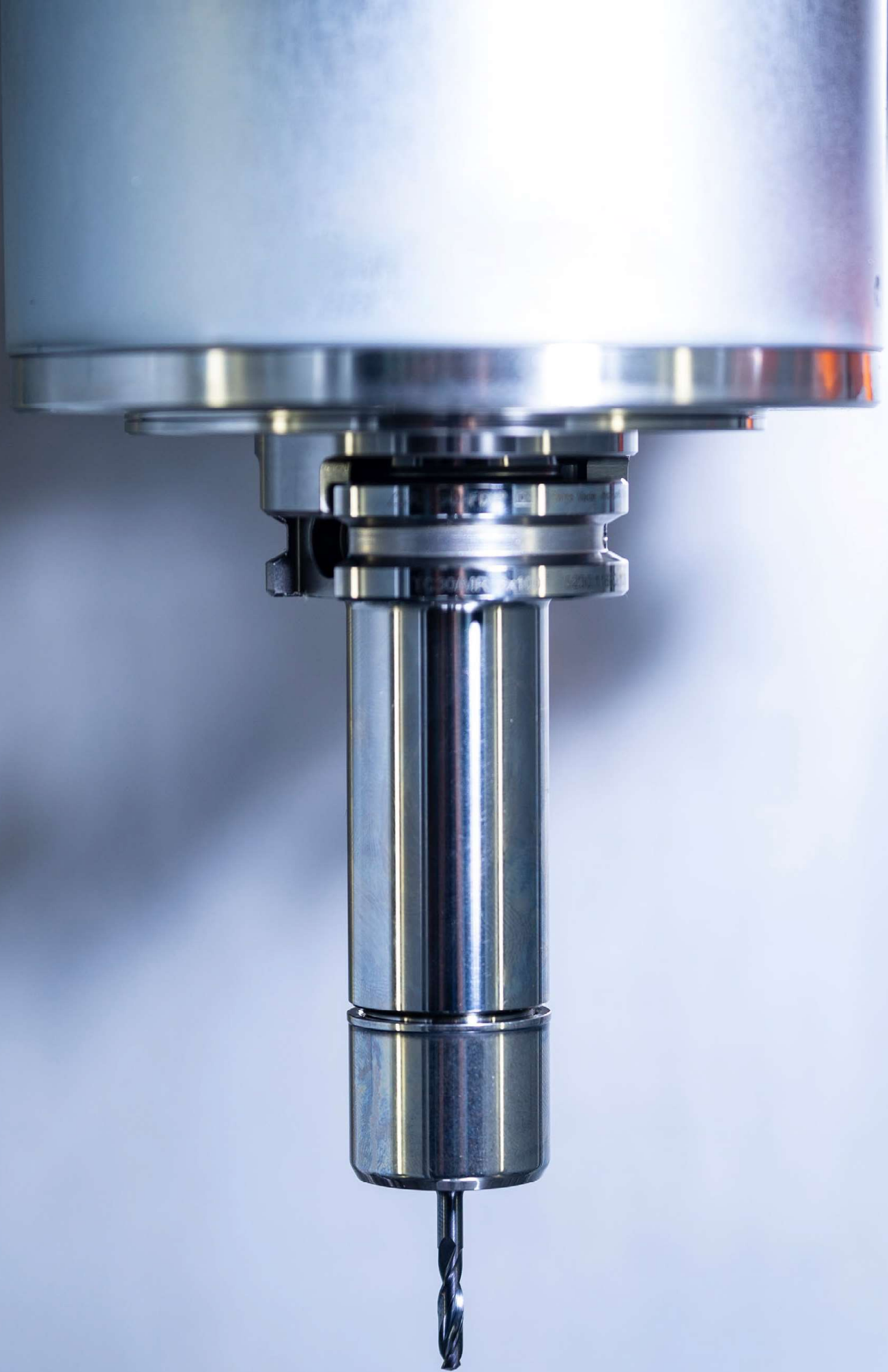
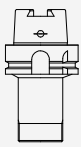
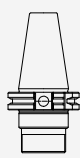
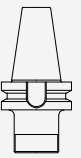
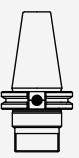


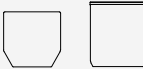


Experience high-precision toolholding

Standard				Cylindrical collets
HSK/MR HSK/MRM	SK/ MR	BT/ MR	CAT/ MR	CYL/MR CYL/MRM
				
page 186	page 190	page 192	page 194	page 196

Collets
MR

page 199

Standard		Mini nut		Sealing and coolant flush disks	
MR	MRC	MRM	MRMC	DS/MR	KS/MR
					
page 204	page 204	page 204	page 204	page 244	page 252

Standard				Cylindrical colletholders
HSK/MR HSK/MRM	SK/ MR	BT/ MR	CAT/ MR	CYL/MR CYL/MRM
				
page 186	page 190	page 192	page 194	page 196



Toolholders in Swiss quality



	HSK/MR	BT/MR	SK/MR	CAT/MR	CYL/MR	CYL/MRM
Norm	DIN 69893 ISO 12164	MAS 403 JIS B 6339 DIN-ISO 7388-2	DIN 69871 DIN ISO 7388-1	DIN 6871 DIN ISO 7388-1	–	–
Balancing	G 2.5 @ 25,000 min ⁻¹	G 2.5 @ 25,000 min ⁻¹	G 2.5 @ 25,000 min ⁻¹	G 2.5 @ 25,000 min ⁻¹	–	–
Chip hole	•	–	•	–	–	–
Runout TIR	≤0.003 mm	≤0.003 mm	≤0.003 mm	≤0.003 mm	≤0.003 mm	≤0.003 mm
Taper accuracy	DIN ISO	AT3	AT3	AT3	–	–
Form A + AD	–	•	•	–	–	–
Form AD + B	–	•	•	–	–	–
Shank tolerance	–	–	–	–	h6	h6

HSK toolholders

Designed for rotating applications, all our HSK toolholders are suited for high-speed applications where a consistent performance is key.

DIN 69893 / ISO 12164

Features and benefits

Total system runout TIR $\leq 3 \mu\text{m}$ @ 3xD

Our holistic system consists of an micRun® toolholder, collet and clamping nut. All components together ensure best runout and accuracy.

Toolholder runout TIR $\leq 1 \mu\text{m}$

Measured from inner taper to outer taper.

Surface finish max. Ra 0.25

Achieve high clamping force and high transferable torque.

Balancing

100% balanced to G 2.5 @ 25,000 rpm/<1gmm.

MR clamping nut included in delivery

Guarantees highest clamping force and best balancing.

Vibration dampening

Our holders offer good vibration dampening to sustain a high surface finish and can help prevent chatter.

Accessories are not included in delivery

Expert advice

For all HSK-A and HSK-E form toolholders a range of coolant tubes (KSR) is available.

For KSR part numbers please refer to page 265.

Balancing specifications

HSK 25	balanced to 90,000 min ⁻¹
HSK 32	balanced to 60,000 min ⁻¹
HSK 40	balanced to 45,000 min ⁻¹
HSK 50	balanced to 36,000 min ⁻¹
HSK 63	G 2.5 @ 25,000 min ⁻¹
HSK 80	G 2.5 @ 25,000 min ⁻¹
HSK 100	G 2.5 @ 25,000 min ⁻¹
HSK 125	G 2.5 @ 25,000 min ⁻¹



HSK-A toolholders

HSK-A

DIN 69893

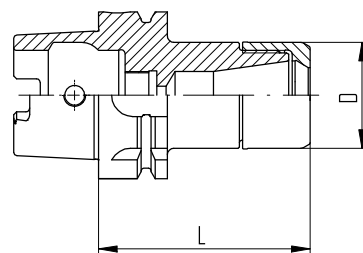
ISO 12164

Type	Part no.	Dimensions [mm]		Accessory
		D	L	Freewheel wrench head
HSK-A 32				
HSK-A 32/MRM 16 x 060	5532.11620	24	60	A-FLS Ø 24/MRM 16
HSK-A 32/MRM 16 x 100	5532.11650	24	100	A-FLS Ø 24/MRM 16
HSK-A 40				
HSK-A 40/MR 16 x 060	5540.11620	28	60	A-FLS Ø 28/MR 16
HSK-A 40/MR 16 x 100	5540.11650	28	100	A-FLS Ø 28/MR 16
HSK-A 40/MR 25 x 080	5540.12540	40	80	A-FLS Ø 40/MR 25
HSK-A 50				
HSK-A 50/MR 16 x 100	5550.11650	28	100	A-FLS Ø 28/MR 16
HSK-A 50/MR 25 x 080	5550.12540	40	80	A-FLS Ø 40/MR 25
HSK-A 63				
HSK-A 63/MR 11 x 100	5563.11150	16	100	A-FLS Ø 16/MR 11
HSK-A 63/MR 11 x 160	5563.11180	16	160	A-FLS Ø 16/MR 11
HSK-A 63/MR 16 x 100	5563.11650	28	100	A-FLS Ø 28/MR 16
HSK-A 63/MRM 16 x 100	5563.11657	24	100	A-FLS Ø 28/MR 16
HSK-A 63/MRM 16 x 160	5563.11687	24	160	A-FLS Ø 28/MR 16
HSK-A 63/MR 25 x 080	5563.12540	40	80	A-FLS Ø 40/MR 25
HSK-A 63/MR 25 x 160	5563.12580	40	160	A-FLS Ø 40/MR 25
HSK-A 63/MR 32 x 070	5563.13230	50	70	A-FLS Ø 50/MR 32
HSK-A 63/MR 32 x 100	5563.13250	50	100	A-FLS Ø 50/MR 32

Included in delivery: MR toolholders come with Hi-Q®/MR clamping nut
 HSK-A: Hole for data carrier DIN STD 69873 in the flange available on request



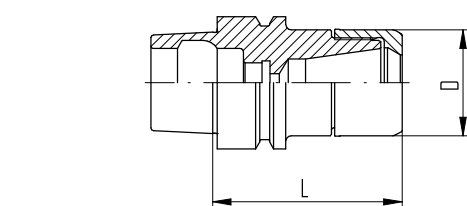
HSK-A/MR

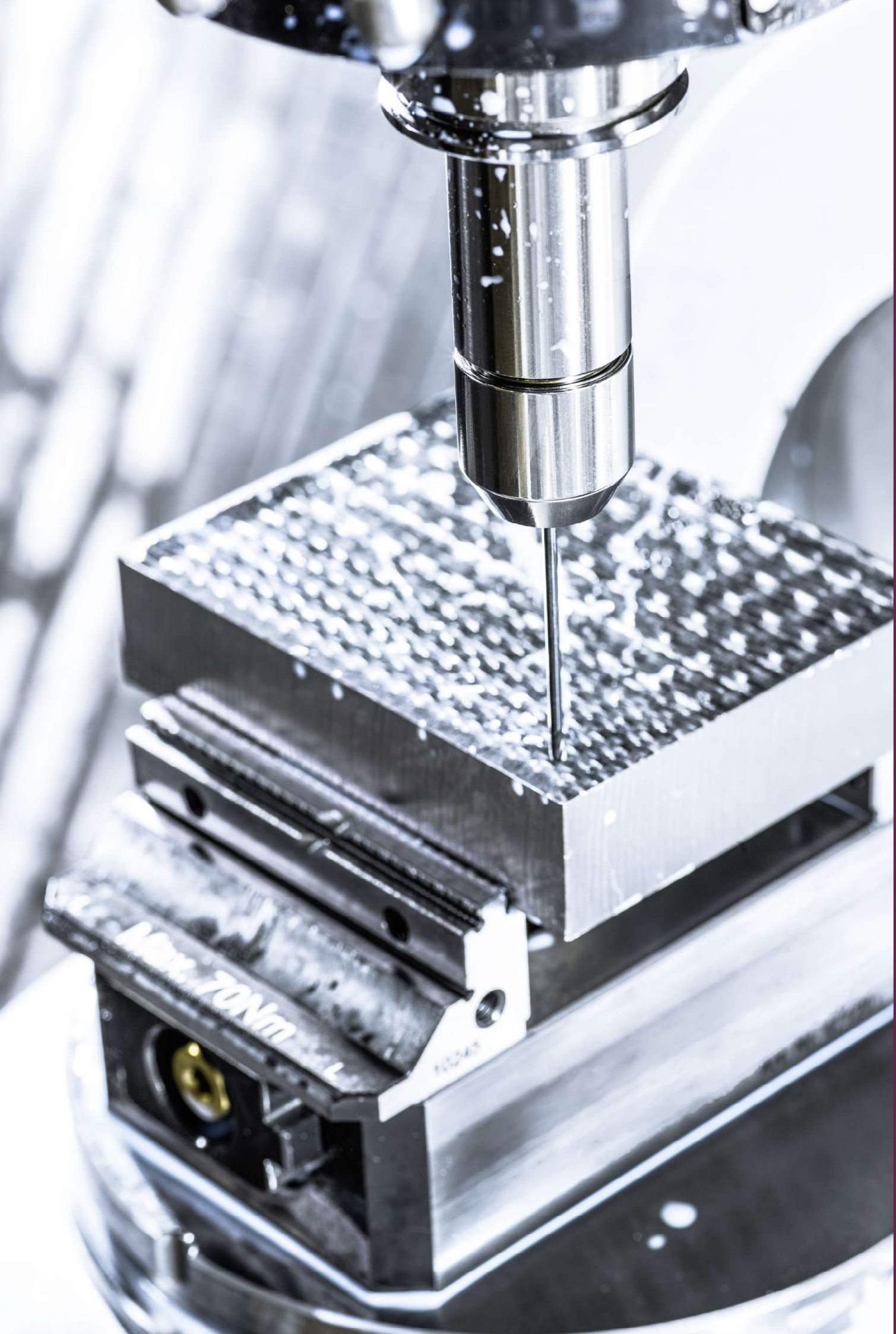


HSK-A/MR

Type	Part no.	Dimensions [mm]		Accessory
		D	L	Freewheel wrench head
HSK-E 25				
HSK-E 25/MR 11 x 045	5525.11114	16	45	A-FLS Ø 16/MR 11
HSK-E 25/MRM 16 x 045	5525.11618	24	45	A-FLS Ø 24/MRM 16
HSK-E 32				
HSK-E 32/MR 11 x 060	5532.11124	16	60	A-FLS Ø 16/MR 11
HSK-E 32/MRM 16 x 055	5532.11618	24	55	A-FLS Ø 24/MRM 16
HSK-E 40				
HSK-E 40/MR 11 x 050	5540.11114	16	50	A-FLS Ø 16/MR 11
HSK-E 40/MR 11 x 100	5540.11154	16	100	A-FLS Ø 16/MR 11
HSK-E 40/MRM 16 x 055	5540.11618	24	55	A-FLS Ø 24/MRM 16
HSK-E 40/MRM 16 x 080	5540.11648	24	80	A-FLS Ø 24/MRM 16
HSK-E 40/MR 25 x 065	5540.12520	40	65	A-FLS Ø 40/MR 25
HSK-E 50				
HSK-E 50/MR 16 x 100	5550.11654	28	100	A-FLS Ø 28/MR 16
HSK-E 50/MR 25 x 070	5550.12534	40	70	A-FLS Ø 40/MR 25

Included in delivery: MR toolholders come with Hi-Q®/MR clamping nut





Steep taper toolholders SK

Universally suitable for different machining applications.

DIN 69871 / DIN ISO 7388-1

Features and benefits

Total system runout TIR $\leq 3 \mu\text{m}$ @ 3xD

Our holistic system consists of an micRun® toolholder, collet and clamping nut. All components together ensure best runout and accuracy.

Toolholder runout TIR $\leq 1 \mu\text{m}$

Measured from inner taper to outer taper.

Taper accuracy AT3

Better spindle-to-holder fit and accuracy.

Surface finish max. Ra 0.25

Achieve high clamping force and high transferable torque.

Balancing

100% balanced to G 2.5 @ 25,000 rpm/<1gmm.

MR clamping nut included in delivery

Guarantees highest clamping force and best balancing.

Vibration dampening

Our holders offer good vibration dampening to sustain a high surface finish and can help prevent chatter.

Accessories are not included in delivery

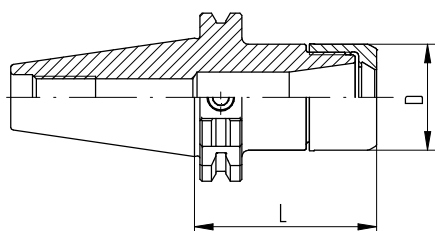
Balancing specifications

SK 30	balanced to 30,000 min ⁻¹
SK 40	G 2.5 @ 25,000 min ⁻¹
SK 50	G 2.5 @ 25,000 min ⁻¹



Type	Part no.	Dimensions [mm]		Accessory
		D	L	Freewheel wrench head
SK 30				
SK 30/MR 16 x 050	5230.11610	28	50	A-FLS Ø 28/MR 16
SK 30/MR 16 x 100	5230.11650	28	100	A-FLS Ø 28/MR 16
SK 30/MR 25 x 070	5230.12530	40	70	A-FLS Ø 40/MR 25
SK 40				
SK 40/MR 11 x 100	5240.11150	16	100	A-FLS Ø 16/MR 11
SK 40/MR 16 x 070	5240.11630	28	70	A-FLS Ø 28/MR 16
SK 40/MR 16 x 100	5240.11650	28	100	A-FLS Ø 28/MR 16
SK 40/MR 16 x 160	5240.11680	28	160	A-FLS Ø 28/MR 16
SK 40/MR 25 x 070	5240.12530	40	70	A-FLS Ø 40/MR 25
SK 40/MR 25 x 100	5240.12550	40	100	A-FLS Ø 40/MR 25
SK 40/MR 25 x 160	5240.12580	40	160	A-FLS Ø 40/MR 25
SK 40/MR 32 x 070	5240.13230	50	70	A-FLS Ø 50/MR 32
SK 40/MR 32 x 100	5240.13250	50	100	A-FLS Ø 50/MR 32
SK 40/MR 32 x 160	5240.13280	50	160	A-FLS Ø 50/MR 32

Included in delivery: MR toolholders come with Hi-Q®/MR clamping nut



SK / MR (Form A+AD)

Expert advice

We recommend tightening the clamping nuts with our TORCO-BLOCK or torque wrench. Get the best accuracy by respecting the suitable tightening forces.

Steep taper toolholders BT

Universally suitable different machining applications, the BT interface toolholders cater to different machining needs.

MAS 403 / JIS B 6339 / DIN ISO 7388-2

Features and benefits

Total system runout TIR $\leq 3 \mu\text{m}$ @ 3xD

Our holistic system consists of an micRun® toolholder, collet and clamping nut. All components together ensure best runout and accuracy.

Toolholder runout TIR $\leq 1 \mu\text{m}$

Measured from inner taper to outer taper.

Taper accuracy AT3

Better spindle-to-holder fit and accuracy.

Surface finish max. Ra 0.25

Achieve high clamping force and high transferable torque.

Balancing

100% balanced to G 2.5 @ 25,000 rpm / <1gmm.

MR clamping nut included in delivery

Guarantees highest clamping force and best balancing.

Vibration dampening

Our holders offer good vibration dampening to sustain a high surface finish and can help prevent chatter.

Accessories are not included in delivery

Balancing specifications

BT 30	balanced to 30,000 min ⁻¹
BT 40	G 2.5 @ 25,000 min ⁻¹



BT toolholders

BT

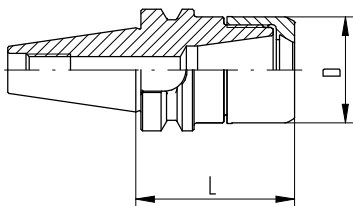
MAS 403

JIS B 6339

DIN ISO 7388-2

Type	Part no.	Dimensions [mm]		Accessory
		D	L	Freewheel wrench head
BT 30				
BT 30/MR 11 x 050	5130.11110	16	50	A-FLS Ø 16/MR 11
BT 30/MR 11 x 100	5130.11150	16	100	A-FLS Ø 16/MR 11
BT 30/MR 16 x 050	5130.11610	28	50	A-FLS Ø 28/MR 16
BT 30/MR 16 x 080	5130.11640	28	80	A-FLS Ø 28/MR 16
BT 30/MR 16 x 100	5130.11650	28	100	A-FLS Ø 28/MR 16
BT 30/MR 25 x 060	5130.12520	40	60	A-FLS Ø 40/MR 25
BT 30/MR 25 x 100	5130.12550	40	100	A-FLS Ø 40/MR 25
BT 30/MR 32 x 060	5130.13220	50	60	A-FLS Ø 50/MR 32
BT 40				
BT 40/MR 11 x 100	5140.11150	16	100	A-FLS Ø 16/MR 11
BT 40/MR 16 x 070	5140.11630	28	70	A-FLS Ø 28/MR 16
BT 40/MR 16 x 100	5140.11650	28	100	A-FLS Ø 28/MR 16
BT 40/MR 25 x 070	5140.12530	40	70	A-FLS Ø 40/MR 25
BT 40/MR 25 x 100	5140.12550	40	100	A-FLS Ø 40/MR 25
BT 40/MR 32 x 070	5140.13230	50	70	A-FLS Ø 50/MR 32
BT 40/MR 32 x 100	5140.13250	50	100	A-FLS Ø 50/MR 32

Included in delivery: MR toolholders come with Hi-Q®/MR clamping nut



BT/MR (Form A+AD)

Expert advice

We recommend tightening the clamping nuts with our TORCO-BLOCK or torque wrench.

Steep taper toolholders CAT

Universally suitable for different machining applications.

ASME B5.50

Features and benefits

Total system runout TIR $\leq 0.0001"$ (3 μm)

Our holistic system consists of an micRun® toolholder, collet and clamping nut. All components together ensure best runout and accuracy.

Toolholder runout TIR $\leq 1 \mu\text{m}$

Measured from inner taper to outer taper.

Taper accuracy AT3

Better spindle-to-holder fit and accuracy.

Surface finish max. Ra 0.25

Achieve high clamping force and high transferable torque.

Balancing

100% balanced to G 2.5 @ 22,000 rpm.

MR clamping nut included in delivery

Guarantees highest clamping force and best balancing.

Vibration dampening

Our holders offer good vibration dampening to sustain a high surface finish and can help prevent chatter.

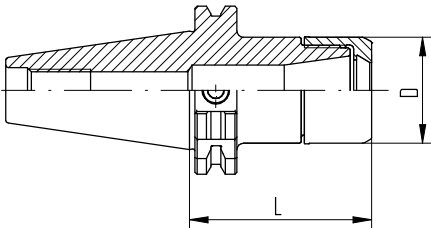
Accessories are not included in delivery



Type	Part no.	Dimensions [mm]		Accessory
		D	L	Freewheel wrench head
CAT 40*				
CAT 40/MR 16 x 3"	5340.11631	28	3"	A-FLS Ø 28/MR 16
CAT 40/MR 16 x 6"	5340.11671	28	6"	A-FLS Ø 28/MR 16
CAT 40/MR 32 x 3"	5340.13231	50	3"	A-FLS Ø 50/MR 32

*USA only

Included in delivery: MR toolholders come with Hi-Q®/MR clamping nut



CAT / MR (form A+AD)

Cylindrical shank toolholders CYL

CYL

Features and benefits

Total system runout TIR $\leq 3\mu\text{m}$ @ 3xD

Our holistic system consists of an micRun® toolholder, collet and clamping nut. All components together ensure best runout and accuracy.

Toolholder runout TIR $\leq 1\mu\text{m}$

Measured from inner taper to cylindrical shank.

Surface finish max. Ra 0.25

Achieve high clamping force and high transferable torque.

Sizes

CYL/MR 11 and CYL/MRM 16

Application

CYL/MR is suited for Swiss automatic machines, machining centers and conventional machines.

MR clamping nut included in delivery

Guarantees maximum precision combined with slimmest diameter.

Vibration dampening

Our holders offer good vibration dampening to sustain a high surface finish and can help prevent chatter.

Accessories are not included in delivery

Expert advice

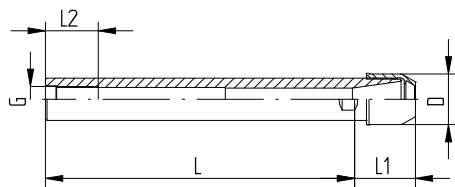
We recommend tightening the clamping nuts using a torque wrench. Get the best accuracy by respecting the suitable tightening forces.

For tightening torque recommendations, please refer to page 293.



Type	Part no.	Dimensions [mm]				G	Accessory
		D	L	L1	L2		Freewheel wrench head
CYL 16							
CYL 16 x 150/MR 11	5616.11190	16	150	17.2	20	M 8 x 1	A-FLS Ø 16/MR 11
CYL 16 x 200/MR 11	5616.11100	16	200	17.2	20	M 8 x 1	A-FLS Ø 16/MR 11
CYL 20							
CYL 20 x 150/MRM 16	5620.21690	24	150	25.2	25	M 12 x 1	A-FLS Ø 24/MRM 16
CYL 20 x 200/MRM 16	5620.21600	24	200	25.2	25	M 12 x 1	A-FLS Ø 24/MRM 16

Included in delivery: MR toolholders come with Hi-Q® /MR clamping nut



CYL/MR



Collets

MR



page 199



Swiss quality MR collets

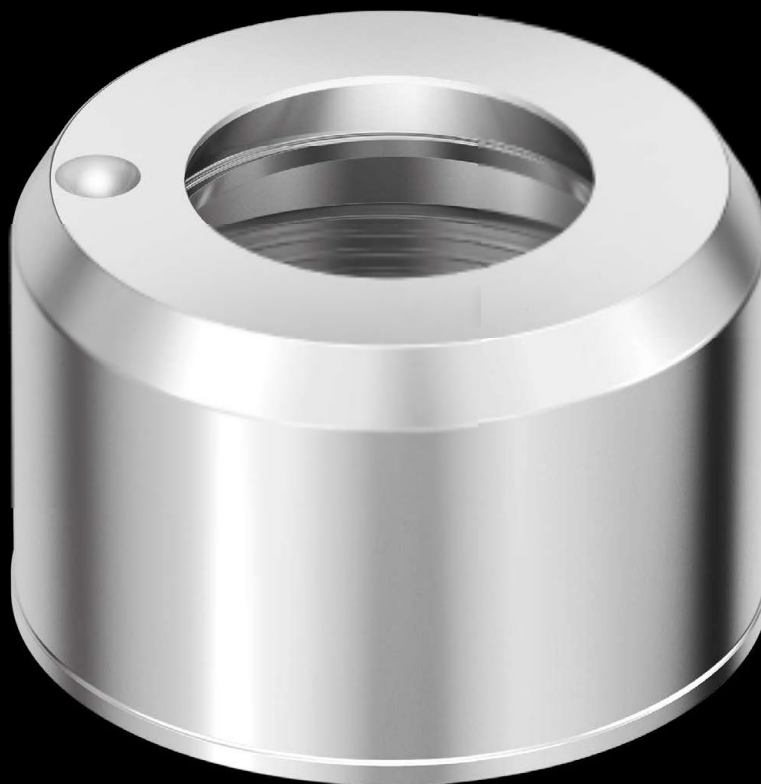
MR collets

Type	Part no.	Ø		max. Shank tolerance
		[mm]	[inch]	
MR 11 [mm]				
Ø 1.0 mm	1111.01006	1.0	–	h11
Ø 2.0 mm	1111.02006	2.0	–	h11
Ø 3.0 mm	1111.03006	3.0	–	h11
Ø 4.0 mm	1111.04006	4.0	–	h11
Ø 5.0 mm	1111.05006	5.0	–	h11
Ø 6.0 mm	1111.06006	6.0	–	h11
MR 11 [inch]				
Ø 1/8"	1111.03186	3.175	1/8"	h11
Ø 3/16"	1111.04766	4.763	3/16"	h11
Ø 1/4"	1111.06356	6.35	1/4"	h11
MR 16 [mm]				
Ø 1.0 mm	1116.01006	1.0	–	h11
Ø 2.0 mm	1116.02006	2.0	–	h11
Ø 3.0 mm	1116.03006	3.0	–	h11
Ø 4.0 mm	1116.04006	4.0	–	h11
Ø 5.0 mm	1116.05006	5.0	–	h11
Ø 6.0 mm	1116.06006	6.0	–	h11
Ø 8.0 mm	1116.08006	8.0	–	h11
Ø 10.0 mm	1116.10006	10.0	–	h11
MR 16 [inch]				
Ø 1/8"	1116.03186	3.175	1/8"	h11
Ø 3/16"	1116.04766	4.763	3/16"	h11
Ø 1/4"	1116.06356	6.35	1/4"	h11
Ø 5/16"	1116.07946	7.938	5/16"	h11
Ø 3/8"	1116.09536	9.525	3/8"	h11

Type	Part no.	Ø [mm]	Ø [inch]	max. Shank tolerance
MR 25 [mm]				
Ø 1.0 mm	1125.01006	1.0	–	h11
Ø 2.0 mm	1125.02006	2.0	–	h11
Ø 3.0 mm	1125.03006	3.0	–	h11
Ø 4.0 mm	1125.04006	4.0	–	h11
Ø 5.0 mm	1125.05006	5.0	–	h11
Ø 6.0 mm	1125.06006	6.0	–	h11
Ø 8.0 mm	1125.08006	8.0	–	h11
Ø 10.0 mm	1125.10006	10.0	–	h11
Ø 12.0 mm	1125.12006	12.0	–	h11
Ø 14.0 mm	1125.14006	14.0	–	h11
Ø 16.0 mm	1125.16006	16.0	–	h11
MR 25 [inch]				
Ø 1/8"	1125.03186	3.175	1/8"	h11
Ø 1/4"	1125.06356	6.35	1/4"	h11
Ø 5/16"	1125.07946	7.938	5/16"	h11
Ø 3/8"	1125.09536	9.525	3/8"	h11
Ø 7/16"	1125.11116	11.113	7/16"	h11
Ø 1/2"	1125.12706	12.7	1/2"	h11
Ø 9/16"	1125.14296	14.288	9/16"	h11
Ø 5/8"	1125.15886	15.875	5/8"	h11
MR 32 [mm]				
Ø 2.0 mm	1132.02006	2.0	–	h11
Ø 3.0 mm	1132.03006	3.0	–	h11
Ø 4.0 mm	1132.04006	4.0	–	h11
Ø 5.0 mm	1132.05006	5.0	–	h11
Ø 6.0 mm	1132.06006	6.0	–	h11
Ø 8.0 mm	1132.08006	8.0	–	h11
Ø 10.0 mm	1132.10006	10.0	–	h11
Ø 12.0 mm	1132.12006	12.0	–	h11
Ø 14.0 mm	1132.14006	14.0	–	h11
Ø 16.0 mm	1132.16006	16.0	–	h11
Ø 18.0 mm	1132.18006	18.0	–	h11
Ø 20.0 mm	1132.20006	20.0	–	h11

Type	Part no.	Ø		max. Shank tolerance
		[mm]	[inch]	
MR 32 [inch]				
Ø 1/4"	1132.06356	6.35	1/4"	h11
Ø 5/16"	1132.07946	7.938	5/16"	h11
Ø 3/8"	1132.09536	9.525	3/8"	h11
Ø 7/16"	1132.11116	11.113	7/16"	h11
Ø 1/2"	1132.12706	12.7	1/2"	h11
Ø 9/16"	1132.14296	14.288	9/16"	h11
Ø 5/8"	1132.15886	15.875	5/8"	h11
Ø 11/16"	1132.17466	17.463	11/16"	h11
Ø 3/4"	1132.19056	19.05	3/4"	h11





Standard		Mini nut		Sealing and coolant flush disks	
MR	MRC	MRM	MRMC	DS/MR	KS/MR
					
page 204	page 204	page 204	page 204	page 244	page 252

C: cooling M: mini thread DS: sealing disk KS: coolant flush disk

Grooveless MR nuts for high-end machining



	Hi-Q/MR	Hi-Q/MRC	Hi-Q/MRM	Hi-Q/MRMC
Main feature	Standard micRun® nut	micRun® nut for coolant through	micRun® mini nut	micRun® mini nut for coolant through
Sizes	MR 11/16/25/32	MR 11/16/25/32	MRM 16	MRM 16
Minimal outer diameter	–	–	•	•
Grooveless	•	•	•	•
Suitable wrench	A-FLS	A-FLS	A-FLS	A-FLS
Compatible with DS	–	•	–	•
Compatible with KS	–	•	–	•

Expert advice

Due to the thread, micRun® MR-clamping nuts are only compatible with MR-toolholders.

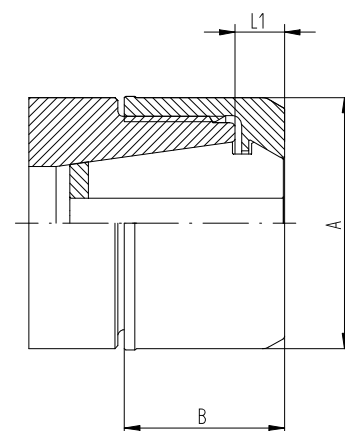
MR Clamping nuts

MR nuts

MRM Mini clamping nuts

MRC and MRMC clamping nuts for coolant through tools (DS/KS)

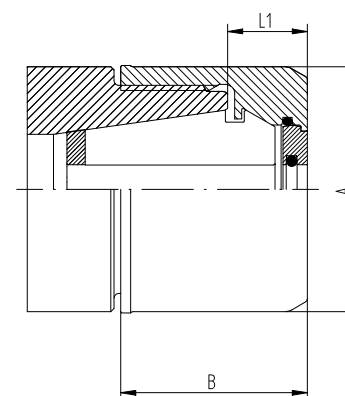
Type	Part no.	Dimensions [mm]		
		A	B	L1
MR 11				
Hi-Q/MR 11	3611.00000	16	16.2	4.5
MR 16				
Hi-Q/MR 16	3616.00000	28	23.1	6.7
MR 25				
Hi-Q/MR 25	3625.00000	40	25.5	8.1
MR 32				
Hi-Q/MR 32	3632.00000	50	31.8	9.1



MR

Type	Part no.	Dimensions [mm]		
		A	B	L1
MRM 16				
Hi-Q /MRM 16	3616.80000	24	23.1	6.7

Type	Part no.	Dimensions [mm]		
		A	B	L1
MRC 16				
Hi-Q/MRC 16	3616.20000	28	28.1	11.7
MRC 25				
Hi-Q/MRC 25	3625.20000	40	30.5	13.1
MRC 32				
Hi-Q/MRC 32	3632.20000	50	36.8	14.1



MRC

Type	Part no.	Dimensions [mm]		
		A	B	L1
MRMC 16				
Hi-Q/MRMC 16	3616.90000	24	28.1	11.7