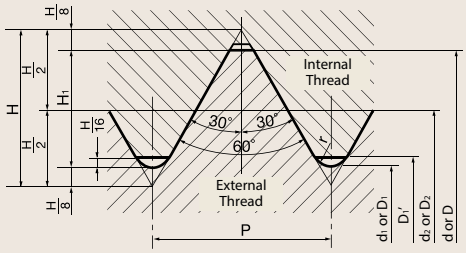
H =0.866025P
H₁ =0.541266P
d₂ =d−0.649519P
d₁ =d−1.082532P
D =d
D₂ =d₂
D₁ =d₁
P =25.4/n
n =Threads per inch

■Whitworth Screw Threads



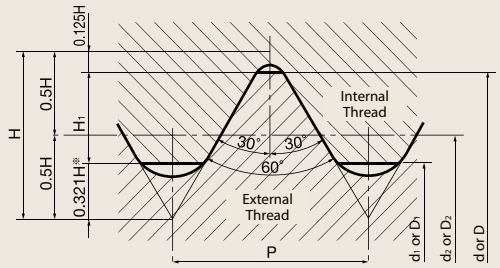
H =0.9605P
H₁ =0.6403P
d₂ =d−H₁
d₁ =d−2H₁
D =d
D₂ =d₂
D₁ =d₁
D₁' =d₁+2×0.0769H
r =0.1373P
P =25.4/n
n =Threads per inch

■Screw Threads for Sewing Machine



H =0.8660P
H₁ =0.6495P
d₂ =d−H₁
d₁ =d−2H₁
D =d
D₂ =d₂
D₁ =d₁
D₁' =d₁+2×H/16
r =0.1083P
P =25.4/n
n =Threads per inch

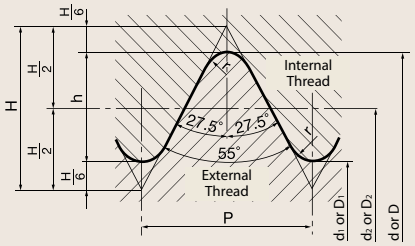
■Miniature Screw Threads



H =0.866025P
H₁ =0.48P
d₂ =d−0.649519P
d₁ =d−0.96P
D =d
D₂ =d₂
D₁ =d₁

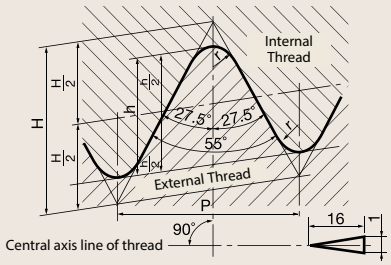
Note : This figure rounds off 0.320744H.

■Parallel Pipe Threads



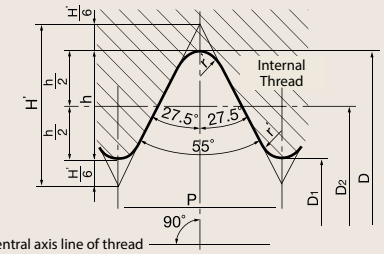
H =0.960491P
h =0.640327P
d₂ =d−h
d₁ =d−2h
D =d
D₂ =d₂
D₁ =d₁
r =0.137329P
P =25.4/n
n =Threads per inch

■Taper Pipe Threads



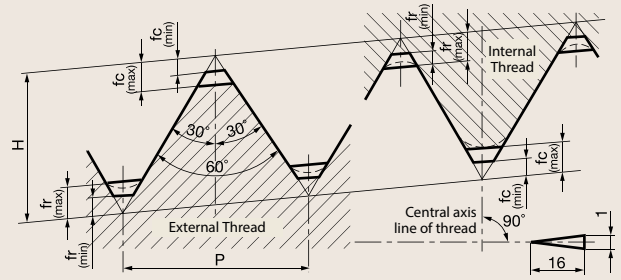
H =0.960237P
h =0.640327P
r =0.137278P
P =25.4/n
n =Threads per inch

■Taper Pipe Threads (Parallel)



H' =0.960491P
h =0.640327P
r' =0.137329P
P =25.4/n
n =Threads per inch

American Standard Taper Pipe Threads

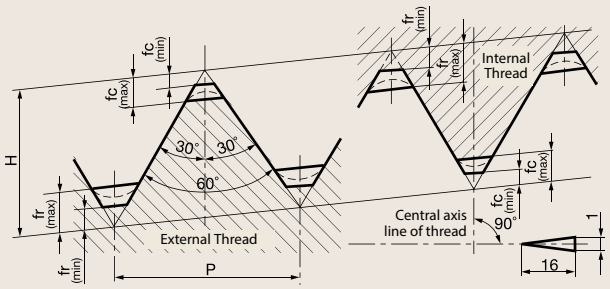


H =0.866025P
P =25.4/n
n =Threads per inch

Truncation Unit : mm

Threads per inch	Section	fc=fr
27	Max.	0.096P
	Min.	0.033P
18	Max.	0.088P
	Min.	0.033P
14	Max.	0.078P
	Min.	0.033P
11.5	Max.	0.073P
	Min.	0.033P
8	Max.	0.062P
	Min.	0.033P

Dryseal American Standard Taper Pipe Threads

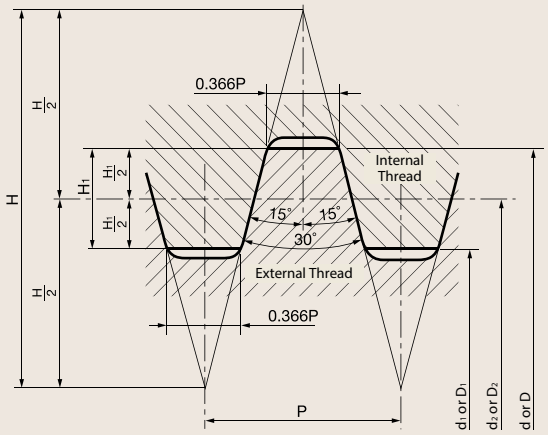


H =0.866025P
P =25.4/n
n =Threads per inch

Truncation Unit : mm

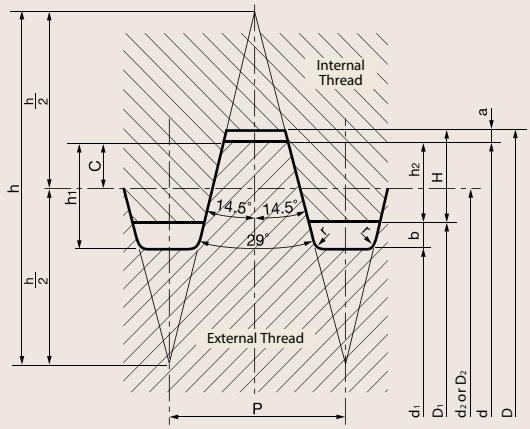
Threads per inch	Section	fc	fr
27	Max.	0.094P	0.140P
	Min.	0.047P	0.094P
18	Max.	0.078P	0.109P
	Min.	0.047P	0.078P
14	Max.	0.060P	0.085P
	Min.	0.036P	0.060P
11.5	Max.	0.060P	0.090P
	Min.	0.040P	0.060P
8	Max.	0.055P	0.076P
	Min.	0.042P	0.055P

Metric Trapezoidal Screw Threads



H =1.866P
H1 =0.5P
d2 =d−0.5P
d1 =d−P
D =d
D2 =d2
D1 =d1

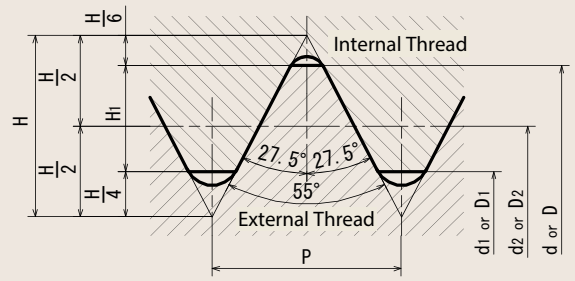
29° Trapezoidal Screw Threads



h =1.9335P
h1 =2c+a
h2 =2c+a−b
H =2c+2a−b
c ≒0.25P
d2 =d−2c
d1 =d−2h1
P =25.4/n
D =d+2a
D2 =d2
D1 =d1+2b
n =Threads per inch

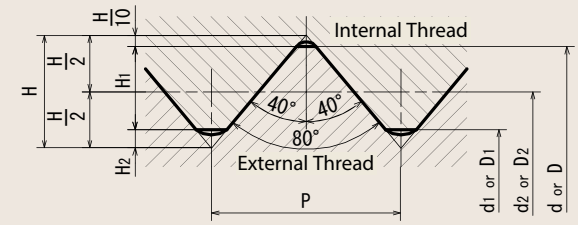
Think threads with YAMAWA

Thick Steel Conduit Threads (CTG)



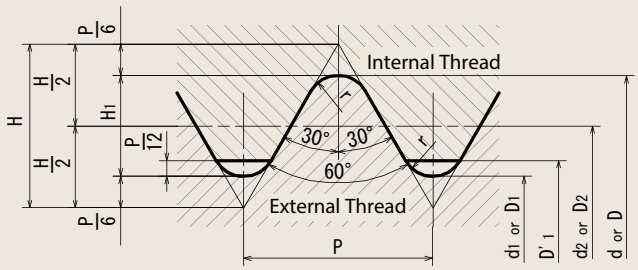
H =0.960491P
H1 =0.560286P
d2 =d−0.640327P
d1 =d−1.120572P
D =d
D2 =d2
D1 =d1
P =25.4/n
n =Thread per inch

Steel Conduit Threads (CTC)



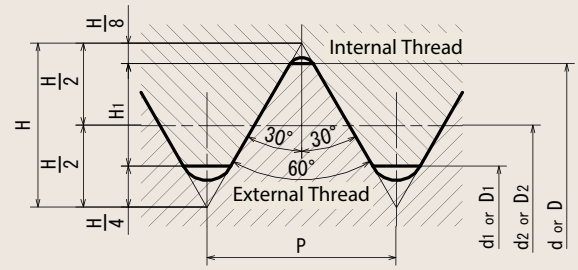
H =0.59588P
H1 =0.43851P
H2 =0.09778P
d2 =d−0.47670P
d1 =d−0.87703P
D =d
D2 =d2
D1 =d1
P =25.4/n
n =Thread per inch

Bicycle Threads (BC)



H =0.8660P
H1 =0.5327P
r =P/6
d2 =d−H1
d1 =d−2H1
D =d
D2 =d2
D1 =d1
D'1 =d1+2×P/12
P =25.4/n
n =Thread per inch

Tire Valve Threads (TV), Bicycle Tire Valve Threads (CTV)



H =0.866025P
H1 =0.541266P
d2 =d−0.649519P
d1 =d−1.082532P
D =d
D2 =d2
D1 =d1
P =25.4/n
n =Thread per inch

30. Symbols for Standard Threads

Japan

Thread symbols	Kinds of threads	Related Standards
M	Metric screw threads	JIS B 0205-1～0205-4
S	Miniature screw threads	JIS B 0201
UNC	Unified threads, Coarse series	JIS B 0206
UNF	Unified threads, Fine series	JIS B 0208
Tr	Metric Trapezoidal screw threads	JIS B 0216
R	Taper external pipe threads	JIS B 0203 (JIS main book)
Rc	Taper internal pipe threads	JIS B 0203 (JIS main book)
Rp	Parallel internal pipe threads	JIS B 0203 (JIS main book)
G	Parallel pipe threads	JIS B 0202 (JIS main book)
PF	Parallel pipe threads	JIS B 0202 (JIS Appendix)
PT	Taper pipe threads	JIS B 0203 (JIS Appendix)
PS	Parallel internal pipe threads	JIS B 0203 (JIS Appendix)
CTC	Screw threads for rigid metal thin-walled conduit and fitting	JIS C 8305
CTG	Screw threads for rigid metal thick-walled conduit and fitting	JIS C 8305
BC	Cycle threads	JIS B 0225
SM	Screw threads for sewing machine	JIS B 0226 (2001.2.20repeal)
E	Electric socket and lamp-base threads	JIS C 7709
V	Tire valve threads of automobile	JIS D 4207
CTV	Tire valve threads of cycle	JIS D 9422

ISO

Thread symbols	Kinds of threads	Related Standards
M	ISO Metric threads	ISO 261
S	ISO Miniature screw threads	ISO 1501
Tr	ISO Metric trapezoidal screw threads	ISO 2902
UNC	ISO Unified threads, coarse series	ISO 263
UNF	ISO Unified threads, fine series	ISO 263
UNEF	ISO Unified threads, extra fine series	ISO 263
UN	ISO Unified threads, constant pitch series	ISO 263
UNJC	Aerospace - UNJ threads (coarse)	ISO 3161
UNJF	Aerospace - UNJ threads (fine)	ISO 3161
UNJEF	Aerospace - UNJ threads (extra fine)	ISO 3161
UNJ	Aerospace - UNJ threads (constant pitch series)	ISO 3161
MJ	Aerospace - MJ threads	ISO 5855
R	Taper external pipe threads	ISO 7/1
Rc	Taper internal pipe threads	ISO 7/1
Rp	Parallel internal pipe threads	ISO 7/1
G	Parallel pipe threads	ISO 228/1
GL	Glass container threads	ISO 1115
V	Tire valve threads	ISO 4570/1～3

America

Thread symbols	Kinds of threads	Related Standards
UN	Unified inch screw threads	ANSI B 1.1
UNC/UNRC	Unified coarse thread series	ANSI B 1.1
UNF/UNRF	Unified fine thread series	ANSI B 1.1
UNEF/UNREF	Unified extra-fine thread series	ANSI B 1.1
4UN/4UNR	Unified constant-pitch series with 4-threads	ANSI B 1.1
6UN/6UNR	Unified constant-pitch series with 6-threads	ANSI B 1.1
8UN/8UNR	Unified constant-pitch series with 8-threads	ANSI B 1.1
12UN/12UNR	Unified constant-pitch series with 12-threads	ANSI B 1.1
16UN/16UNR	Unified constant-pitch series with 16-threads	ANSI B 1.1
20UN/20UNR	Unified constant-pitch series with 20-threads	ANSI B 1.1
28UN/28UNR	Unified constant-pitch series with 28-threads	ANSI B 1.1
32UN/32UNR	Unified constant-pitch series with 32-threads	ANSI B 1.1
UNS/UNRS	Unified threads of special diameters, pitches and lengths of engagement	ANSI B 1.1
NR	American National thread with a 0.108p to 0.144p controlled root radius	MIL-B-7838
Acme	Acme screw threads	ANSI B 1.5
Stub-Acme	Stub Acme screw threads	ANSI B 1.8
Butt	Buttress inch screw threads	ANSI B 1.9
UNM	Unified miniature thread series	ANSI B 1.10
NC5	Class 5 interference-fit thread	ANSI B 1.12
NPT	American Standard taper pipe threads for general use	ANSI/ASME B 1.20.1
NPTR	American Standard taper pipe threads for railing joints	ANSI/ASME B 1.20.1
NPSC	American Standard straight pipe thread in pipe couplings	ANSI/ASME B 1.20.1
NPSL	American standard straight pipe threads for loose-fitting mechanical joints with locknuts	ANSI/ASME B 1.20.1
NPSM	American Standard straight pipe threads for free-fitting mechanical joints for fixture	ANSI/ASME B 1.20.1
NPSH	American Standard straight pipe threads for loose-fitting mechanical joints for hose couplings	ANSI/ASME B 1.20.1
NPTF	Dryseal American Standard taper pipe threads	ANSI B 1.20.3, 1.20.4
F-PTF	Dryseal fine taper pipe thread series	ANSI B 1.20.3, 1.20.4
PTF-SAE SHORT	Dryseal SAE short taper pipe threads	ANSI B 1.20.3, 1.20.4
PTF-SPL SHORT	Dryseal special short taper pipe threads	ANSI B 1.20.3, 1.20.4
PTF-SPL EXTRA SHORT	Dryseal special extra short taper pipe threads	ANSI B 1.20.3, 1.20.4
SPL-PTF	Dryseal special taper pipe threads	ANSI B 1.20.3, 1.20.4
NPSI	Dryseal American Standard intermediate internal straight pipe threads	ANSI B 1.20.3, 1.20.4
NPSF	Dryseal American Standard fuel internal straight pipe threads	ANSI B 1.20.3, 1.20.4
ANPT	Aeronautical National Form taper pipe threads	MIL-P-7150
NGO	National gas outlet threads	ANSI B 57.1
NGS	National gas straight threads	ANSI B 57.1
NGT	National gas taper threads	ANSI B 57.1
SGT	Special gas taper threads	ANSI B 57.1
NH	Hose coupling and firehose coupling threads	USAS B 2.4
NHR	Hose coupling and firehose coupling threads	USAS B 2.4
NPSH	Hose coupling and firehose coupling threads	USAS B 2.4
AMO	American standard microscope objective threads	ANSI B 1.11

30. Symbols for Standard Threads

British※

Thread symbols	Kinds of threads	Related Standards
UNS	Unified special series	BS 1580
B.S.W.	British Standard Whitworth coarse threads	BS 84
B.S.F.	British Standard fine threads	BS 84
BSP	British Standard pipe thread (corresponding to R, Rc, Rp of ISO)	BS 21,2779
B.A.	B.A.-Screw threads	BS 93
Acme	General purpose, Acme screw threads	BS 1104
Buttress	Buttress threads	BS 1657
BSC	Cycle threads	BS 811
BSMO	Microscope objective threads	BS 3569
E	Edison screw threads	BS 5042

※ : We left out the symbols after ISO standard was adopted.

German※

Thread symbols	Kinds of threads	Related Standards
GL	Glass containers thread	DIN 168
S	Buttress thread	DIN 513,2781,20401
Rd	Knuckle thread	DIN 262,3182,7273,15403,20400
W	Whitworth-gewinde	DIN 168,477,6630,49301
KS,KT	Screw siles for packages made of Plastics	DIN 6063
E	Edison screw thread	DIN 40400
Pg	Steel conduit thread	DIN 40430
Vg	Automobil tire valve thread	DIN 7756
Gf	Thread for freezing pipes	DIN 4930
Gg	Threads for drill pipe	DIN 4941,20314
HA	Thread for bone screws and nuts	DIN 58810
FG	Bicycle threads	DIN 79012

※ : We left out the symbols after ISO standard was adopted.

31. Cross chart of thread cutting tool standard

Tap and Die names	JIS	TAS	ISO	ANSI	BS	DIN
General specification		4051				
Measuring method		4053				
Technical requirement			8830			2197
Thread limit (Metric)		4052	2857			
Thread limit (Pipe)			5969			
Hand taps (Metric coarse)	B4430	4105	529	B94.9	949	352
Hand taps (Metric fine)	B4430	4106	529	B94.9	949	2181
Hand taps (Unified coarse)	B4432	4107	529	B94.9	949	
Hand taps (Unified fine)	B4438		529	B94.9	949	
Hand taps (Parallel pipe thread)	B4445		2284	B94.9	949	
Hand taps (Taper pipe thread)	B4446		2284	B94.9	949	
Hand taps (American parallel pipe thread)		4113		B94.9		
Hand taps (American taper pipe thread)		4114		B94.9		
Hand taps (American dryseal parallel pipe thread)		4115		B94.9		
Hand taps (American dryseal taper pipe thread)		4116		B94.9		
Nut taps (Metric coarse)	B4433	4109			357	
Nut taps (Metric fine)		4110				
Nut taps (Unified coarse)		4111		B94.9		
Nut taps (Unified fine)		4112				
Machine taps (Metric coarse)						371,376
Machine taps (Metric fine)						374
Bent shank taps (Metric coarse)		4101				
Bent shank taps (Metric fine)		4102				
Bent shank taps (Unified coarse)		4103				
Bent shank taps (Unified fine)		4104				
Long shank machine taps (Metric thread)		4153	2283			
Long shank machine taps (Inch thread)		4153	2283			
Spiral pointed taps		4155		B94.9		
Spiral fluted taps		4154		B94.9		
Shell taps (Metric thread)		4117				
Pulley taps				B94.9		
Thread Forming taps				B94.9		
Blanks for carbide taps				B94.1		
Thread cutting round dies (Metric coarse, Adjustable)	B4451					223
Thread cutting round dies (Metric fine, Adjustable)	B4451					223
Thread cutting round dies (Metric, Solid)	B4451		2568		1127	223
Thread cutting round dies (Unified coarse adjustable)	B4451					
Thread cutting round dies (Unified fine adjustable)	B4451					
Thread cutting round dies (Unified thread)	B4451		2568		1127	
Thread cutting round dies (Parallel pipe thread)	B4455		4231		1127	5158
Thread cutting round dies (Taper pipe thread)	B4456		4230			5159
Hexagon dies			7226		1127	382

Symbols : Organization names

ISO : International Organization for Standardization
JIS : Japanese Industrial Standards Committee
TAS : Standards of The Japan Solid Cutting Tools' Association
ANSI : American National Standards Institute
BS : British Standards Institution, UK
DIN : Deutsches Institiut fur Normung

32. Hardness conversion table

■Conversion table from Rockwell C hardness of steel. (Approximate)

Rockwell C Scale Hardness	Vickers Hardness	Brinell Hardness		Rockwell Hardness※2			Rockwell Superficial Hardness			Shore Hardness	Tensile Strength MPa※1	Rockwell C Scale Hardness※2
		Standard ball	Tungsten Carbide ball	A scale	B scale	D scale	15-N scale	30-N scale	45-N scale			
HRC	HV	HB		HRA	HRB	HRD	HS15N	HS30N	HS45N	HS	—	HRC
68	940	—	—	85.6	—	76.9	93.2	84.4	75.4	97	—	68
67	900	—	—	85.0	—	76.1	92.9	83.6	74.2	95	—	67
66	865	—	—	84.5	—	75.4	92.5	82.8	73.3	92	—	66
65	832	—	(739)	83.9	—	74.5	92.2	81.9	72.0	91	—	65
64	800	—	(722)	83.4	—	73.8	91.8	81.1	71.0	88	—	64
63	772	—	(705)	82.8	—	73.0	91.4	80.1	69.9	87	—	63
62	746	—	(688)	82.3	—	72.2	91.1	79.3	68.8	85	—	62
61	720	—	(670)	81.8	—	71.5	90.7	78.4	67.7	83	—	61
60	697	—	(654)	81.2	—	70.7	90.2	77.5	66.7	81	—	60
59	674	—	(634)	80.7	—	69.9	89.8	76.6	65.5	80	—	59
58	653	—	615	80.1	—	69.2	89.3	75.7	64.3	78	—	58
57	633	—	595	79.6	—	68.5	88.9	74.8	63.2	76	—	57
56	613	—	577	79.0	—	67.7	88.3	73.9	62.0	75	—	56
55	595	—	560	78.5	—	66.9	87.9	73.0	60.9	74	2075	55
54	577	—	543	78.0	—	66.1	87.4	72.0	59.8	72	2015	54
53	560	—	525	77.4	—	65.4	86.9	71.2	58.6	71	1950	53
52	544	(500)	512	76.8	—	64.6	86.4	70.2	57.4	69	1880	52
51	528	(487)	496	76.3	—	63.8	85.9	69.4	56.1	68	1820	51
50	513	(475)	481	75.9	—	63.1	85.5	68.5	55.0	67	1760	50
49	498	(464)	469	75.2	—	62.1	85.0	67.6	53.8	66	1695	49
48	484	451	455	74.7	—	61.4	84.5	66.7	52.5	64	1635	48
47	471	442	443	74.1	—	60.8	83.9	65.8	51.4	63	1580	47
46	458	432	432	73.6	—	60.0	83.5	64.8	50.3	62	1530	46
45	446	421	421	73.1	—	59.2	83.0	64.0	49.0	60	1480	45
44	434	409	409	72.5	—	58.5	82.5	63.1	47.8	58	1435	44
43	423	400	400	72.0	—	57.7	82.0	62.2	46.7	57	1385	43
42	412	390	390	71.5	—	56.9	81.5	61.3	45.5	56	1340	42
41	402	381	381	70.9	—	56.2	80.9	60.4	44.3	55	1295	41
40	392	371	371	70.4	—	55.4	80.4	59.5	43.1	54	1250	40
39	382	362	362	69.9	—	54.6	79.9	58.6	41.9	52	1215	39
38	372	353	353	69.4	—	53.8	79.4	57.7	40.8	51	1180	38
37	363	344	344	68.9	—	53.1	78.8	56.8	39.6	50	1160	37
36	354	336	336	68.4	(109.0)	52.3	78.3	55.9	38.4	49	1115	36
35	345	327	327	67.9	(108.5)	51.5	77.7	55.0	37.2	48	1080	35
34	336	319	319	67.4	(108.0)	50.8	77.2	54.2	36.1	47	1055	34
33	327	311	311	66.8	(107.5)	50.0	76.6	53.3	34.9	46	1025	33
32	318	301	301	66.3	(107.0)	49.2	76.1	52.1	33.7	44	1000	32
31	310	294	294	65.8	(106.0)	48.4	75.6	51.3	32.5	43	980	31
30	302	286	286	65.3	(105.5)	47.7	75.0	50.4	31.3	42	950	30
29	294	279	279	64.7	(104.5)	47.0	74.5	49.5	30.1	41	930	29
28	286	271	271	64.3	(104.0)	46.1	73.9	48.6	28.9	41	910	28
27	279	264	264	63.8	(103.0)	45.2	73.3	47.7	27.8	40	880	27
26	272	258	258	63.3	(102.5)	44.6	72.8	46.8	26.7	38	860	26
25	266	253	253	62.8	(101.5)	43.8	72.2	45.9	25.5	38	840	25
24	260	247	247	62.4	(101.0)	43.1	71.6	45.0	24.3	37	825	24
23	254	243	243	62.0	100.0	42.1	71.0	44.0	23.1	36	805	23
22	248	237	237	61.5	99.0	41.6	70.5	43.2	22.0	35	785	22
21	243	231	231	61.0	98.5	40.9	69.9	42.3	20.7	35	770	21
20	238	226	226	60.5	97.8	40.1	69.4	41.5	19.6	34	760	20
(18)	230	219	219	—	96.7	—	—	—	—	33	730	(18)
(16)	222	212	212	—	95.5	—	—	—	—	32	705	(16)
(14)	213	203	203	—	93.9	—	—	—	—	31	675	(14)
(12)	204	194	194	—	92.3	—	—	—	—	29	650	(12)
(10)	196	187	187	—	90.7	—	—	—	—	28	620	(10)
(8)	188	179	179	—	89.5	—	—	—	—	27	600	(8)
(6)	180	171	171	—	87.1	—	—	—	—	26	580	(6)
(4)	173	165	165	—	85.5	—	—	—	—	25	550	(4)
(2)	166	158	158	—	83.5	—	—	—	—	24	530	(2)
(0)	160	152	152	—	81.7	—	—	—	—	24	515	(0)

※1 : 1Mpa=1N/mm^2
※2 : In above table, numbers in parenthesis are only for reference.
This table is abstracted from SAE J 417.

33. Conversion table from inch to millimeter

Conversion table from inch to millimeter

Designation		0"	1"	2"	3"	4"	5"	6"	7"	8"	9"
Fractional	Decimal										
0"	0"	–	25.400	50.800	76.200	101.600	127.000	152.400	177.800	203.200	228.600
1/64"	0.015625"	0.397	25.797	51.197	76.597	101.997	127.397	152.797	178.197	203.597	228.997
1/32"	0.03125"	0.794	26.194	51.594	76.994	102.394	127.794	153.194	178.594	203.994	229.394
3/64"	0.046875"	1.191	26.591	51.991	77.391	102.791	128.191	153.591	178.991	204.391	229.791
1/16"	0.0625"	1.588	26.988	52.388	77.788	103.188	128.588	153.988	179.388	204.788	230.188
5/64"	0.078125"	1.984	27.384	52.784	78.184	103.584	128.984	154.384	179.784	205.184	230.584
3/32"	0.09375"	2.381	27.781	53.181	78.581	103.981	129.381	154.781	180.181	205.581	230.981
7/64"	0.109375"	2.778	28.178	53.578	78.978	104.378	129.778	155.178	180.578	205.978	231.378
1/8"	0.125"	3.175	28.575	53.975	79.375	104.775	130.175	155.575	180.975	206.375	231.775
9/64"	0.140625"	3.572	28.972	54.372	79.772	105.172	130.572	155.972	181.372	206.772	232.172
5/32"	0.15625"	3.969	29.369	54.769	80.169	105.569	130.969	156.369	181.769	207.169	232.569
11/64"	0.171875"	4.366	29.766	55.166	80.566	105.966	131.366	156.766	182.166	207.566	232.966
3/16"	0.1875"	4.762	30.162	55.562	80.962	106.362	131.762	157.162	182.562	207.962	233.362
13/64"	0.203125"	5.159	30.559	55.959	81.359	106.759	132.159	157.559	182.959	208.359	233.759
7/32"	0.21875"	5.556	30.956	56.356	81.756	107.156	132.556	157.956	183.356	208.756	234.156
15/64"	0.234375"	5.953	31.353	56.753	82.153	107.553	132.953	158.353	183.753	209.153	234.553
1/4"	0.25"	6.350	31.750	57.150	82.550	107.950	133.350	158.750	184.150	209.550	234.950
17/64"	0.265625"	6.747	32.147	57.547	82.947	108.347	133.747	159.147	184.547	209.947	235.347
9/32"	0.28125"	7.144	32.544	57.944	83.344	108.744	134.144	159.544	184.944	210.344	235.744
19/64"	0.296875"	7.541	32.941	58.341	83.741	109.141	134.541	159.941	185.341	210.741	236.141
5/16"	0.3125"	7.938	33.338	58.738	84.138	109.538	134.938	160.338	185.738	211.138	236.538
21/64"	0.328125"	8.334	33.734	59.134	84.534	109.934	135.334	160.734	186.134	211.534	236.934
11/32"	0.34375"	8.731	34.131	59.531	84.931	110.331	135.731	161.131	186.531	211.931	237.331
23/64"	0.359375"	9.128	34.528	59.928	85.328	110.728	136.128	161.528	186.928	212.328	237.728
3/8"	0.375"	9.525	34.925	60.325	85.725	111.125	136.525	161.925	187.325	212.725	238.125
25/64"	0.390625"	9.922	35.322	60.722	86.122	111.522	136.922	162.322	187.722	213.122	238.522
13/32"	0.40625"	10.319	35.719	61.119	86.519	111.919	137.319	162.719	188.119	213.519	238.919
27/64"	0.421875"	10.716	36.116	61.516	86.916	112.316	137.716	163.116	188.516	213.916	239.316
7/16"	0.4375"	11.112	36.512	61.912	87.312	112.712	138.112	163.512	188.912	214.312	239.712
29/64"	0.453125"	11.509	36.909	62.309	87.709	113.109	138.509	163.909	189.309	214.709	240.109
15/32"	0.46875"	11.906	37.306	62.706	88.106	113.506	138.906	164.306	189.706	215.106	240.506
31/64"	0.484375"	12.303	37.703	63.103	88.503	113.903	139.303	164.703	190.103	215.503	240.903
1/2"	0.5"	12.700	38.100	63.500	88.900	114.300	139.700	165.100	190.500	215.900	241.300
33/64"	0.515625"	13.097	38.497	63.897	89.297	114.697	140.097	165.497	190.897	216.297	241.697
17/32"	0.53125"	13.494	38.894	64.294	89.694	115.094	140.494	165.894	191.294	216.694	242.094
35/64"	0.546875"	13.891	39.291	64.691	90.091	115.491	140.891	166.291	191.691	217.091	242.491
9/16"	0.5625"	14.288	39.688	65.088	90.488	115.888	141.288	166.688	192.088	217.488	242.888
37/64"	0.578125"	14.684	40.084	65.484	90.884	116.284	141.684	167.084	192.484	217.884	243.284
19/32"	0.59375"	15.081	40.481	65.881	91.281	116.681	142.081	167.481	192.881	218.281	243.681
39/64"	0.609375"	15.478	40.878	66.278	91.678	117.078	142.478	167.878	193.278	218.678	244.078
5/8"	0.625"	15.875	41.275	66.675	92.075	117.475	142.875	168.275	193.675	219.075	244.475
41/64"	0.640625"	16.272	41.672	67.072	92.472	117.872	143.272	168.672	194.072	219.472	244.872
21/32"	0.65625"	16.669	42.069	67.469	92.869	118.269	143.669	169.069	194.469	219.869	245.269
43/64"	0.671875"	17.066	42.466	67.866	93.266	118.666	144.066	169.466	194.866	220.266	245.666
11/16"	0.6875"	17.462	42.862	68.262	93.662	119.062	144.462	169.862	195.262	220.662	246.062
45/64"	0.703125"	17.859	43.259	68.659	94.059	119.459	144.859	170.259	195.659	221.059	246.459
23/32"	0.71875"	18.256	43.656	69.056	94.456	119.856	145.256	170.656	196.056	221.456	246.856
47/64"	0.734375"	18.653	44.053	69.453	94.853	120.253	145.653	171.053	196.453	221.853	247.253
3/4"	0.75"	19.050	44.450	69.850	95.250	120.650	146.050	171.450	196.850	222.250	247.650
49/64"	0.765625"	19.447	44.847	70.247	95.647	121.047	146.447	171.847	197.247	222.647	248.047
25/32"	0.78125"	19.844	45.244	70.644	96.044	121.444	146.844	172.244	197.644	223.044	248.444
51/64"	0.796875"	20.241	45.641	71.041	96.441	121.841	147.241	172.641	198.041	223.441	248.841
13/16"	0.8125"	20.638	46.038	71.438	96.838	122.238	147.638	173.038	198.438	223.838	249.238
53/64"	0.828125"	21.034	46.434	71.834	97.234	122.634	148.034	173.434	198.834	224.234	249.634
27/32"	0.84375"	21.431	46.831	72.231	97.631	123.031	148.431	173.831	199.231	224.631	250.031
55/64"	0.859375"	21.828	47.228	72.628	98.028	123.428	148.828	174.228	199.628	225.028	250.428
7/8"	0.875"	22.225	47.625	73.025	98.425	123.825	149.225	174.625	200.025	225.425	250.825
57/64"	0.890625"	22.622	48.022	73.422	98.822	124.222	149.622	175.022	200.422	225.822	251.222
29/32"	0.90625"	23.019	48.419	73.819	99.219	124.619	150.019	175.419	200.819	226.219	251.619
59/64"	0.921875"	23.416	48.816	74.216	99.616	125.016	150.416	175.816	201.216	226.616	252.016
15/16"	0.9375"	23.812	49.212	74.612	100.012	125.412	150.812	176.212	201.612	227.012	252.412
61/64"	0.953125"	24.209	49.609	75.009	100.409	125.809	151.209	176.609	202.009	227.409	252.809
31/32"	0.96875"	24.606	50.006	75.406	100.806	126.206	151.606	177.006	202.406	227.806	253.206
63/64"	0.984375"	25.003	50.403	75.803	101.203	126.603	152.003	177.403	202.803	228.203	253.603

34. Chemical Component table of work materials

The name of work materials and material Symbols			Chemical Composition (%)							
			C	Si	Mn	P	S	Ni	Cr	Mo
Carbon steels for machine structural use	Low carbon steels	S10C	0.08～0.13	0.15～0.35	0.30～0.60	0.030≧	0.035≧	—	—	—
		S15C	0.13～0.18	0.15～0.35	0.30～0.60	0.030≧	0.035≧	—	—	—
		S20C	0.18～0.23	0.15～0.35	0.30～0.60	0.030≧	0.035≧	—	—	—
	Medium carbon steels	S25C	0.22～0.28	0.15～0.35	0.30～0.60	0.030≧	0.035≧	—	—	—
		S35C	0.32～0.38	0.15～0.35	0.60～0.90	0.030≧	0.035≧	—	—	—
		S45C	0.42～0.48	0.15～0.35	0.60～0.90	0.030≧	0.035≧	—	—	—
	High carbon steels	S48C	0.45～0.51	0.15～0.35	0.60～0.90	0.030≧	0.035≧	—	—	—
		S55C	0.52～0.58	0.15～0.35	0.60～0.90	0.030≧	0.035≧	—	—	—
		S58C	0.55～0.61	0.15～0.35	0.60～0.90	0.030≧	0.035≧	—	—	—
Alloy steels for machine structural use	Chromium Molybdenum Steels	SCM415	0.13～0.18	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	0.15～0.25
		SCM418	0.16～0.21	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	0.15～0.25
		SCM420	0.18～0.23	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	0.15～0.25
		SCM430	0.28～0.33	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	0.15～0.30
		SCM435	0.33～0.38	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	0.15～0.30
		SCM440	0.38～0.43	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	0.15～0.30
		SCM445	0.43～0.48	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	0.15～0.30
	Nickel Chromium Steels	SNC236	0.32～0.40	0.15～0.35	0.50～0.90	0.030≧	0.030≧	1.00～1.50	0.50～0.90	—
		SNC415	0.12～0.18	0.15～0.35	0.35～0.65	0.030≧	0.030≧	2.00～2.50	0.20～0.50	—
		SNC631	0.27～0.35	0.15～0.35	0.35～0.65	0.030≧	0.030≧	2.50～3.00	0.60～1.00	—
		SNC815	0.12～0.18	0.15～0.35	0.35～0.65	0.030≧	0.030≧	3.00～3.50	0.60～1.00	—
	Chromium Steels	SCr415	0.13～0.18	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	—
		SCr420	0.18～0.23	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	—
		SCr430	0.28～0.33	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	—
		SCr440	0.38～0.43	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.25≧	0.90～1.20	—
	Nickel Chromium Molybdenum Steels	SNCM220	0.17～0.23	0.15～0.35	0.60～0.90	0.030≧	0.030≧	0.40～0.70	0.40～0.60	0.15～0.25
		SNCM240	0.38～0.43	0.15～0.35	0.70～1.00	0.030≧	0.030≧	0.40～0.70	0.40～0.60	0.15～0.30
		SNCM420	0.17～0.23	0.15～0.35	0.40～0.70	0.030≧	0.030≧	1.60～2.00	0.40～0.60	0.15～0.30
		SNCM439	0.36～0.43	0.15～0.35	0.60～0.90	0.030≧	0.030≧	1.60～2.00	0.60～1.00	0.15～0.30

Chemical Composition (%)					Mechanical Property of Standard test block		
					Tensile strength (N/mm^2)	Hardness	Heat treatment of standard test block
W	V	Pb	Cu	others			
–	–	–	–	–	314≦	109～156 HB	900～950℃ normalizing
–	–	–	–	–	373≦	111～167 HB	880～930℃ normalizing
–	–	–	–	–	402≦	116～174 HB	870～920℃ normalizing
–	–	–	–	–	441≦	123～183 HB	860～910℃ normalizing
–	–	–	–	–	510≦	149～207 HB	840～890℃ normalizing
					569≦	167～235 HB	840～890℃ water hardening・550～650℃ air hardening
–	–	–	–	–	569≦	167～229 HB	820～870℃ normalizing
					686≦	201～269 HB	820～870℃ water hardening・550～650℃ air hardening
–	–	–	–	–	608≦	179～235 HB	810～860℃ normalizing
					735≦	212～277 HB	810～860℃ water hardening・550～650℃ air hardening
–	–	–	–	–	647≦	183～255 HB	800～850℃ normalizing
					785≦	229～285 HB	800～850℃ water hardening・550～650℃ air hardening
–	–	–	–	–	647≦	183～255 HB	800～850℃ normalizing
					785≦	229～285 HB	800～850℃ water hardening・550～650℃ air hardening
–	–	–	–	–	834≦	235～321 HB	850～900℃ Oil hardening 800～850℃ Oil hardening 150～200℃ tempering
–	–	–	–	–	883≦	248～331 HB	
–	–	–	–	–	932≦	262～352 HB	
–	–	–	–	–	834≦	241～302 HB	830～880℃ Oil hardening・530～630℃ air hardening 150～200℃ tempering
–	–	–	–	–	932≦	269～331 HB	
–	–	–	–	–	980.7≦	285～352 HB	
–	–	–	–	–	1030≦	302～363 HB	
–	–	–	–	–	736≦	217～277 HB	820～880℃ Oil hardening・550～650℃ air hardening 150～200℃ tempering
–	–	–	–	–	785≦	235～341 HB	850～900℃ Oil hardening 740～790℃ Water hardening 150～200℃ tempering
–	–	–	–	–	834≦	248～302 HB	820～880℃ Oil hardening・550～650℃ air hardening
–	–	–	–	–	980.7≦	285～388 HB	830～880℃ Oil hardening 750～800℃ Oil hardening 150～200℃ tempering
–	–	–	–	–	785≦	217～302 HB	850～900℃ Oil hardening 800～850℃ Oil hardening 150～200℃ tempering
–	–	–	–	–	834≦	235～321 HB	
–	–	–	–	–	785≦	229～293 HB	830～880℃ Oil hardening・520～620℃ air hardening 150～200℃ tempering
–	–	–	–	–	932≦	269～331 HB	
–	–	–	–	–	834≦	248～341 HB	850～900℃ Oil hardening 800～850℃ Oil hardening 150～200℃ tempering
–	–	–	–	–	883≦	255～311 HB	820～870℃ Oil hardening・580～680℃ air hardening 150～200℃ tempering
–	–	–	–	–	980.7≦	293～375 HB	850～900℃ Oil hardening 770～820℃ Oil hardening 150～200℃ tempering
–	–	–	–	–	980.7≦	293～352 HB	820～870℃ Oil hardening・580～680℃ air hardening 150～200℃ tempering

34. Chemical Component table of work materials

The name of work materials and material Symbols			Chemical Composition (%)							
			C	Si	Mn	P	S	Ni	Cr	Mo
Alloy steels for machine structural use	Nickel Chromium Molybdenum Steels	SNCM625	0.20～0.30	0.15～0.35	0.35～0.60	0.030≧	0.030≧	3.00～ 3.50	1.00～ 1.50	0.15～0.30
		SNCM630	0.25～0.35	0.15～0.35	0.35～0.60	0.030≧	0.030≧	2.50～ 3.50	2.50～ 3.50	0.50～0.70
		SNCM815	0.12～0.18	0.15～0.35	0.30～0.60	0.030≧	0.030≧	4.00～ 4.50	0.70～ 1.00	0.15～0.30
Tool steels	Chromium Tool steels	SK2	1.15～1.25	0.10～0.35	0.10～0.50	0.030≧	0.030≧	–	–	–
		SK4	0.90～1.00	0.10～0.35	0.10～0.50	0.030≧	0.030≧	–	–	–
		SK6	0.70～0.80	0.10～0.35	0.10～0.50	0.030≧	0.030≧	–	–	–
	Alloys Tool steels	SKS11	1.20～1.30	0.35≧	0.50≧	0.030≧	0.030≧	–	0.20～ 0.50	–
		SKS51	0.75～0.85	0.35≧	0.50≧	0.030≧	0.030≧	1.30～ 2.00	0.20～ 0.50	–
		SKS4	0.45～0.55	0.35≧	0.50≧	0.030≧	0.030≧	–	0.50～ 1.00	–
		SKS3	0.90～1.00	0.35≧	0.90～1.20	0.030≧	0.030≧	–	0.50～ 1.00	–
		SKS94	0.90～1.00	0.50≧	0.80～1.10	0.030≧	0.030≧	–	0.20～ 0.60	–
		SKD11	1.40～1.60	0.40≧	0.60≧	0.030≧	0.030≧	–	11.00～13.00	0.80～1.20
		SKD61	0.35～0.42	0.80～1.20	0.25～0.50	0.030≧	0.020≧	–	4.80～ 5.50	1.00～1.50
		SKT3	0.50～0.60	0.35≧	0.60～1.00	0.030≧	0.020≧	0.25～ 0.60	0.90～ 1.20	0.30～0.50
		SKT4	0.50～0.60	0.10～0.40	0.60～0.90	0.030≧	0.020≧	1.50～ 1.80	0.80～ 1.20	0.35～0.55
Stainless steels	Austenite type	SUS301	0.15≧	1.00≧	2.00≧	0.045≧	0.030≧	6.00～ 8.00	16.00～18.00	–
		SUS303	0.15≧	1.00≧	2.00≧	0.20≧	0.15≦	8.00～10.00	17.00～19.00	–
		SUS304	0.08≧	1.00≧	2.00≧	0.045≧	0.030≧	8.00～10.50	18.00～20.00	–
		SUS316	0.08≧	1.00≧	2.00≧	0.045≧	0.030≧	10.00～14.00	16.00～18.00	2.00～3.00
	Martensite type	SUS403	0.15≧	0.50≧	1.00≧	0.040≧	0.030≧	–	11.50～13.00	–
		SUS416	0.15≧	1.00≧	1.25≧	0.060≧	0.15≦	–	12.00～14.00	–
		SUS420J2	0.26～0.40	1.00≧	1.00≧	0.040≧	0.030≧	–	12.00～14.00	–
		SUS440C	0.95～1.20	1.00≧	1.00≧	0.040≧	0.030≧	–	16.00～18.00	–
	Ferrite type	SUS430	0.12≧	0.75≧	1.00≧	0.040≧	0.030≧	–	16.00～18.00	–
	Precipitation hardening	SUS630	0.07≧	1.00≧	1.00≧	0.040≧	0.030≧	3.00～ 5.00	15.00～17.50	–
Cast steels	Carbon steels Cast steels	SC360	0.20≧	–	–	0.040≧	0.040≧	–	–	–
		SC410	0.30≧	–	–	0.040≧	0.040≧	–	–	–
		SC450	0.35≧	–	–	0.040≧	0.040≧	–	–	–
		SC480	0.40≧	–	–	0.040≧	0.040≧	–	–	–
	Stainless steels casting	SCS13	0.08≧	2.00≧	2.00≧	0.040≧	0.040≧	8.00～11.00	18.00～21.00	–
		SCS14	0.08≧	2.00≧	2.00≧	0.040≧	0.040≧	10.00～14.00	17.00～20.00	2.00～3.00
	Steel casting for high temperature and high pressure	SCPH1	0.25≧	0.60≧	0.70≧	0.040≧	0.040≧	–	–	–
		SCPH2	0.30≧	0.60≧	1.00≧	0.040≧	0.040≧	–	–	–
		SCPH21	0.20≧	0.60≧	0.50～0.80	0.040≧	0.040≧	–	1.00～ 1.50	0.45～0.65
		SCPH32	0.20≧	0.60≧	0.50～0.80	0.040≧	0.040≧	–	2.00～ 2.75	0.90～1.20
	Steel casting for welded structure	SCW480	0.22≧	0.80≧	1.50≧	0.040≧	0.040≧	0.50≧	0.50≧	–

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Chemical Composition (%)					Mechanical Property of Standard test block		
					Tensile strength (N/mm^2)	Hardness	Heat treatment of standard test block
W	V	Pb	Cu	others			
–	–	–	–	–	932≦	269～321 HB	820～870℃ oil hardening・570～670℃ air hardening
–	–	–	–	–	1079≦	302～352 HB	850～950℃ normalizing・550～650℃ air hardening
–	–	–	–	–	1079≦	311～375 HB	830～880℃ Oil hardening 750～800℃ Oil hardening 150～200℃ tempering
–	–	–	–	–	–	212 HB≦	750～780℃ annealing
–	–	–	–	–	–	207 HB≦	740～760℃ annealing
–	–	–	–	–	–	201 HB≦	730～760℃ annealing
3.00～4.00	0.10～0.30	–	–	–	–	241 HB≦	780～850℃ annealing
–	–	–	–	–	–	207 HB≦	750～800℃ annealing
0.50～1.00	–	–	–	–	–	201 HB≦	740～780℃ annealing
0.50～1.00	–	–	–	–	–	217 HB≦	750～800℃ annealing
–	–	–	–	–	–	212 HB≦	740～760℃ annealing
–	0.20～0.50	–	–	–	–	255 HB≦	830～880℃ annealing
–	0.80～1.15	–	–	–	–	229 HB≦	820～870℃ annealing
–	–	–	–	–	–	235 HB≦	760～810℃ annealing
–	0.05～0.15	–	–	–	–	241 HB≦	740～800℃ annealing
–	–	–	–	–	520≦	187 HB≦	1010～1150℃ solution treatment
–	–	–	–	–	520≦	187 HB≦	
–	–	–	–	–	520≦	187 HB≦	
–	–	–	–	–	520≦	187 HB≦	
–	–	–	–	–	–	200 HB≦	800～900℃ annealing
–	–	–	–	–	–	200 HB≦	
–	–	–	–	–	–	235 HB≦	
–	–	–	–	–	–	269 HB≦	800～920℃ annealing
–	–	–	–	–	451≦	183 HB≦	780～850℃ normalizing
–	–	–	3.00～5.00	Nb0.15～0.45	–	363 HB≦	1020～1060℃ solution treatment
–	–	–	–	–	363≦	–	annealing, normalizing, or normalizing, tempering
–	–	–	–	–	412≦	–	
–	–	–	–	–	451≦	–	
–	–	–	–	–	481≦	–	
–	–	–	–	–	440≦	183 HB≦	1030～1150℃ solution treatment
–	–	–	–	–	480≦	183 HB≦	
–	–	–	–	–	412≦	–	annealing, normalizing, or normalizing, tempering
–	–	–	–	–	481≦	–	
–	–	–	–	–	481≦	–	
–	–	–	–	–	481≦	–	
–	–	–	–	–	480≦	–	

34. Chemical Component table of work materials

The name of work materials and material Symbols			Chemical Composition (%)							
			C	Si	Mn	P	S	Ni	Cr	Mo
Cast irons	Gray iron castings	FC150	—	—	—	—	—	—	—	—
		FC200	—	—	—	—	—	—	—	—
		FC250	—	—	—	—	—	—	—	—
		FC300	—	—	—	—	—	—	—	—
		FC350	—	—	—	—	—	—	—	—
Tough cast irons Ductile cast irons	Spheroidal graphite Cast irons	FCD400	2.5≧	—	—	—	0.02≧	—	—	—
		FCD450	2.5≧	—	—	—	0.02≧	—	—	—
		FCD500	2.5≧	—	—	—	0.02≧	—	—	—
		FCD600	2.5≧	—	—	—	0.02≧	—	—	—
		FCD700	2.5≧	—	—	—	0.02≧	—	—	—
High carbon chromium bearing steels		SUJ2	0.95～1.10	0.15～0.35	0.50≧	0.025≧	0.025≧	—	1.30～1.60	—
		SUJ3	0.95～1.10	0.40～0.70	0.90～1.15	0.025≧	0.025≧	—	0.90～1.20	—
		SUJ4	0.95～1.10	0.15～0.35	0.50≧	0.025≧	0.025≧	—	1.30～1.60	0.10～0.25
		SUJ5	0.95～1.10	0.40～0.70	0.90～1.15	0.025≧	0.025≧	—	0.90～1.20	0.10～0.25
Free cutting carbon steels		SUM22	0.13≧	—	0.70～1.00	0.07～0.12	0.24～0.33	—	—	—
		SUM22L	0.13≧	—	0.70～1.00	0.07～0.12	0.24～0.33	—	—	—
		SUM31	0.14～0.20	—	1.00～1.30	0.040≧	0.08～0.13	—	—	—
		SUM31L	0.14～0.20	—	1.00～1.30	0.040≧	0.08～0.13	—	—	—
		SUM42	0.37～0.45	—	1.35～1.65	0.040≧	0.08～0.13	—	—	—
Rolled steels for general structure		SS330	—	—	—	0.050≧	0.050≧	—	—	—
		SS400	—	—	—	0.050≧	0.050≧	—	—	—
		SS490	—	—	—	0.050≧	0.050≧	—	—	—
		SS540	0.30≧	—	1.60≧	0.040≧	0.040≧	—	—	—
Cold-reduced carbon steel sheets		SPCC	0.15≧	—	0.60≧	0.100≧	0.035≧	—	—	—
		SPCD	0.10≧	—	0.50≧	0.040≧	0.035≧	—	—	—
		SPCE	0.08≧	—	0.45≧	0.030≧	0.030≧	—	—	—

Chemical Composition (%)					Mechanical Property of Standard test block		
					Tensile strength (N/mm^2)	Hardness	Heat treatment of standard test block
W	V	Pb	Cu	others			
–	–	–	–	–	127～186	210～241 HB	–
–	–	–	–	–	167～235	217～255 HB	
–	–	–	–	–	216～275	229～269 HB	
–	–	–	–	–	265～304	248～269 HB	
–	–	–	–	–	314～343	269～277 HB	
–	–	–	–	–	392≦	201 HB ≧	–
–	–	–	–	–	441≦	143～217 HB	
–	–	–	–	–	490≦	170～241 HB	
–	–	–	–	–	588≦	192～269 HB	
–	–	–	–	–	686≦	229～302 HB	
–	–	–	–	–	–	201 HB ≧	spheroidizing
–	–	–	–	–	–	207 HB ≧	
–	–	–	–	–	–	201 HB ≧	
–	–	–	–	–	–	207 HB ≧	
–	–	–	–	–	–	–	–
–	–	0.10～0.35	–	–			
–	–	–	–	–			
–	–	0.10～0.35	–	–			
–	–	–	–	–			
–	–	–	–	–	330～430	–	–
–	–	–	–	–	400～510		
–	–	–	–	–	490～610		
–	–	–	–	–	540≦		
–	–	–	–	–	270≦	65 HRB ≧	Standerd thermal refining
–	–	–	–	–			
–	–	–	–	–			

34. Chemical Component table of work materials

The name of work materials and material Symbols			Chemical Composition (%)									
			Cu	Pb	Fe	Sn	Zn	Al	Mn	Ni	P	Si
Copper	Oxygen free high conductivity copper	C1020	99.96≦	—	—	—	—	—	—	—	—	—
	tough pitch copper	C1100	99.90≦	—	—	—	—	—	—	—	—	—
	Phosophor deoxidized copper	C1201	99.90≦	—	—	—	—	—	—	—	0.004～0.015	—
		C1221	99.75≦	—	—	—	—	—	—	—	0.004～0.040	—
Brass	Brass	C2600	68.5～71.5	0.05≧	0.05≧	—	remaining	—	—	—	—	—
		C2720	62.0～64.0	0.05≧	0.05≧	—	remaining	—	—	—	—	—
		C2801	59.0～62.0	0.10≧	0.07≧	—	remaining	—	—	—	—	—
	Free cutting brass	C3560	61.0～64.0	2.0～3.0	0.10≧	—	remaining	—	—	—	—	—
		C3713	58.0～62.0	1.0～2.0	0.10≧	—	remaining	—	—	—	—	—
Bras s casting		CAC201	83.0～88.0	0.5≧	0.2≧	0.1≧	11.0～17.0	0.2≧	—	0.2≧	—	—
		CAC203	58.0～64.0	0.5～3.0	0.8≧	1.0≧	30.0～41.0	0.5≧	—	1.0≧	—	—
Bronze casting		CAC401	79.0～83.0	3.0～7.0	0.35≧	2.0～4.0	8.0～12.0	—	—	1.0≧	—	—
		CAC403	86.5～89.5	1.0≧	0.2≧	9.0～11.0	1.0～3.0	—	—	1.0≧	—	—
		CAC406	83.0～87.0	4.0～6.0	0.3≧	4.0～6.0	4.0～6.0	—	—	1.0≧	—	—
Aluminum alloy	Aluminum rolling material	A1080	0.03≧	—	0.15≧	—	0.03≧	99.80≦	0.02≧	—	—	0.15≧
		A1080-H16										
		A2017	3.5～4.5	—	0.7≧	—	0.25≧	remaining	0.40～1.0	—	—	0.20～0.8
		A2017-T3										
		A3003	0.05～0.20	—	0.7≧	—	0.10≧	remaining	1.0～1.5	—	—	0.6≧
		A3003-H16										
		A5052	0.10≧	—	0.4≧	—	0.10≧	remaining	0.10≧	—	—	0.25≧
		A5052-H16										
		A6061	0.15～0.40	—	0.7≧	—	0.25≧	remaining	0.15≧	—	—	0.40～0.8
		A6061-T6										
		A7075	1.2～2.0	—	0.50≧	—	5.1～6.1	remaining	0.30≧	—	—	0.40≧
		A7075-T6										
	Aluminum alloy casting	AC2A-F	3.0～4.5	0.15≧	0.8≧	0.05≧	0.55≧	remaining	0.55≧	0.30≧	—	4.0～6.0
		AC2A-T6										
		AC2B-F	2.0～4.0	0.20≧	1.0≧	0.10≧	1.0≧	remaining	0.50≧	0.35≧	—	5.0～7.0
		AC2B-T6										
		AC4B-F	2.0～4.0	0.20≧	1.0≧	0.10≧	1.0≧	remaining	0.50≧	0.35≧	—	7.0～10.0
		AC4B-T6										
		AC4C-F	0.20≧	0.05≧	0.50≧	0.05≧	0.30≧	remaining	0.60≧	0.05≧	—	6.5～7.5
		AC4C-T6										
	Aluminum alloy diecasting	ADC10	2.0～4.0	0.2≧	1.3≧	0.2≧	1.0≧	remaining	0.5≧	0.5≧	—	7.5～9.5
		ADC12	1.5～3.5	0.2≧	1.3≧	0.2≧	1.0≧	remaining	0.5≧	0.5≧	—	9.6～12.0

Chemical Composition (%)							Mechanical Property of Standard test block		
Mg	Cr	Ti	Zr	Zr+Ti,V,Zr	Cd	others	Tensile strength (N/mm²)	Hardness	Heat treatment of standard test block
–	–	–	–	–	–	–	215～275	55～100 HV	C1020P-¼H
–	–	–	–	–	–	–	215～275	55～100 HV	C1100P-¼H
–	–	–	–	–	–	–	215～275	55～100 HV	C1201P-¼H
–	–	–	–	–	–	–	215～275	55～100 HV	C1221P-¼H
–	–	–	–	–	–	–	325～410	75～125 HV	C2600P-¼H
–	–	–	–	–	–	–	325～410	75～125 HV	C2720P-¼H
–	–	–	–	–	–	–	355～440	85～145 HV	C2801P-¼H
–	–	–	–	–	–	–	345～430	–	C3560P-¼H
–	–	–	–	–	–	–	375～460	–	C3713P-¼H
–	–	–	–	–	–	–	147≦	–	–
–	–	–	–	–	–	–	245≦	–	
–	–	–	–	–	–	impurity 2.0≧	167≦	–	–
–	–	–	–	–	–	impurity 1.0≧	245≦	–	
–	–	–	–	–	–	impurity 2.0≧	196≦	–	
0.02≧	–	0.03≧	–	–	–	–	54～94	–	annealing
							98～137	–	thermal refining
0.40～0.8	0.10≧	0.15≧	–	–	–	0.15≧	216≧	–	annealing
							373≦	–	–
–	–	–	–	–	–	0.15≧	94～127	–	annealing
							167～206	–	thermal refining
2.2～2.8	0.15～0.35	–	–	–	–	0.15≧	177～216	–	annealing
							255～304	–	thermal refining
0.8～1.2	0.04～0.35	0.15≧	–	–	–	0.15≧	147≧	–	annealing
							294≦	–	–
2.1～2.9	0.18～0.28	0.20≧	–	–	–	0.15≧	275≧	–	annealing
							530≦	–	–
0.25≧	0.15≧	0.20≧	–	–	–	–	186≦	about 75 HB	casted
							275≦	about 90 HB	–
0.50≧	0.20≧	0.20≧	–	–	–	–	157≦	about 70 HB	casted
							245≦	about 90 HB	–
0.50≧	0.20≧	0.20≧	–	–	–	–	177≦	about 80 HB	casted
							245≦	about 100 HB	–
0.2～0.4	–	0.20≧	–	–	–	–	157≦	about 55 HB	casted
							226≦	about 85 HB	–
0.3≧	–	0.3≧	–	–	–	–	–	–	–
0.3≧	–	0.3≧	–	–	–	–			

34. Chemical Component table of work materials

The name of work materials and material Symbols			Chemical Composition (%)									
			Cu	Pb	Fe	Sn	Zn	Al	Mn	Ni	P	Si
Magnesium alloy Casting	Magnesium alloy	MC1-F	0.10≧	—	—	—	2.5～3.5	5.3～6.7	0.15～0.6	0.01≧	—	0.30≧
		MC1-T6	—	—	—	—	—	—	—	—	—	—
		MC3-F	0.10≧	—	—	—	1.6～2.4	8.3～9.7	0.10～0.5	0.01≧	—	0.30≧
		MC3-T6	—	—	—	—	—	—	—	—	—	—
		MC6-T5	0.10≧	—	—	—	3.6～5.5	—	—	0.01≧	—	—
	Magnesium alloy diecasting	MDC1A	0.10≧	—	—	—	0.35～1.0	8.3～9.7	0.15≦	0.03≧	—	0.50≧
		MDC1B	0.35≧	—	0.03≧	—	0.35～1.0	8.3～9.7	0.13～0.5	0.03≧	—	0.50≧
Zinc alloy	Zinc alloy diecasting	ZDC1	0.75～1.25	0.005≧	0.10≧	0.003≧	emaining	3.5～4.3	—	—	—	—
		ZDC2	0.25≧	0.005≧	0.10≧	0.003≧	emaining	3.5～4.3	—	—	—	—

■Category and brevity code of thermoplastic resin

name	symbol
ASB resin	ASB
Acetal resin	POM
Methacrylic resin	PMMA
Acetyl cellulose	CA
Tetrafluoride ethylene resin	PTFE
Trifluoride ethylene resin	PCTEF
Hexafluoride ethylene resin	PFEP
Fluoride vinyl resin	PVF
Fluoride vinyliden resin	PVDF
Ethylene tetrafluoride ethylene copolymer	ETFE
Ionomer	IO
Methyl Benzene polyme	MPP
Nylon (Polyamide)	PA
Polycarbonate	PC
Polyethylene	PE

name	symbol
Polyethylene tephthalate	PETP
Polyethylene telephthalate	PBTP
Polyimid	PI
Polyphenylene oxide	PPO
Polyphenylene sulfide	PPS
Polyalysulfone	PASF
Polyarlylate	PAR
Polypropylene	PP
Polystyrene	PS
Polysulfone	PSF
Vinyl acetate resin	PVAC
Vinylidene chloride fiber	PVDC
AS resin	SAN
Vinyl chloride resin	PVC

・Thermoplastic resin : As temperature rises, this resin becomes soft → gammy → fluidity liquid. For example, polystyrene (PS) is like glass at normal temperature. From 60℃ and higher its elastic modules decreases, from 110℃ it becomes gammy, and higher than 170℃, it becomes sticky paste.

Chemical Composition (%)							Mechanical Property of Standard test block		
Mg	Cr	Ti	Zr	Zr+Ti,V,Zr	Cd	others	Tensile strength (N/mm²)	Hardness	Heat treatment of standard test block
remaining	–	–	–	–	–	–	177≦	–	Casted
–	–	–	–	–	–	–	235≦		–
remaining	–	–	–	–	–	–	157≦		Casted
–	–	–	–	–	–	–	235≦		–
remaining	–	–	0.50～1.0	–	–	–	235≦		–
remaining	–	–	–	–	–	–	–	–	–
remaining	–	–	–	–	–	–			
0.020～0.06	–	–	–	–	0.004≧	–	–	–	–
0.020～0.06	–	–	–	–	0.004≧	–			

■Kinds of thermosetting plastics and symbols

name	symbol
Alkyd resin	Alk
Allyl resin	DAP
Urea resin	UF
Melamine resin	MF
Epoxy resin	EP

name	symbol
Phenol resin	PF
Unsaturated polyester resin	UP
Silicone resin	SI
Polyurethane	PUR

・Thermosetting resin : Heated at 80 ℃, it becomes sticky paste with fluidity. Then it is injected into the mould under pressure. Once hardened, the plastics does not get soft owing to polymer processing.

35. Materials used for Cutting Tools

■Materials

We have been seeking the best materials used for cutting tools since the company establishment because the performance of tools are depending on the selection of materials used. Major materials used in our company are listed below.

(1) Taps	● HSS :	Equivalent to SKH58, SKH51, SKH56 Powder HSS (SKH10, High Vanadium High cobalt material)
	● Carbide :	Cemented Carbide Materials of ultra micro grain
(2) Dies	● HSS :	SKH51, SKH56
	● Alloy Tool Steel :	SKS2, SKS21, SKS3, SKS31
(3) Center Drills and Centering Tools	● HSS :	SKH51, SKH56 Powder HSS (SKH10, High Vanadium High cobalt material)
	● Carbide :	Cemented Carbide Materials of ultra micro grain

※For product's improvement, material may be changed without notice.

■Circumstance of tools' materials

Tensile strength, heat resistance, corrosion resistance and accuracy are the important features required of tool’ s materials. These requirements have been changing due to miniaturization and lightening of parts.

And manufacturing methods, as well, have been changing because of necessity of economical efficiency such as saving process/cycle time while parts become hard-to-machine type and their hardness increases.

As a result, the demand of industrial tools by users has become very tough.

For example, higher wear resistance and chipping resistance are required in the area of hardness, and heavy cutting process or high-speed cutting are required in the area of cycle time.

Moreover, product accuracy with its rigidity, laborsaving brought by uniformity, and systematic reliability are highly required.

Therefore, technological improvement of tool steels never stops developing so that they satisfy users needs.

○The major materials used for taps are already listed in the chart, but those materials are ready to develop from conventional alloy tool steels and current high speed steel into next generation materials such as cemented carbide and cermet materials.

New materials are developed even in high-speed tool steel area, such as SKH51 and SKH58 from SKH2, and they are moving into high performance materials, such as high vanadium, cobalt, and powder HSS made of high vanadium and high cobalt contents.

○As the material for round dies, were alloy tool steels mostly used because of the relationship with the use of adjustable round dies. However, for the hard-to-machine material. die material has been shifted into High Speed Steel.

○Major materials for center drills and centering tools are high speed steel materials, but they have been shifting to cobalt type or even cemented carbide from SKH51.

We keep on seeking to develop our technology to meet user's needs and are trying to find the best materials in collaboration with steel manufacturers.

■Chemical composition of the materials specified in JIS

Classification	Symbols	Chemical composition									
		C	Si	Mn	P	S	Cr	Mo	W	V	Co
W type HSS	SKH 2	0.73～0.83	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	—	17.20～18.70	1.00～1.20	—
	SKH 3	0.73～0.83	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	—	17.00～19.00	0.80～1.20	4.50～ 5.50
	SKH 4	0.73～0.83	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	—	17.00～19.00	1.00～1.50	9.00～11.00
	SKH10	1.45～1.60	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	—	11.50～13.50	4.20～5.20	4.20～ 5.20
Mo type HSS	SKH51	0.80～0.88	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	4.70～ 5.20	5.90～ 6.70	1.70～2.10	—
	SKH52	1.00～1.10	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	5.50～ 6.50	5.90～ 6.70	2.30～2.80	—
	SKH53	1.15～1.25	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	4.70～ 5.20	5.90～ 6.70	2.70～3.20	—
	SKH54	1.25～1.40	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	4.20～ 5.00	5.20～ 6.00	3.70～4.20	—
	SKH55	0.87～0.95	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	4.70～ 5.20	5.90～ 6.70	1.70～2.10	4.50～ 5.00
	SKH56	0.85～0.95	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	4.70～ 5.20	5.90～ 6.70	1.70～2.10	7.00～ 9.00
	SKH57	1.20～1.35	≦0.45	≦0.4	≦0.030	≦0.030	3.80～4.50	3.20～ 3.90	9.00～10.00	3.00～3.50	9.50～10.50
	SKH58	0.95～1.05	≦0.7	≦0.4	≦0.030	≦0.030	3.50～4.50	8.20～ 9.20	1.50～ 2.10	1.70～2.20	—
	SKH59	1.05～1.15	≦0.7	≦0.4	≦0.030	≦0.030	3.50～4.50	9.00～10.00	1.20～ 1.90	0.90～1.30	7.50～ 8.50

Classification	Symbols	Usage	Cross chart		
			AISI	VDEH	ISO
W type HSS	SKH 2	Tools for general cutting and other kinds of tools.	T 1	S18-0-1	S1 (HS18-0-1)
	SKH 3	Tools for high speed heavy cutting and other kinds of tools.	T 4	S18-1-2-5	S7 (HS18-1-1-5)
	SKH 4	Tools for cutting hard -to-machine materials and other kinds of tools.	T 5	S18-1-2-10	S6 (HS18-0-1-10)
	SKH10	Tools for cutting ultra hard-to-machine materials and other kinds of tools.	T15	—	S9 (HS12-1-5-5)
Mo type HSS	SKH51	General cutting tools from which toughness is particularly required, and other kinds of tools.	M 2	S6-5-2	S4 (HS6-5-2)
	SKH52	Tools for cutting high hardness material from which comparatively high toughness is required and other kinds of tools.	M 3-1	—	—
	SKH53		M 3-2	S6-5-3	S5 (HS6-5-3)
	SKH54	Tools for cutting ultra hard-to-machine materials and other kinds of tools.	M 4	—	—
	SKH55	High speed cutting tools from which comparatively high toughness is required and other kinds of tools.	M35	S6-5-2-5	S8 (HS6-5-2-5)
	SKH56		M36	—	—
	SKH57	Tools for cutting ultra hard-to-machine materials and other kinds of tools.	—	S10-4-3-10	S10 (HS10-4-3-10)
	SKH58	General cutting tools from which toughness is particularly required, and other kinds of tools.	M 7	S2-9-2	S2 (HS2-9-2)
	SKH59	High speed heavy cutting tools from which comparatively high toughness is required, and other kinds of tools.	M42	S2-10-1-8	S11 (HS2-9-1-8)

The standard of HSS material is specified in JIS. But there are many HSS materials which standard is not specified in JIS. Recently even the kind of HSS-P is getting wider and various. Besides, SKH10, SKH53, SKH57 and their equivalents, such Hi vanadium/hi cobalt material as contains 4-12% vanadium and 8-11% cobalt is now being manufactured. Material engineering will be developed rapidly in the future. Under such situation, there can be many cases where JIS symbols are not used, and the use of larger classification and their symbols is getting popular.

Searching table by product name

	Code No.	Product name	Page No.
A	ASH	AL+SP	SP–51
	ASHM	AL-SP Metric	SP–51
C	C1	CD-S (I)	CE–5
	C2	CD-S (II)	CE–29
	CC∗∗∗Q	C-CD-Q	CE–21
	CCD	C-CD-S	CE–9
	CCDL	C-CD-SL (L-100)	CE–14
	CCDM	C-CD-SL (L-150)	CE–14
	CCL∗∗∗Q	C-CD-QL (L-100)	CE–24
	CCM∗∗∗Q	C-CD-QL (L-150)	CE–24
	CD	CD-SL	CE–11
	CE	CE-S	CE–2
	CE∗∗∗RI	CEIR	CE–25
	CE1	CE-S (I)	CE–3
	CE2	CE-S (II)	CE–28
	CEA	CESA	CE–1
	CEA∗∗∗Q	CEQA	CE–15
	CEB	CESB	CE–27
	CEC	CESC	CE–30
	CEL	CE-SL (L-100)	CE–10
	CEM	CE-SL (L-150)	CE–10
	CEN	CE-SL (L-200)	CE–10
	CL∗∗∗Z	CE-QL (L-100)	CE–22
	CM∗∗∗Z	CE-QL (L-150)	CE–22
	CPCS	CPC-S	ST–29
	CPCT	CPC-T	ST–31
	CPRS	CPR-S	ST–32
	CPRT	CPR-T	ST–34
	CPRY∗∗∗∗	Check Pins for Bored Holes for R-Y	ST–36
	CS∗∗∗Q	CS-Q	CE–57
	CS∗∗∗QM	CS-QM	CE–58
	CS–D	NC-SD	CE–55
	CS–G∗∗∗2∗J	CS-G(20°, L-57)	CE–59
	CS–G∗∗∗2∗K	CS-G(20°, L-70)	CE–59
	CS–G∗∗∗2∗LS	CS-G(20°, L-100)	CE–59
	CS–G∗∗∗3∗J	CS-G(30°, L-57)	CE–59
	CS–G∗∗∗3∗K	CS-G(30°, L-70)	CE–59
	CS–G∗∗∗3∗LS	CS-G(30°, L-100)	CE–59
	CSLCN	MC-CSLC Metric	MC–1
	CSLCX∗∗∗∗G	MC-CSLC For Parallel Pipe Threads	MC–3
	CSLCX∗∗∗∗R	MC-CSLC For Taper Pipe Threads	MC–2
	CY	CD-S	CE–4
	CY∗∗∗–L	CD-S LH	CE–6
	CY∗∗∗Q	CD-Q	CE–17
	CY∗∗∗Q∗L	CD-Q LH	CE–18
	CY∗∗∗R	CD-R	CE–26
	CY∗∗∗Z	CE-Q	CE–16
D	DA	RD-DA	Di–27
	DC	RD-DC	Di–25
	DH	RD-DH	Di–24
E	EHC	EH-CT	CT–13
	EPHM	EH-PO	PO–33
	ESHM	E-SP	SP–45
	ETHM	EH-HT	HT–55
F	FCPF	FC-PF	Pipe–42
	FCPT	FC-PT	Pipe–24
	FCSPT	FC-S-PT	Pipe–25

	Code No.	Product name	Page No.
G	GMHRP	MS+TR	ST–5
	GYE∗∗∗∗DNEBC	D LH Metric 20mm OD	Di–10
	GYEW∗∗∗DNEBC	D LH Whitworth Threads 20mm OD	Di–10
	GYG∗∗∗∗DNEBC	D LH Metric 25mm OD	Di–10
	GYGU∗∗∗DNEBC	D LH Unified Threads 25mm OD	Di–10
	GYGW∗∗∗DNEBC	D LH Whitworth Threads 25mm OD	Di–10
	GYJ∗∗∗∗DNEBC	D LH Metric 38mm OD	Di–10
	GYJU∗∗∗DNEBC	D LH Unified Threads 38mm OD	Di–10
	GYJW∗∗∗DNEBC	D LH Whitworth Threads 38mm OD	Di–10
	GYJPF∗∗∗NEBC	D PF LH 38mm OD	Di–14
	GYJPT∗∗∗NEBC	D PT LH 38mm OD	Di–17
	GYM∗∗∗∗DNEBC	D LH Metric 50mm OD	Di–10
	GYMU∗∗∗DNEBC	D LH Unified Threads 50mm OD	Di–10
	GYMW∗∗∗DNEBC	D LH Whitworth Threads 50mm OD	Di–10
	GYMPF∗∗∗NEBC	D PF LH 50mm OD	Di–14
	GYMPT∗∗∗NEBC	D PT LH 50mm OD	Di–17
	GYR∗∗∗∗DNEBC	D LH Metric 63mm OD	Di–10
	GYRPF∗∗∗NEBC	D PF LH 63mm OD	Di–14
	GYRPT∗∗∗NEBC	D PT LH 63mm OD	Di–17
	GYU∗∗∗∗DNEBC	D LH Metric 75mm OD	Di–10
	GYUPF∗∗∗NEBC	D PF LH 75mm OD	Di–14
	GYUPT∗∗∗NEBC	D PT LH 75mm OD	Di–17
H	HDASP	HDASP	SP–69
	HDISL	HDISL	SL–13
	HDISP	HDISP	SP–68
	HFACTB	HFACT-B	CT–18
	HFACTP	HFACT-P	CT–17
	HFAHS	HFAHS	SP–66
	HFASP	HFASP	SP–67
	HFICTB	HFICT-B	CT–20
	HFICTP	HFICT-P	CT–19
	HFIHS	HFIHS	SP–64
	HFISP	HFISP	SP–65
	HI	IHT	HT–2
	HLCN	MC-HLC Metric	MC–4
	HLCX∗∗∗∗G	MC-HLC For Parallel Pipe Threads	MC–6
	HLCX∗∗∗∗R	MC-HLC For Taper Pipe Threads	MC–5
	HPS∗∗∗∗–B	HPsRZ	ST–3
	HRZ	HP+RZ/HP-RZ Metric	RO–20
	HRZM∗U	HP-RZ Unified Threads	RO–20
I	ITDM	SITD	ST–23
	ITM	SIT	ST–17
J	JC2	JO-CDS Old JIS Type2	CE–36
	JCCY	JO-C-CDS	CE–37
	JCE	JO-CES	CE–32
	JCS∗∗∗QM9	JO-CSQM	CE–42
	JCY	JO-CDS	CE–34
	JH1∗∗∗M	JO HOLDER for 150mm	CE–43
	JH1∗∗∗N	JO HOLDER for 200mm	CE–43
	JPE	JO-PEQ	CE–38
	JVCE	JO-CES V	CE–33
	JVCPE	JO-C-PEQ V	CE–40
	JVCS–D	JO-NCSD V	CE–41
	JVCY	JO-CDS V	CE–35
	JVPE	JO-PEQ V	CE–39
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	L10P	LS-PS (L-100)	Pipe–31
	L10T	LS-PT (L-100)	Pipe–7

Searching table by product name

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	L15P	LS-PS (L-150)	Pipe-31
	L15T	LS-PT	Pipe-7
	LCPT	LC-PT	Pipe-18
	LCSPT	LC-S-PT	Pipe-19
	LSHM＊＊＊＊＊15	LO-SP 15°	SP-55
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	JO–CDS V	Joint- Low Helix Center Drills-Type A 60°, Coated	CE–35
	JO–CDS(II)	Joint- Low Helix Center Drills-Type B 60°, (Old JIS Type 2)	CE–36
	JO–CES	Joint- High Helix Center Drills-Type A 60°	CE–32

Alphabet of product name

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	JO-CSQM	Joint- Countersinks 90°, Drilling Machine Use	CE-42
	JO-HOLDER	Holders for Joint Tools, for 150mm	CE-43
	JO-HOLDER	Holders for Joint Tools, for 200mm	CE-43
	JO-NCSD V	Joint- NC Starting Drills for Beveling, Coated	CE-41
	JO-PEQ	Joint- Point Drills 90°	CE-38
	JO-PEQ V	Joint- Point Drills 90°, Coated	CE-39
L	LA-HT	Hand Taps for Die Cast Materials	HT-40
	LA-O	Hand Taps for Die Cast Materials	HT-42
	LC-PT	Hand Taps for Taper Pipe Threads Long (lg) Type, for Low Carbon Steels	Pipe-18
	LC-S-PT	Hand Taps for Taper Pipe Threads Short (lg) Type, for Low Cabon Steels	Pipe-19
	LO-SP	Low Spiral Fluted Taps	SP-55
	LS-F-SL	Long Shank Spiral Fluted Taps for High Speed Tapping, Through Hole Use (with LH spiral flutes)	SL-12
	LS-F-SP	Long Shank Spiral Fluted Taps for High Speed Tapping	SP-63
	LS-HT	Long Shank Hand Taps	HT-21
	LS-HT LH	Long Shank Hand Taps for Left Hand Threads	HT-29
	LS-HT V	Long Shank Hand Taps, Coated	HT-31
	LS-INT-PT	Long Shank Interrupted Taps for Taper Pipe Threads, Long (lg) Type	Pipe-16
	LS-INT-S-PT	Long Shank Interrupted Taps for Taper Pipe Threads, Short (lg) Type	Pipe-17
	LS-LO-SP	Long Shank Low Spiral Fluted Taps	SP-56
	LS-N-CT	Long Shank Carbide Taps	CT-8
	LS-N-RS	Long Shank Thread Forming Taps for Non-Ferrous Materials	RO-14
	LS-N-RZ	Long Shank Thread Forming Taps for Steels	RO-7
	LS-NPT	Long Shank Hand Taps for American Taper Pipe Threads	Pipe-46
	LS-NPTF	Long Shank Hand Taps for American Dryseal Taper Pipe Threads	Pipe-52
	LS-PF	Long Shank Hand Taps for Parallel Pipe Threads	Pipe-38
	LS-PM-PO	Long Shank Spiral Pointed Taps for Hard-to-Machine Materials	PO-36
	LS-PM-SP	Long Shank Spiral Fluted Taps for Hard-to-Machine Materials	SP-61
	LS-PO	Long Shank Spiral Pointed Taps	PO-17
	LS-PO V	Long Shank Spiral Pointed Taps, Coated	PO-21
	LS-PO-K	Long Shank Spiral Pointed Taps with Neck	PO-22
	LS-PS	Long Shank Taps for Parallel Pipe Threads	Pipe-31
	LS-PT	Long Shank Hand Taps for Taper Pipe Threads Long (lg) Type	Pipe-7
	LS-S-PT	Long Shank Hand Taps for Taper Pipe Threads, Short (lg) Type	Pipe-8
	LS-SP	Long Shank Spiral Fluted Taps	SP-26
	LS-SP LH	Long Shank Spiral Fluted Taps for Left Hand Threads	SP-30
	LS-SP V	Long Shank Spiral Fluted Taps, Coated	SP-31
	LS-SP-K	Long Shank Spiral Fluted Taps with Neck	SP-32
	LS-SP-PF	Long Shank Spiral Fluted Taps for Parallel Pipe Threads	Pipe-40
	LS-SP-PS	Long Shank Spiral Fluted Taps for Parallel Pipe Threads	Pipe-33
	LS-SP-PT	Long Shank Spiral Fluted Taps for Taper Pipe Threads, Long (lg) Type	Pipe-12
	LS-SP-S-NPT	Long Shank Hand Taps for American Taper Pipe Threads, Short (lg) Type	Pipe-48
	LS-SP-S-PT	Long Shank Spiral Fluted Taps for Taper Pipe Threads, Short (lg) Type	Pipe-13
	LS-SU-S-PO	Long Shank Short Spiral Pointed Taps for Stainless Steels	PO-26
	LS-SU-S-SP	Long Shank Spiral Fluted Taps for Stainless Steels, Deep Hole Use	SP-42
M	MC-AD-CT	Carbide Taps with Oil Hole	CT-11
	MC-CSLC	Carbide Thread Mills	MC-1
	MC-HLC	Thread Mills	MC-4
	MC-HT	Hand Taps with Internal Coolant Hole	HT-52
	MC-PO	Spiral Pointed Taps with Internal Coolant Hole	PO-32
	MC-SP	Spiral Fluted Taps with Internal Coolant Hole	SP-57
	MG-HT	Hand Taps with Short Chamfer for Magnesium Alloy Castings	HT-47
	MHCDS	Center Drills for Carbon Steels of Middle Hardness for Running at High Speed	CE-61
	MHSL	Spiral Fluted Taps for Carbon Steels of middle hardness, Through Hole Use (with LH spiral flutes)	SL-15
	MS-RS-D	Rolling Dies	Di-21
	MS+RS	Roll Taps for Miniature Threads	ST-3
	MS+TR	Hand Taps for Miniature Screw Threads	ST-5

	Symbol	Application	Page No.
N	N-CT FC	Carbide Taps for Cast Irons	CT-4
	N-CT LA	Carbide Taps for Light Alloys/Carbide Taps for Helical Coil Wire Screw Thread Inserts	CT-1
	N-CT-PO	Spiral Pointed Carbide Taps	CT-10
	N-CT-SP	Spiral Fluted Carbide Taps	CT-9
	N-RS	Thread Forming Taps for Non-Ferrous Materilas / Thread Forming Taps for Helical Coil Wire Screw Thread Inserts	RO-8
	N-RSD	New Rolling Dies	Di-23
	N-RZ	Thread Forming Taps for Steels	RO-2
	N+RS	Thread Forming Taps for Non-Ferrous Materials	RO-8
	N+RZ	Thread Forming Taps for Steels	RO-2
	NC-SD	NC Starting Drills for Center Positioning (125°)	CE-55
	NC-SD V	NC Starting Drills for Bevelling (90°), Coated	CE-55
	NPS	Hand Taps for American Parallel Pipe Threads	Pipe-53
	NPSF	Hand Taps for American Dryseal Parallel Pipe Threads	Pipe-54
	NPT	Hand Taps for American Taper Pipe Threads	Pipe-44
	NPTF	Hand Taps for American Dryseal Taper Pipe Threads	Pipe-51
	NT	Nut Taps	ST-1
O	OL-RZ	Thread Forming Taps for Dry Tapping, Coated	RO-18
	OL+RZ	Thread Forming Taps for Dry Tapping, Coated	RO-18
P	PE-Q	Point Drills 90°	CE-46
	PE-Q V	Point Drills 90°, Coated	CE-47
	PE-QL V	Long Shank Point Drills 90°, Coated	CE-49
	PE-S	Point Drills 60°	CE-50
	PE-S V	Point Drills 60°, Coated	CE-51
	PE-SL V	Long Shank Point Drills 60°, Coated	CE-53
	PF	Hand Taps for Parallel Pipe Threads	Pipe-36
	PF LH	Hand Taps for Parallel Pipe Threads, for LH Threads	Pipe-37
	PL1	Hand Taps for Plastics	HT-51
	PM-PO	Spiral Pointed Taps for Hard-to-Machine Materials	PO-35
	PM-SP	Spiral Fluted Taps for Hard-to-Machine Materials	SP-60
	PO	Spiral Pointed Taps	PO-3
	PO LH	Spiral Pointed Taps for Left Hand Threads	PO-14
	PO OX	Spiral Pointed Taps, Oxided	PO-11
	PO V	Spiral Pointed Taps, Coated	PO-16
	PS	Hand Taps for Parallel Pipe Threads	Pipe-29
	PS LH	Hand Taps for Parallel Pipe Threads, for LH Threads	Pipe-30
	PT	Hand Taps for Taper Pipe Threads, Long (lg) Type	Pipe-2
	PT LH	Hand Taps for Taper Pipe Threads Long (lg) Type for LH Threads	Pipe-3
	PT-X	X Series Hand Taps for Taper Pipe Threads Short (lg) Type	Pipe-4
R	R-Y	Thread Forming Taps for Thin Soft Structural Steel Sheets	RO-1
	R+V	Thread Forming Taps, Coated	RO-16
	Rc	Hand Taps for Taper Pipe Threads	Pipe-1
	RD-DA	Die Attachment (for Solid Dies)	Di-27
	RD-DC	Die Collets for Die Holders	Di-25
	RD-DH	Die Holders for Solid Dies	Di-24
	RLS-HT	Hand Taps for Camera Release Threads	ST-8
	Rp	Hand Taps for Parallel Pipe Threads	Pipe-28
	RS-D	Rolling Dies	Di-21
S	S-NPT	Hand Taps for American Taper Pipe Threads, Short (lg) Type	Pipe-45
	S-PO	Short Spiral Pointed Taps for Deep Hole Use	PO-27
	S-PT	Hand Taps for Taper Pipe Threads Short (lg) Type	Pipe-5
	S-PT LH	Hand Taps for Taper Pipe Threads Short (lg) Type for LH Threads	Pipe-6
	S-SP	Short Spiral Fluted Taps, Deep Hole Use	SP-43
	SA	Shank Adjusters	ST-37
	SC-TL-RZ	Torqueless Thread Forming Taps with short chamfer	RO-23
	SIT	Simple Thread Inspection Tools	ST-17
	SITD	Simple Thread Inspection Tools, Tandem Type	ST-23
	SP	Spiral Fluted Taps	SP-3

Alphabet of product name

	Symbol	Application	Page No.
S	SP 1.5P	Spiral Fluted Taps 1.5P	SP-11
	SP LH	Spiral Fluted Taps for Left Hand Threads	SP-20
	SP OX	Spiral Fluted Taps, Oxided	SP-16
	SP TRI	Spiral Fluted Taps for Tripod Threads	ST-7
	SP V	Spiral Fluted Taps, Coated	SP-22
	SP-NPT	Spiral Fluted Taps for American Taper Pipe Threadse	Pipe-47
	SP-PF	Spiral Fluted Taps for Parallel Pipe Threads	Pipe-39
	SP-PS	Spiral Fluted Taps for Parallel Pipe Threads	Pipe-32
	SP-PT	Spiral Fluted Taps for Taper PipeThreads, Long (lg) Type	Pipe-9
	SP-PT-X	X Series Spiral Fluted Taps for Taper Pipe Threads Short (lg) Type	Pipe-11
	SP-S-PT	Spiral Fluted Taps for Taper Pipe Threads Short (lg) Type	Pipe-10
	SU-HT	Hand Taps for Stainless Steels	HT-33
	SU-PF	Taps for Parallel Pipe Threads, for Stainless Steels	Pipe-41
	SU-PO	Spiral Pointed Taps for Stainless Steels	PO-23
	SU-PT	Hand Taps for Taper Pipe Threads Long (lg) Type, for Stainless Steels	Pipe-20
	SU-S-PT	Hand Taps for Taper Pipe Threads Short (lg) Type, for Stainless Steels	Pipe-21
	SU-S-SP	Spiral Fluted Taps for Stainless Steels, Deep Hole Use	SP-41
	SU-SP	Spiral Fluted Taps for Stainless Steels	SP-33
	SU-SP-PT	Spiral Fluted Taps for Taper Pipe Threads, Long (lg) Type for Stainless Steels	Pipe-22
	SU-SP-S-PT	Spiral Fluted Taps for Taper Pipe Threads Short (lg) Type for Stainless Steels	Pipe-23
	SU+PO	Spiral Pointed Taps for Stainless Steels	PO-23
	SU+SL	Spiral Fluted Taps for Stainless Steels, Through Hole Use (with LH spiral flutes)	SL-7
	SU+SP	Spiral Fluted Taps for Stainless Steels	SP-33
	SU2-SP	Spiral Fluted Taps for Tough Stainless Steels	SP-39
	SURZ	SU Thread Forming Taps	RO-25
	SUXSL	X Series Spiral Fluted Taps for Stainless Steels, Through Hole Use (with LH spiral flutes)	SL-9
	SUXSP	X Series Spiral Fluted Taps for Stainless Steels	SP-38
U	UH-CT	Carbide Taps for Ultra Hard Materials	CT-15
X	XSL	X Series Spiral Fluted Taps, Through Hole Use (with LH spiral fl utes)	SL-1
	XSP	X Series Spiral Fluted Taps	SP-15
Z	ZEN-B	Spiral Fluted Taps for Nickel Base Alloys	SP-59
	ZEN-P	Spiral Pointed Taps for Nickel Base Alloys	PO-34
	ZET-B	Spiral Fluted Taps for Titanium Alloys	SP-58
	ZET-P	Spiral Fluted Taps for Titanium Alloys, Through Hole Use (with LH spiral flutes)	SL-10
+	+PO	Plus Series Spiral Pointed Taps	PO-10
	+PO OX	Plus Series Spiral Pointed Taps Oxided	PO-13
	+SP	Plus Series Spiral Fluted Taps	SP-13
	+SP OX	Plus Series Spiral Fluted Taps Oxided	SP-19

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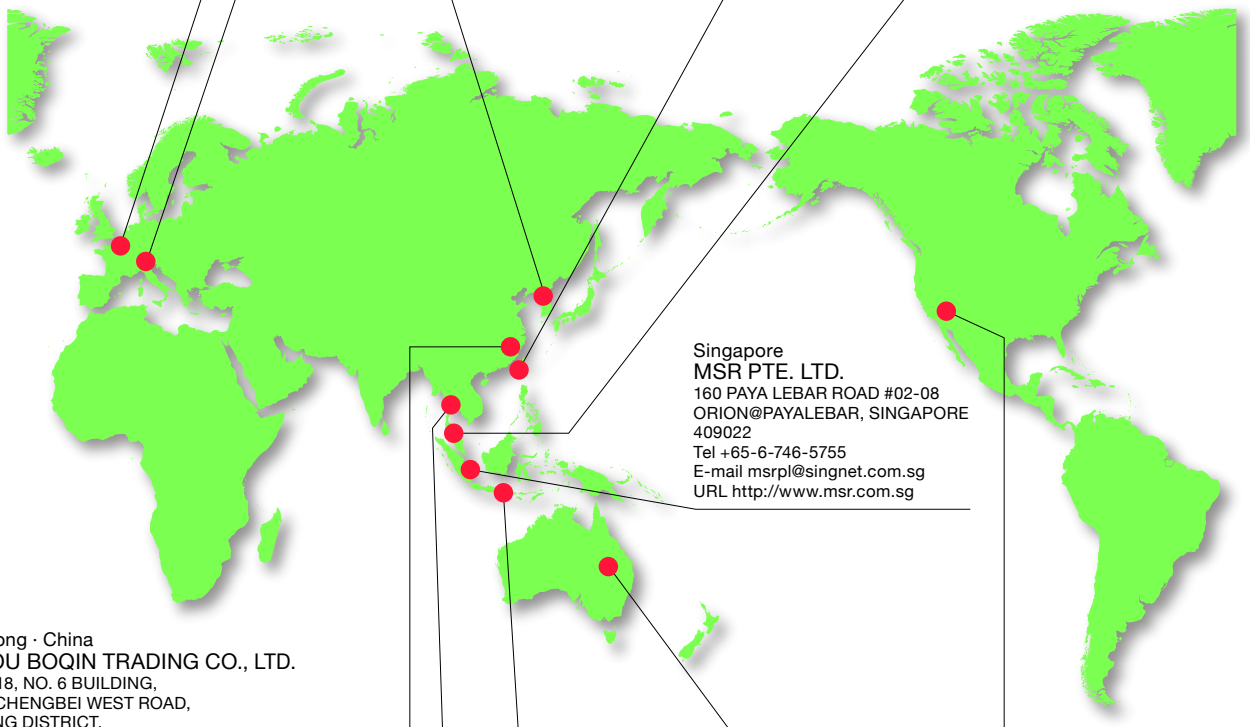

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Yonezawa Plant (ISO9001 : 1996)
(ISO14001 : 2003)

Yonezawa is the main manufacturing plant of the Yamawa Group, this location is equipped with production lines and is the Quality Control Center. The plant obtained ISO 9001 certification in 1996. Of the four Yamawa plants, the Yonezawa location has the longest history of manufacturing and the highest production capacity. Products include roll taps, spiral pointed, pipe and hand taps. The Yonezawa Plant stepped ahead of our competitors by receiving ISO 9001 before any other cutting tool manufacturing in Japan.

Fukushima Plant (ISO9001 : 2000)
(ISO14001 : 2002)

The Fukushima plant provides both tap production lines and in-house facilities for the manufacturing of specialized production machine tools to produce the exceptional high quality cutting tools. This plant develops and manufactures special tap and die production equipment. It also supplies these machines to our other manufacturing sites. Products include spiral fluted taps, dies and combined drills/countersinks as well as production machinery.

Aizu Plant (ISO9001 : 2000)
(ISO14001 : 2002)

Equipped with the most sophisticated machine tools available, this plant is famous for its automation and robotized labor saving manufacturing processes. The plant is designed for mass production of the highest quality cutting tools and screw thread tools. Products include spiral fluted taps and carbide taps.

Tsutsumi Plant (ISO9001 : 2011)
(ISO14001 : 2011)

The Tsutsumi plant is the main tool blank manufacturing operation of Yamawa group. This location is also the testing center where Yamawa executes the innovation in metal machining and performance tests of the products for the Yamawa group.

Head Office (ISO9001 : 2012)
(ISO14001 : 2003)

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