

Micro Turning

For internal small part machining

For internal turning, grooving, and
threading of tiny bores down to 2.0mm



Advantages

- These tools are made for the high-tech, medical and small component industry.
- These tools in different outer diameters adapted for different machine types. The assortment also consists of shank holders for internal machining.
- These tools locate precisely into the boring bar thanks to a locating pin which locks the insert into correct orientation.
- All grooving inserts produce grooves with flat bottom and sharp corner radius.

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Micro Turning Tools

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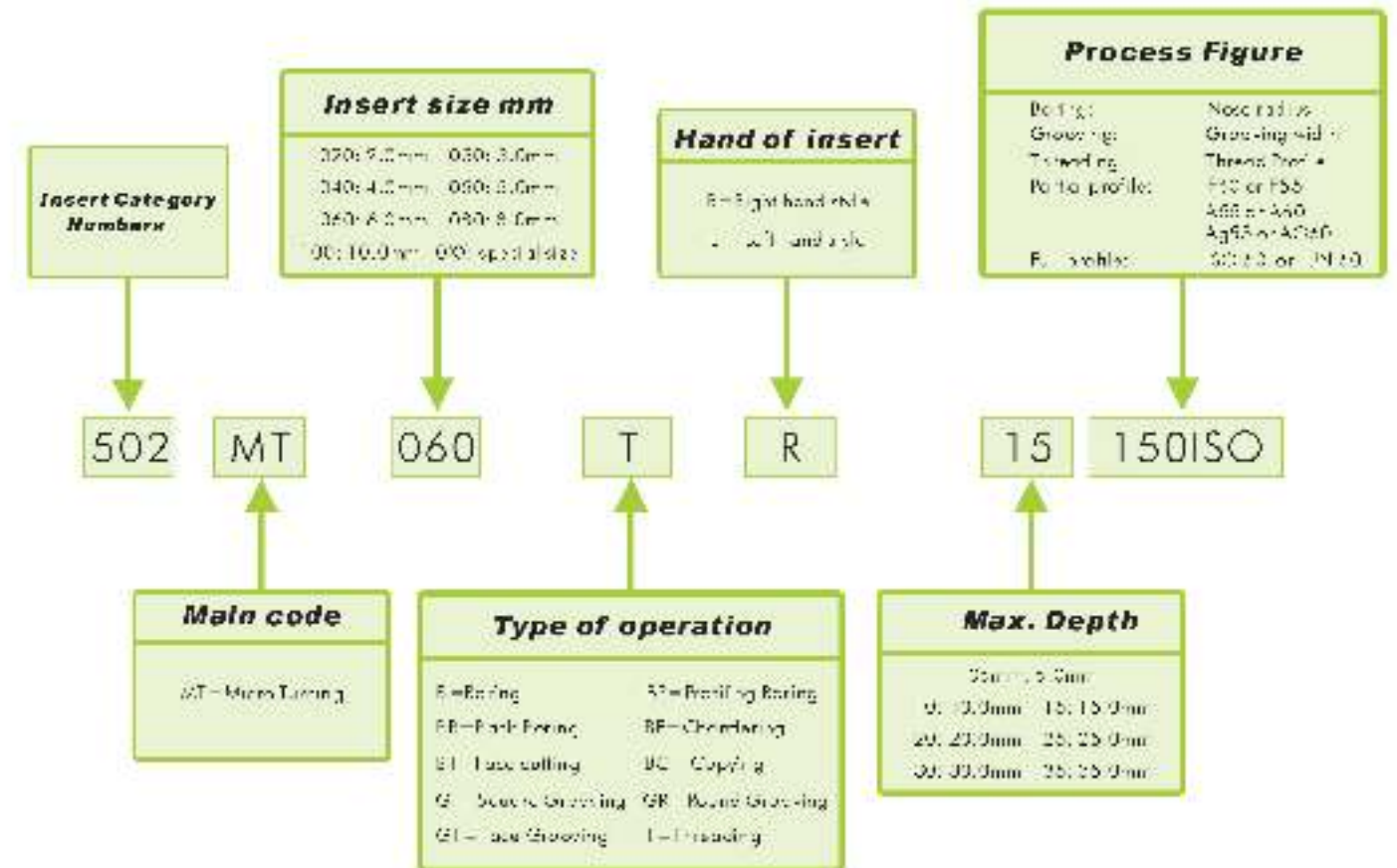
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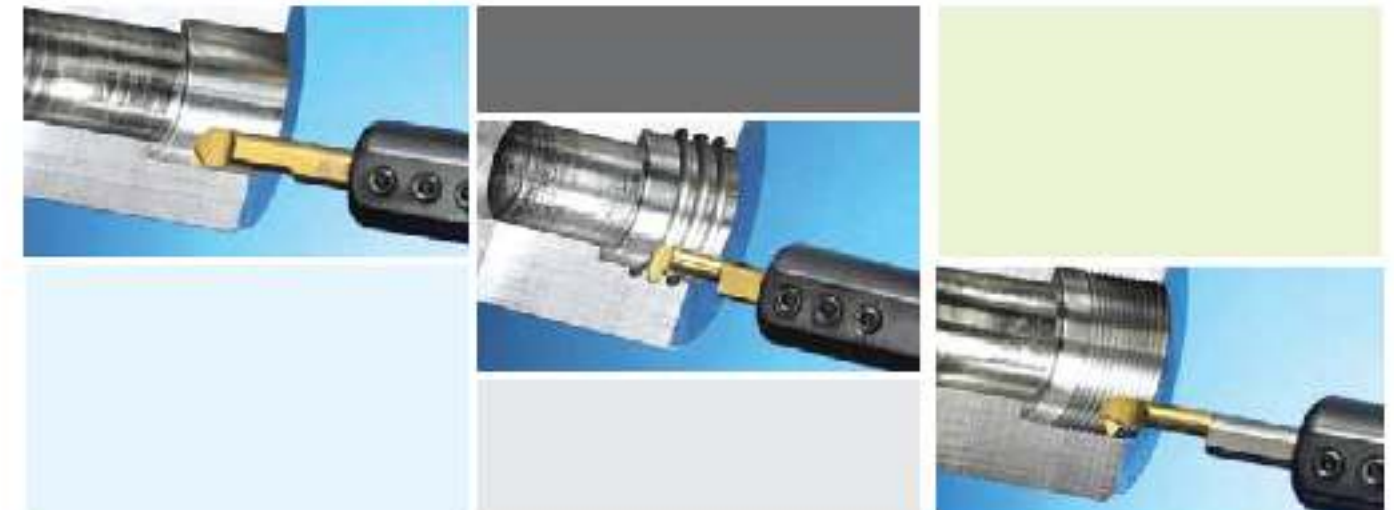
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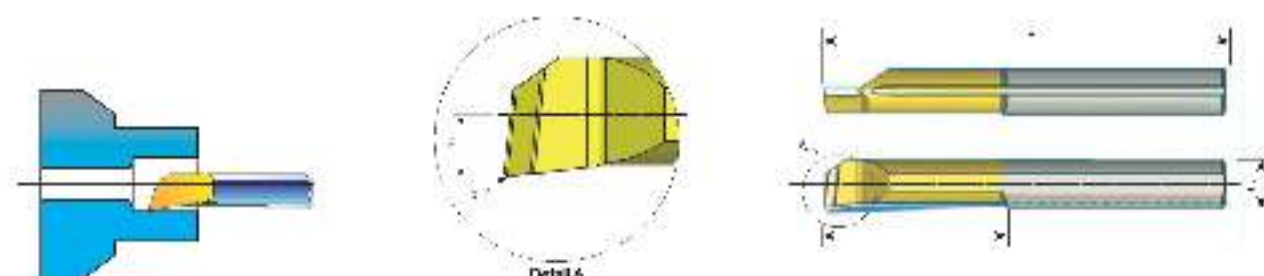
Code Key for Micro Turning Tools



Machining Types

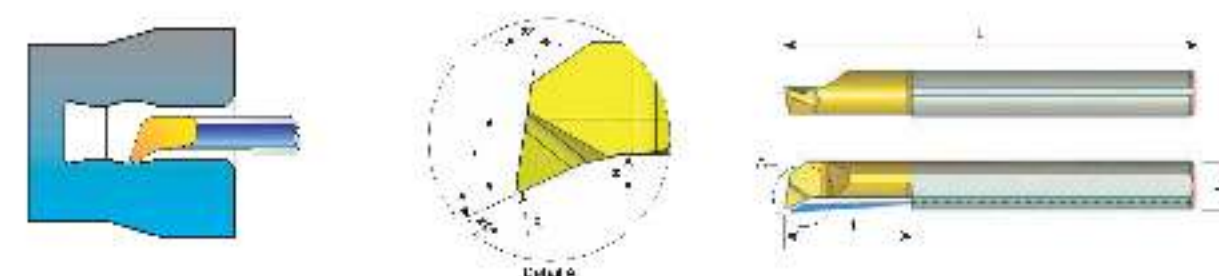


BORING and PROFILING 502 Type



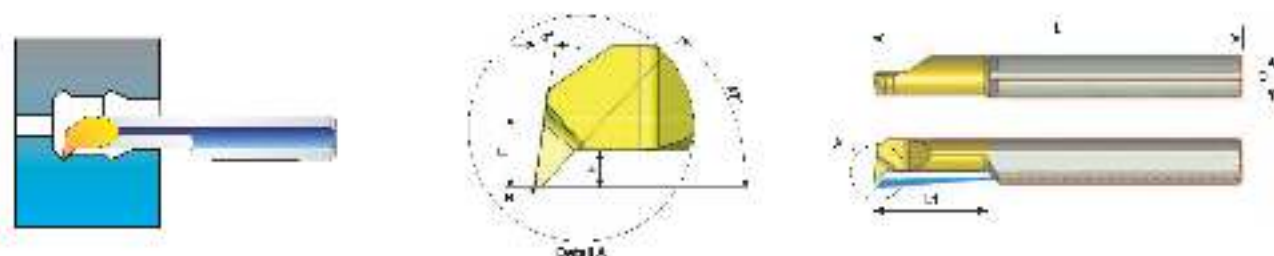
Designation	F	D mm	L1	L2	L3	R
502-MT010-BR/1.0-RC.05	0.50	1.0	3.0	4	30	0.05
502-MT015-BR/1.5-RC.10	0.70	1.5	3.0	4	30	0.10
502-MT020-BR/2.0-RC.15	0.80	2.0	3.0	5	30	0.15
502-MT025-BR/2.5-RC.15				10	35	
502-MT030-BR/3.0-RC.05	1.30	3.0	3.0	10	35	0.05
502-MT030-BR/3.0-RC.15				15	45	
502-MT040-BR/4.0-RC.20				10	35	0.20
502-MT040-BR/4.0-RC.20				15	45	
502-MT040-BR/4.0-RC.20	1.70	4.0	4.0	15	45	0.20
502-MT040-BR/4.0-RC.20				20	50	
502-MT050-BR/5.0-RC.20				10	40	0.20
502-MT050-BR/5.0-RC.20	2.10	5.0	5.0	15	45	0.20
502-MT050-BR/5.0-RC.20				20	50	
502-MT050-BR/5.0-RC.20				30	60	
502-MT060-BR/6.0-RC.20	2.90	6.0	6.0	15	45	0.20
502-MT060-BR/6.0-RC.20				20	50	
502-MT060-BR/6.0-RC.20				30	60	
502-MT060-BR/6.0-RC.20	3.80	8.0	8.0	20	70	0.20
502-MT060-BR/6.0-RC.20				30	70	
502-MT100-BR/10.0-RC.20	4.80	10.0	10.0	15	45	0.20
502-MT100-BR/10.0-RC.20				25	70	
502-MT100-BR/10.0-RC.20				35	90	

BORING and PROFILING 502 Type



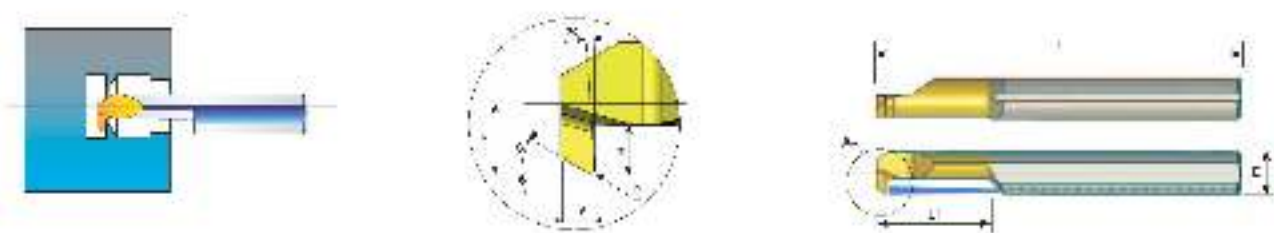
Designation	F	D mm	L1	L2	L3	R
502-MT010-BR/1.0-RC.05	0.50	1.0	3.0	4	30	0.05
502-MT015-BR/1.5-RC.10	0.70	1.5	3.0	4	30	0.10
502-MT020-BR/2.0-RC.15	0.80	2.0	3.0	5	30	0.15
502-MT025-BR/2.5-RC.15				10	35	
502-MT030-BR/3.0-RC.05	1.30	3.0	3.0	10	35	0.05
502-MT030-BR/3.0-RC.15				15	45	
502-MT040-BR/4.0-RC.20				10	35	0.20
502-MT040-BR/4.0-RC.20				15	45	
502-MT040-BR/4.0-RC.20	1.70	4.0	4.0	15	45	0.20
502-MT040-BR/4.0-RC.20				20	50	
502-MT050-BR/5.0-RC.20				10	40	0.20
502-MT050-BR/5.0-RC.20	2.10	5.0	5.0	15	45	0.20
502-MT050-BR/5.0-RC.20				20	50	
502-MT060-BR/6.0-RC.20	2.90	6.0	6.0	15	45	0.20
502-MT060-BR/6.0-RC.20				20	50	
502-MT060-BR/6.0-RC.20				30	60	
502-MT060-BR/6.0-RC.20	3.80	8.0	8.0	20	70	0.20
502-MT060-BR/6.0-RC.20				30	70	
502-MT100-BR/10.0-RC.20	4.80	10.0	10.0	15	45	0.20
502-MT100-BR/10.0-RC.20				25	70	
502-MT100-BR/10.0-RC.20				35	90	

BORING and PROFILING 502 Type



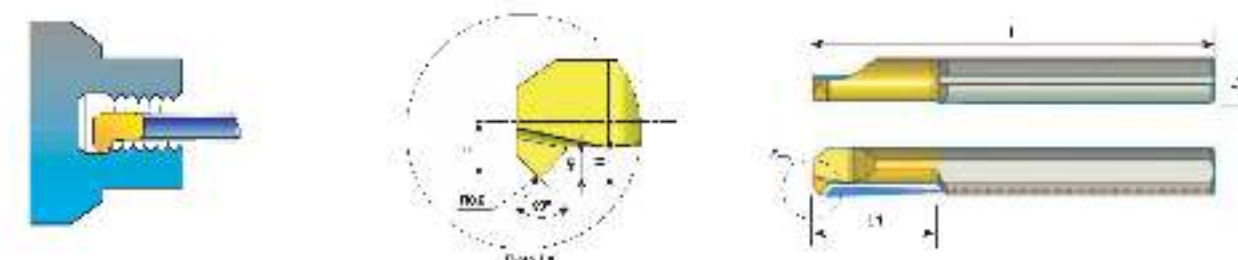
Designation	F	Depth	D	L	R	H	HT
502.MT040BCP/L 10 R0.20	1.00	4.0	4.0	10	30	0.20	0.60
502.MT040BCP/L 15 R0.20				15	40		
502.MT040BCP/L 20 R0.20				20	50		
502.MT050BCP/L 10 R0.20	1.50	5.0	5.0	10	40	0.20	1.00
502.MT050BCP/L 15 R0.20				15	50		
502.MT050BCP/L 20 R0.20				20	60		
502.MT060BCP/L 10 R0.20	2.00	6.0	6.0	10	40	0.20	1.40
502.MT060BCP/L 15 R0.20				15	50		
502.MT060BCP/L 20 R0.20				20	60		
502.MT080BCP/L 20 R0.20	3.00	8.0	8.0	20	60	0.20	1.60
502.MT080BCP/L 30 R0.20				30	70		

BORING and PROFILING 502 Type



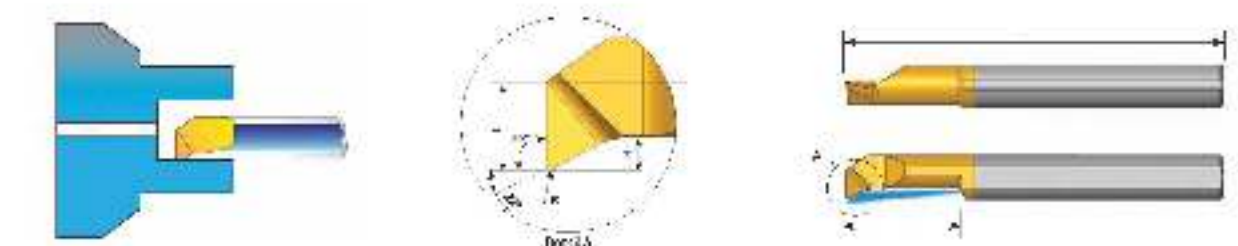
Designation	F	Depth	D	L	R	H	HT
502.MT030BTR/L 10 R0.10	1.00	3.0	3.0	10	35	0.10	0.70
502.MT030BTR/L 15 R0.10				15	45		
502.MT040BTR/L 10 R0.15	1.60	4.0	4.0	10	35	0.15	0.60
502.MT040BTR/L 15 R0.15				15	45		
502.MT040BTR/L 20 R0.15				20	50		
502.MT050BTR/L 10 R0.20	2.20	5.0	5.0	10	40	0.20	1.00
502.MT050BTR/L 15 R0.20				15	45		
502.MT050BTR/L 20 R0.20				20	50		
502.MT060BTR/L 10 R0.20	2.80	6.0	6.0	10	40	0.20	1.80
502.MT060BTR/L 15 R0.20				15	45		
502.MT060BTR/L 20 R0.20				20	50		

BORING and PROFILING 502 Type



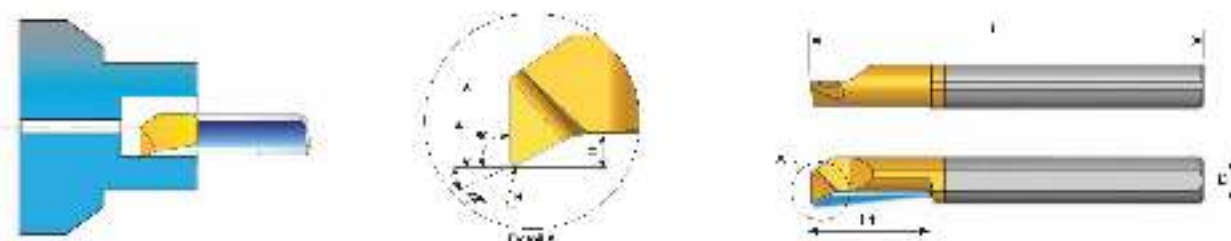
Designation	F	Depth	D	L	R	H	HT
502.MT030BTR/L 10 R0.20	1.00	3.0	3.0	10	35	0.20	0.60
502.MT030BTR/L 15 R0.20				15	45		
502.MT040BTR/L 10 R0.20				10	35		
502.MT040BTR/L 15 R0.20	1.70	4.0	4.0	15	45	0.20	0.60
502.MT040BTR/L 20 R0.20				20	50		
502.MT050BTR/L 10 R0.20				10	40		
502.MT050BTR/L 15 R0.20	2.10	5.0	5.0	15	45	0.20	1.20
502.MT050BTR/L 20 R0.20				20	50		
502.MT060BTR/L 10 R0.20				10	40		
502.MT060BTR/L 15 R0.20	2.80	6.0	6.0	15	45	0.20	0.70
502.MT060BTR/L 20 R0.20				20	50		

BORING and PROFILING 502 Type



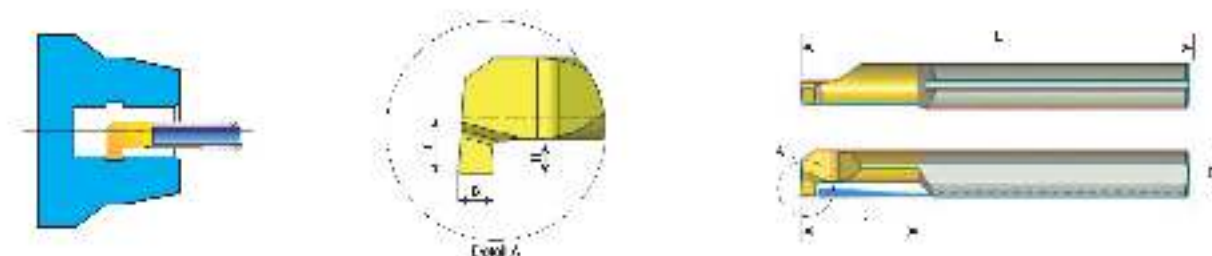
Designation	F	Depth	D	L	R	H	HT
502.MT030BTR/L 10 R0.05	1.30	3.0	3.0	10	35	0.05	0.40
502.MT030BTR/L 15 R0.05				15	45		
502.MT040BTR/L 10 R0.10				10	35		
502.MT040BTR/L 15 R0.10	1.70	4.0	4.0	15	45	0.10	0.50
502.MT040BTR/L 20 R0.10				20	50		
502.MT050BTR/L 10 R0.15				10	40		
502.MT050BTR/L 15 R0.15	2.00	5.0	5.0	15	45	0.15	0.70
502.MT050BTR/L 20 R0.15				20	50		

BORING and PROFILING 502 Type



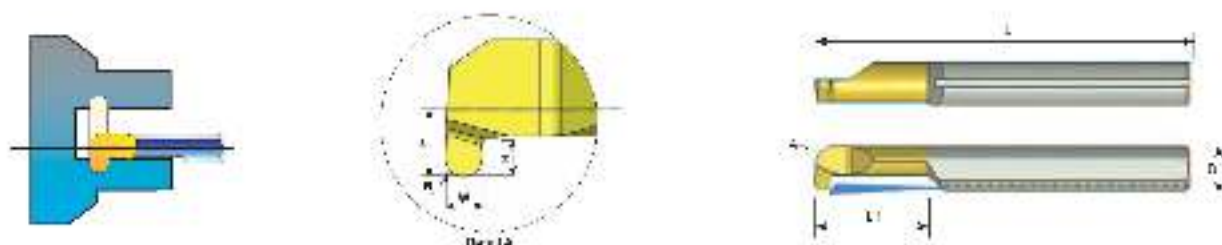
Designation	F	D _{max}	D	L1	L	E	H
502.MT000GR/ 10-R0.15	2.60	6.1	5.0	10	40	3.15	0.90
502.MT000GR/ 15-R0.15				15	45		
502.MT000GR/ 20-R0.15				20	50		
502.MT000GR/ 10-R0.20	3.80	8.1	9.0	10	45	3.20	1.0
502.MT000GR/ 15-R0.20				20	60		
502.MT000GR/ 30-R0.20				30	70		
502.MT1000TR/ 15-R0.20	4.60	10.1	10.0	15	60	3.20	1.30
502.MT1000TR/ 25-R0.20				25	70		
502.MT1000TR/ 35-R0.20				35	80		

GROOVING 502 Type



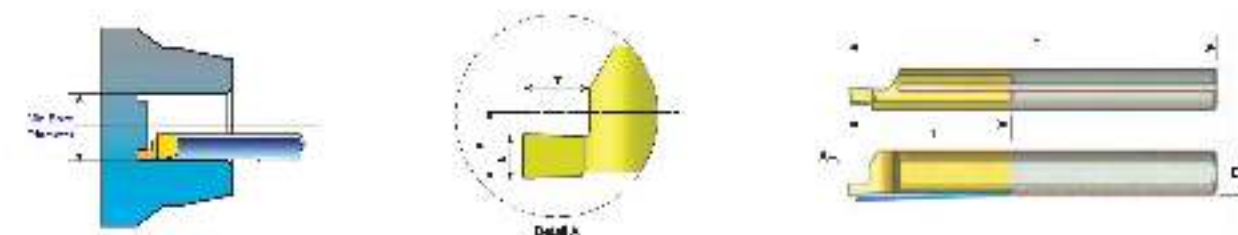
Designation	F	D _{max}	D	L1	L	E	H
502.MT000GR/ 10-R1.00	1.40	3.2	3.0	10	35	3.0	0.80
502.MT000GR/ 15-R1.00				15	45		
502.MT000GR/ 10-R1.50				10	35		
502.MT000GR/ 15-R1.50				15	45		
502.MT000GR/ 10-R1.00				10	35		
502.MT000GR/ 15-R1.00				15	45		
502.MT000GR/ 10-R1.50	1.60	4.2	4.0	10	35	3.0	1.40
502.MT000GR/ 15-R1.50				15	45		
502.MT000GR/ 10-R2.00				10	35		
502.MT000GR/ 15-R2.00				15	45		
502.MT000GR/ 10-R1.00				10	35		
502.MT000GR/ 15-R1.00				15	45		
502.MT000GR/ 10-R1.00	2.30	5.2	5.0	10	35	3.0	1.50
502.MT000GR/ 15-R1.00				15	45		
502.MT000GR/ 10-R1.50				10	35		
502.MT000GR/ 15-R1.50				15	45		
502.MT000GR/ 10-R2.00				10	35		
502.MT000GR/ 15-R2.00				15	45		
502.MT000GR/ 10-R1.00	2.70	6.2	6.0	10	35	3.0	1.80
502.MT000GR/ 15-R1.00				15	45		
502.MT000GR/ 10-R1.50				10	35		
502.MT000GR/ 15-R1.50				15	45		
502.MT000GR/ 10-R2.00				10	35		
502.MT000GR/ 15-R2.00				15	45		
502.MT000GR/ 10-R1.00	3.70	8.2	8.0	10	35	3.0	2.50
502.MT000GR/ 15-R1.00				15	45		
502.MT000GR/ 10-R1.50				10	35		
502.MT000GR/ 15-R1.50				15	45		
502.MT000GR/ 10-R2.00				10	35		
502.MT000GR/ 15-R2.00				15	45		
502.MT000GR/ 10-R1.00	4.70	10.2	10.0	10	35	3.0	3.50
502.MT000GR/ 15-R1.00				15	45		
502.MT000GR/ 10-R1.50				10	35		
502.MT000GR/ 15-R1.50				15	45		
502.MT000GR/ 10-R2.00				10	35		
502.MT000GR/ 15-R2.00				15	45		

GROOVING 502 Type



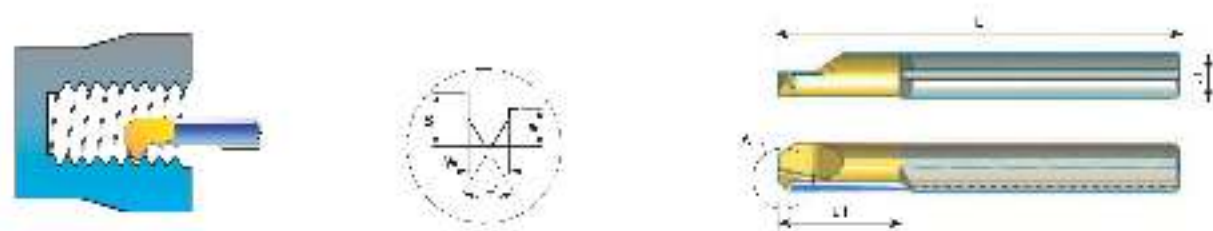
Designation	F	Depth	D	L	L	W	H
502.MT030G33/L 10-W080	1.0	0.2	0.0	10	35	0.80	0.80
502.MT030G33/L 15-W080				15	45		
502.MT040G33/L 10-W100				10	35		
502.MT040G33/L 20-W100				20	50		
502.MT050G33/L 10-W100	1.90	1.2	4.0	10	35	1.50	1.00
502.MT050G33/L 20-W100				20	50		
502.MT050G33/L 10-W100				10	35		
502.MT050G33/L 20-W100				20	50		
502.MT050G33/L 10-W100	2.30	3.2	5.0	10	40	1.50	1.50
502.MT050G33/L 20-W100				20	50		
502.MT050G33/L 10-W200				10	40		
502.MT050G33/L 20-W200				20	50		
502.MT060G33/L 10-W100	2.90	6.2	6.0	10	40	1.50	1.50
502.MT060G33/L 20-W100				20	50		
502.MT060G33/L 10-W200				10	40		
502.MT060G33/L 20-W200				20	50		
502.MT080G33/L 10-W100	3.90	8.2	8.0	10	40	2.00	2.00
502.MT080G33/L 20-W100				20	50		
502.MT080G33/L 10-W200				10	40		
502.MT080G33/L 20-W200				20	50		
502.MT100G33/L 10-W100	4.90	10.2	10.0	10	40	2.00	2.00
502.MT100G33/L 20-W100				20	50		
502.MT100G33/L 10-W200				10	40		
502.MT100G33/L 20-W200				20	50		

GROOVING 502 Type



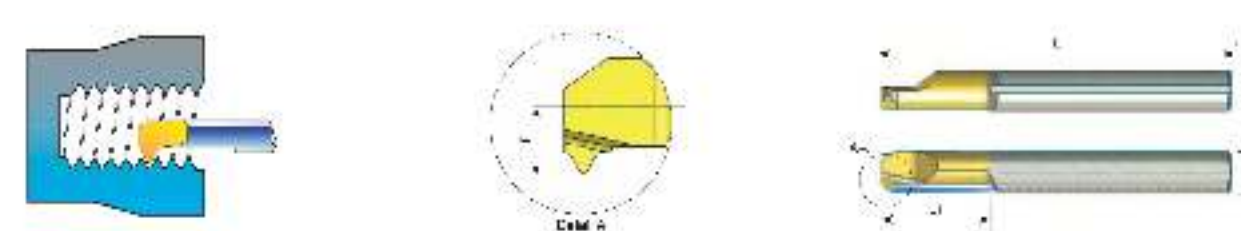
Designation	F	Depth	D	L	L	W	H
502.MT040G33/L 10-W080	1.0	0.2	0.0	10	35	0.80	0.80
502.MT040G33/L 15-W080				15	45		
502.MT040G33/L 10-W100				10	35		
502.MT040G33/L 20-W100				20	50		
502.MT050G33/L 10-W100	1.90	1.2	4.0	10	35	1.50	1.00
502.MT050G33/L 20-W100				20	50		
502.MT050G33/L 10-W100				10	35		
502.MT050G33/L 20-W100				20	50		
502.MT050G33/L 10-W200	2.30	3.2	5.0	10	40	1.50	1.50
502.MT050G33/L 20-W200				20	50		
502.MT050G33/L 10-W200				10	40		
502.MT050G33/L 20-W200				20	50		
502.MT060G33/L 10-W100	2.90	6.2	6.0	10	40	1.50	1.50
502.MT060G33/L 20-W100				20	50		
502.MT060G33/L 10-W200				10	40		
502.MT060G33/L 20-W200				20	50		
502.MT080G33/L 10-W100	3.90	8.2	8.0	10	40	2.00	2.00
502.MT080G33/L 20-W100				20	50		
502.MT080G33/L 10-W200				10	40		
502.MT080G33/L 20-W200				20	50		
502.MT100G33/L 10-W100	4.90	10.2	10.0	10	40	2.00	2.00
502.MT100G33/L 20-W100				20	50		
502.MT100G33/L 10-W200				10	40		
502.MT100G33/L 20-W200				20	50		

THREADING 502 Type



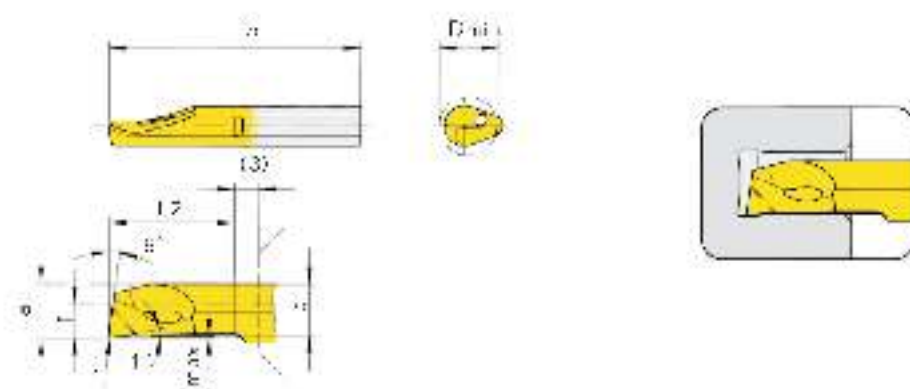
Description	mm	mm	D	L1	L	φ	W	H	Feed Range mm/rev	Feed Range mm/rev
502.MT020TR/L 15-050	1.00	2.1	2.0	10	35	60°	1.2	1.2	0.20-1.0	72-24
502.MT020TR/L 15-055						55°				
502.MT030TR/L 15-060	1.43	3.0	3.0	15	45	60°			0.20-1.0	72-24
502.MT030TR/L 15-055						55°				
502.MT030TR/L 15-A60	1.40	1.2				60°	2.0	2.0	0.5-1.0	56-24
502.MT030TR/L 15-A55						55°				
502.MT040TR/L 15-060	1.95	4.3				60°	1.2	2	0.20-1.0	72-24
502.MT040TR/L 15-055						55°				
502.MT040TR/L 15-A60	1.90	4	4.0	15	45	60°	2.0	2.0	0.5-1.0	48-24
502.MT040TR/L 15-A55						55°				
502.MT050TR/L 15-A60	2.30	5.1	5.0	15	50	60°	2.0	2.2	0.5-1.25	48-20
502.MT050TR/L 15-A55						55°				
502.MT060TR/L 15-A60	2.90	6.2	6.0	15	50	60°			0.5-1.5	48-16
502.MT060TR/L 15-A55						55°				
502.MT060TR/L 20-AC60	3.50	8.1	3.0	20	60	60°			1.0-2.0	24-13
502.MT060TR/L 20-AG55						55°				
502.MT060TR/L 20-AC60	4.50	10.1	10.0	20	70	60°	3.4	3.6	1.0-3.0	24-8
502.MT060TR/L 20-AG60						55°				

THREADING 502 Type



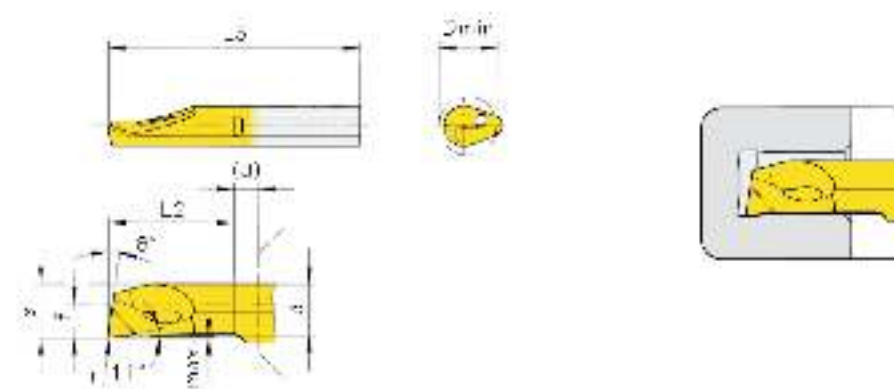
Description	mm	mm	D	L1	L	φ	W	H	Feed Range mm/rev	Feed Range mm/rev
502.MT050TR/L 15-050ISO										
502.MT050TR/L 15-075ISO										
502.MT050TR/L 15-050UN	1.75	3.7	3.0	10	45					
502.MT050TR/L 15-050UN										
502.MT040TR/L 15-050ISO	1.95	1.3								
502.MT040TR/L 15-075ISO	.80	1.2								
502.MT040TR/L 15-050ISO	.65	1.0	1.0	15	45					
502.MT040TR/L 15-050UN	.65	1.0								
502.MT040TR/L 15-050UN	.90	4.2								
502.MT040TR/L 15-050UN	.85	1.3								
502.MT050TR/L 15-050ISO	2.45	5.2								
502.MT050TR/L 15-075ISO	2.40	5								
502.MT050TR/L 15-100ISO	2.95	1.5	5.0	15	50					
502.MT050TR/L 15-050UN	2.40	5.1								
502.MT050TR/L 15-050UN	2.45	5.9								
502.MT060TR/L 15-100ISO										
502.MT060TR/L 15-075ISO										
502.MT060TR/L 15-150ISO	2.95	5.2	6.0	15	50					
502.MT060TR/L 15-150UN										
502.MT060TR/L 15-150UN										

BORING and PROFILING 503 Type



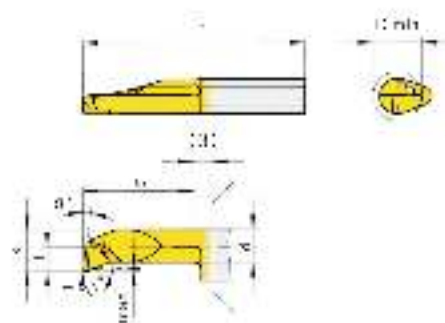
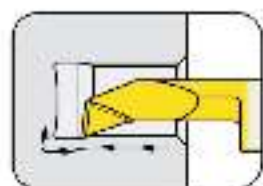
Stroke (mm)	Designation	L	D (mm)	R	R2	R3	R4	R5	Rmax	
4.0	503 MT034BR/ 10-30.05	1.50	4.0	3.7	3.4	10	25	0.05		
	503 MT034BR/ 15-30.05					15	30			
	503 MT034BR/ 20-30.05					20	35			
	503 MT034BR/ 25-30.05					25	40			
	503 MT034BR/ 10-30.20					10	25	0.20		
	503 MT034BR/ 15-30.20					15	30			
	503 MT034BR/ 20-30.20					20	35			
	503 MT034BR/ 25-30.20					25	40			
	503 MT044BR/ 10-30.05					10	25	0.05		
	503 MT044BR/ 15-30.05					15	30			
	503 MT044BR/ 20-30.05					20	35			
	503 MT044BR/ 25-30.05					25	40			
5.0	503 MT044BR/ 30-30.05	2.50	5.0	4.7	4.4	30	50	0.05	0.10	
	503 MT044BR/ 35-30.05					35	55			
	503 MT044BR/ 40-30.05					40	60			
	503 MT044BR/ 45-30.05					45	65			
	503 MT044BR/ 10-30.20					10	25	0.20		
	503 MT044BR/ 15-30.20					15	30			
	503 MT044BR/ 20-30.20					20	35			
	503 MT044BR/ 25-30.20					25	40			
	503 MT044BR/ 30-30.20					30	50	0.15		
	503 MT044BR/ 35-30.20					35	55			
	503 MT044BR/ 40-30.20					40	60			
	503 MT044BR/ 45-30.20					45	65			
6.0	503 MT054BR/ 10-30.05	3.00	6.0	5.7	5.4	10	25	0.05	0.05	
	503 MT054BR/ 15-30.05					15	30			

BORING and PROFILING 503 Type



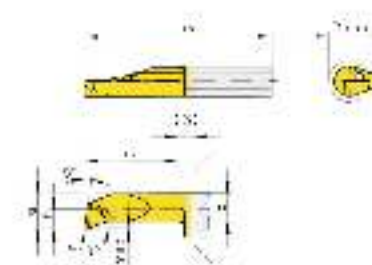
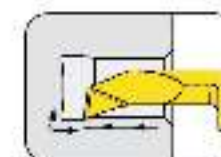
Stroke (in)	Designation	L	D (in)	R	R2	R3	R4	R5	Rmax
6.0	503 MT054BR/ 20-R0.05	3.30	6.0	5.7	5.4	20	35	0.05	0.15
	503 MT054BR/ 25-R0.05					25	40		
	503 MT054BR/ 30-R0.05					30	45		
	503 MT054BR/ 35-R0.05					35	50		
	503 MT054BR/ 10-R0.20					10	25	0.20	
	503 MT054BR/ 15-R0.20					15	30		
	503 MT054BR/ 20-R0.20					20	35		
	503 MT054BR/ 25-R0.20					25	40		
	503 MT054BR/ 30-R0.20					30	45	0.20	
	503 MT054BR/ 35-R0.20					35	50		
7.0	503 MT061BR/ 10-R0.20	4.10	6.8	6.4	6.1	10	25	0.20	
	503 MT061BR/ 15-R0.20					15	30		
	503 MT061BR/ 20-R0.20					20	35		
	503 MT061BR/ 25-R0.20					25	40		
	503 MT061BR/ 30-R0.20					30	45		
	503 MT061BR/ 35-R0.20					35	50		

BORING and PROFILING 503 Type



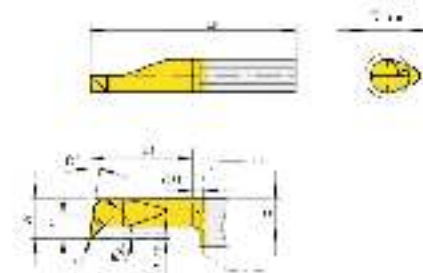
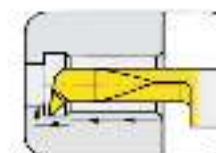
Shank Dia	Description	L	d min	d	α	β	γ	γ _{max}
3.0	503.MTC23FR/L 10-R0.05					10	25	0.05
	503.MTC23FR/L 15-R0.05					15	30	
	503.MTC23FR/L 20-R0.05					20	35	
	503.MTC23FR/L 25-R0.10					25	40	
	503.MTC23FR/L 30-R0.10	1.00	3.0	2.6	2.0	10	25	0.10
	503.MTC23FR/L 35-R0.10					15	30	
	503.MTC23FR/L 40-R0.10					20	35	
	503.MTC23FR/L 45-R0.20					25	40	
4.0	503.MTC23FR/L 10-R0.05					10	25	0.05
	503.MTC23FR/L 15-R0.05					15	30	
	503.MTC23FR/L 20-R0.05					20	35	
	503.MTC23FR/L 25-R0.10					25	40	
	503.MTC23FR/L 30-R0.10	1.00	4.0	3.7	2.0	10	25	0.10
	503.MTC23FR/L 35-R0.10					15	30	
	503.MTC23FR/L 40-R0.10					20	35	
	503.MTC23FR/L 45-R0.20					25	40	
5.0	503.MTC40FR/L 10-R0.05					10	25	0.05
	503.MTC40FR/L 15-R0.05					15	30	
	503.MTC40FR/L 20-R0.05					20	35	
	503.MTC40FR/L 25-R0.10					25	40	
	503.MTC40FR/L 30-R0.10	2.00	5.0	4.7	2.0	10	25	0.10
	503.MTC40FR/L 35-R0.10					15	30	
	503.MTC40FR/L 40-R0.10					20	35	
	503.MTC40FR/L 45-R0.20					25	40	

BORING and PROFILING 503 Type



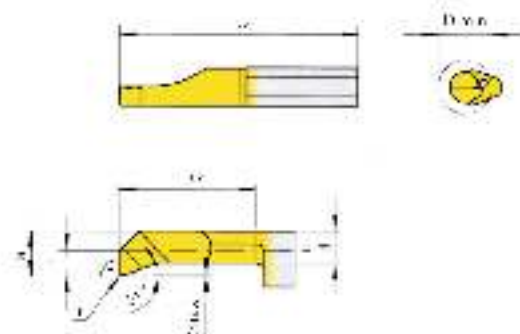
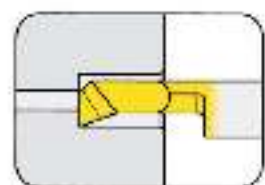
Shank Dia	Description	L	d min	d	α	β	γ	γ _{max}
5.0	503.MTC40FR/L 10-R0.20						20	30
	503.MTC40FR/L 15-R0.20						25	35
	503.MTC40FR/L 20-R0.20						30	40
	503.MTC40FR/L 25-R0.25						35	45
	503.MTC40FR/L 30-R0.25	2.00	5.0	4.7	4.0		20	30
	503.MTC40FR/L 35-R0.25						25	35
	503.MTC40FR/L 40-R0.25						30	40
	503.MTC40FR/L 45-R0.30						35	45
6.0	503.MTC47FR/L 10-R0.05						20	30
	503.MTC47FR/L 15-R0.05						25	35
	503.MTC47FR/L 20-R0.05						30	40
	503.MTC47FR/L 25-R0.05						35	45
	503.MTC47FR/L 30-R0.05	3.00	6.0	5.7	4.7		20	30
	503.MTC47FR/L 35-R0.05						25	35
	503.MTC47FR/L 40-R0.05						30	40
	503.MTC47FR/L 45-R0.10						35	45
7.0	503.MTC57FR/L 10-R0.05						20	30
	503.MTC57FR/L 15-R0.05						25	35
	503.MTC57FR/L 20-R0.05						30	40
	503.MTC57FR/L 25-R0.05						35	45
	503.MTC57FR/L 30-R0.05	4.00	7.0	6.7	5.2		20	30
	503.MTC57FR/L 35-R0.05						25	35
	503.MTC57FR/L 40-R0.05						30	40
	503.MTC57FR/L 45-R0.10						35	45

BORING and PROFILING 503 Type



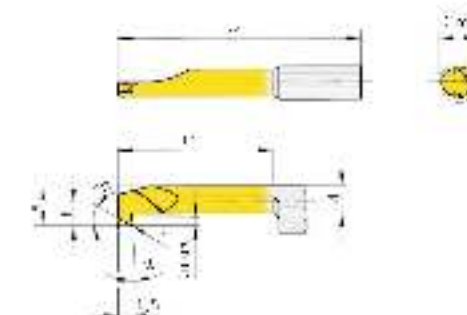
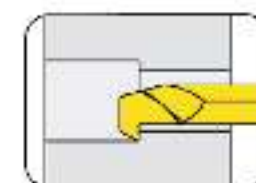
Shank Dia	Description	L	d min	d	α	β	γ	γ _{max}
4.0	503.MTC29FR/L 10-R0.15						10	25
	503.MTC29FR/L 20-R0.15						20	35
5.0	503.MTC37FR/L 15-R0.15						10	30
	503.MTC37FR/L 25-R0.15						25	40
6.0	503.MTC46FR/L 20-R0.15						20	35
	503.MTC46FR/L 30-R0.15	3.00	6.0	5.7	3.8		30	45

BORING and PROFILING 503 Type



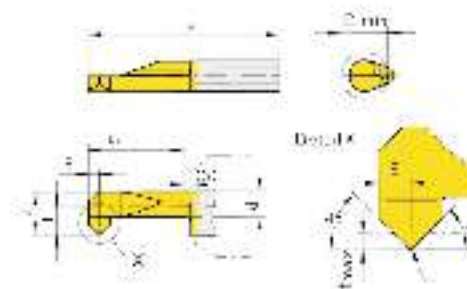
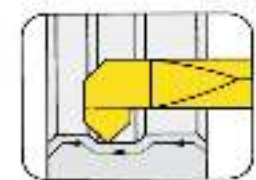
Shank Dia	Designation	L	T	Shank	d	LS	LS	LS	LS	max
3.0	503.MT0238TR/L 10 R0.10	30	3.0	2.6	2.3	10	25	0.10	0.15	
	503.MT0238TR/L 15 R0.10					15	30			
	503.MT0238TR/L 20 R0.10					20	35			
	503.MT0238TR/L 10 R0.20					10	25			
	503.MT0238TR/L 15 R0.20					15	30			
	503.MT0238TR/L 20 R0.20					20	35			
4.0	503.MT0298TR/L 10 R0.10	40	4.0	3.7	3.3	10	25	0.10	0.20	
	503.MT0298TR/L 15 R0.10					15	30			
	503.MT0298TR/L 20 R0.10					20	35			
	503.MT0298TR/L 10 R0.20					10	25			
	503.MT0298TR/L 15 R0.20					15	30			
	503.MT0298TR/L 20 R0.20					20	35			
5.0	503.MT0408TR/L 10 R0.10	50	5.0	4.7	4.0	10	25	0.10	0.30	
	503.MT0408TR/L 15 R0.10					15	30			
	503.MT0408TR/L 20 R0.10					20	35			
	503.MT0408TR/L 25 R0.10					25	40			
	503.MT0408TR/L 10 R0.20					10	25			
	503.MT0408TR/L 15 R0.20					15	30			
6.0	503.MT0478TR/L 10 R0.20	60	6.0	5.7	4.7	10	25	0.20	0.50	
	503.MT0478TR/L 15 R0.20					15	30			
	503.MT0478TR/L 20 R0.20					20	35			
	503.MT0478TR/L 25 R0.20					25	40			
	503.MT0478TR/L 30 R0.20					30	45			
	503.MT0478TR/L 35 R0.20					35	50			

BORING and PROFILING 503 Type



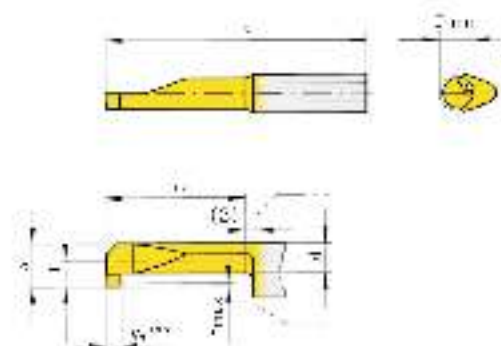
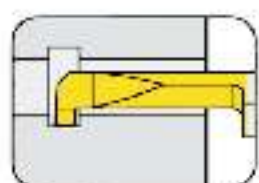
Shank Dia	Designation	L	T	Shank	d	LS	LS	LS	LS	max
3.0	503.MT0193TR/L 15 R0.10	30	3.0	2.6	2.3	15	30	0.10	0.10	
	503.MT0193TR/L 20 R0.10					20	35			
4.0	503.MT0271TR/L 15 R0.15	40	4.0	3.7	3.3	15	30	0.15	0.20	
	503.MT0271TR/L 20 R0.15					20	35			
5.0	503.MT0351TR/L 20 R0.20	50	5.0	4.7	4.0	20	35	0.20	1.00	
	503.MT0351TR/L 25 R0.20					25	40			
6.0	503.MT0371TR/L 20 R0.20	60	6.0	5.7	4.7	20	35	0.20	1.50	
	503.MT0371TR/L 25 R0.20					25	40			
7.0	503.MT0381TR/L 20 R0.20	70	7.0	6.4	5.4	20	35	0.20	2.00	
	503.MT0381TR/L 25 R0.20					25	40			

BORING and PROFILING 503 Type



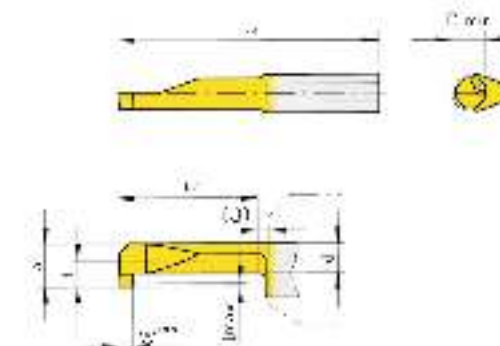
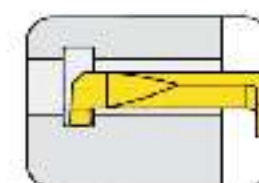
Shank Dia	Designation	L	T	Shank	d	LS	LS	LS	LS	max
5.0	503.MT0358TR/L 15 R0.20	2.30	1	5.0	4.7	0.5	15	30	0.20	0.70
7.0	503.MT0478TR/L 20 R0.20	4.00	1	7.0	6.4	4.7	20	35	0.20	0.70

GROOVING 503 Type



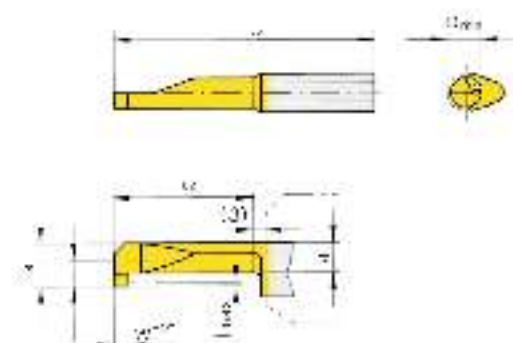
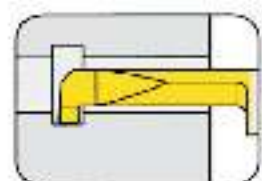
Stock Dia	Description	L	Grb	D	Dmax	W	Grb
3.0	503.MT01PGR/L06-W070	1.40	3.0	2.7	1.5	8	25
	503.MT01PGR/L12-W070					12	30
	503.MT01PGR/L16-W070					16	35
4.0	503.MT02PGR/L06-W100	1.90	4.0	3.7	2.7	10	25
	503.MT02PGR/L10-W100					15	30
	503.MT02PGR/L20-W100					20	35
5.0	503.MT03PGR/L06-W100	2.30	5.0	3.7	3.5	10	25
	503.MT03PGR/L10-W150					15	30
	503.MT03PGR/L10-W200					20	35
	503.MT03PGR/L15-W150					25	40
	503.MT03PGR/L15-W200					30	45
	503.MT03PGR/L20-W100					20	35
	503.MT03PGR/L20-W150					25	40
	503.MT03PGR/L20-W200					30	45
	503.MT03PGR/L25-W100					25	40
	503.MT03PGR/L25-W150					30	45
6.0	503.MT04PGR/L10-W100	3.30	6.0	5.7	5.7	10	25
	503.MT04PGR/L10-W150					15	30
	503.MT04PGR/L10-W200					20	35

GROOVING 503 Type



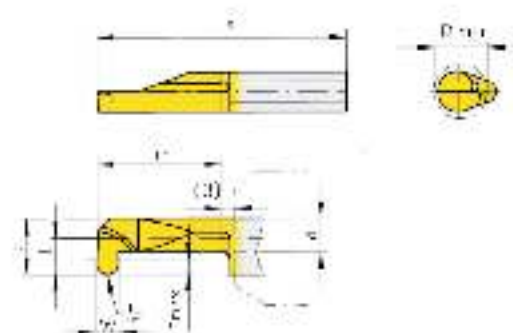
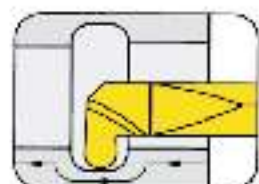
Stock Dia	Description	L	Grb	D	Dmax	W	Grb
4.0	503.MT007GR/L10-W150	3.30	6.0	5.7	3.7	10	25
	503.MT007GR/L10-W200					15	30
	503.MT007GR/L15-W100					20	35
	503.MT007GR/L15-W150					25	40
	503.MT007GR/L15-W200					30	45
	503.MT007GR/L20-W100					20	35
	503.MT007GR/L20-W150					25	40
	503.MT007GR/L20-W200					30	45
	503.MT007GR/L25-W100					25	40
	503.MT007GR/L25-W150					30	45
5.0	503.MT007GR/L30-W150	4.00	6.8	6.4	3.8	10	25
	503.MT007GR/L30-W200					15	30
	503.MT007GR/L30-W250					20	35
	503.MT007GR/L35-W100					25	40
	503.MT007GR/L35-W150					30	45
	503.MT007GR/L35-W200					35	50
7.0	503.MT008GR/L15-W100	4.00	6.8	6.4	3.8	10	25
	503.MT008GR/L15-W150					15	30
	503.MT008GR/L15-W200					20	35
	503.MT008GR/L20-W100					25	40
	503.MT008GR/L20-W150					30	45

GROOVING 503 Type



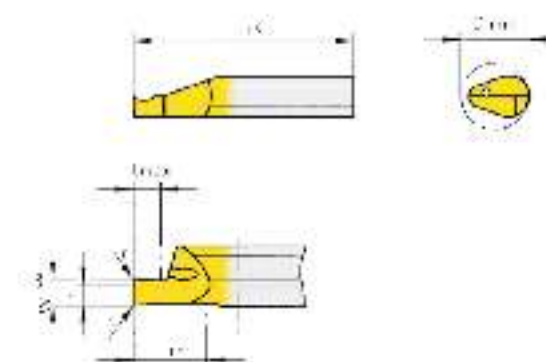
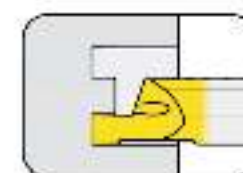
Shank Dia	Designation	L	W	R	10	15	20	25	30
7.0	503.MT036GR/L 20-W100	4.30	6.5	6.7	3.5	20	35	2.00	2.50
	503.MT036GR/L 25-W100					25	40	2.00	
	503.MT036GR/L 25-W150					25	40	2.00	
	503.MT036GR/L 25-W200					25	40	2.00	
	503.MT036GR/L 30-W100					30	45	2.00	
	503.MT036GR/L 30-W200					30	45	2.00	

GROOVING 503 Type



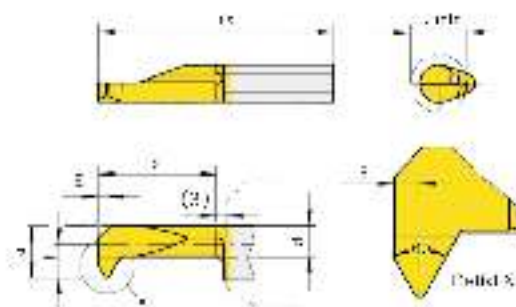
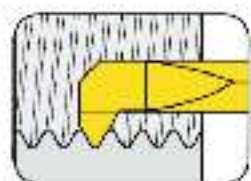
Shank Dia	Designation	L	W	R	10	15	20	25	30
1.0	503.MT037GR/L 15-W100	1.90	3.0	3.7	2.7	15	30	100	0.80
	503.MT037GR/L 20-W100					20	35	100	1.00
5.0	503.MT037GR/L 20-W100	2.30	5.0	5.7	3.5	20	35	100	1.00
	503.MT037GR/L 25-W100					25	40	150	1.50
6.0	503.MT037GR/L 25-W100	3.00	6.0	6.7	3.7	25	40	200	2.00
	503.MT037GR/L 30-W100					30	45	200	2.50
7.0	503.MT038GR/L 30-W100	4.00	6.0	6.4	3.8	30	45	150	2.50
	503.MT038GR/L 35-W200					35	50	200	3.00

GROOVING 503 Type



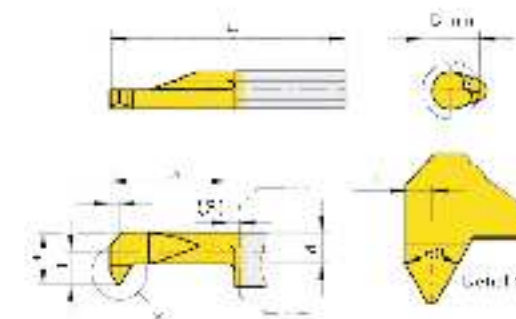
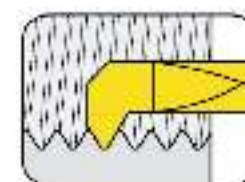
Shank Dia	Designation	L	W	R	10	15	20	25	30
5.0	503.MT060GR/L 10-W100	2.00	5.2	6.2	2.00	10	25	0.05	2.00
	503.MT060GR/L 10-W150					10	25	0.05	3.00
	503.MT060GR/L 10-W200					10	25	0.05	4.00
	503.MT060GR/L 15-W100					15	35	0.05	3.00
	503.MT060GR/L 15-W150					15	35	0.05	4.00
	503.MT060GR/L 15-W200					15	35	0.05	5.00
6.0	503.MT060GR/L 10-W100	2.00	6.2	6.2	2.00	10	25	0.05	2.00
	503.MT060GR/L 10-W150					10	25	0.05	3.00
	503.MT060GR/L 10-W200					10	25	0.05	4.00
	503.MT060GR/L 15-W100					15	35	0.05	3.00
	503.MT060GR/L 15-W150					15	35	0.05	4.00
	503.MT060GR/L 15-W200					15	35	0.05	5.00
7.0	503.MT060GR/L 10-W100	2.00	5.2	6.2	2.00	10	25	0.05	2.00
	503.MT060GR/L 10-W150					10	25	0.05	3.00
	503.MT060GR/L 10-W200					10	25	0.05	4.00
	503.MT060GR/L 15-W100					15	35	0.05	3.00
	503.MT060GR/L 15-W150					15	35	0.05	4.00
	503.MT060GR/L 15-W200					15	35	0.05	5.00

THREADING 503 Type



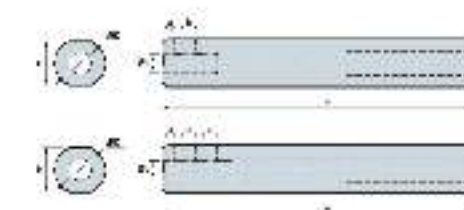
Spindle mm	Description	L	Lmin	a	d	L2	W	Wmin	F	L
3.0	503.MT020TR/ 5-050 SO	1.40	3.0	2.7	2.0	15	30	0.50	-	0.35
	503.MT020TR/ 5-075 SO					15	30	0.75	-	0.75
	503.MT020TR/ 5-090 SO					15	30	0.50	-	0.35
4.0	503.MT027TR/ 20-050 SO	1.90	4.0	3.7	2.7	20	35	-	-	-
	503.MT027TR/ 10-075 SO					10	25	0.75	-	0.45
	503.MT027TR/ 15-075 SO					15	30	-	-	-
5.0	503.MT035TR/ 20-075 SO	2.30	5.0	4.7	3.5	20	35	-	-	-
	503.MT035TR/ 15-090 IN					15	30	-	32	0.45
	503.MT035TR/ 15-050 SO					15	30	0.50	-	0.35
6.0	503.MT035TR/ 20-050 SO	2.10	6.0	5.5	3.5	25	40	-	-	-
	503.MT035TR/ 15-075 SO					15	30	0.75	-	0.45
	503.MT035TR/ 20-075 SO					20	35	0.75	-	0.45
7.0	503.MT037TR/ 15-100 SO	2.30	7.0	6.7	3.5	15	30	-	25	0.35
	503.MT037TR/ 20-100 SO					20	35	-	-	-
	503.MT037TR/ 25-100 SO					25	40	-	-	-
8.0	503.MT037TR/ 15-125 SO	3.30	8.0	7.7	3.7	15	30	1.00	-	0.35
	503.MT037TR/ 20-125 SO					20	35	1.25	-	0.65
	503.MT037TR/ 25-125 SO					25	40	-	-	-
9.0	503.MT037TR/ 15-160 IN	3.30	9.0	8.7	3.7	15	30	-	16	0.70

THREADING 503 Type



Spindle mm	Description	L	Lmin	a	d	L2	W	Wmin	F	L
6.0	503.MT037TR/ 20-160 IN	3.30	6.0	5.7	3.7	20	35	-	16	0.70
	503.MT037TR/ 25-160 IN					25	40	-	-	-
	503.MT037TR/ 15-240 UN					15	30	-	24	0.55
7.0	503.MT037TR/ 20-240 UN	4.00	7.0	6.1	3.8	20	35	-	-	-
	503.MT037TR/ 15-360 UN					15	30	1.50	-	0.45
	503.MT038TR/ 20-160 SO					20	35	-	-	-
8.0	503.MT038TR/ 25-160 SO	3.30	8.0	6.7	3.7	25	40	-	-	-
	503.MT047TR/ 20-080 SO					20	35	0.50	-	0.35
	503.MT047TR/ 20-080 SO					20	35	0.75	-	0.45

THREADING 503 Type



Description	Φ _h	n	α	β	Φ _D	L	L _{min}	Spindle	Material	L _{max}
SH3-3016-100	3.0	3	-	-	16	14	100	M3	2.3	1
SH3-4016-100	4.0	3	-	-	16	14	100	M4	2.0	1
SH3-0516-100	5.0	3	8	-	16	14	100	M4	2.0	1
SH3-0616-100	6.0	3	6	-	16	14	100	M4	2.0	2
SH3-0716-100	7.0	3	6	-	16	14	100	M4	2.0	2
SH3-0820-100	8.0	6	10	10	20	18	100	M4	2.0	2
SH3-1020-100	10.0	3	10	10	20	18	100	M5	2.0	2

Carbide grade selection:

SMX30(P10~P20,M10~M15)

PVD TiN coated grade 4 titanium color for below HPO30 steel and cast steel

SMU30(P30~40,M20~2M40)

PVD ALTiN is the grade, purple black color for mild iron to high speed, works well with a range of stainless steel.

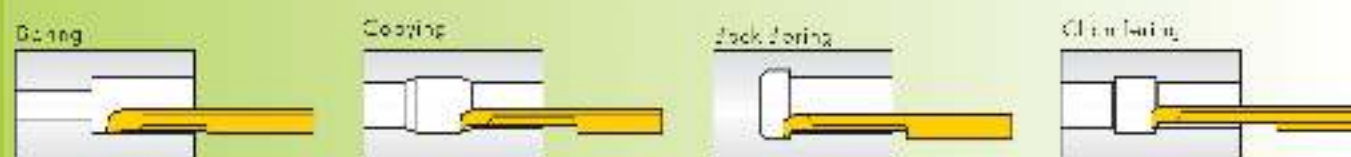
SMM30(P10~P30,M10~M30)

PVD TiAlN coated submicrograin grade provide good fracture toughness and excellent wear resistance, black color for steel and stainless steel.

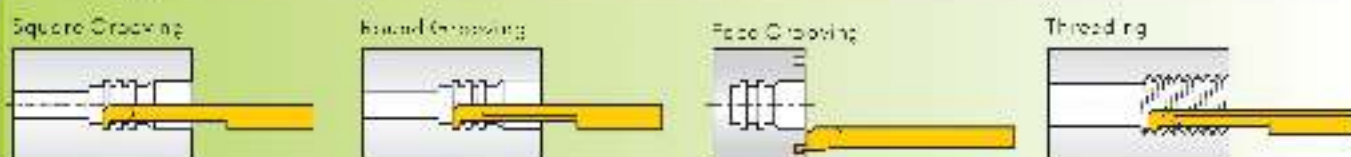
RCC element	Material	Cutting Speed (m/min)		
		500-600	500-600	500-600
P	Low & Medium Carbon Steel	90-140	100-180	90-140
	High Carbon Steel	80-150	90-140	80-130
	Alloy Steel & Tool Steel	80-120	90-120	90-120
M	Stainless Steel	100-140	120-140	90-130
	Cast Steel	70-120	90-130	40-90
K	Cast Iron	80-130	80-150	70-120
N	Non-ferrous & Aluminum	300-600		50-120
S	Super alloy and Titanium	40-80	60-100	10-30
H	Hard Material	20-40	30-60	10-30

Types

Spring



Grooving



Notepad