HAIMER®
Quality Wins.

OVERVIEW OF TOOL HOLDER TECHNOLOGY

Tool Holding Systems For Cylindrical Shank Cutting Tools

Application Areas	Shrink Fit Technology					Mechanical Tool Holders							
	Shrink Fit Chuck Standard	Power Shrink Chuck	Heavy Duty Shrink Chuck	Power Mini Shrink Chuck	Mini Shrink Chuck	ER Collet Chuck	Power Collet Chuck	Heavy Duty Collet Chuck	HG-Chuck	Weldon Chuck	Whistle-Notch	Hydraulic Chuck**	Milling Chuck**
Application													
Drilling	●	●		●	●	●	●		●			●	
Finishing	●	●		●	●	●	●		●			●	
High Speed Cutting	◐	●	◐	●	●		●	◐	◐				
Roughing		●	●				●	●		●	●		●
Clamping Range [mm]	3 - 32	6 - 32	16 - 50	3 - 16	3 - 12	0,5 - 25	2 - 20	25 - 50	2 - 20	6 - 40	6 - 40	3 - 25	6 - 50
Runout [mm] at 3xD	0.003 mm	0.003 mm	0.003 mm	0.003 mm	0.003 mm	0.02 mm	0.003 mm	0.005 mm	0.003 mm	0.03 mm	0.03 mm	0.003 mm	0.01 mm
Max. RPM	up to 50,000	up to 50,000	up to 50,000	up to 80,000	up to 80,000	up to 15,000	up to 25,000	up to 15,000	up to 50,000	up to 15,000	up to 15,000	up to 40,000	up to 15,000
Balancing Grade G	*2.5 @ 25,000 RPM	*2.5 @ 25,000 RPM	*2.5 @ 25,000 RPM	*2.5 @ 25,000 RPM	*2.5 @ 25,000 RPM	*2.5 @ 25,000 RPM	*2.5 @ 25,000 RPM	*2.5 @ 25,000 RPM	*2.5 @ 25,000 RPM	*2.5 @ 22,000 RPM	*6.3 @ 8,000 RPM	2.5 @ 25,000 RPM	partially fine balanced
Outer Contour	slim	shank reinforced	clamping area and shank reinforced	very slim, shank reinforced	very slim	medium	shank reinforced	clamping area and shank reinforced	medium	medium	medium	very massive	large interference contour
Tool Changing Time	60 s	60 s	120 s	60 s	60 s	180 s	180 s	180 s	60 s	60 s	120 s	60 s	120 s
Pullout Protection	Safe-Lock®	Safe-Lock®	Safe-Lock®				Safe-Lock®	Safe-Lock®		●	●		
Maintenance / Care	none / remove oil	none / remove oil	none / remove oil	none / remove oil	none / remove oil	check collet / cleaning	check collet / cleaning	check collet / cleaning	check collet / cleaning	check clamping screw / remove oil	check clamping screw / remove oil	yearly membrane check / daily test for leaks	accurate and sensitive cleaning necessary

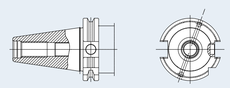
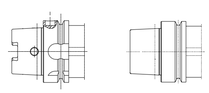
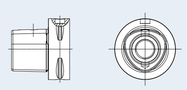
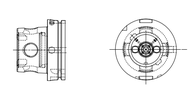
*HAIMER Standard ● applicable ◐ applicable to limited extent

**not in the HAIMER delivery program

HAIMER Tool Holder Program

Program Diversity	SK			BT			HSK												HAIMER CAPTO™	HAIMER KM4X™
	30	40	50	30	40	50	A32	A40	A50	A63	A80	A100	A125	E25	E32	E40	E50	F63	C6	100
Shrink Fit Chuck Standard	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●
Power Shrink Chuck		●	●		●	●				●	●	●	●						●	●
Heavy Duty Shrink Chuck			●			●				●		●	●							●
Power Mini Shrink Chuck		●	●		●					●										
Mini Shrink Chuck										●				●		●	●			
ER Collet Chuck		●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●
Power Collet Chuck		●	●	●	●	●	●	●	●	●		●	●	●	●	●	●			●
Heavy Duty Collet Chuck			●			●						●	●							●
HG-Chuck		●	●		●	●				●		●								
Weldon Chuck		●	●		●	●	●	●	●	●	●	●					●		●	●
Whistle-Notch		●	●							●		●								
Face Mill Arbor		●	●	●	●	●		●	●	●		●	●				●	●	●	●
Combi Shell Endmill Arbor		●	●		●	●		●	●	●		●								

Interfaces

	Steep taper SK, BT, CAT	HSK-A/E	HAIMER CAPTO™	HAIMER KM4X™
Standard	DIN 69871, JIS B6339, ASME B5.50	DIN 69893-1, DIN 69893-5	ISO 26623	
Drawing				
Info	Traditional interface for milling spindles. Very robust. Also applicable for heavy duty machining. Clamping always with additional pull stud. Centering only via taper surface, without face contact. Therefore limited accuracy. For applications up to 12.000 rpm.	HSK-A: Standard for new machining centers. High precision centering and positioning by taper with face contact. Torque transmission by taper drive keys. For applications up to 35.000 rpm. HSK-E: No drive keys but symmetrical design. Mainly used for high speed machining.	Widespread at multitask (mill-turn centers) machines. Torque transmission and centering due to polygon taper. Exact positioning by face contact. Very high static stiffness.	Highly precise positioning by taper and face contact. Symmetrical clamping and high pull-in force by four balls. Therefore high rigidity and reduced bending moment, allowing for highest cutting voumne (e.g. for titanium machining).
Quality	HAIMER: 3.000 measuring points guarantee highest taper tolerance of AT3, i.e. all surface tolerances are within 1.5 µm (applies for SK 40). HAIMER pull studs from highly precise in-house production made of impact-resistant steel are specially case hardened. For highest breakage and process security.	HAIMER: All functional surfaces at and in the taper (clamping shoulder, wings of drive keys etc.) fine finished after hardening. For equal axial pull-in, highest runout accuracy and max. rigidity.	HAIMER is official licensee of Sandvik Coromant. Complete ground inner taper for optimal clamping and centering accuracy.	HAIMER is official licensee of Kennametal. All functional surfaces (like the face contact) are ground for equal axial pull-in and max. rigidity.