



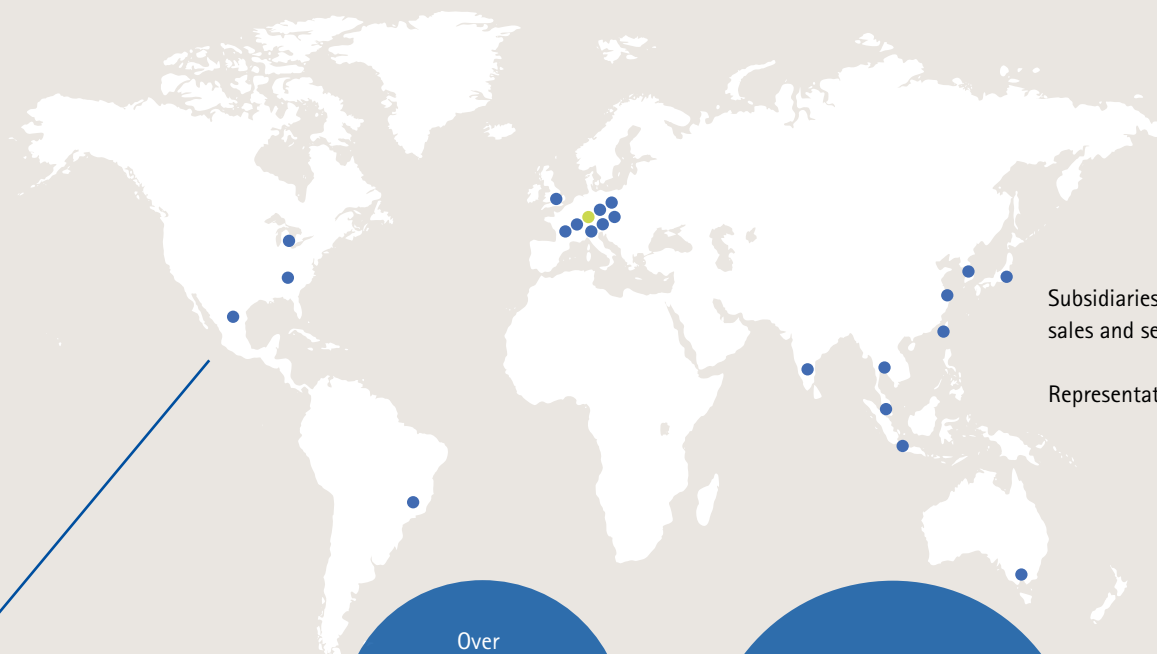
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## CLAMPING



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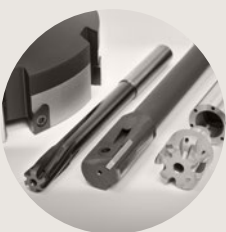
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Reaming and fine boring



Drilling from the solid, boring and countersinking



Milling



Turning



Actuating



Clamping



Setting, measuring and dispensing



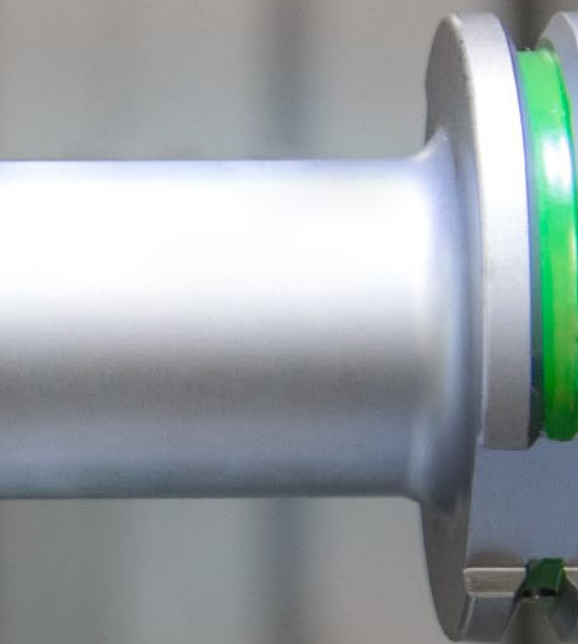
Services





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# CLAMPING TECHNOLOGY



## The optimal clamping tool for every application

On using tools, their connection to the machine spindle, and therefore the clamping technology, plays a central role that is often undervalued.

On fine machining parts, very good results can be achieved with the highest radial run-out accuracies. The effect is very significant even on drilling or milling, as lower radial variations have a positive effect on tool lives.

Manufactured with the latest technology, the clamping technology programme from MAPAL offers the perfect solution for every application and a connection that ensures

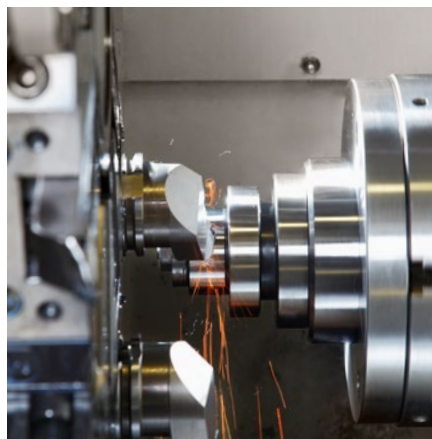
the tool has the necessary performance, radial run-out and changeover accuracy in use. From the manual HSK clamping units with the MAPAL KS clamping cartridge, through clamping tools with flange module, hydraulic and shrinking technology to adapters, the MAPAL standard programme covers a wide variety of systems and technologies. MAPAL offers a comprehensive range of standard programme also for machining with minimum quantity lubrication MQL.



Drilling from the solid |  
Boring | Countersinking



Milling



Turning



Reaming | Fine boring





# MANUAL HSK CLAMPING TECHNOLOGY

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Clamping cartridges and flanges







# MANUAL HSK CLAMPING TECHNOLOGY

## Clamping cartridges

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# THE MAPAL CLAMPING CARTRIDGE

## The heart of manual HSK clamping technology

An important element of the MAPAL HSK clamping technology is the KS clamping cartridge. The manual clamping mechanism provides maximum clamping forces that can be achieved reliably due to the simple, robust construction. The KS clamping cartridge is used in spindles and basic holders, directly or via adapter flanges. The rigid construction with optimal force application via bayonet and cartridge body to the clamping jaws underlines the effectiveness of the KS clamping cartridges. The easy assembly of the cartridges via a 90° rotation against a heavy-duty clamping pin ensures secure assembly. The gentle ejection of the tool via the two ejector pins distributes

the force and the wear is significantly reduced. The KS clamping cartridges in the designs for full lubrication, high pressure lubrication and MQL are compatible. This feature that makes it easier to re-tool the machine for new machining tasks with different lubrication. As a universal solution for MQL applications with HSK-A and HSK-C, MAPAL offers the MQL clamping cartridge MQL1. Due to the large central through-bore the aerosol can be transported without losses with optimised flow characteristics. In this way separation of the aerosol is prevented. The cartridge MQL was especially developed for HSK-C. The blind end is minimised by adapting the sealing ring on

the face. For tight machine compartments with small spindle spacings MAPAL offers the DS clamping cartridge. The programme is completed by the AX cartridge that was especially developed for disc-shaped tools, e.g. grinding wheels and saw blades. With this selection of MAPAL clamping systems it is possible to securely clamp all HSK forms.

Standard	High pressure	MQL1
		
<p>The standard version of the KS clamping cartridge is the proven all-round model and is suitable for almost all machining situations.</p> <ul style="list-style-type: none"> <li>- High rigidity regardless of the load direction</li> <li>- Not susceptible to distorted HSK bases</li> <li>- High clamping force way beyond the standard</li> </ul>	<p>The clamping cartridge for high-pressure applications is suitable for coolant pressures up to 150 bar. It is also equipped with an optimised sealing ring for even more reliable sealing of the system.</p> <ul style="list-style-type: none"> <li>- Use up to 150 bar</li> <li>- Improves clamping jaw geometry</li> <li>- High clamping force way beyond the standard</li> </ul>	<p>As a universal solution for MQL applications with HSK-A and HSK-C, MAPAL offers the MQL1. Due to the large central through-bore the aerosol can be transported without losses with optimised flow characteristics. In this way separation of the aerosol is prevented.</p> <ul style="list-style-type: none"> <li>- Large central through-bore</li> <li>- Universal system MQL1 for HSK-A and HSK-C</li> </ul>





### AT A GLANCE

- Simple design with few individual parts
- Stiff construction with optimal force application
- Four-surface clamping for maximum clamping force and radial run-out accuracy
- 100 % torque transmission due to ideal surface contact on the milled driving elements
- Easy actuation from side
- "Totally fool-proof" – not possible to assemble incorrectly, from fitting the cartridge to changing the tool
- High rigidity regardless of the machining directions

#### MQL



The cartridge MQL was especially developed for HSK-C. The blind end in this area is minimised by adapting the sealing ring on the face.

- Large central through-bore
- With special sealing geometry only for HSK-C

#### DS diagonal clamping cartridge



The MAPAL diagonal clamping cartridge is designed for usage in tight machine compartments with small spindle spacings. Actuation is using a hex-wrench via a screw positioned at 45°.

- Convenient actuation with 45° access angle
- Large central through-bore
- Clamping forces way beyond the standard
- Direct mounting in the spindle possible in the HSK nominal diameter

#### AX axial clamping cartridge



Especially for clamping disc-shaped tools with a central bore, for example grinding wheels or saw blades, also in situations in which the hollow shank taper is behind the tools.

- Axial access from front and rear
- Predestined for clamping grinding wheels and saw blade adapters with HSK shank
- Simple connection contour for direct mounting in the spindle

## Overview of manual HSK clamping units



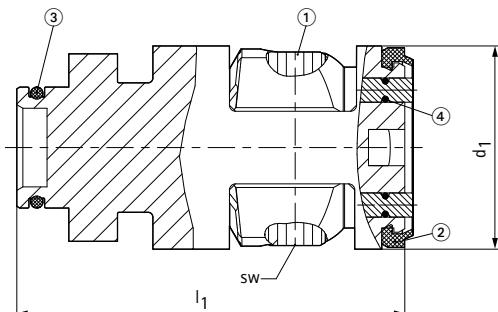
Clamping systems	KS clamping cartridge standard		KS clamping cartridge high pressure		KS clamping cartridge MQL 1	
Type of actuation	3-4 turns with torque wrench		3-4 turns with torque wrench		3-4 turns with torque wrench	
Actuation point (HSK63)	Radial, 9 mm behind face surface		Radial, 9 mm behind face surface		Radial, 9 mm behind face surface	
Clamping force (HSK63)	30 kN		30 kN		30 kN	
Actuation torque (HSK63)	20 Nm		20 Nm		20 Nm	
Central through-bore (HSK63)	2 x $\varnothing$ 6 mm Internal coolant supply on HSK-C tools and HSK-A tools without coolant tube		2 x $\varnothing$ 6 mm Internal coolant supply up to 150 bar on HSK-C tools and HSK-A tools without coolant tube		$\varnothing$ 6 mm central	
Direct mounting in the spindle	Yes		Yes		Yes	
HSK designs suitable for clamping	HSK-A HSK-B HSK-C	HSK-D HSK-T	HSK-A HSK-B HSK-C	HSK-D HSK-T	HSK-A HSK-B HSK-C	HSK-D HSK-T
HSK sizes	HSK32 to HSK100		HSK32 to HSK100		HSK40 to HSK100	
Application	The proven standard system for almost every application		The solution for high coolant pressures		KS cartridges with central through-bore for MQL applications	



KS clamping cartridge MQL		DS diagonal clamping cartridge		AX axial clamping cartridge	
3-4 turns with torque wrench		3-4 turns with torque wrench		360° screw drive with torque wrench	
Radial, 9 mm behind face surface		33 mm behind face surface at 45°		Central from the front or rear	
30 kN		25 kN		25 kN	
20 Nm		approx. 40 Nm		40 Nm	
ø 6 mm central		ø 12 mm central Internal coolant supply on HSK-C tools and HSK-A tools with or without coolant tube		ø 4 mm Internal coolant supply on request	
Yes		Yes		Yes	
HSK-C	HSK-D	HSK-A HSK-B HSK-C HSK-D	HSK-E HSK-F HSK-T	HSK-A HSK-B HSK-C HSK-D	HSK-E HSK-F HSK-T
HSK40 to HSK100		HSK32 to HSK100		HSK32 to HSK100	
KS cartridges with central through-bore for MQL applications		The solution with very tight spindle spacings with large central through-bore		Ideal for clamping disc-shaped tools (grinding wheels, saw blades, etc.)	

# KS clamping cartridges

Standard design



HSK-C	Dimensions		sw	Weight [gr]	Specification	Order No.
	d <sub>1</sub>	l <sub>1</sub>				
32	16,6	43,1	3	52	KS32-05	30325945
40	20,6	48,1	3	86	KS40-06	30325947
50	25,6	55,1	4	152	KS50-07	30325951
63	33,6	64,15	5	288	KS63-08	30325955
80	41,6	74,65	6	525	KS80-09	30325959
100	52,6	94,35	8	1.031	KS100-10	30325941

## Spare parts for KS clamping cartridges in standard design

HSK-C	① Threaded spindle	② Sealing ring (Viton®)	③ O-ring (Viton®)	④ O-ring (Viton®)	
	Order No.	Order No.	Order No.	Order No.	Quantity
32	30358733	30358727	10092414	10041145	2
40	30358734	30358728	10092367	10092366	2
50	30358735	30358729	10093466	10092833	2
63	30358736	30358730	10092421	10092833	2
80	30358737	30358731	10093227	10093216	4
100	30358738	30358732	10093229	10074199	4

Dimensions in mm.

Use: For fitting in machine spindles and adapters, for manually clamping HSK shanks.  
For use with coolant pressures up to 50 bar.

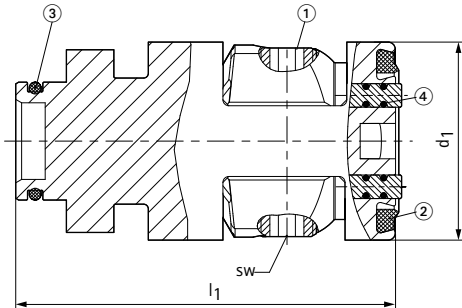
Note: In case of damage or wear, the clamping cartridge must be sent to MAPAL for exchange.

You will find further information on exchange service, direct mounting in the spindle and KS clamping cartridges in the technical appendix.



# KS clamping cartridges

Design for high pressure applications



HSK-C	Dimensions		sw	Weight [gr]	Specification	Order No.
	d <sub>1</sub>	l <sub>1</sub>				
32	16,6	43,4	3	52	KS32-05-D	30325946
40	20,6	48,4	3	86	KS40-06-D	30325948
50	25,6	55,4	4	152	KS50-07-D	30325952
63	33,6	64,45	5	288	KS63-08-D	30325956
80	41,6	74,95	6	525	KS80-09-D	30325960
100	52,6	94,55	8	1.031	KS100-10-D	30325942

## Spare parts for KS clamping cartridges in high pressure design

HSK-C	① Threaded spindle	② Sealing ring	③ O-ring (Viton®)	④ O-ring (Viton®)	
	Order No.	Order No.	Order No.	Order No.	Quantity
32	30358733	30359919	10092414	10041145	4
40	30358734	30359926	10092367	10092366	4
50	30358735	30359927	10093466	10092833	4
63	30358736	30359928	10092421	10092833	4
80	30358737	30359930	10093227	10093216	4
100	30358738	30359931	10093229	10074199	4

Dimensions in mm.

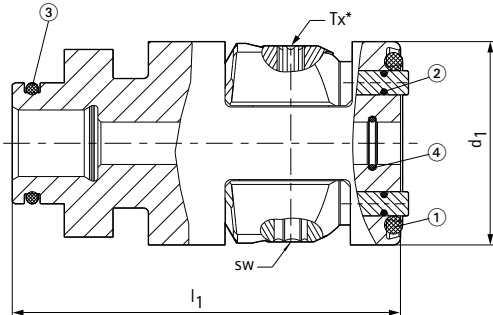
Use: For fitting in machine spindles and adapters, for manually clamping HSK shanks.  
For use with coolant pressures up to 150 bar.

Note: In case of damage or wear, the clamping cartridge must be sent to MAPAL for exchange.

You will find further information on exchange service, direct mounting in the spindle and KS clamping cartridges in the technical appendix.

# KS clamping cartridges

Design for MQL applications MQL1



## KS clamping cartridges with outer O-ring - version MQL1 for HSK-A and HSK-C

HSK-C	Dimensions		sw	Torx*	Weight [gr]	Specification	Order No.
	d <sub>1</sub>	l <sub>1</sub>					
40	20,6	48,1	3	T10	86	KS40-06-MQL1	30325950
50	25,6	55,1	4	T20	152	KS50-07-MQL1	30325954
63	33,6	64,15	5	T25	288	KS63-08-MQL1	30325958
80	41,6	74,65	6	T30	525	KS80-09-MQL1	30325962
100	52,6	94,35	8	T45	1.031	KS100-10-MQL1	30325944

## Spare parts for KS clamping cartridges MQL with outer O-ring - version MQL1 for HSK-A and HSK-C

HSK-C	① O-ring (Viton®)	② O-ring (Viton®)	③ O-ring (Viton®)	④ O-ring (Viton®)
	Order No.	Order No.	Order No.	Order No.
40	10074228	10092366	10092367	10093218
50	30288127	10092833	10074222	10093220
63	10095044	10092833	10092421	10093222
80	10093231	10093216	10093227	10038475
100	10093232	10092420	10093229	10093224

Dimensions in mm.

Use: For fitting in machine spindles and adapters, for optimal, central supply of the MQL medium on manually clamping HSK shanks.

Suitable for 1-channel and 2-channel variants.

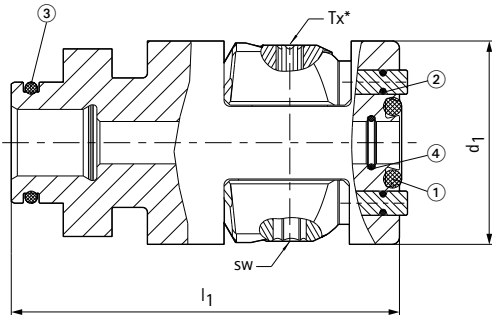
Items included: Blanking plugs or adapter tube are not included, see following pages.

Note: In case of damage or wear, the clamping cartridge must be sent to MAPAL for exchange.

\* Is used only for the emergency release function. After actuation of the emergency release function, the cartridge must be sent to MAPAL for exchange. You will find further information on exchange service, direct mounting in the spindle and KS clamping cartridges in the technical appendix along with a selection aid for the MQL clamping cartridges.

# KS clamping cartridges

Design for MQL applications



## KS clamping cartridges with inner O-ring – version MQL for HSK-C

HSK-C	Dimensions		sw	Torx*	Weight [gr]	Specification	Order No.
	d <sub>1</sub>	l <sub>1</sub>					
40	20,6	48,1	3	T10	86	KS40-06-MQL	30325949
50	25,6	55,1	4	T20	152	KS50-07-MQL	30325953
63	33,6	64,15	5	T25	288	KS63-08-MQL	30325957
80	41,6	74,65	6	T30	525	KS80-09-MQL	30325961
100	52,6	94,35	8	T45	1.031	KS100-10-MQL	30325943

## Spare parts for KS clamping cartridges MQL with inner O-ring – version MQL for HSK-C

HSK-C	① O-ring (Viton®)	② O-ring (Viton®)	③ O-ring (Viton®)	④ O-ring (Viton®)
	Order No.	Order No.	Order No.	Order No.
40	10093221	10092366	10092367	10093218
50	10074202	10092833	10074222	10093220
63	10093223	10092833	10092421	10093222
80	30275900	10093216	10093227	10038475
100	10093226	10092420	10093229	10093224

Dimensions in mm.

Use: For fitting in machine spindles and adapters, for optimal, central supply of the MQL medium on manually clamping HSK shanks.

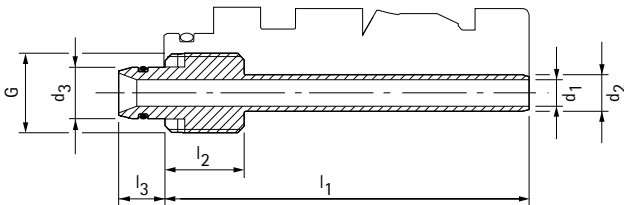
Suitable for 1-channel and 2-channel variants.

Items included: Blanking plugs or adapter tube are not included, see following pages.

Note: In case of damage or wear, the clamping cartridge must be sent to MAPAL for exchange.

\* Is used only for the emergency release function. After actuation of the emergency release function, the cartridge must be sent to MAPAL for exchange. You will find further information on exchange service, direct mounting in the spindle and KS clamping cartridges in the technical appendix along with a selection aid for the MQL clamping cartridges.

## Accessories KS MQL clamping cartridges



### Adapter tubes with spigot connection

HSK-C	Dimensions							Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub> *	G	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	
40	3,5	4,5	5,8	M10x1	48,05	10	7	10079503
50	4	5,5	7,8	M12x1	55,05	12	7	10079504
63	4	7	7,8	M12x1	64,05	14	7	10077739
80	8	10	11,3	M16x1	74,55	14	8	10080904
100	10	12	13,8	M18x1	94,25	14	10	10080905

\* For spindle side connection bore d<sub>3</sub> H9

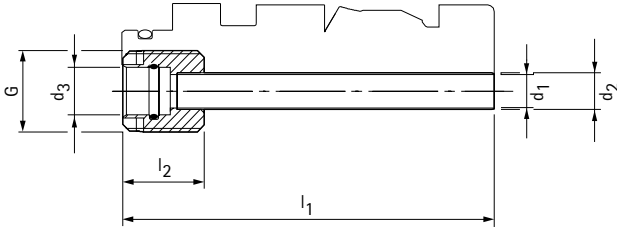
HSK inner contours in accordance with MN5000-40-02-M	Dimensions		
	d <sub>1</sub> H9	l <sub>1</sub> min.	l <sub>1</sub> max.
40	6	49	43,5
50	8	54	48,5
63	8	62,5	57,5
80	11,5	72	65,5
100	14	94	87

Dimensions in mm.

Use: For blind end-free transfer and provision of the MQL medium.

Note: You will find the matching assembly tools in the section "Accessories, spare parts and measuring equipment".

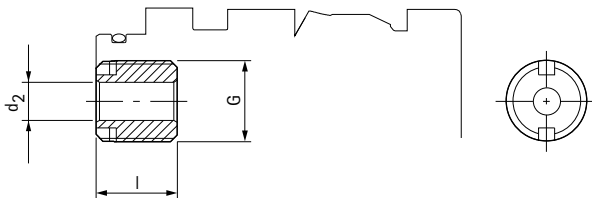
# Accessories KS MQL clamping cartridges



## Adapter tubes with bore transition

HSK-C	Dimensions						Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub> *	G	l <sub>1</sub>	l <sub>2</sub>	
40	4	4,5	5	M10x1	48,05	10	10080906
50	5	5,5	7	M12x1	55,05	12	10080907
63	6	7	7	M12x1	64,05	14	10080908
80	8	10	10	M16x1	74,55	14	10080909
100	10	12	12	M18x1	94,25	14	10080910

\* For spindle supply tube with connection diameter d<sub>3</sub>



## Blanking plug

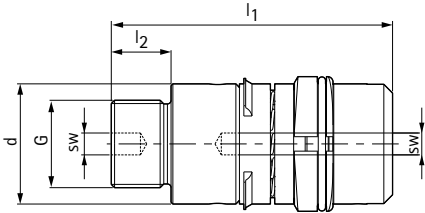
HSK-C	Dimensions			Order No.
	G	d <sub>2</sub>	l	
40	M10x1	4,6	10	30325963
50	M12x1	5,6	12	30325964
63	M12x1	7,1	14	30325965
80	M16x1	10,1	14	30325966
100	M18x1	12,1	14	30325967

Dimensions in mm.

Use: For KS MQL clamping cartridges, if these are used without adapter tube.

Note: You will find the matching assembly tools in the section "Accessories, spare parts and measuring equipment".

# AX axial clamping cartridges



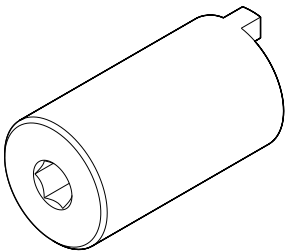
For tool shanks in accordance with DIN 69893-1, -2, -5, -6 / ISO 12164-1, -3

HSK-A/C	Dimensions					Specification	Order No.
	d	G	l <sub>1</sub>	l <sub>2</sub>	sw		
32	16,5	M12x1,0	44,88	8	4	AX32	10082732
40	20,6	M16x1,5	48,8	10	5	AX40	10094291
50	25,4	M20x1,5	60,2	11	6	AX50	10094292
63	33	M24x1,5	77,2	16,4	6	AX63	10094294
80	41	M30x2	95,8	20,7	8	AX80	10094295
100	50,8	M40x2	114,5	22	12	AX100	30231115

Dimensions in mm.

Use: For fitting in machine spindles and adapters, for manually clamping HSK shanks.

Note: No internal coolant supply. You will find information on direct mounting in the spindle in the technical appendix.



## Assembly aid for axial clamping cartridge

HSK axial clamping cartridge	Order No.
32	30252506
40	30252508
50	30249729
63	30252509
80	30252510
100	30252511

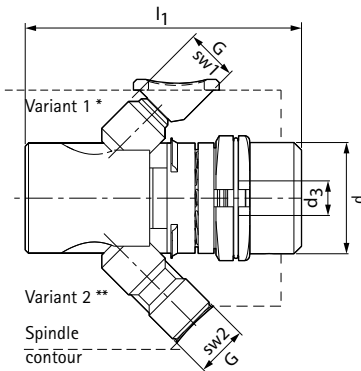
Dimensions in mm.

Use: For fitting in machine spindles and adapters, for manually clamping HSK shanks.

Note: No internal coolant supply. You will find information on direct mounting in the spindle in the technical appendix.



## DS diagonal clamping cartridges



For tool shanks in accordance with DIN 69893-1 / ISO 12164-1

HSK-A/C	Dimensions				Variant 1 *			Variant 2 **		
	d	l <sub>1</sub>	G	d <sub>3</sub>	Specification	Order No.	sw 1	Specification	Order No.	sw 2
32	16,5	43,6	M8x1	6	DS32-S	10094323	3	DS32-L	10094316	4
40	20,6	53,9	M10x1	8	DS40-S	10094324	4	DS40-L	10094317	5
50	25,4	68,7	M12x1,25	10	DS50-S	10094325	5	DS50-L	10094318	6
63	33	84,4	M16x1,5	12	DS63-S	10094327	6	DS63-L	10094319	8
80	41,2	104	M20x1,5	14	DS80-S	10094328	8	DS80-L	10094321	10
100	51,5	127,9	M24x1,5	16	DS100-S	10094329	10	DS100-L	10094322	12

Dimensions in mm.

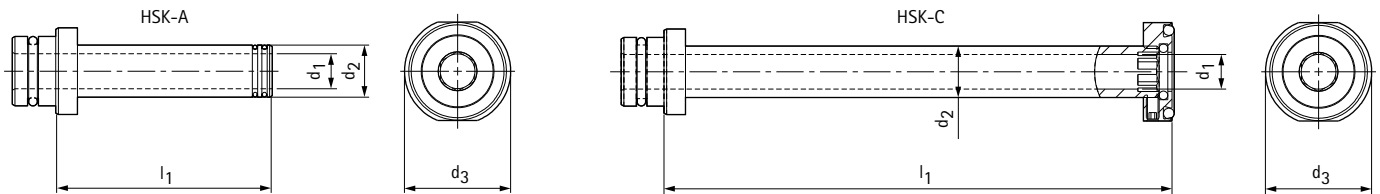
Use: For fitting in machine spindles and adapters, for manually clamping HSK shanks.  
Items included: Coolant tube or MQL supply unit are not included.

Note: You will find diagonal clamping cartridges with adapter flanges and flange adapters in this section under the heading "Clamping cartridges". You will find information on direct mounting in the spindle in the technical appendix.

\* For slender spindle external contour. Spindle contour with short clamping screw and support screw for use with sealing ring.

\*\* For flange solutions and spindles with larger external contour. Spindle contour with long clamping screw and support screw for use with sealing ring.

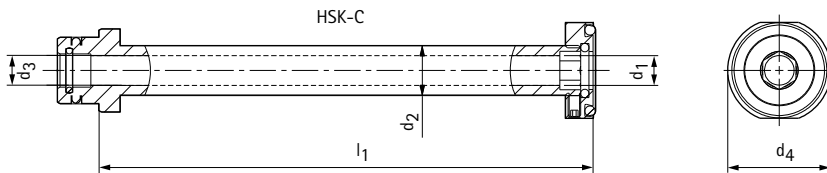
# Accessories for DS diagonal clamping cartridges



## Coolant tubes for diagonal clamping cartridges

HSK-A/C	Dimensions		Diagonal clamping cartridge HSK-A			Diagonal clamping cartridge HSK-C		
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	Order No.	d <sub>3</sub>	l <sub>1</sub>	Order No.
32	3,5	6	10	42,5	30318727	12,8	50,7	10094751
40	5,1	8	16	55,7	30318728	16	61,7	10094752
50	6,1	10	18	73,2	30318741	19,8	76,1	10094753
63	8,1	12	20	94	30318749	24,8	91,7	10094754
80	10,1	14	26	124	30318750	32	114,3	10094755
100	12,1	16	31,2	112	10094750	40	140,3	10094756

Use: For transfer and supply of coolant.



## MQL transfer units for diagonal clamping cartridges

HSK-C	Dimensions				Diagonal clamping cartridge HSK-C	
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	l <sub>1</sub>	Order No.
40	4	8	5,1	16	61,7	10096593
50	5	10	7,1	19,8	76,1	10096594
63	6	12	7,1	24,8	91,7	10096595
80	8	14	10,1	32	114,3	10096596
100	10	16	12,1	40	140,3	10096597

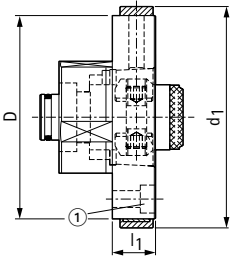
Use: For blind end-free transfer and provision of the MQL medium.

Dimensions in mm.

# KS adapter flanges

with radial alignment

Module connection sizes for internal spindle contour MN5000-12



## With KS clamping cartridge

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
55	32	61	13	0,4	KS-EF-MOD055-HSK-C032-013-11	30320022
63	40	70	15	0,5	KS-EF-MOD063-HSK-C040-015-11	30320023
80	50	87	17	0,9	KS-EF-MOD080-HSK-C050-017-11	30320024
100	63	108	21	1,7	KS-EF-MOD100-HSK-C063-021-11	30320025
117	80	125	21	2,5	KS-EF-MOD117-HSK-C080-021-11	30320026
140	100	150	28	4,9	KS-EF-MOD140-HSK-C100-028-11	30320027

## With KS clamping cartridge for high pressure

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
55	32	61	13	0,4	KS-EF-MOD055-HSK-C032-013-19	30381774
63	40	70	15	0,5	KS-EF-MOD063-HSK-C040-015-19	30381778
80	50	87	17	0,9	KS-EF-MOD080-HSK-C050-017-19	30381783
100	63	108	21	1,7	KS-EF-MOD100-HSK-C063-021-19	30381785
117	80	125	21	2,5	KS-EF-MOD117-HSK-C080-021-19	30381789
140	100	150	28	4,9	KS-EF-MOD140-HSK-C100-028-19	30381794

Dimensions in mm.

Use: For installation in the machine spindle for mounting HSK tools.

Items included: With standard KS clamping cartridge, sealing ring and cylinder head screws (for fastening the KS adapter flange).

Design: Radial run-out adjustable in the machine spindle through the threaded pins (for alignment).

Note: You will find the matching KS clamping cartridges in this section under the heading "Clamping cartridges". For sealing rings, see section "Accessories, spare parts and measuring equipment". You will find information on the fitting dimensions in the technical appendix.

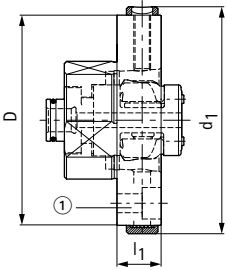
Notes. Spare parts for KS adapter flanges can be found in this section.

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS adapter flanges

with radial alignment

Module connection sizes for internal spindle contour MN5000-12



## HSK-A, HSK-C with MQL clamping cartridge MQL1 with outer O-ring

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
63	40	70	15	0,6	KS-EF-MOD063-HSK-C040-015-17	30381517
80	50	87	17	0,9	KS-EF-MOD080-HSK-C050-017-17	30381522
100	63	108	21	1,6	KS-EF-MOD100-HSK-C063-021-17	30370096
117	80	125	21	2,4	KS-EF-MOD117-HSK-C080-021-17	30381545
140	100	150	28	4,5	KS-EF-MOD140-HSK-C100-028-17	30381563

## Only for HSK-C: With MQL clamping cartridge MQL with inner O-ring

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
63	40	70	15	0,6	KS-EF-MOD063-HSK-C040-015-18	30381516
80	50	87	17	0,9	KS-EF-MOD080-HSK-C050-017-18	30381520
100	63	108	21	1,6	KS-EF-MOD100-HSK-C063-021-18	30321455
117	80	125	21	2,4	KS-EF-MOD117-HSK-C080-021-18	30381544
140	100	150	28	4,5	KS-EF-MOD140-HSK-C100-028-18	30381561

Dimensions in mm.

Use: For installation in the machine spindle for mounting HSK tools.

Items included: With standard MQL clamping cartridge, sealing ring and cylinder head screws (for fastening the KS adapter flange).

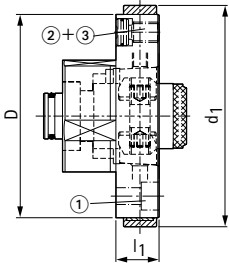
Design: Radial run-out adjustable in the machine spindle through the threaded pins (for alignment).

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS adapter flanges

with radial and angular alignment

Module connection sizes for internal spindle contour MN5000-12



## With KS clamping cartridge

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		$d_1$	$l_1$			
55	32	61	13	0,4	KS-EF-MOD055-HSK-C032-013-21	30320028
63	40	70	15	0,5	KS-EF-MOD063-HSK-C040-015-21	30320029
80	50	87	17	0,9	KS-EF-MOD080-HSK-C050-017-21	30320030
100	63	108	21	1,7	KS-EF-MOD100-HSK-C063-021-21	30320031
117	80	125	21	2,5	KS-EF-MOD117-HSK-C080-021-21	30320032
140	100	150	28	4,9	KS-EF-MOD140-HSK-C100-028-21	30320033

## With KS clamping cartridge for high pressure

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		$d_1$	$l_1$			
55	32	61	13	0,4	KS-EF-MOD055-HSK-C032-013-29	30381932
63	40	70	15	0,5	KS-EF-MOD063-HSK-C040-015-29	30381935
80	50	87	17	0,9	KS-EF-MOD080-HSK-C050-017-29	30381937
100	63	108	21	1,7	KS-EF-MOD100-HSK-C063-021-29	30381940
117	80	125	21	2,5	KS-EF-MOD117-HSK-C080-021-29	30381942
140	100	150	28	4,9	KS-EF-MOD140-HSK-C100-028-29	30381945

Dimensions in mm.

Use: For installation in the machine spindle for mounting HSK tools.

Items included: With standard KS clamping cartridge, thrust pad and threaded pin, sealing ring and cylinder head screws (for fastening the KS adapter flange).

Design: Radial run-out adjustable in the machine spindle through the threaded pins (for alignment). Axial run-out adjustable in the adapter flange through threaded pins and thrust pads.

Note: You will find the matching KS clamping cartridges in this section under the heading "Clamping cartridges". For sealing rings, see section "Accessories, spare parts and measuring equipment". You will find information on the fitting dimensions in the technical appendix.

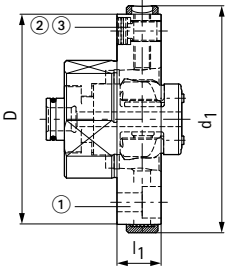
Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.



# KS adapter flanges

with radial and angular alignment

Module connection sizes for internal spindle contour MN5000-12



## HSK-A, HSK-C with MQL clamping cartridge MQL1 with outer O-ring

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
63	40	70	15	0,6	KS-EF-MOD063-HSK-C040-015-27	30381613
80	50	87	17	0,9	KS-EF-MOD080-HSK-C050-017-27	30381616
100	63	108	21	1,6	KS-EF-MOD100-HSK-C063-021-27	30381620
117	80	125	21	2,4	KS-EF-MOD117-HSK-C080-021-27	30381624
140	100	150	28	4,5	KS-EF-MOD140-HSK-C100-028-27	30381626

## Only for HSK-C: With MQL clamping cartridge MQL with inner O-ring

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
63	40	70	15	0,6	KS-EF-MOD063-HSK-C040-015-28	30381612
80	50	87	17	0,9	KS-EF-MOD080-HSK-C050-017-28	30381614
100	63	108	21	1,6	KS-EF-MOD100-HSK-C063-021-28	30381618
117	80	125	21	2,4	KS-EF-MOD117-HSK-C080-021-28	30381623
140	100	150	28	4,5	KS-EF-MOD140-HSK-C100-028-28	30381625

Dimensions in mm.

Use: For installation in the machine spindle for mounting HSK tools.

Items included: With MQL clamping cartridge, thrust pad and threaded pin, sealing ring and cylinder head screws (for fastening the KS adapter flange).

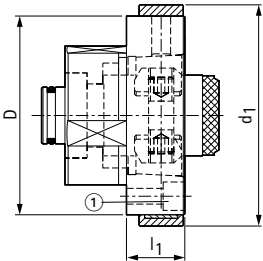
Design: Radial run-out adjustable in the machine spindle thorough the threaded pins (for alignment). Axial run-out adjustable in the adapter flange thorough threaded pins and trust pads.

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS adapter flanges

for short spindles with radial alignment

Module connection sizes for internal spindle contour MN5000-13



## With KS clamping cartridge

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
40	32	45	12	0,2	KS-EF-MOD040-HSK-C032-012-11	30320034
50	40	55	15	0,4	KS-EF-MOD050-HSK-C040-015-11	30320035
63	50	70	18,5	0,7	KS-EF-MOD063-HSK-C050-018-11	30320036
80	63	87	24	1,3	KS-EF-MOD080-HSK-C063-024-11	30320037

## With KS clamping cartridge for high pressure

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
40	32	45	12	0,2	KS-EF-MOD040-HSK-C032-012-19	30381802
50	40	55	15	0,4	KS-EF-MOD050-HSK-C040-015-19	30381806
63	50	70	18,5	0,7	KS-EF-MOD063-HSK-C050-018-19	30381809
80	63	87	24	1,3	KS-EF-MOD080-HSK-C063-024-19	30381813

Dimensions in mm.

Use: For fitting in short spindles (DIN 69002) for mounting HSK tools.

Items included: With standard KS clamping cartridge, sealing ring and cylinder head screws (for fastening the KS adapter flange).

Design: Radial run-out adjustable in the machine spindle through the threaded pins (for alignment).

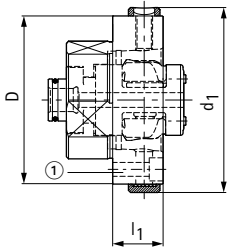
Note: You will find the matching KS clamping cartridges in this section under the heading "Clamping cartridges". For sealing rings, see section "Accessories, spare parts and measuring equipment". You will find information on the fitting dimensions in the technical appendix. Spare parts for KS adapter flanges can be found in this section.

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS adapter flanges

for short spindles with radial alignment

Module connection sizes for internal spindle contour MN5000-13



## HSK-A, HSK-C with MQL clamping cartridge MQL1 with outer O-ring

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
50	40	55	15	0,3	KS-EF-MOD050-HSK-C040-015-17	30381570
63	50	70	18,5	0,6	KS-EF-MOD063-HSK-C050-018-17	30368528
80	63	87	24	1,2	KS-EF-MOD080-HSK-C063-024-17	30374580

## Only for HSK-C: With MQL clamping cartridge MQL with inner O-ring

D	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
50	40	55	15	0,3	KS-EF-MOD050-HSK-C040-015-18	30322617
63	50	70	18,5	0,6	KS-EF-MOD063-HSK-C050-018-18	30377261
80	63	87	24	1,2	KS-EF-MOD080-HSK-C063-024-18	30359866

Dimensions in mm.

Use: For installation in the machine spindle (DIN 69002) for mounting HSK tools.

Items included: MQL clamping cartridge, sealing ring and cylinder head screws (for fastening the KS adapter flange).

Design: Radial run-out adjustable in the machine spindle through the threaded pins (for alignment).

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

## Spare parts for KS adapter flanges

### Spare parts for KS adapter flanges with radial alignment in accordance with MN 5000-14

D	Quantity required	① Cylinder head screw in acc. with ISO 4762	
		Size	Order No.
55	6	M5x16 - 12.9	10003601
63	6	M5x20 - 12.9	10003603
80	6	M6x20 - 12.9	10003619
100	6	M8x25 - 12.9	10003637
117	6	M8x25 - 12.9	10003637
140	6	M10x30 - 12.9	10003660

### Spare parts for KS adapter flanges with radial and angular alignment

D	Quantity required	① Cylinder head screw in acc. with ISO 4762		② Thrust pad		③ Threaded pin	
		Size	Order No.	Specification	Order No.	Specification	Order No.
55	6	M5x16 - 12.9	10003601	ø7.6x4	10075115	M6x8-KLF	10075101
63	6	M5x20 - 12.9	10003603	ø7.6x4	10075115	M6x8-KLF	10075101
80	6	M6x20 - 12.9	10003619	ø10.6x5	10040108	M8x1x11.5-KLR	10075074
100	6	M8x25 - 12.9	10003637	ø12.8x5	10075116	M10x1x14-KLR	10075100
117	6	M8x25 - 12.9	10003637	ø12.8x5	10075116	M10x1x14-KLR	10075100
140	6	M10x30 - 12.9	10003660	ø12.8x5	10075116	M10X1X20-45H-KLR	10075099

### Spare parts for KS adapter flanges for short spindles

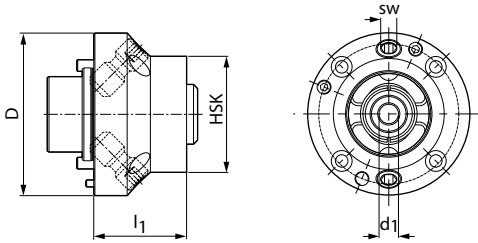
D	Quantity required	① Cylinder head screw in acc. with ISO 4762	
		Size	Order No.
40	6	M3x16 - 12.9	10003572
50	6	M4x20 - 12.9	10003588
63	6	M5x25 - 12.9	10003605
80	6	M6x30 - 12.9	10003621

Dimensions in mm.

## DS adapter flanges

with diagonal clamping cartridge with radial and angular alignment

Module connection sizes in accordance with MN5000-73, with reduced installation dimensions



For tool shanks in accordance with DIN 69893-1 / ISO 12164-1

HSK-C	Dimensions			sw	Order No.
	D	d <sub>1</sub>	l <sub>1</sub>		
32	55	6	25	4	30202173
40	63	8	32	5	30202174
50	80	10	40	6	30202176
63	100	12	50	8	30202177
80	117	14	63	10	30202178
100	140	16	80	12	30202179

Dimensions in mm.

Use: For installation in the machine spindle for mounting HSK tools.

Items included: With diagonal clamping cartridge, thrust pad, threaded pin and cylinder head screws (for fastening the DS flange adapter).

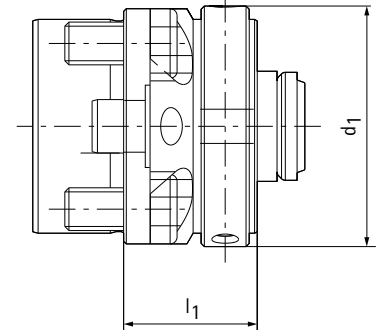
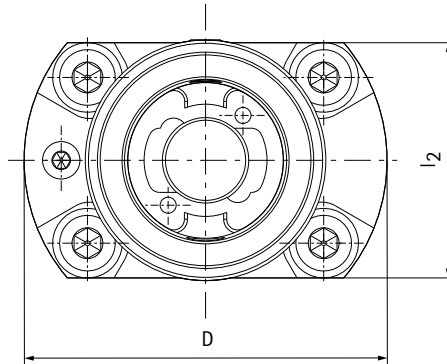
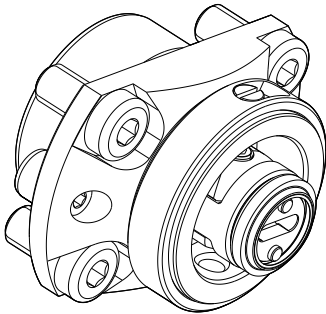
Design: Radial run-out adjustable in the machine spindle through the threaded pins (for alignment). Axial run-out adjustable in the adapter flange through threaded pins and thrust pads.

Notes: You will find information on direct mounting in the spindle in the technical appendix. You will find the matching diagonal clamping cartridges in this section under the heading "Clamping cartridges" (variant 2).

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS flange adapters

for turning applications



Module $\varnothing$ D	HSK-T	Design	Dimensions			Specification	Order No.
			$d_1$	$l_1$	$l_2$		
68	40	Left	45	25	44	KS-VL-MOD068-HSK-T040-025-01	30429656
68	40	Right	45	25	44	KS-VL-MOD068-HSK-T040-025-01	30438946
102	63	Left	70	37	72	KS-VL-MOD102-HSK-T063-037-01	30429657
102	63	Right	70	37	72	KS-VL-MOD102-HSK-T063-037-01	30438947
165	100	Left	110	55	112	KS-VL-MOD165-HSK-T100-055-01	30429658
165	100	Right	110	55	112	KS-VL-MOD165-HSK-T100-055-01	30438948

Dimensions in mm.

Use: For fitting in the revolver and in conversion adaptations for manual clamping of HSK shanks on lathes.

Items included: With KS clamping cartridge, sealing ring, eccentric pin and cylinder head screw.

Design: Adjustable to the centre height by actuating element in the flange adapter. With internal coolant supply.

Notes: In the section "Accessories, spare parts and measuring equipment" you will find suitable KS clamping cartridges, sealing rings, angle setting gauges. You will find information on the "right" and "left" handed designs and on the fitting dimensions in the Technical appendix.



# CHUCKS

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Hydraulic chucks, shrink chucks and mechanical chucks









# CHUCKS

## Chucks

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# PRODUCT RANGE



**1 Hydraulic extensions**

**2 Precision drill chuck**  
Micro design

**3 ThermoChuck**  
Narrow design, 3 degrees

**4 Whistle Notch chuck**

**5 Precision drill chuck**

**6 Collet chuck**

**7 HydroChuck Compensation**

**8 HighTorque Chuck**  
In long and short heavy-duty design

**9 HydroChuck**

In long, ultra-short and short heavy-duty design

**10 HighTorque Chuck**

Narrow design, 3 degrees

**11 ThermoChuck**

In long, short and heavy-duty design



6

7

8

9

10



# INNOVATIONS | HIGHLIGHTS

## HighTorque Chuck HTC with narrow contour 3 degrees



MAPAL achieves a revolution in clamping technology with the HighTorque Chuck HTC with narrow contour. Thanks to additive manufacturing, it has become possible to utilise the benefits of a hydraulic chuck in an even wider field of applications for the first time. On the one hand, the new chuck exhibits the narrow contour with the 3° back taper known from the shrink chuck and the familiar high holding forces, but does without

costly shrink units. On the other hand it offers the benefits of the MAPAL HTC technology, whereby the "T" stands not only for high torque transmission, but also for thermal stability. The wide operating temperature range up to 170°C ensures additional process reliability. It is suitable for all machining operations, particularly in contour-critical areas from a clamping diameter of 3 mm.

### AT A GLANCE

- Reliable clamping even at temperatures up to 170 °C
- Optimum radial run-out accuracy of 3 µm with a projection length of 2.5 x D
- Better surface finish with longer tool life of the tool
- Shorter set-up times and lower tool costs

## HighTorque Chuck HTC short heavy-duty design with resealable cooling channel bores



The MAPAL HTC in the short heavy-duty design has excellent rigidity, high torque transmission and withstands high thermal loads up to 170 degrees, as occur for example during HPC milling. The bending resistance is 1.4 times greater than a conventional shrink chuck. In addition, MAPAL offers the HTC as a short heavy-duty design with resealable cooling channel bores. In this way the range of applications is expanded. It is also possible

to use tools without internal cooling. In use these advantages guarantee a very high quality surface finish on the part, significantly higher milling speeds and shorter machining times. In addition, due to the good damping properties, chipping on the cutting edge is prevented and as a result longer tool lives achieved for the tool used.

### AT A GLANCE

- Maximum torque transmission
- Compact design
- Thermal stability up to 170 °C
- Resealable cooling channel bores
- Ideal for heavy machining
- Optimal damping properties for long tool life



## HydroChuck Compensation



The hydraulic chuck Compensation guarantees perfect radial run-out on the usage of multi-bladed reamers in a close tolerance range. The error on the total system due to the tolerances on the spindle, clamping tool and tool is compensated and perfect radial run-out guaranteed. The HydroChuck Compensation is perfectly suited to light machining tasks with multi-bladed reamers. In addition to the proven MAPAL hydraulic clamping technology,

at three adjusting elements it is possible to set the radial run-out exactly in a setting range of up to 10  $\mu\text{m}$ . The radial run-out is corrected straightforwardly and quickly using a hex wrench depending on the direction of the error. The system is self-locking, unintentional movement during fine machining is impossible.

### AT A GLANCE

- Compensation of errors on the overall system
- Easy handling
- No jamming of the tool
- Better surface quality and tool life
- Dirt resistant and low maintenance

## HydroChuck with module connection



MAPAL HydroChucks with flange module are optimal for machining operations that require the compensation of radial run-out and angular errors on the machine spindle. These are adjusted radially using adjusting

elements and produce accuracies in the  $\mu$  range. In combination with the advantages of hydraulic technology, such as vibration damping, increase of tool lives.

### AT A GLANCE

- Compensation of radial run-out and angular errors
- Easy handling
- Better surface quality and longer tool life

# CHUCK SYSTEMS



## Hydraulic clamping technology

### HighTorque Chuck HTC

The new hydraulic chucks HighTorque Chuck (HTC) combine the damping properties of hydraulic clamping technology with the high holding forces of shrinking technology. Thanks to an innovative manufacturing process, the chucks impress due to high torque transmission, ideal damping properties, outstanding rigidity of the overall system and a radial run-out accuracy of  $< 3 \mu\text{m}$ . The bending resistance is 1.4 times greater than a conventional shrink chuck in accordance with DIN 69882-8. In use these advantages guarantee a high surface finish on the part, significantly higher machining speeds and therefore short machining times, preventing chipping of the cutting edge on the tool and permit long tool lives. The standard programme of HTC chucks covers short versions with additional decentral resealable cooling channel bores, an additively manufactured narrow 3-degree design with direct clamping from a diameter of 3 mm, as well as versions for minimum quantity lubrication MQL.



#### ADVANTAGES

- High torque transmission
- Process reliability up to 170 °C
- Suitable for MQL

### HydroChuck MHC

Due to their high radial run-out accuracy and the resulting even cutting action as well as the excellent vibration damping, MAPAL hydraulic chucks HydroChuck guarantee optimal workpiece finishes. In addition, microstructure cracking on the tool cutting edge is prevented by the hydraulic system, the tool lives increased and costs reduced. The high clamping reliability is ensured even at high spindle speeds. The chucks can be adjusted to the  $\mu$  thanks to axial and radial length adjustment. Designs for minimum quantity lubrication as well as short heavy-duty and ultra-short designs with steep taper are available in the standard programme.



#### ADVANTAGES

- Radial or axial length adjustment to the  $\mu$
- No reduction in the clamping forces at high spindle speeds, as a result high process reliability
- Increased tool life due to very high radial run-out accuracy and repetition accuracy
- Suitable for MQL



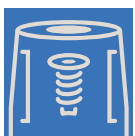
## Shrinking technology

### ThermoChuck MTC

Using the shrink chucks ThermoChuck the tools can be accurately clamped for almost all milling operations. High torque transmission and radial rigidity characterise this chuck. Long-term radial run-out accuracy and repetition accuracy of  $< 3 \mu\text{m}$  in the location bore guarantee high dimensional accuracy at the workpiece. The shrink chucks from MAPAL are finely balanced as standard so that high surface finishes and long tool lives are ensured. The standard programme of shrink chucks ThermoChuck MTC includes designs with narrow external contour, heavy-duty designs as well as a broad MQL program. In addition, long designs up to 300 mm with HSK-A shank are available from stock.

#### ADVANTAGES

- High torque transmission and radial rigidity
- Long service life due to usage of heat-resistant tool steel
- Numerous possible combinations of shrink chucks and extensions
- Suitable for MQL



## Mechanical tool clamping

### Precision drill chucks MPC | Collet chucks MCC | Weldon and Whistle Notch MNC chucks

Mechanical chucks impress due to their simple construction and the uncomplicated handling. The clamping is safeguarded regardless of the direction of rotation even at high spindle speeds. The standard programme for mechanical tool clamping covers precision drill chucks that are also available in a micro design with direct clamping from 0.2 mm. Due to the modular design, the drill chucks are available with all forms of machine-side tool bodies. Collet chucks, Weldon and Whistle Notch chucks round off the programme of mechanical chucks.



#### ADVANTAGES

- Simple construction and uncomplicated handling
- Safe clamping regardless of direction of rotation
- High spindle speed strength
- Modular design makes it possible to use drill chuck heads on all tool connections



# Selection of a chuck 1/2

The optimal chuck for every application

Chucks		Milling			Drilling	Reaming	
		HPC	Roughing	Finishing			
<b>HighTorque Chuck HTC</b> 	Standard	■	■	■	★	■	
	Short heavy-duty design <sup>1)</sup>	■	■	■	■	▣	
	Short heavy-duty design with cooling channel bores <sup>1) 2)</sup>	★	★	★	■	■	
	Narrow contour 3 degrees	□	□	■	■	■	
<b>HydroChuck MHC</b> 	Standard	□	□	■	■	★	
	Short heavy-duty design <sup>1)</sup>	□	□	■	■	▣	
	With radial length adjustment	□	□	■	■	■	
	With compensation technology <sup>3)</sup>	□	□	□	□	■	
	With cooling channel bores <sup>2)</sup>	□	□	■	■	■	
<b>ThermoChuck MTC</b> 	Standard	▣	■	■	■	■	
	Short design <sup>4)</sup>	■	■	■	■	▣	
	With cooling channel bores <sup>2)</sup>	▣	■	■	■	■	
	Narrow contour 3 degrees	□	□	▣	■	■	
<b>Mechanical</b> 	With clamping surface   MNC	■	■	▣	▣	□	
	With collet   MCC	□	□	□	▣	▣	
	Precision drill chuck   MPC	□	□	□	▣	▣	
	Milling cutter arbor   MCA	□	▣	□	□	□	
	Softsynchro   MSC	□	□	□	□	□	

★ = 1st choice | ■ = highly suitable | ▣ = suitable in some situations | □ = not suitable

<sup>1)</sup> Short/heavy-duty design: Compact design for high rigidity.

<sup>2)</sup> With cooling channel bores: Chuck with additional decentral coolant outlets that, optionally, are resealable.

<sup>3)</sup> With compensation technology: Alignment function on the chuck for radial alignment feature for the compensation of radial run-out errors on the overall system.




<sup>4)</sup> Heavy-duty design: Reinforced contour for heavy-duty machining tasks, optionally with additional cooling channel bores.

						
	HSK-A	HSK-A MQL  	HSK-C	HSK-E	HSK-F	
	from page 52	from page 110	from page 132			
	from page 53					
	from page 54					
	from page 55					
	from page 58	from page 111	from page 134	from page 159	from page 172	from page 184
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	from page 75					
	from page 69					
	from page 71				from page 176	from page 187
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	from page 84				from page 178	from page 188
	from page 281					
	from page 88					

Continued on next page.

# Selection of a chuck 2/2

The optimal chuck for every application

Chucks		Milling			Drilling	Reaming	
		HPC	Roughing	Finishing			
<b>HighTorque Chuck HTC</b> 	Standard	■	■	■	★	■	
	Short heavy-duty design <sup>1)</sup>	■	■	■	■	▣	
	Short heavy-duty design with cooling channel bores <sup>1) 2)</sup>	★	★	★	■	■	
	Narrow contour 3 degrees	□	□	■	■	■	
<b>HydroChuck MHC</b> 	Standard	□	□	■	■	★	
	Short heavy-duty design <sup>1)</sup>	□	□	■	■	▣	
	With radial length adjustment	□	□	■	■	■	
	With compensation technology <sup>3)</sup>	□	□	□	□	■	
	With cooling channel bores <sup>2)</sup>	□	□	■	■	■	
<b>ThermoChuck MTC</b> 	Standard	▣	■	■	■	■	
	Short design <sup>4)</sup>	■	■	■	■	▣	
	With cooling channel bores <sup>2)</sup>	▣	■	■	■	■	
	Narrow contour 3 degrees	□	□	▣	■	■	
<b>Mechanical</b> 	With clamping surface   MNC	■	■	▣	▣	□	
	With collet   MCC	□	□	□	▣	▣	
	Precision drill chuck   MPC	□	□	□	▣	▣	
	Milling cutter arbor   MCA	□	▣	□	□	□	
	Softsynchro   MSC	□	□	□	□	□	

★ = 1st choice | ■ = highly suitable | ▣ = suitable in some situations | □ = not suitable

<sup>1)</sup> Short/heavy-duty design: Compact design for high rigidity

<sup>2)</sup> With cooling channel bores: Chuck with additional decentral coolant outlets that, optionally, are resealable.

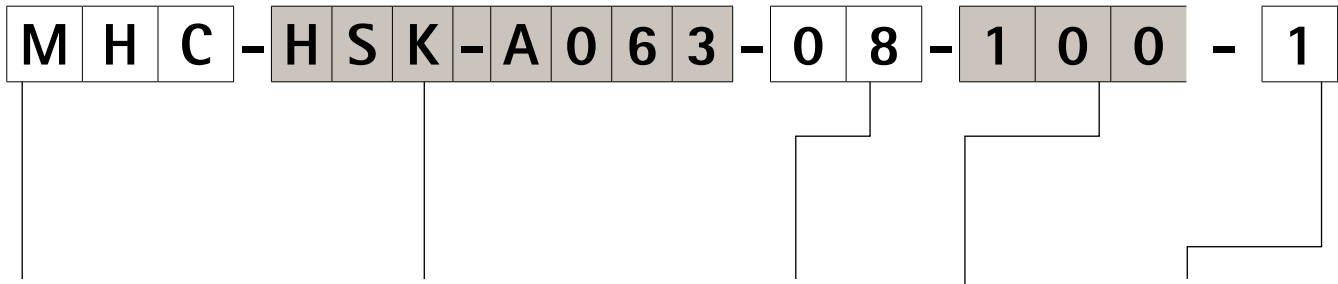
<sup>3)</sup> With compensation technology: Alignment function on the chuck for radial alignment feature for the compensation of radial run-out errors on the overall system.

<sup>4)</sup> Heavy-duty design: Reinforced contour for heavy-duty machining tasks, optionally with additional cooling channel bores.

				
Flange module	Cylindrical shank	SK	BT	CAT
		from page 212	from page 244	
		from page 213	from page 245	from page 268
		from page 215	from page 246	
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from page 201	Hydraulic extension page 208	from page 217	from page 249	from page 269
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		from page 220		
from page 202	Tool extension for thermal expanding chucks page 209	from page 222	from page 253	from page 272
		from page 229		
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			from page 263	
	from page 206	from page 235	from page 264	
		from page 285	from page 286	
	from page 207			



# Designation code for chuck specification



Type

HTC	HighTorque Chuck
MHC	Hydraulic chucks (HydroChuck)
MHA	Hydraulic clamping arbor
MTC	Shrink chuck (ThermoChuck)
MWC	Weldon chuck
MNC	Chucks Whistle Notch
MCC	Chucks for collets
MCA	Milling cutter arbor
MPC	Precision drill chuck (Precision-DrillChuck)
MSC	Synchro tapping chuck
MFH	Floating holder

Connection shank

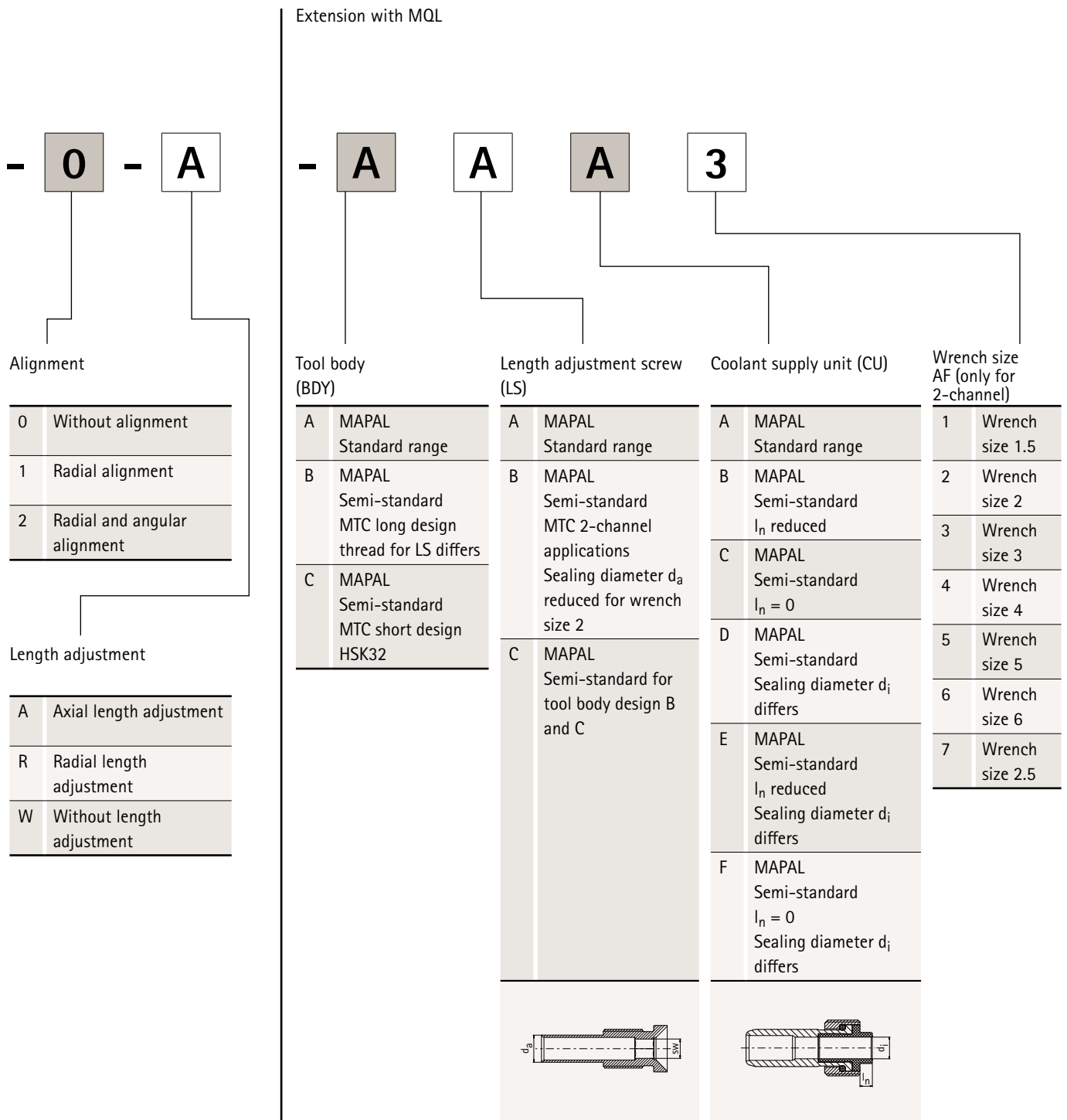
HSK-A	Hollow shank taper Form A
HSK-C	Hollow shank taper Form C
HSK-E	Hollow shank taper Form E
HSK-F	Hollow shank taper Form F
MOD	Module connection
ZYL	Cylindrical shank
SK	Steep taper Form A in acc. with ISO
AD-FC	Steep taper Form A in acc. with ISO
BT	Steep taper Form J in acc. with ISO
JD-FC	Steep taper Form J similar to ISO with face connection
CAT	Steep taper in acc. with ASME
VDI	VDI connection
STH	Shank of adjusting bushing

Clamping diameter (max. clamping  $\phi$ )

Projection length

Internal cooling/MQL – general conditions

0	Without
1	Internal
2	Lateral (SK)
3	Internal and lateral combined
Only with MQL:	
A	MQL 1-channel system automatic tool change
B	MQL 1-channel system manual tool change
C	MQL 2-channel system automatic tool change
D	MQL 2-channel system manual tool change
E	MQL 1-channel system Tool change not specified
F	MQL 2-channel system Tool change not specified
G	MQL not specified Tool change not specified



The following items of information are appended to the specification:




- VS: Foolproofing
- FB: Fine balanced
- BC: Chip version with Balluff chip
- FAS: Milling cutter clamping screw





# CHUCKS WITH HSK-A

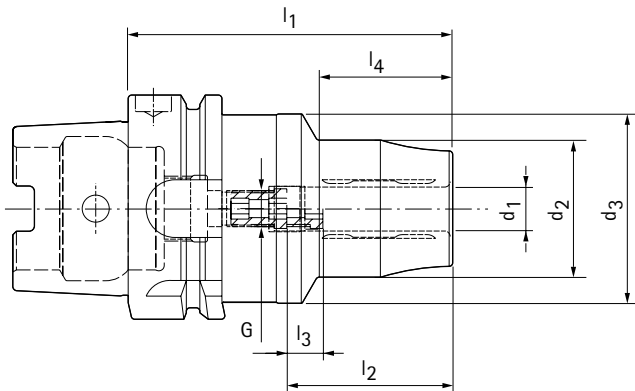
## Chucks

	HighTorque Chuck HTC _____	52
	Hydraulic chucks with radial length adjustment _____	56
	Hydraulic chucks HydroChuck with axial length adjustment _____	58
	Hydraulic chucks HydroChuck Compensation _____	63
	Shrink chucks ThermoChuck with axial length adjustment _____	64
	Shrink chucks ThermoChuck with axial length adjustment and slender contour 3 degrees _____	71
	Chucks for cylindrical shanks with lateral drive area _____	76
	Chucks for cylindrical shanks with angled clamping surface _____	78
	Chucks for collets _____	80
	Precision-DrillChuck _____	84
	Micro-Precision DrillChuck _____	87
	Softsynchro tapping chucks _____	88

# HighTorque Chuck HTC

with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$					
63	6	32	50	80	37	10	26	M5	1,1	HTC-HSK-A063-06-080-1-0-A	30297583	30553424
63	8	34	50	80	37	10	27	M6	1,1	HTC-HSK-A063-08-080-1-0-A	30297584	30553425
63	10	36	50	85	41	10	32	M8x1	1,2	HTC-HSK-A063-10-085-1-0-A	30297603	30553426
63	12	38	52,5	90	46	10	37	M10x1	1,3	HTC-HSK-A063-12-090-1-0-A	30297604	30408580
63	14	40	52,5	90	46	10	37	M10x1	1,3	HTC-HSK-A063-14-090-1-0-A	30297605	30553427
63	16	42	52,5	95	49	10	42	M12x1	1,5	HTC-HSK-A063-16-095-1-0-A	30297606	30553428
63	18	44	52,5	95	49	10	42	M12x1	1,5	HTC-HSK-A063-18-095-1-0-A	30297607	30553429
63	20	48	52,5	100	51	10	45	M16x1	1,5	HTC-HSK-A063-20-100-1-0-A	30297608	30408579
63	25	57	52,5	120	57	10	62	M16x1	2,1	HTC-HSK-A063-25-120-1-0-A	30297609	30409585
63	32	63	53	125	61	10	62	M16x1	2,3	HTC-HSK-A063-32-125-1-0-A	30297610	30553430
100	6	32	50	85	37	10	26	M5	2,8	HTC-HSK-A100-06-085-1-0-A	30477115	30553431
100	8	34	50	85	37	10	27	M6	2,8	HTC-HSK-A100-08-085-1-0-A	30477117	30553432
100	10	36	50	90	41	10	32	M8x1	2,9	HTC-HSK-A100-10-090-1-0-A	30477119	30553433
100	12	38	52,5	95	46	10	37	M10x1	2,9	HTC-HSK-A100-12-095-1-0-A	30477129	30553434
100	14	40	52,5	95	46	10	37	M10x1	2,9	HTC-HSK-A100-14-095-1-0-A	30477131	30553435
100	16	42	52,5	100	49	10	42	M12x1	3,0	HTC-HSK-A100-16-100-1-0-A	30477133	30553436
100	18	44	52,5	100	49	10	42	M12x1	3,0	HTC-HSK-A100-18-105-1-0-A	30477135	30553437
100	20	48	52,5	105	51	10	45	M16x1	3,0	HTC-HSK-A100-20-105-1-0-A	30477137	30553438
100	25	57	63	115	57	10	60	M16x1	3,8	HTC-HSK-A100-25-115-1-0-A	30477139	30476532
100	32	63	75	120	61	10	60	M16x1	4,0	HTC-HSK-A100-32-120-1-0-A	30477141	30553439

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw, without coolant tube.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy 3  $\mu$ m.

On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

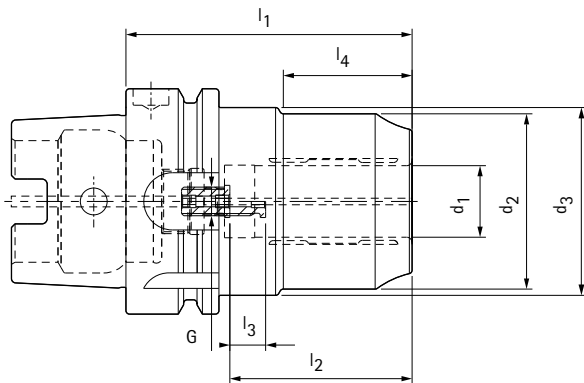
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



## Short heavy-duty design

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
63	12	42	52,5	80	46	10	34	M8x1	1,1	HTC-HSK-A063-12-080-1-0-A	30524702	30551657
63	20	49	52,5	80	51	10	36	M8x1	1,3	HTC-HSK-A063-20-080-1-0-A	30490553	30553440
63	32	63	53	105	61	10	55	M8x1	1,6	HTC-HSK-A063-32-105-1-0-A	30588142	30770302
100	12	42	52,5	85	46	10	34	M8x1	2,1	HTC-HSK-A100-12-085-1-0-A	30524703	30551659
100	20	49	52,5	85	51	10	36	M8x1	2,6	HTC-HSK-A100-20-085-1-0-A	30490554	30553441
100	32	68	72	100	61	10	42	M8x1	3,8	HTC-HSK-A100-32-100-1-0-A	30490555	30553442

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw, without coolant tube.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ .

On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

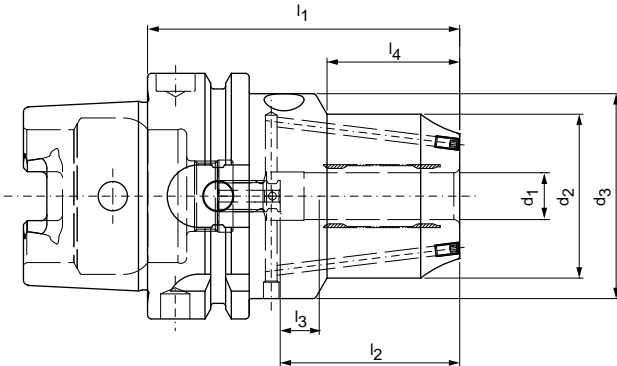
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



## Short heavy-duty design with two cooling channel bores, resealable

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$					
63	12	42	52,5	80	46	10	34	M8x1	1,2	HTC-HSK-A063-12-080-1-0-A	30655666	30678621
63	16	46	52,5	80	49	10	35	M8x1	1,3	HTC-HSK-A063-16-080-1-0-A	30655667	30678622
63	20	49	52,5	80	51	10	36	M8x1	1,3	HTC-HSK-A063-20-080-1-0-A	30655668	30678623

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 20$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw, without coolant tube.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ .

On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

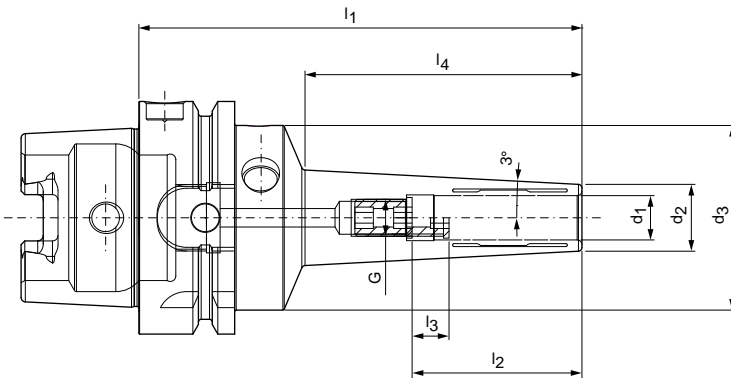
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



## Slender design, 3 degrees

HSK-A	Dimensions							G	sw	Weight [kg]	Specification	Order No.	Order No. chip version
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$						
63	3	9	50	120	28	16	73	M3	1,5	1,0	HTC-HSK-A063-03-120-1-0-A	30639848	30666584
63	4	10	50	120	28	12	73	M3	1,5	1,0	HTC-HSK-A063-04-120-1-0-A	30702807	30784301
63	5	11	50	120	28	8	73	M3	1,5	1,0	HTC-HSK-A063-05-120-1-0-A	30702808	30784303
63	6	12	50	120	37	10	73	M5	2,5	1,0	HTC-HSK-A063-06-120-1-0-A	30639849	30666590
63	8	14	50	120	37	10	74	M6	3	1,0	HTC-HSK-A063-08-120-1-0-A	30639851	30666592
63	10	16	50	120	41	10	74	M8x1	3	1,0	HTC-HSK-A063-10-120-1-0-A	30639852	30666598
63	12	18	50	120	46	10	75	M10x1	5	1,0	HTC-HSK-A063-12-120-1-0-A	30639853	30666599
63	14	22	50	120	46	10	71	M10x1	5	1,2	HTC-HSK-A063-14-120-1-0-A	30782686	30784306
63	16	24	50	120	49	10	71,5	M12x1	5	1,2	HTC-HSK-A063-16-120-1-0-A	30699883	30784307
63	18	26	50	120	49	10	72	M12x1	5	1,2	HTC-HSK-A063-18-120-1-0-A	30699886	30784310
63	20	28	50	120	51	10	72	M16x1	5	1,2	HTC-HSK-A063-20-120-1-0-A	30699888	30784311

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 20$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw, without coolant tube.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ .

On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

Chip version: Equipped with Balluff code carrier see page 353.

Further code carriers on request.

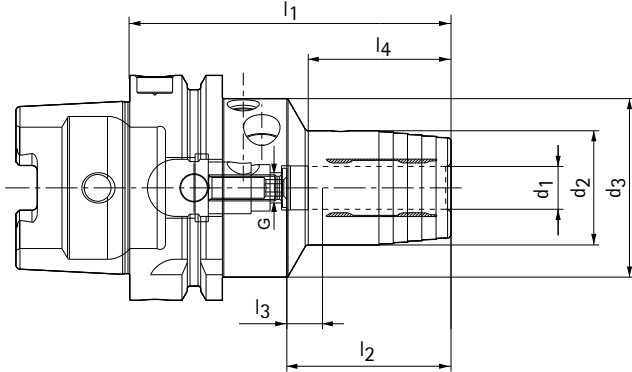
Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.



# Hydraulic chucks HydroChuck

in accordance with DIN 69882-7 with radial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions							Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	6	26	33,5	80	37	10	36	0,5	MHC-HSK-A040-06-080-1-0-R	30349193	On request
40	8	28	33,5	80	37	10	36	0,5	MHC-HSK-A040-08-080-1-0-R	30349194	On request
40	10	30	33,5	85	41	10	43	0,6	MHC-HSK-A040-10-085-1-0-R	30349195	On request
40	12	32	33,5	90	46	10	48	0,6	MHC-HSK-A040-12-090-1-0-R	30349196	On request
50	6	26	40	80	37	10	35	0,7	MHC-HSK-A050-06-080-1-0-R	30349197	On request
50	8	28	40	80	37	10	36	0,7	MHC-HSK-A050-08-080-1-0-R	30349198	On request
50	10	30	40	85	41	10	38	0,8	MHC-HSK-A050-10-085-1-0-R	30349199	On request
50	12	32	40	90	46	10	40	0,8	MHC-HSK-A050-12-090-1-0-R	30349200	On request
50	14	34	40	90	46	10	46	0,8	MHC-HSK-A050-14-090-1-0-R	30349201	On request
50	16	38	53	95	49	10	36,5	1,0	MHC-HSK-A050-16-095-1-0-R	30349202	On request
50	18	40	53	95	49	10	36,5	1,1	MHC-HSK-A050-18-095-1-0-R	30349203	On request
50	20	42	57	100	51	10	39	1,2	MHC-HSK-A050-20-100-1-0-R	30349204	On request
63	6	26	50	80	37	10	33	1,0	MHC-HSK-A063-06-080-1-0-R	30349205	30408468
63	6	26	50	150	37	10	102	1,3	MHC-HSK-A063-06-150-1-0-R	30410164	30408444
63	6	32	50	200	37	10	150	1,9	MHC-HSK-A063-06-200-1-0-R	30410166	30408449
63	8	28	50	80	37	10	33	1,1	MHC-HSK-A063-08-080-1-0-R	30349206	30408471
63	8	28	50	150	37	10	102	1,4	MHC-HSK-A063-08-150-1-0-R	30384315	30408447
63	8	34	50	200	37	10	150	2,0	MHC-HSK-A063-08-200-1-0-R	30381603	30408487
63	10	30	50	85	41	10	38	1,1	MHC-HSK-A063-10-085-1-0-R	30349207	30408472
63	10	30	50	150	41	10	104	1,5	MHC-HSK-A063-10-150-1-0-R	30381596	30408435
63	10	34	50	200	41	10	155	1,9	MHC-HSK-A063-10-200-1-0-R	30460887	30550830
63	12	32	50	90	46	10	40	1,2	MHC-HSK-A063-12-090-1-0-R	30349208	30408477
63	12	32	50	150	46	10	105	1,5	MHC-HSK-A063-12-150-1-0-R	30381597	30408437
63	12	34	50	200	46	10	155	1,9	MHC-HSK-A063-12-200-1-0-R	30460889	30550835
63	14	34	50	90	46	10	46	1,2	MHC-HSK-A063-14-090-1-0-R	30349209	30408478
63	14	34	50	150	46	10	105	1,6	MHC-HSK-A063-14-150-1-0-R	30381598	30408440
63	14	34	50	200	46	10	155	1,9	MHC-HSK-A063-14-200-1-0-R	30460890	30550838
63	16	38	50	95	49	10	51	1,3	MHC-HSK-A063-16-095-1-0-R	30349210	30408480
63	16	38	50	150	49	10	105	1,7	MHC-HSK-A063-16-150-1-0-R	30462195	30550839
63	16	38	50	200	49	10	157	2,2	MHC-HSK-A063-16-200-1-0-R	30410167	30408455
63	18	40	50	95	49	10	52	1,3	MHC-HSK-A063-18-095-1-0-R	30349211	30408481
63	18	40	50	150	49	10	107	1,8	MHC-HSK-A063-18-150-1-0-R	30381599	30409947
63	18	40	50	200	49	10	157	2,3	MHC-HSK-A063-18-200-1-0-R	30381604	30550841
63	20	42	50	100	51	10	51	1,4	MHC-HSK-A063-20-100-1-0-R	30349212	30408483

## Hydraulic chucks HydroChuck | In acc. with DIN 69882-7 with radial tool length adjustment | Shank HSK-A in acc. with DIN 69893-1

HSK-A	Dimensions							Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
63	20	42	50	150	51	10	107	1,9	MHC-HSK-A063-20-150-1-0-R	30412834	30412015
63	20	42	50	200	51	10	155	2,4	MHC-HSK-A063-20-200-1-0-R	30460891	30550842
63	25	57	53	120	57	10	55	2,1	MHC-HSK-A063-25-120-1-0-R	30349213	30408485
63	25	57	53	150	57	10	63	2,6	MHC-HSK-A063-25-150-1-0-R	30460892	30550847
63	25	57	53	200	57	10	63	3,5	MHC-HSK-A063-25-200-1-0-R	30410168	30409601
63	32	63	53	125	61	10	61	2,4	MHC-HSK-A063-32-125-1-0-R	30349214	30408486
63	32	63	53	150	61	10	63	2,7	MHC-HSK-A063-32-150-1-0-R	30460893	30550848
63	32	63	53	200	61	10	63	3,6	MHC-HSK-A063-32-200-1-0-R	30460894	30550849
100	6	26	63	85	37	10	33	2,5	MHC-HSK-A100-06-085-1-0-R	30349215	30418854
100	8	28	63	85	37	10	33	2,6	MHC-HSK-A100-08-085-1-0-R	30349216	30418855
100	10	30	63	90	41	10	36	2,7	MHC-HSK-A100-10-090-1-0-R	30349217	30418856
100	12	32	63	95	46	10	40	2,7	MHC-HSK-A100-12-095-1-0-R	30349218	30403033
100	14	34	63	95	46	10	41	2,7	MHC-HSK-A100-14-095-1-0-R	30349219	30418857
100	16	38	63	100	49	10	46	2,8	MHC-HSK-A100-16-100-1-0-R	30349220	30418858
100	18	40	63	100	49	10	46	2,9	MHC-HSK-A100-18-100-1-0-R	30349221	30408461
100	20	42	75	105	51	10	51	3,1	MHC-HSK-A100-20-105-1-0-R	30349222	30418859
100	25	57	75	115	57	10	55	3,8	MHC-HSK-A100-25-115-1-0-R	30349223	30408467
100	32	63	75	120	61	10	63	4,0	MHC-HSK-A100-32-120-1-0-R	30349224	30418860

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a tool tolerance of h6. Items included: With length adjustment screw, without coolant tube.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy 3  $\mu$ m. On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

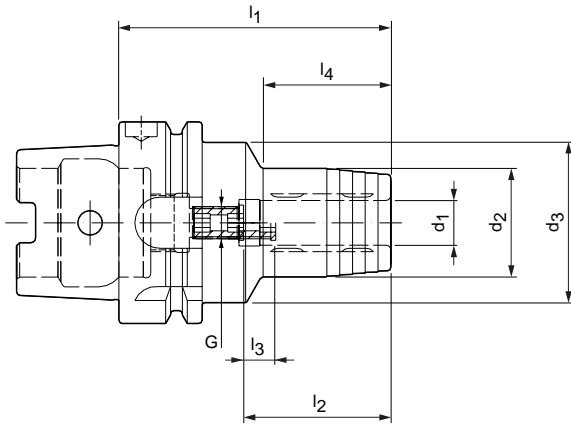
Note: Chuck with radial tool length adjustment. Coolant supply via central through bore. For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

in accordance with DIN 69882-7 with axial tool length adjustment  
 Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$					
32	6	26	40	80	37	10	29	M5	0,5	MHC-HSK-A032-06-080-1-0-A	30250998	On request
32	8	28	40	80	37	10	29	M6	0,5	MHC-HSK-A032-08-080-1-0-A	30250999	On request
32	10	30	40	85	41	10	35	M6	0,5	MHC-HSK-A032-10-085-1-0-A	30251000	On request
32	12	32	40	90	46	10	40	M6	0,5	MHC-HSK-A032-12-090-1-0-A	30251001	On request
40	6	26	33,5	70	37	10	36	M5	0,4	MHC-HSK-A040-06-070-1-0-A	30251002	On request
40	8	28	33,5	70	37	10	36	M6	0,5	MHC-HSK-A040-08-070-1-0-A	30251003	On request
40	10	30	33,5	75	41	10	42	M6	0,5	MHC-HSK-A040-10-075-1-0-A	30251004	On request
40	12	32	33,5	80	46	10	48	M6	0,6	MHC-HSK-A040-12-080-1-0-A	30251005	On request
50	6	26	40	70	37	10	28	M5	0,9	MHC-HSK-A050-06-070-1-0-A	30251006	On request
50	8	28	40	70	37	10	28	M6	0,9	MHC-HSK-A050-08-070-1-0-A	30251007	On request
50	10	30	40	75	41	10	34	M8x1	0,9	MHC-HSK-A050-10-075-1-0-A	30251008	On request
50	12	32	40	85	46	10	44	M10x1	1,0	MHC-HSK-A050-12-085-1-0-A	30251009	On request
50	14	34	40	85	46	10	44	M10x1	1,0	MHC-HSK-A050-14-085-1-0-A	30251010	On request
50	16	38	53	90	49	10	30	M12x1	1,2	MHC-HSK-A050-16-090-1-0-A	30251011	On request
50	18	40	53	90	49	10	30	M12x1	1,2	MHC-HSK-A050-18-090-1-0-A	30251012	On request
50	20	42	57	90	51	10	29	M16x1	1,2	MHC-HSK-A050-20-090-1-0-A	30251013	On request
63	6	26	50	70	37	10	24	M5	0,9	MHC-HSK-A063-06-070-1-0-A	30251014	30348247
63	6	26	50	120	37	10	73	M5	1,3	MHC-HSK-A063-06-120-1-0-A	30273801	On request
63	6	26	50	150	37	10	103	M5	1,7	MHC-HSK-A063-06-150-1-0-A	30251144	30348248
63	6	26	50	200	37	10	153	M5	1,9	MHC-HSK-A063-06-200-1-0-A	30251152	30312598
63	8	28	50	70	37	10	25	M6	0,9	MHC-HSK-A063-08-070-1-0-A	30251015	30348249
63	8	28	50	120	37	10	74	M6	1,3	MHC-HSK-A063-08-120-1-0-A	30273802	On request
63	8	28	50	150	37	10	104	M6	1,7	MHC-HSK-A063-08-150-1-0-A	30251145	30348250
63	8	28	50	200	37	10	154	M6	1,9	MHC-HSK-A063-08-200-1-0-A	30251153	30348251
63	10	30	50	80	41	10	35	M8x1	1,0	MHC-HSK-A063-10-080-1-0-A	30251016	30348252
63	10	30	50	120	41	10	74	M8x1	1,4	MHC-HSK-A063-10-120-1-0-A	30273803	On request
63	10	30	50	150	41	10	104	M8x1	1,7	MHC-HSK-A063-10-150-1-0-A	30251146	30348253
63	10	30	50	200	41	10	154	M8x1	1,9	MHC-HSK-A063-10-200-1-0-A	30251154	30348254
63	12	32	50	85	46	10	40	M10x1	1,0	MHC-HSK-A063-12-085-1-0-A	30251017	30348255
63	12	32	50	120	46	10	75	M10x1	1,4	MHC-HSK-A063-12-120-1-0-A	30273804	On request
63	12	32	50	150	46	10	105	M10x1	1,7	MHC-HSK-A063-12-150-1-0-A	30251147	30348256
63	12	32	50	200	46	10	155	M10x1	1,9	MHC-HSK-A063-12-200-1-0-A	30251155	30348257
63	14	34	50	85	46	10	40	M10x1	1,1	MHC-HSK-A063-14-085-1-0-A	30251018	30348258
63	14	34	50	120	46	10	75	M10x1	1,5	MHC-HSK-A063-14-120-1-0-A	30273805	On request
63	14	34	50	150	46	10	105	M10x1	1,9	MHC-HSK-A063-14-150-1-0-A	30251148	30348259
63	14	34	50	200	46	10	155	M10x1	2,1	MHC-HSK-A063-14-200-1-0-A	30251156	30348260
63	16	38	50	90	49	10	46	M12x1	1,2	MHC-HSK-A063-16-090-1-0-A	30251019	30348261
63	16	38	50	120	49	10	76	M12x1	1,6	MHC-HSK-A063-16-120-1-0-A	30273806	On request
63	16	38	50	150	49	10	106	M12x1	2,0	MHC-HSK-A063-16-150-1-0-A	30251149	30348262

## Hydraulic chucks HydroChuck | In acc. with DIN 69882-7 with axial tool length adjustment | Shank HSK-A in acc. with DIN 69893-1

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
63	16	38	50	200	49	10	156	M12x1	2,3	MHC-HSK-A063-16-200-1-0-A	30251157	30348263
63	18	40	50	90	49	10	47	M12x1	1,2	MHC-HSK-A063-18-090-1-0-A	30251020	30348264
63	18	40	50	120	49	10	77	M12x1	1,7	MHC-HSK-A063-18-120-1-0-A	30273807	On request
63	18	40	50	150	49	10	107	M12x1	2,1	MHC-HSK-A063-18-150-1-0-A	30251150	30348265
63	18	40	50	200	49	10	157	M12x1	2,4	MHC-HSK-A063-18-200-1-0-A	30251158	30348266
63	20	42	50	90	51	10	48	M16x1	1,2	MHC-HSK-A063-20-090-1-0-A	30251021	30348267
63	20	42	50	120	51	10	78	M16x1	1,7	MHC-HSK-A063-20-120-1-0-A	30273808	On request
63	20	42	50	150	51	10	108	M16x1	2,1	MHC-HSK-A063-20-150-1-0-A	30251151	30348268
63	20	42	50	200	51	10	158	M16x1	2,4	MHC-HSK-A063-20-200-1-0-A	30251159	30348269
63	25	57	52,5	120	57	10	63	M16x1	2,1	MHC-HSK-A063-25-120-1-0-A	30251022	30348270
63	32	63	59	125	61	10	61	M16x1	2,3	MHC-HSK-A063-32-125-1-0-A	30251023	30348271
80	6	26	50	70	37	10	24	M5	1,5	MHC-HSK-A080-06-070-1-0-A	30355067	On request
80	8	28	50	70	37	10	24	M6	1,5	MHC-HSK-A080-08-070-1-0-A	30355068	On request
80	10	30	50	80	41	10	35	M8x1	1,6	MHC-HSK-A080-10-080-1-0-A	30355069	On request
80	12	32	50	85	46	10	40	M10x1	1,6	MHC-HSK-A080-12-085-1-0-A	30355071	On request
80	14	34	50	85	46	10	40	M10x1	1,6	MHC-HSK-A080-14-085-1-0-A	30355072	On request
80	16	38	50	95	49	10	51	M12x1	1,7	MHC-HSK-A080-16-095-1-0-A	30355074	On request
80	18	40	50	95	49	10	51	M12x1	1,8	MHC-HSK-A080-18-095-1-0-A	30355075	On request
80	20	42	50	95	51	10	51	M16x1	1,8	MHC-HSK-A080-20-095-1-0-A	30355077	On request
80	25	57	63	110	57	10	65	M16x1	2,6	MHC-HSK-A080-25-110-1-0-A	30355078	On request
80	32	63	66,5	125	61	10	63	M16x1	3,3	MHC-HSK-A080-32-125-1-0-A	30355080	On request
100	6	26	50	75	37	10	26	M5	2,3	MHC-HSK-A100-06-075-1-0-A	30251024	30348272
100	6	26	50	120	37	10	71	M5	2,7	MHC-HSK-A100-06-120-1-0-A	30273809	On request
100	6	26	50	165	37	10	116	M5	3,3	MHC-HSK-A100-06-165-1-0-A	30273810	On request
100	8	28	50	75	37	10	26	M6	2,3	MHC-HSK-A100-08-075-1-0-A	30251025	30348273
100	8	28	50	120	37	10	71	M6	2,7	MHC-HSK-A100-08-120-1-0-A	30273811	On request
100	8	28	50	165	37	10	116	M6	3,3	MHC-HSK-A100-08-165-1-0-A	30273812	On request
100	10	30	50	90	41	10	42	M8x1	2,5	MHC-HSK-A100-10-090-1-0-A	30251026	30311942
100	10	30	50	120	41	10	72	M8x1	2,9	MHC-HSK-A100-10-120-1-0-A	30273813	On request
100	10	30	50	165	41	10	117	M8x1	3,5	MHC-HSK-A100-10-165-1-0-A	30273814	On request
100	12	32	50	95	46	10	47	M10x1	2,5	MHC-HSK-A100-12-095-1-0-A	30251027	30325314
100	12	32	50	120	46	10	72	M10x1	2,9	MHC-HSK-A100-12-120-1-0-A	30273816	On request
100	12	32	50	165	46	10	117	M10x1	2,5	MHC-HSK-A100-12-165-1-0-A	30273817	On request
100	14	34	50	95	46	10	47	M10x1	2,5	MHC-HSK-A100-14-095-1-0-A	30251028	30348274
100	16	38	50	100	49	10	53	M12x1	2,6	MHC-HSK-A100-16-100-1-0-A	30251029	30330625
100	16	38	50	135	49	10	88	M12x1	3,0	MHC-HSK-A100-16-135-1-0-A	30273818	On request
100	16	38	50	165	49	10	118	M12x1	3,6	MHC-HSK-A100-16-165-1-0-A	30273819	On request
100	18	40	50	100	49	10	53	M12x1	2,6	MHC-HSK-A100-18-100-1-0-A	30251030	30325316
100	20	42	50	105	51	10	59	M16x1	2,7	MHC-HSK-A100-20-105-1-0-A	30251031	30348275
100	20	42	50	135	51	10	89	M16x1	3,1	MHC-HSK-A100-20-135-1-0-A	30273820	On request
100	20	42	50	165	51	10	119	M16x1	3,8	MHC-HSK-A100-20-165-1-0-A	30273821	On request
100	25	57	63	110	57	10	62	M16x1	3,3	MHC-HSK-A100-25-110-1-0-A	30251032	30325317
100	32	63	67	110	61	10	62	M16x1	3,5	MHC-HSK-A100-32-110-1-0-A	30251033	30348276

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a tool tolerance of h6. Items included: With length adjustment screw, without coolant tube.

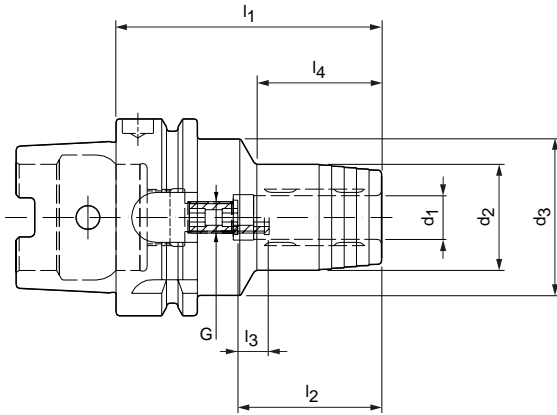
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy 3  $\mu$ m. On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore. For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request. Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request. Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

in accordance with DIN 69882-7 with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



INCH

HSK-A	Dimensions								G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub> inch	d <sub>1</sub> mm	d <sub>2</sub> mm	d <sub>3</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	l <sub>4</sub> mm					
63	1/4	6,35	26	50	70	37	10	24	M5	1,0	MHC-HSK-A063-1/4"-070-1-0-A	30780823	On request
63	3/8	9,53	30	50	80	41	10	35	M8X1	1,1	MHC-HSK-A063-3/8"-080-1-0-A	30780824	On request
63	1/2	12,70	32	50	85	46	10	40	M10X1	1,1	MHC-HSK-A063-1/2"-085-1-0-A	30780825	On request
63	3/4	19,05	42	50	90	51	10	48	M16X1	1,3	MHC-HSK-A063-3/4"-090-1-0-A	30780826	On request
63	1	25,40	57	52,5	120	57	10	59	M16X1	2,1	MHC-HSK-A063-1"-120-1-0-A	30780827	On request
63	1 1/4	31,75	64	52,5	125	61	10	65	M16X1	2,4	MHC-HSK-A063-1_1/4"-125-1-0-A	30780828	On request
100	1 1/4	31,75	64	75	110	61	10	62	M16X1	3,7	MHC-HSK-A100-1_1/4"-110-1-0-A	30780829	On request

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks as well as recesses. The clamping diameter is designed for a tool tolerance of h6.

Items included: With length adjustment screw, without coolant tube.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks. With a projection length of 2.5 x D (max. 50 mm) radial run-out accuracy 3 µm. On usage of cylindrical shanks with angled clamping surface the accuracy may be affected.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

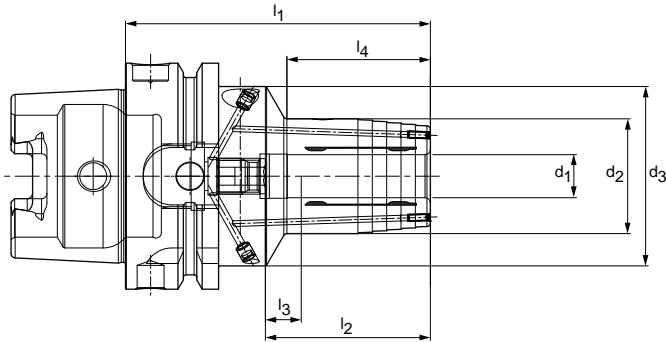
For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Hydraulic chucks HydroChuck

in accordance with DIN 69882-7 with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



## Design with two cooling channel bores, resealable

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
63	6	26	50	70	37	10	24	M5	0,9	MHC-HSK-A063-06-070-1-0-A	30656087	30678627
63	6	26	50	150	37	10	103	M5	1,3	MHC-HSK-A063-06-150-1-0-A	30656096	30678636
63	8	28	50	70	37	10	25	M6	0,9	MHC-HSK-A063-08-070-1-0-A	30656088	30678628
63	8	28	50	150	37	10	104	M6	1,3	MHC-HSK-A063-08-150-1-0-A	30656097	30678637
63	10	30	50	80	41	10	35	M8x1	1,0	MHC-HSK-A063-10-080-1-0-A	30656083	30678624
63	10	30	50	150	41	10	104	M8x1	1,4	MHC-HSK-A063-10-150-1-0-A	30656098	30678638
63	12	32	50	85	46	10	40	M10x1	1,0	MHC-HSK-A063-12-085-1-0-A	30656089	30678629
63	12	32	50	150	46	10	105	M10x1	1,6	MHC-HSK-A063-12-150-1-0-A	30656099	30678639
63	14	34	50	85	46	10	40	M10x1	1,1	MHC-HSK-A063-14-085-1-0-A	30656090	30678630
63	14	34	50	150	46	10	105	M10x1	1,7	MHC-HSK-A063-14-150-1-0-A	30656100	30678640
63	16	38	50	90	49	10	46	M12x1	1,2	MHC-HSK-A063-16-090-1-0-A	30656091	30678631
63	16	38	50	150	49	10	106	M12x1	1,8	MHC-HSK-A063-16-150-1-0-A	30656101	30678641
63	18	40	50	90	49	10	47	M12x1	1,2	MHC-HSK-A063-18-090-1-0-A	30656092	30678632
63	18	40	50	150	49	10	107	M12x1	1,9	MHC-HSK-A063-18-150-1-0-A	30656102	30678642
63	20	42	50	90	51	10	48	M16x1	1,2	MHC-HSK-A063-20-090-1-0-A	30656093	30678633
63	20	42	50	150	51	10	108	M16x1	1,9	MHC-HSK-A063-20-150-1-0-A	30656103	30678643
63	25	57	53	120	57	10	63	M16x1	2,2	MHC-HSK-A063-25-120-1-0-A	30656094	30678634
63	32	63	59	125	61	10	61	M16x1	2,4	MHC-HSK-A063-32-125-1-0-A	30656095	30678635

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a tool tolerance of h6. Items included: With length adjustment screw and screws for sealing the cooling channel bores. Without coolant tube.

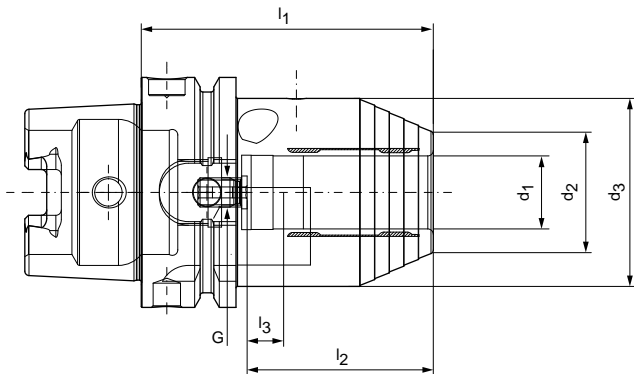
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy 3  $\mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore. For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request. Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request. Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



## Short heavy-duty design

HSK-A	Dimensions						G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>					
63	20	33	51,5	80	51	10	M8x1	1,5	MHC-HSK-A063-20-080-1-0-A	30251036	30348277

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 20$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a tool tolerance of h6. Items included: With length adjustment screw and screws for sealing the cooling channel bores. Without coolant tube.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore. For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

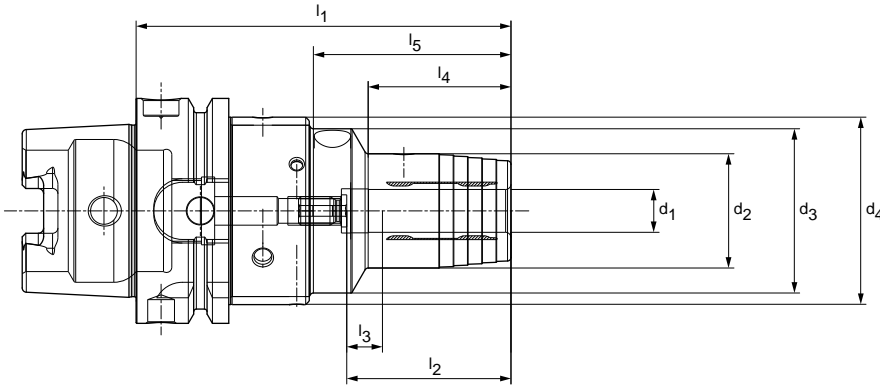
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck Compensation

with axial tool length adjustment and radial alignment feature

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions					G	Weight [kg]	Specification	Order No.	Order No. chip version				
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	l <sub>1</sub>						l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>
63	12	32	46	52,5	105	46	10	40	55,3	M8x1	1,3	MHC-HSK-A063-12-105-1-1-A	30631558	30678541
63	16	38	46	52,5	110	49	10	45	60,3	M8x1	1,4	MHC-HSK-A063-16-110-1-1-A	30631560	30678542
63	20	42	46	52,5	115	51	10	50	65,3	M8x1	1,5	MHC-HSK-A063-20-115-1-1-A	30631563	30678543
63	25	57	64	70	145	57	10	55	69,5	M16x1	2,9	MHC-HSK-A063-25-145-1-1-A	30631566	30678544
63	32	63	64	70	150	61	10	60	74,5	M16x1	3,1	MHC-HSK-A063-32-150-1-1-A	30631567	30678545

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a tool tolerance of h6.

Items included: With length adjustment screw, without coolant tube.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA.

(Radial run-out adjustable  $< 3 \mu\text{m}$  possible) On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be degraded.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

For coolant tubes, Balluff code carriers, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

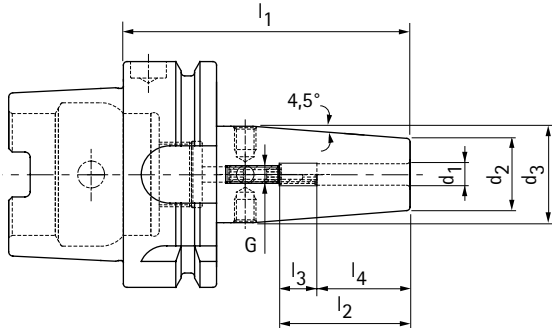
Balancing value: G 2.5 at  $16,000 \text{ min}^{-1}$  as delivered.



# Shrink chucks ThermoChuck

in accordance with DIN 69882-8 with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
32	3	10	15	60	28	16	12	M6	0,2	MTC-HSK-A032-03-060-1-0-A	30261650	On request
32	4	10	15	60	28	12	16	M6	0,2	MTC-HSK-A032-04-060-1-0-A	30261651	On request
32	5	10	15	60	30	10	20	M6	0,2	MTC-HSK-A032-05-060-1-0-A	30261652	On request
32	6	21	25	70	36	10	26	M5	0,3	MTC-HSK-A032-06-070-1-0-A	30261653	On request
32	8	21	25	70	36	10	26	M6	0,3	MTC-HSK-A032-08-070-1-0-A	30261654	On request
32	10	24	29	75	41	10	31	M8x1	0,4	MTC-HSK-A032-10-075-1-0-A	30261655	On request
32	12	24	29	80	47	10	37	M10x1	0,4	MTC-HSK-A032-12-080-1-0-A	30261656	On request
40	3	10	15	60	28	16	12	M6	0,3	MTC-HSK-A040-03-060-1-0-A	30261657	On request
40*	3	10	20	120	-	-	12	-	0,4	MTC-HSK-A040-03-120-1-0-W	30261658	On request
40*	3	10	20	160	-	-	12	-	0,5	MTC-HSK-A040-03-160-1-0-W	30261659	On request
40	4	10	15	60	28	12	16	M6	0,3	MTC-HSK-A040-04-060-1-0-A	30258468	On request
40*	4	15	22	120	-	-	16	-	0,4	MTC-HSK-A040-04-120-1-0-W	30261661	On request
40*	4	15	22	160	-	-	16	-	0,5	MTC-HSK-A040-04-160-1-0-W	30261662	On request
40	5	10	15	60	30	10	20	M6	0,3	MTC-HSK-A040-05-060-1-0-A	30261663	On request
40*	5	15	22	120	-	-	20	-	0,4	MTC-HSK-A040-05-120-1-0-W	30261664	On request
40*	5	15	22	160	-	-	20	-	0,5	MTC-HSK-A040-05-160-1-0-W	30261665	On request
40	6	21	27	80	36	10	26	M5	0,4	MTC-HSK-A040-06-080-1-0-A	30261666	On request
40	6	21	27	120	36	10	26	M5	0,6	MTC-HSK-A040-06-120-1-0-A	30261667	On request
40	6	21	27	160	36	10	26	M5	0,7	MTC-HSK-A040-06-160-1-0-A	30261668	On request
40	8	21	27	80	36	10	26	M6	0,4	MTC-HSK-A040-08-080-1-0-A	30261669	On request
40	8	21	27	120	36	10	26	M6	0,6	MTC-HSK-A040-08-120-1-0-A	30261670	On request
40	8	21	27	160	36	10	26	M6	0,7	MTC-HSK-A040-08-160-1-0-A	30261671	On request
40	10	24	32	80	41	10	31	M8x1	0,5	MTC-HSK-A040-10-080-1-0-A	30261672	On request
40	10	24	32	120	41	10	31	M8x1	0,7	MTC-HSK-A040-10-120-1-0-A	30261673	On request
40	10	24	32	160	41	10	31	M8x1	0,8	MTC-HSK-A040-10-160-1-0-A	30261674	On request
40	12	24	32	90	47	10	37	M10x1	0,5	MTC-HSK-A040-12-090-1-0-A	30261675	On request
40	12	24	32	120	47	10	37	M10x1	0,7	MTC-HSK-A040-12-120-1-0-A	30261676	On request
40	12	24	32	160	47	10	37	M10x1	0,8	MTC-HSK-A040-12-160-1-0-A	30261677	On request
40	14	27	33,5	90	47	10	37	M10x1	0,6	MTC-HSK-A040-14-090-1-0-A	30261678	On request
40	14	27	33,5	120	47	10	37	M10x1	0,8	MTC-HSK-A040-14-120-1-0-A	30261679	On request
40	14	27	33,5	160	47	10	37	M10x1	0,9	MTC-HSK-A040-14-160-1-0-A	30261680	On request
40	16	27	33,5	90	50	10	40	M12x1	0,5	MTC-HSK-A040-16-090-1-0-A	30261681	On request
40	16	27	33,5	120	50	10	40	M12x1	0,7	MTC-HSK-A040-16-120-1-0-A	30261682	On request
40	16	27	33,5	160	50	10	40	M12x1	0,8	MTC-HSK-A040-16-160-1-0-A	30261683	On request
50	3	10	15	80	28	16	12	M6	0,4	MTC-HSK-A050-03-080-1-0-A	30261684	On request
50*	3	10	20	120	-	-	12	-	0,5	MTC-HSK-A050-03-120-1-0-W	30261685	On request
50*	3	10	20	160	-	-	12	-	0,6	MTC-HSK-A050-03-160-1-0-W	30261686	On request
50	4	15	22	80	28	12	16	M6	0,5	MTC-HSK-A050-04-080-1-0-A	30261687	On request

\* without axial tool length adjustment

## Shrink chucks ThermoChuck | In acc. with DIN 69882-8 | With axial tool length adjustment | Shank HSK-A in acc. with DIN 69893-1

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
50*	4	15	22	120	-	-	16	-	0,6	MTC-HSK-A050-04-120-1-0-W	30261688	On request
50*	4	15	22	160	-	-	16	-	0,7	MTC-HSK-A050-04-160-1-0-W	30261689	On request
50	5	15	22	80	30	10	20	M6	0,5	MTC-HSK-A050-05-080-1-0-A	30261690	On request
50*	5	15	22	120	-	-	20	-	0,6	MTC-HSK-A050-05-120-1-0-W	30261691	On request
50*	5	15	22	160	-	-	20	-	0,7	MTC-HSK-A050-05-160-1-0-W	30261692	On request
50	6	21	27	80	36	10	26	M5	0,7	MTC-HSK-A050-06-080-1-0-A	30259972	On request
50	6	21	27	120	36	10	26	M5	0,8	MTC-HSK-A050-06-120-1-0-A	30261694	On request
50	6	21	27	160	36	10	26	M5	0,9	MTC-HSK-A050-06-160-1-0-A	30261695	On request
50	8	21	27	80	36	10	26	M6	0,6	MTC-HSK-A050-08-080-1-0-A	30261696	On request
50	8	21	27	120	36	10	26	M6	0,8	MTC-HSK-A050-08-120-1-0-A	30261697	On request
50	8	21	27	160	36	10	26	M6	0,9	MTC-HSK-A050-08-160-1-0-A	30260002	On request
50	10	24	32	85	41	10	31	M8x1	0,7	MTC-HSK-A050-10-085-1-0-A	30261699	On request
50	10	24	32	120	41	10	31	M8x1	0,8	MTC-HSK-A050-10-120-1-0-A	30261700	On request
50	10	24	32	160	41	10	31	M8x1	0,9	MTC-HSK-A050-10-160-1-0-A	30261701	On request
50	12	24	32	90	47	10	37	M10x1	0,7	MTC-HSK-A050-12-090-1-0-A	30261702	On request
50	12	24	32	120	47	10	37	M10x1	0,8	MTC-HSK-A050-12-120-1-0-A	30261703	On request
50	12	24	32	160	47	10	37	M10x1	0,9	MTC-HSK-A050-12-160-1-0-A	30261704	On request
50	14	27	34	90	47	10	37	M10x1	0,7	MTC-HSK-A050-14-090-1-0-A	30261705	On request
50	14	27	34	120	47	10	37	M10x1	0,8	MTC-HSK-A050-14-120-1-0-A	30261706	On request
50	14	27	34	160	47	10	37	M10x1	0,9	MTC-HSK-A050-14-160-1-0-A	30261707	On request
50	16	27	34	95	50	10	40	M12x1	1,7	MTC-HSK-A050-16-095-1-0-A	30261708	On request
50	16	27	34	120	50	10	40	M12x1	0,8	MTC-HSK-A050-16-120-1-0-A	30261709	On request
50	16	27	34	160	50	10	40	M12x1	0,9	MTC-HSK-A050-16-160-1-0-A	30261711	On request
50	18	33	42	95	50	10	40	M12x1	0,9	MTC-HSK-A050-18-095-1-0-A	30261712	On request
50	18	33	42	120	50	10	40	M12x1	1,0	MTC-HSK-A050-18-120-1-0-A	30261713	On request
50	18	33	42	160	50	10	40	M12x1	1,1	MTC-HSK-A050-18-160-1-0-A	30261714	On request
50	20	33	42	100	52	10	42	M16x1	0,9	MTC-HSK-A050-20-100-1-0-A	30261715	On request
50	20	33	42	120	52	10	42	M16x1	1,0	MTC-HSK-A050-20-120-1-0-A	30261716	On request
50	20	33	42	160	52	10	42	M16x1	1,1	MTC-HSK-A050-20-160-1-0-A	30261717	On request
63	3	10	15	80	28	16	12	M6	0,8	MTC-HSK-A063-03-080-1-0-A	30261718	30348311
63*	3	10	20	120	-	-	12	-	0,8	MTC-HSK-A063-03-120-1-0-W	30261731	30348312
63*	3	10	20	160	-	-	12	-	0,9	MTC-HSK-A063-03-160-1-0-W	30261732	30348313
63*	3	10	20	200	-	-	12	-	1,0	MTC-HSK-A063-03-200-1-0-W	30655572	30678618
63	4	15	22	80	28	12	16	M6	0,8	MTC-HSK-A063-04-080-1-0-A	30260639	30348314
63*	4	15	22	120	-	-	16	-	0,9	MTC-HSK-A063-04-120-1-0-W	30261733	30348315
63*	4	15	22	160	-	-	16	-	1,0	MTC-HSK-A063-04-160-1-0-W	30261734	30348316
63*	4	15	22	200	-	-	16	-	1,0	MTC-HSK-A063-04-200-1-0-W	30655573	30678619
63	5	15	22	80	30	10	20	M6	0,8	MTC-HSK-A063-05-080-1-0-A	30261720	30348317
63*	5	15	22	120	-	-	20	-	0,9	MTC-HSK-A063-05-120-1-0-W	30261735	30348318
63*	5	15	22	160	-	-	20	-	1,0	MTC-HSK-A063-05-160-1-0-W	30261736	30348319
63*	5	15	22	200	-	-	20	-	1,1	MTC-HSK-A063-05-200-1-0-W	30655574	30678620
63	6	21	27	80	36	10	26	M5	0,8	MTC-HSK-A063-06-080-1-0-A	30261721	30279746
63	6	21	27	120	36	10	26	M5	1,0	MTC-HSK-A063-06-120-1-0-A	30261737	30304978
63	6	21	27	160	36	10	26	M5	1,2	MTC-HSK-A063-06-160-1-0-A	30261738	30328562
63	6	21	27	200	36	10	26	M5	1,4	MTC-HSK-A063-06-200-1-0-A	30529026	30529027
63	7	21	27	80	36	10	26	M5	1,2	MTC-HSK-A063-07-080-1-0-A	30267089	30348320
63	8	21	27	80	36	10	26	M6	0,9	MTC-HSK-A063-08-080-1-0-A	30261722	30279748
63	8	21	27	120	36	10	26	M6	1,0	MTC-HSK-A063-08-120-1-0-A	30261739	30304970
63	8	21	27	160	36	10	26	M6	1,2	MTC-HSK-A063-08-160-1-0-A	30261740	30297555
63	8	21	27	200	36	10	26	M6	1,4	MTC-HSK-A063-08-200-1-0-A	30488595	30350658
63	9	21	27	80	36	10	26	M6	1,2	MTC-HSK-A063-09-080-1-0-A	30267092	30348321
63	10	24	32	85	41	10	31	M8x1	1,0	MTC-HSK-A063-10-085-1-0-A	30261723	30279742
63	10	24	32	120	41	10	31	M8x1	1,2	MTC-HSK-A063-10-120-1-0-A	30261741	30279705
63	10	24	32	160	41	10	31	M8x1	0,9	MTC-HSK-A063-10-160-1-0-A	30261742	30279706
63	10	24	32	200	41	10	31	M8x1	1,6	MTC-HSK-A063-10-200-1-0-A	30529032	30350659
63	11	24	32	85	41	10	31	M8x1	1,2	MTC-HSK-A063-11-085-1-0-A	30267094	30348322

\* without axial tool length adjustment

Continued on next page.

## Shrink chucks ThermoChuck | In acc. with DIN 69882-8 | With axial tool length adjustment | Shank HSK-A in acc. with DIN 69893-1

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
63	12	24	32	90	47	10	37	M10x1	1,0	MTC-HSK-A063-12-090-1-0-A	30261724	30279704
63	12	24	32	120	47	10	37	M10x1	1,1	MTC-HSK-A063-12-120-1-0-A	30261743	30328551
63	12	24	32	160	47	10	37	M10x1	1,0	MTC-HSK-A063-12-160-1-0-A	30259973	30279708
63	12	24	32	200	47	10	37	M10x1	1,6	MTC-HSK-A063-12-200-1-0-A	30529033	30350660
63	13	24	32	90	47	10	37	M10x1	1,2	MTC-HSK-A063-13-090-1-0-A	30267095	30348323
63	14	27	34	90	47	10	37	M10x1	1,0	MTC-HSK-A063-14-090-1-0-A	30261725	30318848
63	14	27	34	120	47	10	37	M10x1	1,2	MTC-HSK-A063-14-120-1-0-A	30261745	30328554
63	14	27	34	160	47	10	37	M10x1	1,5	MTC-HSK-A063-14-160-1-0-A	30261746	30328561
63	14	27	34	200	47	10	37	M10x1	1,7	MTC-HSK-A063-14-200-1-0-A	30529043	30529049
63	15	27	34	90	47	10	37	M10x1	0,9	MTC-HSK-A063-15-090-1-0-A	30267096	30348324
63	16	27	34	95	50	10	40	M12x1	1,0	MTC-HSK-A063-16-095-1-0-A	30261726	30279744
63	16	27	34	120	50	10	40	M12x1	1,1	MTC-HSK-A063-16-120-1-0-A	30261747	30348325
63	16	27	34	160	50	10	40	M12x1	1,4	MTC-HSK-A063-16-160-1-0-A	30261748	30328559
63	16	27	34	200	50	10	40	M12x1	1,7	MTC-HSK-A063-16-200-1-0-A	30529044	30529050
63	18	33	42	95	50	10	40	M12x1	1,1	MTC-HSK-A063-18-095-1-0-A	30261727	30279703
63	18	33	42	120	50	10	40	M12x1	1,3	MTC-HSK-A063-18-120-1-0-A	30261749	30279747
63	18	33	42	160	50	10	40	M12x1	1,6	MTC-HSK-A063-18-160-1-0-A	30261750	30279707
63	18	33	42	200	50	10	40	M12x1	2,3	MTC-HSK-A063-18-200-1-0-A	30529045	30529051
63	20	33	42	100	52	10	42	M16x1	1,1	MTC-HSK-A063-20-100-1-0-A	30261728	30279722
63	20	33	42	120	52	10	42	M16x1	1,3	MTC-HSK-A063-20-120-1-0-A	30261751	30328558
63	20	33	42	160	52	10	42	M16x1	1,6	MTC-HSK-A063-20-160-1-0-A	30261752	30329794
63	20	33	42	200	52	10	42	M16x1	2,3	MTC-HSK-A063-20-200-1-0-A	30529046	30529052
63	25	44	53	115	58	10	48	M16x1	1,6	MTC-HSK-A063-25-115-1-0-A	30261729	30279741
63	25	44	53	120	58	10	48	M16x1	1,7	MTC-HSK-A063-25-120-1-0-A	30261753	30348326
63	25	44	53	160	58	10	48	M16x1	2,0	MTC-HSK-A063-25-160-1-0-A	30261754	30348327
63	25	44	53	200	58	10	48	M16x1	3,2	MTC-HSK-A063-25-200-1-0-A	30529047	30529053
63	32	44	53	120	62	10	52	M16x1	1,6	MTC-HSK-A063-32-120-1-0-A	30261730	30304965
63	32	44	53	160	62	10	52	M16x1	1,9	MTC-HSK-A063-32-160-1-0-A	30261755	30329783
63	32	44	53	200	62	10	52	M16x1	3,0	MTC-HSK-A063-32-200-1-0-A	30529048	30529054
80	6	21	27	85	36	10	26	M5	1,2	MTC-HSK-A080-06-085-1-0-A	30261756	On request
80	6	21	27	120	36	10	26	M5	1,5	MTC-HSK-A080-06-120-1-0-A	30261757	On request
80	6	21	27	160	36	10	26	M5	1,8	MTC-HSK-A080-06-160-1-0-A	30261758	On request
80	6	21	27	200	36	10	26	M5	1,8	MTC-HSK-A080-06-200-1-0-A	30655575	On request
80	8	21	27	85	36	10	26	M6	1,2	MTC-HSK-A080-08-085-1-0-A	30261759	On request
80	8	21	27	120	36	10	26	M6	1,5	MTC-HSK-A080-08-120-1-0-A	30261760	On request
80	8	21	27	160	36	10	26	M6	1,8	MTC-HSK-A080-08-160-1-0-A	30261761	On request
80	8	21	27	200	36	10	26	M6	1,8	MTC-HSK-A080-08-200-1-0-A	30655576	On request
80	10	24	32	90	41	10	31	M8x1	1,3	MTC-HSK-A080-10-090-1-0-A	30261762	On request
80	10	24	32	120	41	10	31	M8x1	1,6	MTC-HSK-A080-10-120-1-0-A	30261763	On request
80	10	24	32	160	41	10	31	M8x1	2,0	MTC-HSK-A080-10-160-1-0-A	30261764	On request
80	10	24	32	200	41	10	31	M8x1	2,0	MTC-HSK-A080-10-200-1-0-A	30655577	On request
80	12	24	32	95	47	10	37	M10x1	1,3	MTC-HSK-A080-12-095-1-0-A	30261765	On request
80	12	24	32	120	47	10	37	M10x1	1,6	MTC-HSK-A080-12-120-1-0-A	30261766	On request
80	12	24	32	160	47	10	37	M10x1	2,0	MTC-HSK-A080-12-160-1-0-A	30261767	On request
80	12	24	32	200	47	10	36	M10x1	2,0	MTC-HSK-A080-12-200-1-0-A	30655578	On request
80	14	27	34	95	47	10	37	M10x1	1,4	MTC-HSK-A080-14-095-1-0-A	30261768	On request
80	14	27	34	120	47	10	37	M10x1	1,7	MTC-HSK-A080-14-120-1-0-A	30261769	On request
80	14	27	34	160	47	10	37	M10x1	2,1	MTC-HSK-A080-14-160-1-0-A	30261770	On request
80	14	27	34	200	47	10	36	M10x1	2,1	MTC-HSK-A080-14-200-1-0-A	30655579	On request
80	16	27	34	100	50	10	40	M12x1	1,5	MTC-HSK-A080-16-100-1-0-A	30261771	On request
80	16	27	34	120	50	10	40	M12x1	1,8	MTC-HSK-A080-16-120-1-0-A	30261772	On request
80	16	27	34	160	50	10	40	M12x1	2,1	MTC-HSK-A080-16-160-1-0-A	30261773	On request
80	16	27	34	200	50	10	39	M12x1	2,1	MTC-HSK-A080-16-200-1-0-A	30655580	On request
80	18	33	42	100	50	10	40	M12x1	1,5	MTC-HSK-A080-18-100-1-0-A	30261774	On request
80	18	33	42	120	50	10	40	M12x1	1,9	MTC-HSK-A080-18-120-1-0-A	30261775	On request
80	18	33	42	160	50	10	40	M12x1	2,2	MTC-HSK-A080-18-160-1-0-A	30261776	On request

## Shrink chucks ThermoChuck | In acc. with DIN 69882-8 | With axial tool length adjustment | Shank HSK-A in acc. with DIN 69893-1

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
80	18	33	42	200	50	10	39	M12x1	2,6	MTC-HSK-A080-18-200-1-0-A	30655581	On request
80	20	33	42	105	52	10	42	M16x1	1,7	MTC-HSK-A080-20-105-1-0-A	30261777	On request
80	20	33	42	120	52	10	42	M16x1	2,0	MTC-HSK-A080-20-120-1-0-A	30261778	On request
80	20	33	42	160	52	10	42	M16x1	2,3	MTC-HSK-A080-20-160-1-0-A	30261779	On request
80	20	33	42	200	52	10	41	M16x1	2,7	MTC-HSK-A080-20-200-1-0-A	30655582	On request
80	25	44	53	115	58	10	48	M16x1	2,5	MTC-HSK-A080-25-115-1-0-A	30261780	On request
80	25	44	53	120	58	10	48	M16x1	2,6	MTC-HSK-A080-25-120-1-0-A	30261781	On request
80	25	44	53	160	58	10	48	M16x1	2,9	MTC-HSK-A080-25-160-1-0-A	30261782	On request
80	25	44	53	200	58	10	47	M16x1	3,6	MTC-HSK-A080-25-200-1-0-A	30655583	On request
80	32	44	53	120	62	10	52	M16x1	2,9	MTC-HSK-A080-32-120-1-0-A	30261783	On request
80	32	44	53	160	62	10	52	M16x1	3,2	MTC-HSK-A080-32-160-1-0-A	30261784	On request
80	32	44	53	200	62	10	51	M16x1	3,5	MTC-HSK-A080-32-200-1-0-A	30655584	On request
100	6	21	27	85	36	10	26	M5	2,2	MTC-HSK-A100-06-085-1-0-A	30261785	30298015
100	6	21	27	120	36	10	26	M5	2,4	MTC-HSK-A100-06-120-1-0-A	30261786	30348357
100	6	21	27	160	36	10	26	M5	2,6	MTC-HSK-A100-06-160-1-0-A	30261787	30298012
100	6	21	27	200	36	10	26	M5	2,7	MTC-HSK-A100-06-200-1-0-A	30558360	30554271
100	8	21	27	85	36	10	26	M6	2,2	MTC-HSK-A100-08-085-1-0-A	30261788	30298017
100	8	21	27	120	36	10	26	M6	2,4	MTC-HSK-A100-08-120-1-0-A	30261789	30328555
100	8	21	27	160	36	10	26	M6	2,6	MTC-HSK-A100-08-160-1-0-A	30261790	30329487
100	8	21	27	200	36	10	26	M6	2,7	MTC-HSK-A100-08-200-1-0-A	30558361	30350655
100	10	24	32	90	41	10	31	M8x1	2,3	MTC-HSK-A100-10-090-1-0-A	30261791	30298014
100	10	24	32	120	41	10	31	M8x1	2,5	MTC-HSK-A100-10-120-1-0-A	30261792	30323172
100	10	24	32	160	41	10	31	M8x1	2,7	MTC-HSK-A100-10-160-1-0-A	30261793	30318837
100	10	24	32	200	41	10	31	M8x1	2,9	MTC-HSK-A100-10-200-1-0-A	30558363	30350656
100	12	24	32	95	47	10	37	M10x1	2,2	MTC-HSK-A100-12-095-1-0-A	30261794	30312583
100	12	24	32	120	47	10	37	M10x1	2,5	MTC-HSK-A100-12-120-1-0-A	30261795	30348358
100	12	24	32	160	47	10	37	M10x1	2,7	MTC-HSK-A100-12-160-1-0-A	30261796	30348359
100	12	24	32	200	47	10	37	M10x1	2,7	MTC-HSK-A100-12-200-1-0-A	30558364	30554272
100	14	27	34	95	47	10	37	M10x1	2,3	MTC-HSK-A100-14-095-1-0-A	30261797	30298013
100	14	27	34	120	47	10	37	M10x1	2,5	MTC-HSK-A100-14-120-1-0-A	30261798	30310392
100	14	27	34	160	47	10	37	M10x1	2,7	MTC-HSK-A100-14-160-1-0-A	30261799	30348360
100	14	27	34	200	47	10	37	M10x1	3,0	MTC-HSK-A100-14-200-1-0-A	30558366	30496987
100	16	27	34	100	50	10	40	M12x1	2,3	MTC-HSK-A100-16-100-1-0-A	30261800	30312579
100	16	27	34	120	50	10	40	M12x1	2,6	MTC-HSK-A100-16-120-1-0-A	30261801	30301799
100	16	27	34	160	50	10	40	M12x1	2,9	MTC-HSK-A100-16-160-1-0-A	30261802	30348361
100	16	27	34	200	50	10	40	M12x1	3,0	MTC-HSK-A100-16-200-1-0-A	30558367	30426472
100	18	33	42	100	50	10	40	M12x1	2,5	MTC-HSK-A100-18-100-1-0-A	30261803	30312575
100	18	33	42	120	50	10	40	M12x1	2,7	MTC-HSK-A100-18-120-1-0-A	30261804	30348362
100	18	33	42	160	50	10	40	M12x1	3,0	MTC-HSK-A100-18-160-1-0-A	30261805	30348363
100	18	33	42	200	50	10	40	M12x1	3,6	MTC-HSK-A100-18-200-1-0-A	30558368	30350653
100	20	33	42	105	52	10	42	M16x1	2,5	MTC-HSK-A100-20-105-1-0-A	30259975	30298016
100	20	33	42	120	52	10	42	M16x1	3,0	MTC-HSK-A100-20-120-1-0-A	30261807	30348364
100	20	33	42	160	52	10	42	M16x1	3,4	MTC-HSK-A100-20-160-1-0-A	30261808	30348365
100	20	33	42	200	58	10	42	M16x1	3,6	MTC-HSK-A100-20-200-1-0-A	30558369	30554273
100	25	44	53	115	58	10	48	M16x1	3,1	MTC-HSK-A100-25-115-1-0-A	30261809	30298011
100	25	44	53	120	58	10	48	M16x1	3,2	MTC-HSK-A100-25-120-1-0-A	30261810	30348366
100	25	44	53	160	58	10	48	M16x1	3,6	MTC-HSK-A100-25-160-1-0-A	30261811	30348367
100	25	44	53	200	58	10	48	M16x1	4,5	MTC-HSK-A100-25-200-1-0-A	30558371	30554274
100	32	44	53	120	62	10	52	M16x1	3,0	MTC-HSK-A100-32-120-1-0-A	30261812	30322531
100	32	44	53	160	62	10	52	M16x1	3,3	MTC-HSK-A100-32-160-1-0-A	30261813	30348368
100	32	44	53	200	62	10	52	M16x1	4,4	MTC-HSK-A100-32-200-1-0-A	30558372	30554275

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws and coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

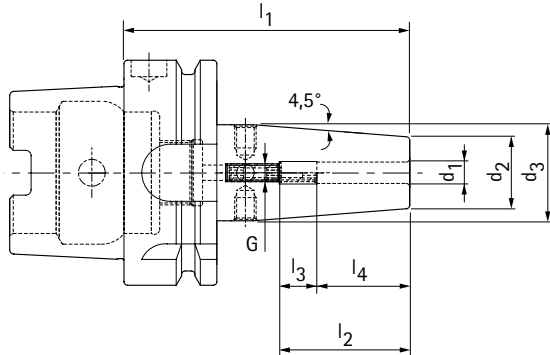
Note: For coolant tubes and Balluff code carriers, see section "Accessories, spare parts and measuring equipment". Fine balancing screws on request. You will find information on foolproofing in the technical appendix. You will find tool extensions in the section "Chucks with cylindrical shank".

Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Shrink chucks ThermoChuck

in accordance with DIN 69882-8 with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



INCH

HSK-A	Dimensions								G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub> inch	d <sub>1</sub> mm	d <sub>2</sub> mm	d <sub>3</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	l <sub>4</sub> mm					
63	1/8	3,18	10	20	80	28	16	12	M6	0,7	MTC-HSK-A063-1/8"-080-1-0-A	30780894	On request
63	3/16	4,76	10	20	80	30	10	20	M6	0,7	MTC-HSK-A063-3/16"-080-1-0-A	30721341	On request
63	1/4	6,35	21	27	80	36	10	26	M6	0,9	MTC-HSK-A063-1/4"-080-1-0-A	30721342	On request
63	5/16	7,94	21	27	80	36	10	26	M6	0,9	MTC-HSK-A063-5/16"-080-1-0-A	30780895	On request
63	3/8	9,53	24	32	85	41	10	31	M8x1	0,9	MTC-HSK-A063-3/8"-085-1-0-A	30721345	On request
63	7/16	11,11	24	32	85	41	10	31	M8x1	0,9	MTC-HSK-A063-7/16"-085-1-0-A	30721344	On request
63	1/2	12,70	24	32	90	47	10	37	M10x1	1,0	MTC-HSK-A063-1/2"-090-1-0-A	30721346	On request
63	5/8	15,88	27	34	95	50	10	40	M12x1	1,0	MTC-HSK-A063-5/8"-095-1-0-A	30721347	On request
63	3/4	19,05	33	42	100	52	10	42	M16x1	1,2	MTC-HSK-A063-3/4"-100-1-0-A	30721343	On request
63	1	25,40	44	52,5	115	58	10	48	M16x1	1,8	MTC-HSK-A063-1"-115-1-0-A	30721348	On request
63	1 1/4	31,75	44	52,5	120	62	10	52	M16x1	1,7	MTC-HSK-A063-1_1/4"-120-1-0-A	30780896	On request
100	1/4	6,35	21	27	85	36	10	26	M5	2,2	MTC-HSK-A100-1/4"-085-1-0-A	30780897	On request
100	5/16	7,94	21	27	85	36	10	26	M6	2,2	MTC-HSK-A100-5/16"-085-1-0-A	30780898	On request
100	3/8	9,53	24	32	90	41	10	31	M8x1	2,3	MTC-HSK-A100-3/8"-090-1-0-A	30780899	On request
100	7/16	11,11	24	32	90	41	10	31	M8x1	2,3	MTC-HSK-A100-7/16"-090-1-0-A	30780900	On request
100	1/2	12,70	24	32	95	47	10	37	M10x1	2,3	MTC-HSK-A100-1/2"-095-1-0-A	30780901	On request
100	5/8	15,88	27	34	100	50	10	40	M12x1	2,4	MTC-HSK-A100-5/8"-100-1-0-A	30780902	On request
100	3/4	19,05	33	42	105	52	10	42	M16x1	2,6	MTC-HSK-A100-3/4"-105-1-0-A	30780903	On request
100	1	25,40	44	53	115	58	10	48	M16x1	3,1	MTC-HSK-A100-1"-115-1-0-A	30780904	On request
100	1 1/4	31,75	44	53	120	62	10	52	M16x1	3,1	MTC-HSK-A100-1_1/4"-120-1-0-A	30780905	On request

Items included: With built-in length adjustment screw with through hole, without fine balancing screws or coolant tube.  
Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: For coolant tubes and Balluff code carriers, see section "Accessories, spare parts and measuring equipment". Fine balancing screws on request. You will find information on foolproofing in the technical appendix. You will find tool extensions in the section "Chucks with cylindrical shank".

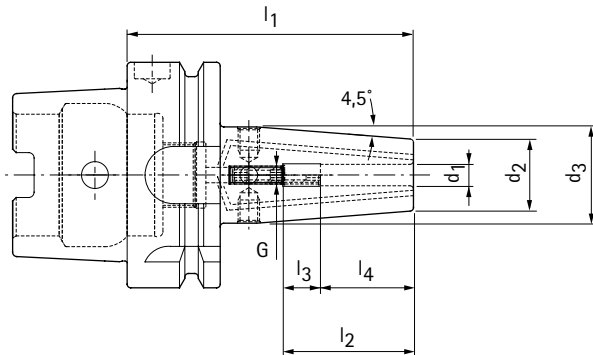
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

similar to DIN 69882-8 with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



## Design with two cooling channel bores

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
63	3	10	15	80	28	16	12	M6	0,7	MTC-HSK-A063-03-080-1-0-A	30271280	30348369
63	4	15	22	80	28	12	16	M6	0,7	MTC-HSK-A063-04-080-1-0-A	30271282	30348370
63	5	15	22	80	30	10	20	M6	0,7	MTC-HSK-A063-05-080-1-0-A	30271283	30348371
63	6	21	27	80	36	10	26	M5	0,8	MTC-HSK-A063-06-080-1-0-A	30271284	30348372
63	6	21	27	200	36	10	26	M5	1,4	MTC-HSK-A063-06-200-1-0-A	30538755	30538766
63	8	21	27	80	36	10	26	M6	0,8	MTC-HSK-A063-08-080-1-0-A	30271285	30348373
63	8	21	27	200	36	10	26	M6	1,4	MTC-HSK-A063-08-200-1-0-A	30538756	30538767
63	10	24	32	85	41	10	31	M8x1	0,9	MTC-HSK-A063-10-085-1-0-A	30271286	30348374
63	10	24	32	200	41	10	31	M8x1	1,6	MTC-HSK-A063-10-200-1-0-A	30538757	30538768
63	12	24	32	90	47	10	37	M10x1	0,9	MTC-HSK-A063-12-090-1-0-A	30271287	30348375
63	12	24	32	200	47	10	37	M10x1	1,6	MTC-HSK-A063-12-200-1-0-A	30538758	30538769
63	14	27	34	90	47	10	37	M10x1	0,9	MTC-HSK-A063-14-090-1-0-A	30271288	30348376
63	14	27	34	200	47	10	37	M10x1	1,7	MTC-HSK-A063-14-200-1-0-A	30538759	30538770
63	16	27	34	95	50	10	40	M12x1	1,0	MTC-HSK-A063-16-095-1-0-A	30271289	30348377
63	16	27	34	200	50	10	40	M12x1	1,7	MTC-HSK-A063-16-200-1-0-A	30538760	30538771
63	18	33	42	95	50	10	40	M12x1	1,1	MTC-HSK-A063-18-095-1-0-A	30271290	30348378
63	18	33	42	200	50	10	40	M12x1	2,3	MTC-HSK-A063-18-200-1-0-A	30538761	30538772
63	20	33	42	100	52	10	42	M16x1	1,1	MTC-HSK-A063-20-100-1-0-A	30271291	30348379
63	20	33	42	200	52	10	42	M16x1	2,3	MTC-HSK-A063-20-200-1-0-A	30538762	30538773
63	25	44	53	115	58	10	48	M16x1	1,6	MTC-HSK-A063-25-115-1-0-A	30271292	30348380
63	25	44	53	200	62	10	48	M16x1	3,2	MTC-HSK-A063-25-200-1-0-A	30538763	30538774
63	32	44	53	120	62	10	52	M16x1	1,6	MTC-HSK-A063-32-120-1-0-A	30271293	30348381
63	32	44	53	200	62	10	52	M16x1	3,0	MTC-HSK-A063-32-200-1-0-A	30538764	30538775

Dimensions in mm.

Items included: With length adjustment screw with through hole fitted and screws for sealing the cooling channel bores. Without fine balancing screws and coolant tube. Design: Standard design with two cooling channel bores. Other cooling channel bores on request. Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: For coolant tubes and Balluff code carriers, see section "Accessories, spare parts and measuring equipment". Fine balancing screws on request. You will find information on foolproofing in the technical appendix. You will find tool extensions in the section "Chucks with cylindrical shank".

Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

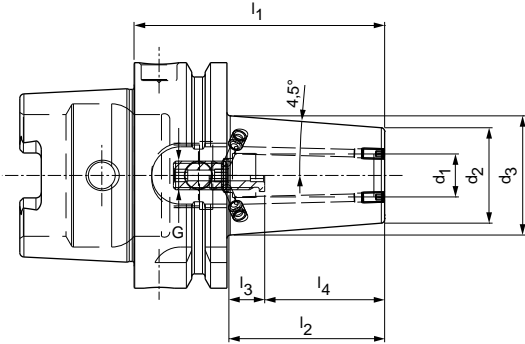
Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.



# Shrink chucks ThermoChuck

similar to DIN 69882-8 with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



## Design with two cooling channel bores, resealable

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$					
63	3	10	15	80	28	16	12	M6	0,7	MTC-HSK-A063-03-080-1-0-A	30654272	30678561
63*	3	10	20	120	-	-	12	-	0,8	MTC-HSK-A063-03-120-1-0-W	30654273	30678562
63	4	15	22	80	28	12	16	M6	0,7	MTC-HSK-A063-04-080-1-0-A	30654274	30678563
63*	4	15	22	120	-	-	16	-	0,8	MTC-HSK-A063-04-120-1-0-W	30654275	30678564
63	5	15	22	80	30	10	20	M6	0,7	MTC-HSK-A063-05-080-1-0-A	30654277	30678565
63*	5	15	22	120	-	-	20	-	0,8	MTC-HSK-A063-05-120-1-0-W	30654279	30678566
63	6	21	27	80	36	10	26	M5	0,8	MTC-HSK-A063-06-080-1-0-A	30654280	30678567
63	6	21	27	120	36	10	26	M5	1,0	MTC-HSK-A063-06-120-1-0-A	30654281	30678568
63	8	21	27	80	36	10	26	M6	0,8	MTC-HSK-A063-08-080-1-0-A	30654282	30678569
63	8	21	27	120	36	10	26	M6	1,0	MTC-HSK-A063-08-120-1-0-A	30654283	30678570
63	10	24	32	85	41	10	31	M8x1	0,9	MTC-HSK-A063-10-085-1-0-A	30654284	30678571
63	10	24	32	120	41	10	31	M8x1	1,0	MTC-HSK-A063-10-120-1-0-A	30654285	30678572
63	12	24	32	90	47	10	37	M10x1	0,9	MTC-HSK-A063-12-090-1-0-A	30654286	30678573
63	12	24	32	120	47	10	37	M10x1	1,0	MTC-HSK-A063-12-120-1-0-A	30654287	30678574
63	14	27	34	90	47	10	37	M10x1	0,9	MTC-HSK-A063-14-090-1-0-A	30654288	30678575
63	14	27	34	120	47	10	37	M10x1	1,1	MTC-HSK-A063-14-120-1-0-A	30654289	30678576
63	16	27	34	95	50	10	40	M12x1	1,0	MTC-HSK-A063-16-095-1-0-A	30654290	30678577
63	16	27	34	120	50	10	40	M12x1	1,1	MTC-HSK-A063-16-120-1-0-A	30654291	30678578
63	18	33	42	95	50	10	40	M12x1	1,1	MTC-HSK-A063-18-095-1-0-A	30654293	30678579
63	18	32	42	120	50	10	40	M12x1	1,3	MTC-HSK-A063-18-120-1-0-A	30654295	30678580
63	20	33	42	100	52	10	42	M16x1	1,1	MTC-HSK-A063-20-100-1-0-A	30654296	30678581
63	20	33	42	120	52	10	42	M16x1	1,3	MTC-HSK-A063-20-120-1-0-A	30654297	30678582
63	25	44	53	115	58	10	48	M16x1	1,6	MTC-HSK-A063-25-115-1-0-A	30654298	30678583
63	25	44	53	120	58	10	48	M16x1	1,7	MTC-HSK-A063-25-120-1-0-A	30654299	30678584
63	32	44	53	120	62	10	52	M16x1	1,6	MTC-HSK-A063-32-120-1-0-A	30654300	30678585

\* without axial tool length adjustment

Dimensions in mm.

Items included: With length adjustment screw with through hole fitted and screws for sealing the cooling channel bores, without fine balancing screws or coolant tube. Design: Standard design with two cooling channel bores. Other cooling channel bores on request. Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: For coolant tubes and Balluff code carriers, see section "Accessories, spare parts and measuring equipment". Fine balancing screws on request. You will find information on foolproofing in the technical appendix. You will find tool extensions in the section "Chucks with cylindrical shank".

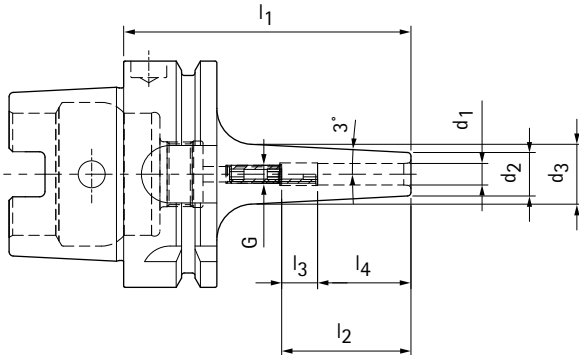
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup>

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



## Slender design, 3 degrees

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
63	3	9	14	80	28	16	12	M6	0,7	MTC-HSK-A063-03-080-1-0-A	30385147	30553443
63*	3	9	16	120	-	-	12	-	0,8	MTC-HSK-A063-03-120-1-0-W	30385148	30553444
63*	3	9	19	160	-	-	12	-	0,8	MTC-HSK-A063-03-160-1-0-W	30385149	30553445
63*	3	9	19	200	-	-	12	-	0,9	MTC-HSK-A063-03-200-1-0-W	30782718	On request
63	4	10	15	80	28	12	16	M6	0,7	MTC-HSK-A063-04-080-1-0-A	30385150	30553446
63*	4	10	17	120	-	-	16	-	0,8	MTC-HSK-A063-04-120-1-0-W	30385151	30553447
63*	4	10	20	160	-	-	16	-	0,9	MTC-HSK-A063-04-160-1-0-W	30385152	30553448
63*	4	10	20	200	-	-	16	-	1,0	MTC-HSK-A063-04-200-1-0-W	30782719	On request
63	5	11	16	80	30	10	20	M6	0,7	MTC-HSK-A063-05-080-1-0-A	30385153	30553449
63*	5	11	18	120	-	-	20	-	0,8	MTC-HSK-A063-05-120-1-0-W	30385154	30553450
63*	5	11	21	160	-	-	20	-	0,9	MTC-HSK-A063-05-160-1-0-W	30385155	30553451
63*	5	11	21	200	-	-	20	-	1,0	MTC-HSK-A063-05-200-1-0-W	30782720	On request
63	6	12	17	80	36	10	26	M5	0,7	MTC-HSK-A063-06-080-1-0-A	30385156	30558878
63	6	12	21	120	36	10	26	M5	0,8	MTC-HSK-A063-06-120-1-0-A	30385157	30553452
63	6	12	24	160	36	10	26	M5	0,9	MTC-HSK-A063-06-160-1-0-A	30385158	30553453
63	6	12	24	200	36	10	26	M5	1,0	MTC-HSK-A063-06-200-1-0-A	30782721	On request
63	8	14	19	80	36	10	26	M6	0,7	MTC-HSK-A063-08-080-1-0-A	30385159	30553454
63	8	14	23	120	36	10	26	M6	0,8	MTC-HSK-A063-08-120-1-0-A	30385160	30558879
63	8	14	26	160	36	10	26	M6	1,0	MTC-HSK-A063-08-160-1-0-A	30385161	30558880
63	8	14	26	200	36	10	26	M6	1,0	MTC-HSK-A063-08-200-1-0-A	30782722	On request
63	10	16	21	85	41	10	31	M8x1	0,8	MTC-HSK-A063-10-085-1-0-A	30385162	30553455
63	10	16	25	120	41	10	31	M8x1	0,9	MTC-HSK-A063-10-120-1-0-A	30385163	30553456
63	10	16	28	160	41	10	31	M8x1	1,0	MTC-HSK-A063-10-160-1-0-A	30385164	30553457
63	10	16	28	200	41	10	31	M8x1	1,0	MTC-HSK-A063-10-200-1-0-A	30782723	On request
63	12	18	24	90	47	10	37	M10x1	0,8	MTC-HSK-A063-12-090-1-0-A	30385165	30553458
63	12	18	27	120	47	10	37	M10x1	0,9	MTC-HSK-A063-12-120-1-0-A	30385166	30336554
63	12	18	30	160	47	10	37	M10x1	1,1	MTC-HSK-A063-12-160-1-0-A	30385167	30553459
63	12	18	30	200	47	10	37	M10x1	1,3	MTC-HSK-A063-12-200-1-0-A	30782724	On request
63	14	20	26	90	47	10	37	M10x1	0,8	MTC-HSK-A063-14-090-1-0-A	30385168	30553460
63	14	20	29	120	47	10	37	M10x1	0,9	MTC-HSK-A063-14-120-1-0-A	30385169	30558881
63	14	20	32	160	47	10	37	M10x1	1,2	MTC-HSK-A063-14-160-1-0-A	30385170	30558882
63	14	20	32	200	47	10	37	M10x1	1,4	MTC-HSK-A063-14-200-1-0-A	30782725	On request
63	16	22	28	95	50	10	40	M12x1	0,8	MTC-HSK-A063-16-095-1-0-A	30385171	30553461

\* without axial tool length adjustment

Continued on next page.



## Shrink chucks ThermoChuck | Shank HSK-A in accordance with DIN 69893-1 | With axial tool length adjustment | Slender design, 3

HSK-A	Dimensions							G	Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
63	16	22	31	120	50	10	40	M12x1	1,0	MTC-HSK-A063-16-120-1-0-A	30385172	30537383
63	16	22	34	160	50	10	40	M12x1	1,2	MTC-HSK-A063-16-160-1-0-A	30385173	30558883
63	16	22	34	200	50	10	40	M12x1	1,5	MTC-HSK-A063-16-200-1-0-A	30774763	On request
63	18	24	30	95	50	10	40	M12x1	0,9	MTC-HSK-A063-18-095-1-0-A	30385174	30553462
63	18	24	33	120	50	10	40	M12x1	1,0	MTC-HSK-A063-18-120-1-0-A	30385175	30553463
63	18	24	36	160	50	10	40	M12x1	1,3	MTC-HSK-A063-18-160-1-0-A	30385176	30553464
63	18	24	36	200	50	10	40	M12x1	1,6	MTC-HSK-A063-18-200-1-0-A	30782726	On request
63	20	26	33	100	52	10	42	M16x1	0,9	MTC-HSK-A063-20-100-1-0-A	30385177	30553465
63	20	26	35	120	52	10	42	M16x1	1,1	MTC-HSK-A063-20-120-1-0-A	30385178	30558884
63	20	26	38	160	52	10	42	M16x1	1,4	MTC-HSK-A063-20-160-1-0-A	30385179	30558885
63	20	26	38	200	52	10	42	M16x1	1,7	MTC-HSK-A063-20-200-1-0-A	30782727	On request
100	6	12	17	85	36	10	26	M5	2,1	MTC-HSK-A100-06-085-1-0-A	30611985	30612625
100	6	12	20	120	36	10	26	M5	2,2	MTC-HSK-A100-06-120-1-0-A	30611986	30612626
100	6	12	23	160	36	10	26	M5	2,3	MTC-HSK-A100-06-160-1-0-A	30611987	30612627
100	6	12	27	200	36	10	26	M5	2,5	MTC-HSK-A100-06-200-1-0-A	30611988	On request
100	8	14	19	85	36	10	26	M6	2,1	MTC-HSK-A100-08-085-1-0-A	30611989	30612629
100	8	14	22	120	36	10	26	M6	2,2	MTC-HSK-A100-08-120-1-0-A	30611990	30612630
100	8	14	25	160	36	10	26	M6	2,3	MTC-HSK-A100-08-160-1-0-A	30611991	30612631
100	8	14	27	200	36	10	26	M6	2,5	MTC-HSK-A100-08-200-1-0-A	30611992	On request
100	10	16	21	90	41	10	31	M8x1	2,1	MTC-HSK-A100-10-090-1-0-A	30611993	30612633
100	10	16	24	120	41	10	31	M8x1	2,2	MTC-HSK-A100-10-120-1-0-A	30611994	30612635
100	10	16	27	160	41	10	31	M8x1	2,4	MTC-HSK-A100-10-160-1-0-A	30611995	30612636
100	10	16	31	200	41	10	31	M8x1	2,5	MTC-HSK-A100-10-200-1-0-A	30611996	On request
100	12	18	24	95	47	10	37	M10x1	2,1	MTC-HSK-A100-12-095-1-0-A	30611997	30612638
100	12	18	27	120	47	10	37	M10x1	2,3	MTC-HSK-A100-12-120-1-0-A	30611998	30612639
100	12	18	29	160	47	10	37	M10x1	2,5	MTC-HSK-A100-12-160-1-0-A	30611999	30612640
100	12	18	32	200	47	10	37	M10x1	2,6	MTC-HSK-A100-12-200-1-0-A	30612000	On request
100	14	20	26	95	47	10	37	M10x1	2,2	MTC-HSK-A100-14-095-1-0-A	30612001	30612643
100	14	20	28	120	47	10	37	M10x1	2,3	MTC-HSK-A100-14-120-1-0-A	30612002	30612644
100	14	20	30	160	47	10	37	M10x1	2,5	MTC-HSK-A100-14-160-1-0-A	30612003	30612645
100	14	20	34	200	47	10	37	M10x1	2,6	MTC-HSK-A100-14-200-1-0-A	30612004	On request
100	16	22	28	100	50	10	40	M12x1	2,2	MTC-HSK-A100-16-100-1-0-A	30612005	30612647
100	16	22	30	120	50	10	40	M12x1	2,3	MTC-HSK-A100-16-120-1-0-A	30612006	30612648
100	16	22	32	160	50	10	40	M12x1	2,6	MTC-HSK-A100-16-160-1-0-A	30612007	30612650
100	16	22	34	200	50	10	40	M12x1	2,8	MTC-HSK-A100-16-200-1-0-A	30612008	On request
100	18	24	30	100	50	10	40	M12x1	2,3	MTC-HSK-A100-18-100-1-0-A	30612009	30612653
100	18	24	32	120	50	10	40	M12x1	2,4	MTC-HSK-A100-18-120-1-0-A	30612010	30612654
100	18	24	36	160	50	10	40	M12x1	2,7	MTC-HSK-A100-18-160-1-0-A	30612011	30612655
100	18	24	40	200	50	10	40	M12x1	3,0	MTC-HSK-A100-18-200-1-0-A	30612012	On request
100	20	27	34	105	52	10	42	M16x1	2,3	MTC-HSK-A100-20-105-1-0-A	30612013	30612706
100	20	27	35	120	52	10	42	M16x1	2,4	MTC-HSK-A100-20-120-1-0-A	30612014	30612758
100	20	27	42	160	52	10	42	M16x1	2,8	MTC-HSK-A100-20-160-1-0-A	30612015	30612808
100	20	27	42	200	52	10	42	M16x1	3,2	MTC-HSK-A100-20-200-1-0-A	30612016	On request

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws and coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: For coolant tubes and Balluff code carriers, see section "Accessories, spare parts and measuring equipment". Fine balancing screws on request. You will find information on foolproofing in the technical appendix. You will find tool extensions in the section "Chucks with cylindrical shank".

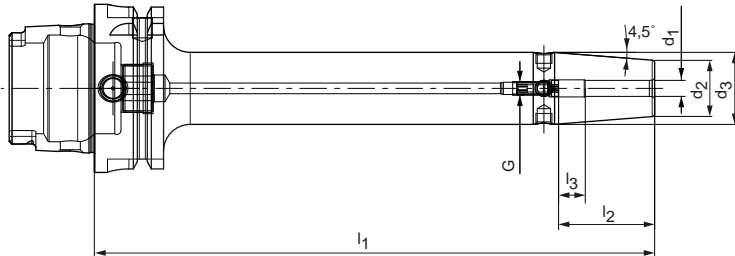
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



## Extra long design

HSK-A	Dimensions						Specification	Design with blanking plug	Design with coolant tube	Design with coolant tube Chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
63	6	21	27	210	36	10	MTC-HSK-A063-06-210-1-0-A	30704085	30704123	30704161
63	6	21	27	230	36	10	MTC-HSK-A063-06-230-1-0-A	30704086	30704124	30704162
63	6	21	27*	250	36	10	MTC-HSK-A063-06-250-1-0-A	30704087	30704125	30704163
63	6	21	27*	270	36	10	MTC-HSK-A063-06-270-1-0-A	30704088	30704126	30704164
63	6	21	27*	300	36	10	MTC-HSK-A063-06-300-1-0-A	30704089	30704127	30704165
63	6	21	27*	330	36	10	MTC-HSK-A063-06-330-1-0-A	30704090	30704128	30704166
63	8	21	27	210	36	10	MTC-HSK-A063-08-210-1-0-A	30704091	30704129	30704167
63	8	21	27	230	36	10	MTC-HSK-A063-08-230-1-0-A	30704092	30704130	30704168
63	8	21	27*	250	36	10	MTC-HSK-A063-08-250-1-0-A	30704093	30704131	30704169
63	8	21	27*	270	36	10	MTC-HSK-A063-08-270-1-0-A	30704094	30704132	30704170
63	8	21	27*	300	36	10	MTC-HSK-A063-08-300-1-0-A	30704095	30704133	30704171
63	8	21	27*	330	36	10	MTC-HSK-A063-08-330-1-0-A	30704096	30704134	30704172
63	10	24	32	210	41	10	MTC-HSK-A063-10-210-1-0-A	30704097	30704135	30704173
63	10	24	32	230	41	10	MTC-HSK-A063-10-230-1-0-A	30704098	30704136	30704174
63	10	24	32*	250	41	10	MTC-HSK-A063-10-250-1-0-A	30704099	30704137	30704175
63	10	24	32*	270	41	10	MTC-HSK-A063-10-270-1-0-A	30704100	30704138	30704176
63	10	24	32*	300	41	10	MTC-HSK-A063-10-300-1-0-A	30704101	30704139	30704177
63	10	24	32*	330	41	10	MTC-HSK-A063-10-330-1-0-A	30704102	30704140	30704178
63	12	24	32	210	47	10	MTC-HSK-A063-12-210-1-0-A	30704103	30704141	30704179
63	12	24	32	230	47	10	MTC-HSK-A063-12-230-1-0-A	30704104	30704142	30704180
63	12	24	32*	250	47	10	MTC-HSK-A063-12-250-1-0-A	30704105	30704143	30704181
63	12	24	32*	270	47	10	MTC-HSK-A063-12-270-1-0-A	30704106	30704144	30704182
63	12	24	32*	300	47	10	MTC-HSK-A063-12-300-1-0-A	30704107	30704145	30704183
63	12	24	32*	330	47	10	MTC-HSK-A063-12-330-1-0-A	30704108	30704146	30704184
63	20	33	42	220	52	10	MTC-HSK-A063-20-220-1-0-A	30704109	30704147	30704185
63	20	33	42	240	52	10	MTC-HSK-A063-20-240-1-0-A	30704110	30704148	30704186
63	20	33	42	255	52	10	MTC-HSK-A063-20-255-1-0-A	30704111	30704149	30704187
63	20	33	42	275	52	10	MTC-HSK-A063-20-275-1-0-A	30704112	30704150	30704188
63	20	33	42	300	52	10	MTC-HSK-A063-20-300-1-0-A	30704113	30704151	30704189
63	20	33	42	330	52	10	MTC-HSK-A063-20-330-1-0-A	30704114	30704152	30704190
63	32	44	53	230	62	10	MTC-HSK-A063-32-230-1-0-A	30704118	30704156	30704194
63	32	44	53	250	62	10	MTC-HSK-A063-32-250-1-0-A	30704119	30704157	30704195
63	32	44	53	275	62	10	MTC-HSK-A063-32-275-1-0-A	30704120	30704158	30704196
63	32	44	53	300	62	10	MTC-HSK-A063-32-300-1-0-A	30704121	30704159	30704197
63	32	44	53	320	62	10	MTC-HSK-A063-32-320-1-0-A	30704122	30704160	30704198

\* Contour with taper, for stabilisation

## Shrink chucks ThermoChuck | Shank HSK-A in accordance with DIN 69893-1 | With axial tool length adjustment | Extra long design

HSK-A	Dimensions						Specification	Design with blanking plug	Design with coolant tube	Design with coolant tube Chip version*
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
100	6	21	27	210	36	10	MTC-HSK-A100-06-210-1-0-A	30723164	30723202	30723240
100	6	21	27	230	36	10	MTC-HSK-A100-06-230-1-0-A	30723165	30723203	30723241
100	6	21	27*	250	36	10	MTC-HSK-A100-06-250-1-0-A	30723166	30723204	30723242
100	6	21	27*	270	36	10	MTC-HSK-A100-06-270-1-0-A	30723167	30723205	30723243
100	6	21	27*	300	36	10	MTC-HSK-A100-06-300-1-0-A	30723168	30723206	30723244
100	6	21	27*	330	36	10	MTC-HSK-A100-06-330-1-0-A	30723169	30723207	30723245
100	8	21	27	210	36	10	MTC-HSK-A100-08-210-1-0-A	30723170	30723208	30723246
100	8	21	27	230	36	10	MTC-HSK-A100-08-230-1-0-A	30723171	30723209	30723247
100	8	21	27*	250	36	10	MTC-HSK-A100-08-250-1-0-A	30723172	30723210	30723248
100	8	21	27*	270	36	10	MTC-HSK-A100-08-270-1-0-A	30723173	30723211	30723249
100	8	21	27*	300	36	10	MTC-HSK-A100-08-300-1-0-A	30723174	30723212	30723250
100	8	21	27*	330	36	10	MTC-HSK-A100-08-330-1-0-A	30723175	30723213	30723251
100	10	24	32	210	41	10	MTC-HSK-A100-10-210-1-0-A	30723176	30723214	30723252
100	10	24	32	230	41	10	MTC-HSK-A100-10-230-1-0-A	30723177	30723215	30723253
100	10	24	32*	250	41	10	MTC-HSK-A100-10-250-1-0-A	30723178	30723216	30723254
100	10	24	32*	270	41	10	MTC-HSK-A100-10-270-1-0-A	30723179	30723217	30723255
100	10	24	32*	300	41	10	MTC-HSK-A100-10-300-1-0-A	30723180	30723218	30723256
100	10	24	32*	330	41	10	MTC-HSK-A100-10-330-1-0-A	30723181	30723219	30723257
100	12	24	32	210	47	10	MTC-HSK-A100-12-210-1-0-A	30723182	30723220	30723258
100	12	24	32	230	47	10	MTC-HSK-A100-12-230-1-0-A	30723183	30723221	30723259
100	12	24	32*	250	47	10	MTC-HSK-A100-12-250-1-0-A	30723184	30723222	30723260
100	12	24	32*	270	47	10	MTC-HSK-A100-12-270-1-0-A	30723185	30723223	30723261
100	12	24	32*	300	47	10	MTC-HSK-A100-12-300-1-0-A	30723186	30723224	30723262
100	12	24	32*	330	47	10	MTC-HSK-A100-12-330-1-0-A	30723187	30723225	30723263
100	20	33	42	220	52	10	MTC-HSK-A100-20-220-1-0-A	30723188	30723226	30723264
100	20	33	42	240	52	10	MTC-HSK-A100-20-240-1-0-A	30723189	30723227	30723265
100	20	33	42	255	52	10	MTC-HSK-A100-20-255-1-0-A	30723190	30723228	30723266
100	20	33	42	275	52	10	MTC-HSK-A100-20-275-1-0-A	30723191	30723229	30723267
100	20	33	42	300	52	10	MTC-HSK-A100-20-300-1-0-A	30723192	30723230	30723268
100	20	33	42	330	52	10	MTC-HSK-A100-20-330-1-0-A	30723193	30723231	30723269
100	32	44	53	230	62	10	MTC-HSK-A100-32-230-1-0-A	30723197	30723235	30723273
100	32	44	53	250	62	10	MTC-HSK-A100-32-250-1-0-A	30723198	30723236	30723274
100	32	44	53	275	62	10	MTC-HSK-A100-32-275-1-0-A	30723199	30723237	30723275
100	32	44	53	300	62	10	MTC-HSK-A100-32-300-1-0-A	30723200	30723238	30723276
100	32	44	53	320	62	10	MTC-HSK-A100-32-320-1-0-A	30723201	30723239	30723277

\* Contour with taper, for stabilisation

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws and coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

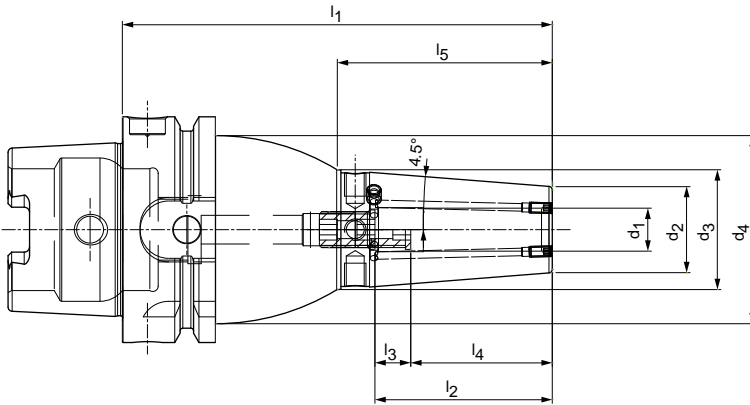
Note: For coolant tubes and Balluff code carriers, see section "Accessories, spare parts and measuring equipment". Fine balancing screws on request. You will find information on foolproofing in the technical appendix. You will find tool extensions in the section "Chucks with cylindrical shank".

Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 12,000 min<sup>-1</sup> as delivered.

# Shrink chucks ThermoChuck

similar to DIN 69882-8 with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



## Heavy-duty design, with two cooling channel bores, resealable

HSK-A	Dimensions					G	Weight [kg]	Specification	Order No.	Order No. chip version				
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	l <sub>1</sub>						l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>
63	6	22	29	-	70	36	10	26	-	M5	0,8	MTC-HSK-A063-06-070-1-0-A	30655300	30678586
63	6	21	29	52,5	120	36	10	26	51	M5	1,3	MTC-HSK-A063-06-120-1-0-A	30655308	30678594
63	8	22	29	-	70	36	10	26	-	M6	0,8	MTC-HSK-A063-08-070-1-0-A	30655301	30678587
63	8	21	29	52,5	120	36	10	26	51	M6	1,3	MTC-HSK-A063-08-120-1-0-A	30655309	30678595
63	10	26,5	33,5	-	70	36	5	31	-	M8x1	0,9	MTC-HSK-A063-10-070-1-0-A	30655302	30678588
63	10	24	33,5	52,5	120	41	10	31	55	M8x1	1,4	MTC-HSK-A063-10-120-1-0-A	30655310	30678596
63	12	26,5	33,5	-	70	40	3	37	-	M8x1	0,9	MTC-HSK-A063-12-070-1-0-A	30655303	30678589
63	12	24	33,5	52,5	120	47	10	37	60	M10x1	1,4	MTC-HSK-A063-12-120-1-0-A	30655311	30678597
63	16	29,5	37,5	-	75	45	5	40	-	M8x1	0,9	MTC-HSK-A063-16-075-1-0-A	30655304	30678590
63	16	27	37,5	52,5	120	50	10	40	63	M12x1	1,4	MTC-HSK-A063-16-120-1-0-A	30655312	30678598
63	20	35,5	43,5	-	75	45	3	42	-	M8x1	1,0	MTC-HSK-A063-20-075-1-0-A	30655305	30678591
63	20	33	43,5	52,5	120	52	10	42	65	M16x1	1,5	MTC-HSK-A063-20-120-1-0-A	30655313	30678599
63	25	45	52,5	-	85	53	5	48	-	M8x1	1,3	MTC-HSK-A063-25-085-1-0-A	30655306	30678592
63	25	44	52,5	52,5	120	58	10	48	54	M16x1	1,7	MTC-HSK-A063-25-120-1-0-A	30655314	30678600
63	32	45	52,5	-	85	55	3	52	-	M8x1	1,2	MTC-HSK-A063-32-085-1-0-A	30655307	30678593
63	32	44	52,5	52,5	120	62	10	52	54	M16x1	1,7	MTC-HSK-A063-32-120-1-0-A	30655315	30678601
100	6	21	30	-	85	36	10	26	-	M5	2,2	MTC-HSK-A100-06-085-1-0-A	30655316	30678602
100	6	21	29	84,5	160	36	10	26	51	M5	4,4	MTC-HSK-A100-06-160-1-0-A	30655324	30678610
100	8	21	30	-	85	36	10	26	-	M6	2,3	MTC-HSK-A100-08-085-1-0-A	30655317	30678603
100	8	21	29	84,5	160	36	10	26	51	M6	4,4	MTC-HSK-A100-08-160-1-0-A	30655325	30678611
100	10	24	33,5	-	90	41	10	31	-	M8x1	2,3	MTC-HSK-A100-10-090-1-0-A	30655318	30678604
100	10	24	33	84,5	160	41	10	31	55	M8x1	4,4	MTC-HSK-A100-10-160-1-0-A	30655326	30678612
100	12	24	33,5	-	95	47	10	37	-	M10x1	2,4	MTC-HSK-A100-12-095-1-0-A	30655319	30678605
100	12	24	33,5	84,5	160	47	10	37	60	M10x1	4,4	MTC-HSK-A100-12-160-1-0-A	30655327	30678613
100	16	27	37,5	-	100	50	10	40	-	M12x1	2,4	MTC-HSK-A100-16-100-1-0-A	30655320	30678606
100	16	27	37,5	84,5	160	50	10	40	65	M12x1	4,4	MTC-HSK-A100-16-160-1-0-A	30655328	30678614
100	20	33	43,5	-	105	52	10	42	-	M16x1	2,6	MTC-HSK-A100-20-105-1-0-A	30655321	30678607
100	20	33	44	84,5	160	52	10	52	70	M16x1	4,4	MTC-HSK-A100-20-160-1-0-A	30655329	30678615
100	25	44	52,5	-	115	58	10	48	-	M16x1	3,1	MTC-HSK-A100-25-115-1-0-A	30655322	30678608
100	25	44	56	84,5	160	58	10	48	75	M16x1	4,8	MTC-HSK-A100-25-160-1-0-A	30655330	30678616
100	32	44	52,5	-	120	62	10	52	-	M16x1	3,0	MTC-HSK-A100-32-120-1-0-A	30655323	30678609
100	32	44	57	84,5	160	62	10	52	80	M16x1	4,6	MTC-HSK-A100-32-160-1-0-A	30655331	30678617

Dimensions in mm.

Items included: With length adjustment screw with through hole fitted and screws for sealing the cooling channel bores. Without fine balancing screws and coolant tube. Design: Standard design with two cooling channel bores. Other cooling channel bores on request. Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: For coolant tubes and Balluff code carriers, see section "Accessories, spare parts and measuring equipment". Fine balancing screws on request. You will find information on foolproofing in the technical appendix. You will find tool extensions in the section "Chucks with cylindrical shank".

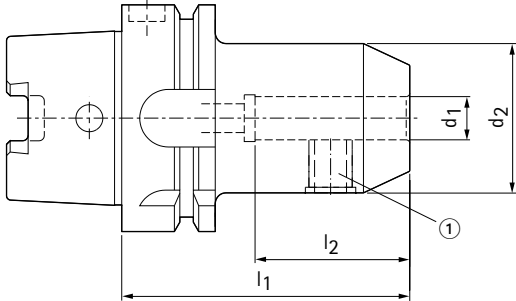
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Chucks for cylindrical shanks

with lateral drive area in accordance with DIN 69882-4

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions				Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>				
50	6	25	65	37	0,5	MWC-HSK-A050-06-065-1-0-W	30319194	On request
50	8	28	65	37	0,6	MWC-HSK-A050-08-065-1-0-W	30319195	On request
50	10	35	65	41	0,7	MWC-HSK-A050-10-065-1-0-W	30319196	On request
50	12	42	80	46	0,9	MWC-HSK-A050-12-080-1-0-W	30319198	On request
50	14	44	80	46	0,9	MWC-HSK-A050-14-080-1-0-W	30319199	On request
50	16	48	80	49	1,0	MWC-HSK-A050-16-080-1-0-W	30319200	On request
50	18	50	80	49	1,0	MWC-HSK-A050-18-080-1-0-W	30319201	On request
50	20	52	80	51	1,0	MWC-HSK-A050-20-080-1-0-W	30319202	On request
63	6	25	65	37	0,8	MWC-HSK-A063-06-065-1-0-W	30319203	30336557
63	8	28	65	37	0,8	MWC-HSK-A063-08-065-1-0-W	30319204	30342036
63	10	35	65	41	0,9	MWC-HSK-A063-10-065-1-0-W	30319205	30342037
63	12	42	80	46	1,2	MWC-HSK-A063-12-080-1-0-W	30319206	30342038
63	14	44	80	46	1,2	MWC-HSK-A063-14-080-1-0-W	30319207	30342039
63	16	48	80	49	1,3	MWC-HSK-A063-16-080-1-0-W	30319208	30342040
63	18	50	80	49	1,3	MWC-HSK-A063-18-080-1-0-W	30319209	30499068
63	20	52	80	51	1,4	MWC-HSK-A063-20-080-1-0-W	30319210	30342041
63	25	65	110	59	2,3	MWC-HSK-A063-25-110-1-0-W	30319211	30342042
63	32	72	110	63	2,6	MWC-HSK-A063-32-110-1-0-W	30319212	30342043
80	6	25	80	37	1,3	MWC-HSK-A080-06-080-1-0-W	30319213	On request
80	8	28	80	37	1,4	MWC-HSK-A080-08-080-1-0-W	30319214	On request
80	10	35	80	41	1,5	MWC-HSK-A080-10-080-1-0-W	30319215	On request
80	12	42	80	46	1,6	MWC-HSK-A080-12-080-1-0-W	30319216	On request
80	14	44	80	46	1,6	MWC-HSK-A080-14-080-1-0-W	30319217	On request
80	16	48	100	49	2,0	MWC-HSK-A080-16-100-1-0-W	30319218	On request
80	18	50	100	49	2,1	MWC-HSK-A080-18-100-1-0-W	30319219	On request
80	20	52	100	51	2,1	MWC-HSK-A080-20-100-1-0-W	30319220	On request
80	25	65	100	59	2,6	MWC-HSK-A080-25-100-1-0-W	30319221	On request
80	32	72	110	63	3,2	MWC-HSK-A080-32-110-1-0-W	30319222	On request

## Chucks for cylindrical shanks with lateral drive area in accordance with DIN 69882-4 shank HSK-A in accordance with DIN 69893-1

HSK-A	Dimensions				Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>				
100	6	25	80	37	2,2	MWC-HSK-A100-06-080-1-0-W	30319223	30553383
100	8	28	80	37	2,2	MWC-HSK-A100-08-080-1-0-W	30319224	30553384
100	10	35	80	41	2,3	MWC-HSK-A100-10-080-1-0-W	30319225	30322535
100	12	42	80	46	2,5	MWC-HSK-A100-12-080-1-0-W	30319226	30322536
100	14	44	80	46	2,5	MWC-HSK-A100-14-080-1-0-W	30319227	30553385
100	16	48	100	49	2,9	MWC-HSK-A100-16-100-1-0-W	30319228	30342044
100	18	50	100	49	2,9	MWC-HSK-A100-18-100-1-0-W	30319229	30553386
100	20	52	100	51	3,2	MWC-HSK-A100-20-100-1-0-W	30319230	30342045
100	25	65	100	59	3,5	MWC-HSK-A100-25-100-1-0-W	30319231	30342046
100	32	72	100	63	3,7	MWC-HSK-A100-32-100-1-0-W	30319232	30342048

## Spare parts

For location bore d <sub>1</sub>	① Clamping screw in accordance with DIN 1835-B	
	Size	Order No.
6	M6x9	10060983
8	M8x9	10042517
10	M10x12	10004134
12	M12x14	30002947
14	M12x14	30002947

For location bore d <sub>1</sub>	① Clamping screw in accordance with DIN 1835-B	
	Size	Order No.
16	M14x16	10004136
18	M14x16	10004136
20	M16x16	10004137
25	M18x2x20	10004141
32	M20x2x20	10004129

Dimensions in mm.

Use: For mounting milling cutters and drills with cylindrical shank and lateral drive area in accordance with DIN 1835 Form B and in accordance with DIN 6535 Form HB.

Items included: Built-in clamping screw, without coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the location bore d<sub>1</sub> = 3 µm. The bore tolerance is much tighter than DIN 1835 (dH4) to obtain machining accuracies of the highest quality.

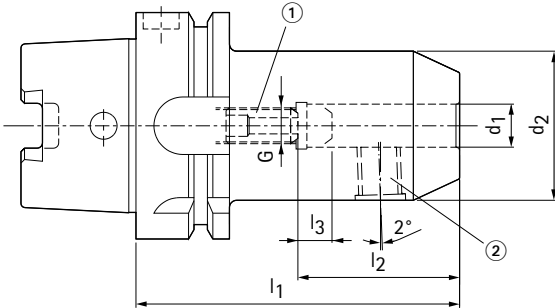
Note: For coolant tubes and Balluff code carriers, see section "Accessories, spare parts and measuring equipment". Fine balancing screws on request. You will find information on foolproofing in the technical appendix. You will find tool extensions in the section "Chucks with cylindrical shank".

Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Chucks for cylindrical shanks

with angled clamping surface in accordance with DIN 69882-5 and axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions					G	Weight [kg]	Specification	Order No.	Order No. chip version	① Order No. Length adjustment screw
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>						
50	6	25	80	36	10	M5	0,6	MNC-HSK-A050-06-080-1-0-A	30319233	On request	30326223
50	8	28	80	36	10	M6	0,6	MNC-HSK-A050-08-080-1-0-A	30319234	On request	30326223
50	10	35	80	40	10	M8	0,8	MNC-HSK-A050-10-080-1-0-A	30319235	On request	30326226
50	12	42	90	45	10	M10	1,0	MNC-HSK-A050-12-090-1-0-A	30319236	On request	30326232
50	14	44	90	45	10	M10	1,0	MNC-HSK-A050-14-090-1-0-A	30319237	On request	30326232
50	16	48	90	48	10	M12	1,1	MNC-HSK-A050-16-090-1-0-A	30319238	On request	30326237
50	18	50	90	48	10	M12	1,2	MNC-HSK-A050-18-090-1-0-A	30319239	On request	30326237
50	20	52	100	50	10	M16	1,3	MNC-HSK-A050-20-100-1-0-A	30319240	On request	30326239
63	6	25	80	36	10	M5	0,9	MNC-HSK-A063-06-080-1-0-A	30319241	30342049	30326223
63	8	28	80	36	10	M6	0,9	MNC-HSK-A063-08-080-1-0-A	30319242	30342050	30326223
63	10	35	80	40	10	M8	1,0	MNC-HSK-A063-10-080-1-0-A	30319243	30342051	30326225
63	12	42	90	45	10	M10	1,3	MNC-HSK-A063-12-090-1-0-A	30319244	30342052	30326232
63	14	44	90	45	10	M10	1,3	MNC-HSK-A063-14-090-1-0-A	30319245	30342053	30326232
63	16	48	100	48	10	M12	1,6	MNC-HSK-A063-16-100-1-0-A	30319246	30342054	30326237
63	18	50	100	48	10	M12	1,6	MNC-HSK-A063-18-100-1-0-A	30319247	30307728	30326237
63	20	52	100	50	10	M16	1,7	MNC-HSK-A063-20-100-1-0-A	30319248	30342055	30326239
63	25	65	110	56	10	M20	2,3	MNC-HSK-A063-25-110-1-0-A	30319249	30332572	30326241
63	32	72	110	60	10	M20	2,6	MNC-HSK-A063-32-110-1-0-A	30319250	30342056	30326241
80	6	25	90	36	10	M5	1,3	MNC-HSK-A080-06-090-1-0-A	30319251	On request	30326223
80	8	28	90	36	10	M6	1,4	MNC-HSK-A080-08-090-1-0-A	30319252	On request	30326223
80	10	35	90	40	10	M8	1,5	MNC-HSK-A080-10-090-1-0-A	30319253	On request	30326225
80	12	42	100	45	10	M10	1,8	MNC-HSK-A080-12-100-1-0-A	30319254	On request	30326231
80	14	44	100	45	10	M10	1,9	MNC-HSK-A080-14-100-1-0-A	30319255	On request	30326231
80	16	48	100	48	10	M12	2,0	MNC-HSK-A080-16-100-1-0-A	30319256	On request	30326237
80	18	50	100	48	10	M12	2,1	MNC-HSK-A080-18-100-1-0-A	30319257	On request	30326237
80	20	52	110	50	10	M16	2,3	MNC-HSK-A080-20-110-1-0-A	30319258	On request	30326240
80	25	65	110	56	10	M20	2,9	MNC-HSK-A080-25-110-1-0-A	30319259	On request	30326243
80	32	72	120	60	10	M20	3,5	MNC-HSK-A080-32-120-1-0-A	30319260	On request	30326243

**Chucks for cylindrical shanks with angled clamping surface in accordance with DIN 69882-5 shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions					G	Weight [kg]	Specification	Order No.	Order No. chip version	Ⓞ Order No. Length adjustment screw
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>						
100	6	25	90	36	10	M5	2,2	MNC-HSK-A100-06-090-1-0-A	30319261	30553387	30326223
100	8	28	90	36	10	M6	2,3	MNC-HSK-A100-08-090-1-0-A	30319262	30553388	30326223
100	10	35	90	40	10	M8	2,4	MNC-HSK-A100-10-090-1-0-A	30319263	30553389	30326225
100	12	42	100	45	10	M10	2,7	MNC-HSK-A100-12-100-1-0-A	30319264	30553390	30326231
100	14	44	100	45	10	M10	2,8	MNC-HSK-A100-14-100-1-0-A	30319265	30342057	30326231
100	16	48	100	48	10	M12	2,9	MNC-HSK-A100-16-100-1-0-A	30319266	30342058	30326236
100	18	50	100	48	10	M12	2,9	MNC-HSK-A100-18-100-1-0-A	30319267	30553391	30326236
100	20	52	110	50	10	M16	3,2	MNC-HSK-A100-20-110-1-0-A	30319268	30342059	30326240
100	25	65	120	56	10	M20	4,0	MNC-HSK-A100-25-120-1-0-A	30319269	30342060	30326243
100	32	72	120	60	10	M20	4,4	MNC-HSK-A100-32-120-1-0-A	30319270	30342061	30326243

**Spare parts**

For location bore d <sub>1</sub>	Ⓞ Clamping screw in accordance with DIN 1835-B	
	Size	Order No.
6	M6x9	10060983
8	M8x9	10042517
10	M10x12	10004134
12	M12x14	30002947
14	M12x14	30002947

For location bore d <sub>1</sub>	Ⓞ Clamping screw in accordance with DIN 1835-B	
	Size	Order No.
16	M14x16	10004136
18	M14x16	10004136
20	M16x16	10004137
25	M18x2x20	10004141
32	M20x2x20	10004129

Dimensions in mm.

Use: For mounting milling cutters and drills with cylindrical shank and angled clamping surface (2°) in accordance with DIN 1835 Form E and DIN 6535 Form HE.

Items included: With built-in clamping screw and length adjustment screw, without coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the location bore d<sub>1</sub> = 3 μm. The bore tolerance is much tighter than DIN 1835 (dH4) to obtain machining accuracies of the highest quality.

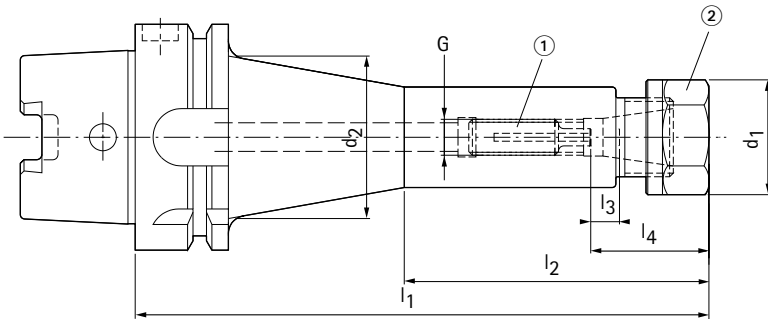
Note: From location bore d<sub>1</sub> = 25 mm two clamping screws are provided. The length adjustment screws have a through hole for coolant. For coolant tubes and Balluff code carriers, see section "Accessories, spare parts and measuring equipment". Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request. Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.



# Chucks for collets

in accordance with DIN 69882-6 with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Clamp- ing range	Nominal size	Dimensions						G	Weight [kg]	Specification	Order No.	Order No. chip version
			d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
50	0,5 - 10	ER-16	28	-	100	-	10	27	M10	0,7	MCC-HSK-A050-16-100-1-0-A	30319271	On request
63	0,5 - 10	ER-16	28	-	100	-	10	27	M10	0,9	MCC-HSK-A063-16-100-1-0-A	30319272	30342062
63	0,5 - 10	ER-16	28	45	160	85	10	27	M10	1,4	MCC-HSK-A063-16-160-1-0-A	30319273	30342063
80	0,5 - 10	ER-16	28	-	100	-	10	27	M12	1,4	MCC-HSK-A080-16-100-1-0-A	30319274	On request
80	0,5 - 10	ER-16	28	45	160	85	10	27	M12	1,8	MCC-HSK-A080-16-160-1-0-A	30319275	On request
100	0,5 - 10	ER-16	28	-	100	-	10	27	M12	2,3	MCC-HSK-A100-16-100-1-0-A	30319276	30342064
100	0,5 - 10	ER-16	28	45	160	85	10	27	M12	2,7	MCC-HSK-A100-16-160-1-0-A	30319277	30342065

## Spare parts

For nominal size HSK-A	① Length adjustment screw (with through hole for coolant) clamping diameter			② Clamping nut in accordance with ISO 15488	
	Ø 2.8 - 5 Order No.	Ø 4.8 - 7 Order No.	Ø 6.8 - 10 Order No.	Nominal size	Order No.
50, 63	30326191	30326192	30326193	ER-16	10013273
80, 100	30326201	30326202	30326203	ER-16	10013273

Dimensions in mm.

Items included: With clamping nut in accordance with ISO 15488.

Without length adjustment screw, coolant tube or collet.

Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper 3 µm.

Note: Chucks have a through hole with internal thread for length adjustment screws.

For suitable collets and tapping collets, coolant tubes, Balluff code carriers and assembly tools, see section "Accessories, spare parts and measuring equipment".

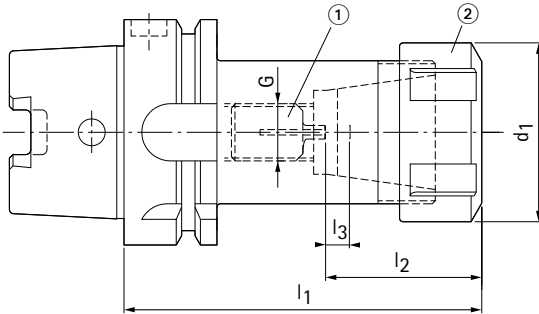
Chip version: Equipped with Balluff code carrier see page 353.

Further code carriers on request.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Chucks for collets

in accordance with DIN 69882-6 with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



HSK-A	Clamping range	Nominal size	Dimensions				G	Weight [kg]	Specification	Order No.	Order No. chip version
			d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>					
50	2 - 20	ER-32	50	100	40	10	M16	1,0	MCC-HSK-A050-32-100-1-0-A	30319285	On request
63	2 - 20	ER-32	50	100	40	10	M16	1,2	MCC-HSK-A063-32-100-1-0-A	30319286	30342070
63	3 - 26	ER-40	63	120	58	10	M16	1,8	MCC-HSK-A063-40-120-1-0-A	30319287	30342071
80	2 - 20	ER-32	50	100	40	10	M16	1,7	MCC-HSK-A080-32-100-1-0-A	30319288	On request
80	3 - 26	ER-40	63	120	58	10	M16	2,3	MCC-HSK-A080-40-120-1-0-A	30319289	On request
100	2 - 20	ER-32	50	100	40	10	M16	2,6	MCC-HSK-A100-32-100-1-0-A	30319290	30342072
100	3 - 26	ER-40	63	120	58	10	M16	3,1	MCC-HSK-A100-40-120-1-0-A	30319291	30342073

## Spare parts

For nominal size HSK-A	Clamping range	① Length adjustment screw (with through hole for coolant) clamping diameter					② Clamping nut in accordance with ISO 15488	
		ø 3.8 - 7 Order No.	ø 6.8 - 10 Order No.	ø 9.8 - 13 Order No.	ø 12.8 - 20 Order No.	ø 19.9 - 26 Order No.	Nominal size	Order No.
50, 63	2 - 20	30326213	30326214	30326215	30326217	-	ER-32	10023401
63	3 - 26	30326213	30326214	30326215	30326217	30326210	ER-40	10022176
80, 100	2 - 20	30326212	30326211	30326216	30326218	-	ER-32	10023401
80, 100	3 - 26	30326212	30326211	30326216	30326218	30326209	ER-40	10022176

Dimensions in mm.

Items included: With clamping nut in accordance with ISO 15488.

Without length adjustment screw, coolant tube or collet.

Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper 3 µm.

Note: Chucks have a through hole with internal thread for length adjustment screws.

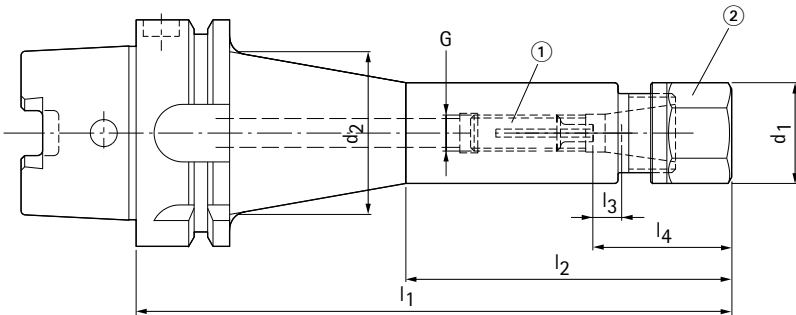
For suitable collets and tapping collets, coolant tubes, Balluff code carriers and assembly tools, see section "Accessories, spare parts and measuring equipment".

Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Chucks for collets

with clamping nut for internal coolant supply (HI-Q/ERC) and axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



HSK-A	Clamping range	Nominal size	Dimensions						G	Weight [kg]	Specification	Order No.	Order No. chip version
			d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>					
50	0,5 - 10	ER-16	28	-	105	-	10	32	M10	0,7	MCC-HSK-A050-16-105-1-0-A	30319278	On request
63	0,5 - 10	ER-16	28	-	105	-	10	32	M10	1,0	MCC-HSK-A063-16-105-1-0-A	30319279	30332511
63	0,5 - 10	ER-16	28	45	165	90	10	32	M10	1,4	MCC-HSK-A063-16-165-1-0-A	30319280	30342066
80	0,5 - 10	ER-16	28	-	105	-	10	32	M12	1,4	MCC-HSK-A080-16-105-1-0-A	30319281	On request
80	0,5 - 10	ER-16	28	45	165	90	10	32	M12	1,8	MCC-HSK-A080-16-165-1-0-A	30319282	On request
100	0,5 - 10	ER-16	28	-	105	-	10	32	M12	2,3	MCC-HSK-A100-16-105-1-0-A	30319283	30342067
100	0,5 - 10	ER-16	28	45	165	90	10	32	M12	2,7	MCC-HSK-A100-16-165-1-0-A	30319284	30342068

## Spare parts

For nominal size HSK-A	① Length adjustment screw (with through hole for coolant) clamping diameter			② Clamping nut HI-Q / ERC in accordance with ISO 15488	
	ø 2.8 - 5 Order No.	ø 4.8 - 7 Order No.	ø 6.8 - 10 Order No.	Nominal size	Order No.
50, 63	30326191	30326192	30326193	ERC-16	10007862
80, 100	30326201	30326202	30326203	ERC-16	10007862

Dimensions in mm.

Items included: With clamping nut for internal coolant supply (HI-Q/ERC).

Without sealing disc, length adjustment screw, coolant tube or collet.

Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper 3 µm.

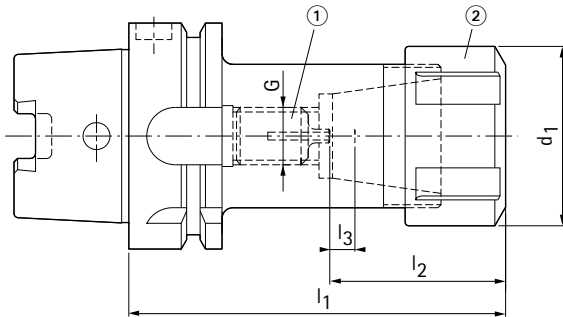
Note: Chucks have a through hole with internal thread for length adjustment screws.

For suitable collets, tapping collets, sealing discs for internal coolant supply, assembly tools, coolant tubes and Balluff code carriers, see section "Accessories, spare parts and chip version": Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Chucks for collets

with clamping nut for internal coolant supply (HI-Q/ERC) and axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



HSK-A	Clamping range	Nominal size	Dimensions				G	Weight [kg]	Specification	Order No.	Order No. chip version
			d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>					
50	2 - 20	ER-32	50	105	45	10	M16	1,0	MCC-HSK-A050-32-105-1-0-A	30319292	On request
63	2 - 20	ER-32	50	105	45	10	M16	3,1	MCC-HSK-A063-32-105-1-0-A	30319293	30342074
63	3 - 26	ER-40	63	125	63	10	M16	1,9	MCC-HSK-A063-40-125-1-0-A	30319294	30342075
80	2 - 20	ER-32	50	105	45	10	M16	1,7	MCC-HSK-A080-32-105-1-0-A	30319295	On request
80	3 - 26	ER-40	63	125	63	10	M16	2,3	MCC-HSK-A080-40-125-1-0-A	30319296	On request
100	2 - 20	ER-32	50	105	45	10	M16	2,6	MCC-HSK-A100-32-105-1-0-A	30319297	30342076
100	3 - 26	ER-40	63	125	63	10	M16	3,2	MCC-HSK-A100-40-125-1-0-A	30319298	30342077

## Spare parts

For nominal size HSK-A	Clamping range	① Length adjustment screw (with through hole for coolant) clamping diameter					② Clamping nut HI-Q / ERC in accordance with ISO 15488	
		ø 3.8 - 7 Order No.	ø 6.8 - 10 Order No.	ø 9.8 - 13 Order No.	ø 12.8 - 20 Order No.	ø 19.9 - 26 Order No.	Nominal size	Order No.
50, 63	2 - 20	30326213	30326214	30326215	30326217	-	ERC-32	10007923
63	3 - 26	30326213	30326214	30326215	30326217	30326210	ERC-40	10008010
80, 100	2 - 20	30326212	30326211	30326216	30326218	-	ERC-32	10007923
80, 100	3 - 26	30326212	30326211	30326216	30326218	30326209	ERC-40	10008010

Dimensions in mm.

Items included: With clamping nut for internal coolant supply (HI-Q/ERC).  
Without sealing disc, length adjustment screw, coolant tube or collet.

Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper 3 µm.

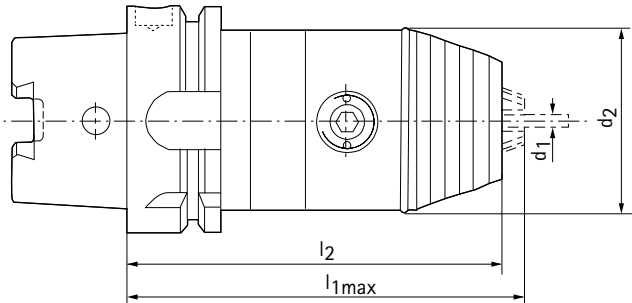
Note: Chucks have a through hole with internal thread for length adjustment screws.  
For suitable collets, tapping collets, sealing discs for internal coolant supply, assembly tools, coolant tubes and Balluff code carriers, see section "Accessories, spare parts and chip version": Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Precision-DrillChuck

with radial actuation, without internal coolant supply

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Clamping range $d_1$	Dimensions			Weight [kg]	Spare part code	Specification	Order No.	Order No. chip version
		$d_2$	$l_{1max}$	$l_2$					
32	0,3 - 8	36	93	90	0,5	DCT-08-A	MPC-HSK-A032-08-093-0-0-W	30259858	On request
40	0,3 - 8	36	94	91	0,5	DCT-08-A	MPC-HSK-A040-08-094-0-0-W	30259859	On request
50	0,3 - 8	36	98	95	0,7	DCT-08-A	MPC-HSK-A050-08-098-0-0-W	30259860	On request
63	0,3 - 8	36	99	96	1,1	DCT-08-A	MPC-HSK-A063-08-099-0-0-W	30259861	30553410
50	0,5 - 13	50	122	116	1,4	DCT-13-A	MPC-HSK-A050-13-122-0-0-W	30259862	On request
63	0,5 - 13	50	110	104	1,7	DCT-13-A	MPC-HSK-A063-13-110-0-0-W	30259863	30553411
80	0,5 - 13	50	115	109	2,1	DCT-13-A	MPC-HSK-A080-13-115-0-0-W	30259864	On request
100	0,5 - 13	50	117	111	3,1	DCT-13-A	MPC-HSK-A100-13-117-0-0-W	30259865	30553412
50	2,5 - 16	57	127	121	1,7	DCT-16-A	MPC-HSK-A050-16-127-0-0-W	30259866	On request
63	2,5 - 16	57	115	109	1,9	DCT-16-A	MPC-HSK-A063-16-115-0-0-W	30259867	30553413
80	2,5 - 16	57	120	114	2,3	DCT-16-A	MPC-HSK-A080-16-120-0-0-W	30259868	On request
100	2,5 - 16	57	122	116	3,3	DCT-16-A	MPC-HSK-A100-16-122-0-0-W	30259869	30544200

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc and coolant tube.

Design: No internal coolant supply.

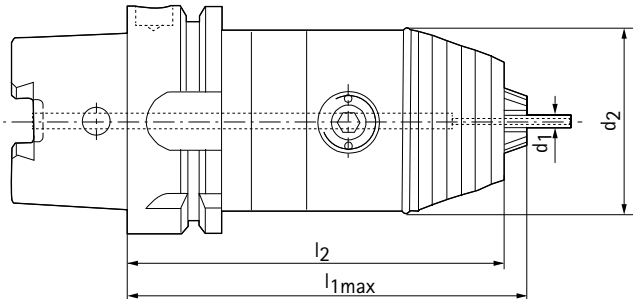
Note: Spare parts and accessories can be found via the spare part code in section "Accessories, spare parts and measuring equipment".

Chip version: Equipped with Balluff code carrier, see section "Accessories, spare parts and measuring equipment". Further code carriers on request.

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

# Precision-DrillChuck

with radial actuation and internal coolant supply  
Shank HSK-A in accordance with DIN 69893-1



HSK-A	Clamping range $d_1$	Dimensions			Weight [kg]	Spare part code	Specification	Order No.	Order No. chip version
		$d_2$	$l_{1max}$	$l_2$					
32	0,3 - 8	36	93	90	0,5	DCT-08-B	MPC-HSK-A032-08-093-1-0-W	30259870	On request
40	0,3 - 8	36	94	91	0,5	DCT-08-B	MPC-HSK-A040-08-094-1-0-W	30259871	On request
50	0,3 - 8	36	98	95	0,7	DCT-08-B	MPC-HSK-A050-08-098-1-0-W	30259872	On request
63	0,3 - 8	36	99	96	1,1	DCT-08-B	MPC-HSK-A063-08-099-1-0-W	30259873	30553414
50	0,5 - 13	50	122	116	1,4	DCT-13-C	MPC-HSK-A050-13-122-1-0-W	30259874	On request
63	0,5 - 13	50	110	104	1,7	DCT-13-C	MPC-HSK-A063-13-110-1-0-W	30259875	30553415
80	0,5 - 13	50	115	109	2,1	DCT-13-B	MPC-HSK-A080-13-115-1-0-W	30259876	On request
100	0,5 - 13	50	117	111	3,1	DCT-13-B	MPC-HSK-A100-13-117-1-0-W	30259877	30553416
50	2,5 - 16	57	127	121	1,7	DCT-16-C	MPC-HSK-A050-16-127-1-0-W	30259878	On request
63	2,5 - 16	57	115	109	1,9	DCT-16-C	MPC-HSK-A063-16-115-1-0-W	30259879	30553417
80	2,5 - 16	57	120	114	2,3	DCT-16-B	MPC-HSK-A080-16-120-1-0-W	30259880	On request
100	2,5 - 16	57	122	116	3,3	DCT-16-B	MPC-HSK-A100-16-122-1-0-W	30259881	30553418

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc and coolant tube.

Design: With internal coolant supply.

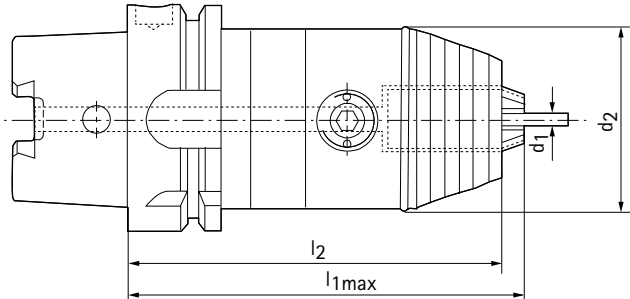
Note: Spare parts and accessories can be found via the spare part code in section "Accessories, spare parts and measuring equipment".

Chip version: Equipped with Balluff code carrier, see section "Accessories, spare parts and measuring equipment". Further code carriers on request.

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

# Precision-DrillChuck

with radial actuation and internal coolant supply with decentral coolant outlet  
Shank HSK-A in accordance with DIN 69893-1



HSK-A	Clamping range $d_1$	Dimensions			Weight [kg]	Spare part code	Specification	Order No.	Order No. chip version
		$d_2$	$l_{1max}$	$l_2$					
32	0,3 - 8	36	93	90	0,5	DCT-08-A	MPC-HSK-A032-08-093-1-0-W	30259882	On request
40	0,3 - 8	36	94	91	0,5	DCT-08-A	MPC-HSK-A040-08-094-1-0-W	30259883	On request
50	0,3 - 8	36	98	95	0,7	DCT-08-A	MPC-HSK-A050-08-098-1-0-W	30259884	On request
63	0,3 - 8	36	99	96	1,1	DCT-08-A	MPC-HSK-A063-08-099-1-0-W	30259885	30557483
50	0,5 - 13	50	122	116	1,4	DCT-13-A	MPC-HSK-A050-13-122-1-0-W	30259886	On request
63	0,5 - 13	50	110	104	1,7	DCT-13-A	MPC-HSK-A063-13-110-1-0-W	30259887	30557490
80	0,5 - 13	50	115	109	2,1	DCT-13-A	MPC-HSK-A080-13-115-1-0-W	30259888	On request
100	0,5 - 13	50	117	111	3,1	DCT-13-A	MPC-HSK-A100-13-117-1-0-W	30259889	30557510
50	2,5 - 16	57	127	121	1,7	DCT-16-A	MPC-HSK-A050-16-127-1-0-W	30259890	On request
63	2,5 - 16	57	115	109	1,9	DCT-16-A	MPC-HSK-A063-16-115-1-0-W	30259891	30557512
80	2,5 - 16	57	120	114	2,3	DCT-16-A	MPC-HSK-A080-16-120-1-0-W	30259892	On request
100	2,5 - 16	57	122	116	3,3	DCT-16-A	MPC-HSK-A100-16-122-1-0-W	30259893	30557516

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc and coolant tube.

Design: With central coolant supply and decentral coolant outlet for tools without coolant ducts.

Note: Spare parts and accessories can be found via the spare part code in section "Accessories, spare parts and measuring equipment".

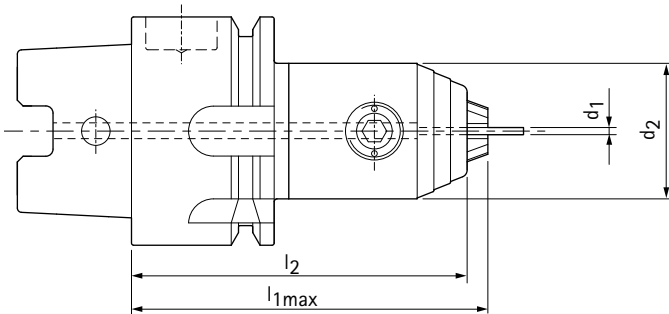
Chip version: Equipped with Balluff code carrier see page 353.

Further code carriers on request.

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

# Micro-Precision DrillChuck

with radial actuation and internal coolant supply  
Shank HSK-A in accordance with DIN 69893-1



HSK-A	Clamping range $d_1$	Dimensions			Weight [kg]	Specification	Order No.	Order No. chip version
		$d_2$	$l_2$	$l_{1max}$				
32	0,2 - 3,4	19	46	49	0,1	MPC-HSK-A032-08-093-1-0-W	30551128	On request
32	0,2 - 6,4	25	54	58	0,3	MPC-HSK-A032-06-058-1-0-W	30608019	On request
40	0,2 - 3,4	19	46	49	0,2	MPC-HSK-A040-08-094-1-0-W	30551129	On request
40	0,2 - 6,4	25	54	58	0,3	MPC-HSK-A040-06-058-1-0-W	30608021	On request
50	0,2 - 3,4	19	52	55	0,3	MPC-HSK-A050-08-098-1-0-W	30551130	On request
50	0,2 - 6,4	25	61	65	0,3	MPC-HSK-A050-06-065-1-0-W	30608022	On request

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without coolant tube.

Design: With internal coolant supply.

Note: For suitable tapping collets and sealing discs for internal coolant supply, coolant tubes and open-ended wrenches, see section "Accessories, spare parts and measuring equipment".

Chip version: Equipped with Balluff code carrier see page 353.

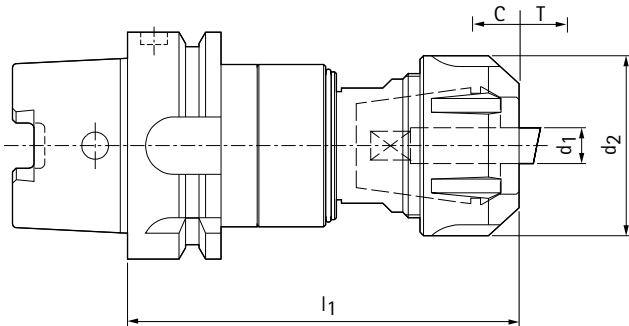
Further code carriers on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.



# Softsynchro tapping chucks

Shank HSK-A in accordance with DIN 69893-1



HSK-A	For tap drill		Clamp- ing range	Nominal size	Dimensions				Weight [kg]	Specification	Order No.	Order No. chip version
	Thread	Shank d <sub>1</sub>			d <sub>2</sub>	l <sub>1</sub>	C	T				
50	M4 - M12	4,5 - 10	1 - 13	ER 20 (GB)	34	93,5	0,5	0,5	0,7	MSC-HSK-A050-20-093-1-0-W	10021638	On request
50	M4 - M20	4,5 - 16	2 - 20	ER 32 (GB)	50	116,3	0,5	0,5	1,1	MSC-HSK-A050-32-116-1-0-W	10079476	On request
63	M4 - M12	4,5 - 10	1 - 13	ER 20 (GB)	34	95,5	0,5	0,5	0,9	MSC-HSK-A063-20-095-1-0-W	10026941	30553404
63	M4 - M20	4,5 - 16	2 - 20	ER 32 (GB)	50	108,8	0,5	0,5	1,3	MSC-HSK-A063-32-108-1-0-W	10035367	30434869
63	M12 - M30	7 - 22	3 - 26	ER 40 (GB)	63	146,5	0,7	0,7	2,3	MSC-HSK-A063-40-146-1-0-W	10034751	30553406
80	M4 - M12	4,5 - 10	1 - 13	ER 20 (GB)	34	100	0,5	0,5	1,2	MSC-HSK-A080-20-115-1-0-W	10051778	On request
80	M4 - M20	4,5 - 16	2 - 20	ER 32 (GB)	50	113,3	0,5	0,5	2,1	MSC-HSK-A080-32-113-1-0-W	10079477	On request
80	M12 - M30	7 - 22	3 - 26	ER 40 (GB)	63	136	0,7	0,7	3,1	MSC-HSK-A080-40-136-1-0-W	10079478	On request
100	M4 - M12	4,5 - 10	1 - 13	ER 20 (GB)	34	102	0,5	0,5	2,3	MSC-HSK-A100-20-102-1-0-W	10022511	30553407
100	M4 - M20	4,5 - 16	2 - 20	ER 32 (GB)	50	115,3	0,5	0,5	2,7	MSC-HSK-A100-32-115-1-0-W	10023150	30553408
100	M12 - M30	7 - 22	3 - 26	ER 40 (GB)	63	138	0,7	0,7	3,2	MSC-HSK-A100-40-138-1-0-W	10079479	30553409

Dimensions in mm.

Use: For clamping tap drills quickly and securely. For compensating for any differences in pitch between the synchronous spindle and the tap drill.

Items included: With clamping nut for internal coolant supply. Without collet, sealing disc or coolant tube.

Design: With internal coolant supply.

Note: For suitable tapping collets and sealing discs for internal coolant supply, coolant tubes and open-ended wrenches, see section "Accessories, spare parts and measuring equipment".

Chip version: Equipped with Balluff code carrier see page 353.

Further code carriers on request.





# CHUCKS WITH HSK-A FOR MQL

Introduction to technology 92

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## Selection system

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HighTorque Chuck HTC for MQL .....	95
Hydraulic chucks for MQL .....	96
Shrink chucks ThermoChuck for MQL .....	97



### 1-channel system, manual tool change

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HighTorque Chuck HTC with axial length adjustment ..... 100

Hydraulic chucks HydroChuck with axial length adjustment ..... 101

Hydraulic chucks with radial length adjustment ..... 105



Shrink chucks ThermoChuck ..... 106



### 1-channel system, automatic tool change

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HighTorque Chuck HTC with axial length adjustment ..... 110

Hydraulic chucks HydroChuck with axial length adjustment ..... 111

Hydraulic chucks with radial length adjustment ..... 115



Shrink chucks ThermoChuck ..... 116



### 2-channel system, automatic tool change

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Selection of chucks MQL 2-channel system ..... 122

HighTorque Chuck HTC with axial length adjustment ..... 132

Hydraulic chucks HydroChuck with axial length adjustment ..... 134

Hydraulic chucks with radial length adjustment ..... 144



Shrink chucks ThermoChuck ..... 146



## Perfect MQL technology

To successfully introduce an MQL process, there are a number of issues that need to be taken into account, from the type of supply via the machine and the sequence of the work steps, to the usage of the correct components such as clamps and tools. A key initial task is to ensure that the air-oil mixture (aerosol) is passed smoothly through the machine spindle to the outlet at the cutting edge. For this purpose in principle two systems, the 1-channel or 2-channel system, are available.

The difference between the systems is the point at which the air-oil mixture (aerosol) is

formed. On the 1-channel system the aerosol is pre-mixed already outside the spindle, while with the 2-channel version mixing only takes place directly at the inlet to the tool. The related transfer systems in the clamping tools are selected depending on the type of supply. In the next step tools suitable for MQL are designed that are specifically adapted to machining using minimum quantity lubrication, from the coolant supply to the design of the exits and chip flutes. If the work steps for the machining process are designed to suit MQL, there is no longer anything in the way of the cost reduction.

The design of all components in the machining process to suit MQL is crucial for ensuring the process results in a cost reduction. Support from an experienced technology partner is useful if the necessary in-house resources are not available. Along with years of experience in process design, MAPAL offers support in relation to all components in the MQL process chain. A complete service package for the introduction of the technology is also available.

### ADVANTAGES

- High energy efficiency:  
no systems for transporting the cooling lubricant with high-pressure pumps
- Resource conservation and protection of the environment:  
no water consumption and no cooling lubricant disposal
- Complete process support:  
system selection to training of the machine operator
- Longer tool lives: due to lower thermal load and ideal lubrication effect
- Reliable, broad tool range:  
specially developed and tested standard and custom tools
- Comprehensive clamping tool programme

### Process design



As the specialist for the implementation of MQL processes, along with its complete product portfolio MAPAL offers its customers support during all phases of an MQL project.

Even right at the start of a project, the tool experts help identify crucial features for successful MQL machining and take them into account as appropriate in the machining process.

During the subsequent planning and implementation phase, all components are perfectly matched to each other: a suitable clamping system, the chuck, the MQL connections and the tools.

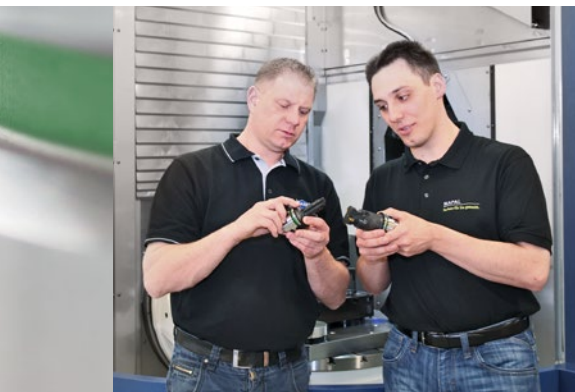
### Services



The comprehensive MAPAL service is rounded off by support during commissioning and series production. MAPAL also offers training courses on minimum quantity lubrication and can undertake machining trials.



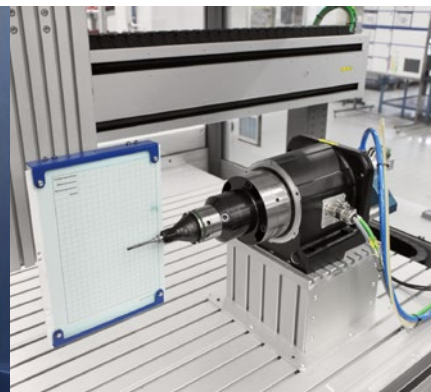
## Continuous further development



Along with the already proven solutions for MQL processes, there is also major potential for the further development and optimisation of this technology. Development engineers and designers jointly prepare suitable solutions for productive, economical MQL manufacturing. Customer workpieces can be completely machined on modern machinery with all the possible options for MQL supply.

The result is that new processes can be installed at the customer within a short time with the highest process reliability.

## Dependable product quality



Along with an optimal process, the right tools are a prerequisite for reliable machining. MAPAL offers all its tool systems familiar from wet machining also for minimum quantity lubrication.

High performance is ensured by appropriate design guidelines that safeguard the most important characteristics of an MQL tool. These characteristics include the supply of the cutting and guide elements with the MQL medium by means of a suitable cooling channels and MQL connections, as well as ensuring chips are removed.

The consistently high quality of the MAPAL MQL tools is guaranteed by special manufacturing processes as well as a subsequent MQL spray test on the "MAPAL UNITEST MQL" tester specially developed in-house for this purpose. Only after comprehensive quality checks are the tools approved for usage.

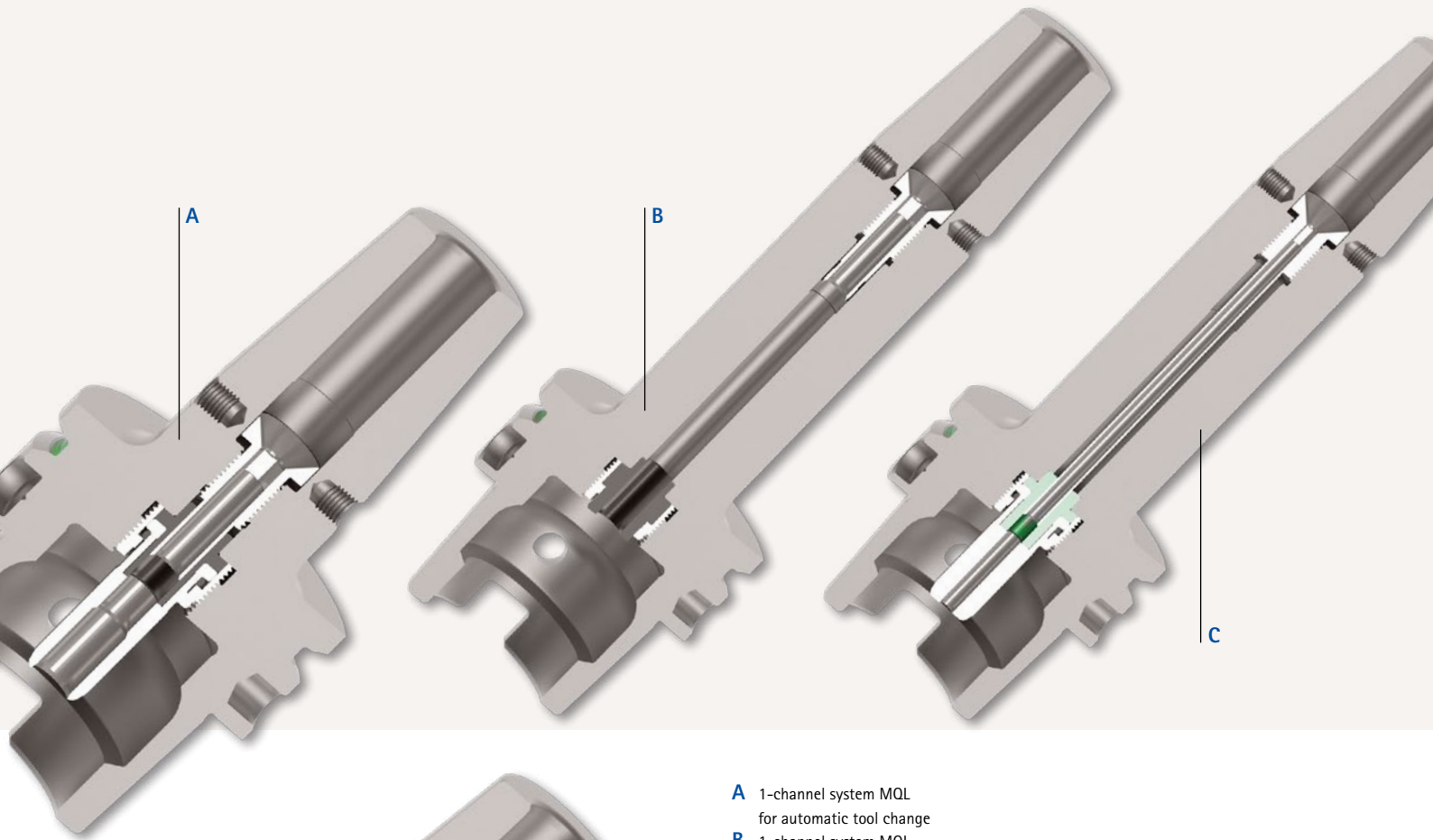
## Broad standard programme of MQL clamping tools



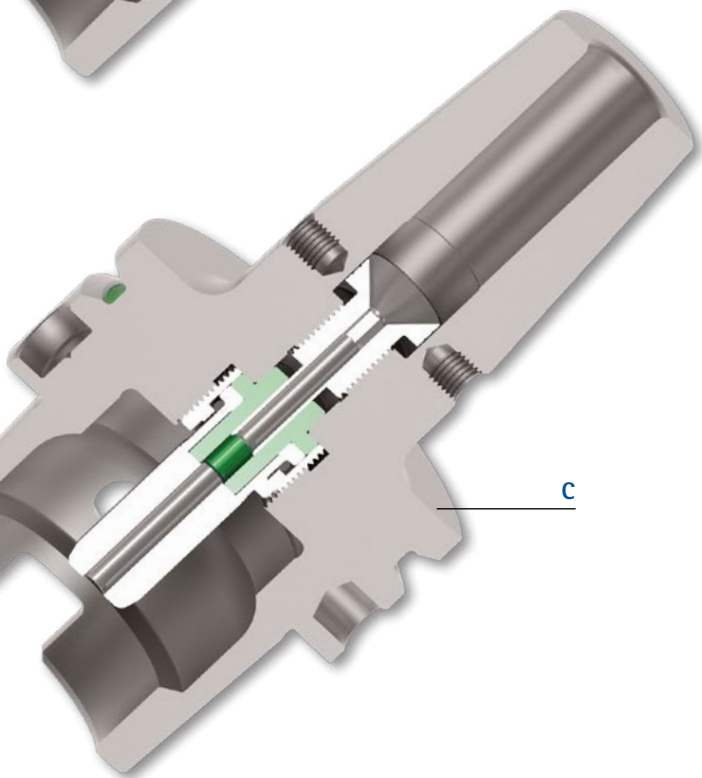
MAPAL offers a wide programme of tools for MQL over the entire product range. An important role for a stable MQL process is played by the related chuck so that the lubricating medium is reliably transported to the cutting edge.

MAPAL offers clamping tools for the 1-channel system and also for the 2-channel system. From shrink chucks of short and long design, through hydraulic chucks with axial or radial length adjustment, to the HighTorque Chuck (HTC). The advantages of the HTC are above all extremely high torque transmission for high-power milling and extremely good thermal stability. This aspect is particularly important, as during MQL machining relatively high temperatures reach the chuck via the tool shank.



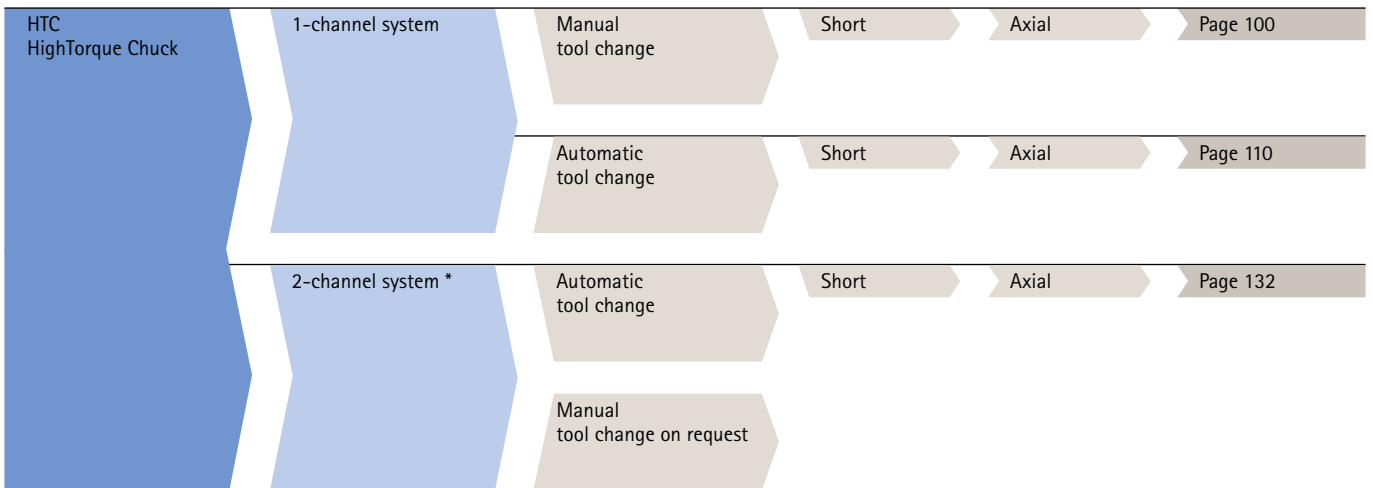


- A** 1-channel system MQL  
for automatic tool change
- B** 1-channel system MQL  
for manual tool change
- C** 2-channel system MQL  
for automatic tool change



# Selection system HTC – HighTorque Chuck for MQL

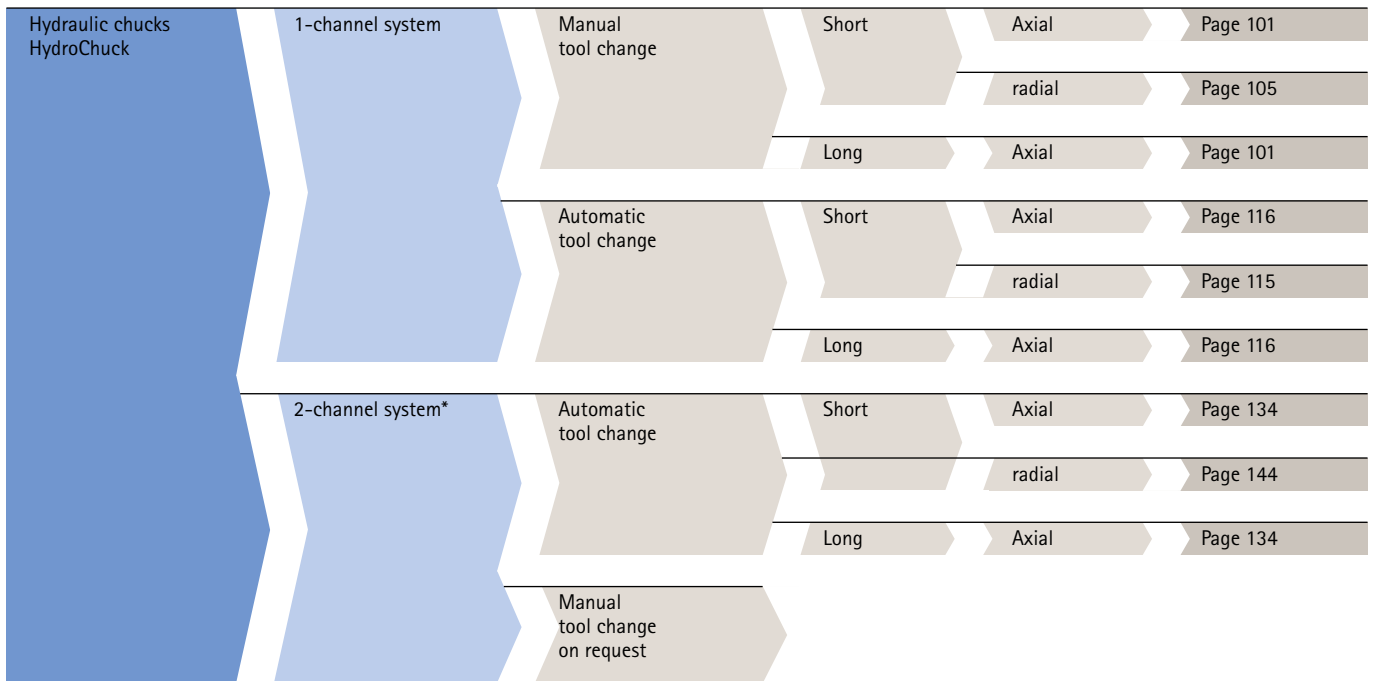
HSK63 and HSK100



\* Due to the need to maintain the MQL ratio, up to three different coolant supply units with the related length adjustment screw can be selected for one shank diameter. You will find more detailed information and a detailed selection system from page 122.



# Selection system hydraulic chucks HydroChuck for MQL



\* Due to the need to maintain the MQL ratio, up to three different coolant supply units with the related length adjustment screw can be selected for one shank diameter. For more detailed information and a detailed selection system, see from page 122.

# Selection system shrink chucks ThermoChuck for MQL



Shrink chucks ThermoChuck	1-channel system	Manual tool change	Short	Page 106
			Long	Page 106
		Automatic tool change	Short	Page 116
			Long	Page 116
	2-channel system*	Automatic tool change		Page 146
		Manual tool change on request		

\* Due to the need to maintain the MQL ratio, up to three different coolant supply units with the related length adjustment screw can be selected for one shank diameter. For more detailed information and a detailed selection system, see from page 122.



# CHUCKS WITH HSK-A FOR MQL 1-CHANNEL SYSTEM

## Manual tool change

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HighTorque Chuck HTC with axial length adjustment \_\_\_\_\_ 100

Hydraulic chucks HydroChuck with axial length adjustment \_\_\_\_\_ 101

Hydraulic chucks with radial length adjustment \_\_\_\_\_ 105



Shrink chucks ThermoChuck \_\_\_\_\_ 106

## Automatic tool change

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HighTorque Chuck HTC with axial length adjustment \_\_\_\_\_ 110

Hydraulic chucks HydroChuck with axial length adjustment \_\_\_\_\_ 111

Hydraulic chucks with radial length adjustment \_\_\_\_\_ 115



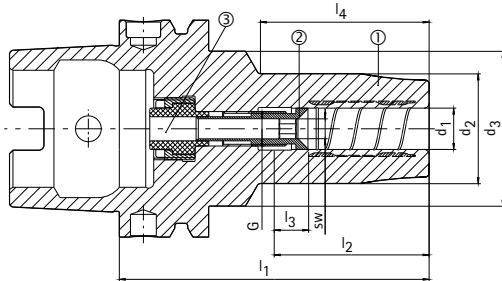
Shrink chucks ThermoChuck \_\_\_\_\_ 116



# 1-channel system MQL HighTorque Chuck HTC

for manual tool change, with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



- ① Hydraulic chucks, HSK, MQL, body material | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, manual | CU

HSK-A	Dimensions							G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			BDY	LS	CU			
63	6	32	50	80	36	10	26	M10x1	4	30487683	30383941	10083270	1,1	HTC-HSK-A063-06-080-B-0-A-AAA	30487743
63	8	34	50	80	36	10	27	M10x1	4	30487684	10083384	10083270	1,1	HTC-HSK-A063-08-080-B-0-A-AAA	30487744
63	10	36	50	85	40	10	32	M10x1	4	30487685	10083385	10083270	1,2	HTC-HSK-A063-10-085-B-0-A-AAA	30487745
63	12	38	52,5	90	45	10	37	M10x1	5	30487686	10083386	10083270	1,3	HTC-HSK-A063-12-090-B-0-A-AAA	30487746
63	14	40	52,5	90	45	10	37	M10x1	5	30487687	10083387	10083270	1,3	HTC-HSK-A063-14-090-B-0-A-AAA	30487747
63	16	42	52,5	95	48	10	42	M12x1	5	30487688	10083388	10083270	1,5	HTC-HSK-A063-16-095-B-0-A-AAA	30487748
63	18	44	52,5	95	48	10	42	M12x1	5	30487689	10083389	10083270	1,5	HTC-HSK-A063-18-095-B-0-A-AAA	30487749
63	20	48	52,5	100	50	10	45	M16x1	5	30487690	10083390	10083270	1,5	HTC-HSK-A063-20-100-B-0-A-AAA	30487750
63	25	57	53	115	56	10	62	M16x1	5	30487691	10083391	10083270	2,1	HTC-HSK-A063-25-115-B-0-A-AAA	30487751
63	32	63	53	120	60	10	62	M16x1	5	30487692	10083392	10083270	2,3	HTC-HSK-A063-32-120-B-0-A-AAA	30487752
100	6	32	50	85	36	10	26	M10x1	4	30487693	30383941	10083272	2,8	HTC-HSK-A100-06-085-B-0-A-AAA	30487753
100	8	34	50	85	36	10	27	M10x1	4	30487694	10083384	10083272	2,8	HTC-HSK-A100-08-085-B-0-A-AAA	30487754
100	10	36	50	90	40	10	32	M10x1	4	30487695	10083385	10083272	2,9	HTC-HSK-A100-10-090-B-0-A-AAA	30487755
100	12	38	52,5	95	45	10	37	M10x1	5	30487696	10083386	10083272	2,9	HTC-HSK-A100-12-095-B-0-A-AAA	30487756
100	14	40	52,5	95	45	10	37	M10x1	5	30487697	10083387	10083272	2,9	HTC-HSK-A100-14-095-B-0-A-AAA	30487757
100	16	42	52,5	100	48	10	42	M12x1	5	30487698	10083388	10083272	3,0	HTC-HSK-A100-16-100-B-0-A-AAA	30487758
100	18	44	52,5	100	48	10	42	M12x1	5	30487699	10083389	10083272	3,0	HTC-HSK-A100-18-100-B-0-A-AAA	30487759
100	20	48	52,5	105	50	10	45	M16x1	5	30487700	10083390	10083272	3,0	HTC-HSK-A100-20-105-B-0-A-AAA	30487760
100	25	57	63	115	56	10	60	M16x1	5	30487701	10083391	10083272	3,8	HTC-HSK-A100-25-115-B-0-A-AAA	30487761
100	32	63	75	120	60	10	60	M16x1	5	30487702	10083392	10083272	4,0	HTC-HSK-A100-32-120-B-0-A-AAA	30487762

Dimensions in mm.

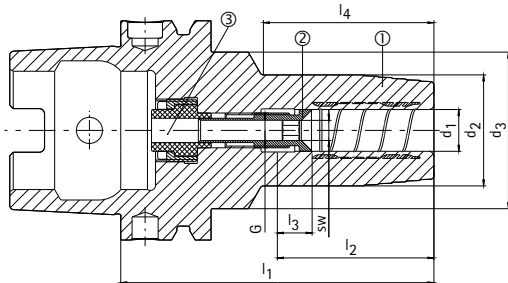
Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: Tool body, length adjustment screw and coolant unit as assembly. These components can also be ordered separately. (see table)

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# 1-channel system MQL hydraulic chucks HydroChuck

for manual tool change, with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



- ① Hydraulic chucks, HSK, MQL, body material | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, manual | CU

HSK-A	Dimensions							G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			BDY	LS	CU			
32	6	26	40	80	36	10	29	M5	2	30386521	30383937	30384272	0,5	MHC-HSK-A032-06-080-B-0-A-AAA	30386435
32	6	26	32	120	36	10	71,5	M5	2	30464553	30383945	30384272	0,6	MHC-HSK-A032-06-120-B-0-A-AAA	30470771
32	6	26	32	160	36	10	111,5	M5	2	30464557	30383945	30384272	0,7	MHC-HSK-A032-06-160-B-0-A-AAA	30470775
32	8	28	40	80	36	10	29,5	M7	2	30386522	30383938	30384272	0,5	MHC-HSK-A032-08-080-B-0-A-AAA	30386436
32	8	28	32	120	36	10	72	M7	2	30464554	30383948	30384272	0,6	MHC-HSK-A032-08-120-B-0-A-AAA	30470772
32	8	28	32	160	36	10	112	M7	2	30464558	30383948	30384272	0,8	MHC-HSK-A032-08-160-B-0-A-AAA	30470776
32	10	30	40	85	40	10	35	M8x1	2	30386523	30383935	30384272	0,5	MHC-HSK-A032-10-085-B-0-A-AAA	30386437
32	10	30	33	120	40	10	72	M8x1	2	30464555	30383946	30384272	0,6	MHC-HSK-A032-10-120-B-0-A-AAA	30470773
32	10	30	33	160	40	10	112	M8x1	2	30464559	30383946	30384272	0,9	MHC-HSK-A032-10-160-B-0-A-AAA	30470777
32	12	32	40	90	45	10	43	M10x1	2	30386524	30383936	30384272	0,5	MHC-HSK-A032-12-090-B-0-A-AAA	30386438
32	12	32	35	120	45	10	72	M10x1	2	30464556	30383947	30384272	0,7	MHC-HSK-A032-12-120-B-0-A-AAA	30470774
32	12	32	35	160	45	10	112	M10x1	2	30464560	30383947	30384272	0,9	MHC-HSK-A032-12-160-B-0-A-AAA	30470778
40	6	26	33,5	80	36	10	49	M7	3	30386529	10083370	10083268	0,5	MHC-HSK-A040-06-080-B-0-A-AAA	30386439
40	6	26	33,5	120	36	10	86	M5	2	30464569	30383945	10083268	0,7	MHC-HSK-A040-06-120-B-0-A-AAA	30470779
40	6	26	33,5	160	36	10	118	M5	2	30464575	30383945	10083268	0,8	MHC-HSK-A040-06-160-B-0-A-AAA	30470785
40	8	28	33,5	80	36	10	50,5	M7	3	30386530	10083371	10083268	0,5	MHC-HSK-A040-08-080-B-0-A-AAA	30386440
40	8	28	33,5	120	36	10	86,5	M7	3	30464570	10083394	10083268	0,7	MHC-HSK-A040-08-120-B-0-A-AAA	30470780
40	8	28	33,5	160	36	10	118	M7	3	30464576	10083394	10083268	0,9	MHC-HSK-A040-08-160-B-0-A-AAA	30470786
40	10	30	33,5	80	40	10	52	M8x1	3	30386531	10083372	10083268	0,5	MHC-HSK-A040-10-080-B-0-A-AAA	30386441
40	10	30	33,5	120	40	10	87	M8x1	3	30464571	10083395	10083268	0,7	MHC-HSK-A040-10-120-B-0-A-AAA	30470781
40	10	30	33,5	160	40	10	127	M8x1	3	30464577	10083395	10083268	1,0	MHC-HSK-A040-10-160-B-0-A-AAA	30470787
40	12	32	33,5	90	45	10	62	M10x1	3	30386532	10083373	10083268	0,6	MHC-HSK-A040-12-090-B-0-A-AAA	30386442
40	12	32	33,5	120	45	10	91,5	M10x1	3	30464572	10083396	10083268	0,8	MHC-HSK-A040-12-120-B-0-A-AAA	30470782
40	12	32	33,5	160	45	10	126	M10x1	3	30464578	10083396	10083268	1,0	MHC-HSK-A040-12-160-B-0-A-AAA	30470788
40	14	34	45	90	45	10	39,5	M10x1	3	30386533	10083374	10083268	0,7	MHC-HSK-A040-14-090-B-0-A-AAA	30386443
40	14	34	-	120	45	10	100	M10x1	3	30464573	10083397	10083268	0,8	MHC-HSK-A040-14-120-B-0-A-AAA	30470783
40	14	34	-	160	45	10	140	M10x1	3	30464579	10083397	10083268	1,1	MHC-HSK-A040-14-160-B-0-A-AAA	30470789
40	16	38	50	90	48	10	39	M12x1	3	30386534	10083375	10083268	0,8	MHC-HSK-A040-16-090-B-0-A-AAA	30386444
40	16	38	-	120	48	10	100	M12x1	3	30464574	10083398	10083268	1,0	MHC-HSK-A040-16-120-B-0-A-AAA	30470784
40	16	38	-	160	48	10	140	M12x1	3	30464580	10083398	10083268	1,3	MHC-HSK-A040-16-160-B-0-A-AAA	30470790
50	6	26	40	80	36	10	38,5	M8x1	4	30386541	10083376	10083269	0,7	MHC-HSK-A050-06-080-B-0-A-AAA	30386445
50	6	26	35	120	36	10	80	M5	2	30464593	30383945	10083269	0,8	MHC-HSK-A050-06-120-B-0-A-AAA	30470791
50	6	26	35	160	36	10	118	M5	2	30464601	30383945	10083269	1,0	MHC-HSK-A050-06-160-B-0-A-AAA	30470799
50	8	28	40	80	36	10	39	M8x1	4	30386542	10083377	10083269	0,7	MHC-HSK-A050-08-080-B-0-A-AAA	30386446
50	8	28	35	120	36	10	80	M7	3	30464594	10083394	10083269	0,9	MHC-HSK-A050-08-120-B-0-A-AAA	30470792
50	8	28	35	160	36	10	118	M7	3	30464602	10083394	10083269	1,1	MHC-HSK-A050-08-160-B-0-A-AAA	30470800
50	10	30	40	85	40	10	44,5	M8x1	4	30386543	10083378	10083269	0,8	MHC-HSK-A050-10-085-B-0-A-AAA	30386447
50	10	30	38	120	40	10	80	M8x1	4	30464595	10083401	10083269	0,9	MHC-HSK-A050-10-120-B-0-A-AAA	30470793

Continued on next page.

**1-channel system MQL hydraulic chucks HydroChuck | For manual tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions							G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			BDY	LS	CU			
50	10	30	38	160	40	10	120	M8x1	4	30464603	10083401	10083269	1,1	MHC-HSK-A050-10-160-B-0-A-AAA	30470801
50	12	32	40	90	45	10	53	M10x1	4	30386544	10083379	10083269	0,8	MHC-HSK-A050-12-090-B-0-A-AAA	30386448
50	12	32	38	120	45	10	81	M10x1	4	30464596	10083402	10083269	1,0	MHC-HSK-A050-12-120-B-0-A-AAA	30470794
50	12	32	38	160	45	10	121	M10x1	4	30464604	10083402	10083269	1,2	MHC-HSK-A050-12-160-B-0-A-AAA	30470802
50	14	34	40	90	45	10	54,5	M10x1	4	30386545	10083380	10083269	0,8	MHC-HSK-A050-14-090-B-0-A-AAA	30386449
50	14	34	38	120	45	10	81,5	M10x1	4	30464597	10083403	10083269	1,0	MHC-HSK-A050-14-120-B-0-A-AAA	30470795
50	14	34	38	160	45	10	121,5	M10x1	4	30464605	10083403	10083269	1,3	MHC-HSK-A050-14-160-B-0-A-AAA	30470803
50	16	38	41,5	95	48	10	61	M12x1	4	30386546	10083381	10083269	0,9	MHC-HSK-A050-16-095-B-0-A-AAA	30386450
50	16	38	-	120	48	10	94	M12x1	4	30464598	10083404	10083269	1,1	MHC-HSK-A050-16-120-B-0-A-AAA	30470796
50	16	38	-	160	48	10	134	M12x1	4	30464606	10083404	10083269	1,5	MHC-HSK-A050-16-160-B-0-A-AAA	30470804
50	18	40	41,5	95	48	10	62,5	M12x1	4	30386547	10083382	10083269	1,0	MHC-HSK-A050-18-095-B-0-A-AAA	30386451
50	18	40	-	120	48	10	94	M12x1	4	30464599	10083405	10083269	1,2	MHC-HSK-A050-18-120-B-0-A-AAA	30470797
50	18	40	-	160	48	10	134	M12x1	4	30464607	10083405	10083269	1,6	MHC-HSK-A050-18-160-B-0-A-AAA	30470805
50	20	42	55	100	50	10	42	M16x1	4	30386548	10083383	10083269	1,1	MHC-HSK-A050-20-100-B-0-A-AAA	30386452
50	20	42	-	120	50	10	94	M16x1	4	30464600	10083406	10083269	1,2	MHC-HSK-A050-20-120-B-0-A-AAA	30470798
50	20	42	-	160	50	10	134	M16x1	4	30464608	10083406	10083269	1,7	MHC-HSK-A050-20-160-B-0-A-AAA	30470806
63	6	26	45	80	36	10	37	M10x1	4	30386549	30383941	10083270	1,0	MHC-HSK-A063-06-080-B-0-A-AAA	30386453
63	6	26	38	120	36	10	78	M5	2	30464609	30383945	10083270	1,1	MHC-HSK-A063-06-120-B-0-A-AAA	30470808
63	6	26	38	160	36	10	118	M5	2	30464617	30383945	10083270	1,3	MHC-HSK-A063-06-160-B-0-A-AAA	30470816
63	6	30	38	200	36	10	155	M5	2	30464627	30383945	10083270	1,6	MHC-HSK-A063-06-200-B-0-A-AAA	30470826
63	8	28	45	80	36	10	37,5	M10x1	4	30386550	10083384	10083270	1,0	MHC-HSK-A063-08-080-B-0-A-AAA	30386454
63	8	28	38	120	36	10	78,5	M7	3	30464610	10083394	10083270	1,1	MHC-HSK-A063-08-120-B-0-A-AAA	30470809
63	8	28	38	160	36	10	118	M7	3	30464618	10083394	10083270	1,3	MHC-HSK-A063-08-160-B-0-A-AAA	30470817
63	8	32	38	200	36	10	155,5	M7	3	30464628	10083394	10083270	1,7	MHC-HSK-A063-08-200-B-0-A-AAA	30470827
63	10	30	45	85	40	10	43,5	M10x1	4	30386551	10083385	10083270	1,0	MHC-HSK-A063-10-085-B-0-A-AAA	30386455
63	10	30	40	120	40	10	79	M8x1	4	30464611	10083401	10083270	1,2	MHC-HSK-A063-10-120-B-0-A-AAA	30470810
63	10	30	40	160	40	10	115	M8x1	4	30464619	10083401	10083270	1,4	MHC-HSK-A063-10-160-B-0-A-AAA	30470818
63	10	31	40	200	40	10	155	M8x1	4	30464629	10083401	10083270	1,7	MHC-HSK-A063-10-200-B-0-A-AAA	30470828
63	12	32	45	90	45	10	49	M10x1	5	30386552	10083386	10083270	1,1	MHC-HSK-A063-12-090-B-0-A-AAA	30386456
63	12	32	40	120	45	10	50,5	M10x1	5	30464612	10083409	10083270	1,2	MHC-HSK-A063-12-120-B-0-A-AAA	30470811
63	12	32	40	160	45	10	120,5	M10x1	5	30464620	10083409	10083270	1,5	MHC-HSK-A063-12-160-B-0-A-AAA	30470819
63	12	32	40	200	45	10	160,5	M10x1	5	30464630	10083409	10083270	1,7	MHC-HSK-A063-12-200-B-0-A-AAA	30470829
63	14	34	45	90	45	10	49,5	M10x1	5	30386553	10083387	10083270	1,1	MHC-HSK-A063-14-090-B-0-A-AAA	30386457
63	14	34	40	120	45	10	81	M10x1	5	30464613	10083410	10083270	1,3	MHC-HSK-A063-14-120-B-0-A-AAA	30470812
63	14	34	40	160	45	10	121	M10x1	5	30464621	10083410	10083270	1,5	MHC-HSK-A063-14-160-B-0-A-AAA	30470820
63	14	34	40	200	45	10	161	M10x1	5	30464631	10083410	10083270	1,8	MHC-HSK-A063-14-200-B-0-A-AAA	30470830
63	16	38	45	95	48	10	55,5	M12x1	5	30386554	10083388	10083270	1,2	MHC-HSK-A063-16-095-B-0-A-AAA	30386458
63	16	38	-	120	48	10	91,1	M12x1	5	30464614	10083411	10083270	1,4	MHC-HSK-A063-16-120-B-0-A-AAA	30470813
63	16	38	-	160	48	10	131,1	M12x1	5	30464622	10083411	10083270	1,7	MHC-HSK-A063-16-160-B-0-A-AAA	30470821
63	16	38	-	200	48	10	171,1	M12x1	5	30464632	10083411	10083270	2,1	MHC-HSK-A063-16-200-B-0-A-AAA	30470831
63	18	40	45	95	48	10	56	M12x1	5	30386555	10083389	10083270	1,2	MHC-HSK-A063-18-095-B-0-A-AAA	30386459
63	18	40	-	120	48	10	89,1	M12x1	5	30464615	10083412	10083270	1,4	MHC-HSK-A063-18-120-B-0-A-AAA	30470814
63	18	40	-	160	48	10	129,1	M12x1	5	30464623	10083412	10083270	1,8	MHC-HSK-A063-18-160-B-0-A-AAA	30470822
63	18	40	-	200	48	10	169,1	M12x1	5	30464633	10083412	10083270	2,2	MHC-HSK-A063-18-200-B-0-A-AAA	30470832
63	20	42	50	100	50	10	60,5	M16x1	5	30386556	10083390	10083270	1,3	MHC-HSK-A063-20-100-B-0-A-AAA	30386460
63	20	42	-	120	50	10	89,1	M16x1	5	30464616	10083413	10083270	1,5	MHC-HSK-A063-20-120-B-0-A-AAA	30470815
63	20	42	-	160	50	10	129,1	M16x1	5	30464624	10083413	10083270	1,9	MHC-HSK-A063-20-160-B-0-A-AAA	30470823
63	20	42	-	200	50	10	169,1	M16x1	5	30464634	10083413	10083270	2,3	MHC-HSK-A063-20-200-B-0-A-AAA	30470833
63	25	57	-	115	56	10	89	M16x1	5	30386557	10083391	10083270	2,0	MHC-HSK-A063-25-115-B-0-A-AAA	30386461
63	25	57	-	160	56	10	134	M16x1	5	30464625	10083414	10083270	2,8	MHC-HSK-A063-25-160-B-0-A-AAA	30470824
63	25	57	-	200	56	10	174	M16x1	5	30464635	10083414	10083270	3,5	MHC-HSK-A063-25-200-B-0-A-AAA	30470834
63	32	63	-	120	60	10	94	M16x1	5	30386558	10083392	10083270	2,2	MHC-HSK-A063-32-120-B-0-A-AAA	30386462
63	32	63	-	160	60	10	134	M16x1	5	30464626	10083415	10083270	2,9	MHC-HSK-A063-32-160-B-0-A-AAA	30470825
63	32	63	-	200	60	10	174	M16x1	5	30464636	10083415	10083270	3,6	MHC-HSK-A063-32-200-B-0-A-AAA	30470835



1-channel system MQL hydraulic chucks HydroChuck | For manual tool change, with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1

HSK-A	Dimensions							G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			BDY	LS	CU			
80	6	26	45	85	36	10	39,5	M10x1	4	30386559	30383941	10083271	1,5	MHC-HSK-A080-06-085-B-0-A-AAA	30386463
80	6	26	38	120	36	10	75	M5	2	30464637	30383945	10083271	1,6	MHC-HSK-A080-06-120-B-0-A-AAA	30470836
80	6	26	38	160	36	10	115	M5	2	30464645	30383945	10083271	1,7	MHC-HSK-A080-06-160-B-0-A-AAA	30470844
80	6	30	38	200	36	10	155	M5	2	30464655	30383945	10083271	2,1	MHC-HSK-A080-06-200-B-0-A-AAA	30470854
80	8	28	45	85	36	10	40	M10x1	4	30386560	10083384	10083271	1,5	MHC-HSK-A080-08-085-B-0-A-AAA	30386464
80	8	28	38	120	36	10	75	M7	3	30464638	10083394	10083271	1,6	MHC-HSK-A080-08-120-B-0-A-AAA	30470837
80	8	28	38	160	36	10	115	M7	3	30464646	10083394	10083271	1,8	MHC-HSK-A080-08-160-B-0-A-AAA	30470845
80	8	32	38	200	36	10	155,5	M7	3	30464656	10083394	10083271	2,2	MHC-HSK-A080-08-200-B-0-A-AAA	30470855
80	10	30	45	90	40	10	46	M10x1	4	30386561	10083385	10083271	1,5	MHC-HSK-A080-10-090-B-0-A-AAA	30386465
80	10	30	40	120	40	10	75	M8x1	4	30464639	10083401	10083271	1,7	MHC-HSK-A080-10-120-B-0-A-AAA	30470838
80	10	30	40	160	40	10	115	M8x1	4	30464647	10083401	10083271	1,9	MHC-HSK-A080-10-160-B-0-A-AAA	30470846
80	10	31	40	200	40	10	155	M8x1	4	30464657	10083401	10083271	2,1	MHC-HSK-A080-10-200-B-0-A-AAA	30470856
80	12	32	45	95	45	10	51,5	M10x1	5	30386562	10083386	10083271	1,6	MHC-HSK-A080-12-095-B-0-A-AAA	30386466
80	12	32	40	120	45	10	77	M10x1	5	30464640	10083409	10083271	1,7	MHC-HSK-A080-12-120-B-0-A-AAA	30470839
80	12	32	40	160	45	10	117	M10x1	5	30464648	10083409	10083271	1,9	MHC-HSK-A080-12-160-B-0-A-AAA	30470847
80	12	32	40	200	45	10	157	M10x1	5	30464658	10083409	10083271	2,2	MHC-HSK-A080-12-200-B-0-A-AAA	30470857
80	14	34	45	95	45	10	52	M10x1	5	30386563	10083387	10083271	1,6	MHC-HSK-A080-14-095-B-0-A-AAA	30386467
80	14	34	40	120	45	10	78	M10x1	5	30464641	10083410	10083271	1,7	MHC-HSK-A080-14-120-B-0-A-AAA	30470840
80	14	34	40	160	45	10	118	M10x1	5	30464649	10083410	10083271	2,0	MHC-HSK-A080-14-160-B-0-A-AAA	30470848
80	14	34	40	200	45	10	158	M10x1	5	30464659	10083410	10083271	2,3	MHC-HSK-A080-14-200-B-0-A-AAA	30470858
80	16	38	45	100	48	10	58	M12x1	5	30386564	10083388	10083271	1,7	MHC-HSK-A080-16-100-B-0-A-AAA	30386468
80	16	38	-	120	48	10	86,1	M12x1	5	30464642	10083411	10083271	1,8	MHC-HSK-A080-16-120-B-0-A-AAA	30470841
80	16	38	-	160	48	10	126,1	M12x1	5	30464650	10083411	10083271	2,2	MHC-HSK-A080-16-160-B-0-A-AAA	30470849
80	16	38	-	200	48	10	166,1	M12x1	5	30464660	10083411	10083271	2,5	MHC-HSK-A080-16-200-B-0-A-AAA	30470859
80	18	40	45	100	48	10	58,5	M12x1	5	30386565	10083389	10083271	1,7	MHC-HSK-A080-18-100-B-0-A-AAA	30386469
80	18	40	-	120	48	10	84,1	M12x1	5	30464643	10083412	10083271	1,9	MHC-HSK-A080-18-120-B-0-A-AAA	30470842
80	18	40	-	160	48	10	124,1	M12x1	5	30464651	10083412	10083271	2,3	MHC-HSK-A080-18-160-B-0-A-AAA	30470850
80	18	40	-	200	48	10	164,1	M12x1	5	30464661	10083412	10083271	2,7	MHC-HSK-A080-18-200-B-0-A-AAA	30470860
80	20	42	50	105	50	10	63	M16x1	5	30386566	10083390	10083271	1,8	MHC-HSK-A080-20-105-B-0-A-AAA	30386470
80	20	42	-	120	50	10	84,1	M16x1	5	30464644	10083413	10083271	2,0	MHC-HSK-A080-20-120-B-0-A-AAA	30470843
80	20	42	-	160	50	10	124,1	M16x1	5	30464652	10083413	10083271	2,4	MHC-HSK-A080-20-160-B-0-A-AAA	30470851
80	20	42	-	200	50	10	164,1	M16x1	5	30464662	10083413	10083271	2,8	MHC-HSK-A080-20-200-B-0-A-AAA	30470861
80	25	57	-	115	56	10	89	M16x1	5	30386567	10083391	10083271	2,6	MHC-HSK-A080-25-115-B-0-A-AAA	30386471
80	25	57	-	160	56	10	134	M16x1	5	30464653	10083414	10083271	3,4	MHC-HSK-A080-25-160-B-0-A-AAA	30470852
80	25	57	-	200	56	10	174	M16x1	5	30464663	10083414	10083271	4,2	MHC-HSK-A080-25-200-B-0-A-AAA	30470862
80	32	63	-	120	60	10	94	M16x1	5	30386568	10083392	10083271	2,8	MHC-HSK-A080-32-120-B-0-A-AAA	30386472
80	32	63	-	160	60	10	134	M16x1	5	30464654	10083415	10083271	3,8	MHC-HSK-A080-32-160-B-0-A-AAA	30470853
80	32	63	-	200	60	10	174	M16x1	5	30464664	10083415	10083271	4,8	MHC-HSK-A080-32-200-B-0-A-AAA	30470863
100	6	26	45	85	36	10	36,5	M10x1	4	30386569	30383941	10083272	2,4	MHC-HSK-A100-06-085-B-0-A-AAA	30386810
100	6	26	38	120	36	10	73,5	M5	2	30464665	30383945	10083272	2,5	MHC-HSK-A100-06-120-B-0-A-AAA	30470864
100	6	26	38	160	36	10	113,5	M5	2	30464673	30383945	10083272	2,7	MHC-HSK-A100-06-160-B-0-A-AAA	30470872
100	6	30	38	200	36	10	155	M5	2	30464683	30383945	10083272	3,0	MHC-HSK-A100-06-200-B-0-A-AAA	30470882
100	8	28	45	85	36	10	37	M10x1	4	30386570	10083384	10083272	2,4	MHC-HSK-A100-08-085-B-0-A-AAA	30386812
100	8	28	38	120	36	10	74	M7	3	30464666	10083394	10083272	2,5	MHC-HSK-A100-08-120-B-0-A-AAA	30470865
100	8	28	38	160	36	10	114	M7	3	30464674	10083394	10083272	2,7	MHC-HSK-A100-08-160-B-0-A-AAA	30470873
100	8	32	38	200	36	10	155,5	M7	3	30464684	10083394	10083272	3,1	MHC-HSK-A100-08-200-B-0-A-AAA	30470883
100	10	30	45	90	40	10	43	M10x1	4	30386571	10083385	10083272	2,4	MHC-HSK-A100-10-090-B-0-A-AAA	30386813
100	10	30	40	120	40	10	74,5	M8x1	4	30464667	10083401	10083272	2,6	MHC-HSK-A100-10-120-B-0-A-AAA	30470866
100	10	30	40	160	40	10	114,5	M8x1	4	30464675	10083401	10083272	2,8	MHC-HSK-A100-10-160-B-0-A-AAA	30470874
100	10	31	40	200	40	10	155	M8x1	4	30464685	10083401	10083272	3,0	MHC-HSK-A100-10-200-B-0-A-AAA	30470884
100	12	32	45	95	45	10	48,5	M10x1	5	30386572	10083386	10083272	2,5	MHC-HSK-A100-12-095-B-0-A-AAA	30386814
100	12	32	40	120	45	10	75	M10x1	5	30464668	10083409	10083272	2,6	MHC-HSK-A100-12-120-B-0-A-AAA	30470867
100	12	32	40	160	45	10	115	M10x1	5	30464676	10083409	10083272	2,8	MHC-HSK-A100-12-160-B-0-A-AAA	30470875
100	12	32	40	200	45	10	155	M10x1	5	30464686	10083409	10083272	3,1	MHC-HSK-A100-12-200-B-0-A-AAA	30470885

Continued on next page.



**1-channel system MQL hydraulic chucks HydroChuck | For manual tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions							G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			BDY	LS	CU			
100	14	34	45	95	45	10	49	M10x1	5	30386573	10083387	10083272	2,5	MHC-HSK-A100-14-095-B-0-A-AAA	30386815
100	14	34	40	120	45	10	75,5	M10x1	5	30464669	10083410	10083272	2,7	MHC-HSK-A100-14-120-B-0-A-AAA	30470868
100	14	34	40	160	45	10	115,5	M10x1	5	30464677	10083410	10083272	2,9	MHC-HSK-A100-14-160-B-0-A-AAA	30470876
100	14	34	40	200	45	10	155,5	M10x1	5	30464687	10083410	10083272	3,2	MHC-HSK-A100-14-200-B-0-A-AAA	30470886
100	16	38	45	100	48	10	55	M12x1	5	30386574	10083388	10083272	2,6	MHC-HSK-A100-16-100-B-0-A-AAA	30386816
100	16	38	-	120	48	10	81,1	M12x1	5	30464670	10083411	10083272	2,7	MHC-HSK-A100-16-120-B-0-A-AAA	30470869
100	16	38	-	160	48	10	121,1	M12x1	5	30464678	10083411	10083272	3,1	MHC-HSK-A100-16-160-B-0-A-AAA	30470877
100	16	38	-	200	48	10	161,1	M12x1	5	30464688	10083411	10083272	3,4	MHC-HSK-A100-16-200-B-0-A-AAA	30470887
100	18	40	45	100	48	10	55,5	M12x1	5	30386575	10083389	10083272	2,6	MHC-HSK-A100-18-100-B-0-A-AAA	30386817
100	18	40	-	120	48	10	81,1	M12x1	5	30464671	10083412	10083272	2,8	MHC-HSK-A100-18-120-B-0-A-AAA	30470870
100	18	40	-	160	48	10	121,1	M12x1	5	30464679	10083412	10083272	3,2	MHC-HSK-A100-18-160-B-0-A-AAA	30470878
100	18	40	-	200	48	10	161,1	M12x1	5	30464689	10083412	10083272	3,6	MHC-HSK-A100-18-200-B-0-A-AAA	30470888
100	20	42	50	105	50	10	60	M16x1	5	30386576	10083390	10083272	2,7	MHC-HSK-A100-20-105-B-0-A-AAA	30386818
100	20	42	-	120	50	10	81,1	M16x1	5	30464672	10083413	10083272	2,9	MHC-HSK-A100-20-120-B-0-A-AAA	30470871
100	20	42	-	160	50	10	121,1	M16x1	5	30464680	10083413	10083272	3,3	MHC-HSK-A100-20-160-B-0-A-AAA	30470879
100	20	42	-	200	50	10	161,1	M16x1	5	30464690	10083413	10083272	3,7	MHC-HSK-A100-20-200-B-0-A-AAA	30470889
100	25	57	-	115	56	10	86	M16x1	5	30386577	10083391	10083272	3,4	MHC-HSK-A100-25-115-B-0-A-AAA	30386819
100	25	57	-	160	56	10	131	M16x1	5	30464681	10083414	10083272	4,3	MHC-HSK-A100-25-160-B-0-A-AAA	30470880
100	25	57	-	200	56	10	171	M16x1	5	30464691	10083414	10083272	5,1	MHC-HSK-A100-25-200-B-0-A-AAA	30470890
100	32	63	-	120	60	10	91	M16x1	5	30386578	10083392	10083272	3,7	MHC-HSK-A100-32-120-B-0-A-AAA	30386820
100	32	63	-	160	60	10	131	M16x1	5	30464682	10083415	10083272	4,7	MHC-HSK-A100-32-160-B-0-A-AAA	30470881
100	32	63	-	200	60	10	171	M16x1	5	30464692	10083415	10083272	5,6	MHC-HSK-A100-32-200-B-0-A-AAA	30470891

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: Tool body, length adjustment screw and coolant unit as assembly.

These components can also be ordered separately. (see table)

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA.

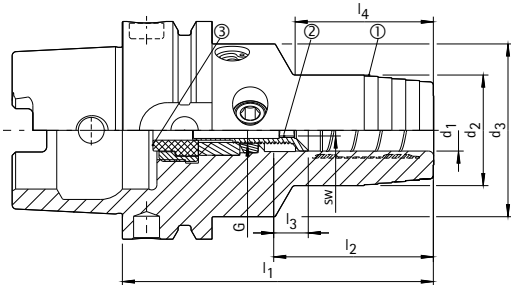
With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ .

On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# 1-channel system MQL hydraulic chucks HydroChuck

for manual tool change, with radial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



- ① Hydraulic chucks, HSK, MQL, body material | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, manual | CU

HSK-A	Dimensions							G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			BDY	LS	CU			
40	6	26	33,5	80	36	10	36	M6x1	2,5	30479916	30480046	30483110	0,5	MHC-HSK-A040-06-080-B-0-R-AAB	30480014
40	8	28	33,5	80	36	10	36	M6x1	3	30479917	30480047	30483110	0,5	MHC-HSK-A040-08-080-B-0-R-AAB	30480015
40	10	30	33,5	85	40	10	43	M6x1	3	30479918	30480048	30483110	0,5	MHC-HSK-A040-10-085-B-0-R-AAB	30480016
40	12	32	33,5	90	45	10	48	M6x1	3	30479919	30480049	30483110	0,5	MHC-HSK-A040-12-090-B-0-R-AAB	30480017
50	6	26	49	80	36	10	35	M6x1	2,5	30479920	30480050	30483111	0,7	MHC-HSK-A050-06-080-B-0-R-AAW	30480018
50	8	28	50,5	80	36	10	36	M6x1	3	30479921	30480051	30483111	0,7	MHC-HSK-A050-08-080-B-0-R-AAW	30480019
50	10	30	52	85	40	10	38	M8x1	4	30479922	30480052	30483112	0,7	MHC-HSK-A050-10-085-B-0-R-AAB	30480020
50	12	32	62	90	45	10	40	M8x1	4	30479923	30480053	30483112	0,8	MHC-HSK-A050-12-090-B-0-R-AAB	30480021
50	14	34	39,5	90	45	10	46	M8x1	4	30479924	30480054	30483112	0,8	MHC-HSK-A050-14-090-B-0-R-AAB	30480022
50	16	34	39,5	95	48	10	36,5	M8x1	4	30479925	30480055	30483112	1,0	MHC-HSK-A050-16-095-B-0-R-AAB	30480023
50	18	38	39	95	48	10	36,5	M8x1	4	30479926	30480056	30483112	1,0	MHC-HSK-A050-18-095-B-0-R-AAB	30480024
50	20	38	39	100	50	10	39	M8x1	4	30479927	30480057	30483112	1,2	MHC-HSK-A050-20-100-B-0-R-AAB	30480025
63	6	26	38,5	80	36	10	33	M6x1	2,5	30479928	30480050	30483113	1,0	MHC-HSK-A063-06-080-B-0-R-AAF	30480026
63	8	28	39	80	36	10	33	M6x1	3	30479929	30480051	30483113	1,1	MHC-HSK-A063-08-080-B-0-R-AAF	30480027
63	10	30	44,5	85	40	10	38	M8x1	4	30479930	30480052	30483114	1,1	MHC-HSK-A063-10-085-B-0-R-AAF	30480028
63	12	32	53	90	45	10	40	M8x1	4	30479931	30480053	30483114	1,2	MHC-HSK-A063-12-090-B-0-R-AAF	30480029
63	14	34	54,5	90	45	10	46	M8x1	4	30479932	30480054	30483114	1,2	MHC-HSK-A063-14-090-B-0-R-AAF	30480030
63	16	38	61	95	48	10	51	M8x1	4	30479933	30480055	30483114	1,3	MHC-HSK-A063-16-095-B-0-R-AAF	30480031
63	18	40	62,5	95	48	10	52	M8x1	4	30479934	30480056	30483114	1,3	MHC-HSK-A063-18-095-B-0-R-AAF	30480032
63	20	42	42	100	50	10	51	M8x1	4	30479935	30480057	30483114	1,4	MHC-HSK-A063-20-100-B-0-R-AAF	30480033
63	25	42	42	120	56	10	54,5	M8x1	5	30479936	30480058	30483114	2,1	MHC-HSK-A063-25-120-B-0-R-AAF	30480034
63	32	42	42	125	60	10	69	M8x1	5	30479937	30480059	30483114	2,4	MHC-HSK-A063-32-125-B-0-R-AAF	30480035

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: Tool body, length adjustment screw and coolant unit as assembly. These components can also be ordered separately. (see table)

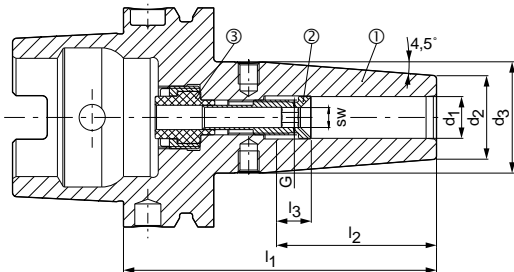
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# 1-channel system MQL shrink chucks ThermoChuck

for manual tool change, with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



- ① Shrink chuck, HSK, MQL, tool body | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, manual | CU

HSK-A	Dimensions						G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>			BDY	LS	CU			
32	6	21	26	70	36	8	M7	2,5	10083202	10083329	10083267	0,3	MTC-HSK-A032-06-070-B-0-A-CCE	30179987
32	6	21	26	80	36	10	M5	2	30386104	30383937	30384272	0,3	MTC-HSK-A032-06-080-B-0-A-AAA	30386068
32	6	21	26	120	36	10	M5	2	30386112	30383945	30384272	0,5	MTC-HSK-A032-06-120-B-0-A-AAA	30386031
32	6	21	26	160	36	10	M5	2	30479062	30383945	30384272	0,6	MTC-HSK-A032-06-160-B-0-A-AAA	30479078
32	8	21	26	70	36	8	M7	2,5	10083218	10083367	10083267	0,3	MTC-HSK-A032-08-070-B-0-A-CCE	30179988
32	8	21	26	80	36	10	M7	2	30386105	30383938	30384272	0,3	MTC-HSK-A032-08-080-B-0-A-AAA	30386069
32	8	21	26	120	36	10	M7	2	30386113	30383948	30384272	0,5	MTC-HSK-A032-08-120-B-0-A-AAA	30386032
32	8	21	26	160	36	10	M7	2	30479063	30383948	30384272	0,6	MTC-HSK-A032-08-160-B-0-A-AAA	30479079
32	10	24	29	75	40	7	M7	2,5	10083219	10083368	10083267	0,4	MTC-HSK-A032-10-075-B-0-A-CCE	30179989
32	10	24	29	85	40	10	M8x1	2	30386106	30383935	30384272	0,4	MTC-HSK-A032-10-085-B-0-A-AAA	30386070
32	10	24	29	120	40	10	M8x1	2	30386114	30383946	30384272	0,6	MTC-HSK-A032-10-120-B-0-A-AAA	30386033
32	10	24	29	160	40	10	M8x1	2	30479064	30383946	30384272	0,7	MTC-HSK-A032-10-160-B-0-A-AAA	30479080
32	12	24	29	80	45	7	M7	2,5	10083220	10083369	10083267	0,4	MTC-HSK-A032-12-080-B-0-A-CCE	30180000
32	12	24	29	90	45	10	M10x1	2	30386107	30383936	30384272	0,4	MTC-HSK-A032-12-090-B-0-A-AAA	30386071
32	12	24	29	120	45	10	M10x1	2	30386115	30383947	30384272	0,6	MTC-HSK-A032-12-120-B-0-A-AAA	30386034
32	12	24	29	160	45	10	M10x1	2	30479065	30383947	30384272	0,7	MTC-HSK-A032-12-160-B-0-A-AAA	30479081
40	6	21	27	80	36	10	M7	3	10083221	10083370	10083268	0,5	MTC-HSK-A040-06-080-B-0-A-AAA	30180001
40	6	21	27	120	36	10	M5	2	30386120	30383945	10083268	0,6	MTC-HSK-A040-06-120-B-0-A-AAA	30386035
40	6	21	27	160	36	10	M5	2	30386122	30383945	10083268	0,8	MTC-HSK-A040-06-160-B-0-A-AAA	30386036
40	8	21	27	80	36	10	M7	3	10083222	10083371	10083268	0,4	MTC-HSK-A040-08-080-B-0-A-AAA	30180002
40	8	21	27	120	36	10	M7	3	30302763	10083394	10083268	0,6	MTC-HSK-A040-08-120-B-0-A-AAA	30340341
40	8	21	27	160	36	10	M7	3	30302769	10083394	10083268	0,8	MTC-HSK-A040-08-160-B-0-A-AAA	30340346
40	10	24	32	80	40	10	M8x1	3	10083223	10083372	10083268	0,5	MTC-HSK-A040-10-080-B-0-A-AAA	30180003
40	10	24	32	120	40	10	M8x1	3	30302764	10083395	10083268	0,8	MTC-HSK-A040-10-120-B-0-A-AAA	30340342
40	10	24	32	160	40	10	M8x1	3	30302770	10083395	10083268	1,0	MTC-HSK-A040-10-160-B-0-A-AAA	30340347
40	12	24	32	90	45	10	M10x1	3	10083224	10083373	10083268	0,5	MTC-HSK-A040-12-090-B-0-A-AAA	30180004
40	12	24	32	120	45	10	M10x1	3	30302765	10083396	10083268	0,7	MTC-HSK-A040-12-120-B-0-A-AAA	30340343
40	12	24	32	160	45	10	M10x1	3	30302771	10083396	10083268	1,0	MTC-HSK-A040-12-160-B-0-A-AAA	30340348
40	14	27	34	90	45	10	M10x1	3	10083225	10083374	10083268	0,6	MTC-HSK-A040-14-090-B-0-A-AAA	30180005
40	14	27	34	120	45	10	M10x1	3	30302766	10083397	10083268	0,8	MTC-HSK-A040-14-120-B-0-A-AAA	30340344
40	14	27	34	160	45	10	M10x1	3	30302772	10083397	10083268	1,1	MTC-HSK-A040-14-160-B-0-A-AAA	30340349
40	16	27	34	90	48	10	M12x1	3	10083226	10083375	10083268	0,6	MTC-HSK-A040-16-090-B-0-A-AAA	30180006
40	16	27	34	120	48	10	M12x1	3	30302767	10083398	10083268	0,8	MTC-HSK-A040-16-120-B-0-A-AAA	30340345
40	16	27	34	160	48	10	M12x1	3	30302773	10083398	10083268	1,1	MTC-HSK-A040-16-160-B-0-A-AAA	30340350
50	6	21	27	80	36	10	M8x1	4	10083227	10083376	10083269	0,6	MTC-HSK-A050-06-080-B-0-A-AAA	30180007
50	6	21	27	120	36	10	M5	2	30386124	30383945	10083269	0,8	MTC-HSK-A050-06-120-B-0-A-AAA	30386037

**1-channel system MQL shrink chucks ThermoChuck | For manual tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions						G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>			BDY	LS	CU			
50	6	21	27	160	36	10	M5	2	30386126	30383945	10083269	1,0	MTC-HSK-A050-06-160-B-0-A-AAA	30386039
50	8	21	27	80	36	10	M8x1	4	10083228	10083377	10083269	0,6	MTC-HSK-A050-08-080-B-0-A-AAA	30180008
50	8	21	27	120	36	10	M7	3	30386125	10083394	10083269	0,8	MTC-HSK-A050-08-120-B-0-A-AAA	30386038
50	8	21	27	160	36	10	M7	3	30386127	10083394	10083269	1,0	MTC-HSK-A050-08-160-B-0-A-AAA	30386040
50	10	24	32	85	40	10	M8x1	4	10083229	10083378	10083269	0,7	MTC-HSK-A050-10-085-B-0-A-AAA	30180009
50	10	24	32	120	40	10	M8x1	4	30302776	10083401	10083269	0,9	MTC-HSK-A050-10-120-B-0-A-AAA	30340352
50	10	24	32	160	40	10	M8x1	4	30302784	10083401	10083269	1,1	MTC-HSK-A050-10-160-B-0-A-AAA	30340359
50	12	24	32	90	45	10	M10x1	4	10083230	10083379	10083269	0,7	MTC-HSK-A050-12-090-B-0-A-AAA	30180010
50	12	24	32	120	45	10	M10x1	4	30302777	10083402	10083269	0,9	MTC-HSK-A050-12-120-B-0-A-AAA	30340353
50	12	24	32	160	45	10	M10x1	4	30302785	10083402	10083269	1,1	MTC-HSK-A050-12-160-B-0-A-AAA	30340360
50	14	27	34	90	45	10	M10x1	4	10083231	10083380	10083269	0,8	MTC-HSK-A050-14-090-B-0-A-AAA	30180011
50	14	27	34	120	45	10	M10x1	4	30302778	10083403	10083269	1,0	MTC-HSK-A050-14-120-B-0-A-AAA	30340354
50	14	27	34	160	45	10	M10x1	4	30302786	10083403	10083269	1,2	MTC-HSK-A050-14-160-B-0-A-AAA	30340361
50	16	27	34	95	48	10	M12x1	4	10083232	10083381	10083269	0,8	MTC-HSK-A050-16-095-B-0-A-AAA	30180012
50	16	27	34	120	48	10	M12x1	4	30302779	10083404	10083269	0,9	MTC-HSK-A050-16-120-B-0-A-AAA	30340355
50	16	27	34	160	48	10	M12x1	4	30302787	10083404	10083269	1,2	MTC-HSK-A050-16-160-B-0-A-AAA	30340362
50	18	33	42	95	48	10	M12x1	4	10083233	10083382	10083269	0,9	MTC-HSK-A050-18-095-B-0-A-AAA	30180013
50	18	33	42	120	48	10	M12x1	4	30302780	10083405	10083269	1,2	MTC-HSK-A050-18-120-B-0-A-AAA	30340356
50	18	33	42	160	48	10	M12x1	4	30302788	10083405	10083269	1,6	MTC-HSK-A050-18-160-B-0-A-AAA	30340363
50	20	33	42	100	50	10	M16x1	4	10083234	10083383	10083269	0,9	MTC-HSK-A050-20-100-B-0-A-AAA	30180014
50	20	33	42	120	50	10	M16x1	4	30302781	10083406	10083269	1,1	MTC-HSK-A050-20-120-B-0-A-AAA	30340357
50	20	33	42	160	50	10	M16x1	4	30302789	10083406	10083269	1,6	MTC-HSK-A050-20-160-B-0-A-AAA	30340364
63	6	21	27	80	36	10	M10x1	4	10083235	30383941	10083270	0,9	MTC-HSK-A063-06-080-B-0-A-AAA	30380806
63	6	21	27	120	36	10	M5	2	30386128	30383945	10083270	1,0	MTC-HSK-A063-06-120-B-0-A-AAA	30386041
63	6	21	27	160	36	10	M5	2	30386130	30383945	10083270	1,2	MTC-HSK-A063-06-160-B-0-A-AAA	30386044
63	6	21	27	200	36	10	M5	2	30386132	30383945	10083270	1,3	MTC-HSK-A063-06-200-B-0-A-AAA	30386047
63	8	21	27	80	36	10	M10x1	4	10083236	10083384	10083270	0,9	MTC-HSK-A063-08-080-B-0-A-AAA	30380807
63	8	21	27	120	36	10	M7	3	30386129	10083394	10083270	1,0	MTC-HSK-A063-08-120-B-0-A-AAA	30386042
63	8	21	27	160	36	10	M7	3	30386131	10083394	10083270	1,2	MTC-HSK-A063-08-160-B-0-A-AAA	30386045
63	8	21	27	200	36	10	M7	3	30386133	10083394	10083270	1,3	MTC-HSK-A063-08-200-B-0-A-AAA	30386048
63	10	24	32	85	40	10	M10x1	4	10083237	10083385	10083270	0,9	MTC-HSK-A063-10-085-B-0-A-AAA	30380808
63	10	24	32	120	40	10	M8x1	4	30386800	10083401	10083270	1,2	MTC-HSK-A063-10-120-B-0-A-AAA	30386043
63	10	24	32	160	40	10	M8x1	4	30386802	10083401	10083270	1,4	MTC-HSK-A063-10-160-B-0-A-AAA	30386046
63	10	24	32	200	40	10	M8x1	4	30386134	10083401	10083270	1,6	MTC-HSK-A063-10-200-B-0-A-AAA	30386049
63	12	24	32	90	45	10	M10x1	5	10083238	10083386	10083270	1,0	MTC-HSK-A063-12-090-B-0-A-AAA	30380809
63	12	24	32	120	45	10	M10x1	5	10096023	10083409	10083270	1,1	MTC-HSK-A063-12-120-B-0-A-AAA	30340365
63	12	24	32	160	45	10	M10x1	5	30197953	10083409	10083270	1,4	MTC-HSK-A063-12-160-B-0-A-AAA	30197954
63	12	24	32	200	45	10	M10x1	5	10107285	10083409	10083270	1,6	MTC-HSK-A063-12-200-B-0-A-AAA	30340376
63	14	27	34	90	45	10	M10x1	5	10083239	10083387	10083270	1,0	MTC-HSK-A063-14-090-B-0-A-AAA	30380810
63	14	27	34	120	45	10	M10x1	5	30192712	10083410	10083270	1,2	MTC-HSK-A063-14-120-B-0-A-AAA	30192710
63	14	27	34	160	45	10	M10x1	5	10096025	10083410	10083270	1,5	MTC-HSK-A063-14-160-B-0-A-AAA	30340369
63	14	27	34	200	45	10	M10x1	5	10096026	10083410	10083270	1,8	MTC-HSK-A063-14-200-B-0-A-AAA	30340377
63	16	27	34	95	48	10	M12x1	5	10083240	10083388	10083270	1,0	MTC-HSK-A063-16-095-B-0-A-AAA	30380811
63	16	27	34	120	48	10	M12x1	5	10107287	10083411	10083270	1,2	MTC-HSK-A063-16-120-B-0-A-AAA	30340366
63	16	27	34	160	48	10	M12x1	5	10107288	10083411	10083270	1,5	MTC-HSK-A063-16-160-B-0-A-AAA	30340370
63	16	27	34	200	48	10	M12x1	5	10107289	10083411	10083270	1,7	MTC-HSK-A063-16-200-B-0-A-AAA	30340378
63	18	33	42	95	48	10	M12x1	5	10083241	10083389	10083270	1,2	MTC-HSK-A063-18-095-B-0-A-AAA	30380812
63	18	33	42	120	48	10	M12x1	5	10107292	10083412	10083270	1,5	MTC-HSK-A063-18-120-B-0-A-AAA	30340367
63	18	33	42	160	48	10	M12x1	5	10096027	10083412	10083270	1,9	MTC-HSK-A063-18-160-B-0-A-AAA	30340371
63	18	33	42	200	48	10	M12x1	5	10107293	10083412	10083270	2,3	MTC-HSK-A063-18-200-B-0-A-AAA	30340379
63	20	33	42	100	50	10	M16x1	5	10083242	10083390	10083270	1,2	MTC-HSK-A063-20-100-B-0-A-AAA	30380813
63	20	33	42	120	50	10	M16x1	5	30192716	10083413	10083270	1,4	MTC-HSK-A063-20-120-B-0-A-AAA	30192715

Continued on next page.

**1-channel system MQL shrink chucks ThermoChuck | For manual tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions						G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>			BDY	LS	CU			
63	20	33	42	160	50	10	M16x1	5	10107294	10083413	10083270	1,8	MTC-HSK-A063-20-160-B-0-A-AAA	30340372
63	20	33	42	200	50	10	M16x1	5	10107295	10083413	10083270	2,2	MTC-HSK-A063-20-200-B-0-A-AAA	30340380
63	25	44	53	115	56	10	M16x1	5	10083243	10083391	10083270	1,8	MTC-HSK-A063-25-115-B-0-A-AAA	30380814
63	25	44	53	160	56	10	M16x1	5	10107296	10083414	10083270	2,5	MTC-HSK-A063-25-160-B-0-A-AAA	30340373
63	25	44	53	200	56	10	M16x1	5	10107297	10083414	10083270	3,2	MTC-HSK-A063-25-200-B-0-A-AAA	30340381
63	32	44	53	120	60	10	M16x1	5	10083244	10083392	10083270	1,6	MTC-HSK-A063-32-120-B-0-A-AAA	30380815
63	32	44	53	160	60	10	M16x1	5	10107298	10083415	10083270	2,3	MTC-HSK-A063-32-160-B-0-A-AAA	30340374
63	32	44	53	200	60	10	M16x1	5	10107299	10083415	10083270	3,0	MTC-HSK-A063-32-200-B-0-A-AAA	30340382
80	6	21	27	85	36	10	M10x1	4	10083245	30383941	10083271	1,3	MTC-HSK-A080-06-085-B-0-A-AAA	30380844
80	6	21	27	120	36	10	M5	2	30386135	30383945	10083271	1,5	MTC-HSK-A080-06-120-B-0-A-AAA	30386050
80	6	21	27	160	36	10	M5	2	30386138	30383945	10083271	1,6	MTC-HSK-A080-06-160-B-0-A-AAA	30386053
80	6	21	27	200	36	10	M5	2	30386141	30383945	10083271	1,8	MTC-HSK-A080-06-200-B-0-A-AAA	30386056
80	8	21	27	85	36	10	M10x1	4	10083246	10083384	10083271	1,3	MTC-HSK-A080-08-085-B-0-A-AAA	30380845
80	8	21	27	120	36	10	M7	3	30386136	10083394	10083271	1,5	MTC-HSK-A080-08-120-B-0-A-AAA	30386051
80	8	21	27	160	36	10	M7	3	30386139	10083394	10083271	1,6	MTC-HSK-A080-08-160-B-0-A-AAA	30386054
80	8	21	27	200	36	10	M7	3	30386142	10083394	10083271	1,8	MTC-HSK-A080-08-200-B-0-A-AAA	30386057
80	10	24	32	90	40	10	M10x1	4	10083247	10083385	10083271	1,4	MTC-HSK-A080-10-090-B-0-A-AAA	30380846
80	10	24	32	120	40	10	M8x1	4	30386137	10083401	10083271	1,6	MTC-HSK-A080-10-120-B-0-A-AAA	30386052
80	10	24	32	160	40	10	M8x1	4	30386140	10083401	10083271	1,8	MTC-HSK-A080-10-160-B-0-A-AAA	30386055
80	10	24	32	200	40	10	M8x1	4	30386143	10083401	10083271	2,1	MTC-HSK-A080-10-200-B-0-A-AAA	30386058
80	12	24	32	95	45	10	M10x1	5	10083248	10083386	10083271	1,4	MTC-HSK-A080-12-095-B-0-A-AAA	30380847
80	12	24	32	120	45	10	M10x1	5	30302793	10083409	10083271	1,6	MTC-HSK-A080-12-120-B-0-A-AAA	30480226
80	12	24	32	160	45	10	M10x1	5	30302801	10083409	10083271	1,8	MTC-HSK-A080-12-160-B-0-A-AAA	30480231
80	12	24	32	200	45	10	M10x1	5	30302811	10083409	10083271	2,1	MTC-HSK-A080-12-200-B-0-A-AAA	30480238
80	14	27	34	95	45	10	M10x1	5	10083249	10083387	10083271	1,5	MTC-HSK-A080-14-095-B-0-A-AAA	30380848
80	14	27	34	120	45	10	M10x1	5	30302794	10083410	10083271	1,7	MTC-HSK-A080-14-120-B-0-A-AAA	30480227
80	14	27	34	160	45	10	M10x1	5	30302802	10083410	10083271	1,9	MTC-HSK-A080-14-160-B-0-A-AAA	30480232
80	14	27	34	200	45	10	M10x1	5	30302812	10083410	10083271	2,2	MTC-HSK-A080-14-200-B-0-A-AAA	30480239
80	16	27	34	100	48	10	M12x1	5	10083250	10083388	10083271	1,5	MTC-HSK-A080-16-100-B-0-A-AAA	30380849
80	16	27	34	120	48	10	M12x1	5	30302795	10083411	10083271	1,6	MTC-HSK-A080-16-120-B-0-A-AAA	30480228
80	16	27	34	160	48	10	M12x1	5	30302803	10083411	10083271	1,9	MTC-HSK-A080-16-160-B-0-A-AAA	30480233
80	16	27	34	200	48	10	M12x1	5	30302813	10083411	10083271	2,2	MTC-HSK-A080-16-200-B-0-A-AAA	30480240
80	18	33	42	100	48	10	M12x1	5	10083251	10083389	10083271	1,7	MTC-HSK-A080-18-100-B-0-A-AAA	30380850
80	18	33	42	120	48	10	M12x1	5	30302796	10083412	10083271	1,9	MTC-HSK-A080-18-120-B-0-A-AAA	30480229
80	18	33	42	160	48	10	M12x1	5	30302804	10083412	10083271	2,3	MTC-HSK-A080-18-160-B-0-A-AAA	30480234
80	18	33	42	200	48	10	M12x1	5	30302814	10083412	10083271	2,7	MTC-HSK-A080-18-200-B-0-A-AAA	30480241
80	20	33	42	105	50	10	M16x1	5	10083252	10083390	10083271	1,7	MTC-HSK-A080-20-105-B-0-A-AAA	30380851
80	20	33	42	120	50	10	M16x1	5	30302797	10083413	10083271	1,9	MTC-HSK-A080-20-120-B-0-A-AAA	30480230
80	20	33	42	160	50	10	M16x1	5	30302805	10083413	10083271	2,3	MTC-HSK-A080-20-160-B-0-A-AAA	30480235
80	20	33	42	200	50	10	M16x1	5	30302815	10083413	10083271	2,7	MTC-HSK-A080-20-200-B-0-A-AAA	30480242
80	25	44	53	115	56	10	M16x1	5	10083253	10083391	10083271	2,2	MTC-HSK-A080-25-115-B-0-A-AAA	30380852
80	25	44	53	160	56	10	M16x1	5	30302806	10083414	10083271	3,0	MTC-HSK-A080-25-160-B-0-A-AAA	30480236
80	25	44	53	200	56	10	M16x1	5	30302816	10083414	10083271	3,7	MTC-HSK-A080-25-200-B-0-A-AAA	30480243
80	32	44	53	120	60	10	M16x1	5	10083254	10083392	10083271	2,1	MTC-HSK-A080-32-120-B-0-A-AAA	30380853
80	32	44	53	160	60	10	M16x1	5	30302807	10083415	10083271	2,8	MTC-HSK-A080-32-160-B-0-A-AAA	30480237
80	32	44	53	200	60	10	M16x1	5	30302817	10083415	10083271	3,4	MTC-HSK-A080-32-200-B-0-A-AAA	30480244
100	6	21	27	85	36	10	M10x1	4	10083255	30383941	10083272	2,3	MTC-HSK-A100-06-085-B-0-A-AAA	30380882
100	8	21	27	85	36	10	M10x1	4	10083256	10083384	10083272	2,2	MTC-HSK-A100-08-085-B-0-A-AAA	30380883
100	10	24	32	90	40	10	M10x1	4	10083257	10083385	10083272	2,3	MTC-HSK-A100-10-090-B-0-A-AAA	30380884
100	12	24	32	95	45	10	M10x1	5	10083258	10083386	10083272	2,3	MTC-HSK-A100-12-095-B-0-A-AAA	30380885
100	14	27	34	95	45	10	M10x1	5	10083259	10083387	10083272	2,4	MTC-HSK-A100-14-095-B-0-A-AAA	30380886
100	16	27	34	100	48	10	M12x1	5	10083260	10083388	10083272	2,4	MTC-HSK-A100-16-100-B-0-A-AAA	30380887

**1-channel system MQL shrink chucks ThermoChuck | For manual tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions						G	sw	Components			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>			BDY	LS	CU			
100	18	33	42	100	48	10	M12x1	5	10083261	10083389	10083272	2,6	MTC-HSK-A100-18-100-B-0-A-AAA	30380888
100	20	33	42	105	50	10	M16x1	5	10083262	10083390	10083272	2,6	MTC-HSK-A100-20-105-B-0-A-AAA	30380889
100	25	44	53	115	56	10	M16x1	5	10083263	10083391	10083272	3,1	MTC-HSK-A100-25-115-B-0-A-AAA	30380890
100	32	44	53	120	60	10	M16x1	5	10083264	10083392	10083272	3,0	MTC-HSK-A100-32-120-B-0-A-AAA	30380891
100	6	21	27	120	36	10	M5	2	30386144	30383945	10083272	2,4	MTC-HSK-A100-06-120-B-0-A-AAA	30386059
100	6	21	27	160	36	10	M5	2	30386147	30383945	10083272	2,5	MTC-HSK-A100-06-160-B-0-A-AAA	30386062
100	6	21	27	200	36	10	M5	2	30386150	30383945	10083272	2,7	MTC-HSK-A100-06-200-B-0-A-AAA	30386065
100	8	21	27	120	36	10	M7	3	30386145	10083394	10083272	2,4	MTC-HSK-A100-08-120-B-0-A-AAA	30386060
100	8	21	27	160	36	10	M7	3	30386148	10083394	10083272	2,5	MTC-HSK-A100-08-160-B-0-A-AAA	30386063
100	8	21	27	200	36	10	M7	3	30386151	10083394	10083272	2,7	MTC-HSK-A100-08-200-B-0-A-AAA	30386066
100	10	24	32	120	40	10	M8x1	4	30386146	10083401	10083272	2,5	MTC-HSK-A100-10-120-B-0-A-AAA	30386061
100	10	24	32	160	40	10	M8x1	4	30386149	10083401	10083272	2,7	MTC-HSK-A100-10-160-B-0-A-AAA	30386064
100	10	24	32	200	40	10	M8x1	4	30386152	10083401	10083272	3,0	MTC-HSK-A100-10-200-B-0-A-AAA	30386067
100	12	24	32	120	45	10	M10x1	5	30253151	10083409	10083272	2,5	MTC-HSK-A100-12-120-B-0-A-AAA	30480245
100	12	24	32	160	45	10	M10x1	5	30302825	10083409	10083272	2,7	MTC-HSK-A100-12-160-B-0-A-AAA	30480250
100	12	24	32	200	45	10	M10x1	5	30253152	10083409	10083272	3,0	MTC-HSK-A100-12-200-B-0-A-AAA	30480257
100	14	27	34	120	45	10	M10x1	5	30254306	10083410	10083272	2,6	MTC-HSK-A100-14-120-B-0-A-AAA	30480246
100	14	27	34	160	45	10	M10x1	5	30302826	10083410	10083272	2,8	MTC-HSK-A100-14-160-B-0-A-AAA	30480251
100	14	27	34	200	45	10	M10x1	5	30303050	10083410	10083272	3,1	MTC-HSK-A100-14-200-B-0-A-AAA	30480258
100	16	27	34	120	48	10	M12x1	5	30302821	10083411	10083272	2,5	MTC-HSK-A100-16-120-B-0-A-AAA	30480247
100	16	27	34	160	48	10	M12x1	5	30302827	10083411	10083272	2,8	MTC-HSK-A100-16-160-B-0-A-AAA	30480252
100	16	27	34	200	48	10	M12x1	5	30302831	10083411	10083272	3,1	MTC-HSK-A100-16-200-B-0-A-AAA	30480259
100	18	33	42	120	48	10	M12x1	5	30253155	10083412	10083272	2,8	MTC-HSK-A100-18-120-B-0-A-AAA	30480248
100	18	33	42	160	48	10	M12x1	5	10096879	10083412	10083272	3,2	MTC-HSK-A100-18-160-B-0-A-AAA	30480253
100	18	33	42	200	48	10	M12x1	5	10107134	10083412	10083272	3,6	MTC-HSK-A100-18-200-B-0-A-AAA	30480260
100	20	33	42	120	50	10	M16x1	5	30302822	10083413	10083272	2,8	MTC-HSK-A100-20-120-B-0-A-AAA	30480249
100	20	33	42	160	50	10	M16x1	5	10096880	10083413	10083272	3,2	MTC-HSK-A100-20-160-B-0-A-AAA	30480254
100	20	33	42	200	50	10	M16x1	5	30302832	10083413	10083272	3,6	MTC-HSK-A100-20-200-B-0-A-AAA	30480261
100	25	44	53	160	56	10	M16x1	5	30258455	10083414	10083272	3,9	MTC-HSK-A100-25-160-B-0-A-AAA	30480255
100	25	44	53	200	56	10	M16x1	5	30302833	10083414	10083272	4,5	MTC-HSK-A100-25-200-B-0-A-AAA	30480262
100	32	44	53	160	60	10	M16x1	5	30303048	10083415	10083272	3,7	MTC-HSK-A100-32-160-B-0-A-AAA	30480256
100	32	44	53	200	60	10	M16x1	5	30302834	10083415	10083272	4,3	MTC-HSK-A100-32-200-B-0-A-AAA	30480263

Dimensions in mm.

Items included: Tool body, length adjustment screw and coolant unit as assembly.

These components can also be ordered separately. (see table)

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

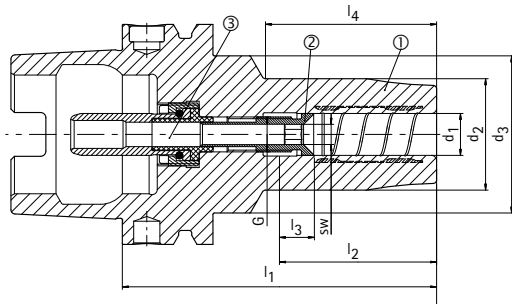
Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.



# 1-channel system MQL HighTorque Chuck HTC

for automatic tool change, with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



① Hydraulic chucks, HSK, MQL, body material | BDY

② Length adjustment screw, MQL | LS

③ Coolant supply unit, MQL, automatic | CU

HSK-A	Dimensions							G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			BDY	LS	CU				
63	6	32	50	80	36	10	26	M10x1	4	30487683	30383941	10083281	1,1	HTC-HSK-A063-06-080-A-0-A-AAA	30487703	30487713
63	8	34	50	80	36	10	27	M10x1	4	30487684	10083384	10083281	1,1	HTC-HSK-A063-08-080-A-0-A-AAA	30487704	30487714
63	10	36	50	85	40	10	32	M10x1	4	30487685	10083385	10083281	1,2	HTC-HSK-A063-10-085-A-0-A-AAA	30487705	30487715
63	12	38	52,5	90	45	10	37	M10x1	5	30487686	10083386	10083281	1,3	HTC-HSK-A063-12-090-A-0-A-AAA	30487706	30487716
63	14	40	52,5	90	45	10	37	M10x1	5	30487687	10083387	10083281	1,3	HTC-HSK-A063-14-090-A-0-A-AAA	30487707	30487717
63	16	42	52,5	95	48	10	42	M12x1	5	30487688	10083388	10083281	1,5	HTC-HSK-A063-16-095-A-0-A-AAA	30487708	30487718
63	18	44	52,5	95	48	10	42	M12x1	5	30487689	10083389	10083281	1,5	HTC-HSK-A063-18-095-A-0-A-AAA	30487709	30487719
63	20	48	52,5	100	50	10	45	M16x1	5	30487690	10083390	10083281	1,5	HTC-HSK-A063-20-100-A-0-A-AAA	30487710	30487720
63	25	57	53	115	56	10	62	M16x1	5	30487691	10083391	10083281	2,1	HTC-HSK-A063-25-115-A-0-A-AAA	30487711	30487721
63	32	63	53	120	60	10	62	M16x1	5	30487692	10083392	10083281	2,3	HTC-HSK-A063-32-120-A-0-A-AAA	30487712	30487722
100	6	32	50	85	36	10	26	M10x1	4	30487693	30383941	10083283	2,8	HTC-HSK-A100-06-085-A-0-A-AAA	30487723	30487733
100	8	34	50	85	36	10	27	M10x1	4	30487694	10083384	10083283	2,8	HTC-HSK-A100-08-085-A-0-A-AAA	30487724	30487734
100	10	36	50	90	40	10	32	M10x1	4	30487695	10083385	10083283	2,9	HTC-HSK-A100-10-090-A-0-A-AAA	30487725	30487735
100	12	38	52,5	95	45	10	37	M10x1	5	30487696	10083386	10083283	2,9	HTC-HSK-A100-12-095-A-0-A-AAA	30487726	30487736
100	14	40	52,5	95	45	10	37	M10x1	5	30487697	10083387	10083283	2,9	HTC-HSK-A100-14-095-A-0-A-AAA	30487727	30487737
100	16	42	52,5	100	48	10	42	M12x1	5	30487698	10083388	10083283	3,0	HTC-HSK-A100-16-100-A-0-A-AAA	30487728	30487738
100	18	44	52,5	100	48	10	42	M12x1	5	30487699	10083389	10083283	3,0	HTC-HSK-A100-18-100-A-0-A-AAA	30487729	30487739
100	20	48	52,5	105	50	10	45	M16x1	5	30487700	10083390	10083283	3,0	HTC-HSK-A100-20-105-A-0-A-AAA	30487730	30487740
100	25	57	63	115	56	10	60	M16x1	5	30487701	10083391	10083283	3,8	HTC-HSK-A100-25-115-A-0-A-AAA	30487731	30487741
100	32	63	75	120	60	10	60	M16x1	5	30487702	10083392	10083283	4,0	HTC-HSK-A100-32-120-A-0-A-AAA	30487732	30487742

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of  $h_6$ . Items included: Tool body, length adjustment screw and coolant unit as assembly. These components can also be ordered separately. (see table)

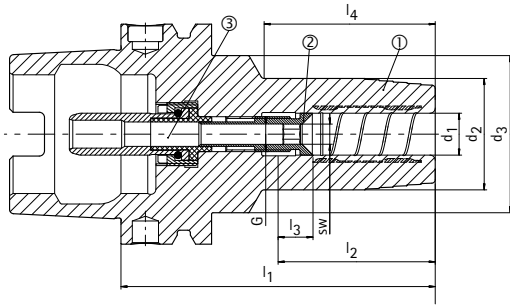
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Chip version: Equipped with Balluff code carrier, see section "Accessories, spare parts and measuring equipment". Further code carriers on request. Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# 1-channel system MQL hydraulic chucks HydroChuck

for automatic tool change, with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



① Hydraulic chucks, HSK, MQL, body material | BDY

② Length adjustment screw, MQL | LS

③ Coolant supply unit, MQL, automatic | CU

HSK-A	Dimensions							G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			BDY	LS	CU				
32	6	26	40	80	36	10	29	M5	2	30386521	30383937	30384298	0,5	MHC-HSK-A032-06-080-A-0-A-AAA	30386339	30386343
32	6	26	32	120	36	10	71,5	M5	2	30464553	30383945	30384298	0,6	MHC-HSK-A032-06-120-A-0-A-AAA	30470529	30470537
32	6	26	32	160	36	10	111,5	M5	2	30464557	30383945	30384298	0,7	MHC-HSK-A032-06-160-A-0-A-AAA	30470533	30470541
32	8	28	40	80	36	10	29,5	M7	2	30386522	30383938	30384298	0,5	MHC-HSK-A032-08-080-A-0-A-AAA	30386340	30386344
32	8	28	32	120	36	10	72	M7	2	30464554	30383948	30384298	0,6	MHC-HSK-A032-08-120-A-0-A-AAA	30470530	30470538
32	8	28	32	160	36	10	112	M7	2	30464558	30383948	30384298	0,8	MHC-HSK-A032-08-160-A-0-A-AAA	30470534	30470542
32	10	30	40	85	40	10	35	M8x1	2	30386523	30383935	30384298	0,5	MHC-HSK-A032-10-085-A-0-A-AAA	30386341	30386345
32	10	30	33	120	40	10	72	M8x1	2	30464555	30383946	30384298	0,6	MHC-HSK-A032-10-120-A-0-A-AAA	30470531	30470539
32	10	30	33	160	40	10	112	M8x1	2	30464559	30383946	30384298	0,9	MHC-HSK-A032-10-160-A-0-A-AAA	30470535	30470543
32	12	32	40	90	45	10	43	M10x1	2	30386524	30383936	30384298	0,5	MHC-HSK-A032-12-090-A-0-A-AAA	30386342	30386346
32	12	32	35	120	45	10	72	M10x1	2	30464556	30383947	30384298	0,7	MHC-HSK-A032-12-120-A-0-A-AAA	30470532	30470540
32	12	32	35	160	45	10	112	M10x1	2	30464560	30383947	30384298	0,9	MHC-HSK-A032-12-160-A-0-A-AAA	30470536	30470544
40	6	26	33,5	80	36	10	49	M7	3	30386529	10083370	10083279	0,5	MHC-HSK-A040-06-080-A-0-A-AAA	30386347	30386353
40	6	26	33,5	120	36	10	86	M5	2	30464569	30383945	10083279	0,7	MHC-HSK-A040-06-120-A-0-A-AAA	30470545	30470557
40	6	26	33,5	160	36	10	118	M5	2	30464575	30383945	10083279	0,8	MHC-HSK-A040-06-160-A-0-A-AAA	30470551	30470563
40	8	28	33,5	80	36	10	50,5	M7	3	30386530	10083371	10083279	0,5	MHC-HSK-A040-08-080-A-0-A-AAA	30386348	30386354
40	8	28	33,5	120	36	10	86,5	M7	3	30464570	10083394	10083279	0,7	MHC-HSK-A040-08-120-A-0-A-AAA	30470546	30470558
40	8	28	33,5	160	36	10	118	M7	3	30464576	10083394	10083279	0,9	MHC-HSK-A040-08-160-A-0-A-AAA	30470552	30470564
40	10	30	33,5	80	40	10	52	M8x1	3	30386531	10083372	10083279	0,5	MHC-HSK-A040-10-080-A-0-A-AAA	30386349	30386355
40	10	30	33,5	120	40	10	87	M8x1	3	30464571	10083395	10083279	0,7	MHC-HSK-A040-10-120-A-0-A-AAA	30470547	30470559
40	10	30	33,5	160	40	10	127	M8x1	3	30464577	10083395	10083279	1,0	MHC-HSK-A040-10-160-A-0-A-AAA	30470553	30470565
40	12	32	33,5	90	45	10	62	M10x1	3	30386532	10083373	10083279	0,6	MHC-HSK-A040-12-090-A-0-A-AAA	30386350	30386356
40	12	32	33,5	120	45	10	91,5	M10x1	3	30464572	10083396	10083279	0,8	MHC-HSK-A040-12-120-A-0-A-AAA	30470548	30470560
40	12	32	33,5	160	45	10	126	M10x1	3	30464578	10083396	10083279	1,0	MHC-HSK-A040-12-160-A-0-A-AAA	30470554	30470566
40	14	34	45	90	45	10	39,5	M10x1	3	30386533	10083374	10083279	0,7	MHC-HSK-A040-14-090-A-0-A-AAA	30386351	30386357
40	14	34	-	120	45	10	100	M10x1	3	30464573	10083397	10083279	0,8	MHC-HSK-A040-14-120-A-0-A-AAA	30470549	30470561
40	14	34	-	160	45	10	140	M10x1	3	30464579	10083397	10083279	1,1	MHC-HSK-A040-14-160-A-0-A-AAA	30470555	30470567
40	16	38	50	90	48	10	39	M12x1	3	30386534	10083375	10083279	0,8	MHC-HSK-A040-16-090-A-0-A-AAA	30386352	30386358
40	16	38	-	120	48	10	100	M12x1	3	30464574	10083398	10083279	1,0	MHC-HSK-A040-16-120-A-0-A-AAA	30470550	30470562
40	16	38	-	160	48	10	140	M12x1	3	30464580	10083398	10083279	1,3	MHC-HSK-A040-16-160-A-0-A-AAA	30470556	30470568
50	6	26	40	80	36	10	38,5	M8x1	4	30386541	10083376	10083280	0,7	MHC-HSK-A050-06-080-A-0-A-AAA	30386359	30386367
50	6	26	35	120	36	10	80	M5	2	30464593	30383945	10083280	0,8	MHC-HSK-A050-06-120-A-0-A-AAA	30470569	30470586
50	6	26	35	160	36	10	118	M5	2	30464601	30383945	10083280	1,0	MHC-HSK-A050-06-160-A-0-A-AAA	30470578	30470594
50	8	28	40	80	36	10	39	M8x1	4	30386542	10083377	10083280	0,7	MHC-HSK-A050-08-080-A-0-A-AAA	30386360	30386368
50	8	28	35	120	36	10	80	M7	3	30464594	10083394	10083280	0,9	MHC-HSK-A050-08-120-A-0-A-AAA	30470570	30470587
50	8	28	35	160	36	10	118	M7	3	30464602	10083394	10083280	1,1	MHC-HSK-A050-08-160-A-0-A-AAA	30470579	30470595
50	10	30	40	85	40	10	44,5	M8x1	4	30386543	10083378	10083280	0,8	MHC-HSK-A050-10-085-A-0-A-AAA	30386361	30386369
50	10	30	38	120	40	10	80	M8x1	4	30464595	10083401	10083280	0,9	MHC-HSK-A050-10-120-A-0-A-AAA	30470571	30470588

Continued on next page.



**1-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions								G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	BDY			LS	CU					
50	10	30	38	160	40	10	120	M8x1	4	30464603	10083401	10083280	1,1	MHC-HSK-A050-10-160-A-0-A-AAA	30470580	30470596	
50	12	32	40	90	45	10	53	M10x1	4	30386544	10083379	10083280	0,8	MHC-HSK-A050-12-090-A-0-A-AAA	30386362	30386370	
50	12	32	38	120	45	10	81	M10x1	4	30464596	10083402	10083280	1,0	MHC-HSK-A050-12-120-A-0-A-AAA	30470572	30470589	
50	12	32	38	160	45	10	121	M10x1	4	30464604	10083402	10083280	1,2	MHC-HSK-A050-12-160-A-0-A-AAA	30470581	30470597	
50	14	34	40	90	45	10	54,5	M10x1	4	30386545	10083380	10083280	0,8	MHC-HSK-A050-14-090-A-0-A-AAA	30386363	30386371	
50	14	34	38	120	45	10	81,5	M10x1	4	30464597	10083403	10083280	1,0	MHC-HSK-A050-14-120-A-0-A-AAA	30470574	30470590	
50	14	34	38	160	45	10	121,5	M10x1	4	30464605	10083403	10083280	1,3	MHC-HSK-A050-14-160-A-0-A-AAA	30470582	30470598	
50	16	38	41,5	95	48	10	61	M12x1	4	30386546	10083381	10083280	0,9	MHC-HSK-A050-16-095-A-0-A-AAA	30386364	30386372	
50	16	38	-	120	48	10	94	M12x1	4	30464598	10083404	10083280	1,1	MHC-HSK-A050-16-120-A-0-A-AAA	30470575	30470591	
50	16	38	-	160	48	10	134	M12x1	4	30464606	10083404	10083280	1,5	MHC-HSK-A050-16-160-A-0-A-AAA	30470583	30470599	
50	18	40	41,5	95	48	10	62,5	M12x1	4	30386547	10083382	10083280	1,0	MHC-HSK-A050-18-095-A-0-A-AAA	30386365	30386373	
50	18	40	-	120	48	10	94	M12x1	4	30464599	10083405	10083280	1,2	MHC-HSK-A050-18-120-A-0-A-AAA	30470576	30470592	
50	18	40	-	160	48	10	134	M12x1	4	30464607	10083405	10083280	1,6	MHC-HSK-A050-18-160-A-0-A-AAA	30470584	30470600	
50	20	42	55	100	50	10	42	M16x1	4	30386548	10083383	10083280	1,1	MHC-HSK-A050-20-100-A-0-A-AAA	30386366	30386374	
50	20	42	-	120	50	10	94	M16x1	4	30464600	10083406	10083280	1,2	MHC-HSK-A050-20-120-A-0-A-AAA	30470577	30470593	
50	20	42	-	160	50	10	134	M16x1	4	30464608	10083406	10083280	1,7	MHC-HSK-A050-20-160-A-0-A-AAA	30470585	30470601	
63	6	26	45	80	36	10	37	M10x1	4	30386549	30383941	10083281	1,0	MHC-HSK-A063-06-080-A-0-A-AAA	30386375	30386385	
63	6	26	38	120	36	10	78	M5	2	30464609	30383945	10083281	1,1	MHC-HSK-A063-06-120-A-0-A-AAA	30470602	30470630	
63	6	26	38	160	36	10	118	M5	2	30464617	30383945	10083281	1,3	MHC-HSK-A063-06-160-A-0-A-AAA	30470610	30470638	
63	6	30	38	200	36	10	155	M5	2	30464627	30383945	10083281	1,7	MHC-HSK-A063-06-200-A-0-A-AAA	30470620	30470648	
63	8	28	45	80	36	10	37,5	M10x1	4	30386550	10083384	10083281	1,0	MHC-HSK-A063-08-080-A-0-A-AAA	30386376	30386386	
63	8	28	38	120	36	10	78,5	M7	3	30464610	10083394	10083281	1,2	MHC-HSK-A063-08-120-A-0-A-AAA	30470603	30470631	
63	8	28	38	160	36	10	118	M7	3	30464618	10083394	10083281	1,3	MHC-HSK-A063-08-160-A-0-A-AAA	30470611	30470639	
63	8	32	38	200	36	10	155,5	M7	3	30464628	10083394	10083281	1,8	MHC-HSK-A063-08-200-A-0-A-AAA	30470621	30470649	
63	10	30	45	85	40	10	43,5	M10x1	4	30386551	10083385	10083281	1,1	MHC-HSK-A063-10-085-A-0-A-AAA	30386377	30386387	
63	10	30	40	120	40	10	79	M8x1	4	30464611	10083401	10083281	1,2	MHC-HSK-A063-10-120-A-0-A-AAA	30470604	30470632	
63	10	30	40	160	40	10	115	M8x1	4	30464619	10083401	10083281	1,4	MHC-HSK-A063-10-160-A-0-A-AAA	30470612	30470640	
63	10	31	40	200	40	10	155	M8x1	4	30464629	10083401	10083281	1,7	MHC-HSK-A063-10-200-A-0-A-AAA	30470622	30470650	
63	12	32	45	90	45	10	49	M10x1	5	30386552	10083386	10083281	1,1	MHC-HSK-A063-12-090-A-0-A-AAA	30386378	30386388	
63	12	32	40	120	45	10	80,5	M10x1	5	30464612	10083409	10083281	1,2	MHC-HSK-A063-12-120-A-0-A-AAA	30470605	30470633	
63	12	32	40	160	45	10	120,5	M10x1	5	30464620	10083409	10083281	1,5	MHC-HSK-A063-12-160-A-0-A-AAA	30470613	30470641	
63	12	32	40	200	45	10	160,5	M10x1	5	30464630	10083409	10083281	1,7	MHC-HSK-A063-12-200-A-0-A-AAA	30470623	30470651	
63	14	34	45	90	45	10	49,5	M10x1	5	30386553	10083387	10083281	1,1	MHC-HSK-A063-14-090-A-0-A-AAA	30386379	30386389	
63	14	34	40	120	45	10	81	M10x1	5	30464613	10083410	10083281	1,3	MHC-HSK-A063-14-120-A-0-A-AAA	30470606	30470634	
63	14	34	40	160	45	10	121	M10x1	5	30464621	10083410	10083281	1,6	MHC-HSK-A063-14-160-A-0-A-AAA	30470614	30470642	
63	14	34	40	200	45	10	161	M10x1	5	30464631	10083410	10083281	1,8	MHC-HSK-A063-14-200-A-0-A-AAA	30470624	30470652	
63	16	38	45	95	48	10	55,5	M12x1	5	30386554	10083388	10083281	1,2	MHC-HSK-A063-16-095-A-0-A-AAA	30386380	30386390	
63	16	38	-	120	48	10	91,1	M12x1	5	30464614	10083411	10083281	1,4	MHC-HSK-A063-16-120-A-0-A-AAA	30470607	30470635	
63	16	38	-	160	48	10	131,1	M12x1	5	30464622	10083411	10083281	1,7	MHC-HSK-A063-16-160-A-0-A-AAA	30470615	30470643	
63	16	38	-	200	48	10	171,1	M12x1	5	30464632	10083411	10083281	2,1	MHC-HSK-A063-16-200-A-0-A-AAA	30470625	30470653	
63	18	40	45	95	48	10	56	M12x1	5	30386555	10083389	10083281	1,3	MHC-HSK-A063-18-095-A-0-A-AAA	30386381	30386391	
63	18	40	-	120	48	10	89,1	M12x1	5	30464615	10083412	10083281	1,5	MHC-HSK-A063-18-120-A-0-A-AAA	30470608	30470636	
63	18	40	-	160	48	10	129,1	M12x1	5	30464623	10083412	10083281	1,8	MHC-HSK-A063-18-160-A-0-A-AAA	30470616	30470644	
63	18	40	-	200	48	10	169,1	M12x1	5	30464633	10083412	10083281	2,2	MHC-HSK-A063-18-200-A-0-A-AAA	30470626	30470654	
63	20	42	50	100	50	10	60,5	M16x1	5	30386556	10083390	10083281	1,4	MHC-HSK-A063-20-100-A-0-A-AAA	30386382	30386392	
63	20	42	-	120	50	10	89,1	M16x1	5	30464616	10083413	10083281	1,5	MHC-HSK-A063-20-120-A-0-A-AAA	30470609	30470637	
63	20	42	-	160	50	10	129,1	M16x1	5	30464624	10083413	10083281	1,9	MHC-HSK-A063-20-160-A-0-A-AAA	30470617	30470645	
63	20	42	-	200	50	10	169,1	M16x1	5	30464634	10083413	10083281	2,3	MHC-HSK-A063-20-200-A-0-A-AAA	30470627	30470655	
63	25	57	-	115	56	10	89	M16x1	5	30386557	10083391	10083281	2,1	MHC-HSK-A063-25-115-A-0-A-AAA	30386383	30386393	
63	25	57	-	160	56	10	134	M16x1	5	30464625	10083414	10083281	2,8	MHC-HSK-A063-25-160-A-0-A-AAA	30470618	30470646	
63	25	57	-	200	56	10	174	M16x1	5	30464635	10083414	10083281	3,5	MHC-HSK-A063-25-200-A-0-A-AAA	30470628	30470656	
63	32	63	-	120	60	10	94	M16x1	5	30386558	10083392	10083281	2,3	MHC-HSK-A063-32-120-A-0-A-AAA	30386384	30386394	
63	32	63	-	160	60	10	134	M16x1	5	30464626	10083415	10083281	2,9	MHC-HSK-A063-32-160-A-0-A-AAA	30470619	30470647	
63	32	63	-	200	60	10	174	M16x1	5	30464636	10083415	10083281	3,6	MHC-HSK-A063-32-200-A-0-A-AAA	30470629	30470657	

**1-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions								G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	BDY			LS	CU					
80	6	26	45	85	36	10	39,5	M10x1	4	30386559	30383941	10083282	1,5	MHC-HSK-A080-06-085-A-0-A-AAA	30386395	30386405	
80	6	26	38	120	36	10	75	M5	2	30464637	30383945	10083282	1,6	MHC-HSK-A080-06-120-A-0-A-AAA	30470658	30470686	
80	6	26	38	160	36	10	115	M5	2	30464645	30383945	10083282	1,8	MHC-HSK-A080-06-160-A-0-A-AAA	30470666	30470694	
80	6	30	38	200	36	10	155	M5	2	30464655	30383945	10083282	2,1	MHC-HSK-A080-06-200-A-0-A-AAA	30470676	30470704	
80	8	28	45	85	36	10	40	M10x1	4	30386560	10083384	10083282	1,5	MHC-HSK-A080-08-085-A-0-A-AAA	30386396	30386406	
80	8	28	38	120	36	10	75	M7	3	30464638	10083394	10083282	1,6	MHC-HSK-A080-08-120-A-0-A-AAA	30470659	30470687	
80	8	28	38	160	36	10	115	M7	3	30464646	10083394	10083282	1,8	MHC-HSK-A080-08-160-A-0-A-AAA	30470667	30470695	
80	8	32	38	200	36	10	155,5	M7	3	30464656	10083394	10083282	2,2	MHC-HSK-A080-08-200-A-0-A-AAA	30470677	30470705	
80	10	30	45	90	40	10	46	M10x1	4	30386561	10083385	10083282	1,6	MHC-HSK-A080-10-090-A-0-A-AAA	30386397	30386407	
80	10	30	40	120	40	10	75	M8x1	4	30464639	10083401	10083282	1,7	MHC-HSK-A080-10-120-A-0-A-AAA	30470660	30470688	
80	10	30	40	160	40	10	115	M8x1	4	30464647	10083401	10083282	1,9	MHC-HSK-A080-10-160-A-0-A-AAA	30470668	30470696	
80	10	31	40	200	40	10	155	M8x1	4	30464657	10083401	10083282	2,2	MHC-HSK-A080-10-200-A-0-A-AAA	30470678	30470706	
80	12	32	45	95	45	10	51,5	M10x1	5	30386562	10083386	10083282	1,6	MHC-HSK-A080-12-095-A-0-A-AAA	30386398	30386408	
80	12	32	40	120	45	10	77	M10x1	5	30464640	10083409	10083282	1,7	MHC-HSK-A080-12-120-A-0-A-AAA	30470661	30470689	
80	12	32	40	160	45	10	117	M10x1	5	30464648	10083409	10083282	1,9	MHC-HSK-A080-12-160-A-0-A-AAA	30470669	30470697	
80	12	32	40	200	45	10	157	M10x1	5	30464658	10083409	10083282	2,2	MHC-HSK-A080-12-200-A-0-A-AAA	30470679	30470707	
80	14	34	45	95	45	10	52	M10x1	5	30386563	10083387	10083282	1,6	MHC-HSK-A080-14-095-A-0-A-AAA	30386399	30386409	
80	14	34	40	120	45	10	78	M10x1	5	30464641	10083410	10083282	1,8	MHC-HSK-A080-14-120-A-0-A-AAA	30470662	30470690	
80	14	34	40	160	45	10	118	M10x1	5	30464649	10083410	10083282	2,0	MHC-HSK-A080-14-160-A-0-A-AAA	30470670	30470698	
80	14	34	40	200	45	10	158	M10x1	5	30464659	10083410	10083282	2,3	MHC-HSK-A080-14-200-A-0-A-AAA	30470680	30470708	
80	16	38	45	100	48	10	58	M12x1	5	30386564	10083388	10083282	1,7	MHC-HSK-A080-16-100-A-0-A-AAA	30386400	30386410	
80	16	38	-	120	48	10	86,1	M12x1	5	30464642	10083411	10083282	1,9	MHC-HSK-A080-16-120-A-0-A-AAA	30470663	30470691	
80	16	38	-	160	48	10	126,1	M12x1	5	30464650	10083411	10083282	2,2	MHC-HSK-A080-16-160-A-0-A-AAA	30470671	30470699	
80	16	38	-	200	48	10	166,1	M12x1	5	30464660	10083411	10083282	2,5	MHC-HSK-A080-16-200-A-0-A-AAA	30470681	30470709	
80	18	40	45	100	48	10	58,5	M12x1	5	30386565	10083389	10083282	1,8	MHC-HSK-A080-18-100-A-0-A-AAA	30386401	30386411	
80	18	40	-	120	48	10	84,1	M12x1	5	30464643	10083412	10083282	1,9	MHC-HSK-A080-18-120-A-0-A-AAA	30470664	30470692	
80	18	40	-	160	48	10	124,1	M12x1	5	30464651	10083412	10083282	2,3	MHC-HSK-A080-18-160-A-0-A-AAA	30470672	30470700	
80	18	40	-	200	48	10	164,1	M12x1	5	30464661	10083412	10083282	2,7	MHC-HSK-A080-18-200-A-0-A-AAA	30470682	30470710	
80	20	42	50	105	50	10	63	M16x1	5	30386566	10083390	10083282	1,9	MHC-HSK-A080-20-105-A-0-A-AAA	30386402	30386412	
80	20	42	-	120	50	10	84,1	M16x1	5	30464644	10083413	10083282	2,0	MHC-HSK-A080-20-120-A-0-A-AAA	30470665	30470693	
80	20	42	-	160	50	10	124,1	M16x1	5	30464652	10083413	10083282	2,4	MHC-HSK-A080-20-160-A-0-A-AAA	30470673	30470701	
80	20	42	-	200	50	10	164,1	M16x1	5	30464662	10083413	10083282	2,8	MHC-HSK-A080-20-200-A-0-A-AAA	30470683	30470711	
80	25	57	-	115	56	10	89	M16x1	5	30386567	10083391	10083282	2,6	MHC-HSK-A080-25-115-A-0-A-AAA	30386403	30386413	
80	25	57	-	160	56	10	134	M16x1	5	30464653	10083414	10083282	3,5	MHC-HSK-A080-25-160-A-0-A-AAA	30470674	30470702	
80	25	57	-	200	56	10	174	M16x1	5	30464663	10083414	10083282	4,2	MHC-HSK-A080-25-200-A-0-A-AAA	30470684	30470712	
80	32	63	-	120	60	10	94	M16x1	5	30386568	10083392	10083282	2,9	MHC-HSK-A080-32-120-A-0-A-AAA	30386404	30386414	
80	32	63	-	160	60	10	134	M16x1	5	30464654	10083415	10083282	3,8	MHC-HSK-A080-32-160-A-0-A-AAA	30470675	30470703	
80	32	63	-	200	60	10	174	M16x1	5	30464664	10083415	10083282	4,8	MHC-HSK-A080-32-200-A-0-A-AAA	30470685	30470713	
100	6	26	45	85	36	10	36,5	M10x1	4	30386569	30383941	10083283	2,4	MHC-HSK-A100-06-085-A-0-A-AAA	30386415	30386425	
100	6	26	38	120	36	10	73,5	M5	2	30464665	30383945	10083283	2,5	MHC-HSK-A100-06-120-A-0-A-AAA	30470714	30470742	
100	6	26	38	160	36	10	113,5	M5	2	30464673	30383945	10083283	2,7	MHC-HSK-A100-06-160-A-0-A-AAA	30470722	30470750	
100	6	30	38	200	36	10	155	M5	2	30464683	30383945	10083283	3,0	MHC-HSK-A100-06-200-A-0-A-AAA	30470732	30470761	
100	8	28	45	85	36	10	37	M10x1	4	30386570	10083384	10083283	2,4	MHC-HSK-A100-08-085-A-0-A-AAA	30386416	30386426	
100	8	28	38	120	36	10	74	M7	3	30464666	10083394	10083283	2,6	MHC-HSK-A100-08-120-A-0-A-AAA	30470715	30470743	
100	8	28	38	160	36	10	114	M7	3	30464674	10083394	10083283	2,7	MHC-HSK-A100-08-160-A-0-A-AAA	30470723	30470751	
100	8	32	38	200	36	10	155,5	M7	3	30464684	10083394	10083283	3,1	MHC-HSK-A100-08-200-A-0-A-AAA	30470733	30470762	
100	10	30	45	90	40	10	43	M10x1	4	30386571	10083385	10083283	2,5	MHC-HSK-A100-10-090-A-0-A-AAA	30386417	30386427	
100	10	30	40	120	40	10	74,5	M8x1	4	30464667	10083401	10083283	2,6	MHC-HSK-A100-10-120-A-0-A-AAA	30470716	30470744	
100	10	30	40	160	40	10	114,5	M8x1	4	30464675	10083401	10083283	2,8	MHC-HSK-A100-10-160-A-0-A-AAA	30470724	30470752	
100	10	31	40	200	40	10	155	M8x1	4	30464685	10083401	10083283	3,1	MHC-HSK-A100-10-200-A-0-A-AAA	30470734	30470763	
100	12	32	45	95	45	10	48,5	M10x1	5	30386572	10083386	10083283	2,5	MHC-HSK-A100-12-095-A-0-A-AAA	30386418	30386428	
100	12	32	40	120	45	10	75	M10x1	5	30464668	10083409	10083283	2,6	MHC-HSK-A100-12-120-A-0-A-AAA	30470717	30470745	
100	12	32	40	160	45	10	115	M10x1	5	30464676	10083409	10083283	2,9	MHC-HSK-A100-12-160-A-0-A-AAA	30470725	30470753	
100	12	32	40	200	45	10	155	M10x1	5	30464686	10083409	10083283	3,1	MHC-HSK-A100-12-200-A-0-A-AAA	30470735	30470764	

Continued on next page.

**1-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions								G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	BDY			LS	CU					
100	14	34	45	95	45	10	49	M10x1	5	30386573	10083387	10083283	2,5	MHC-HSK-A100-14-095-A-0-A-AAA	30386419	30386429	
100	14	34	40	120	45	10	75,5	M10x1	5	30464669	10083410	10083283	2,7	MHC-HSK-A100-14-120-A-0-A-AAA	30470718	30470746	
100	14	34	40	160	45	10	115,5	M10x1	5	30464677	10083410	10083283	3,0	MHC-HSK-A100-14-160-A-0-A-AAA	30470726	30470754	
100	14	34	40	200	45	10	155,5	M10x1	5	30464687	10083410	10083283	3,2	MHC-HSK-A100-14-200-A-0-A-AAA	30470736	30470765	
100	16	38	45	100	48	10	55	M12x1	5	30386574	10083388	10083283	2,6	MHC-HSK-A100-16-100-A-0-A-AAA	30386420	30386430	
100	16	38	-	120	48	10	81,1	M12x1	5	30464670	10083411	10083283	2,8	MHC-HSK-A100-16-120-A-0-A-AAA	30470719	30470747	
100	16	38	-	160	48	10	121,1	M12x1	5	30464678	10083411	10083283	3,1	MHC-HSK-A100-16-160-A-0-A-AAA	30470727	30470755	
100	16	38	-	200	48	10	161,1	M12x1	5	30464688	10083411	10083283	3,5	MHC-HSK-A100-16-200-A-0-A-AAA	30470737	30470766	
100	18	40	45	100	48	10	55,5	M12x1	5	30386575	10083389	10083283	2,7	MHC-HSK-A100-18-100-A-0-A-AAA	30386421	30386431	
100	18	40	-	120	48	10	81,1	M12x1	5	30464671	10083412	10083283	2,8	MHC-HSK-A100-18-120-A-0-A-AAA	30470720	30470748	
100	18	40	-	160	48	10	121,1	M12x1	5	30464679	10083412	10083283	3,2	MHC-HSK-A100-18-160-A-0-A-AAA	30470728	30470757	
100	18	40	-	200	48	10	161,1	M12x1	5	30464689	10083412	10083283	3,6	MHC-HSK-A100-18-200-A-0-A-AAA	30470738	30470767	
100	20	42	50	105	50	10	60	M16x1	5	30386576	10083390	10083283	2,8	MHC-HSK-A100-20-105-A-0-A-AAA	30386422	30386432	
100	20	42	-	120	50	10	81,1	M16x1	5	30464672	10083413	10083283	2,9	MHC-HSK-A100-20-120-A-0-A-AAA	30470721	30470749	
100	20	42	-	160	50	10	121,1	M16x1	5	30464680	10083413	10083283	3,3	MHC-HSK-A100-20-160-A-0-A-AAA	30470729	30470758	
100	20	42	-	200	50	10	161,1	M16x1	5	30464690	10083413	10083283	3,7	MHC-HSK-A100-20-200-A-0-A-AAA	30470739	30470768	
100	25	57	-	115	56	10	86	M16x1	5	30386577	10083391	10083283	3,5	MHC-HSK-A100-25-115-A-0-A-AAA	30386423	30386433	
100	25	57	-	160	56	10	131	M16x1	5	30464681	10083414	10083283	4,3	MHC-HSK-A100-25-160-A-0-A-AAA	30470730	30470759	
100	25	57	-	200	56	10	171	M16x1	5	30464691	10083414	10083283	5,1	MHC-HSK-A100-25-200-A-0-A-AAA	30470740	30470769	
100	32	63	-	120	60	10	91	M16x1	5	30386578	10083392	10083283	3,7	MHC-HSK-A100-32-120-A-0-A-AAA	30386424	30386434	
100	32	63	-	160	60	10	131	M16x1	5	30464682	10083415	10083283	4,7	MHC-HSK-A100-32-160-A-0-A-AAA	30470731	30470760	
100	32	63	-	200	60	10	171	M16x1	5	30464692	10083415	10083283	5,6	MHC-HSK-A100-32-200-A-0-A-AAA	30470741	30470770	

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: Tool body, length adjustment screw and coolant unit as assembly.

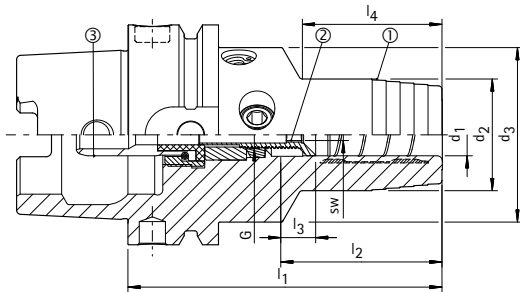
These components can also be ordered separately. (see table)

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Chip version: Equipped with Balluff code carrier, see section "Accessories, spare parts and measuring equipment". Further code carriers on request. Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# 1-channel system MQL hydraulic chucks HydroChuck

for automatic tool change, with radial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



- ① Hydraulic chucks, HSK, MQL, body material | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, automatic | CU

HSK-A	Dimensions							G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			BDY	LS	CU				
40	6	26	33,5	80	36	10	36	M6x1	2,5	30479916	30480046	30483104	0,5	MHC-HSK-A040-06-080-A-0-R-AAB	30479884	30484685
40	8	28	33,5	80	36	10	36	M6x1	3	30479917	30480047	30483104	0,5	MHC-HSK-A040-08-080-A-0-R-AAB	30479885	30484686
40	10	30	33,5	85	40	10	43	M6x1	3	30479918	30480048	30483104	0,5	MHC-HSK-A040-10-085-A-0-R-AAB	30479886	30484687
40	12	32	33,5	90	45	10	48	M6x1	3	30479919	30480049	30483104	0,5	MHC-HSK-A040-12-090-A-0-R-AAB	30479887	30484688
50	6	26	49	80	36	10	35	M6x1	2,5	30479920	30480050	30483106	0,7	MHC-HSK-A050-06-080-A-0-R-AAE	30479888	30484689
50	8	28	50,5	80	36	10	36	M6x1	3	30479921	30480051	30483106	0,7	MHC-HSK-A050-08-080-A-0-R-AAE	30479889	30484690
50	10	30	52	85	40	10	38	M8x1	4	30479922	30480052	30483107	0,7	MHC-HSK-A050-10-085-A-0-R-AAB	30479890	30484691
50	12	32	62	90	45	10	40	M8x1	4	30479923	30480053	30483107	0,8	MHC-HSK-A050-12-090-A-0-R-AAB	30479891	30484692
50	14	34	39,5	90	45	10	46	M8x1	4	30479924	30480054	30483107	0,8	MHC-HSK-A050-14-090-A-0-R-AAB	30479892	30484693
50	16	34	39,5	95	48	10	36,5	M8x1	4	30479925	30480055	30483107	1,0	MHC-HSK-A050-16-095-A-0-R-AAB	30479893	30484694
50	18	38	39	95	48	10	36,5	M8x1	4	30479926	30480056	30483107	1,0	MHC-HSK-A050-18-095-A-0-R-AAB	30479894	30484695
50	20	38	39	100	50	10	39	M8x1	4	30479927	30480057	30483107	1,2	MHC-HSK-A050-20-100-A-0-R-AAB	30479895	30484696
63	6	26	39	80	36	10	33	M6x1	2,5	30479928	30480050	30483108	1,0	MHC-HSK-A063-06-080-A-0-R-AAF	30479896	30484697
63	8	28	39	80	36	10	33	M6x1	3	30479929	30480051	30483108	1,1	MHC-HSK-A063-08-080-A-0-R-AAF	30479897	30484698
63	10	30	45	85	40	10	38	M8x1	4	30479930	30480052	30483109	1,1	MHC-HSK-A063-10-085-A-0-R-AAF	30479898	30484699
63	12	32	53	90	45	10	40	M8x1	4	30479931	30480053	30483109	1,2	MHC-HSK-A063-12-090-A-0-R-AAF	30479899	30484700
63	14	34	55	90	45	10	46	M8x1	4	30479932	30480054	30483109	1,2	MHC-HSK-A063-14-090-A-0-R-AAF	30479900	30484701
63	16	38	61	95	48	10	51	M8x1	4	30479933	30480055	30483109	1,3	MHC-HSK-A063-16-095-A-0-R-AAF	30479901	30484702
63	18	40	63	95	48	10	52	M8x1	4	30479934	30480056	30483109	1,3	MHC-HSK-A063-18-095-A-0-R-AAF	30479902	30484703
63	20	42	42	100	50	10	51	M8x1	4	30479935	30480057	30483109	1,4	MHC-HSK-A063-20-100-A-0-R-AAF	30479903	30484704
63	25	42	42	120	56	10	54,5	M8x1	5	30479936	30480058	30483109	2,1	MHC-HSK-A063-25-120-A-0-R-AAF	30479904	30484705
63	32	42	42	125	60	10	69	M8x1	5	30479937	30480059	30483109	2,4	MHC-HSK-A063-32-125-A-0-R-AAF	30479905	30484706

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: Tool body, length adjustment screw and coolant unit as assembly. These components can also be ordered separately. (see table)

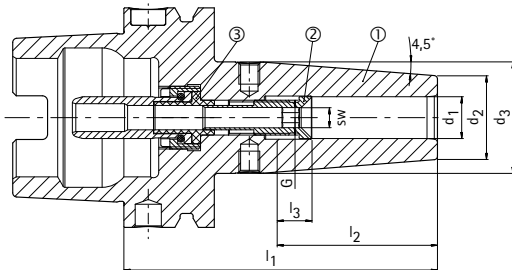
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Chip version: Equipped with Balluff code carrier. Further code carriers on request. Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# 1-channel system MQL shrink chucks ThermoChuck

for automatic tool change, with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



- ① Shrink chuck, HSK, MQL, tool body | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, automatic | CU

HSK-A	Dimensions						G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>			BDY	LS	CU				
32	6	21	26	80	36	10	M5	2	30386104	30383937	30384298	0,3	MTC-HSK-A032-06-080-A-0-A-AAA	30386080	30386084
32	6	21	26	120	36	10	M5	2	30386112	30383945	30384298	0,5	MTC-HSK-A032-06-120-A-0-A-AAA	30385463	30385468
32	6	21	26	160	36	10	M5	2	30479062	30383945	30384298	0,6	MTC-HSK-A032-06-160-A-0-A-AAA	30479070	30479074
32	8	21	26	80	36	10	M7	2	30386105	30383938	30384298	0,3	MTC-HSK-A032-08-080-A-0-A-AAA	30386081	30386085
32	8	21	26	120	36	10	M7	2	30386113	30383948	30384298	0,5	MTC-HSK-A032-08-120-A-0-A-AAA	30385465	30385469
32	8	21	26	160	36	10	M7	2	30479063	30383948	30384298	0,6	MTC-HSK-A032-08-160-A-0-A-AAA	30479071	30479075
32	10	24	29	85	40	10	M8x1	2	30386106	30383935	30384298	0,4	MTC-HSK-A032-10-085-A-0-A-AAA	30386082	30386086
32	10	24	29	120	40	10	M8x1	2	30386114	30383946	30384298	0,6	MTC-HSK-A032-10-120-A-0-A-AAA	30385466	30385470
32	10	24	29	160	40	10	M8x1	2	30479064	30383946	30384298	0,7	MTC-HSK-A032-10-160-A-0-A-AAA	30479072	30479076
32	12	24	29	90	45	10	M10x1	2	30386107	30383936	30384298	0,4	MTC-HSK-A032-12-090-A-0-A-AAA	30386083	30386087
32	12	24	29	120	45	10	M10x1	2	30386115	30383947	30384298	0,6	MTC-HSK-A032-12-120-A-0-A-AAA	30385467	30385471
32	12	24	29	160	45	10	M10x1	2	30479065	30383947	30384298	0,7	MTC-HSK-A032-12-160-A-0-A-AAA	30479073	30479077
40	6	21	27	80	36	10	M7	3	10083221	10083370	10083279	0,5	MTC-HSK-A040-06-080-A-0-A-AAA	30335292	30335310
40	6	21	27	120	36	10	M5	2	30386120	30383945	10083279	0,6	MTC-HSK-A040-06-120-A-0-A-AAA	30385472	30385473
40	6	21	27	160	36	10	M5	2	30386122	30383945	10083279	0,8	MTC-HSK-A040-06-160-A-0-A-AAA	30385474	30385475
40	8	21	27	80	36	10	M7	3	10083222	10083371	10083279	0,5	MTC-HSK-A040-08-080-A-0-A-AAA	30335293	30335311
40	8	21	27	120	36	10	M7	3	30302763	10083394	10083279	0,6	MTC-HSK-A040-08-120-A-0-A-AAA	30340512	30340522
40	8	21	27	160	36	10	M7	3	30302769	10083394	10083279	0,8	MTC-HSK-A040-08-160-A-0-A-AAA	30340517	30340527
40	10	24	32	80	40	10	M8x1	3	10083223	10083372	10083279	0,5	MTC-HSK-A040-10-080-A-0-A-AAA	30335294	30335312
40	10	24	32	120	40	10	M8x1	3	30302764	10083395	10083279	0,8	MTC-HSK-A040-10-120-A-0-A-AAA	30340513	30340523
40	10	24	32	160	40	10	M8x1	3	30302770	10083395	10083279	1,0	MTC-HSK-A040-10-160-A-0-A-AAA	30340518	30340528
40	12	24	32	90	45	10	M10x1	3	10083224	10083373	10083279	0,6	MTC-HSK-A040-12-090-A-0-A-AAA	30335295	30335313
40	12	24	32	120	45	10	M10x1	3	30302765	10083396	10083279	0,7	MTC-HSK-A040-12-120-A-0-A-AAA	30340514	30340524
40	12	24	32	160	45	10	M10x1	3	30302771	10083396	10083279	1,0	MTC-HSK-A040-12-160-A-0-A-AAA	30340519	30340529
40	14	27	34	90	45	10	M10x1	3	10083225	10083374	10083279	0,6	MTC-HSK-A040-14-090-A-0-A-AAA	30335296	30335314
40	14	27	34	120	45	10	M10x1	3	30302766	10083397	10083279	0,8	MTC-HSK-A040-14-120-A-0-A-AAA	30340515	30340525
40	14	27	34	160	45	10	M10x1	3	30302772	10083397	10083279	1,1	MTC-HSK-A040-14-160-A-0-A-AAA	30340520	30340530
40	16	27	34	90	48	10	M12x1	3	10083226	10083375	10083279	0,6	MTC-HSK-A040-16-090-A-0-A-AAA	30335297	30335315
40	16	27	34	120	48	10	M12x1	3	30302767	10083398	10083279	0,8	MTC-HSK-A040-16-120-A-0-A-AAA	30340516	30340526
40	16	27	34	160	48	10	M12x1	3	30302773	10083398	10083279	1,1	MTC-HSK-A040-16-160-A-0-A-AAA	30340521	30340531
50	6	21	27	80	36	10	M8x1	4	10083227	10083376	10083280	0,6	MTC-HSK-A050-06-080-A-0-A-AAA	30335328	30335352
50	6	21	27	120	36	10	M5	2	30386124	30383945	10083280	0,8	MTC-HSK-A050-06-120-A-0-A-AAA	30385476	30385478
50	6	21	27	160	36	10	M5	2	30386126	30383945	10083280	1,0	MTC-HSK-A050-06-160-A-0-A-AAA	30385480	30385482
50	8	21	27	80	36	10	M8x1	4	10083228	10083377	10083280	0,6	MTC-HSK-A050-08-080-A-0-A-AAA	30335329	30335353
50	8	21	27	120	36	10	M7	3	30386125	10083394	10083280	0,8	MTC-HSK-A050-08-120-A-0-A-AAA	30385477	30385479
50	8	21	27	160	36	10	M7	3	30386127	10083394	10083280	1,0	MTC-HSK-A050-08-160-A-0-A-AAA	30385481	30385483
50	10	24	32	85	40	10	M8x1	4	10083229	10083378	10083280	0,7	MTC-HSK-A050-10-085-A-0-A-AAA	30335330	30335354
50	10	24	32	120	40	10	M8x1	4	30302776	10083401	10083280	0,9	MTC-HSK-A050-10-120-A-0-A-AAA	30340533	30340547



1-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1

HSK-A	Dimensions						G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>			BDY	LS	CU				
50	10	24	32	160	40	10	M8x1	4	30302784	10083401	10083280	1,2	MTC-HSK-A050-10-160-A-0-A-AAA	30340540	30340554
50	12	24	32	90	45	10	M10x1	4	10083230	10083379	10083280	0,7	MTC-HSK-A050-12-090-A-0-A-AAA	30335331	30335355
50	12	24	32	120	45	10	M10x1	4	30302777	10083402	10083280	0,9	MTC-HSK-A050-12-120-A-0-A-AAA	30340534	30340548
50	12	24	32	160	45	10	M10x1	4	30302785	10083402	10083280	1,1	MTC-HSK-A050-12-160-A-0-A-AAA	30340541	30340555
50	14	27	34	90	45	10	M10x1	4	10083231	10083380	10083280	0,8	MTC-HSK-A050-14-090-A-0-A-AAA	30335332	30335356
50	14	27	34	120	45	10	M10x1	4	30302778	10083403	10083280	1,0	MTC-HSK-A050-14-120-A-0-A-AAA	30340535	30340549
50	14	27	34	160	45	10	M10x1	4	30302786	10083403	10083280	1,2	MTC-HSK-A050-14-160-A-0-A-AAA	30340542	30340556
50	16	27	34	95	48	10	M12x1	4	10083232	10083381	10083280	0,8	MTC-HSK-A050-16-095-A-0-A-AAA	30335333	30335357
50	16	27	34	120	48	10	M12x1	4	30302779	10083404	10083280	0,9	MTC-HSK-A050-16-120-A-0-A-AAA	30340536	30340550
50	16	27	34	160	48	10	M12x1	4	30302787	10083404	10083280	1,2	MTC-HSK-A050-16-160-A-0-A-AAA	30340543	30340557
50	18	33	42	95	48	10	M12x1	4	10083233	10083382	10083280	0,9	MTC-HSK-A050-18-095-A-0-A-AAA	30335334	30335358
50	18	33	42	120	48	10	M12x1	4	30302780	10083405	10083280	1,2	MTC-HSK-A050-18-120-A-0-A-AAA	30340537	30340551
50	18	33	42	160	48	10	M12x1	4	30302788	10083405	10083280	1,6	MTC-HSK-A050-18-160-A-0-A-AAA	30340544	30340558
50	20	33	42	100	50	10	M16x1	4	10083234	10083383	10083280	0,9	MTC-HSK-A050-20-100-A-0-A-AAA	30335335	30335359
50	20	33	42	120	50	10	M16x1	4	30302781	10083406	10083280	1,2	MTC-HSK-A050-20-120-A-0-A-AAA	30340538	30340552
50	20	33	42	160	50	10	M16x1	4	30302789	10083406	10083280	1,6	MTC-HSK-A050-20-160-A-0-A-AAA	30340545	30340559
63	6	21	27	80	36	10	M10x1	4	10083235	30383941	10083281	0,9	MTC-HSK-A063-06-080-A-0-A-AAA	30380921	30380931
63	6	21	27	120	36	10	M5	2	30386128	30383945	10083281	1,1	MTC-HSK-A063-06-120-A-0-A-AAA	30385484	30385487
63	6	21	27	160	36	10	M5	2	30386130	30383945	10083281	1,2	MTC-HSK-A063-06-160-A-0-A-AAA	30385490	30385493
63	6	21	27	200	36	10	M5	2	30386132	30383945	10083281	1,4	MTC-HSK-A063-06-200-A-0-A-AAA	30385496	30385499
63	8	21	27	80	36	10	M10x1	4	10083236	10083384	10083281	0,9	MTC-HSK-A063-08-080-A-0-A-AAA	30380922	30380932
63	8	21	27	120	36	10	M7	3	30386129	10083394	10083281	1,1	MTC-HSK-A063-08-120-A-0-A-AAA	30385485	30385488
63	8	21	27	160	36	10	M7	3	30386131	10083394	10083281	1,2	MTC-HSK-A063-08-160-A-0-A-AAA	30385491	30385494
63	8	21	27	200	36	10	M7	3	30386133	10083394	10083281	1,4	MTC-HSK-A063-08-200-A-0-A-AAA	30385497	30385500
63	10	24	32	85	40	10	M10x1	4	10083237	10083385	10083281	1,0	MTC-HSK-A063-10-085-A-0-A-AAA	30380923	30380933
63	10	24	32	120	40	10	M8x1	4	30386800	10083401	10083281	1,2	MTC-HSK-A063-10-120-A-0-A-AAA	30385486	30385489
63	10	24	32	160	40	10	M8x1	4	30386802	10083401	10083281	1,4	MTC-HSK-A063-10-160-A-0-A-AAA	30385492	30385495
63	10	24	32	200	40	10	M8x1	4	30386134	10083401	10083281	1,7	MTC-HSK-A063-10-200-A-0-A-AAA	30385498	30385501
63	12	24	32	90	45	10	M10x1	5	10083238	10083386	10083281	1,0	MTC-HSK-A063-12-090-A-0-A-AAA	30380924	30380934
63	12	24	32	120	45	10	M10x1	5	10096023	10083409	10083281	1,2	MTC-HSK-A063-12-120-A-0-A-AAA	30340561	30340581
63	12	24	32	160	45	10	M10x1	5	30197953	10083409	10083281	1,4	MTC-HSK-A063-12-160-A-0-A-AAA	30340566	30340587
63	12	24	32	200	45	10	M10x1	5	10107285	10083409	10083281	1,6	MTC-HSK-A063-12-200-A-0-A-AAA	30340573	30340596
63	14	27	34	90	45	10	M10x1	5	10083239	10083387	10083281	1,0	MTC-HSK-A063-14-090-A-0-A-AAA	30380925	30380935
63	14	27	34	120	45	10	M10x1	5	30192712	10083410	10083281	1,2	MTC-HSK-A063-14-120-A-0-A-AAA	30340562	30340582
63	14	27	34	160	45	10	M10x1	5	10096025	10083410	10083281	1,5	MTC-HSK-A063-14-160-A-0-A-AAA	30340567	30340588
63	14	27	34	200	45	10	M10x1	5	10096026	10083410	10083281	1,8	MTC-HSK-A063-14-200-A-0-A-AAA	30340574	30340597
63	16	27	34	95	48	10	M12x1	5	10083240	10083388	10083281	1,0	MTC-HSK-A063-16-095-A-0-A-AAA	30380926	30380936
63	16	27	34	120	48	10	M12x1	5	10107287	10083411	10083281	1,2	MTC-HSK-A063-16-120-A-0-A-AAA	30340563	30340583
63	16	27	34	160	48	10	M12x1	5	10107288	10083411	10083281	1,5	MTC-HSK-A063-16-160-A-0-A-AAA	30340568	30340590
63	16	27	34	200	48	10	M12x1	5	10107289	10083411	10083281	1,7	MTC-HSK-A063-16-200-A-0-A-AAA	30340575	30340598
63	18	33	42	95	48	10	M12x1	5	10083241	10083389	10083281	1,2	MTC-HSK-A063-18-095-A-0-A-AAA	30380927	30380937
63	18	33	42	120	48	10	M12x1	5	10107292	10083412	10083281	1,5	MTC-HSK-A063-18-120-A-0-A-AAA	30263986	30340584
63	18	33	42	160	48	10	M12x1	5	10096027	10083412	10083281	1,9	MTC-HSK-A063-18-160-A-0-A-AAA	30340570	30340591
63	18	33	42	200	48	10	M12x1	5	10107293	10083412	10083281	2,3	MTC-HSK-A063-18-200-A-0-A-AAA	30340576	30340599
63	20	33	42	100	50	10	M16x1	5	10083242	10083390	10083281	1,2	MTC-HSK-A063-20-100-A-0-A-AAA	30380928	30380938
63	20	33	42	120	50	10	M16x1	5	30192716	10083413	10083281	1,4	MTC-HSK-A063-20-120-A-0-A-AAA	30340564	30340585
63	20	33	42	160	50	10	M16x1	5	10107294	10083413	10083281	1,9	MTC-HSK-A063-20-160-A-0-A-AAA	30263987	30340592
63	20	33	42	200	50	10	M16x1	5	10107295	10083413	10083281	2,3	MTC-HSK-A063-20-200-A-0-A-AAA	30340577	30340600
63	25	44	53	115	56	10	M16x1	5	10083243	10083391	10083281	1,8	MTC-HSK-A063-25-115-A-0-A-AAA	30380929	30380939
63	25	44	53	160	56	10	M16x1	5	10107296	10083414	10083281	2,5	MTC-HSK-A063-25-160-A-0-A-AAA	30296689	30340593
63	25	44	53	200	56	10	M16x1	5	10107297	10083414	10083281	3,2	MTC-HSK-A063-25-200-A-0-A-AAA	30340578	30340601
63	32	44	53	120	60	10	M16x1	5	10083244	10083392	10083281	1,6	MTC-HSK-A063-32-120-A-0-A-AAA	30380930	30380940
63	32	44	53	160	60	10	M16x1	5	10107298	10083415	10083281	2,3	MTC-HSK-A063-32-160-A-0-A-AAA	30340571	30340594
63	32	44	53	200	60	10	M16x1	5	10107299	10083415	10083281	3,0	MTC-HSK-A063-32-200-A-0-A-AAA	30340579	30340602

Continued on next page.

**1-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions						G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>			BDY	LS	CU				
80	6	21	27	85	36	10	M10x1	4	10083245	30383941	10083282	1,3	MTC-HSK-A080-06-085-A-0-A-AAA	30380997	30381007
80	6	21	27	120	36	10	M5	2	30386135	30383945	10083282	1,5	MTC-HSK-A080-06-120-A-0-A-AAA	30385502	30385505
80	6	21	27	160	36	10	M5	2	30386138	30383945	10083282	1,7	MTC-HSK-A080-06-160-A-0-A-AAA	30385508	30385511
80	6	21	27	200	36	10	M5	2	30386141	30383945	10083282	1,8	MTC-HSK-A080-06-200-A-0-A-AAA	30385514	30385517
80	8	21	27	85	36	10	M10x1	4	10083246	10083384	10083282	1,3	MTC-HSK-A080-08-085-A-0-A-AAA	30380998	30381008
80	8	21	27	120	36	10	M7	3	30386136	10083394	10083282	1,5	MTC-HSK-A080-08-120-A-0-A-AAA	30385503	30385506
80	8	21	27	160	36	10	M7	3	30386139	10083394	10083282	1,7	MTC-HSK-A080-08-160-A-0-A-AAA	30385509	30385512
80	8	21	27	200	36	10	M7	3	30386142	10083394	10083282	1,8	MTC-HSK-A080-08-200-A-0-A-AAA	30385515	30385518
80	10	24	32	90	40	10	M10x1	4	10083247	10083385	10083282	1,4	MTC-HSK-A080-10-090-A-0-A-AAA	30380999	30381009
80	10	24	32	120	40	10	M8x1	4	30386137	10083401	10083282	1,6	MTC-HSK-A080-10-120-A-0-A-AAA	30385504	30385507
80	10	24	32	160	40	10	M8x1	4	30386140	10083401	10083282	1,9	MTC-HSK-A080-10-160-A-0-A-AAA	30385510	30385513
80	10	24	32	200	40	10	M8x1	4	30386143	10083401	10083282	2,1	MTC-HSK-A080-10-200-A-0-A-AAA	30385516	30385519
80	12	24	32	95	45	10	M10x1	5	10083248	10083386	10083282	1,4	MTC-HSK-A080-12-095-A-0-A-AAA	30381000	30381010
80	12	24	32	120	45	10	M10x1	5	30302793	10083409	10083282	1,6	MTC-HSK-A080-12-120-A-0-A-AAA	30480149	30480154
80	12	24	32	160	45	10	M10x1	5	30302801	10083409	10083282	1,9	MTC-HSK-A080-12-160-A-0-A-AAA	30480159	30480166
80	12	24	32	200	45	10	M10x1	5	30302811	10083409	10083282	2,1	MTC-HSK-A080-12-200-A-0-A-AAA	30480173	30480180
80	14	27	34	95	45	10	M10x1	5	10083249	10083387	10083282	1,5	MTC-HSK-A080-14-095-A-0-A-AAA	30381001	30381011
80	14	27	34	120	45	10	M10x1	5	30302794	10083410	10083282	1,7	MTC-HSK-A080-14-120-A-0-A-AAA	30480150	30480155
80	14	27	34	160	45	10	M10x1	5	30302802	10083410	10083282	2,0	MTC-HSK-A080-14-160-A-0-A-AAA	30480160	30480167
80	14	27	34	200	45	10	M10x1	5	30302812	10083410	10083282	2,2	MTC-HSK-A080-14-200-A-0-A-AAA	30480174	30480181
80	16	27	34	100	48	10	M12x1	5	10083250	10083388	10083282	1,5	MTC-HSK-A080-16-100-A-0-A-AAA	30381002	30381012
80	16	27	34	120	48	10	M12x1	5	30302795	10083411	10083282	1,7	MTC-HSK-A080-16-120-A-0-A-AAA	30480151	30480156
80	16	27	34	160	48	10	M12x1	5	30302803	10083411	10083282	1,9	MTC-HSK-A080-16-160-A-0-A-AAA	30480161	30480168
80	16	27	34	200	48	10	M12x1	5	30302813	10083411	10083282	2,2	MTC-HSK-A080-16-200-A-0-A-AAA	30480175	30480182
80	18	33	42	100	48	10	M12x1	5	10083251	10083389	10083282	1,7	MTC-HSK-A080-18-100-A-0-A-AAA	30381003	30381013
80	18	33	42	120	48	10	M12x1	5	30302796	10083412	10083282	1,9	MTC-HSK-A080-18-120-A-0-A-AAA	30480152	30480157
80	18	33	42	160	48	10	M12x1	5	30302804	10083412	10083282	2,4	MTC-HSK-A080-18-160-A-0-A-AAA	30480162	30480169
80	18	33	42	200	48	10	M12x1	5	30302814	10083412	10083282	2,8	MTC-HSK-A080-18-200-A-0-A-AAA	30480176	30480183
80	20	33	42	105	50	10	M16x1	5	10083252	10083390	10083282	1,7	MTC-HSK-A080-20-105-A-0-A-AAA	30381004	30381014
80	20	33	42	120	50	10	M16x1	5	30302797	10083413	10083282	1,9	MTC-HSK-A080-20-120-A-0-A-AAA	30480153	30480158
80	20	33	42	160	50	10	M16x1	5	30302805	10083413	10083282	2,3	MTC-HSK-A080-20-160-A-0-A-AAA	30480163	30480170
80	20	33	42	200	50	10	M16x1	5	30302815	10083413	10083282	2,7	MTC-HSK-A080-20-200-A-0-A-AAA	30480177	30480184
80	25	44	53	115	56	10	M16x1	5	10083253	10083391	10083282	2,2	MTC-HSK-A080-25-115-A-0-A-AAA	30381005	30381015
80	25	44	53	160	56	10	M16x1	5	30302806	10083414	10083282	3,0	MTC-HSK-A080-25-160-A-0-A-AAA	30480164	30480171
80	25	44	53	200	56	10	M16x1	5	30302816	10083414	10083282	3,7	MTC-HSK-A080-25-200-A-0-A-AAA	30480178	30480185
80	32	44	53	120	60	10	M16x1	5	10083254	10083392	10083282	2,1	MTC-HSK-A080-32-120-A-0-A-AAA	30381006	30381016
80	32	44	53	160	60	10	M16x1	5	30302807	10083415	10083282	2,8	MTC-HSK-A080-32-160-A-0-A-AAA	30480165	30480172
80	32	44	53	200	60	10	M16x1	5	30302817	10083415	10083282	3,5	MTC-HSK-A080-32-200-A-0-A-AAA	30480179	30480186
100	6	21	27	85	36	10	M10x1	4	10083255	30383941	10083283	2,3	MTC-HSK-A100-06-085-A-0-A-AAA	30381074	30381084
100	6	21	27	120	36	10	M5	2	30386144	30383945	10083283	2,4	MTC-HSK-A100-06-120-A-0-A-AAA	30385520	30385523
100	6	21	27	160	36	10	M5	2	30386147	30383945	10083283	2,6	MTC-HSK-A100-06-160-A-0-A-AAA	30385526	30385529
100	6	21	27	200	36	10	M5	2	30386150	30383945	10083283	2,7	MTC-HSK-A100-06-200-A-0-A-AAA	30385532	30385535
100	8	21	27	85	36	10	M10x1	4	10083256	10083384	10083283	2,2	MTC-HSK-A100-08-085-A-0-A-AAA	30381075	30381085
100	8	21	27	120	36	10	M7	3	30386145	10083394	10083283	2,4	MTC-HSK-A100-08-120-A-0-A-AAA	30385521	30385524
100	8	21	27	160	36	10	M7	3	30386148	10083394	10083283	2,6	MTC-HSK-A100-08-160-A-0-A-AAA	30385527	30385530
100	8	21	27	200	36	10	M7	3	30386151	10083394	10083283	2,7	MTC-HSK-A100-08-200-A-0-A-AAA	30385533	30385536
100	10	24	32	90	40	10	M10x1	4	10083257	10083385	10083283	2,3	MTC-HSK-A100-10-090-A-0-A-AAA	30381076	30381086
100	10	24	32	120	40	10	M8x1	4	30386146	10083401	10083283	2,6	MTC-HSK-A100-10-120-A-0-A-AAA	30385522	30385525
100	10	24	32	160	40	10	M8x1	4	30386149	10083401	10083283	2,8	MTC-HSK-A100-10-160-A-0-A-AAA	30385528	30385531
100	10	24	32	200	40	10	M8x1	4	30386152	10083401	10083283	3,0	MTC-HSK-A100-10-200-A-0-A-AAA	30385534	30385537
100	12	24	32	95	45	10	M10x1	5	10083258	10083386	10083283	2,3	MTC-HSK-A100-12-095-A-0-A-AAA	30381077	30381087
100	12	24	32	120	45	10	M10x1	5	30253151	10083409	10083283	2,5	MTC-HSK-A100-12-120-A-0-A-AAA	30480187	30480193
100	12	24	32	160	45	10	M10x1	5	30302825	10083409	10083283	2,8	MTC-HSK-A100-12-160-A-0-A-AAA	30480198	30480205
100	12	24	32	200	45	10	M10x1	5	30253152	10083409	10083283	3,0	MTC-HSK-A100-12-200-A-0-A-AAA	30480212	30480219

**1-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

HSK-A	Dimensions						G	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>			BDY	LS	CU				
100	14	27	34	95	45	10	M10x1	5	10083259	10083387	10083283	2,4	MTC-HSK-A100-14-095-A-0-A-AAA	30381078	30381088
100	14	27	34	120	45	10	M10x1	5	30254306	10083410	10083283	2,6	MTC-HSK-A100-14-120-A-0-A-AAA	30480188	30480194
100	14	27	34	160	45	10	M10x1	5	30302826	10083410	10083283	2,9	MTC-HSK-A100-14-160-A-0-A-AAA	30480199	30480206
100	14	27	34	200	45	10	M10x1	5	30303050	10083410	10083283	3,1	MTC-HSK-A100-14-200-A-0-A-AAA	30480213	30480220
100	16	27	34	100	48	10	M12x1	5	10083260	10083388	10083283	2,4	MTC-HSK-A100-16-100-A-0-A-AAA	30381079	30381089
100	16	27	34	120	48	10	M12x1	5	30302821	10083411	10083283	2,6	MTC-HSK-A100-16-120-A-0-A-AAA	30480189	30480195
100	16	27	34	160	48	10	M12x1	5	30302827	10083411	10083283	2,9	MTC-HSK-A100-16-160-A-0-A-AAA	30480200	30480207
100	16	27	34	200	48	10	M12x1	5	30302831	10083411	10083283	3,1	MTC-HSK-A100-16-200-A-0-A-AAA	30480214	30480221
100	18	33	42	100	48	10	M12x1	5	10083261	10083389	10083283	2,6	MTC-HSK-A100-18-100-A-0-A-AAA	30381080	30381090
100	18	33	42	120	48	10	M12x1	5	30253155	10083412	10083283	2,8	MTC-HSK-A100-18-120-A-0-A-AAA	30480190	30480196
100	18	33	42	160	48	10	M12x1	5	10096879	10083412	10083283	3,3	MTC-HSK-A100-18-160-A-0-A-AAA	30480201	30480208
100	18	33	42	200	48	10	M12x1	5	10107134	10083412	10083283	3,7	MTC-HSK-A100-18-200-A-0-A-AAA	30480215	30480222
100	20	33	42	105	50	10	M16x1	5	10083262	10083390	10083283	2,6	MTC-HSK-A100-20-105-A-0-A-AAA	30381081	30381091
100	20	33	42	120	50	10	M16x1	5	30302822	10083413	10083283	2,8	MTC-HSK-A100-20-120-A-0-A-AAA	30480192	30480197
100	20	33	42	160	50	10	M16x1	5	10096880	10083413	10083283	3,2	MTC-HSK-A100-20-160-A-0-A-AAA	30480202	30480209
100	20	33	42	200	50	10	M16x1	5	30302832	10083413	10083283	3,6	MTC-HSK-A100-20-200-A-0-A-AAA	30480216	30480223
100	25	44	53	115	56	10	M16x1	5	10083263	10083391	10083283	3,1	MTC-HSK-A100-25-115-A-0-A-AAA	30381082	30381092
100	25	44	53	160	56	10	M16x1	5	30258455	10083414	10083283	3,9	MTC-HSK-A100-25-160-A-0-A-AAA	30480203	30480210
100	25	44	53	200	56	10	M16x1	5	30302833	10083414	10083283	4,6	MTC-HSK-A100-25-200-A-0-A-AAA	30480217	30480224
100	32	44	53	120	60	10	M16x1	5	10083264	10083392	10083283	3,0	MTC-HSK-A100-32-120-A-0-A-AAA	30381083	30381093
100	32	44	53	160	60	10	M16x1	5	30303048	10083415	10083283	3,7	MTC-HSK-A100-32-160-A-0-A-AAA	30480204	30480211
100	32	44	53	200	60	10	M16x1	5	30302834	10083415	10083283	4,4	MTC-HSK-A100-32-200-A-0-A-AAA	30480218	30480225

Dimensions in mm.

Items included: Tool body, length adjustment screw and coolant unit as assembly.  
 These components can also be ordered separately. (see table)

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Chip version: Equipped with Balluff code carrier. Further code carriers on request.  
 Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.







# CHUCKS WITH HSK-A FOR MQL 2-CHANNEL SYSTEM

## Selection system

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Chucks MQL 2-channel system \_\_\_\_\_ 122

## Automatic tool change

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HighTorque Chuck HTC with axial length adjustment \_\_\_\_\_ 132

Hydraulic chucks HydroChuck with axial length adjustment \_\_\_\_\_ 134

Hydraulic chucks with radial length adjustment \_\_\_\_\_ 144



Shrink chucks ThermoChuck \_\_\_\_\_ 146

## Selection of chucks MQL 2-channel system

On the selection of the chucks for the MQL 2-channel system, it is imperative attention is paid to ensuring the cross-sections of the MQL connections (length adjustment screw and coolant supply unit) match the sum of the cross-sections of all coolant outlets on the tool.

The correct ratio of inlet cross-section  $A_{IN}$  to the outlet cross-section  $A_{OUT}$  is ensured by the so-called MQL ratio. The MQL ratio should be a maximum of 4 and should not be less than 1.

$$\text{MQL ratio} = \frac{A_{IN}}{A_{OUT}} \qquad 1 \leq \text{MQL ratio} \leq 4$$

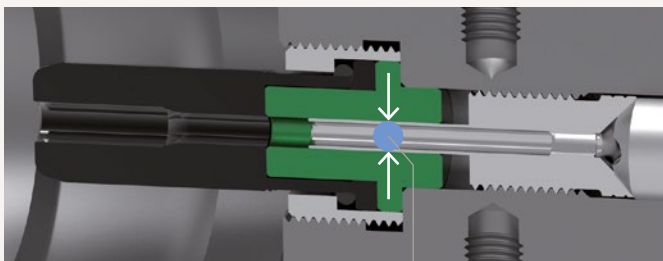
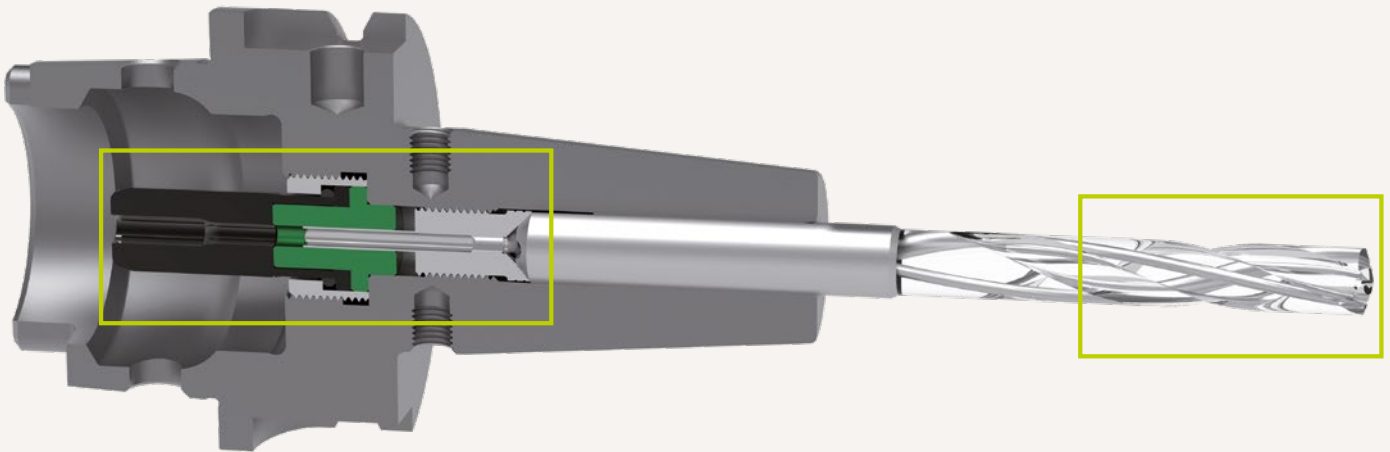
$A_{IN}$ : Defined by the bore diameter on the length adjustment screw

$A_{OUT}$ : Defined by the sum of the cross-sections of all coolant outlets on the tool

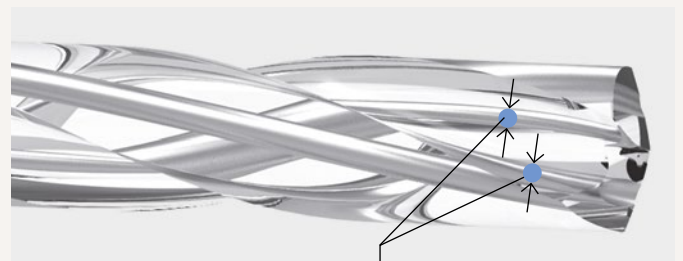
### NOTE

It is necessary to maintain the MQL ratio for the following reasons:

- To ensure a continuous supply of oil
- Transport the entire volume of oil provided by the 2-channel system
- Short reaction times (time from switching on the oil supply to the outlet of the oil-air mixture from the coolant outlets on the tool)



$A_{IN}$



Information on MAPAL drawing for the tool:  
 $A_{OUT} = A_{OUT1} + A_{OUT2}$

Due to the need to maintain the MQL ratio, up to three different coolant supply units with the related length adjustment screw can be selected for one shank diameter. To keep, nevertheless the number of variants as low as possible, a Standard or preferred series is defined. Only if the MQL ratio cannot be maintained with this Standard series

is usage made of the Semi-standard 1 as the next smaller variant. Should it also not be possible to maintain the MQL ratio with this series, Semi-standard 2 is used.

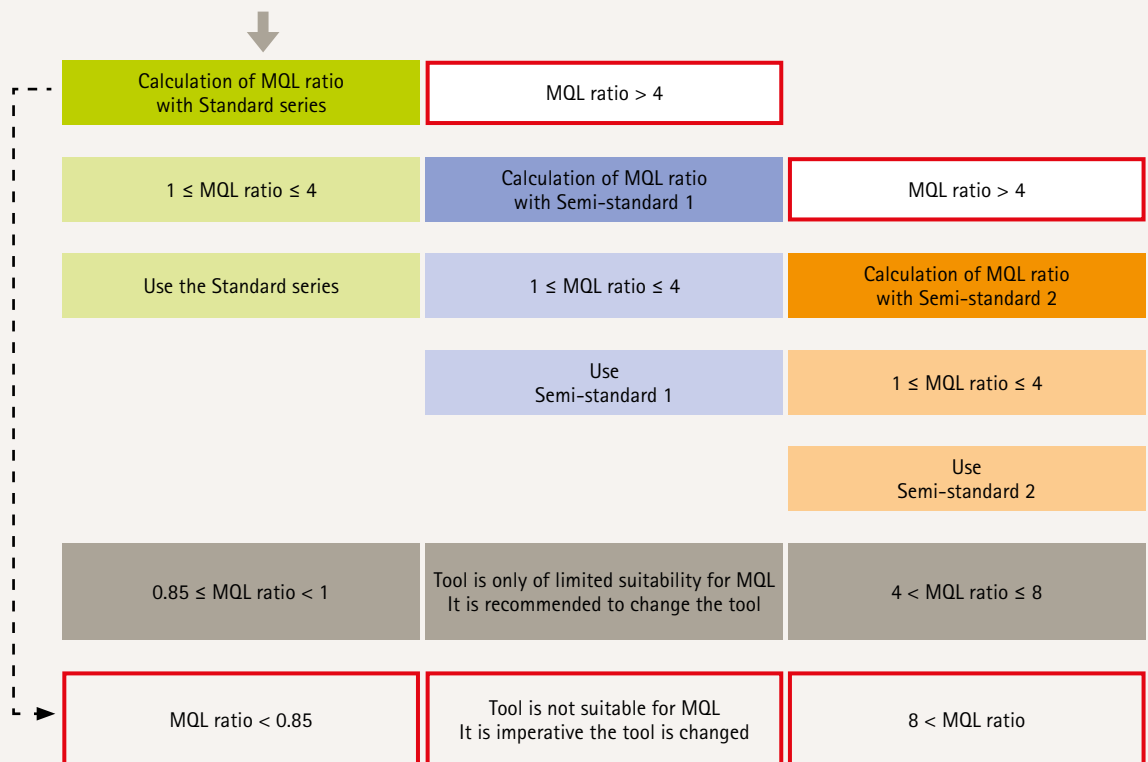
**For standard MQL tools, for example solid carbide drills, use the selection aid with examples on the following pages.**

**Definition of the variants Standard, Semi-standard 1 and Semi-standard 2**

Cross-sectional area  $A_{IN}$ , inside diameter  $d_i$  and wrench size for the length adjustment screw as a function of the shank diameter and the HSK size

HSK size	Shank $\varnothing$	Standard			Semi-standard 1			Semi-standard 2		
		$A_{IN}$ [mm <sup>2</sup> ]	$d_i$ [mm]	sw	$A_{IN}$ [mm <sup>2</sup> ]	$d_i$ [mm]	sw	$A_{IN}$ [mm <sup>2</sup> ]	$d_i$ [mm]	sw
32	06 – 12	4,52	2,40	2	1,54	1,40	1,5	–	–	–
40 – 100	06 – 10	4,52	2,40	2	1,54	1,40	1,5	–	–	–
	12 – 18	9,90	3,55	3	4,52	2,40	2	1,54	1,40	1,5
	20 – 32	17,35	4,70	4	9,90	3,55	3	4,52	2,40	2

Procedure for the selection of the variants Standard, Semi-standard 1 and Semi-standard 2  
 Inlet cross-sections  $A_{IN}$  can be taken from the above table for the calculation of the MQL ratio.

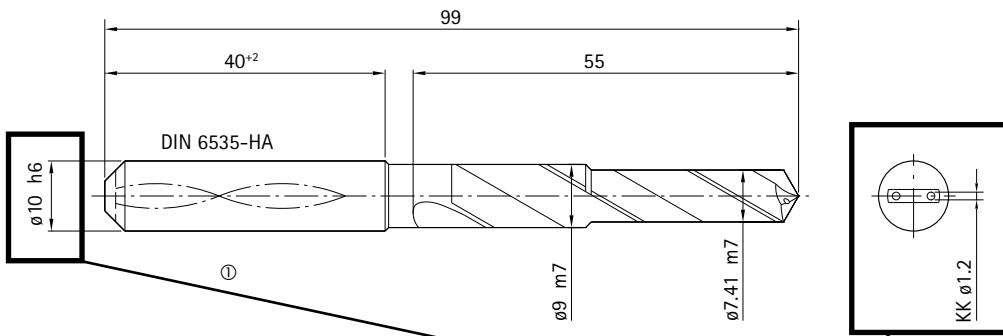


# Selection system example for determining the variant for 2-channel systems

The following selection aids can be used to select the chuck more quickly and straightforwardly. The procedure is defined in the following.

- ① Selection of the table to suit the shank diameter
- ② Selection of the range based on the number and diameter of the cooling channels
- ③ Determination of the series via colour coding

## Example 1



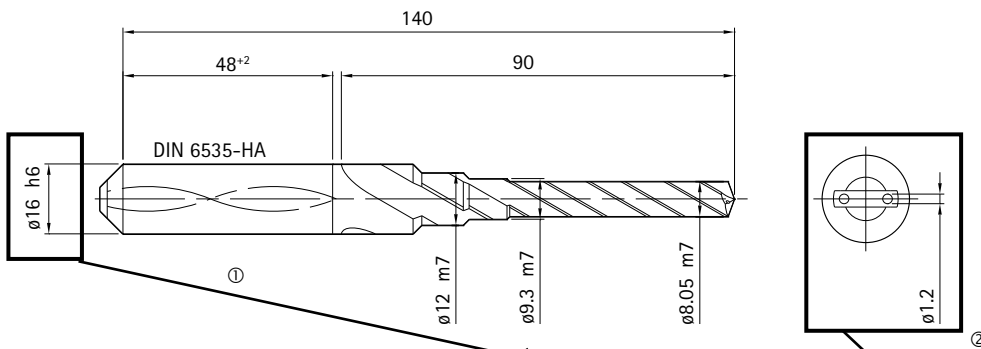
Connection ø:		6 - 10		Standard / wrench size 2		Semi-standard 1 / wrench size 1.5		MQL ratio with wrench size 1.5 too small and with wrench size 2 too large; permissible with limitations																	
Cooling channel ø		0,3		0,4		0,5		0,6		0,7		0,8		0,9		1,0		1,1		1,2		1,3		1,4	
Number of cooling channels	1	0,07	21,78	0,13	12,25	0,20	7,84	0,28	5,44	0,38	4,00	0,50	3,06	0,64	2,42	0,79	1,96	0,95	1,62	1,13	4,00	1,33	3,41	1,54	2,94
	2	0,14	10,89	0,25	6,13	0,39	3,92	0,57	2,72	0,77	2,00	1,01	1,53	1,27	3,56	1,57	2,88	1,90	2,38	2,26	2,00	2,65	1,70	3,08	1,47
	3	0,21	7,26	0,38	4,08	0,59	2,61	0,85	1,81	1,15	3,92	1,51	3,00	1,91	2,37	2,36	1,92	2,85	1,59	3,39	1,33	3,98	1,14	4,62	0,98
	4	0,28	5,44	0,50	3,06	0,79	1,96	1,13	4,00	1,54	2,94	2,01	2,25	2,54	1,78	3,14	1,44	3,80	1,19	4,52	1,00	5,31	0,85	6,16	
	5	0,35	4,36	0,63	2,45	0,98	1,57	1,41	3,20	1,92	2,35	2,51	1,80	3,18	1,42	3,93	1,15	4,75	0,95	5,65		6,64		7,70	
	6	0,42	3,63	0,75	2,04	1,18	3,84	1,70	2,67	2,31	1,96	3,02	1,50	3,82	1,19	4,71	0,96	5,70		6,79		7,96		9,24	
	7	0,49	3,11	0,88	1,75	1,37	3,29	1,98	2,29	2,69	1,68	3,52	1,29	4,45	1,02	5,58		6,65		7,92		9,29		10,78	
	8	0,57	2,72	1,01	1,53	1,57	2,88	2,26	2,00	3,08	1,47	4,02	1,13	5,09	0,89	6,28		7,60		9,05		10,62		12,32	

Variant*	HSK-A	Dimensions						G	A <sub>IN</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				BDY	LS	CU				
63	8	21	27	160	36	10	M7	1,54	1,5	30386131	30512820	30512203	1,2	MTC-HSK-A063-08-160-C-0-A-AAA1	30521894	30521895	
63	8	21	27	160	36	10	M7	4,52	2	30386131	30384045	30384304	1,2	MTC-HSK-A063-08-160-C-0-A-AAA2	30385675	30385685	
63	8	21	27	200	36	10	M7	1,54	1,5	30386133	30512840	30512203	1,4	MTC-HSK-A063-08-200-C-0-A-AAA1	30521896	30521897	
63	8	21	27	200	36	10	M7	4,52	2	30386133	30384046	30384304	1,4	MTC-HSK-A063-08-200-C-0-A-AAA2	30385695	30385705	
63	10	24	32	85	40	10	M10x1	1,54	1,5	10083237	30512786	30512203	1,0	MTC-HSK-A063-10-085-C-0-A-AAA1	30521898	30521899	
63	10	24	32	85	40	10	M10x1	4,52	2	10083237	30384011	30384304	1,0	MTC-HSK-A063-10-085-C-0-A-AAA2	30385640	30385650	
63	10	24	32	120	40	10	M8x1	1,54	1,5	30386800	30512806	30512203	1,2	MTC-HSK-A063-10-120-C-0-A-AAA1	30521900	30521901	
63	10	24	32	120	40	10	M8x1	4,52	2	30386800	30384012	30384304	1,2	MTC-HSK-A063-10-120-C-0-A-AAA2	30385660	30385668	
63	10	24	32	160	40	10	M8x1	1,54	1,5	30386802	30512821	30512203	1,4	MTC-HSK-A063-10-160-C-0-A-AAA1	30521902	30521903	
63	10	24	32	160	40	10	M8x1	4,52	2	30386802	30384013	30384304	1,4	MTC-HSK-A063-10-160-C-0-A-AAA2	30385676	30385686	
63	10	24	32	200	40	10	M8x1	1,54	1,5	30386134	30512841	30512203	1,7	MTC-HSK-A063-10-200-C-0-A-AAA1	30521904	30521905	
63	10	24	32	200	40	10	M8x1	4,52	2	30386134	30384014	30384304	1,7	MTC-HSK-A063-10-200-C-0-A-AAA2	30385696	30385706	
63	12	24	32	90	45	10	M10x1	1,54	1,5	10083238	30512791	30512203	1,0	MTC-HSK-A063-12-090-C-0-A-AAA1	30521906	30521907	

Calculation of the MQL ratio taking into account the inlet cross-section A<sub>IN</sub> Semi-standard 1 variant.

- ① Selection of the table to suit the shank diameter
- ② Selection of the range based on the number and diameter of the cooling channels
- ③ Determination of the series via colour coding

Example 2



Connection $\phi$ :		12 - 18		Standard / wrench size 3		Semi-standard 1 / wrench size 2		Semi-standard 2 / wrench size 1.5		MQL ratio with wrench size 1.5 too small and with wrench size 3 too large; permissible with limitations															
Cooling channel $\phi$		0,3		0,4		0,5		0,6		0,7		0,8		0,9		1,0		1,1		1,2		1,3		1,4	
Number of cooling channels	1	0,07	21,78	0,13	12,25	0,20	7,84	0,28	5,44	0,38	4,00	0,50	3,06	0,64	2,42	0,79	1,96	0,95	1,62	1,13	4,00	1,33	3,41	1,54	2,94
	2	0,14	10,89	0,25	6,13	0,39	3,92	0,57	2,72	0,77	2,00	1,01	1,53	1,27	3,56	1,57	2,88	1,90	2,38	2,26	2,00	2,65	3,73	3,08	3,21
	3	0,21	7,26	0,38	4,08	0,59	2,61	0,85	1,81	1,15	3,92	1,51	3,00	1,91	2,37	2,36	1,92	2,85	3,47	3,39	2,92	3,98	2,49	4,62	2,14
	4	0,28	5,44	0,50	3,06	0,79	1,96	1,13	4,00	1,54	2,94	2,01	2,25	2,54	3,89	3,14	3,15	3,80	2,60	4,52	2,19	5,31	1,86	6,16	1,61
	5	0,35	4,36	0,63	2,45	0,98	1,57	1,41	3,20	1,92	2,35	2,51	3,94	3,18	3,11	3,93	2,52	4,75	2,08	5,65	1,75	6,64	1,49	7,70	1,29
	6	0,42	3,63	0,75	2,04	1,18	3,84	1,70	2,67	2,31	4,29	3,02	3,28	3,82	2,59	4,71	2,18	5,70	1,74	6,79	1,46	7,96	1,24	9,24	1,07
	7	0,49	3,11	0,88	1,75	1,37	3,29	1,98	2,29	2,69	3,67	3,52	2,81	4,45	2,22	5,50	1,80	6,65	1,49	7,92	1,25	9,29	1,07	10,78	0,92

Variant*	HSK-A	Dimensions						G	$A_{IN}$	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$				BDY	LS	CU				
63	14	27	34	160	45	10	M10x1	9,9	3	10096025	30279410	30284772	1,5	MTC-HSK-A063-14-160-C-0-A-AAA3	30326650	30326689	
63	14	27	34	200	45	10	M10x1	1,54	1,5	10096026	30512847	30512203	1,8	MTC-HSK-A063-14-200-C-0-A-AAA1	30521934	30521935	
63	14	27	34	200	45	10	M10x1	4,52	2	10096026	30512843	30384304	1,8	MTC-HSK-A063-14-200-C-0-A-AAA2	30521936	30521937	
63	14	27	34	200	45	10	M10x1	9,9	3	10096026	30279412	30284772	1,8	MTC-HSK-A063-14-200-C-0-A-AAA3	30326660	30326699	
63	16	27	34	95	48	10	M12x1	1,54	1,5	10083240	30512793	30512203	1,0	MTC-HSK-A063-16-095-C-0-A-AAA1	30521938	30521939	
63	16	27	34	95	48	10	M12x1	4,52	2	10083240	30512789	30384304	1,0	MTC-HSK-A063-16-095-C-0-A-AAA2	30521940	30521941	
63	16	27	34	95	48	10	M12x1	9,9	3	10083240	30279413	30284772	1,0	MTC-HSK-A063-16-095-C-0-A-AAA3	30326633	30326671	
63	16	27	34	120	48	10	M12x1	1,54	1,5	10107287	30512814	30512203	1,2	MTC-HSK-A063-16-120-C-0-A-AAA1	30521942	30521943	
63	16	27	34	120	48	10	M12x1	4,52	2	10107287	30512809	30384304	1,2	MTC-HSK-A063-16-120-C-0-A-AAA2	30521944	30521945	
63	16	27	34	120	48	10	M12x1	9,9	3	10107287	30279414	30284772	1,2	MTC-HSK-A063-16-120-C-0-A-AAA3	30326643	30326682	
63	16	27	34	160	48	10	M12x1	1,54	1,5	10107288	30512828	30512203	1,5	MTC-HSK-A063-16-160-C-0-A-AAA1	30521946	30521947	
63	16	27	34	160	48	10	M12x1	4,52	2	10107288	30512824	30384304	1,5	MTC-HSK-A063-16-160-C-0-A-AAA2	30521948	30521949	
63	16	27	34	160	48	10	M12x1	9,9	3	10107288	30279416	30284772	1,5	MTC-HSK-A063-16-160-C-0-A-AAA3	30326651	30326690	

Calculation of the MQL ratio taking into account the inlet cross-section  $A_{IN}$  Semi-standard 1 variant.

# Selection system example for determining the variant

For 2-channel system chucks with diameter 6 - 10 mm

		Mounting diameter										6 - 10		Standard / wrench size 2									
														Semi-standard 1 / wrench size 1.5									
														MQL ratio with wrench size 1.5 too small and with wrench size 2 too large									
		Cooling channel diameter																					
		0,3		0,4		0,5		0,6		0,7		0,8		0,9		1,0		1,1					
		A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio		
Number of cooling channels	1	0,07	21,78	0,13	12,25	0,20	7,84	0,28	5,44	0,38	4,00	0,50	3,06	0,64	2,42	0,79	1,96	0,95	1,62				
	2	0,14	10,89	0,25	6,13	0,39	3,92	0,57	2,72	0,77	2,00	1,01	1,53	1,27	3,56	1,57	2,88	1,90	2,38				
	3	0,21	7,26	0,38	4,08	0,59	2,61	0,85	1,81	1,15	3,92	1,51	3,00	1,91	2,37	2,36	1,92	2,85	1,59				
	4	0,28	5,44	0,50	3,06	0,79	1,96	1,13	4,00	1,54	2,94	2,01	2,25	2,54	1,78	3,14	1,44	3,80	1,19				
	5	0,35	4,36	0,63	2,45	0,98	1,57	1,41	3,20	1,92	2,35	2,51	1,80	3,18	1,42	3,93	1,15	4,75	0,95				
	6	0,42	3,63	0,75	2,04	1,18	3,84	1,70	2,67	2,31	1,96	3,02	1,50	3,82	1,19	4,71	0,96	5,70					
	7	0,49	3,11	0,88	1,75	1,37	3,29	1,98	2,29	2,69	1,68	3,52	1,29	4,45	1,02	5,50		6,65					
	8	0,57	2,72	1,01	1,53	1,57	2,88	2,26	2,00	3,08	1,47	4,02	1,13	5,09	0,89	6,28		7,60					
Number of cooling channels		2,2		2,3		2,4		2,5		2,6		2,7		2,8		2,9		3,0					
		A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>OUT</sub> [mm <sup>2</sup> ]	MQL ratio		
	1	3,80	1,19	4,15	1,09	4,52	1,00	4,91	0,92	5,31		5,73		6,16		6,61		7,07					
	2	7,60		8,31		9,05		9,82		10,62		11,45		12,32		13,21		14,14					
	3	11,40		12,46		13,57		14,73		15,93		17,18		18,47		19,82		21,21					
	4	15,21		16,62		18,10		19,63		21,24		22,90		24,63		26,42		28,27					
	5	19,01		20,77		22,62		24,54		26,55		28,63		30,79		33,03		35,34					
	6	22,81		24,93		27,14		29,45		31,86		34,35		36,95		39,63		42,41					
7	26,61		29,08		31,67		34,36		37,17		40,08		43,10		46,24		49,48						
8	30,41		33,24		36,19		39,27		42,47		45,80		49,26		52,84		56,55						

permissible with limitations

1,2		1,3		1,4		1,5		1,6		1,7		1,8		1,9		2,0		2,1	
A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio
1,13	4,00	1,33	3,41	1,54	2,94	1,77	2,56	2,01	2,25	2,27	1,99	2,54	1,78	2,84	1,60	3,14	1,44	3,46	1,31
2,26	2,00	2,65	1,70	3,08	1,47	3,53	1,28	4,02	1,13	4,54	1,00	5,09	0,89	5,67		6,28		6,93	
3,39	1,33	3,98	1,14	4,62	0,98	5,30		6,03		6,81		7,63		8,51		9,42		10,39	
4,52	1,00	5,31	0,85	6,16		7,07		8,04		9,08		10,18		11,34		12,57		13,85	
5,65		6,64		7,70		8,84		10,05		11,35		12,72		14,18		15,71		17,32	
6,79		7,96		9,24		10,60		12,06		13,62		15,27		17,01		18,85		20,78	
7,92		9,29		10,78		12,37		14,07		15,89		17,81		19,85		21,99		24,25	
9,05		10,62		12,32		14,14		16,08		18,16		20,36		22,68		25,13		27,71	
3,1		3,2		3,3		3,4		3,5		3,6		3,7		3,8		3,9		4,0	
A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio
7,55		8,04		8,55		9,08		9,62		10,18		10,75		11,34		11,95		12,57	
15,10		16,08		17,11		18,16		19,24		20,36		21,50		22,68		23,89		25,13	
22,64		24,13		25,66		27,24		28,86		30,54		32,26		34,02		35,84		37,70	
30,19		32,17		34,21		36,32		38,48		40,72		43,01		45,36		47,78		50,27	
37,74		40,21		42,76		45,40		48,11		50,89		53,76		56,71		59,73		62,83	
45,29		48,25		51,32		54,48		57,73		61,07		64,51		68,05		71,68		75,40	
52,83		56,30		59,87		63,55		67,35		71,25		75,26		79,39		83,62		87,96	
60,38		64,34		68,42		72,63		76,97		81,43		86,02		90,73		95,57		100,53	



Taking into account the MQL ratio to be maintained for the 2-channel system, the tool is not suitable for MQL. It is imperative the tool is changed.



# Selection system example for determining the variant

For 2-channel system chucks with diameter 12 - 18 mm

		Mounting diameter																		12 - 18			
																				Standard / wrench size 3			
																				Semi-standard 1 / wrench size 2			
		Cooling channel diameter																		Semi-standard 2 / wrench size 1.5		MQL ratio with wrench size 1.5 too small and with wrench size 3 too large	
		0,3		0,4		0,5		0,6		0,7		0,8		0,9		1,0		1,1					
		A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio		
Number of cooling channels	1	0,07	21,78	0,13	12,25	0,20	7,84	0,28	5,44	0,38	4,00	0,50	3,06	0,64	2,42	0,79	1,96	0,95	1,62				
	2	0,14	10,89	0,25	6,13	0,39	3,92	0,57	2,72	0,77	2,00	1,01	1,53	1,27	3,56	1,57	2,88	1,90	2,38				
	3	0,21	7,26	0,38	4,08	0,59	2,61	0,85	1,81	1,15	3,92	1,51	3,00	1,91	2,37	2,36	1,92	2,85	3,47				
	4	0,28	5,44	0,50	3,06	0,79	1,96	1,13	4,00	1,54	2,94	2,01	2,25	2,54	3,89	3,14	3,15	3,80	2,60				
	5	0,35	4,36	0,63	2,45	0,98	1,57	1,41	3,20	1,92	2,35	2,51	3,94	3,18	3,11	3,93	2,52	4,75	2,08				
	6	0,42	3,63	0,75	2,04	1,18	3,84	1,70	2,67	2,31	4,29	3,02	3,28	3,82	2,59	4,71	2,10	5,70	1,74				
	7	0,49	3,11	0,88	1,75	1,37	3,29	1,98	2,29	2,69	3,67	3,52	2,81	4,45	2,22	5,50	1,80	6,65	1,49				
	8	0,57	2,72	1,01	1,53	1,57	2,88	2,26	2,00	3,08	3,21	4,02	2,46	5,09	1,94	6,28	1,58	7,60	1,30				
		2,2		2,3		2,4		2,5		2,6		2,7		2,8		2,9		3,0					
		A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio		
Number of cooling channels	1	3,80	2,60	4,15	2,38	4,52	2,19	4,91	2,02	5,31	1,86	5,73	1,73	6,16	1,61	6,61	1,50	7,07	1,40				
	2	7,60	1,30	8,31	1,19	9,05	1,09	9,82	1,01	10,62	0,93	11,45	0,86	12,32		13,21		14,14					
	3	11,40	0,87	12,46		13,57		14,73		15,93		17,18		18,47		19,82		21,21					
	4	15,21		16,62		18,10		19,63		21,24		22,90		24,63		26,42		28,27					
	5	19,01		20,77		22,62		24,54		26,55		28,63		30,79		33,03		35,34					
	6	22,81		24,93		27,14		29,45		31,86		34,35		36,95		39,63		42,41					
	7	26,61		29,08		31,67		34,36		37,17		40,08		43,10		46,24		49,48					
	8	30,41		33,24		36,19		39,27		42,47		45,80		49,26		52,84		56,55					

permissible with limitations

	1,2		1,3		1,4		1,5		1,6		1,7		1,8		1,9		2,0		2,1	
	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio
	1,13	4,00	1,33	3,41	1,54	2,94	1,77	2,56	2,01	2,25	2,27	1,99	2,54	3,89	2,84	3,49	3,14	3,15	3,46	2,86
	2,26	2,00	2,65	3,73	3,08	3,21	3,53	2,80	4,02	2,46	4,54	2,18	5,09	1,94	5,67	1,75	6,28	1,58	6,93	1,43
	3,39	2,92	3,98	2,49	4,62	2,14	5,30	1,87	6,03	1,64	6,81	1,45	7,63	1,30	8,51	1,16	9,42	1,05	10,39	0,95
	4,52	2,19	5,31	1,86	6,16	1,61	7,07	1,40	8,04	1,23	9,08	1,09	10,18	0,97	11,34	0,87	12,57		13,85	
	5,65	1,75	6,64	1,49	7,70	1,29	8,84	1,12	10,05	0,98	11,35	0,87	12,72		14,18		15,71		17,32	
	6,79	1,46	7,96	1,24	9,24	1,07	10,60	0,93	12,06		13,62		15,27		17,01		18,85		20,78	
	7,92	1,25	9,29	1,07	10,78	0,92	12,37		14,07		15,89		17,81		19,85		21,99		24,25	
	9,05	1,09	10,62	0,93	12,32		14,14		16,08		18,16		20,36		22,68		25,13		27,71	
	3,1		3,2		3,3		3,4		3,5		3,6		3,7		3,8		3,9		4,0	
	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio
	7,55	1,31	8,04	1,23	8,55	1,16	9,08	1,09	9,62	1,03	10,18		10,75		11,34		11,95		12,57	
	15,10		16,08		17,11		18,16		19,24		20,36		21,50		22,68		23,89		25,13	
	22,64		24,13		25,66		27,24		28,86		30,54		32,26		34,02		35,84		37,70	
	30,19		32,17		34,21		36,32		38,48		40,72		43,01		45,36		47,78		50,27	
	37,74		40,21		42,76		45,40		48,11		50,89		53,76		56,71		59,73		62,83	
	45,29		48,25		51,32		54,48		57,73		61,07		64,51		68,05		71,68		75,40	
	52,83		56,30		59,87		63,55		67,35		71,25		75,26		79,39		83,62		87,96	
	60,38		64,34		68,42		72,63		76,97		81,43		86,02		90,73		95,57		100,53	



Taking into account the MQL ratio to be maintained for the 2-channel system, the tool is not suitable for MQL. It is imperative the tool is changed.

# Selection system example for determining the variant

For 2-channel system chucks with diameter 20 - 32 mm

		Mounting diameter																20 - 32	
																		Standard / wrench size 4	
																		Semi-standard 1 / wrench size 3	
		Cooling channel diameter																Semi-standard 2 / wrench size 2	
		0,3		0,4		0,5		0,6		0,7		0,8		0,9		1,0		1,1	
		A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio
Number of cooling channels	1	0,07		0,13		0,20		0,28		0,38		0,50		0,64	7,11	0,79	5,76	0,95	4,76
	2	0,14		0,25		0,39		0,57	8,00	0,77	5,88	1,01	4,50	1,27	3,56	1,57	2,88	1,90	2,38
	3	0,21		0,38		0,59	7,68	0,85	5,33	1,15	3,92	1,51	3,00	1,91	2,37	2,36	1,92	2,85	3,47
	4	0,28		0,50		0,79	5,76	1,13	4,00	1,54	2,94	2,01	2,25	2,54	3,89	3,14	3,15	3,80	2,60
	5	0,35		0,63	7,20	0,98	4,61	1,41	3,20	1,92	2,35	2,51	3,94	3,18	3,11	3,93	2,52	4,75	3,65
	6	0,42		0,75	6,00	1,18	3,84	1,70	2,67	2,31	1,96	3,02	3,28	3,82	2,59	4,71	3,68	5,70	3,04
	7	0,49		0,88	5,14	1,37	3,29	1,98	2,29	2,69	3,67	3,52	2,81	4,45	3,90	5,50	3,16	6,65	2,61
	8	0,57	8,00	1,01	4,50	1,57	2,88	2,26	2,00	3,08	3,21	4,02	2,46	5,09	3,41	6,28	2,76	7,60	2,28
Number of cooling channels		2,2		2,3		2,4		2,5		2,6		2,7		2,8		2,9		3,0	
		A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio
	1	3,80	2,60	4,15	2,38	4,52	3,84	4,91	3,53	5,31	3,27	5,73	3,03	6,16	2,82	6,61	2,63	7,07	2,45
	2	7,60	2,28	8,31	2,09	9,05	1,92	9,82	1,77	10,62	1,63	11,45	1,52	12,32	1,41	13,21	1,31	14,14	1,23
	3	11,40	1,52	12,46	1,39	13,57	1,28	14,73	1,18	15,93	1,09	17,18	1,01	18,47	0,94	19,82	0,88	21,21	
	4	15,21	1,14	16,62	1,04	18,10	0,96	19,63	0,88	21,24		22,90		24,63		26,42		28,27	
	5	19,01	0,91	20,77		22,62		24,54		26,55		28,63		30,79		33,03		35,34	
	6	22,81		24,93		27,14		29,45		31,86		34,35		36,95		39,63		42,41	
7	26,61		29,08		31,67		34,36		37,17		40,08		43,10		46,24		49,48		
8	30,41		33,24		36,19		39,27		42,47		45,80		49,26		52,84		56,55		

permissible with limitations

1,2		1,3		1,4		1,5		1,6		1,7		1,8		1,9		2,0		2,1	
A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio
1,13	4,00	1,33	3,41	1,54	2,94	1,77	2,56	2,01	2,25	2,27	1,99	2,54	3,89	2,84	3,49	3,14	3,15	3,46	2,86
2,26	2,00	2,65	3,73	3,08	3,21	3,53	2,80	4,02	2,46	4,54	3,82	5,09	3,41	5,67	3,06	6,28	2,76	6,93	2,50
3,39	2,92	3,98	2,49	4,62	3,76	5,30	3,27	6,03	2,88	6,81	2,55	7,63	2,27	8,51	2,04	9,42	1,84	10,39	1,67
4,52	3,84	5,31	3,27	6,16	2,82	7,07	2,45	8,04	2,16	9,08	1,91	10,18	1,70	11,34	1,53	12,57	1,38	13,85	1,25
5,65	3,07	6,64	2,61	7,70	2,25	8,84	1,96	10,05	1,73	11,35	1,53	12,72	1,36	14,18	1,22	15,71	1,10	17,32	1,00
6,79	2,56	7,96	2,18	9,24	1,88	10,60	1,64	12,06	1,44	13,62	1,27	15,27	1,14	17,01	1,02	18,85		20,78	
7,92	2,19	9,29	1,87	10,78	1,61	12,37	1,40	14,07	1,23	15,89	1,09	17,81		19,85		21,99		24,25	
9,05	1,92	10,62	1,63	12,32	1,41	14,14	1,23	16,08	1,08	18,16		20,36		22,68		25,13		27,71	
3,1		3,2		3,3		3,4		3,5		3,6		3,7		3,8		3,9		4,0	
A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio	A <sub>out</sub> [mm <sup>2</sup> ]	MQL ratio
7,55	2,30	8,04	2,16	8,55	2,03	9,08	1,91	9,62	1,80	10,18	1,70	10,75	1,61	11,34	1,53	11,95	1,45	12,57	1,38
15,10	1,15	16,08	1,08	17,11	1,01	18,16	0,96	19,24	0,90	20,36	0,85	21,50		22,68		23,89		25,13	
22,64		24,13		25,66		27,24		28,86		30,54		32,26		34,02		35,84		37,70	
30,19		32,17		34,21		36,32		38,48		40,72		43,01		45,36		47,78		50,27	
37,74		40,21		42,76		45,40		48,11		50,89		53,76		56,71		59,73		62,83	
45,29		48,25		51,32		54,48		57,73		61,07		64,51		68,05		71,68		75,40	
52,83		56,30		59,87		63,55		67,35		71,25		75,26		79,39		83,62		87,96	
60,38		64,34		68,42		72,63		76,97		81,43		86,02		90,73		95,57		100,53	

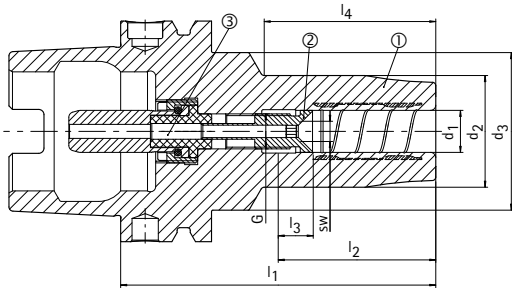


Taking into account the MQL ratio to be maintained for the 2-channel system, the tool is not suitable for MQL. It is imperative the tool is changed.

## 2-channel system MQL HighTorque Chuck HTC

for automatic tool change, with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



- ① Hydraulic chucks, HSK, MQL, body material | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, automatic | CU

Variant*	HSK-A	Dimensions							G	A <sub>IN</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
63	6	32	50	80	36	10	26	M10x1	1,54	1,5	30487683	30512784	30512203	1,1	HTC-HSK-A063-06-080-C-0-A-AAA1	30521647	30521674	
63	6	32	50	80	36	10	26	M10x1	4,52	2	30487683	30384039	30384304	1,1	HTC-HSK-A063-06-080-C-0-A-AAA2	30487763	30487773	
63	8	34	50	80	36	10	27	M10x1	1,54	1,5	30487684	30512785	30512203	1,1	HTC-HSK-A063-08-080-C-0-A-AAA1	30521650	30521675	
63	8	34	50	80	36	10	27	M10x1	4,52	2	30487684	30384043	30384304	1,1	HTC-HSK-A063-08-080-C-0-A-AAA2	30487764	30487774	
63	10	36	50	85	40	10	32	M10x1	1,54	1,5	30487685	30512786	30512203	1,2	HTC-HSK-A063-10-085-C-0-A-AAA1	30521659	30521676	
63	10	36	50	85	40	10	32	M10x1	4,52	2	30487685	30384011	30384304	1,2	HTC-HSK-A063-10-085-C-0-A-AAA2	30487765	30487775	
63	12	38	52,5	90	45	10	37	M10x1	1,54	1,5	30487686	30512791	30512203	1,3	HTC-HSK-A063-12-090-C-0-A-AAA1	30521660	30521677	
63	12	38	52,5	90	45	10	37	M10x1	4,52	2	30487686	30512787	30384304	1,3	HTC-HSK-A063-12-090-C-0-A-AAA2	30521661	30521678	
63	12	38	52,5	90	45	10	37	M10x1	9,9	3	30487686	30279400	30284772	1,3	HTC-HSK-A063-12-090-C-0-A-AAA3	30487766	30487776	
63	14	40	52,5	90	45	10	37	M10x1	1,54	1,5	30487687	30512792	30512203	1,3	HTC-HSK-A063-14-090-C-0-A-AAA1	30521662	30521679	
63	14	40	52,5	90	45	10	37	M10x1	4,52	2	30487687	30512788	30384304	1,3	HTC-HSK-A063-14-090-C-0-A-AAA2	30521663	30521680	
63	14	40	52,5	90	45	10	37	M10x1	9,9	3	30487687	30279407	30284772	1,3	HTC-HSK-A063-14-090-C-0-A-AAA3	30487767	30487777	
63	16	42	52,5	95	48	10	42	M12x1	1,54	1,5	30487688	30512793	30512203	1,5	HTC-HSK-A063-16-095-C-0-A-AAA1	30521664	30521681	
63	16	42	52,5	95	48	10	42	M12x1	4,52	2	30487688	30512789	30384304	1,5	HTC-HSK-A063-16-095-C-0-A-AAA2	30521665	30521682	
63	16	42	52,5	95	48	10	42	M12x1	9,9	3	30487688	30279413	30284772	1,5	HTC-HSK-A063-16-095-C-0-A-AAA3	30487768	30487778	
63	18	44	52,5	95	48	10	42	M12x1	1,54	1,5	30487689	30512794	30512203	1,5	HTC-HSK-A063-18-095-C-0-A-AAA1	30521666	30521683	
63	18	44	52,5	95	48	10	42	M12x1	4,52	2	30487689	30512790	30384304	1,5	HTC-HSK-A063-18-095-C-0-A-AAA2	30521667	30521684	
63	18	44	52,5	95	48	10	42	M12x1	9,9	3	30487689	30279420	30284772	1,5	HTC-HSK-A063-18-095-C-0-A-AAA3	30487769	30487779	
63	20	48	52,5	100	50	10	45	M16x1	4,52	2	30487690	30512798	30384304	1,5	HTC-HSK-A063-20-100-C-0-A-AAA2	30521668	30521685	
63	20	48	52,5	100	50	10	45	M16x1	9,9	3	30487690	30512795	30284772	1,5	HTC-HSK-A063-20-100-C-0-A-AAA3	30521669	30521686	
63	20	48	52,5	100	50	10	45	M16x1	17,35	4	30487690	30279429	30279444	1,5	HTC-HSK-A063-20-100-C-0-A-AAA4	30487770	30487780	
63	25	57	53	115	56	10	62	M16x1	4,52	2	30487691	30512799	30384304	2,1	HTC-HSK-A063-25-115-C-0-A-AAA2	30521670	30521687	
63	25	57	53	115	56	10	62	M16x1	9,9	3	30487691	30512796	30284772	2,1	HTC-HSK-A063-25-115-C-0-A-AAA3	30521671	30521688	
63	25	57	53	115	56	10	62	M16x1	17,35	4	30487691	30279434	30279444	2,1	HTC-HSK-A063-25-115-C-0-A-AAA4	30487771	30487781	
63	32	63	53	120	60	10	62	M16x1	4,52	2	30487692	30512800	30384304	2,3	HTC-HSK-A063-32-120-C-0-A-AAA2	30521672	30521689	
63	32	63	53	120	60	10	62	M16x1	9,9	3	30487692	30512797	30284772	2,3	HTC-HSK-A063-32-120-C-0-A-AAA3	30521673	30521690	
63	32	63	53	120	60	10	62	M16x1	17,35	4	30487692	30279441	30279444	2,3	HTC-HSK-A063-32-120-C-0-A-AAA4	30487772	30487782	
100	6	32	50	85	36	10	26	M10x1	1,54	1,5	30487693	30512784	30521106	2,8	HTC-HSK-A100-06-085-C-0-A-AAA1	30521691	30521708	
100	6	32	50	85	36	10	26	M10x1	4,52	2	30487693	30384039	30384306	2,8	HTC-HSK-A100-06-085-C-0-A-AAA2	30487783	30487793	
100	8	34	50	85	36	10	27	M10x1	1,54	1,5	30487694	30512785	30521106	2,8	HTC-HSK-A100-08-085-C-0-A-AAA1	30521692	30521709	
100	8	34	50	85	36	10	27	M10x1	4,52	2	30487694	30384043	30384306	2,8	HTC-HSK-A100-08-085-C-0-A-AAA2	30487784	30487794	
100	10	36	50	90	40	10	32	M10x1	1,54	1,5	30487695	30512786	30521106	2,9	HTC-HSK-A100-10-090-C-0-A-AAA1	30521693	30521710	

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

**2-channel system MQL HighTorque Chuck HTC | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions							G	A <sub>IN</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	100	10	36	50	90	40	10	32	M10x1	4,52	2	30487695	30384011	30384306	2,9	HTC-HSK-A100-10-090-C-0-A-AAA2	30487785	30487795
	100	12	38	52,5	95	45	10	37	M10x1	1,54	1,5	30487696	30512791	30521106	2,9	HTC-HSK-A100-12-095-C-0-A-AAA1	30521694	30521711
	100	12	38	52,5	95	45	10	37	M10x1	4,52	2	30487696	30512787	30384306	2,9	HTC-HSK-A100-12-095-C-0-A-AAA2	30521695	30521712
	100	12	38	52,5	95	45	10	37	M10x1	9,9	3	30487696	30279400	30297309	2,9	HTC-HSK-A100-12-095-C-0-A-AAA3	30487786	30487796
	100	14	40	52,5	95	45	10	37	M10x1	1,54	1,5	30487697	30512792	30521106	2,9	HTC-HSK-A100-14-095-C-0-A-AAA1	30521696	30521713
	100	14	40	52,5	95	45	10	37	M10x1	4,52	2	30487697	30512788	30384306	2,9	HTC-HSK-A100-14-095-C-0-A-AAA2	30521697	30521714
	100	14	40	52,5	95	45	10	37	M10x1	9,9	3	30487697	30279407	30297309	2,9	HTC-HSK-A100-14-095-C-0-A-AAA3	30487787	30487797
	100	16	42	52,5	100	48	10	42	M12x1	1,54	1,5	30487698	30512793	30521106	3,0	HTC-HSK-A100-16-100-C-0-A-AAA1	30521698	30521715
	100	16	42	52,5	100	48	10	42	M12x1	4,52	2	30487698	30512789	30384306	3,0	HTC-HSK-A100-16-100-C-0-A-AAA2	30521699	30521716
	100	16	42	52,5	100	48	10	42	M12x1	9,9	3	30487698	30279413	30297309	3,0	HTC-HSK-A100-16-100-C-0-A-AAA3	30487788	30487798
	100	18	44	52,5	100	48	10	42	M12x1	1,54	1,5	30487699	30512794	30521106	3,0	HTC-HSK-A100-18-100-C-0-A-AAA1	30521700	30521717
	100	18	44	52,5	100	48	10	42	M12x1	4,52	2	30487699	30512790	30384306	3,0	HTC-HSK-A100-18-100-C-0-A-AAA2	30521701	30521718
	100	18	44	52,5	100	48	10	42	M12x1	9,9	3	30487699	30279420	30297309	3,0	HTC-HSK-A100-18-100-C-0-A-AAA3	30487789	30487799
	100	20	48	52,5	105	50	10	45	M16x1	4,52	2	30487700	30512798	30384306	3,0	HTC-HSK-A100-20-105-C-0-A-AAA2	30521702	30521719
	100	20	48	52,5	105	50	10	45	M16x1	9,9	3	30487700	30512795	30297309	3,0	HTC-HSK-A100-20-105-C-0-A-AAA3	30521703	30521720
	100	20	48	52,5	105	50	10	45	M16x1	17,35	4	30487700	30279429	30297310	3,0	HTC-HSK-A100-20-105-C-0-A-AAA4	30487790	30487800
	100	25	57	63	115	56	10	60	M16x1	4,52	2	30487701	30512799	30384306	3,8	HTC-HSK-A100-25-115-C-0-A-AAA2	30521704	30521721
	100	25	57	63	115	56	10	60	M16x1	9,9	3	30487701	30512796	30297309	3,8	HTC-HSK-A100-25-115-C-0-A-AAA3	30521705	30521722
	100	25	57	63	115	56	10	60	M16x1	17,35	4	30487701	30279434	30297310	3,8	HTC-HSK-A100-25-115-C-0-A-AAA4	30487791	30487801
	100	32	63	75	120	60	10	60	M16x1	4,52	2	30487702	30512800	30384306	4,0	HTC-HSK-A100-32-120-C-0-A-AAA2	30521706	30521723
	100	32	63	75	120	60	10	60	M16x1	9,9	3	30487702	30512797	30297309	4,0	HTC-HSK-A100-32-120-C-0-A-AAA3	30521707	30521724
	100	32	63	75	120	60	10	60	M16x1	17,35	4	30487702	30279441	30297310	4,0	HTC-HSK-A100-32-120-C-0-A-AAA4	30487792	30487802

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter d<sub>1</sub> = 32 mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: Tool body, length adjustment screw and coolant unit as assembly.

These components can also be ordered separately. (see table)

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA.

With a projection length of 2.5 × D (max. 50 mm) radial run-out accuracy 3 μm.

On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

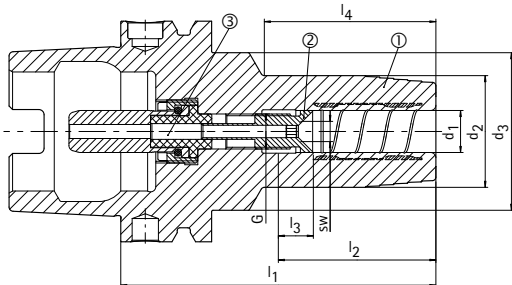
Chip version: Equipped with Balluff code carrier, see section "Accessories, spare parts and measuring equipment". Further code carriers on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

## 2-channel system MQL hydraulic chucks HydroChuck

for automatic tool change, with axial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



- ① Hydraulic chucks, HSK, MQL, body material | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, automatic | CU

Variant*	HSK-A	Dimensions							G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	32	6	26	40	80	36	10	29	M5	1,54	1,5	30386521	30513620	30521101	0,5	MHC-HSK-A032-06-080-C-0-A-AAA1	30522726	30522730
	32	6	26	40	80	36	10	29	M5	4,52	2	30386521	30383955	30384301	0,5	MHC-HSK-A032-06-080-C-0-A-AAA2	30386241	30386245
	32	6	26	32	120	36	10	71,5	M5	1,54	1,5	30464553	30512718	30521101	0,5	MHC-HSK-A032-06-120-C-0-A-AAA1	30522734	30522738
	32	6	26	32	120	36	10	71,5	M5	4,52	2	30464553	30383956	30384301	0,5	MHC-HSK-A032-06-120-C-0-A-AAA2	30485260	30485264
	32	6	26	32	160	36	10	111,5	M5	1,54	1,5	30464557	30512722	30521101	0,5	MHC-HSK-A032-06-160-C-0-A-AAA1	30522742	30522746
	32	6	26	32	160	36	10	111,5	M5	4,52	2	30464557	30484932	30384301	0,5	MHC-HSK-A032-06-160-C-0-A-AAA2	30485268	30485272
	32	8	26	40	80	36	10	29,5	M7	1,54	1,5	30386522	30512715	30521101	0,5	MHC-HSK-A032-08-080-C-0-A-AAA1	30522727	30522731
	32	8	26	40	80	36	10	29,5	M7	4,52	2	30386522	30383957	30384301	0,5	MHC-HSK-A032-08-080-C-0-A-AAA2	30386242	30386246
	32	8	26	32	120	36	10	72	M7	1,54	1,5	30464554	30512719	30521101	0,5	MHC-HSK-A032-08-120-C-0-A-AAA1	30522735	30522739
	32	8	26	32	120	36	10	72	M7	4,52	2	30464554	30383958	30384301	0,5	MHC-HSK-A032-08-120-C-0-A-AAA2	30485261	30485265
	32	8	26	32	160	36	10	112	M7	1,54	1,5	30464558	30512723	30521101	0,6	MHC-HSK-A032-08-160-C-0-A-AAA1	30522743	30485272
	32	8	26	32	160	36	10	112	M7	4,52	2	30464558	30484933	30384301	0,6	MHC-HSK-A032-08-160-C-0-A-AAA2	30485269	30522747
	32	10	30	40	85	40	10	35	M8x1	1,54	1,5	30386523	30512716	30521101	0,6	MHC-HSK-A032-10-085-C-0-A-AAA1	30522728	30522732
	32	10	30	40	85	40	10	35	M8x1	4,52	2	30386523	30383951	30384301	0,6	MHC-HSK-A032-10-085-C-0-A-AAA2	30386243	30386247
	32	10	30	33	120	40	10	72	M8x1	1,54	1,5	30464555	30512720	30521101	0,6	MHC-HSK-A032-10-120-C-0-A-AAA1	30522736	30522740
	32	10	30	33	120	40	10	72	M8x1	4,52	2	30464555	30383952	30384301	0,6	MHC-HSK-A032-10-120-C-0-A-AAA2	30485262	30485266
	32	10	30	33	160	40	10	112	M8x1	1,54	1,5	30464559	30512724	30521101	0,7	MHC-HSK-A032-10-160-C-0-A-AAA1	30522744	30522748
	32	10	30	33	160	40	10	112	M8x1	4,52	2	30464559	30484936	30384301	0,7	MHC-HSK-A032-10-160-C-0-A-AAA2	30485270	30485274
	32	12	32	40	90	45	10	43	M10x1	1,54	1,5	30386524	30512717	30521101	0,8	MHC-HSK-A032-12-090-C-0-A-AAA1	30522729	30522733
	32	12	32	40	90	45	10	43	M10x1	4,52	2	30386524	30383953	30384301	0,8	MHC-HSK-A032-12-090-C-0-A-AAA2	30386244	30386248
	32	12	32	35	120	45	10	72	M10x1	1,54	1,5	30464556	30512721	30521101	0,9	MHC-HSK-A032-12-120-C-0-A-AAA1	30522737	30522741
	32	12	32	35	120	45	10	72	M10x1	4,52	2	30464556	30383954	30384301	0,9	MHC-HSK-A032-12-120-C-0-A-AAA2	30485263	30485267
	32	12	32	35	160	45	10	112	M10x1	1,54	1,5	30464560	30512725	30521101	0,9	MHC-HSK-A032-12-160-C-0-A-AAA1	30522745	30522749
	32	12	32	35	160	45	10	112	M10x1	4,52	2	30464560	30484939	30384301	0,9	MHC-HSK-A032-12-160-C-0-A-AAA2	30485271	30485275
	40	6	26	33,5	80	36	10	49	M7	1,54	1,5	30386529	30512726	30521102	0,5	MHC-HSK-A040-06-080-C-0-A-AAA1	30522750	30522759
	40	6	26	33,5	80	36	10	49	M7	4,52	2	30386529	30383971	30384302	0,5	MHC-HSK-A040-06-080-C-0-A-AAA2	30386249	30386255
	40	6	26	33,5	120	36	10	86	M5	1,54	1,5	30464569	30512735	30521102	0,6	MHC-HSK-A040-06-120-C-0-A-AAA1	30522768	30522777
	40	6	26	33,5	120	36	10	86	M5	4,52	2	30464569	30383972	30384302	0,6	MHC-HSK-A040-06-120-C-0-A-AAA2	30485276	30485282
	40	6	26	33,5	160	36	10	118	M5	1,54	1,5	30464575	30512744	30521102	0,8	MHC-HSK-A040-06-160-C-0-A-AAA1	30522786	30522795
	40	6	26	33,5	160	36	10	118	M5	4,52	2	30464575	30383973	30384302	0,8	MHC-HSK-A040-06-160-C-0-A-AAA2	30485288	30485294
	40	8	28	33,5	80	36	10	50,5	M7	1,54	1,5	30386530	30512727	30521102	0,5	MHC-HSK-A040-08-080-C-0-A-AAA1	30522751	30522760
	40	8	28	33,5	80	36	10	50,5	M7	4,52	2	30386530	30383974	30384302	0,5	MHC-HSK-A040-08-080-C-0-A-AAA2	30386250	30386256

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1

Variant*	HSK-A	Dimensions							G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	40	8	28	33,5	120	36	10	86,5	M7	1,54	1,5	30464570	30512736	30521102	0,6	MHC-HSK-A040-08-120-C-0-A-AAA1	30522769	30522778
	40	8	28	33,5	120	36	10	86,5	M7	4,52	2	30464570	30383975	30384302	0,6	MHC-HSK-A040-08-120-C-0-A-AAA2	30485277	30485283
	40	8	28	33,5	160	36	10	118	M7	1,54	1,5	30464576	30512745	30521102	0,8	MHC-HSK-A040-08-160-C-0-A-AAA1	30522787	30522796
	40	8	28	33,5	160	36	10	118	M7	4,52	2	30464576	30383976	30384302	0,8	MHC-HSK-A040-08-160-C-0-A-AAA2	30485289	30485295
	40	10	30	33,5	80	40	10	52	M8x1	1,54	1,5	30386531	30512728	30521102	0,5	MHC-HSK-A040-10-080-C-0-A-AAA1	30522752	30522761
	40	10	30	33,5	80	40	10	52	M8x1	4,52	2	30386531	30383959	30384302	0,5	MHC-HSK-A040-10-080-C-0-A-AAA2	30386251	30386257
	40	10	30	33,5	120	40	10	87	M8x1	1,54	1,5	30464571	30512737	30521102	0,8	MHC-HSK-A040-10-120-C-0-A-AAA1	30522770	30522779
	40	10	30	33,5	120	40	10	87	M8x1	4,52	2	30464571	30383960	30384302	0,8	MHC-HSK-A040-10-120-C-0-A-AAA2	30485278	30485284
	40	10	30	33,5	160	40	10	127	M8x1	1,54	1,5	30464577	30512746	30521102	1,0	MHC-HSK-A040-10-160-C-0-A-AAA1	30522788	30522797
	40	10	30	33,5	160	40	10	127	M8x1	4,52	2	30464577	30383961	30384302	1,0	MHC-HSK-A040-10-160-C-0-A-AAA2	30485290	30485296
	40	12	32	33,5	90	45	10	62	M10x1	1,54	1,5	30386532	30512732	30521102	0,6	MHC-HSK-A040-12-090-C-0-A-AAA1	30522753	30522762
	40	12	32	33,5	90	45	10	62	M10x1	4,52	2	30386532	30512729	30384302	0,6	MHC-HSK-A040-12-090-C-0-A-AAA2	30522754	30522763
	40	12	32	33,5	90	45	10	62	M10x1	9,9	3	30386532	30280050	30297304	0,6	MHC-HSK-A040-12-090-C-0-A-AAA3	30386252	30386258
	40	12	32	33,5	120	45	10	91,5	M10x1	1,54	1,5	30464572	30512741	30521102	0,7	MHC-HSK-A040-12-120-C-0-A-AAA1	30522771	30522780
	40	12	32	33,5	120	45	10	91,5	M10x1	4,52	2	30464572	30512738	30384302	0,7	MHC-HSK-A040-12-120-C-0-A-AAA2	30522772	30522781
	40	12	32	33,5	120	45	10	91,5	M10x1	9,9	3	30464572	30302842	30297304	0,7	MHC-HSK-A040-12-120-C-0-A-AAA3	30485279	30485285
	40	12	32	33,5	160	45	10	126	M10x1	1,54	1,5	30464578	30512750	30521102	1,0	MHC-HSK-A040-12-160-C-0-A-AAA1	30522789	30522798
	40	12	32	33,5	160	45	10	126	M10x1	4,52	2	30464578	30512747	30384302	1,0	MHC-HSK-A040-12-160-C-0-A-AAA2	30522790	30522799
	40	12	32	33,5	160	45	10	126	M10x1	9,9	3	30464578	30302848	30297304	1,0	MHC-HSK-A040-12-160-C-0-A-AAA3	30485291	30485297
	40	14	34	45	90	45	10	39,5	M10x1	1,54	1,5	30386533	30512733	30521102	0,6	MHC-HSK-A040-14-090-C-0-A-AAA1	30522755	30522764
	40	14	34	45	90	45	10	39,5	M10x1	4,52	2	30386533	30512730	30384302	0,6	MHC-HSK-A040-14-090-C-0-A-AAA2	30522756	30522765
	40	14	34	45	90	45	10	39,5	M10x1	9,9	3	30386533	30280051	30297304	0,6	MHC-HSK-A040-14-090-C-0-A-AAA3	30386253	30386259
	40	14	34	-	120	45	10	100	M10x1	1,54	1,5	30464573	30512742	30521102	0,8	MHC-HSK-A040-14-120-C-0-A-AAA1	30522773	30522782
	40	14	34	-	120	45	10	100	M10x1	4,52	2	30464573	30512739	30384302	0,8	MHC-HSK-A040-14-120-C-0-A-AAA2	30522774	30522783
	40	14	34	-	120	45	10	100	M10x1	9,9	3	30464573	30302843	30297304	0,8	MHC-HSK-A040-14-120-C-0-A-AAA3	30485280	30485286
	40	14	34	-	160	45	10	140	M10x1	1,54	1,5	30464579	30512751	30521102	1,1	MHC-HSK-A040-14-160-C-0-A-AAA1	30522791	30522800
	40	14	34	-	160	45	10	140	M10x1	4,52	2	30464579	30512748	30384302	1,1	MHC-HSK-A040-14-160-C-0-A-AAA2	30522792	30522801
	40	14	34	-	160	45	10	140	M10x1	9,9	3	30464579	30302849	30297304	1,1	MHC-HSK-A040-14-160-C-0-A-AAA3	30485292	30485298
	40	16	38	50	90	48	10	39	M12x1	1,54	1,5	30386534	30512734	30521102	0,6	MHC-HSK-A040-16-090-C-0-A-AAA1	30522757	30522766
	40	16	38	50	90	48	10	39	M12x1	4,52	2	30386534	30512731	30384302	0,6	MHC-HSK-A040-16-090-C-0-A-AAA2	30522758	30522767
	40	16	38	50	90	48	10	39	M12x1	9,9	3	30386534	30280052	30297304	0,6	MHC-HSK-A040-16-090-C-0-A-AAA3	30386254	30386260
	40	16	38	-	120	48	10	100	M12x1	1,54	1,5	30464574	30512743	30521102	0,8	MHC-HSK-A040-16-120-C-0-A-AAA1	30522775	30522784
	40	16	38	-	120	48	10	100	M12x1	4,52	2	30464574	30512740	30384302	0,8	MHC-HSK-A040-16-120-C-0-A-AAA2	30522776	30522785
	40	16	38	-	120	48	10	100	M12x1	9,9	3	30464574	30302844	30297304	0,8	MHC-HSK-A040-16-120-C-0-A-AAA3	30485281	30485287
	40	16	38	-	160	48	10	140	M12x1	1,54	1,5	30464580	30512752	30521102	1,1	MHC-HSK-A040-16-160-C-0-A-AAA1	30522793	30522802
	40	16	38	-	160	48	10	140	M12x1	4,52	2	30464580	30512749	30384302	1,1	MHC-HSK-A040-16-160-C-0-A-AAA2	30522794	30522803
	40	16	38	-	160	48	10	140	M12x1	9,9	3	30464580	30302850	30297304	1,1	MHC-HSK-A040-16-160-C-0-A-AAA3	30485293	30485299
	50	6	26	40	80	36	10	38,5	M8x1	1,54	1,5	30386541	30512753	30521103	0,6	MHC-HSK-A050-06-080-C-0-A-AAA1	30522804	30522817
	50	6	26	40	80	36	10	38,5	M8x1	4,52	2	30386541	30384009	30384303	0,6	MHC-HSK-A050-06-080-C-0-A-AAA2	30386261	30386269
	50	6	26	35	120	36	10	80	M5	1,54	1,5	30464593	30512756	30521103	0,8	MHC-HSK-A050-06-120-C-0-A-AAA1	30522830	30522843
	50	6	26	35	120	36	10	80	M5	4,52	2	30464593	30383998	30384303	0,8	MHC-HSK-A050-06-120-C-0-A-AAA2	30485300	30485308
	50	6	26	35	160	36	10	118	M5	1,54	1,5	30464601	30512770	30521103	1,0	MHC-HSK-A050-06-160-C-0-A-AAA1	30522856	30522869
	50	6	26	35	160	36	10	118	M5	4,52	2	30464601	30383999	30384303	1,0	MHC-HSK-A050-06-160-C-0-A-AAA2	30485316	30485324
	50	8	28	40	80	36	10	39	M8x1	1,54	1,5	30386542	30512754	30521103	0,6	MHC-HSK-A050-08-080-C-0-A-AAA1	30522805	30522818
	50	8	28	40	80	36	10	39	M8x1	4,52	2	30386542	30384010	30384303	0,6	MHC-HSK-A050-08-080-C-0-A-AAA2	30386262	30386270
	50	8	28	35	120	36	10	80	M7	1,54	1,5	30464594	30512757	30521103	0,8	MHC-HSK-A050-08-120-C-0-A-AAA1	30522831	30522844
	50	8	28	35	120	36	10	80	M7	4,52	2	30464594	30384001	30384303	0,8	MHC-HSK-A050-08-120-C-0-A-AAA2	30485301	30485309
	50	8	28	35	160	36	10	118	M7	1,54	1,5	30464602	30512771	30521103	1,0	MHC-HSK-A050-08-160-C-0-A-AAA1	30522857	30522870

\* The exact determination of the variant can be found in the selection system  
2-channel system chucks. The preferred series is marked with a green

Continued on next page.



**2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions							G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	50	8	28	35	160	36	10	118	M7	4,52	2	30464602	30384002	30384303	1,0	MHC-HSK-A050-08-160-C-0-A-AAA2	30485317	30485325
	50	10	30	40	85	40	10	44,5	M8x1	1,54	1,5	30386543	30512755	30521103	0,7	MHC-HSK-A050-10-085-C-0-A-AAA1	30522806	30522819
	50	10	30	40	85	40	10	44,5	M8x1	4,52	2	30386543	30384004	30384303	0,7	MHC-HSK-A050-10-085-C-0-A-AAA2	30386263	30386271
	50	10	30	38	120	40	10	80	M8x1	1,54	1,5	30464595	30512758	30521103	0,9	MHC-HSK-A050-10-120-C-0-A-AAA1	30522832	30522845
	50	10	30	38	120	40	10	80	M8x1	4,52	2	30464595	30383977	30384303	0,9	MHC-HSK-A050-10-120-C-0-A-AAA2	30485302	30485310
	50	10	30	38	160	40	10	120	M8x1	1,54	1,5	30464603	30512772	30521103	1,2	MHC-HSK-A050-10-160-C-0-A-AAA1	30522858	30522871
	50	10	30	38	160	40	10	120	M8x1	4,52	2	30464603	30383978	30384303	1,2	MHC-HSK-A050-10-160-C-0-A-AAA2	30485318	30485326
	50	12	32	40	90	45	10	53	M10x1	1,54	1,5	30386544	30512791	30521103	0,7	MHC-HSK-A050-12-090-C-0-A-AAA1	30522807	30522820
	50	12	32	40	90	45	10	53	M10x1	4,52	2	30386544	30512787	30384303	0,7	MHC-HSK-A050-12-090-C-0-A-AAA2	30522808	30522821
	50	12	32	40	90	45	10	53	M10x1	9,9	3	30386544	30279400	30297305	0,7	MHC-HSK-A050-12-090-C-0-A-AAA3	30386264	30386272
	50	12	32	38	120	45	10	81	M10x1	1,54	1,5	30464596	30512763	30521103	0,9	MHC-HSK-A050-12-120-C-0-A-AAA1	30522833	30522846
	50	12	32	38	120	45	10	81	M10x1	4,52	2	30464596	30512759	30384303	0,9	MHC-HSK-A050-12-120-C-0-A-AAA2	30522834	30522847
	50	12	32	38	120	45	10	81	M10x1	9,9	3	30464596	30302854	30297305	0,9	MHC-HSK-A050-12-120-C-0-A-AAA3	30485303	30485311
	50	12	32	38	160	45	10	121	M10x1	1,54	1,5	30464604	30512777	30521103	1,1	MHC-HSK-A050-12-160-C-0-A-AAA1	30522859	30522872
	50	12	32	38	160	45	10	121	M10x1	4,52	2	30464604	30512773	30384303	1,1	MHC-HSK-A050-12-160-C-0-A-AAA2	30522860	30522873
	50	12	32	38	160	45	10	121	M10x1	9,9	3	30464604	30302862	30297305	1,1	MHC-HSK-A050-12-160-C-0-A-AAA3	30485319	30485327
	50	14	34	40	90	45	10	54,5	M10x1	1,54	1,5	30386545	30512792	30521103	0,8	MHC-HSK-A050-14-090-C-0-A-AAA1	30522809	30522822
	50	14	34	40	90	45	10	54,5	M10x1	4,52	2	30386545	30512788	30384303	0,8	MHC-HSK-A050-14-090-C-0-A-AAA2	30522810	30522823
	50	14	34	40	90	45	10	54,5	M10x1	9,9	3	30386545	30279407	30297305	0,8	MHC-HSK-A050-14-090-C-0-A-AAA3	30386265	30386273
	50	14	34	38	120	45	10	81,5	M10x1	1,54	1,5	30464597	30512764	30521103	1,0	MHC-HSK-A050-14-120-C-0-A-AAA1	30522835	30522848
	50	14	34	38	120	45	10	81,5	M10x1	4,52	2	30464597	30512760	30384303	1,0	MHC-HSK-A050-14-120-C-0-A-AAA2	30522836	30522849
	50	14	34	38	120	45	10	81,5	M10x1	9,9	3	30464597	30302855	30297305	1,0	MHC-HSK-A050-14-120-C-0-A-AAA3	30485304	30485312
	50	14	34	38	160	45	10	121,5	M10x1	1,54	1,5	30464605	30512778	30521103	1,2	MHC-HSK-A050-14-160-C-0-A-AAA1	30522861	30522874
	50	14	34	38	160	45	10	121,5	M10x1	4,52	2	30464605	30512774	30384303	1,2	MHC-HSK-A050-14-160-C-0-A-AAA2	30522862	30522875
	50	14	34	38	160	45	10	121,5	M10x1	9,9	3	30464605	30302863	30297305	1,2	MHC-HSK-A050-14-160-C-0-A-AAA3	30485320	30485328
	50	16	38	41,5	95	48	10	61	M12x1	1,54	1,5	30386546	30512793	30521103	0,8	MHC-HSK-A050-16-095-C-0-A-AAA1	30522811	30522824
	50	16	38	41,5	95	48	10	61	M12x1	4,52	2	30386546	30512789	30384303	0,8	MHC-HSK-A050-16-095-C-0-A-AAA2	30522812	30522825
	50	16	38	41,5	95	48	10	61	M12x1	9,9	3	30386546	30279413	30297305	0,8	MHC-HSK-A050-16-095-C-0-A-AAA3	30386266	30386274
	50	16	38	-	120	48	10	94	M12x1	1,54	1,5	30464598	30512765	30521103	0,9	MHC-HSK-A050-16-120-C-0-A-AAA1	30522837	30522850
	50	16	38	-	120	48	10	94	M12x1	4,52	2	30464598	30512761	30384303	0,9	MHC-HSK-A050-16-120-C-0-A-AAA2	30522838	30522851
	50	16	38	-	120	48	10	94	M12x1	9,9	3	30464598	30302856	30297305	0,9	MHC-HSK-A050-16-120-C-0-A-AAA3	30485305	30485313
	50	16	38	-	160	48	10	134	M12x1	1,54	1,5	30464606	30512779	30521103	1,2	MHC-HSK-A050-16-160-C-0-A-AAA1	30522863	30522876
	50	16	38	-	160	48	10	134	M12x1	4,52	2	30464606	30512775	30384303	1,2	MHC-HSK-A050-16-160-C-0-A-AAA2	30522864	30522877
	50	16	38	-	160	48	10	134	M12x1	9,9	3	30464606	30302864	30297305	1,2	MHC-HSK-A050-16-160-C-0-A-AAA3	30485321	30485329
	50	18	40	41,5	95	48	10	62,5	M12x1	1,54	1,5	30386547	30512794	30521103	0,9	MHC-HSK-A050-18-095-C-0-A-AAA1	30522813	30522826
	50	18	40	41,5	95	48	10	62,5	M12x1	4,52	2	30386547	30512790	30384303	0,9	MHC-HSK-A050-18-095-C-0-A-AAA2	30522814	30522827
	50	18	40	41,5	95	48	10	62,5	M12x1	9,9	3	30386547	30279420	30297305	0,9	MHC-HSK-A050-18-095-C-0-A-AAA3	30386267	30386275
	50	18	40	-	120	48	10	94	M12x1	1,54	1,5	30464599	30512766	30521103	1,2	MHC-HSK-A050-18-120-C-0-A-AAA2	30522839	30522852
	50	18	40	-	120	48	10	94	M12x1	4,52	2	30464599	30512762	30384303	1,2	MHC-HSK-A050-18-120-C-0-A-AAA3	30522840	30522853
	50	18	40	-	120	48	10	94	M12x1	9,9	3	30464599	30302857	30297305	1,2	MHC-HSK-A050-18-120-C-0-A-AAA3	30485306	30485314
	50	18	40	-	160	48	10	134	M12x1	1,54	1,5	30464607	30512780	30521103	1,6	MHC-HSK-A050-18-160-C-0-A-AAA3	30522865	30522878
	50	18	40	-	160	48	10	134	M12x1	4,52	2	30464607	30512776	30384303	1,6	MHC-HSK-A050-18-160-C-0-A-AAA2	30522866	30522879
	50	18	40	-	160	48	10	134	M12x1	9,9	3	30464607	30302865	30297305	1,6	MHC-HSK-A050-18-160-C-0-A-AAA3	30485322	30485330
	50	20	42	55	100	50	10	42	M16x1	4,52	2	30386548	30512798	30521103	0,9	MHC-HSK-A050-20-100-C-0-A-AAA1	30522815	30522828
	50	20	42	55	100	50	10	42	M16x1	9,9	3	30386548	30512795	30384303	0,9	MHC-HSK-A050-20-100-C-0-A-AAA2	30522816	30522829
	50	20	42	55	100	50	10	42	M16x1	17,35	4	30386548	30279429	30297305	0,9	MHC-HSK-A050-20-100-C-0-A-AAA3	30386268	30386276
	50	20	42	-	120	50	10	94	M16x1	4,52	2	30464600	30512768	30521103	1,2	MHC-HSK-A050-20-120-C-0-A-AAA2	30522841	30522854
	50	20	42	-	120	50	10	94	M16x1	9,9	3	30464600	30512767	30384303	1,2	MHC-HSK-A050-20-120-C-0-A-AAA3	30522842	30522855

\* The exact determination of the variant can be found in the selection system  
2-channel system chucks. The preferred series is marked with a green

**2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions							G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	50	20	42	-	120	50	10	94	M16x1	17,35	4	30464600	30302858	30297305	1,2	MHC-HSK-A050-20-120-C-0-A-AAA2	30485307	30485315
	50	20	42	-	160	50	10	134	M16x1	4,52	2	30464608	30512782	30521103	1,6	MHC-HSK-A050-20-160-C-0-A-AAA3	30522867	30522880
	50	20	42	-	160	50	10	134	M16x1	9,9	3	30464608	30512781	30384303	1,6	MHC-HSK-A050-20-160-C-0-A-AAA2	30522868	30522881
	50	20	42	-	160	50	10	134	M16x1	17,35	4	30464608	30302866	30297305	1,6	MHC-HSK-A050-20-160-C-0-A-AAA3	30485323	30485331
	63	6	26	45	80	36	10	37	M10x1	1,54	1,5	30386549	30512784	30512203	0,9	MHC-HSK-A063-06-080-C-0-A-AAA1	30522882	30522899
	63	6	26	45	80	36	10	37	M10x1	4,52	2	30386549	30384039	30384304	0,9	MHC-HSK-A063-06-080-C-0-A-AAA2	30386278	30386288
	63	6	26	38	120	36	10	78	M5	1,54	1,5	30464609	30512804	30512203	1,1	MHC-HSK-A063-06-120-C-0-A-AAA1	30522916	30522929
	63	6	26	38	120	36	10	78	M5	4,52	2	30464609	30384040	30384304	1,1	MHC-HSK-A063-06-120-C-0-A-AAA2	30485332	30485340
	63	6	26	38	160	36	10	118	M5	1,54	1,5	30464617	30512819	30512203	1,2	MHC-HSK-A063-06-160-C-0-A-AAA1	30522942	30522959
	63	6	26	38	160	36	10	118	M5	4,52	2	30464617	30384041	30384304	1,2	MHC-HSK-A063-06-160-C-0-A-AAA2	30485348	30485358
	63	6	26	38	200	36	10	155	M5	1,54	1,5	30464627	30512839	30512203	1,4	MHC-HSK-A063-06-200-C-0-A-AAA1	30522976	30522993
	63	6	26	38	200	36	10	155	M5	4,52	2	30464627	30384042	30384304	1,4	MHC-HSK-A063-06-200-C-0-A-AAA2	30485368	30485378
	63	8	28	45	80	36	10	37,5	M10x1	1,54	1,5	30386550	30512785	30512203	0,9	MHC-HSK-A063-08-080-C-0-A-AAA1	30522883	30522900
	63	8	28	45	80	36	10	37,5	M10x1	4,52	2	30386550	30384043	30384304	0,9	MHC-HSK-A063-08-080-C-0-A-AAA2	30386279	30386289
	63	8	28	38	120	36	10	78,5	M7	1,54	1,5	30464610	30512805	30512203	1,1	MHC-HSK-A063-08-120-C-0-A-AAA1	30522917	30522930
	63	8	28	38	120	36	10	78,5	M7	4,52	2	30464610	30384044	30384304	1,1	MHC-HSK-A063-08-120-C-0-A-AAA2	30485333	30485341
	63	8	28	38	160	36	10	118,5	M7	1,54	1,5	30464618	30512820	30512203	1,2	MHC-HSK-A063-08-160-C-0-A-AAA1	30522943	30522960
	63	8	28	38	160	36	10	118,5	M7	4,52	2	30464618	30384045	30384304	1,2	MHC-HSK-A063-08-160-C-0-A-AAA2	30485349	30485359
	63	8	28	38	200	36	10	155,5	M7	1,54	1,5	30464628	30512840	30512203	1,4	MHC-HSK-A063-08-200-C-0-A-AAA1	30522977	30522994
	63	8	28	38	200	36	10	155,5	M7	4,52	2	30464628	30384046	30384304	1,4	MHC-HSK-A063-08-200-C-0-A-AAA2	30485369	30485379
	63	10	30	45	85	40	10	43,5	M10x1	1,54	1,5	30386551	30512786	30512203	1,0	MHC-HSK-A063-10-085-C-0-A-AAA1	30522884	30522901
	63	10	30	45	85	40	10	43,5	M10x1	4,52	2	30386551	30384011	30384304	1,0	MHC-HSK-A063-10-085-C-0-A-AAA2	30386280	30386290
	63	10	30	40	120	40	10	79	M8x1	1,54	1,5	30464611	30512806	30512203	1,2	MHC-HSK-A063-10-120-C-0-A-AAA1	30522918	30522931
	63	10	30	40	120	40	10	79	M8x1	4,52	2	30464611	30384012	30384304	1,2	MHC-HSK-A063-10-120-C-0-A-AAA2	30485334	30485342
	63	10	30	40	160	40	10	115	M8x1	1,54	1,5	30464619	30512821	30512203	1,4	MHC-HSK-A063-10-160-C-0-A-AAA1	30522944	30522961
	63	10	30	40	160	40	10	115	M8x1	4,52	2	30464619	30384013	30384304	1,4	MHC-HSK-A063-10-160-C-0-A-AAA2	30485350	30485360
	63	10	30	40	200	40	10	155	M8x1	1,54	1,5	30464629	30512841	30512203	1,7	MHC-HSK-A063-10-200-C-0-A-AAA1	30522978	30522995
	63	10	30	40	200	40	10	155	M8x1	4,52	2	30464629	30384014	30384304	1,7	MHC-HSK-A063-10-200-C-0-A-AAA2	30485370	30485380
	63	12	32	45	90	45	10	49	M10x1	1,54	1,5	30386552	30512791	30512203	1,0	MHC-HSK-A063-12-090-C-0-A-AAA1	30522885	30522902
	63	12	32	45	90	45	10	49	M10x1	4,52	2	30386552	30512787	30384304	1,0	MHC-HSK-A063-12-090-C-0-A-AAA2	30522886	30522903
	63	12	32	45	90	45	10	49	M10x1	9,9	3	30386552	30279400	30284772	1,0	MHC-HSK-A063-12-090-C-0-A-AAA3	30386281	30386291
	63	12	32	40	120	45	10	80,5	M10x1	1,54	1,5	30464612	30512811	30512203	1,2	MHC-HSK-A063-12-120-C-0-A-AAA1	30522919	30522932
	63	12	32	40	120	45	10	80,5	M10x1	4,52	2	30464612	30512807	30384304	1,2	MHC-HSK-A063-12-120-C-0-A-AAA2	30522920	30522933
	63	12	32	40	120	45	10	80,5	M10x1	9,9	3	30464612	30279402	30284772	1,2	MHC-HSK-A063-12-120-C-0-A-AAA3	30485335	30485343
	63	12	32	40	160	45	10	120,5	M10x1	1,54	1,5	30464620	30512826	30512203	1,4	MHC-HSK-A063-12-160-C-0-A-AAA1	30522945	30522962
	63	12	32	40	160	45	10	120,5	M10x1	4,52	2	30464620	30512822	30384304	1,4	MHC-HSK-A063-12-160-C-0-A-AAA2	30522946	30522963
	63	12	32	40	160	45	10	120,5	M10x1	9,9	3	30464620	30279404	30284772	1,4	MHC-HSK-A063-12-160-C-0-A-AAA3	30485351	30485361
	63	12	32	40	200	45	10	160,5	M10x1	1,54	1,5	30464630	30512846	30512203	1,6	MHC-HSK-A063-12-200-C-0-A-AAA1	30522979	30522996
	63	12	32	40	200	45	10	160,5	M10x1	4,52	2	30464630	30512842	30384304	1,6	MHC-HSK-A063-12-200-C-0-A-AAA2	30522980	30522997
	63	12	32	40	200	45	10	160,5	M10x1	9,9	3	30464630	30279405	30284772	1,6	MHC-HSK-A063-12-200-C-0-A-AAA3	30485371	30485381
	63	14	34	45	90	45	10	49,5	M10x1	1,54	1,5	30386553	30512792	30512203	1,0	MHC-HSK-A063-14-090-C-0-A-AAA1	30522887	30522904
	63	14	34	45	90	45	10	49,5	M10x1	4,52	2	30386553	30512788	30384304	1,0	MHC-HSK-A063-14-090-C-0-A-AAA2	30522888	30522905
	63	14	34	45	90	45	10	49,5	M10x1	9,9	3	30386553	30279407	30284772	1,0	MHC-HSK-A063-14-090-C-0-A-AAA3	30386282	30386292
	63	14	34	40	120	45	10	81	M10x1	1,54	1,5	30464613	30512813	30512203	1,2	MHC-HSK-A063-14-120-C-0-A-AAA1	30522921	30522934
	63	14	34	40	120	45	10	81	M10x1	4,52	2	30464613	30512808	30384304	1,2	MHC-HSK-A063-14-120-C-0-A-AAA2	30522922	30522935
	63	14	34	40	120	45	10	81	M10x1	9,9	3	30464613	30279408	30284772	1,2	MHC-HSK-A063-14-120-C-0-A-AAA3	30485336	30485344
	63	14	34	40	160	45	10	121	M10x1	1,54	1,5	30464621	30512827	30512203	1,5	MHC-HSK-A063-14-160-C-0-A-AAA1	30522947	30522964
	63	14	34	40	160	45	10	121	M10x1	4,52	2	30464621	30512823	30384304	1,5	MHC-HSK-A063-14-160-C-0-A-AAA2	30522948	30522965

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green  .

Continued on next page.

**2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions							G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	63	14	34	40	160	45	10	121	M10x1	9,9	3	30464621	30279410	30284772	1,5	MHC-HSK-A063-14-160-C-0-A-AAA3	30485352	30485362
	63	14	34	40	200	45	10	161	M10x1	1,54	1,5	30464631	30512847	30512203	1,8	MHC-HSK-A063-14-200-C-0-A-AAA1	30522981	30522998
	63	14	34	40	200	45	10	161	M10x1	4,52	2	30464631	30512843	30384304	1,8	MHC-HSK-A063-14-200-C-0-A-AAA2	30522982	30522999
	63	14	34	40	200	45	10	161	M10x1	9,9	3	30464631	30279412	30284772	1,8	MHC-HSK-A063-14-200-C-0-A-AAA3	30485372	30485382
	63	16	38	45	95	48	10	55,5	M12x1	1,54	1,5	30386554	30512793	30512203	1,0	MHC-HSK-A063-16-095-C-0-A-AAA1	30522889	30522906
	63	16	38	45	95	48	10	55,5	M12x1	4,52	2	30386554	30512789	30384304	1,0	MHC-HSK-A063-16-095-C-0-A-AAA2	30522890	30522907
	63	16	38	45	95	48	10	55,5	M12x1	9,9	3	30386554	30279413	30284772	1,0	MHC-HSK-A063-16-095-C-0-A-AAA3	30386283	30386293
	63	16	38	-	120	48	10	91,1	M12x1	1,54	1,5	30464614	30512814	30512203	1,2	MHC-HSK-A063-16-120-C-0-A-AAA1	30522923	30522936
	63	16	38	-	120	48	10	91,1	M12x1	4,52	2	30464614	30512809	30384304	1,2	MHC-HSK-A063-16-120-C-0-A-AAA2	30522924	30522937
	63	16	38	-	120	48	10	91,1	M12x1	9,9	3	30464614	30279414	30284772	1,2	MHC-HSK-A063-16-120-C-0-A-AAA3	30485337	30485345
	63	16	38	-	160	48	10	131,1	M12x1	1,54	1,5	30464622	30512828	30512203	1,5	MHC-HSK-A063-16-160-C-0-A-AAA1	30522949	30522966
	63	16	38	-	160	48	10	131,1	M12x1	4,52	2	30464622	30512824	30384304	1,5	MHC-HSK-A063-16-160-C-0-A-AAA2	30522950	30522967
	63	16	38	-	160	48	10	131,1	M12x1	9,9	3	30464622	30279416	30284772	1,5	MHC-HSK-A063-16-160-C-0-A-AAA3	30485353	30485363
	63	16	38	-	200	48	10	171,1	M12x1	1,54	1,5	30464632	30512848	30512203	1,7	MHC-HSK-A063-16-200-C-0-A-AAA1	30522983	30523000
	63	16	38	-	200	48	10	171,1	M12x1	4,52	2	30464632	30512844	30384304	1,7	MHC-HSK-A063-16-200-C-0-A-AAA2	30522984	30523001
	63	16	38	-	200	48	10	171,1	M12x1	9,9	3	30464632	30279418	30284772	1,7	MHC-HSK-A063-16-200-C-0-A-AAA3	30485373	30485383
	63	18	40	45	95	48	10	56	M12x1	1,54	1,5	30386555	30512794	30512203	1,2	MHC-HSK-A063-18-095-C-0-A-AAA1	30522891	30522908
	63	18	40	45	95	48	10	56	M12x1	4,52	2	30386555	30512790	30384304	1,2	MHC-HSK-A063-18-095-C-0-A-AAA2	30522892	30522909
	63	18	40	45	95	48	10	56	M12x1	9,9	3	30386555	30279420	30284772	1,2	MHC-HSK-A063-18-095-C-0-A-AAA3	30386284	30386294
	63	18	40	-	120	48	10	89,1	M12x1	1,54	1,5	30464615	30512815	30512203	1,5	MHC-HSK-A063-18-120-C-0-A-AAA1	30522925	30522938
	63	18	40	-	120	48	10	89,1	M12x1	4,52	2	30464615	30512810	30384304	1,5	MHC-HSK-A063-18-120-C-0-A-AAA2	30522926	30522939
	63	18	40	-	120	48	10	89,1	M12x1	9,9	3	30464615	30279422	30284772	1,5	MHC-HSK-A063-18-120-C-0-A-AAA3	30485338	30485346
	63	18	40	-	160	48	10	129,1	M12x1	1,54	1,5	30464623	30512829	30512203	1,9	MHC-HSK-A063-18-160-C-0-A-AAA1	30522951	30522968
	63	18	40	-	160	48	10	129,1	M12x1	4,52	2	30464623	30512825	30384304	1,9	MHC-HSK-A063-18-160-C-0-A-AAA2	30522952	30522969
	63	18	40	-	160	48	10	129,1	M12x1	9,9	3	30464623	30279423	30284772	1,9	MHC-HSK-A063-18-160-C-0-A-AAA3	30485354	30485364
	63	18	40	-	200	48	10	169,1	M12x1	1,54	1,5	30464633	30512849	30512203	2,3	MHC-HSK-A063-18-200-C-0-A-AAA1	30522985	30523002
	63	18	40	-	200	48	10	169,1	M12x1	4,52	2	30464633	30512845	30384304	2,3	MHC-HSK-A063-18-200-C-0-A-AAA2	30522986	30523003
	63	18	40	-	200	48	10	169,1	M12x1	9,9	3	30464633	30279427	30284772	2,3	MHC-HSK-A063-18-200-C-0-A-AAA3	30485374	30485384
	63	20	42	50	100	50	10	60,5	M16x1	4,52	2	30386556	30512798	30384304	1,2	MHC-HSK-A063-20-100-C-0-A-AAA1	30522893	30522910
	63	20	42	50	100	50	10	60,5	M16x1	9,9	3	30386556	30512795	30284772	1,2	MHC-HSK-A063-20-100-C-0-A-AAA2	30522894	30522911
	63	20	42	50	100	50	10	60,5	M16x1	17,35	4	30386556	30279429	30279444	1,2	MHC-HSK-A063-20-100-C-0-A-AAA3	30386285	30386296
	63	20	42	-	120	50	10	89,1	M16x1	4,52	2	30464616	30512817	30384304	1,4	MHC-HSK-A063-20-120-C-0-A-AAA1	30522927	30522940
	63	20	42	-	120	50	10	89,1	M16x1	9,9	3	30464616	30512816	30284772	1,4	MHC-HSK-A063-20-120-C-0-A-AAA2	30522928	30522941
	63	20	42	-	120	50	10	89,1	M16x1	17,35	4	30464616	30279422	30279444	1,4	MHC-HSK-A063-20-120-C-0-A-AAA3	30485339	30485347
	63	20	42	-	160	50	10	129,1	M16x1	4,52	2	30464624	30512833	30384304	1,9	MHC-HSK-A063-20-160-C-0-A-AAA1	30522953	30522970
	63	20	42	-	160	50	10	129,1	M16x1	9,9	3	30464624	30512830	30284772	1,9	MHC-HSK-A063-20-160-C-0-A-AAA2	30522954	30522971
	63	20	42	-	160	50	10	129,1	M16x1	17,35	4	30464624	30279432	30279444	1,9	MHC-HSK-A063-20-160-C-0-A-AAA3	30485355	30485365
	63	20	42	-	200	50	10	169,1	M16x1	4,52	2	30464634	30512853	30384304	2,3	MHC-HSK-A063-20-200-C-0-A-AAA1	30522987	30523004
	63	20	42	-	200	50	10	169,1	M16x1	9,9	3	30464634	30512850	30284772	2,3	MHC-HSK-A063-20-200-C-0-A-AAA2	30522988	30523005
	63	20	42	-	200	50	10	169,1	M16x1	17,35	4	30464634	30279433	30279444	2,3	MHC-HSK-A063-20-200-C-0-A-AAA3	30485375	30485385
	63	25	57	-	115	56	10	89	M16x1	4,52	2	30386557	30512799	30384304	1,8	MHC-HSK-A063-25-115-C-0-A-AAA1	30522895	30522912
	63	25	57	-	115	56	10	89	M16x1	9,9	3	30386557	30512796	30284772	1,8	MHC-HSK-A063-25-115-C-0-A-AAA2	30522896	30522913
	63	25	57	-	115	56	10	89	M16x1	17,35	4	30386557	30279434	30279444	1,8	MHC-HSK-A063-25-115-C-0-A-AAA3	30386286	30386297
	63	25	57	-	160	56	10	134	M16x1	4,52	2	30464625	30512834	30384304	2,5	MHC-HSK-A063-25-160-C-0-A-AAA1	30522955	30522972
	63	25	57	-	160	56	10	134	M16x1	9,9	3	30464625	30512831	30284772	2,5	MHC-HSK-A063-25-160-C-0-A-AAA2	30522956	30522973
	63	25	57	-	160	56	10	134	M16x1	17,35	4	30464625	30279435	30279444	2,5	MHC-HSK-A063-25-160-C-0-A-AAA3	30485356	30485366
	63	25	57	-	200	56	10	174	M16x1	4,52	2	30464635	30512854	30384304	3,2	MHC-HSK-A063-25-200-C-0-A-AAA1	30522989	30523006
	63	25	57	-	200	56	10	174	M16x1	9,9	3	30464635	30512851	30284772	3,2	MHC-HSK-A063-25-200-C-0-A-AAA2	30522990	30523007

\* The exact determination of the variant can be found in the selection system  
2-channel system chucks. The preferred series is marked with a green

**2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A		Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
			d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				l <sub>4</sub>	BDY	LS				
	63	25	57	-	200	56	10	174	M16x1	17,35	4	30464635	30279436	30279444	3,2	MHC-HSK-A063-25-200-C-0-A-AAA3	30485376	30485386
	63	32	63	-	120	60	10	94	M16x1	4,52	2	30386558	30512800	30384304	1,7	MHC-HSK-A063-32-120-C-0-A-AAA1	30522897	30522914
	63	32	63	-	120	60	10	94	M16x1	9,9	3	30386558	30512797	30284772	1,7	MHC-HSK-A063-32-120-C-0-A-AAA2	30522898	30522915
	63	32	63	-	120	60	10	94	M16x1	17,35	4	30386558	30279441	30279444	1,7	MHC-HSK-A063-32-120-C-0-A-AAA3	30386287	30386298
	63	32	63	-	160	60	10	134	M16x1	4,52	2	30464626	30512835	30384304	2,3	MHC-HSK-A063-32-160-C-0-A-AAA1	30522957	30522974
	63	32	63	-	160	60	10	134	M16x1	9,9	3	30464626	30512832	30284772	2,3	MHC-HSK-A063-32-160-C-0-A-AAA2	30522958	30522975
	63	32	63	-	160	60	10	134	M16x1	17,35	4	30464626	30279442	30279444	2,3	MHC-HSK-A063-32-160-C-0-A-AAA3	30485357	30485367
	63	32	63	-	200	60	10	174	M16x1	4,52	2	30464636	30512856	30384304	3,0	MHC-HSK-A063-32-200-C-0-A-AAA1	30522991	30523008
	63	32	63	-	200	60	10	174	M16x1	9,9	3	30464636	30512852	30284772	3,0	MHC-HSK-A063-32-200-C-0-A-AAA2	30522992	30523009
	63	32	63	-	200	60	10	174	M16x1	17,35	4	30464636	30279443	30279444	3,0	MHC-HSK-A063-32-200-C-0-A-AAA3	30485377	30485387
	80	6	26	45	80	36	10	39,5	M10x1	1,54	1,5	30386559	30512784	30521104	1,4	MHC-HSK-A080-06-080-C-0-A-AAA1	30523010	30523027
	80	6	26	45	80	36	10	39,5	M10x1	4,52	2	30386559	30384039	30384305	1,4	MHC-HSK-A080-06-080-C-0-A-AAA2	30386299	30386309
	80	6	26	38	120	36	10	75	M5	1,54	1,5	30464637	30512804	30521104	1,5	MHC-HSK-A080-06-120-C-0-A-AAA1	30523044	30523057
	80	6	26	38	120	36	10	75	M5	4,52	2	30464637	30384040	30384305	1,5	MHC-HSK-A080-06-120-C-0-A-AAA2	30485388	30485396
	80	6	26	38	160	36	10	115	M5	1,54	1,5	30464645	30512819	30521104	1,7	MHC-HSK-A080-06-160-C-0-A-AAA1	30523070	30523087
	80	6	26	38	160	36	10	115	M5	4,52	2	30464645	30384041	30384305	1,7	MHC-HSK-A080-06-160-C-0-A-AAA2	30485404	30485414
	80	6	26	38	200	36	10	155	M5	1,54	1,5	30464655	30512839	30521104	1,8	MHC-HSK-A080-06-200-C-0-A-AAA1	30523104	30523121
	80	6	26	38	200	36	10	155	M5	4,52	2	30464655	30384042	30384305	1,8	MHC-HSK-A080-06-200-C-0-A-AAA2	30485424	30485434
	80	8	28	45	80	36	10	40	M10x1	1,54	1,5	30386560	30521104	30521104	1,4	MHC-HSK-A080-08-080-C-0-A-AAA1	30523011	30523028
	80	8	28	45	80	36	10	40	M10x1	4,52	2	30386560	30384305	30384305	1,4	MHC-HSK-A080-08-080-C-0-A-AAA2	30386300	30386310
	80	8	28	38	120	36	10	75	M7	1,54	1,5	30464638	30512805	30521104	1,5	MHC-HSK-A080-08-120-C-0-A-AAA1	30523045	30523058
	80	8	28	38	120	36	10	75	M7	4,52	2	30464638	30384044	30384305	1,5	MHC-HSK-A080-08-120-C-0-A-AAA2	30485389	30485397
	80	8	28	38	160	36	10	115	M7	1,54	1,5	30464646	30512820	30521104	1,7	MHC-HSK-A080-08-160-C-0-A-AAA1	30523071	30523088
	80	8	28	38	160	36	10	115	M7	4,52	2	30464646	30384045	30384305	1,7	MHC-HSK-A080-08-160-C-0-A-AAA2	30485405	30485415
	80	8	28	38	200	36	10	155,5	M7	1,54	1,5	30464656	30512840	30521104	1,8	MHC-HSK-A080-08-200-C-0-A-AAA1	30523105	30523122
	80	8	28	38	200	36	10	155,5	M7	4,52	2	30464656	30384046	30384305	1,8	MHC-HSK-A080-08-200-C-0-A-AAA2	30485425	30485435
	80	10	30	45	85	40	10	46	M10x1	1,54	1,5	30386561	30512786	30521104	1,5	MHC-HSK-A080-10-085-C-0-A-AAA1	30523012	30523029
	80	10	30	45	85	40	10	46	M10x1	4,52	2	30386561	30384011	30384305	1,5	MHC-HSK-A080-10-085-C-0-A-AAA2	30386301	30386311
	80	10	30	40	120	40	10	75	M8x1	1,54	1,5	30464639	30512806	30521104	1,6	MHC-HSK-A080-10-120-C-0-A-AAA1	30523046	30485398
	80	10	30	40	120	40	10	75	M8x1	4,52	2	30464639	30384012	30384305	1,6	MHC-HSK-A080-10-120-C-0-A-AAA2	30485390	30523060
	80	10	30	40	160	40	10	115	M8x1	1,54	1,5	30464647	30512821	30521104	1,9	MHC-HSK-A080-10-160-C-0-A-AAA1	30523072	30523089
	80	10	30	40	160	40	10	115	M8x1	4,52	2	30464647	30384013	30384305	1,9	MHC-HSK-A080-10-160-C-0-A-AAA2	30485406	30485416
	80	10	30	40	200	40	10	155	M8x1	1,54	1,5	30464657	30512841	30521104	2,1	MHC-HSK-A080-10-200-C-0-A-AAA1	30523106	30523123
	80	10	30	40	200	40	10	155	M8x1	4,52	2	30464657	30384014	30384305	2,1	MHC-HSK-A080-10-200-C-0-A-AAA2	30485426	30485436
	80	12	32	45	90	45	10	51,5	M10x1	1,54	1,5	30386562	30512791	30521104	1,5	MHC-HSK-A080-12-090-C-0-A-AAA1	30523013	30523030
	80	12	32	45	90	45	10	51,5	M10x1	4,52	2	30386562	30512787	30384305	1,5	MHC-HSK-A080-12-090-C-0-A-AAA2	30523014	30523031
	80	12	32	45	90	45	10	51,5	M10x1	9,9	3	30386562	30279400	30297307	1,5	MHC-HSK-A080-12-090-C-0-A-AAA3	30386302	30386312
	80	12	32	40	120	45	10	77	M10x1	1,54	1,5	30464640	30512811	30521104	1,6	MHC-HSK-A080-12-120-C-0-A-AAA1	30523047	30523060
	80	12	32	40	120	45	10	77	M10x1	4,52	2	30464640	30512807	30384305	1,6	MHC-HSK-A080-12-120-C-0-A-AAA2	30523048	30523061
	80	12	32	40	120	45	10	77	M10x1	9,9	3	30464640	30279402	30297307	1,6	MHC-HSK-A080-12-120-C-0-A-AAA3	30485391	30485399
	80	12	32	40	160	45	10	117	M10x1	1,54	1,5	30512826	30512826	30521104	1,9	MHC-HSK-A080-12-160-C-0-A-AAA1	30523073	30523090
	80	12	32	40	160	45	10	117	M10x1	4,52	2	30512826	30512822	30384305	1,9	MHC-HSK-A080-12-160-C-0-A-AAA2	30523074	30523091
	80	12	32	40	160	45	10	117	M10x1	9,9	3	30512826	30279404	30297307	1,9	MHC-HSK-A080-12-160-C-0-A-AAA3	30485407	30485417
	80	12	32	40	200	45	10	157	M10x1	1,54	1,5	30464658	30512846	30521104	2,1	MHC-HSK-A080-12-200-C-0-A-AAA1	30523107	30523124
	80	12	32	40	200	45	10	157	M10x1	4,52	2	30464658	30512842	30384305	2,1	MHC-HSK-A080-12-200-C-0-A-AAA2	30523108	30523125
	80	12	32	40	200	45	10	157	M10x1	9,9	3	30464658	30279405	30297307	2,1	MHC-HSK-A080-12-200-C-0-A-AAA3	30485427	30485437
	80	14	34	45	90	45	10	52	M10x1	1,54	1,5	30386563	30512792	30521104	1,5	MHC-HSK-A080-14-090-C-0-A-AAA1	30523015	30523032
	80	14	34	45	90	45	10	52	M10x1	4,52	2	30386563	30512788	30384305	1,5	MHC-HSK-A080-14-090-C-0-A-AAA2	30523016	30523033

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

Continued on next page.



**2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions							G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	80	14	34	45	90	45	10	52	M10x1	9,9	3	30386563	30279407	30297307	1,5	MHC-HSK-A080-14-090-C-0-A-AAA3	30386303	30386313
	80	14	34	40	120	45	10	78	M10x1	1,54	1,5	30464641	30512813	30521104	1,7	MHC-HSK-A080-14-120-C-0-A-AAA1	30523049	30523062
	80	14	34	40	120	45	10	78	M10x1	4,52	2	30464641	30512808	30384305	1,7	MHC-HSK-A080-14-120-C-0-A-AAA2	30523050	30523063
	80	14	34	40	120	45	10	78	M10x1	9,9	3	30464641	30279408	30297307	1,7	MHC-HSK-A080-14-120-C-0-A-AAA3	30485392	30485400
	80	14	34	40	160	45	10	118	M10x1	1,54	1,5	30464649	30512827	30521104	2,0	MHC-HSK-A080-14-160-C-0-A-AAA1	30523075	30523092
	80	14	34	40	160	45	10	118	M10x1	4,52	2	30464649	30512823	30384305	2,0	MHC-HSK-A080-14-160-C-0-A-AAA2	30523076	30523093
	80	14	34	40	160	45	10	118	M10x1	9,9	3	30464649	30279410	30297307	2,0	MHC-HSK-A080-14-160-C-0-A-AAA3	30485408	30485418
	80	14	34	40	200	45	10	158	M10x1	1,54	1,5	30464659	30512847	30521104	2,2	MHC-HSK-A080-14-200-C-0-A-AAA1	30523109	30523126
	80	14	34	40	200	45	10	158	M10x1	4,52	2	30464659	30512843	30384305	2,2	MHC-HSK-A080-14-200-C-0-A-AAA2	30523110	30523127
	80	14	34	40	200	45	10	158	M10x1	9,9	3	30464659	30279412	30297307	2,2	MHC-HSK-A080-14-200-C-0-A-AAA3	30485428	30485438
	80	16	38	45	95	48	10	58	M12x1	1,54	1,5	30386564	30512793	30521104	1,5	MHC-HSK-A080-16-095-C-0-A-AAA1	30523017	30523034
	80	16	38	45	95	48	10	58	M12x1	4,52	2	30386564	30512789	30384305	1,5	MHC-HSK-A080-16-095-C-0-A-AAA2	30523018	30523035
	80	16	38	45	95	48	10	58	M12x1	9,9	3	30386564	30279413	30297307	1,5	MHC-HSK-A080-16-095-C-0-A-AAA3	30386304	30386314
	80	16	38	-	120	48	10	86,1	M12x1	1,54	1,5	30464642	30512814	30521104	1,7	MHC-HSK-A080-16-120-C-0-A-AAA1	30523051	30523064
	80	16	38	-	120	48	10	86,1	M12x1	4,52	2	30464642	30512809	30384305	1,7	MHC-HSK-A080-16-120-C-0-A-AAA2	30523052	30523065
	80	16	38	-	120	48	10	86,1	M12x1	9,9	3	30464642	30279414	30297307	1,7	MHC-HSK-A080-16-120-C-0-A-AAA3	30485393	30485401
	80	16	38	-	160	48	10	126,1	M12x1	1,54	1,5	30464650	30512828	30521104	1,9	MHC-HSK-A080-16-160-C-0-A-AAA1	30523077	30523094
	80	16	38	-	160	48	10	126,1	M12x1	4,52	2	30464650	30512824	30384305	1,9	MHC-HSK-A080-16-160-C-0-A-AAA2	30523078	30523095
	80	16	38	-	160	48	10	126,1	M12x1	9,9	3	30464650	30279416	30297307	1,9	MHC-HSK-A080-16-160-C-0-A-AAA3	30485409	30485419
	80	16	38	-	200	48	10	166,1	M12x1	1,54	1,5	30464660	30512848	30521104	2,2	MHC-HSK-A080-16-200-C-0-A-AAA1	30523111	30523128
	80	16	38	-	200	48	10	166,1	M12x1	4,52	2	30464660	30512844	30384305	2,2	MHC-HSK-A080-16-200-C-0-A-AAA2	30523112	30523129
	80	16	38	-	200	48	10	166,1	M12x1	9,9	3	30464660	30279418	30297307	2,2	MHC-HSK-A080-16-200-C-0-A-AAA3	30485429	30485439
	80	18	40	45	95	48	10	58,5	M12x1	1,54	1,5	30386565	30512794	30521104	1,7	MHC-HSK-A080-18-095-C-0-A-AAA1	30523019	30523036
	80	18	40	45	95	48	10	58,5	M12x1	4,52	2	30386565	30512790	30384305	1,7	MHC-HSK-A080-18-095-C-0-A-AAA2	30523020	30523037
	80	18	40	45	95	48	10	58,5	M12x1	9,9	3	30386565	30279420	30297307	1,7	MHC-HSK-A080-18-095-C-0-A-AAA3	30386305	30386315
	80	18	40	-	120	48	10	84,1	M12x1	1,54	1,5	30464643	30512815	30521104	1,9	MHC-HSK-A080-18-120-C-0-A-AAA1	30523053	30523066
	80	18	40	-	120	48	10	84,1	M12x1	4,52	2	30464643	30512810	30384305	1,9	MHC-HSK-A080-18-120-C-0-A-AAA2	30523054	30523067
	80	18	40	-	120	48	10	84,1	M12x1	9,9	3	30464643	30279422	30297307	1,9	MHC-HSK-A080-18-120-C-0-A-AAA3	30485394	30485402
	80	18	40	-	160	48	10	124,1	M12x1	1,54	1,5	30464651	30512829	30521104	2,4	MHC-HSK-A080-18-160-C-0-A-AAA1	30523079	30523096
	80	18	40	-	160	48	10	124,1	M12x1	4,52	2	30464651	30512825	30384305	2,4	MHC-HSK-A080-18-160-C-0-A-AAA2	30523080	30523097
	80	18	40	-	160	48	10	124,1	M12x1	9,9	3	30464651	30279423	30297307	2,4	MHC-HSK-A080-18-160-C-0-A-AAA3	30485410	30485420
	80	18	40	-	200	48	10	164,1	M12x1	1,54	1,5	30464661	30512849	30521104	2,8	MHC-HSK-A080-18-200-C-0-A-AAA1	30523113	30523130
	80	18	40	-	200	48	10	164,1	M12x1	4,52	2	30464661	30512845	30384305	2,8	MHC-HSK-A080-18-200-C-0-A-AAA2	30523114	30523131
	80	18	40	-	200	48	10	164,1	M12x1	9,9	3	30464661	30279427	30297307	2,8	MHC-HSK-A080-18-200-C-0-A-AAA3	30485430	30485440
	80	20	42	50	100	50	10	63	M16x1	4,52	2	30386566	30512798	30384305	1,7	MHC-HSK-A080-20-100-C-0-A-AAA1	30523021	30523038
	80	20	42	50	100	50	10	63	M16x1	9,9	3	30386566	30512795	30297307	1,7	MHC-HSK-A080-20-100-C-0-A-AAA2	30523022	30523039
	80	20	42	50	100	50	10	63	M16x1	17,35	4	30386566	30279429	30297308	1,7	MHC-HSK-A080-20-100-C-0-A-AAA3	30386306	30386316
	80	20	42	-	120	50	10	84,1	M16x1	4,52	2	30464644	30512817	30384305	1,9	MHC-HSK-A080-20-120-C-0-A-AAA1	30523055	30523068
	80	20	42	-	120	50	10	84,1	M16x1	9,9	3	30464644	30512816	30297307	1,9	MHC-HSK-A080-20-120-C-0-A-AAA2	30523056	30523069
	80	20	42	-	120	50	10	84,1	M16x1	17,35	4	30464644	30279430	30297308	1,9	MHC-HSK-A080-20-120-C-0-A-AAA3	30485395	30485403
	80	20	42	-	160	50	10	124,1	M16x1	4,52	2	30464652	30512833	30384305	2,3	MHC-HSK-A080-20-160-C-0-A-AAA1	30523081	30523098
	80	20	42	-	160	50	10	124,1	M16x1	9,9	3	30464652	30512830	30297307	2,3	MHC-HSK-A080-20-160-C-0-A-AAA2	30523082	30523099
	80	20	42	-	160	50	10	124,1	M16x1	17,35	4	30464652	30279432	30297308	2,3	MHC-HSK-A080-20-160-C-0-A-AAA3	30485411	30485421
	80	20	42	-	200	50	10	164,1	M16x1	4,52	2	30464662	30512853	30384305	2,7	MHC-HSK-A080-20-200-C-0-A-AAA1	30523115	30523132
	80	20	42	-	200	50	10	164,1	M16x1	9,9	3	30464662	30512850	30297307	2,7	MHC-HSK-A080-20-200-C-0-A-AAA2	30523116	30523133
	80	20	42	-	200	50	10	164,1	M16x1	17,35	4	30464662	30279433	30297308	2,7	MHC-HSK-A080-20-200-C-0-A-AAA3	30485431	30485441
	80	25	57	-	115	56	10	89	M16x1	4,52	2	30386567	30512799	30384305	2,3	MHC-HSK-A080-25-115-C-0-A-AAA1	30523023	30523040
	80	25	57	-	115	56	10	89	M16x1	9,9	3	30386567	30512796	30297307	2,3	MHC-HSK-A080-25-115-C-0-A-AAA2	30523024	30523041

\* The exact determination of the variant can be found in the selection system  
2-channel system chucks. The preferred series is marked with a green

2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1

Variant*	HSK-A	Dimensions							G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	80	25	57	-	115	56	10	89	M16x1	17,35	4	30386567	30279434	30297308	2,3	MHC-HSK-A080-25-115-C-0-A-AAA3	30386307	30386317
	80	25	57	-	160	56	10	134	M16x1	4,52	2	30464653	30512834	30384305	3,0	MHC-HSK-A080-25-160-C-0-A-AAA1	30523083	30523100
	80	25	57	-	160	56	10	134	M16x1	9,9	3	30464653	30512831	30297307	3,0	MHC-HSK-A080-25-160-C-0-A-AAA2	30523084	30523101
	80	25	57	-	160	56	10	134	M16x1	17,35	4	30464653	30279435	30297308	3,0	MHC-HSK-A080-25-160-C-0-A-AAA3	30485412	30485422
	80	25	57	-	200	56	10	174	M16x1	4,52	2	30464663	30512854	30384305	3,7	MHC-HSK-A080-25-200-C-0-A-AAA1	30523117	30523134
	80	25	57	-	200	56	10	174	M16x1	9,9	3	30464663	30512851	30297307	3,7	MHC-HSK-A080-25-200-C-0-A-AAA2	30523118	30523135
	80	25	57	-	200	56	10	174	M16x1	17,35	4	30464663	30279436	30297308	3,7	MHC-HSK-A080-25-200-C-0-A-AAA3	30485432	30485442
	80	32	63	-	120	60	10	94	M16x1	4,52	2	30386568	30512800	30384305	2,1	MHC-HSK-A080-32-120-C-0-A-AAA1	30523025	30523042
	80	32	63	-	120	60	10	94	M16x1	9,9	3	30386568	30512797	30297307	2,1	MHC-HSK-A080-32-120-C-0-A-AAA2	30523026	30523043
	80	32	63	-	120	60	10	94	M16x1	17,35	4	30386568	30279441	30297308	2,1	MHC-HSK-A080-32-120-C-0-A-AAA3	30386308	30386318
	80	32	63	-	160	60	10	134	M16x1	4,52	2	30464655	30512835	30384305	2,8	MHC-HSK-A080-32-160-C-0-A-AAA1	30523085	30523102
	80	32	63	-	160	60	10	134	M16x1	9,9	3	30464655	30512832	30297307	2,8	MHC-HSK-A080-32-160-C-0-A-AAA2	30523086	30523103
	80	32	63	-	160	60	10	134	M16x1	17,35	4	30464655	30279442	30297308	2,8	MHC-HSK-A080-32-160-C-0-A-AAA3	30485413	30485423
	80	32	63	-	200	60	10	174	M16x1	4,52	2	30464664	30512856	30384305	3,5	MHC-HSK-A080-32-200-C-0-A-AAA1	30523119	30523136
	80	32	63	-	200	60	10	174	M16x1	9,9	3	30464664	30512852	30297307	3,5	MHC-HSK-A080-32-200-C-0-A-AAA2	30523120	30523137
	80	32	63	-	200	60	10	174	M16x1	17,35	4	30464664	30279443	30297308	3,5	MHC-HSK-A080-32-200-C-0-A-AAA3	30485433	30485443
	100	6	26	45	85	36	10	36,5	M10x1	1,54	1,5	30386569	30512784	30521106	2,3	MHC-HSK-A100-06-085-C-0-A-AAA1	30523138	30523155
	100	6	26	45	85	36	10	36,5	M10x1	4,52	2	30386569	30384039	30384306	2,3	MHC-HSK-A100-06-085-C-0-A-AAA2	30386319	30386329
	100	6	26	38	120	36	10	73,5	M5	1,54	1,5	30464665	30512804	30521106	2,4	MHC-HSK-A100-06-120-C-0-A-AAA1	30523172	30523185
	100	6	26	38	120	36	10	73,5	M5	4,52	2	30464665	30384040	30384306	2,4	MHC-HSK-A100-06-120-C-0-A-AAA2	30485444	30485452
	100	6	26	38	160	36	10	113,5	M5	1,54	1,5	30464673	30512819	30521106	2,6	MHC-HSK-A100-06-160-C-0-A-AAA1	30523198	30523215
	100	6	26	38	160	36	10	113,5	M5	4,52	2	30464673	30384041	30384306	2,6	MHC-HSK-A100-06-160-C-0-A-AAA2	30485460	30485470
	100	6	26	38	200	36	10	155	M5	1,54	1,5	30464683	30512839	30521106	2,7	MHC-HSK-A100-06-200-C-0-A-AAA1	30523232	30523249
	100	6	26	38	200	36	10	155	M5	4,52	2	30464683	30384042	30384306	2,7	MHC-HSK-A100-06-200-C-0-A-AAA2	30485480	30485490
	100	8	28	45	85	36	10	37	M10x1	1,54	1,5	30386570	30512785	30521106	2,3	MHC-HSK-A100-08-085-C-0-A-AAA1	30523139	30523156
	100	8	28	45	85	36	10	37	M10x1	4,52	2	30386570	30384043	30384306	2,3	MHC-HSK-A100-08-085-C-0-A-AAA2	30386320	30386330
	100	8	28	38	120	36	10	74	M7	1,54	1,5	30464666	30512805	30521106	2,4	MHC-HSK-A100-08-120-C-0-A-AAA1	30523173	30523186
	100	8	28	38	120	36	10	74	M7	4,52	2	30464666	30384044	30384306	2,4	MHC-HSK-A100-08-120-C-0-A-AAA2	30485445	30485453
	100	8	28	38	160	36	10	114	M7	1,54	1,5	30464674	30512820	30521106	2,6	MHC-HSK-A100-08-160-C-0-A-AAA1	30523199	30523216
	100	8	28	38	160	36	10	114	M7	4,52	2	30464674	30384045	30384306	2,6	MHC-HSK-A100-08-160-C-0-A-AAA2	30485461	30485471
	100	8	28	38	200	36	10	155,5	M7	1,54	1,5	30464684	30512840	30521106	2,7	MHC-HSK-A100-08-200-C-0-A-AAA1	30523233	30523250
	100	8	28	38	200	36	10	155,5	M7	4,52	2	30464684	30384046	30384306	2,7	MHC-HSK-A100-08-200-C-0-A-AAA2	30485481	30485491
	100	10	30	45	90	40	10	43	M10x1	1,54	1,5	30386571	30512786	30521106	2,4	MHC-HSK-A100-10-090-C-0-A-AAA1	30523140	30523157
	100	10	30	45	90	40	10	43	M10x1	4,52	2	30386571	30384011	30384306	2,4	MHC-HSK-A100-10-090-C-0-A-AAA2	30386321	30386331
	100	10	30	40	120	40	10	74,5	M8x1	1,54	1,5	30464667	30512806	30521106	2,6	MHC-HSK-A100-10-120-C-0-A-AAA1	30523174	30523187
	100	10	30	40	120	40	10	74,5	M8x1	4,52	2	30464667	30384012	30384306	2,6	MHC-HSK-A100-10-120-C-0-A-AAA2	30485446	30485454
	100	10	30	40	160	40	10	114,5	M8x1	1,54	1,5	30464675	30512821	30521106	2,8	MHC-HSK-A100-10-160-C-0-A-AAA1	30523200	30523217
	100	10	30	40	160	40	10	114,5	M8x1	4,52	2	30464675	30384013	30384306	2,8	MHC-HSK-A100-10-160-C-0-A-AAA2	30485462	30485472
	100	10	30	40	200	40	10	155	M8x1	1,54	1,5	30464685	30512841	30521106	3,0	MHC-HSK-A100-10-200-C-0-A-AAA1	30523234	30523251
	100	10	30	40	200	40	10	155	M8x1	4,52	2	30464685	30384014	30384306	3,0	MHC-HSK-A100-10-200-C-0-A-AAA2	30485482	30485492
	100	12	32	45	95	45	10	48,5	M10x1	1,54	1,5	30386572	30512791	30521106	2,4	MHC-HSK-A100-12-095-C-0-A-AAA1	30523141	30523158
	100	12	32	45	95	45	10	48,5	M10x1	4,52	2	30386572	30512787	30384306	2,4	MHC-HSK-A100-12-095-C-0-A-AAA2	30523142	30523159
	100	12	32	45	95	45	10	48,5	M10x1	9,9	3	30386572	30279400	30297309	2,4	MHC-HSK-A100-12-095-C-0-A-AAA3	30386322	30386332
	100	12	32	40	120	45	10	75	M10x1	1,54	1,5	30464668	30512811	30521106	2,5	MHC-HSK-A100-12-120-C-0-A-AAA1	30523175	30523188
	100	12	32	40	120	45	10	75	M10x1	4,52	2	30464668	30512807	30384306	2,5	MHC-HSK-A100-12-120-C-0-A-AAA2	30523176	30523189
	100	12	32	40	120	45	10	75	M10x1	9,9	3	30464668	30279402	30297309	2,5	MHC-HSK-A100-12-120-C-0-A-AAA3	30485447	30485455
	100	12	32	40	160	45	10	115	M10x1	1,54	1,5	30464676	30512826	30521106	2,8	MHC-HSK-A100-12-160-C-0-A-AAA1	30523201	30523218
	100	12	32	40	160	45	10	115	M10x1	4,52	2	30464676	30512822	30384306	2,8	MHC-HSK-A100-12-160-C-0-A-AAA2	30523202	30523219

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green

Continued on next page.

**2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions							G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	100	12	32	40	160	45	10	115	M10x1	9,9	3	30464676	30279404	30297309	2,8	MHC-HSK-A100-12-160-C-0-A-AAA3	30485463	30485473
	100	12	32	40	200	45	10	155	M10x1	1,54	1,5	30464686	30512846	30521106	3,0	MHC-HSK-A100-12-200-C-0-A-AAA1	30523235	30523252
	100	12	32	40	200	45	10	155	M10x1	4,52	2	30464686	30512842	30384306	3,0	MHC-HSK-A100-12-200-C-0-A-AAA2	30523236	30523253
	100	12	32	40	200	45	10	155	M10x1	9,9	3	30464686	30279405	30297309	3,0	MHC-HSK-A100-12-200-C-0-A-AAA3	30485483	30485493
	100	14	34	45	95	45	10	49	M10x1	1,54	1,5	30386573	30512792	30521106	2,5	MHC-HSK-A100-14-095-C-0-A-AAA1	30523143	30523160
	100	14	34	45	95	45	10	49	M10x1	4,52	2	30386573	30512788	30384306	2,5	MHC-HSK-A100-14-095-C-0-A-AAA2	30523144	30523161
	100	14	34	45	95	45	10	49	M10x1	9,9	3	30386573	30279407	30297309	2,5	MHC-HSK-A100-14-095-C-0-A-AAA3	30386323	30386333
	100	14	34	40	120	45	10	75,5	M10x1	1,54	1,5	30464669	30512813	30521106	2,6	MHC-HSK-A100-14-120-C-0-A-AAA1	30523177	30523190
	100	14	34	40	120	45	10	75,5	M10x1	4,52	2	30464669	30512808	30384306	2,6	MHC-HSK-A100-14-120-C-0-A-AAA2	30523178	30523191
	100	14	34	40	120	45	10	75,5	M10x1	9,9	3	30464669	30279408	30297309	2,6	MHC-HSK-A100-14-120-C-0-A-AAA3	30485448	30485456
	100	14	34	40	160	45	10	115,5	M10x1	1,54	1,5	30464677	30512827	30521106	2,9	MHC-HSK-A100-14-160-C-0-A-AAA1	30523203	30523220
	100	14	34	40	160	45	10	115,5	M10x1	4,52	2	30464677	30512823	30384306	2,9	MHC-HSK-A100-14-160-C-0-A-AAA2	30523204	30523221
	100	14	34	40	160	45	10	115,5	M10x1	9,9	3	30464677	30279410	30297309	2,9	MHC-HSK-A100-14-160-C-0-A-AAA3	30485464	30485474
	100	14	34	40	200	45	10	155,5	M10x1	1,54	1,5	30464687	30512847	30521106	3,1	MHC-HSK-A100-14-200-C-0-A-AAA1	30523237	30523254
	100	14	34	40	200	45	10	155,5	M10x1	4,52	2	30464687	30512843	30384306	3,1	MHC-HSK-A100-14-200-C-0-A-AAA2	30523238	30523255
	100	14	34	40	200	45	10	155,5	M10x1	9,9	3	30464687	30279412	30297309	3,1	MHC-HSK-A100-14-200-C-0-A-AAA3	30485484	30485494
	100	16	38	45	100	48	10	55	M12x1	1,54	1,5	30386574	30512793	30521106	2,5	MHC-HSK-A100-16-100-C-0-A-AAA1	30523145	30523162
	100	16	38	45	100	48	10	55	M12x1	4,52	2	30386574	30512789	30384306	2,5	MHC-HSK-A100-16-100-C-0-A-AAA2	30523146	30523163
	100	16	38	45	100	48	10	55	M12x1	9,9	3	30386574	30279413	30297309	2,5	MHC-HSK-A100-16-100-C-0-A-AAA3	30386324	30386334
	100	16	38	-	120	48	10	81,1	M12x1	1,54	1,5	30464670	30512814	30521106	2,6	MHC-HSK-A100-16-120-C-0-A-AAA1	30523179	30523192
	100	16	38	-	120	48	10	81,1	M12x1	4,52	2	30464670	30512809	30384306	2,6	MHC-HSK-A100-16-120-C-0-A-AAA2	30523180	30523193
	100	16	38	-	120	48	10	81,1	M12x1	9,9	3	30464670	30279414	30297309	2,6	MHC-HSK-A100-16-120-C-0-A-AAA3	30485449	30485457
	100	16	38	-	160	48	10	121,1	M12x1	1,54	1,5	30464678	30512828	30521106	2,9	MHC-HSK-A100-16-160-C-0-A-AAA1	30523205	30523222
	100	16	38	-	160	48	10	121,1	M12x1	4,52	2	30464678	30512824	30384306	2,9	MHC-HSK-A100-16-160-C-0-A-AAA2	30523206	30523223
	100	16	38	-	160	48	10	121,1	M12x1	9,9	3	30464678	30279416	30297309	2,9	MHC-HSK-A100-16-160-C-0-A-AAA3	30485465	30485475
	100	16	38	-	200	48	10	161,1	M12x1	1,54	1,5	30464688	30512848	30521106	3,1	MHC-HSK-A100-16-200-C-0-A-AAA1	30523239	30523256
	100	16	38	-	200	48	10	161,1	M12x1	4,52	2	30464688	30512844	30384306	3,1	MHC-HSK-A100-16-200-C-0-A-AAA2	30523240	30523257
	100	16	38	-	200	48	10	161,1	M12x1	9,9	3	30464688	30279418	30297309	3,1	MHC-HSK-A100-16-200-C-0-A-AAA3	30485485	30485495
	100	18	40	45	100	48	10	55,5	M12x1	1,54	1,5	30386575	30512794	30521106	2,6	MHC-HSK-A100-18-100-C-0-A-AAA1	30523147	30523164
	100	18	40	45	100	48	10	55,5	M12x1	4,52	2	30386575	30512790	30384306	2,6	MHC-HSK-A100-18-100-C-0-A-AAA2	30523148	30523165
	100	18	40	45	100	48	10	55,5	M12x1	9,9	3	30386575	30279420	30297309	2,6	MHC-HSK-A100-18-100-C-0-A-AAA3	30386325	30386335
	100	18	40	-	120	48	10	81,1	M12x1	1,54	1,5	30464671	30512815	30521106	2,8	MHC-HSK-A100-18-120-C-0-A-AAA1	30523181	30523194
	100	18	40	-	120	48	10	81,1	M12x1	4,52	2	30464671	30512810	30384306	2,8	MHC-HSK-A100-18-120-C-0-A-AAA2	30523182	30523195
	100	18	40	-	120	48	10	81,1	M12x1	9,9	3	30464671	30279422	30297309	2,8	MHC-HSK-A100-18-120-C-0-A-AAA3	30485450	30485458
	100	18	40	-	160	48	10	121,1	M12x1	1,54	1,5	30464679	30512829	30521106	3,3	MHC-HSK-A100-18-160-C-0-A-AAA1	30523207	30523224
	100	18	40	-	160	48	10	121,1	M12x1	4,52	2	30464679	30512825	30384306	3,3	MHC-HSK-A100-18-160-C-0-A-AAA2	30523208	30523225
	100	18	40	-	160	48	10	121,1	M12x1	9,9	3	30464679	30279423	30297309	3,3	MHC-HSK-A100-18-160-C-0-A-AAA3	30485466	30485476
	100	18	40	-	200	48	10	161,1	M12x1	1,54	1,5	30464689	30512849	30521106	3,7	MHC-HSK-A100-18-200-C-0-A-AAA1	30523241	30523258
	100	18	40	-	200	48	10	161,1	M12x1	4,52	2	30464689	30512845	30384306	3,7	MHC-HSK-A100-18-200-C-0-A-AAA2	30523242	30523259
	100	18	40	-	200	48	10	161,1	M12x1	9,9	3	30464689	30279427	30297309	3,7	MHC-HSK-A100-18-200-C-0-A-AAA3	30485486	30485496
	100	20	42	50	105	50	10	60	M16x1	4,52	2	30386576	30512798	30384306	2,6	MHC-HSK-A100-20-105-C-0-A-AAA1	30523149	30523166
	100	20	42	50	105	50	10	60	M16x1	9,9	3	30386576	30512795	30297309	2,6	MHC-HSK-A100-20-105-C-0-A-AAA2	30523150	30523167
	100	20	42	50	105	50	10	60	M16x1	17,35	4	30386576	30279429	30297310	2,6	MHC-HSK-A100-20-105-C-0-A-AAA3	30386326	30386336
	100	20	42	-	120	50	10	81,1	M16x1	4,52	2	30464672	30512817	30384306	2,8	MHC-HSK-A100-20-120-C-0-A-AAA1	30523183	30523196
	100	20	42	-	120	50	10	81,1	M16x1	9,9	3	30464672	30512816	30297309	2,8	MHC-HSK-A100-20-120-C-0-A-AAA2	30523184	30523197
	100	20	42	-	120	50	10	81,1	M16x1	17,35	4	30464672	30279430	30297310	2,8	MHC-HSK-A100-20-120-C-0-A-AAA3	30485451	30485459
	100	20	42	-	160	50	10	121,1	M16x1	4,52	2	30464680	30512833	30384306	3,2	MHC-HSK-A100-20-160-C-0-A-AAA1	30523209	30523226
	100	20	42	-	160	50	10	121,1	M16x1	9,9	3	30464680	30512830	30297309	3,2	MHC-HSK-A100-20-160-C-0-A-AAA2	30523210	30523227

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

**2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions							G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
	100	20	42	-	160	50	10	121,1	M16x1	17,35	4	30464680	30279432	30297310	3,2	MHC-HSK-A100-20-160-C-0-A-AAA3	30485467	30485477
	100	20	42	-	200	50	10	161,1	M16x1	4,52	2	30464690	30512853	30384306	3,6	MHC-HSK-A100-20-200-C-0-A-AAA1	30523243	30523260
	100	20	42	-	200	50	10	161,1	M16x1	9,9	3	30464690	30512850	30297309	3,6	MHC-HSK-A100-20-200-C-0-A-AAA2	30523244	30523261
	100	20	42	-	200	50	10	161,1	M16x1	17,35	4	30464690	30279433	30297310	3,6	MHC-HSK-A100-20-200-C-0-A-AAA3	30485487	30485497
	100	25	57	-	115	56	10	86	M16x1	4,52	2	30386577	30512799	30384306	3,2	MHC-HSK-A100-25-115-C-0-A-AAA1	30523151	30523168
	100	25	57	-	115	56	10	86	M16x1	9,9	3	30386577	30512796	30297309	3,2	MHC-HSK-A100-25-115-C-0-A-AAA2	30523152	30523169
	100	25	57	-	115	56	10	86	M16x1	17,35	4	30386577	30279434	30297310	3,2	MHC-HSK-A100-25-115-C-0-A-AAA3	30386327	30386337
	100	25	57	-	160	56	10	131	M16x1	4,52	2	30464681	30512834	30384306	3,9	MHC-HSK-A100-25-160-C-0-A-AAA1	30523211	30523228
	100	25	57	-	160	56	10	131	M16x1	9,9	3	30464681	30512831	30297309	3,9	MHC-HSK-A100-25-160-C-0-A-AAA2	30523212	30523229
	100	25	57	-	160	56	10	131	M16x1	17,35	4	30464681	30279435	30297310	3,9	MHC-HSK-A100-25-160-C-0-A-AAA3	30485468	30485478
	100	25	57	-	200	56	10	171	M16x1	4,52	2	30464691	30512854	30384306	4,6	MHC-HSK-A100-25-200-C-0-A-AAA1	30523245	30523262
	100	25	57	-	200	56	10	171	M16x1	9,9	3	30464691	30512851	30297309	4,6	MHC-HSK-A100-25-200-C-0-A-AAA2	30523246	30523263
	100	25	57	-	200	56	10	171	M16x1	17,35	4	30464691	30279436	30297310	4,6	MHC-HSK-A100-25-200-C-0-A-AAA3	30485488	30485498
	100	32	63	-	120	60	10	91	M16x1	4,52	2	30386578	30512800	30384306	3,0	MHC-HSK-A100-32-120-C-0-A-AAA1	30523153	30523170
	100	32	63	-	120	60	10	91	M16x1	9,9	3	30386578	30512797	30297309	3,0	MHC-HSK-A100-32-120-C-0-A-AAA2	30523154	30523171
	100	32	63	-	120	60	10	91	M16x1	17,35	4	30386578	30279441	30297310	3,0	MHC-HSK-A100-32-120-C-0-A-AAA3	30386328	30386338
	100	32	63	-	160	60	10	131	M16x1	4,52	2	30464682	30512835	30384306	3,7	MHC-HSK-A100-32-160-C-0-A-AAA1	30523213	30523230
	100	32	63	-	160	60	10	131	M16x1	9,9	3	30464682	30512832	30297309	3,7	MHC-HSK-A100-32-160-C-0-A-AAA2	30523214	30523231
	100	32	63	-	160	60	10	131	M16x1	17,35	4	30464682	30279442	30297310	3,7	MHC-HSK-A100-32-160-C-0-A-AAA3	30485469	30485479
	100	32	63	-	200	60	10	171	M16x1	4,52	2	30464692	30512856	30384306	4,4	MHC-HSK-A100-32-200-C-0-A-AAA1	30523247	30523264
	100	32	63	-	200	60	10	171	M16x1	9,9	3	30464692	30512852	30297309	4,4	MHC-HSK-A100-32-200-C-0-A-AAA2	30523248	30523265
	100	32	63	-	200	60	10	171	M16x1	17,35	4	30464692	30279443	30297310	4,4	MHC-HSK-A100-32-200-C-0-A-AAA3	30485489	30485499

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter d<sub>1</sub> = 32 mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: Tool body, length adjustment screw and coolant unit as assembly.

These components can also be ordered separately. (see table)

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA.

With a projection length of 2.5 × D (max. 50 mm) radial run-out accuracy 3 μm.

On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Chip version: Equipped with Balluff code carrier, see section "Accessories, spare parts and measuring equipment". Further code carriers on request.

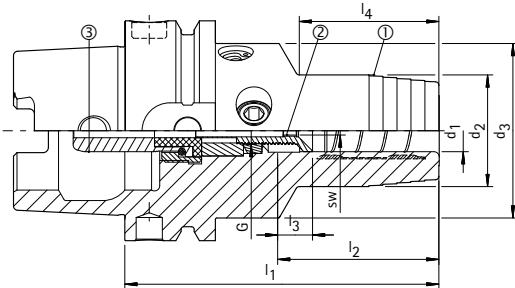
Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.



## 2-channel system MQL hydraulic chucks HydroChuck

for automatic tool change, with radial tool length adjustment

Shank HSK-A in accordance with DIN 69893-1



- ① Hydraulic chucks, HSK, MQL, body material | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, automatic | CU

Variant*	HSK-A	Dimensions							G	A <sub>IN</sub> mm <sup>2</sup>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
40	6	26	33,5	80	36	10	36	M6	1,54	1,5	30479916	30523272	30523266	0,5	MHC-HSK-A040-06-080-C-0-R-AAB1	30522656	30522661	
40	6	26	33,5	80	36	10	36	M6	4,52	2	30479916	30485173	30523267	0,5	MHC-HSK-A040-06-080-C-0-R-AAB2	30485141	30487572	
40	8	28	33,5	80	36	10	36	M6	1,54	1,5	30479917	30523273	30523266	0,5	MHC-HSK-A040-08-080-C-0-R-AAB1	30522657	30522662	
40	8	28	33,5	80	36	10	36	M6	4,52	2	30479917	30485174	30523267	0,5	MHC-HSK-A040-08-080-C-0-R-AAB2	30485142	30487573	
40	10	30	33,5	85	40	10	43	M6	1,54	1,5	30479918	30523274	30523266	0,5	MHC-HSK-A040-10-085-C-0-R-AAB1	30522658	30522663	
40	10	30	33,5	85	40	10	43	M6	4,52	2	30479918	30485175	30523267	0,5	MHC-HSK-A040-10-085-C-0-R-AAB2	30485143	30487574	
40	12	32	33,5	90	45	10	48	M6	1,54	1,5	30479919	30523275	30523266	0,5	MHC-HSK-A040-12-090-C-0-R-AAE1	30522659	30522664	
40	12	32	33,5	90	45	10	48	M6	4,52	2	30479919	30523276	30523267	0,5	MHC-HSK-A040-12-090-C-0-R-AAE2	30522660	30522665	
40	12	32	33,5	90	45	10	48	M6	9,9	3	30479919	30485176	30485194	0,5	MHC-HSK-A040-12-090-C-0-R-AAE3	30485144	30487575	
50	6	26	49	80	36	10	35	M6	1,54	1,5	30479920	30523277	30523268	0,7	MHC-HSK-A050-06-080-C-0-R-AAB1	30522666	30522679	
50	6	26	49	80	36	10	35	M6	4,52	2	30479920	30485177	30523269	0,7	MHC-HSK-A050-06-080-C-0-R-AAB2	30485145	30487576	
50	8	28	50,5	80	36	10	36	M6	1,54	1,5	30479921	30523278	30523268	0,7	MHC-HSK-A050-08-080-C-0-R-AAB1	30522667	30522680	
50	8	28	50,5	80	36	10	36	M6	4,52	2	30479921	30485178	30523269	0,7	MHC-HSK-A050-08-080-C-0-R-AAB2	30485146	30487577	
50	10	30	52	85	40	10	38	M8x1	1,54	1,5	30479922	30523279	30523268	0,7	MHC-HSK-A050-10-085-C-0-R-AAB1	30522668	30522681	
50	10	30	52	85	40	10	38	M8x1	4,52	2	30479922	30485179	30523269	0,7	MHC-HSK-A050-10-085-C-0-R-AAB2	30485147	30487578	
50	12	32	62	90	45	10	40	M8x1	1,54	1,5	30479923	30523280	30523268	0,8	MHC-HSK-A050-12-090-C-0-R-AAE1	30522669	30522682	
50	12	32	62	90	45	10	40	M8x1	4,52	2	30479923	30523281	30523269	0,8	MHC-HSK-A050-12-090-C-0-R-AAE2	30522670	30522683	
50	12	32	62	90	45	10	40	M8x1	9,9	3	30479923	30485180	30485195	0,8	MHC-HSK-A050-12-090-C-0-R-AAE3	30485148	30487579	
50	14	34	39,5	90	45	10	46	M8x1	1,54	1,5	30479924	30523282	30523268	0,8	MHC-HSK-A050-14-090-C-0-R-AAE1	30522671	30522684	
50	14	34	39,5	90	45	10	46	M8x1	4,52	2	30479924	30523283	30523269	0,8	MHC-HSK-A050-14-090-C-0-R-AAE2	30522672	30522685	
50	14	34	39,5	90	45	10	46	M8x1	9,9	3	30479924	30485181	30485195	0,8	MHC-HSK-A050-14-090-C-0-R-AAE3	30485149	30487580	
50	16	34	39,5	95	48	10	36,5	M8x1	1,54	1,5	30479925	30523284	30523268	1,0	MHC-HSK-A050-16-095-C-0-R-AAE1	30522673	30522686	
50	16	34	39,5	95	48	10	36,5	M8x1	4,52	2	30479925	30523285	30523269	1,0	MHC-HSK-A050-16-095-C-0-R-AAE2	30522674	30522687	
50	16	34	39,5	95	48	10	36,5	M8x1	9,9	3	30479925	30485182	30485195	1,0	MHC-HSK-A050-16-095-C-0-R-AAE3	30485150	30487581	
50	18	38	39	95	48	10	36,5	M8x1	1,54	1,5	30479926	30523286	30523268	1,0	MHC-HSK-A050-18-095-C-0-R-AAE1	30522675	30522688	
50	18	38	39	95	48	10	36,5	M8x1	4,52	2	30479926	30523287	30523269	1,0	MHC-HSK-A050-18-095-C-0-R-AAE2	30522676	30522689	
50	18	38	39	95	48	10	36,5	M8x1	9,9	3	30479926	30485183	30485195	1,0	MHC-HSK-A050-18-095-C-0-R-AAE3	30485151	30487582	
50	20	38	39	100	50	10	39	M8x1	1,54	2	30479927	30523288	30523268	1,2	MHC-HSK-A050-20-100-C-0-R-AAB2	30522677	30522690	
50	20	38	39	100	50	10	39	M8x1	4,52	3	30479927	30523289	30523269	1,2	MHC-HSK-A050-20-100-C-0-R-AAB3	30522678	30522691	
50	20	38	39	100	50	10	39	M8x1	9,9	4	30479927	30485184	30485195	1,2	MHC-HSK-A050-20-100-C-0-R-AAB4	30485152	30487583	
63	6	26	38,5	80	36	10	33	M6	1,54	1,5	30479928	30523277	30523270	1,0	MHC-HSK-A063-06-080-C-0-R-AAC1	30522692	30522709	
63	6	26	38,5	80	36	10	33	M6	4,52	2	30479928	30485177	30523271	1,0	MHC-HSK-A063-06-080-C-0-R-AAC2	30485153	30487584	

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

**2-channel system MQL hydraulic chucks HydroChuck | For automatic tool change, with radial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions							G	A <sub>N</sub> mm <sup>2</sup>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				BDY	LS	CU				
63	8	28	39	80	36	10	33	M6	1,54	1,5	30479929	30523278	30523270	1,1	MHC-HSK-A063-08-080-C-0-R-AAC1	30522693	30522710	
63	8	28	39	80	36	10	33	M6	4,52	2	30479929	30485178	30523271	1,1	MHC-HSK-A063-08-080-C-0-R-AAC2	30485154	30487585	
63	10	30	44,5	85	40	10	38	M8x1	1,54	1,5	30479930	30523279	30523270	1,1	MHC-HSK-A063-10-085-C-0-R-AAC1	30522694	30522711	
63	10	30	44,5	85	40	10	38	M8x1	4,52	2	30479930	30485179	30523271	1,1	MHC-HSK-A063-10-085-C-0-R-AAC2	30485155	30487586	
63	12	32	53	90	45	10	40	M8x1	1,54	1,5	30479931	30523280	30523270	1,2	MHC-HSK-A063-12-090-C-0-R-AAF1	30522695	30522712	
63	12	32	53	90	45	10	40	M8x1	4,52	2	30479931	30523281	30523271	1,2	MHC-HSK-A063-12-090-C-0-R-AAF2	30522696	30522713	
63	12	32	53	90	45	10	40	M8x1	9,9	3	30479931	30485180	30485197	1,2	MHC-HSK-A063-12-090-C-0-R-AAF3	30485156	30487587	
63	14	34	54,5	90	45	10	46	M8x1	1,54	1,5	30479932	30523282	30523270	1,2	MHC-HSK-A063-14-090-C-0-R-AAF1	30522697	30522714	
63	14	34	54,5	90	45	10	46	M8x1	4,52	2	30479932	30523283	30523271	1,2	MHC-HSK-A063-14-090-C-0-R-AAF2	30522698	30522715	
63	14	34	54,5	90	45	10	46	M8x1	9,9	3	30479932	30485181	30485197	1,2	MHC-HSK-A063-14-090-C-0-R-AAF3	30485157	30487588	
63	16	38	61	95	48	10	51	M8x1	1,54	1,5	30479933	30523284	30523270	1,3	MHC-HSK-A063-16-095-C-0-R-AAF1	30522699	30522716	
63	16	38	61	95	48	10	51	M8x1	4,52	2	30479933	30523285	30523271	1,3	MHC-HSK-A063-16-095-C-0-R-AAF2	30522700	30522717	
63	16	38	61	95	48	10	51	M8x1	9,9	3	30479933	30485182	30485197	1,3	MHC-HSK-A063-16-095-C-0-R-AAF3	30485158	30487589	
63	18	40	62,5	95	48	10	52	M8x1	1,54	1,5	30479934	30523286	30523270	1,3	MHC-HSK-A063-18-095-C-0-R-AAF1	30522701	30522718	
63	18	40	62,5	95	48	10	52	M8x1	4,52	2	30479934	30523287	30523271	1,3	MHC-HSK-A063-18-095-C-0-R-AAF2	30522702	30522719	
63	18	40	62,5	95	48	10	52	M8x1	9,9	3	30479934	30485183	30485197	1,3	MHC-HSK-A063-18-095-C-0-R-AAF3	30485159	30487590	
63	20	42	42	100	50	10	51	M8x1	1,54	2	30479935	30523288	30523271	1,4	MHC-HSK-A063-20-100-C-0-R-AAC2	30522703	30522720	
63	20	42	42	100	50	10	51	M8x1	4,52	3	30479935	30523289	30485197	1,4	MHC-HSK-A063-20-100-C-0-R-AAC3	30522704	30522721	
63	20	42	42	100	50	10	51	M8x1	9,9	4	30479935	30485184	30485198	1,4	MHC-HSK-A063-20-100-C-0-R-AAC4	30485160	30487591	
63	25	42	42	120	56	10	54,5	M8x1	1,54	2	30479936	30523290	30523271	2,1	MHC-HSK-A063-25-120-C-0-R-AAC2	30522705	30522722	
63	25	42	42	120	56	10	54,5	M8x1	4,52	3	30479936	30523291	30485197	2,1	MHC-HSK-A063-25-120-C-0-R-AAC3	30522706	30522723	
63	25	42	42	120	56	10	54,5	M8x1	9,9	4	30479936	30485185	30485198	2,1	MHC-HSK-A063-25-120-C-0-R-AAC4	30485161	30487592	
63	32	42	42	125	60	10	69	M8x1	1,54	2	30479937	30523292	30523271	2,4	MHC-HSK-A063-32-125-C-0-R-AAC2	30522707	30522724	
63	32	42	42	125	60	10	69	M8x1	4,52	3	30479937	30523293	30485197	2,4	MHC-HSK-A063-32-125-C-0-R-AAC3	30522708	30522725	
63	32	42	42	125	60	10	69	M8x1	9,9	4	30479937	30485186	30485198	2,4	MHC-HSK-A063-32-125-C-0-R-AAC4	30485162	30487593	

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

Dimensions in mm.

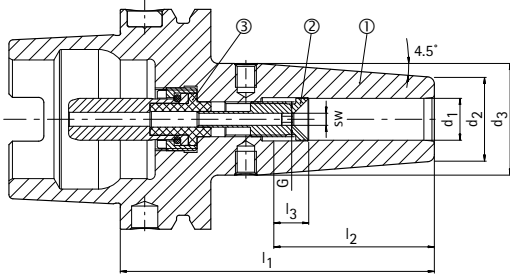
Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: Tool body, length adjustment screw and coolant unit as assembly. These components can also be ordered separately. (see table)

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Chip version: Equipped with Balluff code carrier, see section "Accessories, spare parts and measuring equipment". Further code carriers on request. Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# 2-channel system MQL shrink chucks ThermoChuck

for automatic tool change, with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1



- ① Shrink chuck, HSK, MQL, tool body | BDY
- ② Length adjustment screw, MQL | LS
- ③ Coolant supply unit, MQL, automatic | CU

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				mm <sup>2</sup>	BDY	LS				
Blue	32	6	21	26	80	36	10	M5	1,54	1,5	30386104	30513620	30521101	0,3	MTC-HSK-A032-06-080-C-0-A-AAA1	30521726	30521727
Green	32	6	21	26	80	36	10	M5	4,52	2	30386104	30383955	30384301	0,3	MTC-HSK-A032-06-080-C-0-A-AAA2	30385538	30385542
Blue	32	6	21	26	120	36	10	M5	1,54	1,5	30386112	30512718	30521101	0,5	MTC-HSK-A032-06-120-C-0-A-AAA1	30521728	30521729
Green	32	6	21	26	120	36	10	M5	4,52	2	30386112	30383956	30384301	0,5	MTC-HSK-A032-06-120-C-0-A-AAA2	30385546	30385550
Blue	32	6	21	26	160	36	10	M5	1,54	1,5	30479062	30512722	30521101	0,6	MTC-HSK-A032-06-160-C-0-A-AAA1	30521730	30521731
Green	32	6	21	26	160	36	10	M5	4,52	2	30479062	30484932	30384301	0,6	MTC-HSK-A032-06-160-C-0-A-AAA2	30484914	30484919
Blue	32	8	21	26	80	36	10	M7	1,54	1,5	30386105	30512715	30521101	0,3	MTC-HSK-A032-08-080-C-0-A-AAA1	30521732	30521733
Green	32	8	21	26	80	36	10	M7	4,52	2	30386105	30383957	30384301	0,3	MTC-HSK-A032-08-080-C-0-A-AAA2	30385539	30385543
Blue	32	8	21	26	120	36	10	M7	1,54	1,5	30386113	30512719	30521101	0,5	MTC-HSK-A032-08-120-C-0-A-AAA1	30521734	30521735
Green	32	8	21	26	120	36	10	M7	4,52	2	30386113	30383958	30384301	0,5	MTC-HSK-A032-08-120-C-0-A-AAA2	30385547	30385551
Blue	32	8	21	26	160	36	10	M7	1,54	1,5	30479063	30512723	30521101	0,6	MTC-HSK-A032-08-160-C-0-A-AAA1	30521736	30521737
Green	32	8	21	26	160	36	10	M7	4,52	2	30479063	30484933	30384301	0,6	MTC-HSK-A032-08-160-C-0-A-AAA2	30484915	30484920
Blue	32	10	24	29	85	40	10	M8x1	1,54	1,5	30386106	30512716	30521101	0,4	MTC-HSK-A032-10-085-C-0-A-AAA1	30521738	30521739
Green	32	10	24	29	85	40	10	M8x1	4,52	2	30386106	30383951	30384301	0,4	MTC-HSK-A032-10-085-C-0-A-AAA2	30385540	30385544
Blue	32	10	24	29	120	40	10	M8x1	1,54	1,5	30386114	30512720	30521101	0,6	MTC-HSK-A032-10-120-C-0-A-AAA1	30521740	30521741
Green	32	10	24	29	120	40	10	M8x1	4,52	2	30386114	30383952	30384301	0,6	MTC-HSK-A032-10-120-C-0-A-AAA2	30385548	30385552
Blue	32	10	24	29	160	40	10	M8x1	1,54	1,5	30479064	30512724	30521101	0,7	MTC-HSK-A032-10-160-C-0-A-AAA1	30521742	30521743
Green	32	10	24	29	160	40	10	M8x1	4,52	2	30479064	30484936	30384301	0,7	MTC-HSK-A032-10-160-C-0-A-AAA2	30484916	30484921
Blue	32	12	24	29	90	45	10	M10x1	1,54	1,5	30386107	30512717	30521101	0,4	MTC-HSK-A032-12-090-C-0-A-AAA1	30521744	30521745
Green	32	12	24	29	90	45	10	M10x1	4,52	2	30386107	30383953	30384301	0,4	MTC-HSK-A032-12-090-C-0-A-AAA2	30385541	30385545
Blue	32	12	24	29	120	45	10	M10x1	1,54	1,5	30386115	30512721	30521101	0,6	MTC-HSK-A032-12-120-C-0-A-AAA1	30521746	30521747
Green	32	12	24	29	120	45	10	M10x1	4,52	2	30386115	30383954	30384301	0,6	MTC-HSK-A032-12-120-C-0-A-AAA2	30385549	30385553
Blue	32	12	24	29	160	45	10	M10x1	1,54	1,5	30479065	30512725	30521101	0,7	MTC-HSK-A032-12-160-C-0-A-AAA1	30521748	30521749
Green	32	12	24	29	160	45	10	M10x1	4,52	2	30479065	30484939	30384301	0,7	MTC-HSK-A032-12-160-C-0-A-AAA2	30484918	30484923
Blue	40	6	21	27	80	36	10	M7	1,54	1,5	10083221	30512726	30521102	0,5	MTC-HSK-A040-06-080-C-0-A-AAA1	30521750	30521751
Green	40	6	21	27	80	36	10	M7	4,52	2	10083221	30383971	30384302	0,5	MTC-HSK-A040-06-080-C-0-A-AAA2	30385554	30385560
Blue	40	6	21	27	120	36	10	M5	1,54	1,5	30386120	30512735	30521102	0,6	MTC-HSK-A040-06-120-C-0-A-AAA1	30521752	30521753
Green	40	6	21	27	120	36	10	M5	4,52	2	30386120	30383972	30384302	0,6	MTC-HSK-A040-06-120-C-0-A-AAA2	30385566	30385572
Blue	40	6	21	27	160	36	10	M5	1,54	1,5	30386122	30512744	30521102	0,8	MTC-HSK-A040-06-160-C-0-A-AAA1	30521754	30521755
Green	40	6	21	27	160	36	10	M5	4,52	2	30386122	30383973	30384302	0,8	MTC-HSK-A040-06-160-C-0-A-AAA2	30385578	30385584
Blue	40	8	21	27	80	36	10	M7	1,54	1,5	10083222	30512727	30521102	0,5	MTC-HSK-A040-08-080-C-0-A-AAA1	30521756	30521757
Green	40	8	21	27	80	36	10	M7	4,52	2	10083222	30383974	30384302	0,5	MTC-HSK-A040-08-080-C-0-A-AAA2	30385555	30385561

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

**2-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				BDY	LS	CU				
	40	8	21	27	120	36	10	M7	1,54	1,5	30302763	30512736	30521102	0,6	MTC-HSK-A040-08-120-C-0-A-AAA1	30521758	30521759
	40	8	21	27	120	36	10	M7	4,52	2	30302763	30383975	30384302	0,6	MTC-HSK-A040-08-120-C-0-A-AAA2	30385567	30385573
	40	8	21	27	160	36	10	M7	1,54	1,5	30302769	30512745	30521102	0,8	MTC-HSK-A040-08-160-C-0-A-AAA1	30521760	30521761
	40	8	21	27	160	36	10	M7	4,52	2	30302769	30383976	30384302	0,8	MTC-HSK-A040-08-160-C-0-A-AAA2	30385579	30385585
	40	10	24	32	80	40	10	M8x1	1,54	1,5	10083223	30512728	30521102	0,5	MTC-HSK-A040-10-080-C-0-A-AAA1	30521762	30521763
	40	10	24	32	80	40	10	M8x1	4,52	2	10083223	30383959	30384302	0,5	MTC-HSK-A040-10-080-C-0-A-AAA2	30385556	30385562
	40	10	24	32	120	40	10	M8x1	1,54	1,5	30302764	30512737	30521102	0,8	MTC-HSK-A040-10-120-C-0-A-AAA1	30521764	30521765
	40	10	24	32	120	40	10	M8x1	4,52	2	30302764	30383960	30384302	0,8	MTC-HSK-A040-10-120-C-0-A-AAA2	30385568	30385574
	40	10	24	32	160	40	10	M8x1	1,54	1,5	30302770	30512746	30521102	1,0	MTC-HSK-A040-10-160-C-0-A-AAA1	30521766	30521767
	40	10	24	32	160	40	10	M8x1	4,52	2	30302770	30383961	30384302	1,0	MTC-HSK-A040-10-160-C-0-A-AAA2	30385580	30385586
	40	12	24	32	90	45	10	M10x1	1,54	1,5	10083224	30512732	30521102	0,6	MTC-HSK-A040-12-090-C-0-A-AAA1	30521768	30521769
	40	12	24	32	90	45	10	M10x1	4,52	2	10083224	30512729	30384302	0,6	MTC-HSK-A040-12-090-C-0-A-AAA2	30521770	30521771
	40	12	24	32	90	45	10	M10x1	9,9	3	10083224	30280050	30297304	0,6	MTC-HSK-A040-12-090-C-0-A-AAA3	30326547	30326565
	40	12	24	32	120	45	10	M10x1	1,54	1,5	30302765	30512741	30521102	0,7	MTC-HSK-A040-12-120-C-0-A-AAA1	30521772	30521773
	40	12	24	32	120	45	10	M10x1	4,52	2	30302765	30512738	30384302	0,7	MTC-HSK-A040-12-120-C-0-A-AAA2	30521774	30521775
	40	12	24	32	120	45	10	M10x1	9,9	3	30302765	30302842	30297304	0,7	MTC-HSK-A040-12-120-C-0-A-AAA3	30326553	30326571
	40	12	24	32	160	45	10	M10x1	1,54	1,5	30302771	30512750	30521102	1,0	MTC-HSK-A040-12-160-C-0-A-AAA1	30521776	30521777
	40	12	24	32	160	45	10	M10x1	4,52	2	30302771	30512747	30384302	1,0	MTC-HSK-A040-12-160-C-0-A-AAA2	30521778	30521779
	40	12	24	32	160	45	10	M10x1	9,9	3	30302771	30302848	30297304	1,0	MTC-HSK-A040-12-160-C-0-A-AAA3	30326559	30326577
	40	14	27	34	90	45	10	M10x1	1,54	1,5	10083225	30512733	30521102	0,6	MTC-HSK-A040-14-090-C-0-A-AAA1	30521780	30521781
	40	14	27	34	90	45	10	M10x1	4,52	2	10083225	30512730	30384302	0,6	MTC-HSK-A040-14-090-C-0-A-AAA2	30521782	30521783
	40	14	27	34	90	45	10	M10x1	9,9	3	10083225	30280051	30297304	0,6	MTC-HSK-A040-14-090-C-0-A-AAA3	30326548	30326566
	40	14	27	34	120	45	10	M10x1	1,54	1,5	30302766	30512742	30521102	0,8	MTC-HSK-A040-14-120-C-0-A-AAA1	30521784	30521785
	40	14	27	34	120	45	10	M10x1	4,52	2	30302766	30512739	30384302	0,8	MTC-HSK-A040-14-120-C-0-A-AAA2	30521786	30521787
	40	14	27	34	120	45	10	M10x1	9,9	3	30302766	30302843	30297304	0,8	MTC-HSK-A040-14-120-C-0-A-AAA3	30326554	30326572
	40	14	27	34	160	45	10	M10x1	1,54	1,5	30302772	30512751	30521102	1,1	MTC-HSK-A040-14-160-C-0-A-AAA1	30521788	30521789
	40	14	27	34	160	45	10	M10x1	4,52	2	30302772	30512748	30384302	1,1	MTC-HSK-A040-14-160-C-0-A-AAA2	30521790	30521791
	40	14	27	34	160	45	10	M10x1	9,9	3	30302772	30302849	30297304	1,1	MTC-HSK-A040-14-160-C-0-A-AAA3	30326560	30326578
	40	16	27	34	90	48	10	M12x1	1,54	1,5	10083226	30512734	30521102	0,6	MTC-HSK-A040-16-090-C-0-A-AAA1	30521792	30521793
	40	16	27	34	90	48	10	M12x1	4,52	2	10083226	30512731	30384302	0,6	MTC-HSK-A040-16-090-C-0-A-AAA2	30521794	30521795
	40	16	27	34	90	48	10	M12x1	9,9	3	10083226	30280052	30297304	0,6	MTC-HSK-A040-16-090-C-0-A-AAA3	30326549	30326567
	40	16	27	34	120	48	10	M12x1	1,54	1,5	30302767	30512743	30521102	0,8	MTC-HSK-A040-16-120-C-0-A-AAA1	30521796	30521797
	40	16	27	34	120	48	10	M12x1	4,52	2	30302767	30512740	30384302	0,8	MTC-HSK-A040-16-120-C-0-A-AAA2	30521798	30521799
	40	16	27	34	120	48	10	M12x1	9,9	3	30302767	30302844	30297304	0,8	MTC-HSK-A040-16-120-C-0-A-AAA3	30326555	30326573
	40	16	27	34	160	48	10	M12x1	1,54	1,5	30302773	30512752	30521102	1,1	MTC-HSK-A040-16-160-C-0-A-AAA1	30521800	30521801
	40	16	27	34	160	48	10	M12x1	4,52	2	30302773	30512749	30384302	1,1	MTC-HSK-A040-16-160-C-0-A-AAA2	30521802	30521803
	40	16	27	34	160	48	10	M12x1	9,9	3	30302773	30302850	30297304	1,1	MTC-HSK-A040-16-160-C-0-A-AAA3	30326561	30326579
	50	6	21	27	80	36	10	M8x1	1,54	1,5	10083227	30512753	30521103	0,6	MTC-HSK-A050-06-080-C-0-A-AAA1	30521804	30521805
	50	6	21	27	80	36	10	M8x1	4,52	2	10083227	30384009	30384303	0,6	MTC-HSK-A050-06-080-C-0-A-AAA2	30385590	30385598
	50	6	21	27	120	36	10	M5	1,54	1,5	30386124	30512756	30521103	0,8	MTC-HSK-A050-06-120-C-0-A-AAA1	30521806	30521807
	50	6	21	27	120	36	10	M5	4,52	2	30386124	30383998	30384303	0,8	MTC-HSK-A050-06-120-C-0-A-AAA2	30385606	30385614
	50	6	21	27	160	36	10	M5	1,54	1,5	30386126	30512770	30521103	1,0	MTC-HSK-A050-06-160-C-0-A-AAA1	30521808	30521809
	50	6	21	27	160	36	10	M5	4,52	2	30386126	30383999	30384303	1,0	MTC-HSK-A050-06-160-C-0-A-AAA2	30385622	30385630
	50	8	21	27	80	36	10	M8x1	1,54	1,5	10083228	30512754	30521103	0,6	MTC-HSK-A050-08-080-C-0-A-AAA1	30521810	30521811
	50	8	21	27	80	36	10	M8x1	4,52	2	10083228	30384010	30384303	0,6	MTC-HSK-A050-08-080-C-0-A-AAA2	30385591	30385599
	50	8	21	27	120	36	10	M7	1,54	1,5	30386125	30512757	30521103	0,8	MTC-HSK-A050-08-120-C-0-A-AAA1	30521812	30521813
	50	8	21	27	120	36	10	M7	4,52	2	30386125	30384001	30384303	0,8	MTC-HSK-A050-08-120-C-0-A-AAA2	30385607	30385615
	50	8	21	27	160	36	10	M7	1,54	1,5	30386127	30512771	30521103	1,0	MTC-HSK-A050-08-160-C-0-A-AAA1	30521814	30521815

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

Continued on next page.

**2-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				BDY	LS	CU				
	50	8	21	27	160	36	10	M7	4,52	2	30386127	30384002	30384303	1,0	MTC-HSK-A050-08-160-C-0-A-AAA2	30385623	30385631
	50	10	24	32	85	40	10	M8x1	1,54	1,5	10083229	30512755	30521103	0,7	MTC-HSK-A050-10-085-C-0-A-AAA1	30521816	30521817
	50	10	24	32	85	40	10	M8x1	4,52	2	10083229	30384004	30384303	0,7	MTC-HSK-A050-10-085-C-0-A-AAA2	30385592	30385600
	50	10	24	32	120	40	10	M8x1	1,54	1,5	30302776	30512758	30521103	0,9	MTC-HSK-A050-10-120-C-0-A-AAA1	30521818	30521819
	50	10	24	32	120	40	10	M8x1	4,52	2	30302776	30383977	30384303	0,9	MTC-HSK-A050-10-120-C-0-A-AAA2	30385608	30385616
	50	10	24	32	160	40	10	M8x1	1,54	1,5	30302784	30512772	30521103	1,2	MTC-HSK-A050-10-160-C-0-A-AAA1	30521820	30521821
	50	10	24	32	160	40	10	M8x1	4,52	2	30302784	30383978	30384303	1,2	MTC-HSK-A050-10-160-C-0-A-AAA2	30385624	30385632
	50	12	24	32	90	45	10	M10x1	1,54	1,5	10083230	30512791	30521103	0,7	MTC-HSK-A050-12-090-C-0-A-AAA1	30521822	30521823
	50	12	24	32	90	45	10	M10x1	4,52	2	10083230	30512787	30384303	0,7	MTC-HSK-A050-12-090-C-0-A-AAA2	30521824	30521825
	50	12	24	32	90	45	10	M10x1	9,9	3	10083230	30279400	30297305	0,7	MTC-HSK-A050-12-090-C-0-A-AAA3	30326583	30326607
	50	12	24	32	120	45	10	M10x1	1,54	1,5	30302777	30512763	30521103	0,9	MTC-HSK-A050-12-120-C-0-A-AAA1	30521826	30521827
	50	12	24	32	120	45	10	M10x1	4,52	2	30302777	30512759	30384303	0,9	MTC-HSK-A050-12-120-C-0-A-AAA2	30521828	30521829
	50	12	24	32	120	45	10	M10x1	9,9	3	30302777	30302854	30297305	0,9	MTC-HSK-A050-12-120-C-0-A-AAA3	30326591	30326615
	50	12	24	32	160	45	10	M10x1	1,54	1,5	30302785	30512777	30521103	1,1	MTC-HSK-A050-12-160-C-0-A-AAA1	30521830	30521831
	50	12	24	32	160	45	10	M10x1	4,52	2	30302785	30512773	30384303	1,1	MTC-HSK-A050-12-160-C-0-A-AAA2	30521832	30521833
	50	12	24	32	160	45	10	M10x1	9,9	3	30302785	30302862	30297305	1,1	MTC-HSK-A050-12-160-C-0-A-AAA3	30326599	30326623
	50	14	27	34	90	45	10	M10x1	1,54	1,5	10083231	30512792	30521103	0,8	MTC-HSK-A050-14-090-C-0-A-AAA1	30521834	30521835
	50	14	27	34	90	45	10	M10x1	4,52	2	10083231	30512788	30384303	0,8	MTC-HSK-A050-14-090-C-0-A-AAA2	30521836	30521837
	50	14	27	34	90	45	10	M10x1	9,9	3	10083231	30279407	30297305	0,8	MTC-HSK-A050-14-090-C-0-A-AAA3	30326584	30326608
	50	14	27	34	120	45	10	M10x1	1,54	1,5	30302778	30512764	30521103	1,0	MTC-HSK-A050-14-120-C-0-A-AAA1	30521838	30521839
	50	14	27	34	120	45	10	M10x1	4,52	2	30302778	30512760	30384303	1,0	MTC-HSK-A050-14-120-C-0-A-AAA2	30521840	30521841
	50	14	27	34	120	45	10	M10x1	9,9	3	30302778	30302855	30297305	1,0	MTC-HSK-A050-14-120-C-0-A-AAA3	30326592	30326616
	50	14	27	34	160	45	10	M10x1	1,54	1,5	30302786	30512778	30521103	1,2	MTC-HSK-A050-14-160-C-0-A-AAA1	30521842	30521843
	50	14	27	34	160	45	10	M10x1	4,52	2	30302786	30512774	30384303	1,2	MTC-HSK-A050-14-160-C-0-A-AAA2	30521844	30521845
	50	14	27	34	160	45	10	M10x1	9,9	3	30302786	30302863	30297305	1,2	MTC-HSK-A050-14-160-C-0-A-AAA3	30326600	30326624
	50	16	27	34	95	48	10	M12x1	1,54	1,5	10083232	30512793	30521103	0,8	MTC-HSK-A050-16-095-C-0-A-AAA1	30521846	30521847
	50	16	27	34	95	48	10	M12x1	4,52	2	10083232	30512789	30384303	0,8	MTC-HSK-A050-16-095-C-0-A-AAA2	30521848	30521849
	50	16	27	34	95	48	10	M12x1	9,9	3	10083232	30279413	30297305	0,8	MTC-HSK-A050-16-095-C-0-A-AAA3	30326585	30326609
	50	16	27	34	120	48	10	M12x1	1,54	1,5	30302779	30512765	30521103	0,9	MTC-HSK-A050-16-120-C-0-A-AAA1	30521850	30521851
	50	16	27	34	120	48	10	M12x1	4,52	2	30302779	30512761	30384303	0,9	MTC-HSK-A050-16-120-C-0-A-AAA2	30521852	30521853
	50	16	27	34	120	48	10	M12x1	9,9	3	30302779	30302856	30297305	0,9	MTC-HSK-A050-16-120-C-0-A-AAA3	30326593	30326617
	50	16	27	34	160	48	10	M12x1	1,54	1,5	30302787	30512779	30521103	1,2	MTC-HSK-A050-16-160-C-0-A-AAA1	30521854	30521855
	50	16	27	34	160	48	10	M12x1	4,52	2	30302787	30512775	30384303	1,2	MTC-HSK-A050-16-160-C-0-A-AAA2	30521856	30521857
	50	16	27	34	160	48	10	M12x1	9,9	3	30302787	30302864	30297305	1,2	MTC-HSK-A050-16-160-C-0-A-AAA3	30326601	30326625
	50	18	33	42	95	48	10	M12x1	1,54	1,5	10083233	30512794	30521103	0,9	MTC-HSK-A050-18-095-C-0-A-AAA1	30521858	30521859
	50	18	33	42	95	48	10	M12x1	4,52	2	10083233	30512790	30384303	0,9	MTC-HSK-A050-18-095-C-0-A-AAA2	30521860	30521861
	50	18	33	42	95	48	10	M12x1	9,9	3	10083233	30279420	30297305	0,9	MTC-HSK-A050-18-095-C-0-A-AAA3	30326586	30326610
	50	18	33	42	120	48	10	M12x1	1,54	1,5	30302780	30512766	30521103	1,2	MTC-HSK-A050-18-120-C-0-A-AAA1	30521862	30521863
	50	18	33	42	120	48	10	M12x1	4,52	2	30302780	30512762	30384303	1,2	MTC-HSK-A050-18-120-C-0-A-AAA2	30521864	30521865
	50	18	33	42	120	48	10	M12x1	9,9	3	30302780	30302857	30297305	1,2	MTC-HSK-A050-18-120-C-0-A-AAA3	30326594	30326618
	50	18	33	42	160	48	10	M12x1	1,54	1,5	30302788	30512780	30521103	1,6	MTC-HSK-A050-18-160-C-0-A-AAA1	30521866	30521867
	50	18	33	42	160	48	10	M12x1	4,52	2	30302788	30512776	30384303	1,6	MTC-HSK-A050-18-160-C-0-A-AAA2	30521868	30521869
	50	18	33	42	160	48	10	M12x1	9,9	3	30302788	30302865	30297305	1,6	MTC-HSK-A050-18-160-C-0-A-AAA3	30326602	30326626
	50	20	33	42	100	50	10	M16x1	4,52	2	10083234	30512798	30384303	0,9	MTC-HSK-A050-20-100-C-0-A-AAA2	30521870	30521871
	50	20	33	42	100	50	10	M16x1	9,9	3	10083234	30512795	30297305	0,9	MTC-HSK-A050-20-100-C-0-A-AAA3	30521872	30521873
	50	20	33	42	100	50	10	M16x1	17,35	4	10083234	30279429	30297306	0,9	MTC-HSK-A050-20-100-C-0-A-AAA4	30326587	30326611
	50	20	33	42	120	50	10	M16x1	4,52	2	30302781	30512768	30384303	1,2	MTC-HSK-A050-20-120-C-0-A-AAA2	30521874	30521875
	50	20	33	42	120	50	10	M16x1	9,9	3	30302781	30512767	30297305	1,2	MTC-HSK-A050-20-120-C-0-A-AAA3	30521876	30521877

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .



2-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment  
Shank HSK-A in accordance with DIN 69893-1

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				mm <sup>2</sup>	BDY	LS				
	50	20	33	42	120	50	10	M16x1	17,35	4	30302781	30302858	30297306	1,2	MTC-HSK-A050-20-120-C-0-A-AAA4	30326595	30326619
	50	20	33	42	160	50	10	M16x1	4,52	2	30302789	30512782	30384303	1,6	MTC-HSK-A050-20-160-C-0-A-AAA2	30521878	30521879
	50	20	33	42	160	50	10	M16x1	9,9	3	30302789	30512781	30297305	1,6	MTC-HSK-A050-20-160-C-0-A-AAA3	30521880	30521881
	50	20	33	42	160	50	10	M16x1	17,35	4	30302789	30302866	30297306	1,6	MTC-HSK-A050-20-160-C-0-A-AAA4	30326603	30326627
	63	6	21	27	80	36	10	M10x1	1,54	1,5	10083235	30512784	30512203	0,9	MTC-HSK-A063-06-080-C-0-A-AAA1	30521882	30521883
	63	6	21	27	80	36	10	M10x1	4,52	2	10083235	30384039	30384304	0,9	MTC-HSK-A063-06-080-C-0-A-AAA2	30385638	30385648
	63	6	21	27	120	36	10	M5	1,54	1,5	30386128	30512804	30512203	1,1	MTC-HSK-A063-06-120-C-0-A-AAA1	30521884	30521885
	63	6	21	27	120	36	10	M5	4,52	2	30386128	30384040	30384304	1,1	MTC-HSK-A063-06-120-C-0-A-AAA2	30385658	30385666
	63	6	21	27	160	36	10	M5	1,54	1,5	30386130	30512819	30512203	1,2	MTC-HSK-A063-06-160-C-0-A-AAA1	30521886	30521887
	63	6	21	27	160	36	10	M5	4,52	2	30386130	30384041	30384304	1,2	MTC-HSK-A063-06-160-C-0-A-AAA2	30385674	30385684
	63	6	21	27	200	36	10	M5	1,54	1,5	30386132	30512839	30512203	1,4	MTC-HSK-A063-06-200-C-0-A-AAA1	30521888	30521889
	63	6	21	27	200	36	10	M5	4,52	2	30386132	30384042	30384304	1,4	MTC-HSK-A063-06-200-C-0-A-AAA2	30385694	30385704
	63	8	21	27	80	36	10	M10x1	1,54	1,5	10083236	30512785	30512203	0,9	MTC-HSK-A063-08-080-C-0-A-AAA1	30521890	30521891
	63	8	21	27	80	36	10	M10x1	4,52	2	10083236	30384043	30384304	0,9	MTC-HSK-A063-08-080-C-0-A-AAA2	30385639	30385649
	63	8	21	27	120	36	10	M7	1,54	1,5	30386129	30512805	30512203	1,1	MTC-HSK-A063-08-120-C-0-A-AAA1	30521892	30521893
	63	8	21	27	120	36	10	M7	4,52	2	30386129	30384044	30384304	1,1	MTC-HSK-A063-08-120-C-0-A-AAA2	30385659	30385667
	63	8	21	27	160	36	10	M7	1,54	1,5	30386131	30512820	30512203	1,2	MTC-HSK-A063-08-160-C-0-A-AAA1	30521894	30521895
	63	8	21	27	160	36	10	M7	4,52	2	30386131	30384045	30384304	1,2	MTC-HSK-A063-08-160-C-0-A-AAA2	30385675	30385685
	63	8	21	27	200	36	10	M7	1,54	1,5	30386133	30512840	30512203	1,4	MTC-HSK-A063-08-200-C-0-A-AAA1	30521896	30521897
	63	8	21	27	200	36	10	M7	4,52	2	30386133	30384046	30384304	1,4	MTC-HSK-A063-08-200-C-0-A-AAA2	30385695	30385705
	63	10	24	32	85	40	10	M10x1	1,54	1,5	10083237	30512786	30512203	1,0	MTC-HSK-A063-10-085-C-0-A-AAA1	30521898	30521899
	63	10	24	32	85	40	10	M10x1	4,52	2	10083237	30384011	30384304	1,0	MTC-HSK-A063-10-085-C-0-A-AAA2	30385640	30385650
	63	10	24	32	120	40	10	M8x1	1,54	1,5	30386800	30512806	30512203	1,2	MTC-HSK-A063-10-120-C-0-A-AAA1	30521900	30521901
	63	10	24	32	120	40	10	M8x1	4,52	2	30386800	30384012	30384304	1,2	MTC-HSK-A063-10-120-C-0-A-AAA2	30385660	30385668
	63	10	24	32	160	40	10	M8x1	1,54	1,5	30386802	30512821	30512203	1,4	MTC-HSK-A063-10-160-C-0-A-AAA1	30521902	30521903
	63	10	24	32	160	40	10	M8x1	4,52	2	30386802	30384013	30384304	1,4	MTC-HSK-A063-10-160-C-0-A-AAA2	30385676	30385686
	63	10	24	32	200	40	10	M8x1	1,54	1,5	30386134	30512841	30512203	1,7	MTC-HSK-A063-10-200-C-0-A-AAA1	30521904	30521905
	63	10	24	32	200	40	10	M8x1	4,52	2	30386134	30384014	30384304	1,7	MTC-HSK-A063-10-200-C-0-A-AAA2	30385696	30385706
	63	12	24	32	90	45	10	M10x1	1,54	1,5	10083238	30512791	30512203	1,0	MTC-HSK-A063-12-090-C-0-A-AAA1	30521906	30521907
	63	12	24	32	90	45	10	M10x1	4,52	2	10083238	30512787	30384304	1,0	MTC-HSK-A063-12-090-C-0-A-AAA2	30521908	30521909
	63	12	24	32	90	45	10	M10x1	9,9	3	10083238	30279400	30284772	1,0	MTC-HSK-A063-12-090-C-0-A-AAA3	30326631	30326669
	63	12	24	32	120	45	10	M10x1	1,54	1,5	10096023	30512811	30512203	1,2	MTC-HSK-A063-12-120-C-0-A-AAA1	30521910	30521911
	63	12	24	32	120	45	10	M10x1	4,52	2	10096023	30512807	30384304	1,2	MTC-HSK-A063-12-120-C-0-A-AAA2	30521912	30521913
	63	12	24	32	120	45	10	M10x1	9,9	3	10096023	30279402	30284772	1,2	MTC-HSK-A063-12-120-C-0-A-AAA3	30326641	30326680
	63	12	24	32	160	45	10	M10x1	1,54	1,5	30197953	30512826	30512203	1,4	MTC-HSK-A063-12-160-C-0-A-AAA1	30521914	30521915
	63	12	24	32	160	45	10	M10x1	4,52	2	30197953	30512822	30384304	1,4	MTC-HSK-A063-12-160-C-0-A-AAA2	30521916	30521917
	63	12	24	32	160	45	10	M10x1	9,9	3	30197953	30279404	30284772	1,4	MTC-HSK-A063-12-160-C-0-A-AAA3	30326649	30326688
	63	12	24	32	200	45	10	M10x1	1,54	1,5	10107285	30512846	30512203	1,6	MTC-HSK-A063-12-200-C-0-A-AAA1	30521918	30521919
	63	12	24	32	200	45	10	M10x1	4,52	2	10107285	30512842	30384304	1,6	MTC-HSK-A063-12-200-C-0-A-AAA2	30521920	30521921
	63	12	24	32	200	45	10	M10x1	9,9	3	10107285	30279405	30284772	1,6	MTC-HSK-A063-12-200-C-0-A-AAA3	30326659	30326698
	63	14	27	34	90	45	10	M10x1	1,54	1,5	10083239	30512792	30512203	1,0	MTC-HSK-A063-14-090-C-0-A-AAA1	30521922	30521923
	63	14	27	34	90	45	10	M10x1	4,52	2	10083239	30512788	30384304	1,0	MTC-HSK-A063-14-090-C-0-A-AAA2	30521924	30521925
	63	14	27	34	90	45	10	M10x1	9,9	3	10083239	30279407	30284772	1,0	MTC-HSK-A063-14-090-C-0-A-AAA3	30326632	30326670
	63	14	27	34	120	45	10	M10x1	1,54	1,5	30192712	30512813	30512203	1,2	MTC-HSK-A063-14-120-C-0-A-AAA1	30521926	30521927
	63	14	27	34	120	45	10	M10x1	4,52	2	30192712	30512808	30384304	1,2	MTC-HSK-A063-14-120-C-0-A-AAA2	30521928	30521929
	63	14	27	34	120	45	10	M10x1	9,9	3	30192712	30279408	30284772	1,2	MTC-HSK-A063-14-120-C-0-A-AAA3	30326642	30326681
	63	14	27	34	160	45	10	M10x1	1,54	1,5	10096025	30512827	30512203	1,5	MTC-HSK-A063-14-160-C-0-A-AAA1	30521930	30521931
	63	14	27	34	160	45	10	M10x1	4,52	2	10096025	30512823	30384304	1,5	MTC-HSK-A063-14-160-C-0-A-AAA2	30521932	30521933

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

Continued on next page.

**2-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				BDY	LS	CU				
	63	14	27	34	160	45	10	M10x1	9,9	3	10096025	30279410	30284772	1,5	MTC-HSK-A063-14-160-C-0-A-AAA3	30326650	30326689
	63	14	27	34	200	45	10	M10x1	1,54	1,5	10096026	30512847	30512203	1,8	MTC-HSK-A063-14-200-C-0-A-AAA1	30521934	30521935
	63	14	27	34	200	45	10	M10x1	4,52	2	10096026	30512843	30384304	1,8	MTC-HSK-A063-14-200-C-0-A-AAA2	30521936	30521937
	63	14	27	34	200	45	10	M10x1	9,9	3	10096026	30279412	30284772	1,8	MTC-HSK-A063-14-200-C-0-A-AAA3	30326660	30326699
	63	16	27	34	95	48	10	M12x1	1,54	1,5	10083240	30512793	30512203	1,0	MTC-HSK-A063-16-095-C-0-A-AAA1	30521938	30521939
	63	16	27	34	95	48	10	M12x1	4,52	2	10083240	30512789	30384304	1,0	MTC-HSK-A063-16-095-C-0-A-AAA2	30521940	30521941
	63	16	27	34	95	48	10	M12x1	9,9	3	10083240	30279413	30284772	1,0	MTC-HSK-A063-16-095-C-0-A-AAA3	30326633	30326671
	63	16	27	34	120	48	10	M12x1	1,54	1,5	10107287	30512814	30512203	1,2	MTC-HSK-A063-16-120-C-0-A-AAA1	30521942	30521943
	63	16	27	34	120	48	10	M12x1	4,52	2	10107287	30512809	30384304	1,2	MTC-HSK-A063-16-120-C-0-A-AAA2	30521944	30521945
	63	16	27	34	120	48	10	M12x1	9,9	3	10107287	30279414	30284772	1,2	MTC-HSK-A063-16-120-C-0-A-AAA3	30326643	30326682
	63	16	27	34	160	48	10	M12x1	1,54	1,5	10107288	30512828	30512203	1,5	MTC-HSK-A063-16-160-C-0-A-AAA1	30521946	30521947
	63	16	27	34	160	48	10	M12x1	4,52	2	10107288	30512824	30384304	1,5	MTC-HSK-A063-16-160-C-0-A-AAA2	30521948	30521949
	63	16	27	34	160	48	10	M12x1	9,9	3	10107288	30279416	30284772	1,5	MTC-HSK-A063-16-160-C-0-A-AAA3	30326651	30326690
	63	16	27	34	200	48	10	M12x1	1,54	1,5	10107289	30512848	30512203	1,7	MTC-HSK-A063-16-200-C-0-A-AAA1	30521950	30521951
	63	16	27	34	200	48	10	M12x1	4,52	2	10107289	30512844	30384304	1,7	MTC-HSK-A063-16-200-C-0-A-AAA2	30521952	30521953
	63	16	27	34	200	48	10	M12x1	9,9	3	10107289	30279418	30284772	1,7	MTC-HSK-A063-16-200-C-0-A-AAA3	30326661	30326700
	63	18	33	42	95	48	10	M12x1	1,54	1,5	10083241	30512794	30512203	1,2	MTC-HSK-A063-18-095-C-0-A-AAA1	30521954	30521955
	63	18	33	42	95	48	10	M12x1	4,52	2	10083241	30512790	30384304	1,2	MTC-HSK-A063-18-095-C-0-A-AAA2	30521956	30521957
	63	18	33	42	95	48	10	M12x1	9,9	3	10083241	30279420	30284772	1,2	MTC-HSK-A063-18-095-C-0-A-AAA3	30326634	30326672
	63	18	33	42	120	48	10	M12x1	1,54	1,5	10107292	30512815	30512203	1,5	MTC-HSK-A063-18-120-C-0-A-AAA1	30521958	30521959
	63	18	33	42	120	48	10	M12x1	4,52	2	10107292	30512810	30384304	1,5	MTC-HSK-A063-18-120-C-0-A-AAA2	30521960	30521961
	63	18	33	42	120	48	10	M12x1	9,9	3	10107292	30279422	30284772	1,5	MTC-HSK-A063-18-120-C-0-A-AAA3	30326644	30326683
	63	18	33	42	160	48	10	M12x1	1,54	1,5	10096027	30512829	30512203	1,9	MTC-HSK-A063-18-160-C-0-A-AAA1	30521962	30521963
	63	18	33	42	160	48	10	M12x1	4,52	2	10096027	30512825	30384304	1,9	MTC-HSK-A063-18-160-C-0-A-AAA2	30521964	30521965
	63	18	33	42	160	48	10	M12x1	9,9	3	10096027	30279423	30284772	1,9	MTC-HSK-A063-18-160-C-0-A-AAA3	30326652	30326691
	63	18	33	42	200	48	10	M12x1	1,54	1,5	10107293	30512849	30512203	2,3	MTC-HSK-A063-18-200-C-0-A-AAA1	30521966	30521967
	63	18	33	42	200	48	10	M12x1	4,52	2	10107293	30512845	30384304	2,3	MTC-HSK-A063-18-200-C-0-A-AAA2	30521968	30521969
	63	18	33	42	200	48	10	M12x1	9,9	3	10107293	30279427	30284772	2,3	MTC-HSK-A063-18-200-C-0-A-AAA3	30326662	30326701
	63	20	33	42	100	50	10	M16x1	4,52	2	10083242	30512798	30384304	1,2	MTC-HSK-A063-20-100-C-0-A-AAA2	30521970	30521971
	63	20	33	42	100	50	10	M16x1	9,9	3	10083242	30512795	30284772	1,2	MTC-HSK-A063-20-100-C-0-A-AAA3	30521972	30521973
	63	20	33	42	100	50	10	M16x1	17,35	4	10083242	30279429	30279444	1,2	MTC-HSK-A063-20-100-C-0-A-AAA4	30326635	30326673
	63	20	33	42	120	50	10	M16x1	4,52	2	30192716	30512817	30384304	1,4	MTC-HSK-A063-20-120-C-0-A-AAA2	30521974	30521975
	63	20	33	42	120	50	10	M16x1	9,9	3	30192716	30512816	30284772	1,4	MTC-HSK-A063-20-120-C-0-A-AAA3	30521976	30521977
	63	20	33	42	120	50	10	M16x1	17,35	4	30192716	30279430	30279444	1,4	MTC-HSK-A063-20-120-C-0-A-AAA4	30326645	30326684
	63	20	33	42	160	50	10	M16x1	4,52	2	10107294	30512833	30384304	1,9	MTC-HSK-A063-20-160-C-0-A-AAA2	30521978	30521979
	63	20	33	42	160	50	10	M16x1	9,9	3	10107294	30512830	30284772	1,9	MTC-HSK-A063-20-160-C-0-A-AAA3	30521980	30521981
	63	20	33	42	160	50	10	M16x1	17,35	4	10107294	30279432	30279444	1,9	MTC-HSK-A063-20-160-C-0-A-AAA4	30326653	30326692
	63	20	33	42	200	50	10	M16x1	4,52	2	10107295	30512853	30384304	2,3	MTC-HSK-A063-20-200-C-0-A-AAA2	30521982	30521983
	63	20	33	42	200	50	10	M16x1	9,9	3	10107295	30512850	30284772	2,3	MTC-HSK-A063-20-200-C-0-A-AAA3	30521984	30521985
	63	20	33	42	200	50	10	M16x1	17,35	4	10107295	30279433	30279444	2,3	MTC-HSK-A063-20-200-C-0-A-AAA4	30326663	30326702
	63	25	44	53	115	56	10	M16x1	4,52	2	10083243	30512799	30384304	1,8	MTC-HSK-A063-25-115-C-0-A-AAA2	30521986	30521987
	63	25	44	53	115	56	10	M16x1	9,9	3	10083243	30512796	30284772	1,8	MTC-HSK-A063-25-115-C-0-A-AAA3	30521988	30521989
	63	25	44	53	115	56	10	M16x1	17,35	4	10083243	30279434	30279444	1,8	MTC-HSK-A063-25-115-C-0-A-AAA4	30326636	30326674
	63	25	44	53	160	56	10	M16x1	4,52	2	10107296	30512834	30384304	2,5	MTC-HSK-A063-25-160-C-0-A-AAA2	30521990	30521991
	63	25	44	53	160	56	10	M16x1	9,9	3	10107296	30512831	30284772	2,5	MTC-HSK-A063-25-160-C-0-A-AAA3	30521992	30521993
	63	25	44	53	160	56	10	M16x1	17,35	4	10107296	30279435	30279444	2,5	MTC-HSK-A063-25-160-C-0-A-AAA4	30326654	30326693
	63	25	44	53	200	56	10	M16x1	4,52	2	10107297	30512854	30384304	3,2	MTC-HSK-A063-25-200-C-0-A-AAA2	30521994	30521995
	63	25	44	53	200	56	10	M16x1	9,9	3	10107297	30512851	30284772	3,2	MTC-HSK-A063-25-200-C-0-A-AAA3	30521996	30521997

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .



**2-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				BDY	LS	CU				
	63	25	44	53	200	56	10	M16x1	17,35	4	10107297	30279436	30279444	3,2	MTC-HSK-A063-25-200-C-0-A-AAA4	30326664	30326703
	63	32	44	53	120	60	10	M16x1	4,52	2	10083244	30512800	30384304	1,7	MTC-HSK-A063-32-120-C-0-A-AAA2	30521998	30521999
	63	32	44	53	120	60	10	M16x1	9,9	3	10083244	30512797	30284772	1,7	MTC-HSK-A063-32-120-C-0-A-AAA3	30522000	30522001
	63	32	44	53	120	60	10	M16x1	17,35	4	10083244	30279441	30279444	1,7	MTC-HSK-A063-32-120-C-0-A-AAA4	30326637	30326675
	63	32	44	53	160	60	10	M16x1	4,52	2	10107298	30512835	30384304	2,3	MTC-HSK-A063-32-160-C-0-A-AAA2	30522002	30522003
	63	32	44	53	160	60	10	M16x1	9,9	3	10107298	30512832	30284772	2,3	MTC-HSK-A063-32-160-C-0-A-AAA3	30522004	30522005
	63	32	44	53	160	60	10	M16x1	17,35	4	10107298	30279442	30279444	2,3	MTC-HSK-A063-32-160-C-0-A-AAA4	30326655	30326694
	63	32	44	53	200	60	10	M16x1	4,52	2	10107299	30512856	30384304	3,0	MTC-HSK-A063-32-200-C-0-A-AAA2	30522006	30522007
	63	32	44	53	200	60	10	M16x1	9,9	3	10107299	30512852	30284772	3,0	MTC-HSK-A063-32-200-C-0-A-AAA3	30522008	30522009
	63	32	44	53	200	60	10	M16x1	17,35	4	10107299	30279443	30279444	3,0	MTC-HSK-A063-32-200-C-0-A-AAA4	30326665	30326704
	80	6	21	27	85	36	10	M10x1	1,54	1,5	10083245	30512784	30521104	1,4	MTC-HSK-A080-06-085-C-0-A-AAA1	30522010	30522011
	80	6	21	27	85	36	10	M10x1	4,52	2	10083245	30384039	30384305	1,4	MTC-HSK-A080-06-085-C-0-A-AAA2	30385714	30385724
	80	6	21	27	120	36	10	M5	1,54	1,5	30386135	30512804	30521104	1,5	MTC-HSK-A080-06-120-C-0-A-AAA1	30522012	30522013
	80	6	21	27	120	36	10	M5	4,52	2	30386135	30384040	30384305	1,5	MTC-HSK-A080-06-120-C-0-A-AAA2	30385734	30385742
	80	6	21	27	160	36	10	M5	1,54	1,5	30386138	30512819	30521104	1,7	MTC-HSK-A080-06-160-C-0-A-AAA1	30522014	30522015
	80	6	21	27	160	36	10	M5	4,52	2	30386138	30384041	30384305	1,7	MTC-HSK-A080-06-160-C-0-A-AAA2	30385750	30385760
	80	6	21	27	200	36	10	M5	1,54	1,5	30386141	30512839	30521104	1,8	MTC-HSK-A080-06-200-C-0-A-AAA1	30522016	30522017
	80	6	21	27	200	36	10	M5	4,52	2	30386141	30384042	30384305	1,8	MTC-HSK-A080-06-200-C-0-A-AAA2	30385770	30385780
	80	8	21	27	85	36	10	M10x1	1,54	1,5	10083246	30512785	30521104	1,4	MTC-HSK-A080-08-085-C-0-A-AAA1	30522018	30522019
	80	8	21	27	85	36	10	M10x1	4,52	2	10083246	30384043	30384305	1,4	MTC-HSK-A080-08-085-C-0-A-AAA2	30385715	30385725
	80	8	21	27	120	36	10	M7	1,54	1,5	30386136	30512805	30521104	1,5	MTC-HSK-A080-08-120-C-0-A-AAA1	30522020	30522021
	80	8	21	27	120	36	10	M7	4,52	2	30386136	30384044	30384305	1,5	MTC-HSK-A080-08-120-C-0-A-AAA2	30385735	30385743
	80	8	21	27	160	36	10	M7	1,54	1,5	30386139	30512820	30521104	1,7	MTC-HSK-A080-08-160-C-0-A-AAA1	30522022	30522023
	80	8	21	27	160	36	10	M7	4,52	2	30386139	30384045	30384305	1,7	MTC-HSK-A080-08-160-C-0-A-AAA2	30385751	30385761
	80	8	21	27	200	36	10	M7	1,54	1,5	30386142	30512840	30521104	1,8	MTC-HSK-A080-08-200-C-0-A-AAA1	30522024	30522025
	80	8	21	27	200	36	10	M7	4,52	2	30386142	30384046	30384305	1,8	MTC-HSK-A080-08-200-C-0-A-AAA2	30385771	30385781
	80	10	24	32	90	40	10	M10x1	1,54	1,5	10083247	30512786	30521104	1,5	MTC-HSK-A080-10-090-C-0-A-AAA1	30522026	30522027
	80	10	24	32	90	40	10	M10x1	4,52	2	10083247	30384011	30384305	1,5	MTC-HSK-A080-10-090-C-0-A-AAA2	30385716	30385726
	80	10	24	32	120	40	10	M8x1	1,54	1,5	30386137	30512806	30521104	1,6	MTC-HSK-A080-10-120-C-0-A-AAA1	30522028	30522029
	80	10	24	32	120	40	10	M8x1	4,52	2	30386137	30384012	30384305	1,6	MTC-HSK-A080-10-120-C-0-A-AAA2	30385736	30385744
	80	10	24	32	160	40	10	M8x1	1,54	1,5	30386140	30512821	30521104	1,9	MTC-HSK-A080-10-160-C-0-A-AAA1	30522030	30522031
	80	10	24	32	160	40	10	M8x1	4,52	2	30386140	30384013	30384305	1,9	MTC-HSK-A080-10-160-C-0-A-AAA2	30385752	30385762
	80	10	24	32	200	40	10	M8x1	1,54	1,5	30386143	30512841	30521104	2,1	MTC-HSK-A080-10-200-C-0-A-AAA1	30522032	30522033
	80	10	24	32	200	40	10	M8x1	4,52	2	30386143	30384014	30384305	2,1	MTC-HSK-A080-10-200-C-0-A-AAA2	30385772	30385782
	80	12	24	32	95	45	10	M10x1	1,54	1,5	10083248	30512791	30521104	1,5	MTC-HSK-A080-12-095-C-0-A-AAA1	30522034	30522035
	80	12	24	32	95	45	10	M10x1	4,52	2	10083248	30512787	30384305	1,5	MTC-HSK-A080-12-095-C-0-A-AAA2	30522036	30522037
	80	12	24	32	95	45	10	M10x1	9,9	3	10083248	30279400	30297307	1,5	MTC-HSK-A080-12-095-C-0-A-AAA3	30326708	30326746
	80	12	24	32	120	45	10	M10x1	1,54	1,5	30302793	30512811	30521104	1,6	MTC-HSK-A080-12-120-C-0-A-AAA1	30522038	30522039
	80	12	24	32	120	45	10	M10x1	4,52	2	30302793	30512807	30384305	1,6	MTC-HSK-A080-12-120-C-0-A-AAA2	30522040	30522041
	80	12	24	32	120	45	10	M10x1	9,9	3	30302793	30279402	30297307	1,6	MTC-HSK-A080-12-120-C-0-A-AAA3	30326718	30326756
	80	12	24	32	160	45	10	M10x1	1,54	1,5	30302801	30512826	30521104	1,9	MTC-HSK-A080-12-160-C-0-A-AAA1	30522042	30522043
	80	12	24	32	160	45	10	M10x1	4,52	2	30302801	30512822	30384305	1,9	MTC-HSK-A080-12-160-C-0-A-AAA2	30522044	30522045
	80	12	24	32	160	45	10	M10x1	9,9	3	30302801	30279404	30297307	1,9	MTC-HSK-A080-12-160-C-0-A-AAA3	30326726	30326764
	80	12	24	32	200	45	10	M10x1	1,54	1,5	30302811	30512846	30521104	2,1	MTC-HSK-A080-12-200-C-0-A-AAA1	30522046	30522047
	80	12	24	32	200	45	10	M10x1	4,52	2	30302811	30512842	30384305	2,1	MTC-HSK-A080-12-200-C-0-A-AAA2	30522048	30522049
	80	12	24	32	200	45	10	M10x1	9,9	3	30302811	30279405	30297307	2,1	MTC-HSK-A080-12-200-C-0-A-AAA3	30326736	30326774
	80	14	27	34	95	45	10	M10x1	1,54	1,5	10083249	30512792	30521104	1,5	MTC-HSK-A080-14-095-C-0-A-AAA1	30522050	30522051
	80	14	27	34	95	45	10	M10x1	4,52	2	10083249	30512788	30384305	1,5	MTC-HSK-A080-14-095-C-0-A-AAA2	30522052	30522053

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green  .

Continued on next page.

**2-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				BDY	LS	CU				
	80	14	27	34	95	45	10	M10x1	9,9	3	10083249	30279407	30297307	1,5	MTC-HSK-A080-14-095-C-0-A-AAA3	30326709	30326747
	80	14	27	34	120	45	10	M10x1	1,54	1,5	30302794	30512813	30521104	1,7	MTC-HSK-A080-14-120-C-0-A-AAA1	30522054	30522055
	80	14	27	34	120	45	10	M10x1	4,52	2	30302794	30512808	30384305	1,7	MTC-HSK-A080-14-120-C-0-A-AAA2	30522056	30522057
	80	14	27	34	120	45	10	M10x1	9,9	3	30302794	30279408	30297307	1,7	MTC-HSK-A080-14-120-C-0-A-AAA3	30326719	30326757
	80	14	27	34	160	45	10	M10x1	1,54	1,5	30302802	30512827	30521104	2,0	MTC-HSK-A080-14-160-C-0-A-AAA1	30522058	30522059
	80	14	27	34	160	45	10	M10x1	4,52	2	30302802	30512823	30384305	2,0	MTC-HSK-A080-14-160-C-0-A-AAA2	30522060	30522061
	80	14	27	34	160	45	10	M10x1	9,9	3	30302802	30279410	30297307	2,0	MTC-HSK-A080-14-160-C-0-A-AAA3	30326727	30326765
	80	14	27	34	200	45	10	M10x1	1,54	1,5	30302812	30512847	30521104	2,2	MTC-HSK-A080-14-200-C-0-A-AAA1	30522062	30522063
	80	14	27	34	200	45	10	M10x1	4,52	2	30302812	30512843	30384305	2,2	MTC-HSK-A080-14-200-C-0-A-AAA2	30522064	30522065
	80	14	27	34	200	45	10	M10x1	9,9	3	30302812	30279412	30297307	2,2	MTC-HSK-A080-14-200-C-0-A-AAA3	30326737	30326775
	80	16	27	34	100	48	10	M12x1	1,54	1,5	10083250	30512793	30521104	1,5	MTC-HSK-A080-16-100-C-0-A-AAA1	30522066	30522067
	80	16	27	34	100	48	10	M12x1	4,52	2	10083250	30512789	30384305	1,5	MTC-HSK-A080-16-100-C-0-A-AAA2	30522068	30522069
	80	16	27	34	100	48	10	M12x1	9,9	3	10083250	30279413	30297307	1,5	MTC-HSK-A080-16-100-C-0-A-AAA3	30326710	30326748
	80	16	27	34	120	48	10	M12x1	1,54	1,5	30302795	30512814	30521104	1,7	MTC-HSK-A080-16-120-C-0-A-AAA1	30522070	30522071
	80	16	27	34	120	48	10	M12x1	4,52	2	30302795	30512809	30384305	1,7	MTC-HSK-A080-16-120-C-0-A-AAA2	30522072	30522073
	80	16	27	34	120	48	10	M12x1	9,9	3	30302795	30279414	30297307	1,7	MTC-HSK-A080-16-120-C-0-A-AAA3	30326720	30326758
	80	16	27	34	160	48	10	M12x1	1,54	1,5	30302803	30512828	30521104	1,9	MTC-HSK-A080-16-160-C-0-A-AAA1	30522074	30522075
	80	16	27	34	160	48	10	M12x1	4,52	2	30302803	30512824	30384305	1,9	MTC-HSK-A080-16-160-C-0-A-AAA2	30522076	30522077
	80	16	27	34	160	48	10	M12x1	9,9	3	30302803	30279416	30297307	1,9	MTC-HSK-A080-16-160-C-0-A-AAA3	30326728	30326766
	80	16	27	34	200	48	10	M12x1	1,54	1,5	30302813	30512848	30521104	2,2	MTC-HSK-A080-16-200-C-0-A-AAA1	30522078	30522079
	80	16	27	34	200	48	10	M12x1	4,52	2	30302813	30512844	30384305	2,2	MTC-HSK-A080-16-200-C-0-A-AAA2	30522080	30522081
	80	16	27	34	200	48	10	M12x1	9,9	3	30302813	30279418	30297307	2,2	MTC-HSK-A080-16-200-C-0-A-AAA3	30326738	30326776
	80	18	33	42	100	48	10	M12x1	1,54	1,5	10083251	30512794	30521104	1,7	MTC-HSK-A080-18-100-C-0-A-AAA1	30522082	30522083
	80	18	33	42	100	48	10	M12x1	4,52	2	10083251	30512790	30384305	1,7	MTC-HSK-A080-18-100-C-0-A-AAA2	30522084	30522085
	80	18	33	42	100	48	10	M12x1	9,9	3	10083251	30279420	30297307	1,7	MTC-HSK-A080-18-100-C-0-A-AAA3	30326711	30326749
	80	18	33	42	120	48	10	M12x1	1,54	1,5	30302796	30512815	30521104	1,9	MTC-HSK-A080-18-120-C-0-A-AAA1	30522086	30522087
	80	18	33	42	120	48	10	M12x1	4,52	2	30302796	30512810	30384305	1,9	MTC-HSK-A080-18-120-C-0-A-AAA2	30522088	30522089
	80	18	33	42	120	48	10	M12x1	9,9	3	30302796	30279422	30297307	1,9	MTC-HSK-A080-18-120-C-0-A-AAA3	30326721	30326759
	80	18	33	42	160	48	10	M12x1	1,54	1,5	30302804	30512829	30521104	2,4	MTC-HSK-A080-18-160-C-0-A-AAA1	30522090	30522091
	80	18	33	42	160	48	10	M12x1	4,52	2	30302804	30512825	30384305	2,4	MTC-HSK-A080-18-160-C-0-A-AAA2	30522092	30522093
	80	18	33	42	160	48	10	M12x1	9,9	3	30302804	30279423	30297307	2,4	MTC-HSK-A080-18-160-C-0-A-AAA3	30326729	30326767
	80	18	33	42	200	48	10	M12x1	1,54	1,5	30302814	30512849	30521104	2,8	MTC-HSK-A080-18-200-C-0-A-AAA1	30522094	30522095
	80	18	33	42	200	48	10	M12x1	4,52	2	30302814	30512845	30384305	2,8	MTC-HSK-A080-18-200-C-0-A-AAA2	30522096	30522097
	80	18	33	42	200	48	10	M12x1	9,9	3	30302814	30279427	30297307	2,8	MTC-HSK-A080-18-200-C-0-A-AAA3	30326739	30326777
	80	20	33	42	105	50	10	M16x1	4,52	2	10083252	30512798	30384305	1,7	MTC-HSK-A080-20-105-C-0-A-AAA2	30522098	30522099
	80	20	33	42	105	50	10	M16x1	9,9	3	10083252	30512795	30297307	1,7	MTC-HSK-A080-20-105-C-0-A-AAA3	30522100	30522101
	80	20	33	42	105	50	10	M16x1	17,35	4	10083252	30279429	30297308	1,7	MTC-HSK-A080-20-105-C-0-A-AAA4	30326712	30326750
	80	20	33	42	120	50	10	M16x1	4,52	2	30302797	30512817	30384305	1,9	MTC-HSK-A080-20-120-C-0-A-AAA2	30522102	30522103
	80	20	33	42	120	50	10	M16x1	9,9	3	30302797	30512816	30297307	1,9	MTC-HSK-A080-20-120-C-0-A-AAA3	30522104	30522105
	80	20	33	42	120	50	10	M16x1	17,35	4	30302797	30279430	30297308	1,9	MTC-HSK-A080-20-120-C-0-A-AAA4	30326722	30326760
	80	20	33	42	160	50	10	M16x1	4,52	2	30302805	30512833	30384305	2,3	MTC-HSK-A080-20-160-C-0-A-AAA2	30522106	30522107
	80	20	33	42	160	50	10	M16x1	9,9	3	30302805	30512830	30297307	2,3	MTC-HSK-A080-20-160-C-0-A-AAA3	30522108	30522109
	80	20	33	42	160	50	10	M16x1	17,35	4	30302805	30279432	30297308	2,3	MTC-HSK-A080-20-160-C-0-A-AAA4	30326730	30326768
	80	20	33	42	200	50	10	M16x1	4,52	2	30302815	30512853	30384305	2,7	MTC-HSK-A080-20-200-C-0-A-AAA2	30522110	30522111
	80	20	33	42	200	50	10	M16x1	9,9	3	30302815	30512850	30297307	2,7	MTC-HSK-A080-20-200-C-0-A-AAA3	30522112	30522113
	80	20	33	42	200	50	10	M16x1	17,35	4	30302815	30279433	30297308	2,7	MTC-HSK-A080-20-200-C-0-A-AAA4	30326740	30326778
	80	25	44	53	115	56	10	M16x1	4,52	2	10083253	30512799	30384305	2,3	MTC-HSK-A080-25-115-C-0-A-AAA2	30522114	30522115
	80	25	44	53	115	56	10	M16x1	9,9	3	10083253	30512796	30297307	2,3	MTC-HSK-A080-25-115-C-0-A-AAA3	30522116	30522117

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green  .

**2-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				BDY	LS	CU				
	80	25	44	53	115	56	10	M16x1	17,35	4	10083253	30279434	30297308	2,3	MTC-HSK-A080-25-115-C-0-A-AAA4	30326713	30326751
	80	25	44	53	160	56	10	M16x1	4,52	2	30302806	30512834	30384305	3,0	MTC-HSK-A080-25-160-C-0-A-AAA2	30522118	30522119
	80	25	44	53	160	56	10	M16x1	9,9	3	30302806	30512831	30297307	3,0	MTC-HSK-A080-25-160-C-0-A-AAA3	30522120	30522121
	80	25	44	53	160	56	10	M16x1	17,35	4	30302806	30279435	30297308	3,0	MTC-HSK-A080-25-160-C-0-A-AAA4	30326731	30326769
	80	25	44	53	200	56	10	M16x1	4,52	2	30302816	30512854	30384305	3,7	MTC-HSK-A080-25-200-C-0-A-AAA2	30522122	30522123
	80	25	44	53	200	56	10	M16x1	9,9	3	30302816	30512851	30297307	3,7	MTC-HSK-A080-25-200-C-0-A-AAA3	30522124	30522125
	80	25	44	53	200	56	10	M16x1	17,35	4	30302816	30279436	30297308	3,7	MTC-HSK-A080-25-200-C-0-A-AAA4	30326741	30326779
	80	32	44	53	120	60	10	M16x1	4,52	2	10083254	30512800	30384305	2,1	MTC-HSK-A080-32-120-C-0-A-AAA2	30522126	30522127
	80	32	44	53	120	60	10	M16x1	9,9	3	10083254	30512797	30297307	2,1	MTC-HSK-A080-32-120-C-0-A-AAA3	30522128	30522129
	80	32	44	53	120	60	10	M16x1	17,35	4	10083254	30279441	30297308	2,1	MTC-HSK-A080-32-120-C-0-A-AAA4	30326714	30326752
	80	32	44	53	160	60	10	M16x1	4,52	2	30302807	30512835	30384305	2,8	MTC-HSK-A080-32-160-C-0-A-AAA2	30522130	30522131
	80	32	44	53	160	60	10	M16x1	9,9	3	30302807	30512832	30297307	2,8	MTC-HSK-A080-32-160-C-0-A-AAA3	30522132	30522133
	80	32	44	53	160	60	10	M16x1	17,35	4	30302807	30279442	30297308	2,8	MTC-HSK-A080-32-160-C-0-A-AAA4	30326732	30326770
	80	32	44	53	200	60	10	M16x1	4,52	2	30302817	30512856	30384305	3,5	MTC-HSK-A080-32-200-C-0-A-AAA2	30522134	30522135
	80	32	44	53	200	60	10	M16x1	9,9	3	30302817	30512852	30297307	3,5	MTC-HSK-A080-32-200-C-0-A-AAA3	30522136	30522137
	80	32	44	53	200	60	10	M16x1	17,35	4	30302817	30279443	30297308	3,5	MTC-HSK-A080-32-200-C-0-A-AAA4	30326742	30326780
	100	6	21	27	85	36	10	M10x1	1,54	1,5	10083255	30512784	30521106	2,3	MTC-HSK-A100-06-085-C-0-A-AAA1	30522138	30522139
	100	6	21	27	85	36	10	M10x1	4,52	2	10083255	30384039	30384306	2,3	MTC-HSK-A100-06-085-C-0-A-AAA2	30385790	30385800
	100	6	21	27	120	36	10	M5	1,54	1,5	30386144	30512804	30521106	2,4	MTC-HSK-A100-06-120-C-0-A-AAA1	30522140	30522141
	100	6	21	27	120	36	10	M5	4,52	2	30386144	30384040	30384306	2,4	MTC-HSK-A100-06-120-C-0-A-AAA2	30385810	30385818
	100	6	21	27	160	36	10	M5	1,54	1,5	30386147	30512819	30521106	2,6	MTC-HSK-A100-06-160-C-0-A-AAA1	30522142	30522143
	100	6	21	27	160	36	10	M5	4,52	2	30386147	30384041	30384306	2,6	MTC-HSK-A100-06-160-C-0-A-AAA2	30385826	30385836
	100	6	21	27	200	36	10	M5	1,54	1,5	30386150	30512839	30521106	2,7	MTC-HSK-A100-06-200-C-0-A-AAA1	30522144	30522145
	100	6	21	27	200	36	10	M5	4,52	2	30386150	30384042	30384306	2,7	MTC-HSK-A100-06-200-C-0-A-AAA2	30385847	30385857
	100	8	21	27	85	36	10	M10x1	1,54	1,5	10083256	30512785	30521106	2,3	MTC-HSK-A100-08-085-C-0-A-AAA1	30522146	30522147
	100	8	21	27	85	36	10	M10x1	4,52	2	10083256	30384043	30384306	2,3	MTC-HSK-A100-08-085-C-0-A-AAA2	30385791	30385801
	100	8	21	27	120	36	10	M7	1,54	1,5	30386145	30512805	30521106	2,4	MTC-HSK-A100-08-120-C-0-A-AAA1	30522148	30522149
	100	8	21	27	120	36	10	M7	4,52	2	30386145	30384044	30384306	2,4	MTC-HSK-A100-08-120-C-0-A-AAA2	30385811	30385819
	100	8	21	27	160	36	10	M7	1,54	1,5	30386148	30512820	30521106	2,6	MTC-HSK-A100-08-160-C-0-A-AAA1	30522150	30522151
	100	8	21	27	160	36	10	M7	4,52	2	30386148	30384045	30384306	2,6	MTC-HSK-A100-08-160-C-0-A-AAA2	30385827	30385837
	100	8	21	27	200	36	10	M7	1,54	1,5	30386151	30512840	30521106	2,7	MTC-HSK-A100-08-200-C-0-A-AAA1	30522152	30522153
	100	8	21	27	200	36	10	M7	4,52	2	30386151	30384046	30384306	2,7	MTC-HSK-A100-08-200-C-0-A-AAA2	30385848	30385858
	100	10	24	32	90	40	10	M10x1	1,54	1,5	10083257	30512786	30521106	2,4	MTC-HSK-A100-10-090-C-0-A-AAA1	30522154	30522155
	100	10	24	32	90	40	10	M10x1	4,52	2	10083257	30384011	30384306	2,4	MTC-HSK-A100-10-090-C-0-A-AAA2	30385792	30385802
	100	10	24	32	120	40	10	M8x1	1,54	1,5	30386146	30512806	30521106	2,6	MTC-HSK-A100-10-120-C-0-A-AAA1	30522156	30522157
	100	10	24	32	120	40	10	M8x1	4,52	2	30386146	30384012	30384306	2,6	MTC-HSK-A100-10-120-C-0-A-AAA2	30385812	30385820
	100	10	24	32	160	40	10	M8x1	1,54	1,5	30386149	30512821	30521106	2,8	MTC-HSK-A100-10-160-C-0-A-AAA1	30522158	30522159
	100	10	24	32	160	40	10	M8x1	4,52	2	30386149	30384013	30384306	2,8	MTC-HSK-A100-10-160-C-0-A-AAA2	30385828	30385838
	100	10	24	32	200	40	10	M8x1	1,54	1,5	30386152	30512841	30521106	3,0	MTC-HSK-A100-10-200-C-0-A-AAA1	30522160	30522161
	100	10	24	32	200	40	10	M8x1	4,52	2	30386152	30384014	30384306	3,0	MTC-HSK-A100-10-200-C-0-A-AAA2	30385849	30385859
	100	12	24	32	95	45	10	M10x1	1,54	1,5	10083258	30512791	30521106	2,4	MTC-HSK-A100-12-095-C-0-A-AAA1	30522162	30522163
	100	12	24	32	95	45	10	M10x1	4,52	2	10083258	30512787	30384306	2,4	MTC-HSK-A100-12-095-C-0-A-AAA2	30522164	30522165
	100	12	24	32	95	45	10	M10x1	9,9	3	10083258	30279400	30297309	2,4	MTC-HSK-A100-12-095-C-0-A-AAA3	30326784	30326822
	100	12	24	32	120	45	10	M10x1	1,54	1,5	30253151	30512811	30521106	2,5	MTC-HSK-A100-12-120-C-0-A-AAA1	30522166	30522167
	100	12	24	32	120	45	10	M10x1	4,52	2	30253151	30512807	30384306	2,5	MTC-HSK-A100-12-120-C-0-A-AAA2	30522168	30522169
	100	12	24	32	120	45	10	M10x1	9,9	3	30253151	30279402	30297309	2,5	MTC-HSK-A100-12-120-C-0-A-AAA3	30326794	30326832
	100	12	24	32	160	45	10	M10x1	1,54	1,5	30302825	30512826	30521106	2,8	MTC-HSK-A100-12-160-C-0-A-AAA1	30522170	30522171
	100	12	24	32	160	45	10	M10x1	4,52	2	30302825	30512822	30384306	2,8	MTC-HSK-A100-12-160-C-0-A-AAA2	30522172	30522173

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green  .

Continued on next page.

**2-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				BDY	LS	CU				
	100	12	24	32	160	45	10	M10x1	9,9	3	30302825	30279404	30297309	2,8	MTC-HSK-A100-12-160-C-0-A-AAA3	30326802	30326840
	100	12	24	32	200	45	10	M10x1	1,54	1,5	30253152	30512846	30521106	3,0	MTC-HSK-A100-12-200-C-0-A-AAA1	30522174	30522175
	100	12	24	32	200	45	10	M10x1	4,52	2	30253152	30512842	30384306	3,0	MTC-HSK-A100-12-200-C-0-A-AAA2	30522176	30522177
	100	12	24	32	200	45	10	M10x1	9,9	3	30253152	30279405	30297309	3,0	MTC-HSK-A100-12-200-C-0-A-AAA3	30326812	30326850
	100	14	27	34	95	45	10	M10x1	1,54	1,5	10083259	30512792	30521106	2,5	MTC-HSK-A100-14-095-C-0-A-AAA1	30522178	30522179
	100	14	27	34	95	45	10	M10x1	4,52	2	10083259	30512788	30384306	2,5	MTC-HSK-A100-14-095-C-0-A-AAA2	30522180	30522181
	100	14	27	34	95	45	10	M10x1	9,9	3	10083259	30279407	30297309	2,5	MTC-HSK-A100-14-095-C-0-A-AAA3	30326785	30326823
	100	14	27	34	120	45	10	M10x1	1,54	1,5	30254306	30512813	30521106	2,6	MTC-HSK-A100-14-120-C-0-A-AAA1	30522182	30522183
	100	14	27	34	120	45	10	M10x1	4,52	2	30254306	30512808	30384306	2,6	MTC-HSK-A100-14-120-C-0-A-AAA2	30522184	30522185
	100	14	27	34	120	45	10	M10x1	9,9	3	30254306	30279408	30297309	2,6	MTC-HSK-A100-14-120-C-0-A-AAA3	30326795	30326833
	100	14	27	34	160	45	10	M10x1	1,54	1,5	30302826	30512827	30521106	2,9	MTC-HSK-A100-14-160-C-0-A-AAA1	30522186	30522187
	100	14	27	34	160	45	10	M10x1	4,52	2	30302826	30512823	30384306	2,9	MTC-HSK-A100-14-160-C-0-A-AAA2	30522188	30522189
	100	14	27	34	160	45	10	M10x1	9,9	3	30302826	30279410	30297309	2,9	MTC-HSK-A100-14-160-C-0-A-AAA3	30326803	30326841
	100	14	27	34	200	45	10	M10x1	1,54	1,5	30303050	30512847	30521106	3,1	MTC-HSK-A100-14-200-C-0-A-AAA1	30522190	30522191
	100	14	27	34	200	45	10	M10x1	4,52	2	30303050	30512843	30384306	3,1	MTC-HSK-A100-14-200-C-0-A-AAA2	30522192	30522193
	100	14	27	34	200	45	10	M10x1	9,9	3	30303050	30279412	30297309	3,1	MTC-HSK-A100-14-200-C-0-A-AAA3	30326813	30326851
	100	16	27	34	100	48	10	M12x1	1,54	1,5	10083260	30512793	30521106	2,5	MTC-HSK-A100-16-100-C-0-A-AAA1	30522194	30522195
	100	16	27	34	100	48	10	M12x1	4,52	2	10083260	30512789	30384306	2,5	MTC-HSK-A100-16-100-C-0-A-AAA2	30522196	30522197
	100	16	27	34	100	48	10	M12x1	9,9	3	10083260	30279413	30297309	2,5	MTC-HSK-A100-16-100-C-0-A-AAA3	30326786	30326824
	100	16	27	34	120	48	10	M12x1	1,54	1,5	30302821	30512814	30521106	2,6	MTC-HSK-A100-16-120-C-0-A-AAA1	30522198	30522199
	100	16	27	34	120	48	10	M12x1	4,52	2	30302821	30512809	30384306	2,6	MTC-HSK-A100-16-120-C-0-A-AAA2	30522200	30522201
	100	16	27	34	120	48	10	M12x1	9,9	3	30302821	30279414	30297309	2,6	MTC-HSK-A100-16-120-C-0-A-AAA3	30326796	30326834
	100	16	27	34	160	48	10	M12x1	1,54	1,5	30302827	30512828	30521106	2,9	MTC-HSK-A100-16-160-C-0-A-AAA1	30522202	30522203
	100	16	27	34	160	48	10	M12x1	4,52	2	30302827	30512824	30384306	2,9	MTC-HSK-A100-16-160-C-0-A-AAA2	30522204	30522205
	100	16	27	34	160	48	10	M12x1	9,9	3	30302827	30279416	30297309	2,9	MTC-HSK-A100-16-160-C-0-A-AAA3	30326804	30326842
	100	16	27	34	200	48	10	M12x1	1,54	1,5	30302831	30512848	30521106	3,1	MTC-HSK-A100-16-200-C-0-A-AAA1	30522206	30522207
	100	16	27	34	200	48	10	M12x1	4,52	2	30302831	30512844	30384306	3,1	MTC-HSK-A100-16-200-C-0-A-AAA2	30522208	30522209
	100	16	27	34	200	48	10	M12x1	9,9	3	30302831	30279418	30297309	3,1	MTC-HSK-A100-16-200-C-0-A-AAA3	30326814	30326852
	100	18	33	42	100	48	10	M12x1	1,54	1,5	10083261	30512794	30521106	2,6	MTC-HSK-A100-18-100-C-0-A-AAA1	30522210	30522211
	100	18	33	42	100	48	10	M12x1	4,52	2	10083261	30512790	30384306	2,6	MTC-HSK-A100-18-100-C-0-A-AAA2	30522212	30522213
	100	18	33	42	100	48	10	M12x1	9,9	3	10083261	30279420	30297309	2,6	MTC-HSK-A100-18-100-C-0-A-AAA3	30326787	30326825
	100	18	33	42	120	48	10	M12x1	1,54	1,5	30253155	30512815	30521106	2,8	MTC-HSK-A100-18-120-C-0-A-AAA1	30522214	30522215
	100	18	33	42	120	48	10	M12x1	4,52	2	30253155	30512810	30384306	2,8	MTC-HSK-A100-18-120-C-0-A-AAA2	30522216	30522217
	100	18	33	42	120	48	10	M12x1	9,9	3	30253155	30279422	30297309	2,8	MTC-HSK-A100-18-120-C-0-A-AAA3	30326797	30326835
	100	18	33	42	160	48	10	M12x1	1,54	1,5	10096879	30512829	30521106	3,3	MTC-HSK-A100-18-160-C-0-A-AAA1	30522218	30522219
	100	18	33	42	160	48	10	M12x1	4,52	2	10096879	30512825	30384306	3,3	MTC-HSK-A100-18-160-C-0-A-AAA2	30522220	30522221
	100	18	33	42	160	48	10	M12x1	9,9	3	10096879	30279423	30297309	3,3	MTC-HSK-A100-18-160-C-0-A-AAA3	30326805	30326843
	100	18	33	42	200	48	10	M12x1	1,54	1,5	10107134	30512849	30521106	3,7	MTC-HSK-A100-18-200-C-0-A-AAA1	30522222	30522223
	100	18	33	42	200	48	10	M12x1	4,52	2	10107134	30512845	30384306	3,7	MTC-HSK-A100-18-200-C-0-A-AAA2	30522224	30522225
	100	18	33	42	200	48	10	M12x1	9,9	3	10107134	30279427	30297309	3,7	MTC-HSK-A100-18-200-C-0-A-AAA3	30326815	30326853
	100	20	33	42	105	50	10	M16x1	4,52	2	10083262	30512798	30384306	2,6	MTC-HSK-A100-20-105-C-0-A-AAA2	30522226	30522227
	100	20	33	42	105	50	10	M16x1	9,9	3	10083262	30512795	30297309	2,6	MTC-HSK-A100-20-105-C-0-A-AAA3	30522228	30522229
	100	20	33	42	105	50	10	M16x1	17,35	4	10083262	30279429	30297310	2,6	MTC-HSK-A100-20-105-C-0-A-AAA4	30326788	30326826
	100	20	33	42	120	50	10	M16x1	4,52	2	30302822	30512817	30384306	2,8	MTC-HSK-A100-20-120-C-0-A-AAA2	30522230	30522231
	100	20	33	42	120	50	10	M16x1	9,9	3	30302822	30512816	30297309	2,8	MTC-HSK-A100-20-120-C-0-A-AAA3	30522232	30522233
	100	20	33	42	120	50	10	M16x1	17,35	4	30302822	30279430	30297310	2,8	MTC-HSK-A100-20-120-C-0-A-AAA4	30326798	30326836
	100	20	33	42	160	50	10	M16x1	4,52	2	10096880	30512833	30384306	3,2	MTC-HSK-A100-20-160-C-0-A-AAA2	30522234	30522235
	100	20	33	42	160	50	10	M16x1	9,9	3	10096880	30512830	30297309	3,2	MTC-HSK-A100-20-160-C-0-A-AAA3	30522236	30522237

\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

**2-channel system MQL shrink chucks ThermoChuck | For automatic tool change, with axial tool length adjustment**  
**Shank HSK-A in accordance with DIN 69893-1**

Variant*	HSK-A	Dimensions						G	A <sub>N</sub>	sw	Components			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				BDY	LS	CU				
	100	20	33	42	160	50	10	M16x1	17,35	4	10096880	30279432	30297310	3,2	MTC-HSK-A100-20-160-C-0-A-AAA4	30326806	30326844
	100	20	33	42	200	50	10	M16x1	4,52	2	30302832	30512853	30384306	3,6	MTC-HSK-A100-20-200-C-0-A-AAA2	30522238	30522239
	100	20	33	42	200	50	10	M16x1	9,9	3	30302832	30512850	30297309	3,6	MTC-HSK-A100-20-200-C-0-A-AAA3	30522240	30522241
	100	20	33	42	200	50	10	M16x1	17,35	4	30302832	30279433	30297310	3,6	MTC-HSK-A100-20-200-C-0-A-AAA4	30326816	30326854
	100	25	44	53	115	56	10	M16x1	4,52	2	10083263	30512799	30384306	3,2	MTC-HSK-A100-25-115-C-0-A-AAA2	30522242	30522243
	100	25	44	53	115	56	10	M16x1	9,9	3	10083263	30512796	30297309	3,2	MTC-HSK-A100-25-115-C-0-A-AAA3	30522244	30522245
	100	25	44	53	115	56	10	M16x1	17,35	4	10083263	30279434	30297310	3,2	MTC-HSK-A100-25-115-C-0-A-AAA4	30326789	30326827
	100	25	44	53	160	56	10	M16x1	1,54	2	30258455	30512834	30384306	3,9	MTC-HSK-A100-25-160-C-0-A-AAA2	30522246	30522247
	100	25	44	53	160	56	10	M16x1	4,52	3	30258455	30512831	30297309	3,9	MTC-HSK-A100-25-160-C-0-A-AAA3	30522248	30522249
	100	25	44	53	160	56	10	M16x1	9,9	4	30258455	30279435	30297310	3,9	MTC-HSK-A100-25-160-C-0-A-AAA4	30326807	30326845
	100	25	44	53	200	56	10	M16x1	1,54	2	30302833	30512854	30384306	4,6	MTC-HSK-A100-25-200-C-0-A-AAA2	30522250	30522251
	100	25	44	53	200	56	10	M16x1	4,52	3	30302833	30512851	30297309	4,6	MTC-HSK-A100-25-200-C-0-A-AAA3	30522252	30522253
	100	25	44	53	200	56	10	M16x1	9,9	4	30302833	30279436	30297310	4,6	MTC-HSK-A100-25-200-C-0-A-AAA4	30326817	30326855
	100	32	44	53	120	60	10	M16x1	4,52	2	10083264	30512800	30384306	3,0	MTC-HSK-A100-32-120-C-0-A-AAA2	30522254	30522255
	100	32	44	53	120	60	10	M16x1	9,9	3	10083264	30512797	30297309	3,0	MTC-HSK-A100-32-120-C-0-A-AAA3	30522256	30522257
	100	32	44	53	120	60	10	M16x1	17,35	4	10083264	30279441	30297310	3,0	MTC-HSK-A100-32-120-C-0-A-AAA4	30326790	30326828
	100	32	44	53	160	60	10	M16x1	4,52	2	30303048	30512835	30384306	3,7	MTC-HSK-A100-32-160-C-0-A-AAA2	30522258	30522259
	100	32	44	53	160	60	10	M16x1	9,9	3	30303048	30512832	30297309	3,7	MTC-HSK-A100-32-160-C-0-A-AAA3	30522260	30522261
	100	32	44	53	160	60	10	M16x1	17,35	4	30303048	30279442	30297310	3,7	MTC-HSK-A100-32-160-C-0-A-AAA4	30326808	30326846
	100	32	44	53	200	60	10	M16x1	4,52	2	30302834	30512856	30384306	4,4	MTC-HSK-A100-32-200-C-0-A-AAA2	30522262	30522263
	100	32	44	53	200	60	10	M16x1	9,9	3	30302834	30512852	30297309	4,4	MTC-HSK-A100-32-200-C-0-A-AAA3	30522264	30522265
	100	32	44	53	200	60	10	M16x1	17,35	4	30302834	30279443	30297310	4,4	MTC-HSK-A100-32-200-C-0-A-AAA4	30326818	30326856

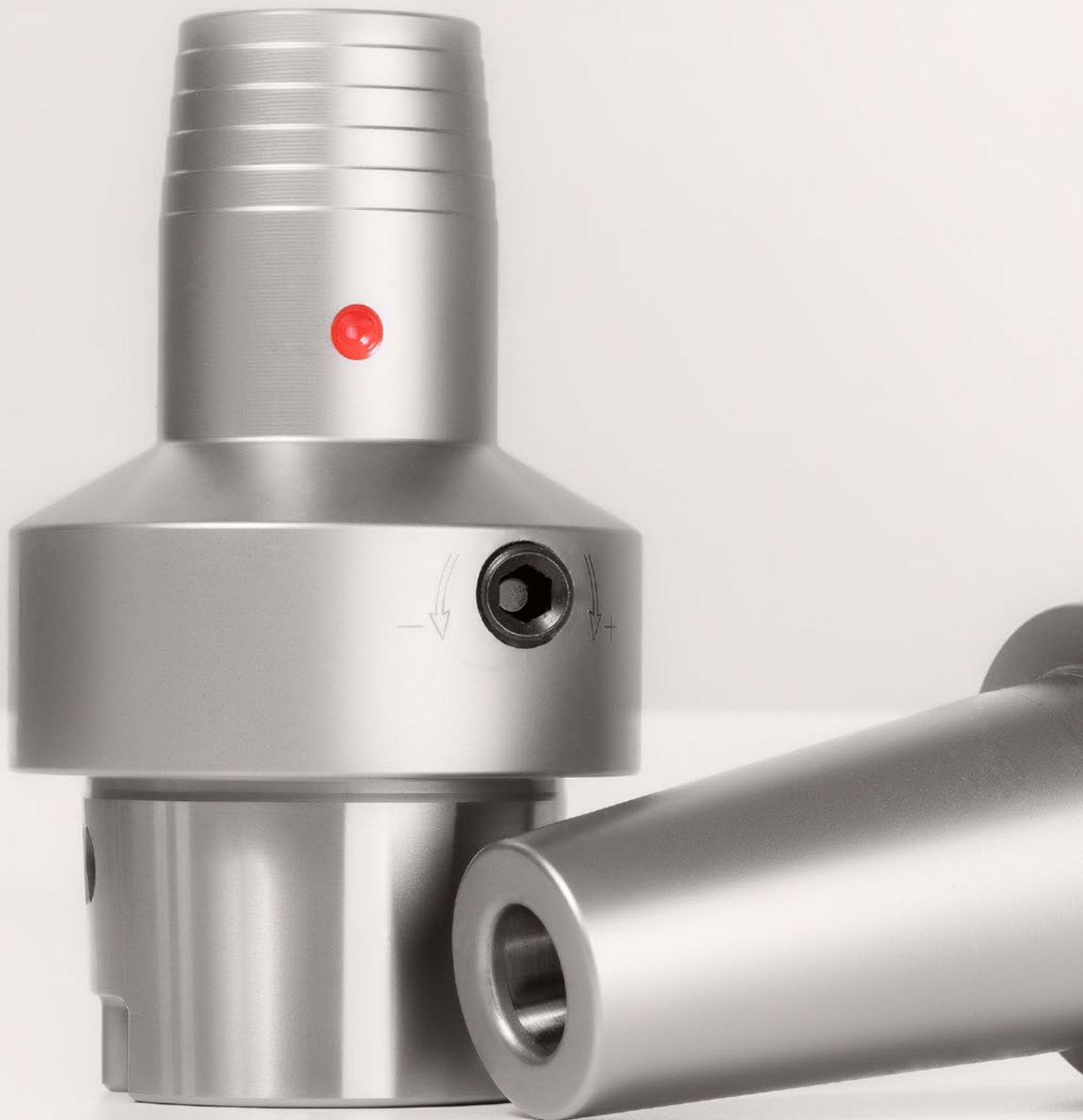
\* The exact determination of the variant can be found in the selection system 2-channel system chucks. The preferred series is marked with a green .

Dimensions in mm.

Items included: Tool body, length adjustment screw and coolant unit as assembly. These components can also be ordered separately. (see table)"

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Chip version: Equipped with Balluff code carrier, see section "Accessories, spare parts and measuring equipment". Further code carriers on request. Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.





# CHUCKS WITH HSK-C

## Chucks

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Hydraulic chucks with radial length adjustment \_\_\_\_\_ 158

Hydraulic chucks HydroChuck with axial length adjustment \_\_\_\_\_ 159



Shrink chucks ThermoChuck \_\_\_\_\_ 160



Chucks for cylindrical shanks with angled clamping surface \_\_\_\_\_ 163



Chucks for collets \_\_\_\_\_ 165

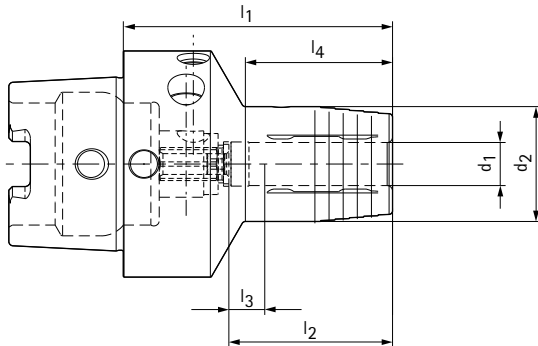




# Hydraulic chucks HydroChuck

in accordance with DIN 69882-7 with radial tool length adjustment

Shank in accordance with HSK-C in accordance with DIN 69893-1



HSK-C	Dimensions						Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			
40	6	26	60	36	10	30	0,4	MHC-HSK-C040-06-060-1-0-R	30349225
40	8	28	60	36	10	30	0,4	MHC-HSK-C040-08-060-1-0-R	30349226
40	10	30	65	40	10	35	0,5	MHC-HSK-C040-10-065-1-0-R	30349227
40	12	32	70	45	10	40	0,5	MHC-HSK-C040-12-070-1-0-R	30349228
50	6	26	60	36	10	30	0,5	MHC-HSK-C050-06-060-1-0-R	30349229
50	8	28	60	36	10	30	0,6	MHC-HSK-C050-08-060-1-0-R	30349230
50	10	30	65	40	10	35	0,6	MHC-HSK-C050-10-065-1-0-R	30349231
50	12	32	75	46	10	44	0,7	MHC-HSK-C050-12-075-1-0-R	30349232
50	14	34	75	46	10	46	0,7	MHC-HSK-C050-14-075-1-0-R	30349233
50	16	38	80	49	10	51	0,8	MHC-HSK-C050-16-080-1-0-R	30349234
50	18	40	80	49	10	51	0,8	MHC-HSK-C050-18-080-1-0-R	30349235
50	20	42	80	51	10	52	0,8	MHC-HSK-C050-20-080-1-0-R	30349236
63	6	26	60	36	10	25	0,9	MHC-HSK-C063-06-060-1-0-R	30349237
63	8	28	60	36	10	25	0,9	MHC-HSK-C063-08-060-1-0-R	30349238
63	10	30	65	40	10	31	0,9	MHC-HSK-C063-10-065-1-0-R	30349239
63	12	32	75	46	10	41	1,0	MHC-HSK-C063-12-075-1-0-R	30349240
63	14	34	75	46	10	42	1,0	MHC-HSK-C063-14-075-1-0-R	30349241
63	16	38	80	49	10	48	1,1	MHC-HSK-C063-16-080-1-0-R	30349242
63	18	40	80	49	10	48	1,1	MHC-HSK-C063-18-080-1-0-R	30349243
63	20	42	80	51	10	49	1,2	MHC-HSK-C063-20-080-1-0-R	30349244
63	25	57	95	57	10	59,5	1,8	MHC-HSK-C063-25-095-1-0-R	30349245
63	32	62,5	100	61	10	60,5	2,0	MHC-HSK-C063-32-100-1-0-R	30349246

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: With radial length adjustment. Without coolant tube.

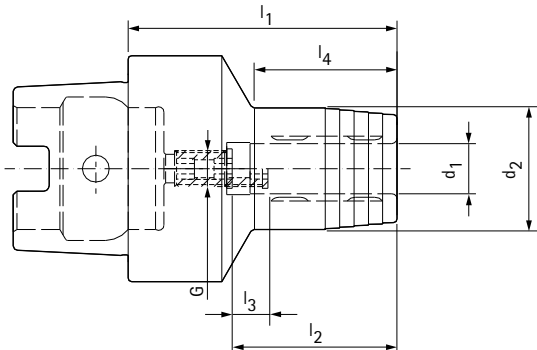
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with radial tool length adjustment. Coolant supply via central through bore. For coolant tubes, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

in accordance with DIN 69882-7 with axial tool length adjustment

Shank HSK-C in accordance with DIN 69893-1



HSK-C	Dimensions						G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	6	26	60	37	10	35	M5	0,5	MHC-HSK-C040-06-060-1-0-A	30251176
40	8	28	60	37	10	36	M6	0,5	MHC-HSK-C040-08-060-1-0-A	30251177
40	10	30	65	41	10	41	M6	0,6	MHC-HSK-C040-10-065-1-0-A	30251178
40	12	32	70	46	10	47	M6	0,6	MHC-HSK-C040-12-070-1-0-A	30251179
50	6	26	60	37	10	30	M5	0,7	MHC-HSK-C050-06-060-1-0-A	30251180
50	8	28	60	37	10	30	M6	0,7	MHC-HSK-C050-08-060-1-0-A	30251181
50	10	30	65	41	10	35	M8x1	1,0	MHC-HSK-C050-10-065-1-0-A	30251182
50	12	32	75	46	10	40	M10x1	0,9	MHC-HSK-C050-12-075-1-0-A	30251183
50	14	34	75	46	10	40	M10x1	0,8	MHC-HSK-C050-14-075-1-0-A	30251184
50	16	38	80	49	10	50	M12x1	1,1	MHC-HSK-C050-16-080-1-0-A	30251185
50	18	40	80	49	10	50	M12x1	1,4	MHC-HSK-C050-18-080-1-0-A	30251186
50	20	42	80	51	10	50	M16x1	1,2	MHC-HSK-C050-20-080-1-0-A	30251187
50	25	49,5	90	57	10	59	M16x1	1,1	MHC-HSK-C050-25-090-1-0-A	30287376
63	6	26	60	37	10	25	M5	1,0	MHC-HSK-C063-06-060-1-0-A	30251188
63	8	28	60	37	10	25	M6	1,0	MHC-HSK-C063-08-060-1-0-A	30251189
63	10	30	65	41	10	31	M8x1	1,0	MHC-HSK-C063-10-065-1-0-A	30251190
63	12	32	75	46	10	41	M10x1	1,1	MHC-HSK-C063-12-075-1-0-A	30251191
63	14	34	75	46	10	42	M10x1	1,1	MHC-HSK-C063-14-075-1-0-A	30251192
63	16	38	80	49	10	48	M12x1	1,1	MHC-HSK-C063-16-080-1-0-A	30251193
63	18	40	80	49	10	48	M12x1	1,2	MHC-HSK-C063-18-080-1-0-A	30251194
63	20	42	80	51	10	49	M16x1	1,2	MHC-HSK-C063-20-080-1-0-A	30251195
63	25	58	95	57	10	63	M16x1	2,0	MHC-HSK-C063-25-095-1-0-A	30251196
63	32	62	100	61	10	60	M16x1	2,1	MHC-HSK-C063-32-100-1-0-A	30251197

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: With length adjustment screw.

Without coolant tube.

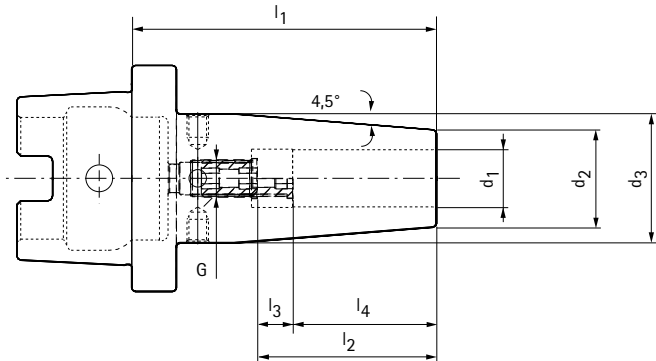
Note: Chuck with axial tool length adjustment. Coolant supply via central through bore. For coolant tubes, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Shrink chucks ThermoChuck

in accordance with DIN 69882-8 with axial tool length adjustment

Shank HSK-C in accordance with DIN 69893-1



HSK-C	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
32	3	10	15	60	22	10	12	M6	0,2	MTC-HSK-C032-03-060-1-0-A	30261892
32	4	10	15	60	26	10	16	M6	0,2	MTC-HSK-C032-04-060-1-0-A	30261893
32	5	10	15	60	30	10	20	M6	0,2	MTC-HSK-C032-05-060-1-0-A	30261894
32	6	21	26	65	36	10	26	M6	0,3	MTC-HSK-C032-06-065-1-0-A	30261895
32	8	21	26	65	36	10	26	M6	0,3	MTC-HSK-C032-08-065-1-0-A	30261896
32	10	24	30	65	41	10	31	M8x1	0,4	MTC-HSK-C032-10-065-1-0-A	30261897
32	12	24	32	75	47	10	37	M10x1	0,4	MTC-HSK-C032-12-075-1-0-A	30261898
40	3	10	15	60	28	16	12	M6	0,3	MTC-HSK-C040-03-060-1-0-A	30261899
40*	3	10	20	120	-	-	12	-	0,4	MTC-HSK-C040-03-120-1-0-W	30261900
40*	3	10	20	160	-	-	12	-	0,5	MTC-HSK-C040-03-160-1-0-W	30261901
40	4	10	15	60	28	12	16	M6	0,3	MTC-HSK-C040-04-060-1-0-A	30261902
40*	4	15	22	120	-	-	16	-	0,4	MTC-HSK-C040-04-120-1-0-W	30261903
40*	4	15	22	160	-	-	16	-	0,5	MTC-HSK-C040-04-160-1-0-W	30261904
40	5	10	15	60	30	10	20	M6	0,3	MTC-HSK-C040-05-060-1-0-A	30261905
40*	5	15	22	120	-	-	20	-	0,4	MTC-HSK-C040-05-120-1-0-W	30261906
40*	5	15	22	160	-	-	20	-	0,5	MTC-HSK-C040-05-160-1-0-W	30261907
40	6	21	30	70	36	10	26	M5	0,4	MTC-HSK-C040-06-070-1-0-A	30261908
40	6	21	30	120	36	10	26	M5	0,5	MTC-HSK-C040-06-120-1-0-A	30261909
40	6	21	30	160	36	10	26	M5	0,6	MTC-HSK-C040-06-160-1-0-A	30261910
40	8	21	30	70	36	10	26	M6	0,4	MTC-HSK-C040-08-070-1-0-A	30261911
40	8	21	30	120	36	10	26	M6	0,5	MTC-HSK-C040-08-120-1-0-A	30261912
40	8	21	30	160	36	10	26	M6	0,6	MTC-HSK-C040-08-160-1-0-A	30261913
40	10	24	33,5	70	41	10	31	M8x1	0,5	MTC-HSK-C040-10-070-1-0-A	30261914
40	10	24	33,5	120	41	10	31	M8x1	0,6	MTC-HSK-C040-10-120-1-0-A	30261915
40	10	24	33,5	160	41	10	31	M8x1	0,7	MTC-HSK-C040-10-160-1-0-A	30261916
40	12	24	35	80	47	10	37	M10x1	0,5	MTC-HSK-C040-12-080-1-0-A	30261917
40	12	24	35	120	47	10	37	M10x1	0,6	MTC-HSK-C040-12-120-1-0-A	30261918
40	12	24	35	160	47	10	37	M10x1	0,7	MTC-HSK-C040-12-160-1-0-A	30261919
40	14	27	38	80	47	10	37	M10x1	0,5	MTC-HSK-C040-14-080-1-0-A	30261920
40	14	27	38	120	47	10	37	M10x1	0,6	MTC-HSK-C040-14-120-1-0-A	30261921
40	14	27	38	160	47	10	37	M10x1	0,7	MTC-HSK-C040-14-160-1-0-A	30261922
40	16	27	38	80	50	10	40	M12x1	0,6	MTC-HSK-C040-16-080-1-0-A	30261923
40	16	27	38	120	50	10	40	M12x1	0,7	MTC-HSK-C040-16-120-1-0-A	30261924
40	16	27	38	160	50	10	40	M12x1	0,8	MTC-HSK-C040-16-160-1-0-A	30261925
50	3	10	15	70	28	16	12	M6	0,4	MTC-HSK-C050-03-070-1-0-A	30261926
50*	3	10	20	120	-	-	12	-	0,5	MTC-HSK-C050-03-120-1-0-W	30261927
50*	3	10	20	160	-	-	12	-	0,5	MTC-HSK-C050-03-160-1-0-W	30261928
50	4	15	22	70	28	12	16	M6	0,4	MTC-HSK-C050-04-070-1-0-A	30261929

\* without axial tool length adjustment

## Shrink chucks ThermoChuck | In acc. with DIN 69882-8 | With axial tool length adjustment | Shank HSK-C in acc. with DIN 69893-1

HSK-C	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
50*	4	15	22	120	-	-	16	-	0,5	MTC-HSK-C050-04-120-1-0-W	30261930
50*	4	15	22	160	-	-	16	-	0,5	MTC-HSK-C050-04-160-1-0-W	30261931
50	5	15	22	70	30	10	20	M6	0,4	MTC-HSK-C050-05-070-1-0-A	30261932
50*	5	15	22	120	-	-	20	-	0,5	MTC-HSK-C050-05-120-1-0-W	30261933
50*	5	15	22	160	-	-	20	-	0,5	MTC-HSK-C050-05-160-1-0-W	30261934
50	6	21	30	70	36	10	26	M5	0,6	MTC-HSK-C050-06-070-1-0-A	30261935
50	6	21	30	120	36	10	26	M5	0,7	MTC-HSK-C050-06-120-1-0-A	30261936
50	6	21	30	160	36	10	26	M5	0,8	MTC-HSK-C050-06-160-1-0-A	30261937
50	8	21	30	70	36	10	26	M6	0,6	MTC-HSK-C050-08-070-1-0-A	30261938
50	8	21	30	120	36	10	26	M6	0,7	MTC-HSK-C050-08-120-1-0-A	30261939
50	8	21	30	160	36	10	26	M6	0,8	MTC-HSK-C050-08-160-1-0-A	30261940
50	10	24	33	75	41	10	31	M8x1	0,6	MTC-HSK-C050-10-075-1-0-A	30261941
50	10	24	33	120	41	10	31	M8x1	0,7	MTC-HSK-C050-10-120-1-0-A	30261942
50	10	24	33	160	41	10	31	M8x1	0,8	MTC-HSK-C050-10-160-1-0-A	30261943
50	12	24	34	80	47	10	37	M10x1	0,7	MTC-HSK-C050-12-080-1-0-A	30261944
50	12	24	34	120	47	10	37	M10x1	0,8	MTC-HSK-C050-12-120-1-0-A	30261945
50	12	24	34	160	47	10	37	M10x1	0,9	MTC-HSK-C050-12-160-1-0-A	30261946
50	14	27	37	80	47	10	37	M10x1	0,7	MTC-HSK-C050-14-080-1-0-A	30261947
50	14	27	37	120	47	10	37	M10x1	0,8	MTC-HSK-C050-14-120-1-0-A	30261948
50	14	27	37	160	47	10	37	M10x1	0,9	MTC-HSK-C050-14-160-1-0-A	30261949
50	16	27	38,5	85	50	10	40	M12x1	0,7	MTC-HSK-C050-16-085-1-0-A	30261950
50	16	27	38,5	120	50	10	40	M12x1	0,8	MTC-HSK-C050-16-120-1-0-A	30261951
50	16	27	38,5	160	50	10	40	M12x1	0,9	MTC-HSK-C050-16-160-1-0-A	30261952
50	18	33	44,5	85	50	10	40	M12x1	0,8	MTC-HSK-C050-18-085-1-0-A	30261953
50	18	33	44,5	120	50	10	40	M12x1	0,9	MTC-HSK-C050-18-120-1-0-A	30261954
50	18	33	44,5	160	50	10	40	M12x1	1,0	MTC-HSK-C050-18-160-1-0-A	30261955
50	20	33	45	90	52	10	42	M16x1	0,8	MTC-HSK-C050-20-090-1-0-A	30261956
50	20	33	45	120	52	10	42	M16x1	0,9	MTC-HSK-C050-20-120-1-0-A	30261957
50	20	33	45	160	52	10	42	M16x1	1,0	MTC-HSK-C050-20-160-1-0-A	30261958
63	3	10	15	70	28	16	12	M6	0,6	MTC-HSK-C063-03-070-1-0-A	30261959
63*	3	10	20	120	-	-	12	-	0,7	MTC-HSK-C063-03-120-1-0-W	30261960
63*	3	10	20	160	-	-	12	-	0,8	MTC-HSK-C063-03-160-1-0-W	30261961
63	4	15	22	70	28	12	16	M6	0,6	MTC-HSK-C063-04-070-1-0-A	30261962
63*	4	15	22	120	-	-	16	-	0,7	MTC-HSK-C063-04-120-1-0-W	30261963
63*	4	15	22	160	-	-	16	-	0,8	MTC-HSK-C063-04-160-1-0-W	30261964
63	5	15	22	70	30	10	20	M6	0,6	MTC-HSK-C063-05-070-1-0-A	30261965
63*	5	15	22	120	-	-	20	-	0,7	MTC-HSK-C063-05-120-1-0-W	30261966
63*	5	15	22	160	-	-	20	-	0,8	MTC-HSK-C063-05-160-1-0-W	30261967
63	6	21	30	70	36	10	26	M5	0,7	MTC-HSK-C063-06-070-1-0-A	30261968
63	6	21	30	120	36	10	26	M5	0,8	MTC-HSK-C063-06-120-1-0-A	30261969
63	6	21	30	160	36	10	26	M5	0,9	MTC-HSK-C063-06-160-1-0-A	30261970
63	8	21	30	70	36	10	26	M6	0,7	MTC-HSK-C063-08-070-1-0-A	30261971
63	8	21	30	120	36	10	26	M6	0,8	MTC-HSK-C063-08-120-1-0-A	30261972
63	8	21	30	160	36	10	26	M6	0,9	MTC-HSK-C063-08-160-1-0-A	30261973
63	10	24	34	75	41	10	31	M8x1	0,8	MTC-HSK-C063-10-075-1-0-A	30261974
63	10	24	34	120	41	10	31	M8x1	0,9	MTC-HSK-C063-10-120-1-0-A	30261975
63	10	24	34	160	41	10	31	M8x1	1,0	MTC-HSK-C063-10-160-1-0-A	30261976
63	12	24	34	80	47	10	37	M10x1	0,8	MTC-HSK-C063-12-080-1-0-A	30261977
63	12	24	34	120	47	10	37	M10x1	0,9	MTC-HSK-C063-12-120-1-0-A	30261978
63	12	24	34	160	47	10	37	M10x1	1,0	MTC-HSK-C063-12-160-1-0-A	30261979
63	14	27	36	80	47	10	37	M10x1	0,8	MTC-HSK-C063-14-080-1-0-A	30261980
63	14	27	36	120	47	10	37	M10x1	0,9	MTC-HSK-C063-14-120-1-0-A	30261981
63	14	27	36	160	47	10	37	M10x1	1,0	MTC-HSK-C063-14-160-1-0-A	30261982
63	16	27	36	85	50	10	40	M12x1	0,8	MTC-HSK-C063-16-085-1-0-A	30261983
63	16	27	36	120	50	10	40	M12x1	0,9	MTC-HSK-C063-16-120-1-0-A	30261984
63	16	27	36	160	50	10	40	M12x1	1,0	MTC-HSK-C063-16-160-1-0-A	30261985

\* without axial tool length adjustment

Continued on next page.

## Shrink chucks ThermoChuck | In acc. with DIN 69882-8 | With axial tool length adjustment | Shank HSK-C in acc. with DIN 69893-1

HSK-C	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
63	18	33	44	85	50	10	40	M12x1	1,0	MTC-HSK-C063-18-085-1-0-A	30261986
63	18	33	44	120	50	10	40	M12x1	1,1	MTC-HSK-C063-18-120-1-0-A	30261987
63	18	33	44	160	50	10	40	M12x1	1,2	MTC-HSK-C063-18-160-1-0-A	30261988
63	20	33	45	90	52	10	42	M16x1	1,0	MTC-HSK-C063-20-090-1-0-A	30261989
63	20	33	45	120	52	10	42	M16x1	1,1	MTC-HSK-C063-20-120-1-0-A	30261990
63	20	33	45	160	52	10	42	M16x1	1,2	MTC-HSK-C063-20-160-1-0-A	30261991
63	25	44	53	100	58	10	48	M16x1	1,4	MTC-HSK-C063-25-100-1-0-A	30261992
63	25	44	53	120	58	10	48	M16x1	1,5	MTC-HSK-C063-25-120-1-0-A	30261993
63	25	44	53	160	58	10	48	M16x1	1,7	MTC-HSK-C063-25-160-1-0-A	30261994
63	32	44	53	110	62	10	52	M16x1	1,5	MTC-HSK-C063-32-110-1-0-A	30261995
63	32	44	53	160	62	10	52	M16x1	1,7	MTC-HSK-C063-32-160-1-0-A	30261996

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.  
Without fine balancing screws and coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

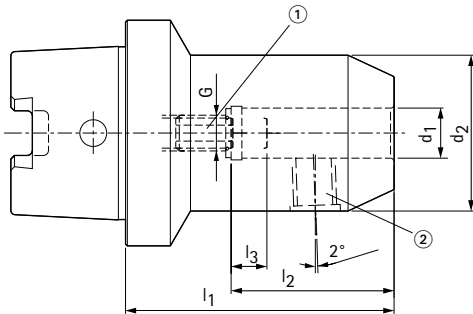
Note: For tool extensions, see section "Accessories, spare parts and measuring equipment".  
Fine balancing screws available on request. For notes on foolproofing see technical appendix.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Chucks for cylindrical shanks

with angled clamping surface in accordance with DIN 69882-5 with axial tool length adjustment

Shank HSK-C in accordance with DIN 69893-1



HSK-C	Dimensions					G	Weight [kg]	Specification	Order No.	① Order No. length adjustment screw
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>					
32	6	25	60	36	10	M5	0,3	MNC-HSK-C032-06-060-1-0-A	30319548	30326220
32	8	28	60	36	10	M6	0,3	MNC-HSK-C032-08-060-1-0-A	30319549	30326223
32	10	35	65	40	10	M8	0,5	MNC-HSK-C032-10-065-1-0-A	30319550	30326225
40	6	25	60	36	10	M5	0,3	MNC-HSK-C040-06-060-1-0-A	30319551	30326220
40	8	28	60	36	10	M6	0,4	MNC-HSK-C040-08-060-1-0-A	30319552	30326223
40	10	35	65	40	10	M8	0,5	MNC-HSK-C040-10-065-1-0-A	30319553	30326225
40	12	42	70	45	8	M10	0,7	MNC-HSK-C040-12-070-1-0-A	30319554	30326230
40	14	44	70	45	8	M10	0,7	MNC-HSK-C040-14-070-1-0-A	30319555	30326230
40	16	48	75	48	8	M12	0,9	MNC-HSK-C040-16-075-1-0-A	30319556	30326235
50	6	25	60	36	8	M5	0,4	MNC-HSK-C050-06-060-1-0-A	30319557	30326219
50	8	28	60	36	8	M6	0,5	MNC-HSK-C050-08-060-1-0-A	30319558	30326222
50	10	35	65	40	8	M8	0,6	MNC-HSK-C050-10-065-1-0-A	30319559	30326225
50	12	42	75	45	10	M10	0,9	MNC-HSK-C050-12-075-1-0-A	30319560	30326230
50	14	44	75	45	10	M10	0,9	MNC-HSK-C050-14-075-1-0-A	30319561	30326230
50	16	48	80	48	10	M12	0,5	MNC-HSK-C050-16-080-1-0-A	30319562	30326235
50	18	50	80	48	10	M12	1,1	MNC-HSK-C050-18-080-1-0-A	30319563	30326235
50	20	52	80	50	8	M16	1,2	MNC-HSK-C050-20-080-1-0-A	30319564	30326238
63	6	25	60	36	8	M5	0,6	MNC-HSK-C063-06-060-1-0-A	30319565	30326219
63	8	28	60	36	8	M6	0,6	MNC-HSK-C063-08-060-1-0-A	30319566	30326222
63	10	35	65	40	8	M8	0,8	MNC-HSK-C063-10-065-1-0-A	30319567	30326225
63	12	42	75	45	10	M10	1,0	MNC-HSK-C063-12-075-1-0-A	30319568	30326230
63	14	44	75	45	10	M10	1,1	MNC-HSK-C063-14-075-1-0-A	30319569	30326230
63	16	48	80	48	10	M12	1,2	MNC-HSK-C063-16-080-1-0-A	30319570	30326235
63	18	50	80	48	10	M12	1,3	MNC-HSK-C063-18-080-1-0-A	30319571	30326235
63	20	52	80	50	8	M16	1,4	MNC-HSK-C063-20-080-1-0-A	30319572	30326238
63	25	65	95	56	8	M20	2,2	MNC-HSK-C063-25-095-1-0-A	30319573	30326242
63	32	72	100	60	8	M20	2,6	MNC-HSK-C063-32-100-1-0-A	30319574	30326242
80	6	25	65	36	10	M5	1,0	MNC-HSK-C080-06-065-1-0-A	30319575	30326220
80	8	28	65	36	10	M6	1,0	MNC-HSK-C080-08-065-1-0-A	30319576	30326220
80	10	35	70	40	10	M8	1,2	MNC-HSK-C080-10-070-1-0-A	30319577	30326225
80	12	42	75	45	8	M10	1,4	MNC-HSK-C080-12-075-1-0-A	30319578	30326230
80	14	44	75	45	8	M10	1,4	MNC-HSK-C080-14-075-1-0-A	30319579	30326230
80	16	48	80	48	10	M12	1,6	MNC-HSK-C080-16-080-1-0-A	30319580	30326235
80	18	50	80	48	10	M12	1,6	MNC-HSK-C080-18-080-1-0-A	30319581	30326235
80	20	52	85	50	10	M16	1,8	MNC-HSK-C080-20-085-1-0-A	30319582	30326238
80	25	65	95	56	10	M20	2,5	MNC-HSK-C080-25-095-1-0-A	30319583	30326242
80	32	72	100	60	10	M20	3,0	MNC-HSK-C080-32-100-1-0-A	30319584	30326242

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**Chucks for cylindrical shanks with angled clamping surface in accordance with DIN 69882-5 shank HSK-C in accordance with DIN 69893-1**

HSK-C	Dimensions					G	Weight [kg]	Specification	Order No.	① Order No. length adjustment screw
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>					
100	6	25	65	36	10	M5	1,5	MNC-HSK-C100-06-065-1-0-A	30319585	30326220
100	8	28	65	36	10	M6	1,6	MNC-HSK-C100-08-065-1-0-A	30319586	30326223
100	10	35	70	40	10	M8	1,7	MNC-HSK-C100-10-070-1-0-A	30319587	30326225
100	12	42	75	45	8	M10	1,9	MNC-HSK-C100-12-075-1-0-A	30319588	30326230
100	14	44	75	45	8	M10	2,0	MNC-HSK-C100-14-075-1-0-A	30319589	30326230
100	16	48	80	48	8	M12	2,2	MNC-HSK-C100-16-080-1-0-A	30319590	30326235
100	18	50	80	48	8	M12	2,2	MNC-HSK-C100-18-080-1-0-A	30319591	30326235
100	20	52	85	50	10	M16	2,3	MNC-HSK-C100-20-085-1-0-A	30319592	30326238
100	25	65	95	56	10	M20	3,0	MNC-HSK-C100-25-095-1-0-A	30319593	30326242
100	32	72	100	60	10	M20	3,5	MNC-HSK-C100-32-100-1-0-A	30319594	30326242

**Spare parts**

For location bore d <sub>1</sub>	② Clamping screw in accordance with DIN 1835-B	
	Size	Order No.
6	M6x9	10060983
8	M8x9	10042517
10	M10x12	10004134
12	M12x14	30002947
14	M12x14	30002947
16	M14x16	10004136
18	M14x16	10004136
20	M16x16	10004137
25	M18x2x20	10004141
32	M20x2x20	10004129

Dimensions in mm.

Use: For mounting milling cutters and drills with cylindrical shank and angled clamping surface (2°) in accordance with DIN 1835 Form E and DIN 6535 Form HE.

Items included: With built-in clamping screw and length adjustment screw.

Design: Permissible run-out deviation on the hollow taper shank in relation to the location bore d<sub>1</sub> is max. 3 µm. The bore tolerance is much tighter than DIN 1835 (dH4) to obtain machining accuracies of the highest quality.

Note: From location bore d<sub>1</sub> = 25 mm two clamping screws are provided.

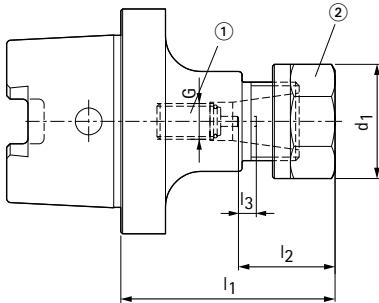
The length adjustment screws have a through hole for coolant.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.



# Chucks for collets

in accordance with DIN 69882-6 with axial tool length adjustment  
Shank HSK-C in accordance with DIN 69893-1



HSK-C	Clamping range	Nominal size	Dimensions				G	Weight [kg]	Specification	Order No.
			d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
32	0,5 - 10	ER-16	28	60	27	5	M8	0,3	MCC-HSK-C032-16-060-1-0-A	30319595
40	0,5 - 10	ER-16	28	60	27	5	M10	0,3	MCC-HSK-C040-16-060-1-0-A	30319596
50	0,5 - 10	ER-16	28	60	27	5	M10	0,4	MCC-HSK-C050-16-060-1-0-A	30319597
63	0,5 - 10	ER-16	28	60	27	5	M10	0,6	MCC-HSK-C063-16-060-1-0-A	30319598
63	0,5 - 10	ER-16	28	100	27	5	M10	0,8	MCC-HSK-C063-16-100-1-0-A	30319599
80	0,5 - 10	ER-16	28	100	27	5	M10	1,2	MCC-HSK-C080-16-100-1-0-A	30319600
100	0,5 - 10	ER-16	28	100	27	5	M10	1,8	MCC-HSK-C100-16-100-1-0-A	30319601

## Spare parts

For HSK-C	① Length adjustment screw (with through hole for coolant) clamping diameter			② Clamping nut in accordance with ISO 15488	
	ø 2.8 - 5 Order No	ø 4.8 - 7 Order No	ø 6.8 - 10 Order No	Nominal size	Order No.
32	30326227	30326228	30326229	ER-16	10013273
40 - 100	30326233	30350353	30350355	ER-16	10013273

Dimensions in mm.

Items included: With clamping nut. Without length adjustment screw or collet.

Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper 3 µm.

Note: Chucks have a through hole with internal thread for length adjustment screws.

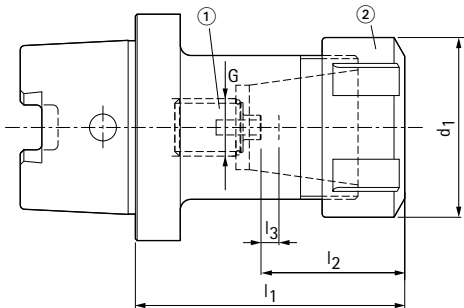
For collets, tapping collets, clamping nuts for internal coolant supply and assembly tools, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Chucks for collets

in accordance with DIN 69882-6 with axial tool length adjustment

Shank HSK-C in accordance with DIN 69893-1



HSK-C	Clamping range	Nominal size	Dimensions				G	Weight [kg]	Specification	Order No.
			d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	2 - 20	ER-32	50	75	40	5	M12	0,6	MCC-HSK-C040-20-075-1-0-A	30319609
50	2 - 20	ER-32	50	75	40	5	M16	0,7	MCC-HSK-C050-20-075-1-0-A	30319610
50	3 - 26	ER-40	63	80	46	5	M16	1,0	MCC-HSK-C050-26-080-1-0-A	30319611
63	2 - 20	ER-32	50	75	40	5	M16	0,9	MCC-HSK-C063-20-075-1-0-A	30319612
63	3 - 26	ER-40	63	80	46	5	M16	1,2	MCC-HSK-C063-26-080-1-0-A	30319613
80	2 - 20	ER-32	50	80	40	5	M16	1,3	MCC-HSK-C080-20-080-1-0-A	30319614
80	3 - 26	ER-40	63	85	46	5	M16	1,6	MCC-HSK-C080-26-085-1-0-A	30319615
100	2 - 20	ER-32	50	80	40	5	M16	1,9	MCC-HSK-C100-20-080-1-0-A	30319616
100	3 - 26	ER-40	63	90	46	5	M16	2,2	MCC-HSK-C100-26-090-1-0-A	30319617

## Spare parts

For HSK-C	Clamping range	① Length adjustment screw (with through hole for coolant) clamping diameter					② Clamping nut in accordance with ISO 15488	
		ø 3.8 - 7 Order No.	ø 6.8 - 10 Order No.	ø 9.8 - 13 Order No.	ø 12.8 - 20 Order No.	ø 19.9 - 26 Order No.	Nominal size	Order No.
40	2 - 20	30326196	30326197	30326195	30326195	-	ER-32	10023401
50 - 100	2 - 20	30326204	30326205	30326206	30326207	-	ER-32	10023401
50 - 100	3 - 26	30326204	30326205	30326206	30326207	30326208	ER-40	10022176

Dimensions in mm.

Items included: With clamping nut. Without length adjustment screw or collet

Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper 3 µm.

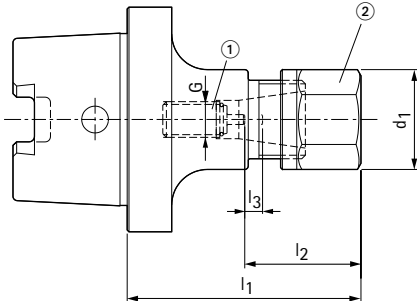
Note: Chucks have a through hole with internal thread for length adjustment screws.

For collets, tapping collets, clamping nuts for internal coolant supply and assembly tools, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Chucks for collets

with clamping nut for internal coolant supply (HI-Q/ERC) and axial tool length adjustment  
Shank HSK-C in accordance with DIN 69893-1



HSK-C	Clamping range	Nominal size	Dimensions				G	Weight [kg]	Specification	Order No.
			d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
32	0,5 - 10	ER-16	28	65	32	5	M8	0,3	MCC-HSK-C032-16-065-1-0-A	30319602
40	0,5 - 10	ER-16	28	65	32	5	M10	0,3	MCC-HSK-C040-16-065-1-0-A	30319603
50	0,5 - 10	ER-16	28	65	32	5	M10	0,4	MCC-HSK-C050-16-065-1-0-A	30319604
63	0,5 - 10	ER-16	28	65	32	5	M10	0,6	MCC-HSK-C063-16-065-1-0-A	30319605
63	0,5 - 10	ER-16	28	105	32	5	M10	0,8	MCC-HSK-C063-16-105-1-0-A	30319606
80	0,5 - 10	ER-16	28	105	32	5	M10	1,2	MCC-HSK-C080-16-105-1-0-A	30319607
100	0,5 - 10	ER-16	28	105	32	5	M10	1,8	MCC-HSK-C100-16-105-1-0-A	30319608

## Spare parts

For HSK-C	① Length adjustment screw (with through hole for coolant) clamping diameter			② Clamping nut HI-Q/ERC similar to ISO 15488	
	Ø 2.8 - 5 Order No.	Ø 4.8 - 7 Order No.	Ø 6.8 - 10 Order No.	Nominal size	Order No.
32	30326227	30326228	30326229	ER-16	10007862
40 - 100	30326233	30350353	30350355	ER-16	10007862

Dimensions in mm.

Items included: With clamping nut for internal coolant supply (HI-Q/ERC).  
Without length adjustment screw, sealing disc or collet.

Design: Permissible run-out deviation on the hollow taper shank  
in relation to the internal taper 3 µm.

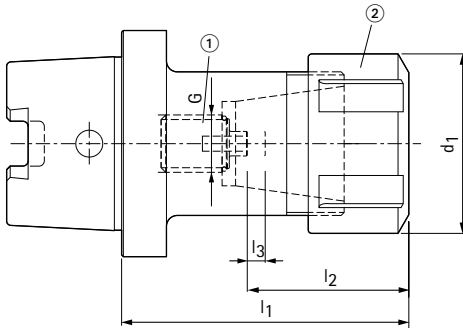
Note: Chucks have a through hole with internal thread for length adjustment screws.

For collets, tapping collets, sealing discs and assembly tools, see section  
"Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

## Chucks for collets

with clamping nut for internal coolant supply (HI-Q/ERC) and axial tool length adjustment  
Shank HSK-C in accordance with DIN 69893-1



HSK-C	Clamping range	Nominal size	Dimensions				G	Weight [kg]	Specification	Order No.
			d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	2 - 20	ER-32	50	80	45	5	M12	0,7	MCC-HSK-C040-32-080-1-0-A	30319618
50	2 - 20	ER-32	50	80	45	5	M16	0,8	MCC-HSK-C050-32-080-1-0-A	30319619
50	3 - 26	ER-40	63	85	51	5	M16	1,1	MCC-HSK-C050-40-085-1-0-A	30319620
63	2 - 20	ER-32	50	80	45	5	M16	0,9	MCC-HSK-C063-32-080-1-0-A	30319621
63	3 - 26	ER-40	63	85	51	5	M16	1,2	MCC-HSK-C063-40-085-1-0-A	30319622
80	2 - 20	ER-32	50	85	45	5	M16	1,3	MCC-HSK-C080-32-085-1-0-A	30319623
80	3 - 26	ER-40	63	90	51	5	M16	1,7	MCC-HSK-C080-40-090-1-0-A	30319624
100	2 - 20	ER-32	50	85	45	5	M16	1,9	MCC-HSK-C100-32-085-1-0-A	30319625
100	3 - 26	ER-40	63	95	51	5	M16	2,3	MCC-HSK-C100-40-095-1-0-A	30319626

### Spare parts

For HSK-C	Clamping range	① Length adjustment screw (with through hole for coolant) clamping diameter					② Clamping nut HI-Q/ERC similar to ISO 15488	
		ø 3.8 - 7 Order No.	ø 6.8 - 10 Order No.	ø 9.8 - 13 Order No.	ø 12.8 - 20 Order No.	ø 19.9 - 26 Order No.	Nominal size	Order No.
40	2 - 20	30326196	30326197	30326195	30326195	-	ER-32	10007923
50 - 100	2 - 20	30326204	30326205	30326207	30326206	-	ER-32	10007923
50 - 100	3 - 26	30326204	30326205	30326207	30326206	30326208	ER-40	10008010

Dimensions in mm.

Delivery: With clamping nut for internal coolant supply (HI-Q/ERC).

Without length adjustment screw, sealing disc or collet.

Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper on the collet is 5 µm.

Note: Chucks have a through hole with internal thread for length adjustment screws.

For collets, tapping collets, assembly tools and clamping nuts for internal coolant supply, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.





# CHUCKS WITH HSK-E

## Chucks

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Hydraulic chucks HydroChuck with axial length adjustment \_\_\_\_\_ 172

Shrink chucks ThermoChuck \_\_\_\_\_ 173



Shrink chucks ThermoChuck with slender contour 3 degrees \_\_\_\_\_ 176



Precision-DrillChuck \_\_\_\_\_ 178

Micro-Precision DrillChuck \_\_\_\_\_ 180

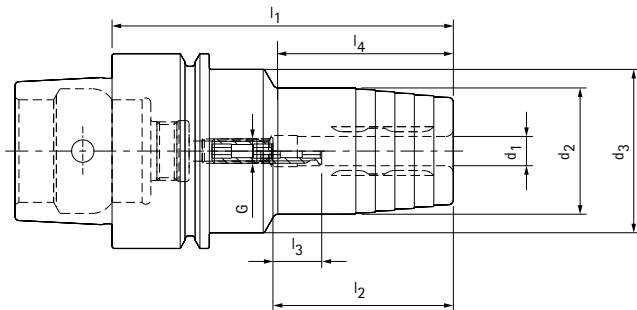




# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank HSK-E in accordance with DIN 69893-5



HSK-E	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	6	26	34	70	37	10	36	M5	0,5	MHC-HSK-E040-06-070-1-0-A	30495053
40	8	28	34	70	37	10	36	M6	0,5	MHC-HSK-E040-08-070-1-0-A	30501163
40	10	30	34	75	41	10	42	M6	0,6	MHC-HSK-E040-10-075-1-0-A	30543481
40	12	32	34	80	46	10	48	M6	0,6	MHC-HSK-E040-12-080-1-0-A	30495056
50	6	26	40	70	37	10	28	M5	0,9	MHC-HSK-E050-06-070-1-0-A	30550799
50	8	28	40	70	37	10	28	M6	0,9	MHC-HSK-E050-08-070-1-0-A	30550820
50	10	30	40	75	41	10	34	M8x1	1,0	MHC-HSK-E050-10-075-1-0-A	30550821
50	12	32	40	85	46	10	44	M10x1	1,0	MHC-HSK-E050-12-085-1-0-A	30550822
50	14	34	40	85	46	10	44	M10x1	1,0	MHC-HSK-E050-14-085-1-0-A	30320448
50	16	38	42	90	49	10	30	M12x1	1,0	MHC-HSK-E050-16-090-1-0-A	30550823
50	18	40	42	90	49	10	29	M12x1	1,2	MHC-HSK-E050-18-090-1-0-A	30550824
50	20	42	42	90	51	10	29	M16x1	1,2	MHC-HSK-E050-20-090-1-0-A	30550825

Dimensions in mm.

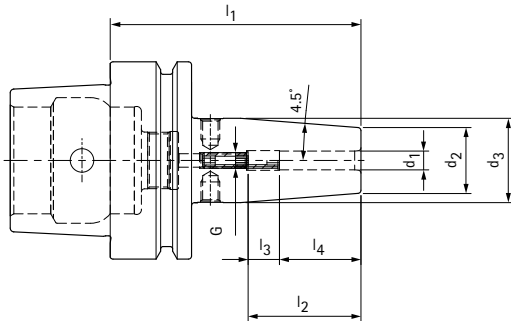
Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 20$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: With length adjustment screw. Without coolant tube.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore. For coolant tubes, reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank HSK-E in accordance with DIN 69893-5



HSK-E	Dimensions							G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$				
32	3	10	15	60	28	16	12	M5	0,2	MTC-HSK-E032-03-060-1-0-A	30261997
32	4	10	15	60	28	12	16	M5	0,2	MTC-HSK-E032-04-060-1-0-A	30261998
32	5	10	15	60	30	10	20	M5	0,2	MTC-HSK-E032-05-060-1-0-A	30261999
32	6	21	25	70	36	10	26	M5	0,3	MTC-HSK-E032-06-070-1-0-A	30262000
32	8	21	25	70	36	10	26	M6	0,3	MTC-HSK-E032-08-070-1-0-A	30251257
32	10	24	29	75	41	10	31	M8x1	0,4	MTC-HSK-E032-10-075-1-0-A	30251259
32	12	24	29	80	47	10	37	M10x1	0,4	MTC-HSK-E032-12-080-1-0-A	30262003
40	3	10	15	60	28	16	12	M6	0,3	MTC-HSK-E040-03-060-1-0-A	30262004
40*	3	10	20	120	-	-	12	-	0,4	MTC-HSK-E040-03-120-1-0-W	30271307
40*	3	10	20	160	-	-	12	-	0,5	MTC-HSK-E040-03-160-1-0-W	30271308
40	4	10	15	60	28	12	16	M6	0,3	MTC-HSK-E040-04-060-1-0-A	30262005
40*	4	15	22	120	-	-	16	-	0,4	MTC-HSK-E040-04-120-1-0-W	30271309
40*	4	15	22	160	-	-	16	-	0,5	MTC-HSK-E040-04-160-1-0-W	30271310
40	5	10	15	60	30	10	20	M6	0,3	MTC-HSK-E040-05-060-1-0-A	30262006
40*	5	15	22	120	-	-	20	-	0,4	MTC-HSK-E040-05-120-1-0-W	30271311
40*	5	15	22	160	-	-	20	-	0,5	MTC-HSK-E040-05-160-1-0-W	30271312
40	6	21	27	80	36	10	26	M5	0,4	MTC-HSK-E040-06-080-1-0-A	30262007
40	6	21	27	120	36	10	26	M5	0,6	MTC-HSK-E040-06-120-1-0-A	30271313
40	6	21	27	160	36	10	26	M5	0,7	MTC-HSK-E040-06-160-1-0-A	30271314
40	8	21	27	80	36	10	26	M6	0,4	MTC-HSK-E040-08-080-1-0-A	30262008
40	8	21	27	120	36	10	26	M6	0,6	MTC-HSK-E040-08-120-1-0-A	30271315
40	8	21	27	160	36	10	26	M6	0,7	MTC-HSK-E040-08-160-1-0-A	30271316
40	10	24	32	80	41	10	31	M8x1	0,5	MTC-HSK-E040-10-080-1-0-A	30262009
40	10	24	32	120	41	10	31	M8x1	0,7	MTC-HSK-E040-10-120-1-0-A	30271317
40	10	24	32	160	41	10	31	M8x1	0,8	MTC-HSK-E040-10-160-1-0-A	30271318
40	12	24	32	90	47	10	37	M10x1	0,5	MTC-HSK-E040-12-090-1-0-A	30262010
40	12	24	32	120	47	10	37	M10x1	0,7	MTC-HSK-E040-12-120-1-0-A	30271319
40	12	24	32	160	47	10	37	M10x1	0,8	MTC-HSK-E040-12-160-1-0-A	30271320
40	14	27	33,5	90	47	10	37	M10x1	0,6	MTC-HSK-E040-14-090-1-0-A	30262011
40	14	27	33,5	120	47	10	37	M10x1	0,8	MTC-HSK-E040-14-120-1-0-A	30271321
40	14	27	33,5	160	47	10	37	M10x1	0,9	MTC-HSK-E040-14-160-1-0-A	30271322
40	16	27	33,5	90	50	10	40	M12x1	0,5	MTC-HSK-E040-16-090-1-0-A	30262012
40	16	27	33,5	120	50	10	40	M12x1	0,7	MTC-HSK-E040-16-120-1-0-A	30271323
40	16	27	33,5	160	50	10	40	M12x1	0,8	MTC-HSK-E040-16-160-1-0-A	30271324
50	3	10	15	80	28	16	12	M6	0,4	MTC-HSK-E050-03-080-1-0-A	30262013
50*	3	10	20	120	-	-	12	-	0,5	MTC-HSK-E050-03-120-1-0-W	30271325
50*	3	10	20	160	-	-	12	-	0,6	MTC-HSK-E050-03-160-1-0-W	30271326
50	4	15	22	80	28	12	16	M6	0,5	MTC-HSK-E050-04-080-1-0-A	30262015

\* without axial tool length adjustment

Continued on next page.

## Shrink chucks ThermoChuck | With axial tool length adjustment | Shank HSK-E in accordance with DIN 69893-5

HSK-E	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
50*	4	15	22	120	-	-	16	-	0,6	MTC-HSK-E050-04-120-1-0-W	30271327
50*	4	15	22	160	-	-	16	-	0,7	MTC-HSK-E050-04-160-1-0-W	30271328
50	5	15	22	80	30	10	20	M6	0,5	MTC-HSK-E050-05-080-1-0-A	30262016
50*	5	15	22	120	-	-	20	-	0,6	MTC-HSK-E050-05-120-1-0-W	30271329
50*	5	15	22	160	-	-	20	-	0,7	MTC-HSK-E050-05-160-1-0-W	30271330
50	6	21	27	80	36	10	26	M5	0,7	MTC-HSK-E050-06-080-1-0-A	30262017
50	6	21	27	120	36	10	26	M5	0,8	MTC-HSK-E050-06-120-1-0-A	30271331
50	6	21	27	160	36	10	26	M5	0,9	MTC-HSK-E050-06-160-1-0-A	30271332
50	8	21	27	80	36	10	26	M6	0,6	MTC-HSK-E050-08-080-1-0-A	30262018
50	8	21	27	120	36	10	26	M6	0,8	MTC-HSK-E050-08-120-1-0-A	30271333
50	8	21	27	160	36	10	26	M6	0,9	MTC-HSK-E050-08-160-1-0-A	30271334
50	10	24	32	85	41	10	31	M8x1	0,7	MTC-HSK-E050-10-085-1-0-A	30262019
50	10	24	32	120	41	10	31	M8x1	0,8	MTC-HSK-E050-10-120-1-0-A	30271335
50	10	24	32	160	41	10	31	M8x1	0,9	MTC-HSK-E050-10-160-1-0-A	30271336
50	12	24	32	90	47	10	37	M10x1	0,7	MTC-HSK-E050-12-090-1-0-A	30262020
50	12	24	32	120	47	10	37	M10x1	0,8	MTC-HSK-E050-12-120-1-0-A	30271337
50	12	24	32	160	47	10	37	M10x1	0,9	MTC-HSK-E050-12-160-1-0-A	30271338
50	14	27	34	90	47	10	37	M10x1	0,7	MTC-HSK-E050-14-090-1-0-A	30262021
50	14	27	34	120	47	10	37	M10x1	0,8	MTC-HSK-E050-14-120-1-0-A	30271339
50	14	27	34	160	47	10	37	M10x1	0,9	MTC-HSK-E050-14-160-1-0-A	30271340
50	16	27	34	95	50	10	40	M12x1	0,7	MTC-HSK-E050-16-095-1-0-A	30262022
50	16	27	34	120	50	10	40	M12x1	0,8	MTC-HSK-E050-16-120-1-0-A	30271341
50	16	27	34	160	50	10	40	M12x1	0,9	MTC-HSK-E050-16-160-1-0-A	30271342
50	18	33	42	95	50	10	40	M12x1	0,9	MTC-HSK-E050-18-095-1-0-A	30262023
50	18	33	42	120	50	10	40	M12x1	1,0	MTC-HSK-E050-18-120-1-0-A	30271343
50	18	33	42	160	50	10	40	M12x1	1,1	MTC-HSK-E050-18-160-1-0-A	30271344
50	20	33	42	100	52	10	42	M16x1	0,9	MTC-HSK-E050-20-100-1-0-A	30262024
50	20	33	42	120	52	10	42	M16x1	1,0	MTC-HSK-E050-20-120-1-0-A	30271345
50	20	33	42	160	52	10	42	M16x1	1,1	MTC-HSK-E050-20-160-1-0-A	30271346
63	3	10	15	80	28	16	12	M6	0,7	MTC-HSK-E063-03-080-1-0-A	30262025
63*	3	10	20	120	-	-	12	-	0,8	MTC-HSK-E063-03-120-1-0-W	30271347
63*	3	10	20	160	-	-	12	-	0,9	MTC-HSK-E063-03-160-1-0-W	30271348
63	4	15	22	80	28	12	16	M6	0,7	MTC-HSK-E063-04-080-1-0-A	30262026
63*	4	15	22	120	-	-	16	-	0,8	MTC-HSK-E063-04-120-1-0-W	30271349
63*	4	15	22	160	-	-	16	-	0,9	MTC-HSK-E063-04-160-1-0-W	30271350
63	5	15	22	80	30	10	20	M6	0,7	MTC-HSK-E063-05-080-1-0-A	30262027
63*	5	15	22	120	-	-	20	-	0,8	MTC-HSK-E063-05-120-1-0-W	30271351
63*	5	15	22	160	-	-	20	-	0,9	MTC-HSK-E063-05-160-1-0-W	30271352
63	6	21	27	80	36	10	26	M5	0,8	MTC-HSK-E063-06-080-1-0-A	30262028
63	6	21	27	120	36	10	26	M5	0,9	MTC-HSK-E063-06-120-1-0-A	30271353
63	6	21	27	160	36	10	26	M5	1,0	MTC-HSK-E063-06-160-1-0-A	30271354
63	8	21	27	80	36	10	26	M6	0,8	MTC-HSK-E063-08-080-1-0-A	30262029
63	8	21	27	120	36	10	26	M6	0,9	MTC-HSK-E063-08-120-1-0-A	30271355
63	8	21	27	160	36	10	26	M6	1,0	MTC-HSK-E063-08-160-1-0-A	30271356
63	10	24	32	85	41	10	31	M8x1	0,9	MTC-HSK-E063-10-085-1-0-A	30262030
63	10	24	32	120	41	10	31	M8x1	1,0	MTC-HSK-E063-10-120-1-0-A	30271357
63	10	24	32	160	41	10	31	M8x1	1,1	MTC-HSK-E063-10-160-1-0-A	30271358
63	12	24	32	90	47	10	37	M10x1	0,9	MTC-HSK-E063-12-090-1-0-A	30262031
63	12	24	32	120	47	10	37	M10x1	1,0	MTC-HSK-E063-12-120-1-0-A	30271359
63	12	24	32	160	47	10	37	M10x1	1,1	MTC-HSK-E063-12-160-1-0-A	30271360
63	14	27	34	90	47	10	37	M10x1	1,0	MTC-HSK-E063-14-090-1-0-A	30262032
63	14	27	34	120	47	10	37	M10x1	1,1	MTC-HSK-E063-14-120-1-0-A	30271361
63	14	27	34	160	47	10	37	M10x1	1,2	MTC-HSK-E063-14-160-1-0-A	30271362
63	16	27	34	95	50	10	40	M12x1	1,0	MTC-HSK-E063-16-095-1-0-A	30262033
63	16	27	34	120	50	10	40	M12x1	1,2	MTC-HSK-E063-16-120-1-0-A	30271363
63	16	27	34	160	50	10	40	M12x1	1,4	MTC-HSK-E063-16-160-1-0-A	30271364

\* without axial tool length adjustment

## Shrink chucks ThermoChuck | With axial tool length adjustment | Shank HSK-E in accordance with DIN 69893-5

HSK-E	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
63	18	33	42	95	50	10	40	M12x1	1,1	MTC-HSK-E063-18-095-1-0-A	30262034
63	18	33	42	120	50	10	40	M12x1	1,3	MTC-HSK-E063-18-120-1-0-A	30271365
63	18	33	42	160	50	10	40	M12x1	1,5	MTC-HSK-E063-18-160-1-0-A	30271366
63	20	33	42	100	52	10	42	M16x1	1,1	MTC-HSK-E063-20-100-1-0-A	30262035
63	20	33	42	120	52	10	42	M16x1	1,3	MTC-HSK-E063-20-120-1-0-A	30271367
63	20	33	42	160	52	10	42	M16x1	1,5	MTC-HSK-E063-20-160-1-0-A	30271368
63	25	44	53	115	58	10	48	M16x1	1,6	MTC-HSK-E063-25-115-1-0-A	30262036
63	25	44	53	120	58	10	48	M16x1	1,6	MTC-HSK-E063-25-120-1-0-A	30271369
63	25	44	53	160	58	10	48	M16x1	1,8	MTC-HSK-E063-25-160-1-0-A	30271370
63	32	44	53	120	62	10	52	M16x1	1,6	MTC-HSK-E063-32-120-1-0-A	30262037
63	32	44	53	160	62	10	52	M16x1	1,7	MTC-HSK-E063-32-160-1-0-A	30271371

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.  
Without fine balancing screws and coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

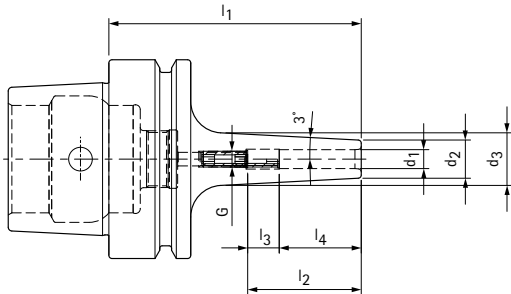
Fine balancing screws on request. You will find information on foolproofing in the technical appendix.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank HSK-E in accordance with DIN 69893-5



## Slender design, 3 degrees

HSK-E	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	3	9	13	60	28	16	12	M6	0,3	MTC-HSK-E040-03-060-1-0-A	30551131
40	3	9	14	70	28	16	12	M6	0,3	MTC-HSK-E040-03-070-1-0-A	30551132
40	3	9	15	80	28	16	12	M6	0,3	MTC-HSK-E040-03-080-1-0-A	30551133
40*	3	9	16	120	-	-	12	-	0,3	MTC-HSK-E040-03-120-1-0-W	30796827
40*	3	9	19	160	-	-	12	-	0,4	MTC-HSK-E040-03-160-1-0-W	30796828
40	4	10	14	60	28	12	16	M6	0,3	MTC-HSK-E040-04-060-1-0-A	30551134
40	4	10	15	70	28	12	16	M6	0,3	MTC-HSK-E040-04-070-1-0-A	30551135
40	4	10	16	80	28	12	16	M6	0,3	MTC-HSK-E040-04-080-1-0-A	30551136
40*	4	10	17	120	-	-	16	-	0,3	MTC-HSK-E040-04-120-1-0-W	30796829
40*	4	10	20	160	-	-	16	-	0,4	MTC-HSK-E040-04-160-1-0-W	30796830
40	5	11	15	60	30	10	20	M6	0,3	MTC-HSK-E040-05-060-1-0-A	30551137
40	5	11	16	70	30	10	20	M6	0,3	MTC-HSK-E040-05-070-1-0-A	30551138
40	5	11	17	80	30	10	20	M6	0,3	MTC-HSK-E040-05-080-1-0-A	30551139
40*	5	11	18	120	-	-	20	-	0,3	MTC-HSK-E040-05-120-1-0-W	30796831
40*	5	11	21	160	-	-	20	-	0,4	MTC-HSK-E040-05-160-1-0-W	30796832
40	6	12	16	60	36	10	26	M5	0,3	MTC-HSK-E040-06-060-1-0-A	30551140
40	6	12	17	70	36	10	26	M5	0,3	MTC-HSK-E040-06-070-1-0-A	30551141
40	6	12	18	80	36	10	26	M5	0,3	MTC-HSK-E040-06-080-1-0-A	30551142
40	6	12	21	120	36	10	26	M5	0,4	MTC-HSK-E040-06-120-1-0-A	30796833
40	6	12	24	160	36	10	26	M5	0,5	MTC-HSK-E040-06-160-1-0-A	30796834
40	8	14	18	60	36	10	26	M5	0,3	MTC-HSK-E040-08-060-1-0-A	30551143
40	8	14	19	70	36	10	26	M5	0,3	MTC-HSK-E040-08-070-1-0-A	30551144
40	8	14	20	80	36	10	26	M6	0,3	MTC-HSK-E040-08-080-1-0-A	30551145
40	8	14	25	120	36	10	26	M6	0,4	MTC-HSK-E040-08-120-1-0-A	30796836
40	8	14	26	160	36	10	26	M6	0,6	MTC-HSK-E040-08-160-1-0-A	30796837
40	10	16	20	60	38	7	31	M5	0,3	MTC-HSK-E040-10-060-1-0-A	30551146
40	10	16	21	70	41	10	31	M5	0,3	MTC-HSK-E040-10-070-1-0-A	30551147
40	10	16	22	80	41	10	31	M8x1	0,3	MTC-HSK-E040-10-080-1-0-A	30551148
40	10	16	27	120	41	10	31	M8x1	0,4	MTC-HSK-E040-10-120-1-0-A	30796838
40	10	16	28	160	41	10	31	M8x1	0,6	MTC-HSK-E040-10-160-1-0-A	30796839
40	12	18	22	60	40	3	37	M5	0,3	MTC-HSK-E040-12-060-1-0-A	30551149
40	12	18	23	70	47	10	37	M5	0,3	MTC-HSK-E040-12-070-1-0-A	30551150
40	12	18	24	80	47	10	37	M5	0,4	MTC-HSK-E040-12-080-1-0-A	30551151
40	12	18	29	120	47	10	37	M10x1	0,5	MTC-HSK-E040-12-120-1-0-A	30796840
40	12	18	30	160	47	10	37	M10x1	0,7	MTC-HSK-E040-12-160-1-0-A	30796841
40	14	20	31	120	47	10	37	M10x1	0,5	MTC-HSK-E040-14-120-1-0-A	30796842

\* without axial tool length adjustment

**Shrink chucks ThermoChuck | With axial tool length adjustment | Shank HSK-E in accordance with DIN 69893-5**  
**Slender design, 3 degrees**

HSK-E	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	14	20	32	160	47	10	37	M10x1	0,8	MTC-HSK-E040-14-160-1-0-A	30796843
40	16	22	33	120	50	10	40	M12x1	0,6	MTC-HSK-E040-16-120-1-0-A	30796844
40	16	22	32	160	50	10	40	M12x1	0,8	MTC-HSK-E040-16-160-1-0-A	30796845
50	3	9	14	70	28	16	12	M6	0,5	MTC-HSK-E050-03-070-1-0-A	30551152
50	3	9	15	80	28	16	12	M6	0,5	MTC-HSK-E050-03-080-1-0-A	30551153
50	3	9	17	100	28	16	12	M6	0,5	MTC-HSK-E050-03-100-1-0-A	30551154
50	4	10	15	70	28	12	16	M6	0,5	MTC-HSK-E050-04-070-1-0-A	30551155
50	4	10	16	80	28	12	16	M6	0,5	MTC-HSK-E050-04-080-1-0-A	30551156
50	4	10	18	100	28	12	16	M6	0,5	MTC-HSK-E050-04-100-1-0-A	30551157
50	5	11	16	70	30	10	20	M6	0,5	MTC-HSK-E050-05-070-1-0-A	30551158
50	5	11	17	80	30	10	20	M6	0,5	MTC-HSK-E050-05-080-1-0-A	30551159
50	5	11	19	100	30	10	20	M6	0,5	MTC-HSK-E050-05-100-1-0-A	30551160
50	6	12	17	70	36	10	26	M5	0,5	MTC-HSK-E050-06-070-1-0-A	30551161
50	6	12	18	80	36	10	26	M5	0,5	MTC-HSK-E050-06-080-1-0-A	30551162
50	6	12	20	100	36	10	26	M5	0,5	MTC-HSK-E050-06-100-1-0-A	30551163
50	8	14	19	70	36	10	26	M5	0,5	MTC-HSK-E050-08-070-1-0-A	30551164
50	8	14	20	80	36	10	26	M6	0,5	MTC-HSK-E050-08-080-1-0-A	30551165
50	8	14	22	100	36	10	26	M6	0,6	MTC-HSK-E050-08-100-1-0-A	30551166
50	10	16	21	70	41	10	31	M5	0,5	MTC-HSK-E050-10-070-1-0-A	30551167
50	10	16	22	80	41	10	31	M5	0,5	MTC-HSK-E050-10-080-1-0-A	30551168
50	10	16	24	100	41	10	31	M8x1	0,6	MTC-HSK-E050-10-100-1-0-A	30551169
50	12	18	23	70	44	7	37	M5	0,5	MTC-HSK-E050-12-070-1-0-A	30551170
50	12	18	24	80	47	10	37	M5	0,5	MTC-HSK-E050-12-080-1-0-A	30551171
50	12	18	26	100	47	10	37	M10x1	0,6	MTC-HSK-E050-12-100-1-0-A	30551172
63	6	12	18	80	36	10	26	M5	0,8	MTC-HSK-E063-06-080-1-0-A	30551173
63	6	12	22	120	36	10	26	M5	0,9	MTC-HSK-E063-06-120-1-0-A	30551174
63	8	14	20	80	36	10	26	M6	0,8	MTC-HSK-E063-08-080-1-0-A	30551175
63	8	14	24	120	36	10	26	M6	0,9	MTC-HSK-E063-08-120-1-0-A	30551176
63	10	16	22	80	41	10	31	M5	0,8	MTC-HSK-E063-10-080-1-0-A	30551177
63	10	16	26	120	41	10	31	M8x1	0,9	MTC-HSK-E063-10-120-1-0-A	30551178
63	12	18	24	80	47	10	37	M5	0,8	MTC-HSK-E063-12-080-1-0-A	30551179
63	12	18	28	120	47	10	37	M10x1	1,0	MTC-HSK-E063-12-120-1-0-A	30551180

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.  
 Without fine balancing screws and coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

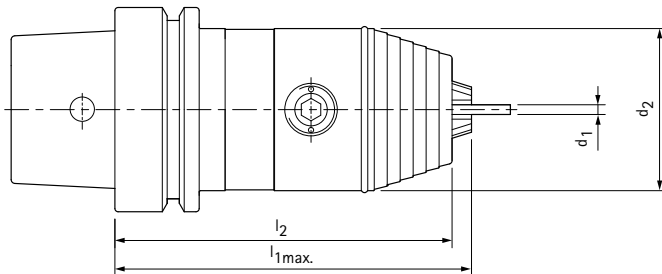
Fine balancing screws on request. You will find information on foolproofing in the technical appendix.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Precision-DrillChuck

with radial actuation, without internal coolant supply

Shank HSK-E in accordance with DIN 69893-5



HSK-E	Clamping range $d_1$	Dimensions			Weight [kg]	Specification	Order No.
		$d_2$	$l_{1max}$	$l_2$			
40	0,3 - 8	36	94	91	0,7	MPC-HSK-E040-08-094-0-0-W	30259899
50	0,3 - 8	36	98	95	1,0	MPC-HSK-E050-08-098-0-0-W	30259900
50	0,5 - 13	50	122	116	1,5	MPC-HSK-E050-13-122-0-0-W	30259902
50	2,5 - 16	57	127	121	1,6	MPC-HSK-E050-16-127-0-0-W	30259904
63	0,3 - 8	36	99	96	1,2	MPC-HSK-E063-08-099-0-0-W	30259901
63	0,5 - 13	50	110	104	1,7	MPC-HSK-E063-13-110-0-0-W	30259903
63	2,5 - 16	57	115	109	1,8	MPC-HSK-E063-16-115-0-0-W	30259905

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc and coolant tube.

Design: No internal coolant supply.

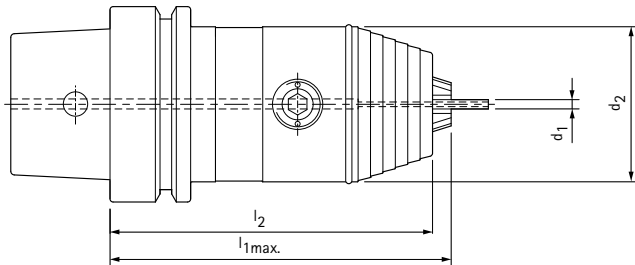
Note: Spare parts and accessories can be found via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.



# Precision-DrillChuck

with radial actuation and internal coolant supply  
Shank HSK-E in accordance with DIN 69893-5



HSK-E	Clamping range $d_1$	Dimensions			Weight [kg]	Specification	Order No.
		$d_2$	$l_{1max}$	$l_2$			
40	0,3 - 8	36	94	91	0,7	MPC-HSK-E040-08-094-1-0-W	30259906
50	0,3 - 8	36	98	95	1,0	MPC-HSK-E050-08-098-1-0-W	30259907
50	0,5 - 13	50	122	116	1,5	MPC-HSK-E050-13-122-1-0-W	30259909
50	2,5 - 16	57	127	121	1,6	MPC-HSK-E050-16-127-1-0-W	30259911
63	0,3 - 8	36	99	96	1,2	MPC-HSK-E063-08-099-1-0-W	30259908
63	0,5 - 13	50	110	104	1,7	MPC-HSK-E063-13-110-1-0-W	30259910
63	2,5 - 16	57	115	109	1,8	MPC-HSK-E063-16-115-1-0-W	30259912

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc and coolant tube.

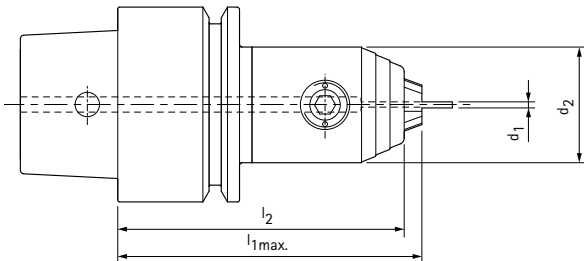
Design: With internal coolant supply.

Note: Spare parts and accessories can be found via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

# Micro-Precision DrillChuck

with radial actuation and internal coolant supply  
Shank HSK-E in accordance with DIN 69893-5



HSK-E	Clamping range $d_1$	Dimensions			Weight [kg]	Specification	Order No.
		$d_2$	$l_{1max}$	$l_2$			
25	0,2 - 3,4	19	40	37	0,1	MPC-HSK-E025-03-040-1-0-W	30551181
25	0,2 - 6,4	25	61	57	0,3	MPC-HSK-E025-06-061-1-0-W	30608023
32	0,2 - 3,4	19	49	46	0,2	MPC-HSK-E032-03-049-1-0-W	30551182
32	0,2 - 6,4	25	58	54	0,3	MPC-HSK-E032-06-058-1-0-W	30608024
40	0,2 - 3,4	19	49	46	0,3	MPC-HSK-E040-03-049-1-0-W	30551183
40	0,2 - 6,4	25	58	54	0,4	MPC-HSK-E040-06-058-1-0-W	30608025
50	0,2 - 3,4	19	52	55	0,5	MPC-HSK-E050-03-052-1-0-W	30795216

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Without coolant tube.

Design: With internal coolant supply.

Note: Spare parts and accessories can be found via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.





# CHUCKS WITH HSK-F

## Chucks

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Hydraulic chucks HydroChuck with axial length adjustment \_\_\_\_\_ 184



Shrink chucks ThermoChuck \_\_\_\_\_ 185

Shrink chucks ThermoChuck with slender contour 3 degrees \_\_\_\_\_ 187



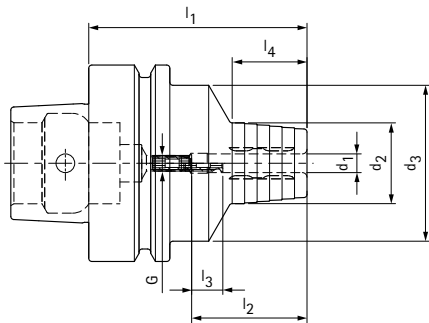
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## Hydraulic chucks HydroChuck

for automatic tool change, with axial tool length adjustment

Shank HSK-F in accordance with DIN 69893-6



HSK-F	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
63	6	26	50	70	37	10	24	M5	1,0	MHC-HSK-F063-06-070-0-0-A	30551184
63	8	28	50	70	37	10	25	M6	1,0	MHC-HSK-F063-08-070-0-0-A	30551185
63	10	30	50	80	41	10	35	M8x1	1,1	MHC-HSK-F063-10-080-0-0-A	30551186
63	12	32	50	85	46	10	40	M10x1	1,1	MHC-HSK-F063-12-085-0-0-A	30556135
63	14	34	50	85	46	10	40	M10x1	1,2	MHC-HSK-F063-14-085-0-0-A	30556140
63	16	38	50	90	49	10	46	M12x1	1,2	MHC-HSK-F063-16-090-0-0-A	30556149
63	18	40	50	90	49	10	47	M12x1	1,4	MHC-HSK-F063-18-090-0-0-A	30551187
63	20	42	50	90	51	10	48	M16x1	1,4	MHC-HSK-F063-20-090-0-0-A	30558349
63	25	57	53	120	57	10	63	M16x1	2,1	MHC-HSK-F063-25-120-0-0-A	30551188

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 25$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. Items included: With length adjustment screw.

Without coolant tube.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

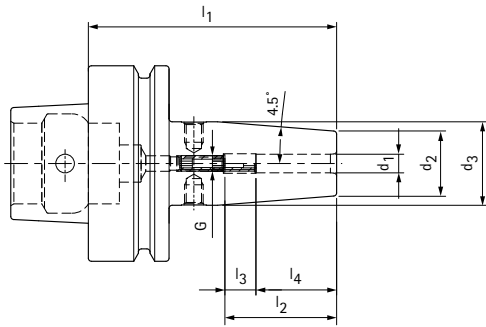
For coolant tubes and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank HSK-F in accordance with DIN 69893-6



HSK-F	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	3	10	15	60	28	16	12	M6	0,6	MTC-HSK-F040-03-060-0-0-A	30271372
40	4	10	15	60	28	12	16	M6	0,7	MTC-HSK-F040-04-060-0-0-A	30271373
40	5	10	15	60	30	10	20	M6	0,7	MTC-HSK-F040-05-060-0-0-A	30271374
40	6	21	27	80	36	10	26	M5	0,8	MTC-HSK-F040-06-080-0-0-A	30425135
40	8	21	27	80	36	10	26	M6	0,8	MTC-HSK-F040-08-080-0-0-A	30425138
40	10	24	32	80	41	10	31	M8x1	0,9	MTC-HSK-F040-10-080-0-0-A	30425141
40	12	24	32	90	47	10	37	M10x1	0,9	MTC-HSK-F040-12-090-0-0-A	30425144
63	3	10	15	80	28	16	12	M6	0,6	MTC-HSK-F063-03-080-0-0-A	30271379
63*	3	10	20	120	-	-	12	-	0,7	MTC-HSK-F063-03-120-0-0-W	30271380
63*	3	10	20	160	-	-	12	-	0,8	MTC-HSK-F063-03-160-0-0-W	30271381
63	4	15	22	80	28	12	16	M6	0,7	MTC-HSK-F063-04-080-0-0-A	30271382
63*	4	15	22	120	-	-	16	-	0,8	MTC-HSK-F063-04-120-0-0-W	30271383
63*	4	15	22	160	-	-	16	-	0,8	MTC-HSK-F063-04-160-0-0-W	30271384
63	5	15	22	80	30	10	20	M6	0,7	MTC-HSK-F063-05-080-0-0-A	30271385
63*	5	15	22	120	-	-	20	-	0,8	MTC-HSK-F063-05-120-0-0-W	30271386
63*	5	15	22	160	-	-	20	-	0,8	MTC-HSK-F063-05-160-0-0-W	30271387
63	6	21	27	80	36	10	26	M5	0,8	MTC-HSK-F063-06-080-0-0-A	30271388
63	6	21	27	120	36	10	26	M5	1,0	MTC-HSK-F063-06-120-0-0-A	30271389
63	6	21	27	160	36	10	26	M5	1,1	MTC-HSK-F063-06-160-0-0-A	30271390
63	8	21	27	80	36	10	26	M6	0,8	MTC-HSK-F063-08-080-0-0-A	30271391
63	8	21	27	120	36	10	26	M6	1,0	MTC-HSK-F063-08-120-0-0-A	30271392
63	8	21	27	160	36	10	26	M6	1,1	MTC-HSK-F063-08-160-0-0-A	30271393
63	10	24	32	85	41	10	31	M8x1	0,9	MTC-HSK-F063-10-085-0-0-A	30271394
63	10	24	32	120	41	10	31	M8x1	1,1	MTC-HSK-F063-10-120-0-0-A	30271395
63	10	24	32	160	41	10	31	M8x1	1,3	MTC-HSK-F063-10-160-0-0-A	30271396
63	12	24	32	90	47	10	37	M10x1	0,9	MTC-HSK-F063-12-090-0-0-A	30271397
63	12	24	32	120	47	10	37	M10x1	1,1	MTC-HSK-F063-12-120-0-0-A	30271398
63	12	24	32	160	47	10	37	M10x1	1,3	MTC-HSK-F063-12-160-0-0-A	30271399
63	14	27	34	90	47	10	37	M10x1	0,9	MTC-HSK-F063-14-090-0-0-A	30271400
63	14	27	34	120	47	10	37	M10x1	1,1	MTC-HSK-F063-14-120-0-0-A	30271401
63	14	27	34	160	47	10	37	M10x1	1,3	MTC-HSK-F063-14-160-0-0-A	30271402
63	16	27	34	95	50	10	40	M12x1	1,0	MTC-HSK-F063-16-095-0-0-A	30271403
63	16	27	34	120	50	10	40	M12x1	1,1	MTC-HSK-F063-16-120-0-0-A	30271404
63	16	27	34	160	50	10	40	M12x1	1,4	MTC-HSK-F063-16-160-0-0-A	30271405

\* without axial tool length adjustment

Continued on next page.



## Shrink chucks ThermoChuck | With axial tool length adjustment | Shank HSK-F in accordance with DIN 69893-6

HSK-F	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
63	18	33	42	95	50	10	40	M12x1	1,1	MTC-HSK-F063-18-095-0-0-A	30271406
63	18	33	42	120	50	10	40	M12x1	1,3	MTC-HSK-F063-18-120-0-0-A	30271407
63	18	33	42	160	50	10	40	M12x1	1,6	MTC-HSK-F063-18-160-0-0-A	30271408
63	20	33	42	100	52	10	42	M16x1	1,1	MTC-HSK-F063-20-100-0-0-A	30271409
63	20	33	42	120	52	10	42	M16x1	1,3	MTC-HSK-F063-20-120-0-0-A	30271410
63	20	33	42	160	52	10	42	M16x1	1,6	MTC-HSK-F063-20-160-0-0-A	30271411
63	25	44	53	115	58	10	48	M16x1	1,6	MTC-HSK-F063-25-115-0-0-A	30271412
63	25	44	53	120	58	10	48	M16x1	1,7	MTC-HSK-F063-25-120-0-0-A	30271413
63	25	44	53	160	58	10	48	M16x1	2,0	MTC-HSK-F063-25-160-0-0-A	30271414
63	32	44	53	120	62	10	52	M16x1	1,6	MTC-HSK-F063-32-120-0-0-A	30271415

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws and coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: For tool extensions, see section "Accessories, spare parts and measuring equipment".

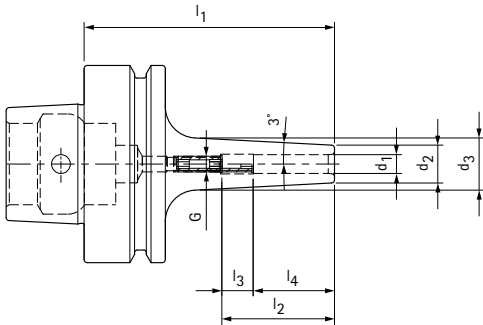
Fine balancing screws available on request. For notes on foolproofing see technical appendix

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank HSK-F in accordance with DIN 69893-6



## Slender design, 3 degrees

HSK-F	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
63	3	9	14	80	28	16	12	M6	0,7	MTC-HSK-F063-03-080-0-0-A	30551189
63*	3	9	16	120	-	-	12	-	0,8	MTC-HSK-F063-03-120-0-0-W	30551190
63*	3	9	19	160	-	-	12	-	0,9	MTC-HSK-F063-03-160-0-0-W	30551191
63	4	10	15	80	28	12	16	M6	0,7	MTC-HSK-F063-04-080-0-0-A	30551192
63*	4	10	17	120	-	-	16	-	0,8	MTC-HSK-F063-04-120-0-0-W	30551193
63*	4	10	20	160	-	-	16	-	0,9	MTC-HSK-F063-04-160-0-0-W	30551194
63	5	11	16	80	30	10	20	M6	0,8	MTC-HSK-F063-05-080-0-0-A	30551195
63*	5	11	18	120	-	-	20	-	0,8	MTC-HSK-F063-05-120-0-0-W	30551196
63*	5	11	21	160	-	-	20	-	0,9	MTC-HSK-F063-05-160-0-0-W	30551197
63	6	12	17	80	36	10	26	M5	0,8	MTC-HSK-F063-06-080-0-0-A	30551198
63	6	12	21	120	36	10	26	M5	0,9	MTC-HSK-F063-06-120-0-0-A	30551199
63	6	12	24	160	36	10	26	M5	1,0	MTC-HSK-F063-06-160-0-0-A	30551200
63	8	14	19	80	36	10	26	M6	0,8	MTC-HSK-F063-08-080-0-0-A	30551201
63	8	14	23	120	36	10	26	M6	0,9	MTC-HSK-F063-08-120-0-0-A	30551202
63	8	14	24	160	36	10	26	M6	1,0	MTC-HSK-F063-08-160-0-0-A	30551203
63	10	16	22	85	41	10	31	M8x1	0,8	MTC-HSK-F063-10-085-0-0-A	30551204
63	10	16	25	120	41	10	31	M8x1	0,9	MTC-HSK-F063-10-120-0-0-A	30551205
63	10	16	28	160	41	10	31	M8x1	1,0	MTC-HSK-F063-10-160-0-0-A	30551206
63	12	18	24	90	47	10	37	M10x1	0,8	MTC-HSK-F063-12-090-0-0-A	30551207
63	12	18	27	120	47	10	37	M10x1	1,0	MTC-HSK-F063-12-120-0-0-A	30551208
63	12	18	30	160	47	10	37	M10x1	1,2	MTC-HSK-F063-12-160-0-0-A	30551209
63	14	20	26	90	47	10	37	M10x1	0,8	MTC-HSK-F063-14-090-0-0-A	30551210
63	14	20	29	120	47	10	37	M10x1	1,0	MTC-HSK-F063-14-120-0-0-A	30551211
63	14	20	32	160	47	10	37	M10x1	1,2	MTC-HSK-F063-14-160-0-0-A	30551212
63	16	22	29	95	50	10	40	M12x1	0,9	MTC-HSK-F063-16-095-0-0-A	30551213
63	16	22	31	120	50	10	40	M12x1	1,0	MTC-HSK-F063-16-120-0-0-A	30551214
63	16	22	34	160	50	10	40	M12x1	1,3	MTC-HSK-F063-16-160-0-0-A	30551215
63	18	24	31	95	50	10	40	M12x1	0,9	MTC-HSK-F063-18-095-0-0-A	30551216
63	18	24	33	120	50	10	40	M12x1	1,0	MTC-HSK-F063-18-120-0-0-A	30551217
63	18	24	36	160	50	10	40	M12x1	1,4	MTC-HSK-F063-18-160-0-0-A	30551218
63	20	27	34	100	52	10	42	M16x1	1,0	MTC-HSK-F063-20-100-0-0-A	30551219
63	20	27	36	120	52	10	42	M16x1	1,0	MTC-HSK-F063-20-120-0-0-A	30551220
63	20	27	38	160	52	10	42	M16x1	1,5	MTC-HSK-F063-20-160-0-0-A	30551221

\* without axial tool length adjustment

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws and coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

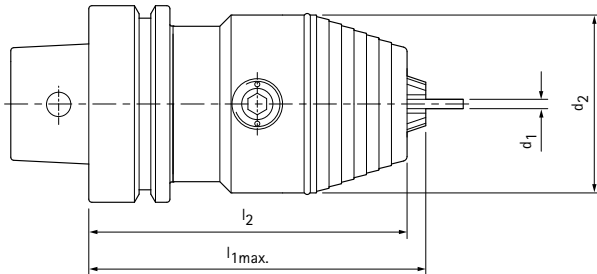
Fine balancing screws on request. You will find information on foolproofing in the technical appendix.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Precision-DrillChuck

with radial actuation, without internal coolant supply

Shank HSK-F in accordance with DIN 69893-6



HSK-F	Clamping range $d_1$	Dimensions			Weight [kg]	Specification	Order No.
		$d_2$	$l_{1max}$	$l_2$			
40	0,3 - 8	36	90	87	0,6	MPC-HSK-F040-08-090-0-0-W	30259894
50	0,5 - 13	50	122	116	1,5	MPC-HSK-F050-13-122-0-0-W	30259895
50	2,5 - 16	57	127	121	1,6	MPC-HSK-F050-16-127-0-0-W	30259897
63	0,5 - 13	50	103	97	1,7	MPC-HSK-F063-13-103-0-0-W	30259896
63	2,5 - 16	57	108	102	1,8	MPC-HSK-F063-16-108-0-0-W	30259898

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc and coolant tube.

Design: No internal coolant supply.

Note: Spare parts and accessories can be found via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.





# CLAMPING TOOLS WITH FLANGE MODULE

MAPAL chucks with flange module are the means of choice if radial run-out and angular errors on the machine spindle must be compensated. The chucks are adjusted radially using adjusting elements and produce accuracies in the  $\mu$  range.

The use of adapters or flange modules that can be aligned makes it possible to transfer the high changeover accuracies of the HSK to spindles and SK basic holders. In addition, interchangeable adapters can be easily replaced in case of damage or wear. The heart of these flanges and adapters, the MAPAL KS clamping cartridge, ensures very high loads can be applied. The milled key blocks allow maximum torque transmission.

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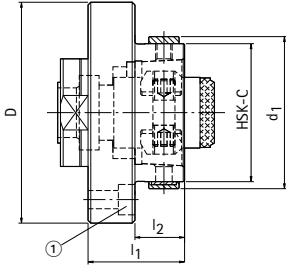
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# KS flange adapter

with radial alignment

Module connection sizes in accordance with MN5000-14



## With KS clamping cartridge

Module diameter D	HSK-C	Dimensions			Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>			
60	32	37	26	13	0,4	KS-VL-MOD060-HSK-C032-026-11	30328780
70	40	45	30	15	0,7	KS-VL-MOD070-HSK-C040-030-11	30328778
80	50	55	35	18	1,0	KS-VL-MOD080-HSK-C050-035-11	30328777
100	63	70	43	22	1,9	KS-VL-MOD100-HSK-C063-043-11	30328781
117	80	87	50	29	2,8	KS-VL-MOD117-HSK-C080-050-11	30328782
140	100	110	70	42	5,8	KS-VL-MOD140-HSK-C100-070-11	30328784

## With KS clamping cartridge for high pressure

Module diameter D	HSK-C	Dimensions			Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>			
60	32	37	26	13	0,4	KS-VL-MOD060-HSK-C032-026-19	30381766
70	40	45	30	15	0,7	KS-VL-MOD070-HSK-C040-030-19	30328576
80	50	55	35	18	1,0	KS-VL-MOD080-HSK-C050-035-19	30381767
100	63	70	43	22	1,9	KS-VL-MOD100-HSK-C063-043-19	30381768
117	80	87	50	29	2,8	KS-VL-MOD117-HSK-C080-050-19	30381769
140	100	110	70	42	5,8	KS-VL-MOD140-HSK-C100-070-19	30381770

Dimensions in mm.

Use: For fitting in the machine spindle or in HSK or steep taper adapter for mounting HSK tools.

Items included: With standard KS clamping cartridge, sealing ring and cylinder head screws (for fastening the KS flange adapter).

Design: Adjustable in the machine spindle and in the HSK or steep taper adapter.

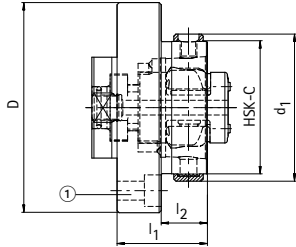
Note: Matching KS clamping cartridges can be found in the section "Manual HSK clamping units" under the heading "Clamping cartridges". For sealing rings, see section "Accessories, spare parts and measuring equipment". Spare parts for KS adapter flanges can be found in this section. Information on the fitting dimensions can be found in section "Technical appendix".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS flange adapter

with radial alignment

Module connection sizes in accordance with MN5000-14



## HSK-A, HSK-C with MQL clamping cartridge MQL1 with outer O-ring

Module diameter D	HSK-A/C	Dimensions			Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>			
70	40	45	30	15	0,7	KS-VL-MOD070-HSK-C040-030-17	30381486
80	50	55	35	18	1,0	KS-VL-MOD080-HSK-C050-035-17	30381497
100	63	70	43	22	1,9	KS-VL-MOD100-HSK-C063-043-17	30381502
117	80	87	50	29	2,8	KS-VL-MOD117-HSK-C080-050-17	30381505
140	100	110	70	42	5,8	KS-VL-MOD140-HSK-C100-070-17	30381510

## Only for HSK-C: With MQL clamping cartridge MQL with inner O-ring

Module diameter D	HSK-C	Dimensions			Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>			
70	40	45	30	15	0,7	KS-VL-MOD070-HSK-C040-030-18	30381485
80	50	55	35	18	1,0	KS-VL-MOD080-HSK-C050-035-18	30381494
100	63	70	43	22	1,9	KS-VL-MOD100-HSK-C063-043-18	30381501
117	80	87	50	29	2,8	KS-VL-MOD117-HSK-C080-050-18	30381504
140	100	110	70	42	5,8	KS-VL-MOD140-HSK-C100-070-18	30381509

Dimensions in mm.

Use: For fitting in the machine spindle or in HSK or steep taper adapter for mounting HSK tools

Items included: MQL clamping cartridge, sealing ring and cylinder head screws (for fastening the KS flange adapter).

Design: Adjustable in the machine spindle and in the HSK adapter.

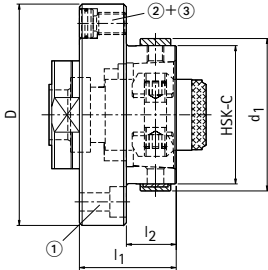
Note: Matching KS clamping cartridges can be found in the section "Manual HSK clamping units" under the heading "Clamping cartridges". For sealing rings, see section "Accessories, spare parts and measuring equipment".  
Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.



# KS flange adapter

with radial and angular alignment

Module connection sizes in accordance with MN5000-14



## With KS clamping cartridge long design

Module diameter D	HSK-C	Dimensions			Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>			
60	32	37	26	13	0,4	KS-VL-MOD060-HSK-C032-026-21	30320016
70	40	45	30	15	0,7	KS-VL-MOD070-HSK-C040-030-21	30320017
80	50	55	35	18	1,0	KS-VL-MOD080-HSK-C050-035-21	30320018
80	50	55	100	83	2,0	KS-VL-MOD080-HSK-C050-100-21	30327001
80	50	55	150	133	2,7	KS-VL-MOD080-HSK-C050-150-21	30327002
80	50	55	200	183	3,5	KS-VL-MOD080-HSK-C050-200-21	30327004
100	63	70	43	22	1,9	KS-VL-MOD100-HSK-C063-043-21	30320019
100	63	70	100	79	3,2	KS-VL-MOD100-HSK-C063-100-21	30327005
100	63	70	150	129	4,4	KS-VL-MOD100-HSK-C063-150-21	30327007
100	63	70	200	179	5,6	KS-VL-MOD100-HSK-C063-200-21	30327008
117	80	87	50	29	2,8	KS-VL-MOD117-HSK-C080-050-21	30320020
117	80	87	100	79	4,8	KS-VL-MOD117-HSK-C080-100-21	30327009
117	80	87	150	129	6,7	KS-VL-MOD117-HSK-C080-150-21	30327010
117	80	87	200	179	8,6	KS-VL-MOD117-HSK-C080-200-21	30327012
140	100	110	70	42	5,8	KS-VL-MOD140-HSK-C100-070-21	30320021
140	100	110	100	72	7,6	KS-VL-MOD140-HSK-C100-100-21	30327013
140	100	110	150	122	10,7	KS-VL-MOD140-HSK-C100-150-21	30327014
140	100	110	200	172	13,7	KS-VL-MOD140-HSK-C100-200-21	30327015

Dimensions in mm.

Use: For fitting in the machine spindle or in HSK or steep taper adapter for mounting HSK tools.

Items included: With standard KS clamping cartridge, thrust pad and threaded pin, sealing ring and cylinder head screws (for fastening the KS flange adapter).

Design: Adjustable in the machine spindle and in the HSK or steep taper adapter.

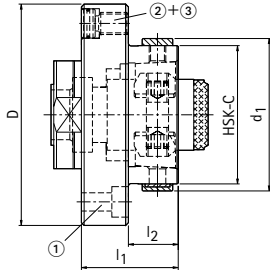
Adjustable for axial run-out due to thrust pad and threaded pin in the flange adapter.

Note: Matching KS clamping cartridges can be found in the section "Manual HSK clamping units" under the heading "Clamping cartridges". For sealing rings, see section "Accessories, spare parts and measuring equipment". Information on the fitting dimensions can be found in section "Technical appendix". Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS flange adapter

with radial and angular alignment

Module connection sizes in accordance with MN5000-14



## With KS clamping cartridge for high pressure

Module diameter D	HSK-C	Dimensions			Weight [kg]	Specification	Order No.
		$d_1$	$l_1$	$l_2$			
60	32	37	26	13	0,4	KS-VL-MOD060-HSK-C032-026-29	30381819
70	40	45	30	15	0,7	KS-VL-MOD070-HSK-C040-030-29	30381827
80	50	55	35	18	1,0	KS-VL-MOD080-HSK-C050-035-29	30381829
100	63	70	43	22	1,9	KS-VL-MOD100-HSK-C063-043-29	30381832
117	80	87	50	29	2,8	KS-VL-MOD117-HSK-C080-050-29	30381834
140	100	110	70	42	5,8	KS-VL-MOD140-HSK-C100-070-29	30381847

Dimensions in mm.

Use: For fitting in the machine spindle or in HSK or steep taper adapter for mounting HSK tools.

Items included: With standard KS clamping cartridge for high pressure, thrust pad and threaded pin, sealing ring and cylinder head screws (for fastening the KS flange adapter).

Design: Adjustable in the machine spindle and in the HSK or steep taper adapter.

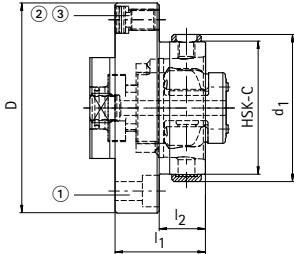
Adjustable for axial run-out due to thrust pad and threaded pin in the flange adapter.

Note: Matching KS clamping cartridges can be found in the section "Manual HSK clamping units" under the heading "Clamping cartridges". For sealing rings, see section "Accessories, spare parts and measuring equipment". Information on the fitting dimensions can be found in section "Technical appendix". Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS flange adapter

with radial and angular alignment

Module connection size in accordance with MN5000-14



## HSK-A, HSK-C with MQL clamping cartridge MQL1 with outer O-ring

Module diameter D	HSK-A/C	Dimensions			Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>			
70	40	45	30	15	0,7	KS-VL-MOD070-HSK-C040-030-27	30381576
80	50	55	35	18	1,0	KS-VL-MOD080-HSK-C050-035-27	30381578
100	63	70	43	22	1,9	KS-VL-MOD100-HSK-C063-043-27	30308614
117	80	87	50	29	2,8	KS-VL-MOD117-HSK-C080-050-27	30381594
140	100	110	70	42	5,8	KS-VL-MOD140-HSK-C100-070-27	30381602

## Only for HSK-C: With MQL clamping cartridge MQL with inner O-ring

Module diameter D	HSK-C	Dimensions			Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>			
70	40	45	30	15	0,7	KS-VL-MOD070-HSK-C040-030-28	30350872
80	50	55	35	18	1,0	KS-VL-MOD080-HSK-C050-035-28	30381577
100	63	70	43	22	1,9	KS-VL-MOD100-HSK-C063-043-28	30381581
117	80	87	50	29	2,8	KS-VL-MOD117-HSK-C080-050-28	30381589
140	100	110	70	42	5,8	KS-VL-MOD140-HSK-C100-070-28	30381600

Dimensions in mm.

Use: For fitting in the machine spindle or in HSK adapter for mounting HSK tools.

Items included: With MQL clamping cartridge, thrust pad and threaded pin, sealing ring and cylinder head screws (for fastening the KS flange adapter).

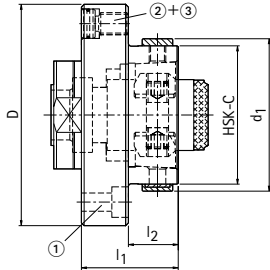
Design: Adjustable in the machine spindle and in the HSK adapter. Adjustable for axial run-out due to thrust pad and threaded pin in the flange adapter.

Note: Matching KS clamping cartridges can be found in the section "Manual HSK clamping units" under the heading "Clamping cartridges". For sealing rings, see section "Accessories, spare parts and measuring equipment". Information on the fitting dimensions can be found in section "Technical appendix". Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS flange adapter

with radial and angular alignment

Module connection sizes in accordance with MN5000-14



Module diameter D	HSK-E	Dimensions			Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>			
60	32	37	26	13	0,4	KS-VL-MOD060-HSK-E032-026-21	30509670
70	40	45	30	15	0,6	KS-VL-MOD070-HSK-E040-030-21	30509672
80	50	55	35	18	0,9	KS-VL-MOD080-HSK-E050-035-21	30509674
100	63	70	43	22	1,8	KS-VL-MOD100-HSK-E063-043-21	30509675
117	80	87	50	29	2,7	KS-VL-MOD117-HSK-E080-050-21	30509677
140	100	110	70	42	7,9	KS-VL-MOD140-HSK-E100-070-21	30509678

Connection similar to HSK-E, however for shanks without access bore!

Dimensions in mm.

Use: For fitting in the machine spindle or in HSK or steep taper adapter for mounting HSK tools.

Items included: With standard KS clamping cartridge or KS clamping cartridge for high pressure, thrust pad and threaded pin, sealing ring and cylinder head screws (for fastening the KS flange adapter).

Design: Adjustable in the machine spindle and in the HSK or steep taper adapter. Adjustable for axial run-out due to thrust pad and threaded pin in the flange adapter.

Note: Matching KS clamping cartridges can be found in the section "Manual HSK clamping units" under the heading "Clamping cartridges". For sealing rings, see section "Accessories, spare parts and measuring equipment". Spare parts for KS adapter flanges can be found in this section. Information on the fitting dimensions can be found in section "Technical appendix".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

## Spare parts for KS flange adapters

### Spare parts for KS flange adapter with radial alignment in accordance with MN 5000-14

Module diameter D	Quantity required	① Cylinder head screw in acc. with ISO 4762	
		Size	Order No.
60	4	M5x16 - 12.9	10003601
70	4	M6x20 - 12.9	10003619
80	4	M6x20 - 12.9	10003619
100	4	M8x25 - 12.9	10003637
117	4	M8x25 - 12.9	10003637
140	4	M10x30 - 12.9	10003660

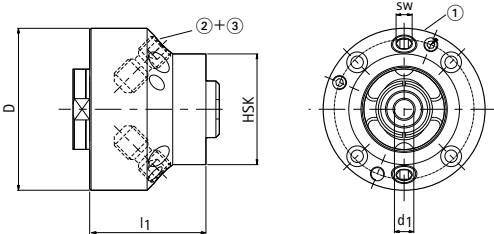
### Spare parts for KS flange adapter with radial and angular alignment in accordance with MN 5000-14

Module diameter D	Quantity required	① Cylinder head screw in acc. with ISO 4762		② Thrust pad		③ Threaded pin	
		Size	Order No.	Specification	Order No.	Specification	Order No.
60	4	M5x16 - 12.9	10003601	ø10.6x5	10040108	M8x1x8-KLR	10040109
70	4	M6x20 - 12.9	10003619	ø10.6x5	10040108	M8x1x8-KLR	10040109
80	4	M6x20 - 12.9	10003619	ø10.6x5	10040108	M8x1x11.5-KLR	10075074
100	4	M8x25 - 12.9	10003637	ø12.8x5	10075116	M10x1x14-KLR	10075100
117	4	M8x25 - 12.9	10003637	ø12.8x5	10075116	M10x1x14-KLR	10075100
140	4	M10x30 - 12.9	10003660	ø12.8x5	10075116	M10x1x20-45H-KLR	10075099

# DS flange adapters with diagonal clamping cartridge

with radial and angular alignment

Module connection sizes in accordance with MN5000-14



For tool shanks in accordance with DIN 69893-1 / ISO 12164-1

HSK-A/C	Dimensions			sw	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>				
32	60	6	30,0	4	0,5	DS-VL-MOD060-HSK-C032-030-21	30315592
40	70	8	40,2	5	0,8	DS-VL-MOD070-HSK-C040-040-21	30315593
50	80	10	51,6	6	1,3	DS-VL-MOD080-HSK-C050-052-21	30315594
63	100	12	65,0	8	2,6	DS-VL-MOD100-HSK-C063-065-21	30252570
80	117	14	84,0	10	4,9	DS-VL-MOD117-HSK-C080-084-21	30315595
100	140	16	107,0	12	9,0	DS-VL-MOD140-HSK-C100-107-21	30315596

For tool shanks in accordance with DIN 69893-5

HSK-E	Dimensions			sw	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>				
32	60	6	30,0	4	0,5	DS-VL-MOD060-HSK-E032-030-21	30509715
40	70	8	40,2	5	0,8	DS-VL-MOD070-HSK-E040-040-21	30509716
50	80	10	51,6	6	1,3	DS-VL-MOD080-HSK-E050-052-21	30509717
63	100	12	65,0	8	2,6	DS-VL-MOD100-HSK-E063-065-21	30509718
80	117	14	84,0	10	4,9	DS-VL-MOD117-HSK-E080-084-21	30509719
100	140	16	107,0	12	9,0	DS-VL-MOD140-HSK-E100-107-21	30509720

Dimensions in mm.

Use: For use on setting fixtures with module connection sizes to MAPAL works standard. For fitting in the machine spindle or in HSK or steep taper adapter for mounting HSK tools. Items included: With diagonal clamping cartridge, thrust pad, threaded pin and cylinder head screws (for fastening the DS flange adapter).

Design: Adjustable in the machine spindle and in the HSK or steep taper adapter.

Adjustable for axial run-out due to thrust pad and threaded pin in the flange adapter.

Note: Information on the fitting dimensions can be found in section "Technical appendix". Matching diagonal clamping cartridges can be found in the section "Manual HSK clamping units" under the heading "Clamping cartridges (Variant 2)".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

## Spare parts for DS flange adapters

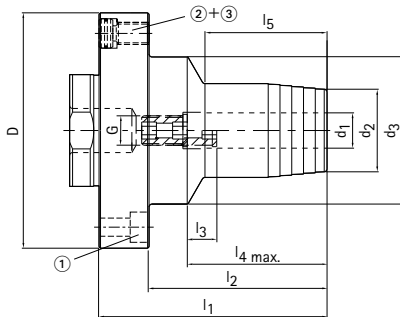
### Spare parts for DS flange adapter with radial and angular alignment

Module diameter D	Quantity required	① Cylinder head screw in acc. with ISO 4762		② Thrust pad		③ Threaded pin	
		Size	Order No.	Specification	Order No.	Specification	Order No.
60	4	M5x16 - 12.9	10003601	∅10.6x5	10040108	M8x1x8	10040109
70	4	M6x20 - 12.9	10003619	∅10.6x5	10040108	M8x1x8	10040109
80	4	M6x20 - 12.9	10003619	∅10.6x5	10040108	M8x1x11.5	10075074
100	4	M8x25 - 12.9	10003637	∅12.8x5	10075116	M10x1x14	10075100
117	4	M8x25 - 12.9	10003637	∅12.8x5	10075116	M10x1x14	10075100
140	4	M10x30 - 12.9	10003660	∅12.8x5	10075116	M10x1x20	10075099

# Hydraulic chucks HydroChuck

with radial and angular alignment and axial tool length adjustment

Module connection sizes in accordance with MN5000-14



Module diameter D	Dimensions								G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4 max.</sub>	l <sub>5</sub>				
60	6	22	42	65	52	10	39,5	34	M5	6	MHC-MOD060-06-065-1-2-A	30712231
60	8	24	42	65	52	10	40	35	M6	6,1	MHC-MOD060-08-065-1-2-A	30712232
60	10	26	42	70	57	10	44,5	40	M8x1	6,6	MHC-MOD060-10-070-1-2-A	30712234
60	12	28	42	75	62	10	50	46	M10x1	6,9	MHC-MOD060-12-075-1-2-A	30712235
80	12	32	50	77,5	60,5	10	47,5	41,5	M10x1	1,2	MHC-MOD080-12-078-1-2-A	30320043
80	16	38	50	82,5	65,5	10	52,5	47,5	M12x1	1,3	MHC-MOD080-16-083-1-2-A	30320044
80	20	42	50	82,5	65,5	10	52,5	49,5	M16x1	1,4	MHC-MOD080-20-083-1-2-A	30320045
100	25	57	63	100	79	10	61,5	61	M16x1	2,8	MHC-MOD100-25-100-1-2-A	30320046
117	32	64	75	103	82	10	65	60	M16x1	3,7	MHC-MOD117-32-103-1-2-A	30320047

## Spare parts for hydraulic chucks HydroChuck with radial and angular alignment

Module diameter D	Quantity required	① Cylinder head screw in acc. with ISO 4762		② Thrust pad		③ Threaded pin	
		Size	Order No.	Specification	Order No.	Specification	Order No.
80	4	M6x20 – 12.9	10003619	∅10.6x5	10040108	M8x1x11.5	10075074
100	4	M8x25 – 12.9	10003637	∅12.8x5	10075116	M10x1x14	10075100
117	4	M8x25 – 12.9	10003637	∅12.8x5	10075116	M10x1x14	10075100

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeves in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw, clamping screw, cylinder head screws (for fastening the chuck) and alignment screws (thrust pad and threaded pin).

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA.

With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ .

Adjustable for radial run-out thanks to threaded pins (for alignment) in the machine spindle and in the HSK or steep taper adapter. Adjustable for axial run-out due to thrust pad and threaded pin in the hydraulic chuck. On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

For reducing sleeves, see section "Accessories, spare parts and measuring equipment".

(The accuracy may be affected by the use of the reducing sleeve)

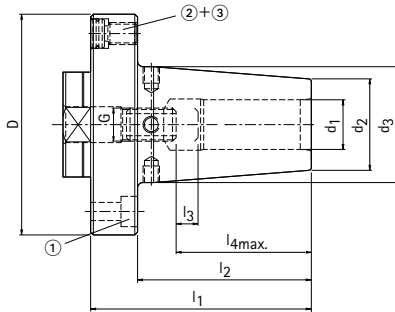
Balancing value: G 2.5 at  $16,000 \text{ min}^{-1}$  as delivered.



# Shrink chucks ThermoChuck

with radial and angular alignment and axial tool length adjustment

Module connection sizes in accordance with MN5000-14



Module diameter D	Dimensions							G	Weight [kg]	Length adjustment screw		Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4max</sub>			Specification	Order No.		
60	6	21	27	70	57	10	36	M5	0,7	M5x16-45H	10049051	MTC-MOD060-06-070-1-2-A	30320048
60	8	21	27	70	57	10	36	M6	0,7	M6x16-45H	10049052	MTC-MOD060-08-070-1-2-A	30320049
60	10	24	32	70	57	10	41	M8x1	0,7	M8x1x16-45H	10049053	MTC-MOD060-10-070-1-2-A	30327443
60	12	24	32	70	57	10	46	M10x1	0,7	M10x1x18-45H	10049056	MTC-MOD060-12-070-1-2-A	30320050
70	14	27	34	75	60	10	46	M10x1	1,0	M10x1x18-45H	10049056	MTC-MOD070-14-075-1-2-A	30320051
70	16	27	34	75	60	10	49	M12x1	1,0	M12x1x18-45H	10049059	MTC-MOD070-16-075-1-2-A	30320052
80	18	33	42	80	63	10	49	M12x1	1,4	M12x1x18-45H	10049059	MTC-MOD080-18-080-1-2-A	30320053
80	20	33	42	80	63	10	51	M16x1	1,3	M16x1x18-45H	10067787	MTC-MOD080-20-080-1-2-A	30320054
100	25	44	53	80	59	10	57	M16x1	2,3	M16x1x22-45H	10067681	MTC-MOD100-25-080-1-2-A	30320055
100	32	44	53	80	59	10	61	M16x1	2,2	M16x1x22-45H	10067681	MTC-MOD100-32-080-1-2-A	30320056

## Spare parts for chucks for cylindrical shanks with angled clamping surface with radial and angular alignment

Module diameter D	Quantity required	① Cylinder head screw in acc. with ISO 4762		② Thrust pad		③ Threaded pin	
		Size	Order No.	Specification	Order No.	Specification	Order No.
60	4	M5x16 – 12.9	10003601	ø10.6x5	10040108	M8x1x8	10040109
70	4	M6x20 – 12.9	10003619	ø10.6x5	10040108	M8x1x8	10040109
80	4	M6x20 – 12.9	10003619	ø10.6x5	10040108	M8x1x11.5	10075074
100	4	M8x25 – 12.9	10003637	ø12.8x5	10075116	M10x1x14	10075100

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Design: Adjustable in the machine spindle and in the HSK or steep taper adapter.

Adjustable for axial run-out due to thrust pad and threaded pin in the shrink chuck.

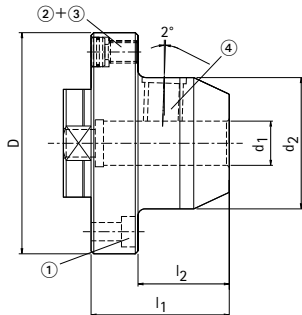
The clamping diameter is designed for a shank tolerance of h6.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Chucks for cylindrical shanks

with angled clamping surface, radial and angular alignment

Module connection sizes in accordance with MN5000-14



Module diameter D	Dimensions				Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>			
80	12	42	48	31	1,0	MNC-MOD080-12-048-1-2-W	30320038
80	16	48	50	33	1,1	MNC-MOD080-16-050-1-2-W	30320039
80	20	52	52	35	1,2	MNC-MOD080-20-052-1-2-W	30320040
100	25	63	80	59	2,6	MNC-MOD100-25-080-1-2-W	30320041
100	32	72	80	59	2,8	MNC-MOD100-32-080-1-2-W	30320042

## Spare parts for chucks for cylindrical shanks with angled clamping surface with radial and angular alignment

Module diameter D	Quantity required	① Cylinder head screw in acc. with ISO 4762		② Thrust pad		③ Threaded pin	
		Size	Order No.	Specification	Order No.	Specification	Order No.
80	4	M6x20 – 12.9	10003619	ø10.6x5	10040108	M8x1x11.5	10075074
100	4	M8x25 – 12.9	10003637	ø12.8x5	10075116	M10x1x14	10075100

## Spare parts for chucks for cylindrical shanks with angled clamping surface with radial and angular alignment

Clamping diameter D	Quantity required	④ Clamping screw in accordance with DIN 1835-B	
		Size	Order No.
12	1	M12x14	30002947
16	1	M14x16	10004136
20	1	M16x16	10004137
25	2	M18x2x20	10004141
32	2	M20x2x20	10004129

Dimensions in mm.

Use: For mounting milling cutters and drills with cylindrical shank and angled clamping surface (2°) in accordance with DIN 1835 Form E and DIN 6535 Form HE

Items included: Built-in clamping screw, cylinder head screws (for fastening the chuck) and alignment screws (thrust pad and threaded pin).

Design: Adjustable in the machine spindle and in the HSK or steep taper adapter.

Adjustable for axial run-out due to thrust pad and threaded pin in the chuck. The bore tolerance is much tighter than DIN 1835 (dH4) to obtain machining accuracies of the highest quality.

Note: From location bore d<sub>1</sub> = 25 mm two clamping screws are provided.  
Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.



# CLAMPING TOOLS WITH CYLINDRICAL SHANK

## Chucks

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Micro-Precision DrillChuck ..... 206



Softsynchro tapping chucks ..... 207



Hydraulic extensions ..... 208

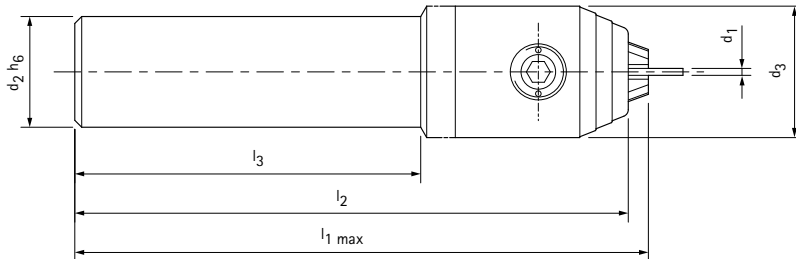


Tool extension for thermal expanding chucks ..... 209

# Micro-Precision DrillChuck

with radial actuation and internal coolant supply

Cylindrical shank similar to DIN 1835-A



Clamping range	Dimensions					Weight [kg]	Specification	Order No.
	$d_1$	$d_2$ h6	$d_3$	$l_2$	$l_1$ max.			
0,2 - 3,4	10	19	70	73	40	0,08	MPC-ZYL010-03-073-1-0-W	30551745
0,2 - 3,4	10	19	100	103	70	0,09	MPC-ZYL010-03-103-1-0-W	30551746
0,2 - 3,4	10	19	160	163	130	0,13	MPC-ZYL010-03-163-1-0-W	30551747
0,2 - 3,4	16	19	80	83	50	0,13	MPC-Zyl016-03-083-1-0-W	30551222
0,2 - 3,4	16	19	100	103	70	0,16	MPC-Zyl016-03-103-1-0-W	30551223
0,2 - 3,4	16	19	160	163	130	0,26	MPC-Zyl016-03-163-1-0-W	30551224
0,2 - 3,4	20	19	80	83	52	0,17	MPC-Zyl020-03-083-1-0-W	30551225
0,2 - 6,4	20	25	100	104	60	0,40	MPC-ZYL020-06-104-1-0-W	30608032
0,2 - 3,4	20	19	100	103	72	0,21	MPC-Zyl020-03-103-1-0-W	30551226
0,2 - 6,4	20	25	150	154	110	0,60	MPC-ZYL020-06-154-1-0-W	30608033
0,2 - 3,4	20	19	160	163	132	0,36	MPC-Zyl020-03-163-1-0-W	30551227
0,2 - 6,4	20	25	200	204	160	0,80	MPC-ZYL020-06-204-1-0-W	30608034

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc.

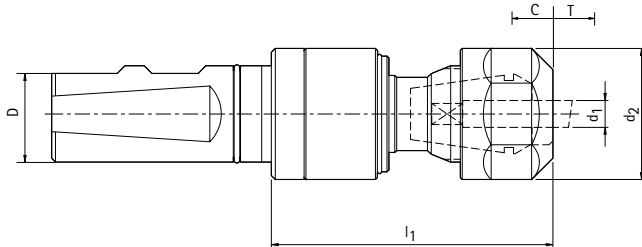
Design: With internal coolant supply.

Note: Spare parts and accessories can be found via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Softsynchro tapping chucks

Shank in accordance with DIN 1835 B+E



D	For tap drill		Clamping range	Nominal size	Dimensions				Weight [kg]	Specification	Order No.
	Thread	$d_1$			$d_2$	$l_1$	C	T			
20	M4 - M12	4,5 - 10	1 - 13	ER 20 (GB)	34	73	0,5	0,5	0,3	MSC-ZYL-020-20-073-1-0-W	30531488
25	M4 - M12	4,5 - 10	1 - 13	ER 20 (GB)	34	73	0,5	0,5	0,3	MSC-ZYL-025-20-073-1-0-W	10015373
25	M4 - M20	4,5 - 16	2 - 20	ER 32 (GB)	50	87,3	0,5	0,5	1,4	MSC-ZYL-025-32-088-1-0-W	10063621
32	M12 - M30	7 - 22	3 - 26	ER 40 (GB)	63	113,5	0,7	0,7	2,8	MSC-ZYL-032-40-114-1-0-W	10057697

Dimensions in mm.

Use: For clamping tap drills quickly and securely. For compensating for any differences in pitch between the synchronous spindle and the tap drill.

Items included: With clamping nut for internal coolant supply and open-ended wrench.  
Without collet or sealing disc.

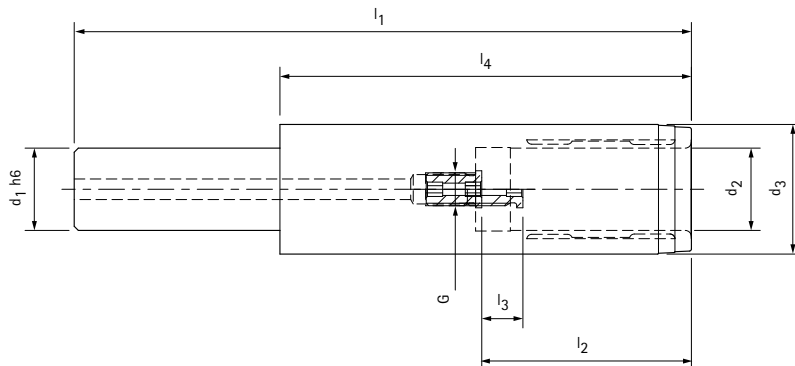
Design: With internal coolant supply.

Note: Further designs on request. For suitable tapping collets and sealing discs for internal open-ended wrenches, see section "Accessories, spare parts and measuring equipment".  
Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# Hydraulic extension

with axial tool length adjustment

Cylindrical shank in accordance with DIN 1835-A



d <sub>1</sub> h6	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
20	20	12	25,0	150	46	10	100	M10x1	0,5	MHC-ZYL020-12-150-1-0-A	30479014
20	20	20	31,5	150	51	10	100	M16x1	0,6	MHC-ZYL020-20-150-1-0-A	30479015
32	32	20	31,5	150	51	10	90	M16x1	0,7	MHC-ZYL032-20-150-1-0-A	30479016
32	32	20	31,5	200	51	10	90	M16x1	0,8	MHC-ZYL032-20-200-1-0-A	30479018

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA up to diameter 20 mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6. To increase the torque transmission, suitable for all MAPAL hydraulic chucks HydroChuck and HTC.

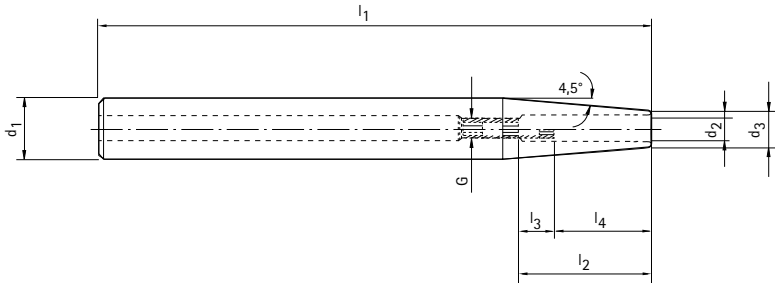
Items included: With length adjustment screw.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Tool extension for thermal expanding chucks

with axial tool length adjustment from clamping diameter  $d_1 = 6 \text{ mm}$

Cylindrical shank in accordance with DIN 1835-A



Dimensions							G	Weight [kg]	Order No.
$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$			
12	3	8	150	-	-	12	-	0,1	30251111
12	4	8	150	-	-	16	-	0,1	30251112
12	5	10	150	-	-	20	-	0,1	30251113
12	6	10	150	36	10	26	M5	0,1	30251114
16	3	10	150	-	-	12	-	0,2	30251115
16	4	10	150	-	-	16	-	0,2	30251116
16	5	10	150	-	-	20	-	0,2	30251117
16	6	10	150	36	10	26	M5	0,2	30251118
16	8	12	150	36	10	26	M6	0,2	30251119
20	3	10	150	-	-	12	-	0,3	30251120
20	4	10	150	-	-	16	-	0,3	30251121
20	5	10	150	-	-	20	-	0,3	30251122
20	6	10	150	36	10	26	M5	0,3	30251123
20	8	12	150	36	10	26	M6	0,3	30251124
20	10	14	150	42	10	32	M8x1	0,3	30251125
20	12	16	150	47	10	37	M10x1	0,3	30251126
25	3	10	150	-	-	12	-	0,5	30251127
25	4	10	150	-	-	16	-	0,5	30251128
25	5	15	150	-	-	20	-	0,5	30251129
25	6	20	150	36	10	26	M5	0,5	30251130
25	8	20	150	36	10	26	M6	0,5	30251131
25	10	20	150	42	10	32	M8x1	0,5	30251132
25	12	20	150	47	10	37	M10x1	0,5	30251133
25	14	20	150	47	10	37	M10x1	0,4	30251134
25	16	22	150	50	10	40	M10x1	0,4	30251135
32	6	20	150	36	10	26	M5	0,8	30251136
32	8	20	150	36	10	26	M6	0,8	30251137
32	10	24	150	42	10	32	M8x1	0,8	30251138
32	12	24	150	47	10	37	M10x1	0,8	30251139
32	14	27	150	47	10	37	M10x1	0,8	30251140
32	16	27	150	50	10	40	M10x1	0,8	30251141
32	18	27	150	50	10	40	M10x1	0,7	30251142
32	20	27	150	52	10	42	M10x1	0,7	30251143

Dimensions in mm.

The extensions may only be shortened on the shank side.

The minimum clamping depth required is 2-3 x D.

The clamping diameter is designed for a shank tolerance of h6. We assume no liability for modifications to tool adapters and their consequences.







# CHUCKS WITH SK

## Chucks

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HighTorque Chuck HTC \_\_\_\_\_ 212

Hydraulic chucks HydroChuck with axial length adjustment \_\_\_\_\_ 216

Hydraulic chucks HydroChuck Compensation \_\_\_\_\_ 221



Shrink chucks ThermoChuck \_\_\_\_\_ 222

Shrink chucks ThermoChuck with slender contour 3 degrees \_\_\_\_\_ 227



Chucks for cylindrical shanks with angled clamping surface \_\_\_\_\_ 230

Chucks for cylindrical shanks with lateral drive area \_\_\_\_\_ 233

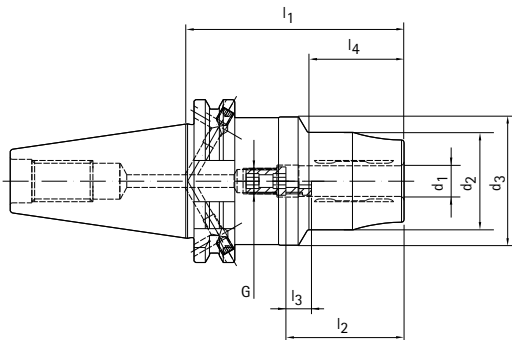
Precision-DrillChuck \_\_\_\_\_ 235

Micro-Precision DrillChuck \_\_\_\_\_ 240

# HighTorque Chuck HTC

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	6	32	50	75	37	10	26	M5	1,4	HTC-SK040-06-075-3-0-A	30297611
40	8	34	50	75	37	10	27	M6	1,4	HTC-SK040-08-075-3-0-A	30297612
40	10	36	50	80	41	10	32	M8x1	1,4	HTC-SK040-10-080-3-0-A	30297613
40	12	38	50	85	46	10	37	M10x1	1,5	HTC-SK040-12-085-3-0-A	30297614
40	14	40	50	85	46	10	37	M10x1	1,6	HTC-SK040-14-085-3-0-A	30297615
40	16	42	50	90	49	10	42	M12x1	1,6	HTC-SK040-16-090-3-0-A	30297616
40	18	44	50	90	49	10	42	M12x1	1,7	HTC-SK040-18-090-3-0-A	30297617
40	20	48	50	95	51	10	45	M16x1	1,7	HTC-SK040-20-095-3-0-A	30297618
40	25	57	50	110	57	10	60	M16x1	2,2	HTC-SK040-25-110-3-0-A	30297619
40	32	63	50	120	61	10	65	M16x1	2,5	HTC-SK040-32-120-3-0-A	30297620

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screws.

Without pull stud.

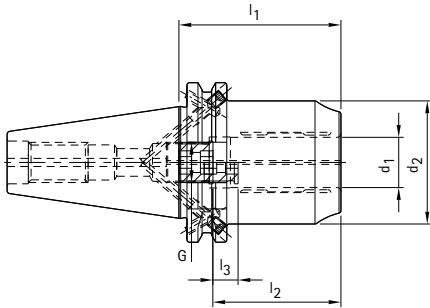
Design: Normal setting Form AD, if Form AF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment".  
Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



## Short heavy-duty design

SK	Dimensions					G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	12	42	50	46	10	M8x1	1,0	HTC-SK040-12-050-3-0-A	30524698
40	20	49	64,5	51	10	M16x1	1,4	HTC-SK040-20-065-3-0-A	30490556
50	12	42	50	46	10	M8x1	2,8	HTC-SK050-12-050-3-0-A	30524699
50	20	49	64,5	51	10	M16x1	3,1	HTC-SK050-20-065-3-0-A	30490557
50	32	72	81	61	10	M16x1	4,1	HTC-SK050-32-081-3-0-A	30490558

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screws.

Without pull stud.

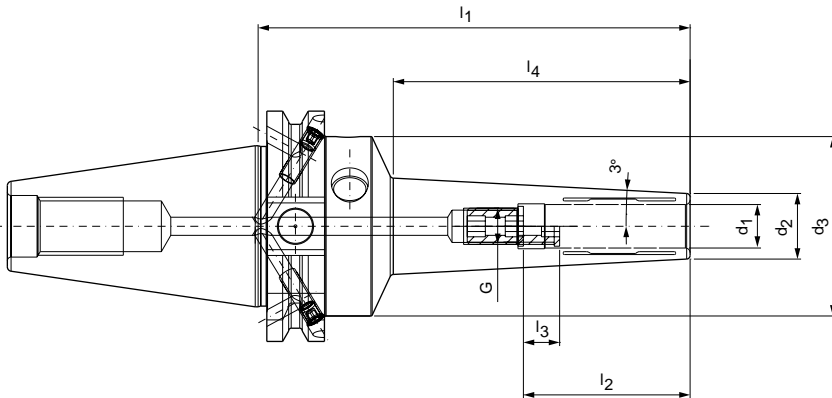
Design: Normal setting Form AD, if Form AF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



Slender design, 3 degrees

SK	Dimensions							G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$				
40	3	9	49,5	120	28	10	79,5	M3	1,1	HTC-SK040-03-120-3-0-A	30781267
40	4	10	49,5	120	28	10	79,5	M3	1,2	HTC-SK040-04-120-3-0-A	30781270
40	5	11	49,5	120	28	10	80	M3	1,2	HTC-SK040-05-120-3-0-A	30781273
40	6	12	49,5	120	37	10	79,9	M5	1,2	HTC-SK040-06-120-3-0-A	30655457
40	8	14	49,5	120	37	10	79,9	M6	1,2	HTC-SK040-08-120-3-0-A	30655458
40	10	16	49,5	120	41	10	80,9	M8x1	1,2	HTC-SK040-10-120-3-0-A	30655459
40	12	18	49,5	120	46	10	81,9	M10x1	1,2	HTC-SK040-12-120-3-0-A	30655460
40	14	22	49,5	120	46	10	78,5	M10x1	1,3	HTC-SK040-14-120-3-0-A	30782699
40	16	24	49,5	120	49	10	79	M12x1	1,3	HTC-SK040-16-120-3-0-A	30782702
40	18	26	49,5	120	49	10	79,5	M12x1	1,4	HTC-SK040-18-120-3-0-A	30782708
40	20	28	49,5	120	51	10	80	M16x1	1,4	HTC-SK040-20-120-3-0-A	30782712

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 20$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw.

Without pull stud.

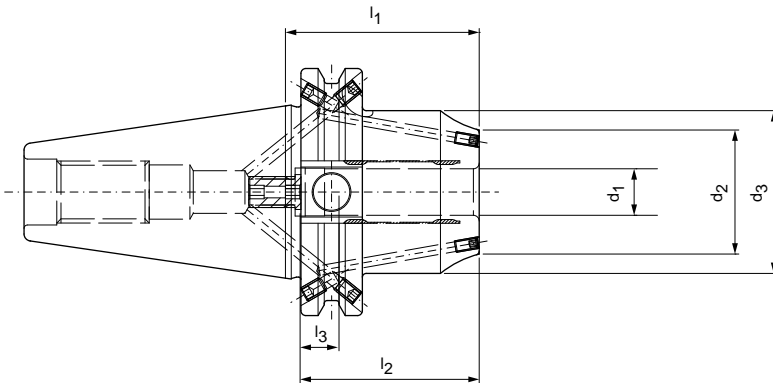
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected. Normal setting Form AD, if Form AF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



Short heavy-duty design with two cooling channel bores, resealable

SK	Dimensions						G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$				
40	12	32	42	50	46	10	M8x1	1,1	HTC-SK040-12-050-3-0-A	30655663
40	16	38	46	64,5	49	10	M12x1	1,3	HTC-SK040-16-065-3-0-A	30655664
40	20	46	49	64,5	51	10	M16x1	1,4	HTC-SK040-20-065-3-0-A	30655665

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 20$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screws.

Without pull stud.

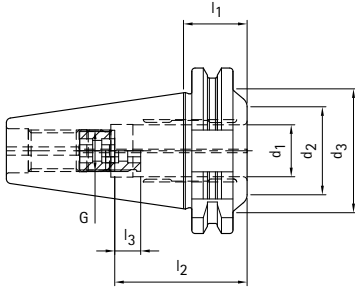
Design: Normal setting Form AD, if Form AF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment".  
Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD



## Ultra-short design

SK	Dimensions						G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	20	34	48	25	51	10	M16x1	0,6	MHC-SK040-20-025-1-0-A	30524709

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 20$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw.

Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA.

With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ .

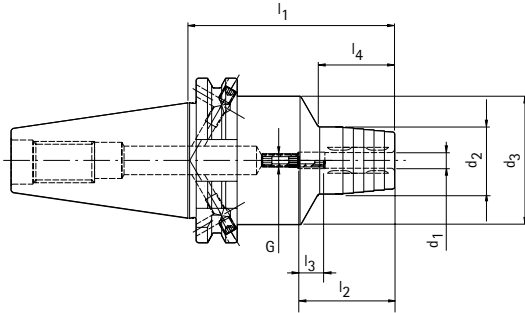
On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. For reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
30*	6	26	45	55	37	10	20	M5	0,6	MHC-SK-030-06-055-1-0-A	30559118
30*	8	28	45	55	37	10	20	M6	0,6	MHC-SK-030-08-055-1-0-A	30559119
30*	10	30	45	55	41	10	21	M8x1	0,6	MHC-SK-030-10-055-1-0-A	30559120
30*	12	32	45	55	46	10	22	M8x1	0,6	MHC-SK-030-12-055-1-0-A	30559121
30*	14	34	45	90	46	10	42	M8x1	0,7	MHC-SK-030-14-090-1-0-A	30559122
30*	16	38	45	90	49	10	50	M8x1	0,7	MHC-SK-030-16-090-1-0-A	30559123
30*	18	40	45	90	49	10	50	M8x1	0,7	MHC-SK-030-18-090-1-0-A	30559124
30*	20	42	45	90	51	10	50	M8x1	0,7	MHC-SK-030-20-090-1-0-A	30559125
40	6	26	49,5	80,5	37	10	29,5	M5	1,3	MHC-SK-040-06-081-3-0-A	30250958
40	6	26	49,5	110	37	10	29	M5	1,7	MHC-SK-040-06-110-3-0-A	30250978
40	8	28	49,5	80,5	37	10	30	M6	1,3	MHC-SK-040-08-081-3-0-A	30250959
40	8	28	49,5	110	37	10	30	M6	1,8	MHC-SK-040-08-110-3-0-A	30250979
40	10	30	49,5	80,5	41	10	35	M8x1	1,3	MHC-SK-040-10-081-3-0-A	30250960
40	10	30	49,5	110	41	10	35	M8x1	1,8	MHC-SK-040-10-110-3-0-A	30250980
40	12	32	49,5	80,5	46	10	40	M10x1	1,3	MHC-SK-040-12-081-3-0-A	30250961
40	12	32	49,5	110	46	10	40	M10x1	1,8	MHC-SK-040-12-110-3-0-A	30250981
40	14	34	49,5	80,5	46	10	40	M10x1	1,3	MHC-SK-040-14-081-3-0-A	30250962
40	14	34	49,5	110	46	10	40	M10x1	1,8	MHC-SK-040-14-110-3-0-A	30250982
40	16	38	49,5	80,5	49	10	45	M12x1	1,4	MHC-SK-040-16-081-3-0-A	30250963
40	16	38	49,5	110	49	10	45	M12x1	1,8	MHC-SK-040-16-110-3-0-A	30250983
40	18	40	49,5	80,5	49	10	46	M12x1	1,3	MHC-SK-040-18-081-3-0-A	30250964
40	18	40	49,5	110	49	10	46	M12x1	1,9	MHC-SK-040-18-110-3-0-A	30250984
40	20	42	49,5	80,5	51	10	47	M16x1	1,3	MHC-SK-040-20-081-3-0-A	30250965
40	20	42	49,5	110	51	10	47	M16x1	1,9	MHC-SK-040-20-110-3-0-A	30250985
40	25	55	63	80,5	57	10	28	M16x1	1,6	MHC-SK-040-25-081-3-0-A	30250966
40	25	55	63	110	57	10	28	M16x1	2,3	MHC-SK-040-25-110-3-0-A	30250986
40	32	63	70	80,5	61	10	25,5	M16x1	1,7	MHC-SK-040-32-081-3-0-A	30250967
40	32	63	59	110	61	10	59	M16x1	2,4	MHC-SK-040-32-110-3-0-A	30250987
50	6	26	49,5	80,5	37	10	29,5	M5	3,2	MHC-SK-050-06-081-3-0-A	30250968
50	6	26	49,5	110	37	10	29	M5	4,1	MHC-SK-050-06-110-3-0-A	30250988
50	8	28	49,5	80,5	37	10	30	M6	3,3	MHC-SK-050-08-081-3-0-A	30250969
50	8	28	49,5	110	37	10	30	M6	4,1	MHC-SK-050-08-110-3-0-A	30250989
50	10	30	49,5	80,5	41	10	35	M8x1	3,3	MHC-SK-050-10-081-3-0-A	30250970
50	10	30	49,5	110	41	10	35	M8x1	4,1	MHC-SK-050-10-110-3-0-A	30250990
50	12	32	49,5	80,5	46	10	40	M10x1	3,3	MHC-SK-050-12-081-3-0-A	30250971
50	12	32	49,5	110	46	10	40	M10x1	4,3	MHC-SK-050-12-110-3-0-A	30250991

Continued on next page.

Dimensions in mm.

\* Design: Steep taper size is not available in combined design AD/AF.



**Hydraulic chucks HydroChuck | With axial tool length adjustment | Shank SK in accordance with ISO 7388-1 Form AD/AF**

SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
50	14	34	49,5	80,5	46	10	40	M10x1	3,3	MHC-SK-050-14-081-3-0-A	30250972
50	14	34	49,5	110	46	10	40	M10x1	4,3	MHC-SK-050-14-110-3-0-A	30250992
50	16	38	49,5	80,5	49	10	45	M12x1	3,3	MHC-SK-050-16-081-3-0-A	30250973
50	16	38	49,5	110	49	10	45	M12x1	4,3	MHC-SK-050-16-110-3-0-A	30250993
50	18	40	49,5	80,5	49	10	46	M12x1	3,3	MHC-SK-050-18-081-3-0-A	30250974
50	18	40	49,5	110	49	10	46	M12x1	4,5	MHC-SK-050-18-110-3-0-A	30250994
50	20	42	49,5	80,5	51	10	42	M16x1	3,3	MHC-SK-050-20-081-3-0-A	30250975
50	20	42	49,5	110	51	10	42	M16x1	4,5	MHC-SK-050-20-110-3-0-A	30250995
50	25	55	63	100	57	10	48	M16x1	3,8	MHC-SK-050-25-100-3-0-A	30250976
50	25	55	63	110	57	10	48	M16x1	4,7	MHC-SK-050-25-110-3-0-A	30250996
50	32	63	70	100	61	10	61	M16x1	4,2	MHC-SK-050-32-100-3-0-A	30250977
50	32	63	70	110	61	10	50	M16x1	4,8	MHC-SK-050-32-110-3-0-A	30250997

Dimensions in mm.

Design: \* Steep taper size is not available in combined design AD/AF.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screws.

Without pull stud.

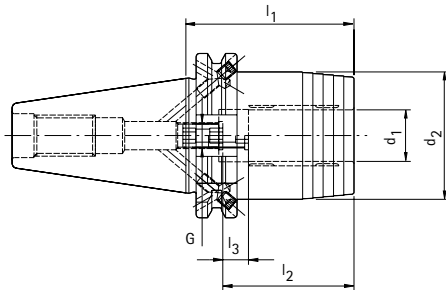
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected. Normal setting Form AD, if Form AF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



## Short heavy-duty design

SK	Dimensions					G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	20	49,5	64,5	51	10	M16x1	1,3	MHC-SK040-20-065-3-0-A	30251034
50	32	72,0	81,0	61	10	M16x1	3,9	MHC-SK050-32-081-3-0-A	30251035

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screws.

Without pull stud.

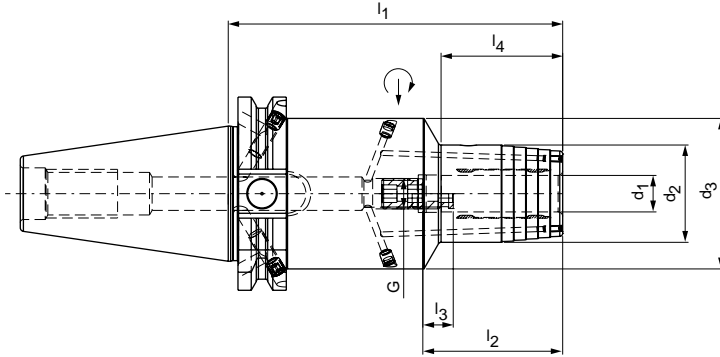
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected. Normal setting Form AD, if Form AF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Balancing value:  $G 2.5$  at  $25,000 \text{ min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



Design with two cooling channel bores, resealable

SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	6	26	49,5	80,5	37	10	29,5	M5	1,3	MHC-SK040-06-081-3-0-A	30656106
40	6	26	49,5	110	37	10	29	M5	1,7	MHC-SK040-06-110-3-0-A	30656115
40	8	28	49,5	80,5	37	10	30	M6	1,3	MHC-SK040-08-081-3-0-A	30656107
40	8	28	49,5	110	27	10	30	M6	1,7	MHC-SK040-08-110-3-0-A	30656116
40	10	30	49,5	80,5	41	10	35	M8x1	1,3	MHC-SK040-10-081-3-0-A	30656108
40	10	30	49,5	110	41	10	35	M8x1	1,8	MHC-SK040-10-110-3-0-A	30656117
40	12	32	49,5	80,5	46	10	40	M10x1	1,3	MHC-SK040-12-081-3-0-A	30656105
40	12	32	49,5	110	46	10	40	M10x1	1,8	MHC-SK040-12-110-3-0-A	30656118
40	14	34	49,5	80,5	46	10	40	M10x1	1,3	MHC-SK040-14-081-3-0-A	30656109
40	14	34	49,5	110	46	10	40	M10x1	1,8	MHC-SK040-14-110-3-0-A	30656119
40	16	38	49,5	80,5	49	10	45	M12x1	1,4	MHC-SK040-16-081-3-0-A	30656110
40	16	38	49,5	110	49	10	45	M12x1	1,8	MHC-SK040-16-110-3-0-A	30656120
40	18	40	49,5	80,5	49	10	46	M12x1	1,3	MHC-SK040-18-081-3-0-A	30656111
40	18	40	49,5	110	49	10	46	M12x1	1,9	MHC-SK040-18-110-3-0-A	30656121
40	20	42	49,5	80,5	51	10	47	M16x1	1,3	MHC-SK040-20-081-3-0-A	30656112
40	20	42	49,5	110	51	10	47	M16x1	1,9	MHC-SK040-20-110-3-0-A	30656122
40	25	55	63	80,5	57	10	28	M16x1	1,6	MHC-SK040-25-081-3-0-A	30656113
40	25	55	63	110	57	10	28	M16x1	2,1	MHC-SK040-25-110-3-0-A	30656123
40	32	63	70	80,5	61	10	25,5	M16x1	1,7	MHC-SK040-32-081-3-0-A	30656114
40	32	63	59	110	61	10	59	M16x1	2,2	MHC-SK040-32-110-3-0-A	30656124

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screws and screws for sealing the cooling channel bores. Without pull stud.

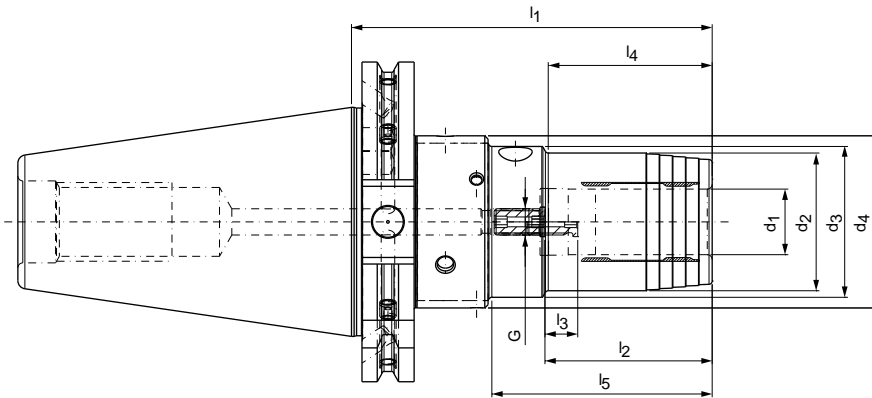
Design: Normal setting Form AD, if Form AF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment".  
Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Hydraulic chucks HydroChuck Compensation

with axial tool length adjustment and radial alignment feature

Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions									G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$d_4$	$l_1$	$l_2$	$l_3$	$l_4$	$l_5$				
50	20	42	46	52,5	110	51	10	50	67,2	M8x1	3,5	MHC-SK050-20-110-3-1-A	30631601
50	25	55	64	70	115	57	10	50	64,8	M16x1	4,4	MHC-SK050-25-115-3-1-A	30631604
50	32	63	64	70	125	61	10	61	74,8	M16x1	4,7	MHC-SK050-32-125-3-1-A	30631608

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screws.

Without pull stud.

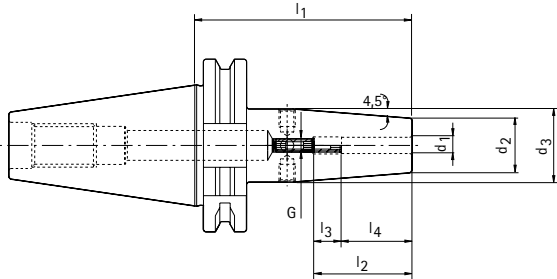
Design: Normal setting Form AD, if Form AF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". You will find information on handling in the technical appendix. Balancing value: G 2.5 at  $16,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD



SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
30	3	10	17	80	28	16	12	M6	0,5	MTC-SK030-03-080-1-0-A	30261560
30	4	15	22	80	28	12	16	M6	0,5	MTC-SK030-04-080-1-0-A	30261561
30	5	15	22	80	30	10	20	M6	0,5	MTC-SK030-05-080-1-0-A	30261562
30	6	21	27	80	36	10	26	M5	0,6	MTC-SK030-06-080-1-0-A	30261563
30	8	21	27	80	36	10	26	M6	0,6	MTC-SK030-08-080-1-0-A	30261564
30	10	24	32	80	41	10	31	M8x1	0,6	MTC-SK030-10-080-1-0-A	30261565
30	12	24	32	80	47	10	37	M10x1	0,7	MTC-SK030-12-080-1-0-A	30261566
30	14	27	34	80	47	10	37	M10x1	0,7	MTC-SK030-14-080-1-0-A	30261567
30	16	27	34	80	50	10	40	M12x1	0,7	MTC-SK030-16-080-1-0-A	30261568
30	18	33	42	80	50	10	40	M12x1	0,8	MTC-SK030-18-080-1-0-A	30261569
30	20	33	42	80	52	10	42	M16x1	0,8	MTC-SK030-20-080-1-0-A	30261570

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws or pull studs.

Design: Permissible run-out deviation on the taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

For pull studs, see section "Accessories, spare parts and measuring equipment".

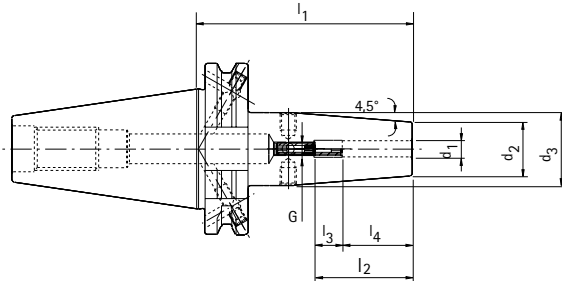
Fine balancing screws on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	3	10	17	80	28	16	12	M6	0,9	MTC-SK040-03-080-3-0-A	30261571
40*	3	10	20	120	-	-	12	-	0,9	MTC-SK040-03-120-3-0-W	30261584
40*	3	10	20	160	-	-	12	-	1,0	MTC-SK040-03-160-3-0-W	30261585
40*	3	10	20	200	-	-	12	-	1,1	MTC-SK 040-03-200-3-0-W	30655712
40	4	15	22	80	28	12	16	M6	0,9	MTC-SK040-04-080-3-0-A	30261572
40*	4	15	22	120	-	-	16	-	1,0	MTC-SK040-04-120-3-0-W	30261586
40*	4	15	22	160	-	-	16	-	1,1	MTC-SK040-04-160-3-0-W	30261587
40*	4	15	22	200	-	-	16	-	1,2	MTC-SK 040-04-200-3-0-W	30655713
40	5	15	22	80	30	10	20	M6	0,9	MTC-SK040-05-080-3-0-A	30261573
40*	5	15	22	120	-	-	20	-	1,0	MTC-SK040-05-120-3-0-W	30261588
40*	5	15	22	160	-	-	20	-	1,1	MTC-SK040-05-160-3-0-W	30261589
40*	5	15	22	200	-	-	20	-	1,2	MTC-SK 040-05-200-3-0-W	30655714
40	6	21	27	80	36	10	26	M6	1,0	MTC-SK040-06-080-3-0-A	30261574
40	6	21	27	120	36	10	26	M6	1,0	MTC-SK040-06-120-3-0-A	30261590
40	6	21	27	160	36	10	26	M6	1,1	MTC-SK040-06-160-3-0-A	30261591
40	6	21	27	200	36	10	26	M5	1,4	MTC-SK 040-06-200-3-0-A	30655715
40	7	21	27	80	36	10	26	M5	1,3	MTC-SK040-07-080-3-0-A	30267108
40	8	21	27	80	36	10	26	M6	1,0	MTC-SK040-08-080-3-0-A	30261575
40	8	21	27	120	36	10	26	M6	1,1	MTC-SK040-08-120-3-0-A	30261592
40	8	21	27	160	36	10	26	M6	1,3	MTC-SK040-08-160-3-0-A	30261593
40	8	21	27	200	36	10	26	M6	1,4	MTC-SK 040-08-200-3-0-A	30655716
40	9	21	27	80	36	10	26	M6	1,0	MTC-SK040-09-080-3-0-A	30267109
40	10	24	32	80	41	10	31	M8x1	1,0	MTC-SK040-10-080-3-0-A	30261576
40	10	24	32	120	41	10	31	M8x1	1,2	MTC-SK040-10-120-3-0-A	30261594
40	10	24	32	160	41	10	31	M8x1	1,5	MTC-SK040-10-160-3-0-A	30261595
40	10	24	32	200	41	10	31	M8x1	1,7	MTC-SK 040-10-200-3-0-A	30655717
40	11	24	32	80	41	10	31	M8x1	1,0	MTC-SK040-11-080-3-0-A	30267110
40	12	24	32	80	47	10	37	M10x1	1,0	MTC-SK040-12-080-3-0-A	30261577
40	12	24	32	120	47	10	37	M10x1	1,2	MTC-SK040-12-120-3-0-A	30261596
40	12	24	32	160	47	10	37	M10x1	1,5	MTC-SK040-12-160-3-0-A	30261597
40	12	24	32	200	47	10	37	M10x1	1,7	MTC-SK 040-12-200-3-0-A	30655711
40	13	24	32	80	47	10	37	M10x1	1,0	MTC-SK040-13-080-3-0-A	30267112

\* without axial tool length adjustment

Continued on next page.

## Shrink chucks ThermoChuck | With axial tool length adjustment | Shank SK in accordance ISO 7388-1 Form AD/AF

SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	14	27	34	80	47	10	37	M10x1	1,0	MTC-SK040-14-080-3-0-A	30261578
40	14	27	34	120	47	10	37	M10x1	1,3	MTC-SK040-14-120-3-0-A	30261598
40	14	27	34	160	47	10	37	M10x1	1,6	MTC-SK040-14-160-3-0-A	30261599
40	14	27	34	200	47	10	37	M10x1	1,8	MTC-SK 040-14-200-3-0-A	30655718
40	15	27	34	80	47	10	37	M10x1	1,0	MTC-SK040-15-080-3-0-A	30267113
40	16	27	34	80	50	10	40	M12x1	1,0	MTC-SK040-16-080-3-0-A	30261579
40	16	27	34	120	50	10	40	M12x1	1,3	MTC-SK040-16-120-3-0-A	30261600
40	16	27	34	160	50	10	40	M12x1	1,6	MTC-SK040-16-160-3-0-A	30261601
40	16	27	34	200	50	10	40	M12x1	1,8	MTC-SK 040-16-200-3-0-A	30655719
40	18	33	42	80	50	10	40	M12x1	1,1	MTC-SK040-18-080-3-0-A	30260195
40	18	33	42	120	50	10	40	M12x1	1,5	MTC-SK040-18-120-3-0-A	30261602
40	18	33	42	160	50	10	40	M12x1	1,7	MTC-SK040-18-160-3-0-A	30261603
40	18	33	42	200	50	10	40	M12x1	1,9	MTC-SK 040-18-200-3-0-A	30655720
40	20	33	42	80	52	10	42	M16x1	1,1	MTC-SK040-20-080-3-0-A	30261581
40	20	33	42	120	52	10	42	M16x1	1,5	MTC-SK040-20-120-3-0-A	30261604
40	20	33	42	160	52	10	42	M16x1	1,8	MTC-SK040-20-160-3-0-A	30261605
40	20	33	42	200	52	10	42	M16x1	2,0	MTC-SK 040-20-200-3-0-A	30655721
40	25	44	53	100	58	10	48	M16x1	1,6	MTC-SK040-25-100-3-0-A	30261582
40	25	44	53	120	58	10	48	M16x1	1,8	MTC-SK040-25-120-3-0-A	30261606
40	25	44	53	160	58	10	48	M16x1	2,5	MTC-SK040-25-160-3-0-A	30261607
40	25	44	53	200	58	10	48	M16x1	2,8	MTC-SK 040-25-200-3-0-A	30655722
40	32	44	53	100	62	10	52	M16x1	1,4	MTC-SK040-32-100-3-0-A	30261583
40	32	44	53	120	62	10	52	M16x1	1,7	MTC-SK040-32-120-3-0-A	30261608
40	32	44	53	160	62	10	52	M16x1	2,4	MTC-SK040-32-160-3-0-A	30261610
40	32	44	53	200	62	10	52	M16x1	3,2	MTC-SK 040-32-200-3-0-A	30655723
50*	3	10	17	80	-	-	12	-	2,7	MTC-SK050-03-080-3-0-W	30261611
50*	3	10	20	120	-	-	12	-	2,8	MTC-SK050-03-120-3-0-W	30261612
50*	3	10	20	160	-	-	12	-	3,0	MTC-SK050-03-160-3-0-W	30261613
50*	4	15	22	80	-	-	16	-	2,7	MTC-SK050-04-080-3-0-W	30261614
50*	4	15	22	120	-	-	16	-	2,8	MTC-SK050-04-120-3-0-W	30261615
50*	4	15	22	160	-	-	16	-	3,0	MTC-SK050-04-160-3-0-W	30261616
50*	5	15	22	80	-	-	20	-	2,7	MTC-SK050-05-080-3-0-W	30261617
50*	5	15	22	120	-	-	20	-	2,8	MTC-SK050-05-120-3-0-W	30261618
50*	5	15	22	160	-	-	20	-	3,0	MTC-SK050-05-160-3-0-W	30261619
50	6	21	27	80	36	10	26	M5	2,8	MTC-SK050-06-080-3-0-A	30261620
50	6	21	27	120	36	10	26	M5	2,9	MTC-SK050-06-120-3-0-A	30261621
50	6	21	27	160	36	10	26	M5	3,1	MTC-SK050-06-160-3-0-A	30261622
50	8	21	27	80	36	10	26	M6	2,8	MTC-SK050-08-080-3-0-A	30261623
50	8	21	27	120	36	10	26	M6	3,0	MTC-SK050-08-120-3-0-A	30261624
50	8	21	27	160	36	10	26	M6	3,1	MTC-SK050-08-160-3-0-A	30261625
50	10	24	32	80	41	10	31	M8x1	2,8	MTC-SK050-10-080-3-0-A	30261626
50	10	24	32	120	41	10	31	M8x1	3,0	MTC-SK050-10-120-3-0-A	30261627
50	10	24	32	160	41	10	31	M8x1	3,3	MTC-SK050-10-160-3-0-A	30261628
50	12	24	32	80	47	10	37	M10x1	2,8	MTC-SK050-12-080-3-0-A	30261629
50	12	24	32	120	47	10	37	M10x1	3,0	MTC-SK050-12-120-3-0-A	30261630
50	12	24	32	160	47	10	37	M10x1	3,3	MTC-SK050-12-160-3-0-A	30261631
50	14	27	34	80	47	10	37	M10x1	2,9	MTC-SK050-14-080-3-0-A	30261632
50	14	27	34	120	47	10	37	M10x1	3,1	MTC-SK050-14-120-3-0-A	30261633
50	14	27	34	160	47	10	37	M10x1	3,4	MTC-SK050-14-160-3-0-A	30261634
50	16	27	34	80	50	10	40	M12x1	2,9	MTC-SK050-16-080-3-0-A	30261635

\* without axial tool length adjustment

## Shrink chucks ThermoChuck | With axial tool length adjustment | Shank SK in accordance ISO 7388-1 Form AD/AF

SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
50	16	27	34	120	50	10	40	M12x1	3,1	MTC-SK050-16-120-3-0-A	30261636
50	16	27	34	160	50	10	40	M12x1	3,5	MTC-SK050-16-160-3-0-A	30261637
50	18	33	42	80	50	10	40	M12x1	3,0	MTC-SK050-18-080-3-0-A	30261638
50	18	33	42	120	50	10	40	M12x1	3,3	MTC-SK050-18-120-3-0-A	30261639
50	18	33	42	160	50	10	40	M12x1	3,7	MTC-SK050-18-160-3-0-A	30261640
50	20	33	42	80	52	10	42	M16x1	3,0	MTC-SK050-20-080-3-0-A	30261641
50	20	33	42	120	52	10	42	M16x1	3,3	MTC-SK050-20-120-3-0-A	30261642
50	20	33	42	160	52	10	42	M16x1	3,7	MTC-SK050-20-160-3-0-A	30261643
50	25	44	53	100	58	10	48	M16x1	3,5	MTC-SK050-25-100-3-0-A	30261644
50	25	44	53	120	58	10	48	M16x1	3,8	MTC-SK050-25-120-3-0-A	30261645
50	25	44	53	160	58	10	48	M16x1	4,0	MTC-SK050-25-160-3-0-A	30261646
50	32	44	53	100	62	10	52	M16x1	3,3	MTC-SK050-32-100-3-0-A	30261647
50	32	44	53	120	62	10	52	M16x1	3,8	MTC-SK050-32-120-3-0-A	30261648
50	32	44	53	160	62	10	52	M16x1	4,0	MTC-SK050-32-160-3-0-A	30261649

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws or pull studs.

Design: Permissible run-out deviation on the taper shank in relation to the clamping diameter

d<sub>1</sub> = 3 µm. The clamping diameter is designed for a shank tolerance of h6.

Normal setting Form AD, if Form AF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

For pull studs, see section "Accessories, spare parts and measuring equipment".

Fine balancing screws on request.

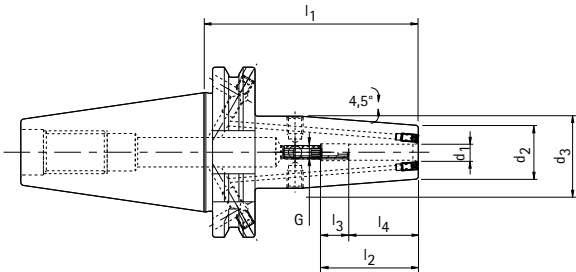
Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.



# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



Design with two cooling channel bores, resealable

SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	3	10	17	80	28	16	12	M6	0,9	MTC-SK040-03-080-3-0-A	30655352
40*	3	9	16	120	-	-	12	-	0,9	MTC-SK040-03-120-3-0-W	30655355
40	4	15	22	80	28	12	16	M6	0,9	MTC-SK040-04-080-3-0-A	30655353
40*	4	10	17	120	-	-	16	-	1,0	MTC-SK040-04-120-3-0-W	30655356
40	5	15	22	80	30	10	20	M6	0,9	MTC-SK040-05-080-3-0-A	30655354
40*	5	11	18	120	-	-	20	-	1,0	MTC-SK040-05-120-3-0-W	30655357
40	6	21	27	80	36	10	26	M5	1,0	MTC-SK040-06-080-3-0-A	30655332
40	6	12	22	120	36	10	26	M5	1,1	MTC-SK040-06-120-3-0-A	30655342
40	8	21	27	80	36	10	26	M6	1,0	MTC-SK040-08-080-3-0-A	30655333
40	8	14	24	120	36	10	26	M6	1,1	MTC-SK040-08-120-3-0-A	30655343
40	10	24	32	80	41	10	31	M8x1	1,0	MTC-SK040-10-080-3-0-A	30655334
40	10	16	26	120	41	10	31	M8x1	1,2	MTC-SK040-10-120-3-0-A	30655344
40	12	24	32	80	47	10	37	M10x1	1,0	MTC-SK040-12-080-3-0-A	30655335
40	12	18	28	120	47	10	37	M10x1	1,2	MTC-SK040-12-120-3-0-A	30655345
40	14	27	34	80	47	10	37	M10x1	1,0	MTC-SK040-14-080-3-0-A	30655336
40	14	20	30	120	47	10	37	M10x1	1,3	MTC-SK040-14-120-3-0-A	30655346
40	16	27	34	80	50	10	40	M12x1	1,0	MTC-SK040-16-080-3-0-A	30655337
40	16	22	32	120	50	10	40	M12x1	1,3	MTC-SK040-16-120-3-0-A	30655347
40	18	33	42	80	50	10	40	M12x1	1,1	MTC-SK040-18-080-3-0-A	30655338
40	18	24	34	120	50	10	40	M12x1	1,5	MTC-SK040-18-120-3-0-A	30655348
40	20	33	42	80	52	10	42	M16x1	1,1	MTC-SK040-20-080-3-0-A	30655339
40	20	26	36	120	52	10	42	M16x1	1,5	MTC-SK040-20-120-3-0-A	30655349
40	25	44	53	100	58	10	48	M16x1	1,6	MTC-SK040-25-100-3-0-A	30655340
40	25	44	53	120	58	10	48	M16x1	1,8	MTC-SK040-25-120-3-0-A	30655350
40	32	44	53	100	62	10	52	M16x1	1,4	MTC-SK040-32-100-3-0-A	30655341
40	32	44	53	120	62	10	52	M16x1	1,7	MTC-SK040-32-120-3-0-A	30655351

\* without axial tool length adjustment

Dimensions in mm.

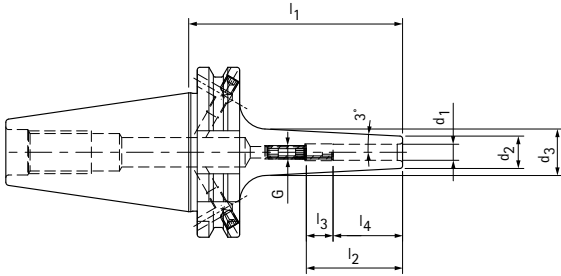
Items included: With length adjustment screw with through hole fitted and screws for sealing the cooling channel bores. Without fine balancing screws or pull studs.  
 Design: Standard design with two cooling channel bores. Other cooling channel bores on request. Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6. Normal setting Form AD, if Form AF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".  
 For pull studs, see section "Accessories, spare parts and measuring equipment".  
 Fine balancing screws on request.  
 Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



Slender design, 3 degrees

SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	3	9	14	80	28	16	12	M6	0,9	MTC-SK040-03-080-3-0-A	30385180
40*	3	9	16	120	-	-	12	-	0,9	MTC-SK040-03-120-3-0-A	30385181
40*	3	9	19	160	-	-	12	-	1,1	MTC-SK040-03-160-3-0-A	30385182
40*	3	9	19	200	-	-	12	-	1,2	MTC-SK040-03-200-3-0-A	30797073
40	4	10	15	80	28	12	16	M6	0,9	MTC-SK040-04-080-3-0-A	30385183
40*	4	10	17	120	-	-	16	-	0,9	MTC-SK040-04-120-3-0-A	30385184
40*	4	10	20	160	-	-	16	-	1,1	MTC-SK040-04-160-3-0-A	30385185
40*	4	10	20	200	-	-	16	-	1,2	MTC-SK040-04-200-3-0-A	30797075
40	5	11	16	80	30	10	20	M6	0,9	MTC-SK040-05-080-3-0-A	30385186
40*	5	11	18	120	-	-	20	-	1,0	MTC-SK040-05-120-3-0-A	30385187
40*	5	11	21	160	-	-	20	-	1,1	MTC-SK040-05-160-3-0-A	30385188
40*	5	11	21	200	-	-	20	-	1,2	MTC-SK040-05-200-3-0-A	30797076
40	6	12	17	80	36	10	26	M5	0,9	MTC-SK040-06-080-3-0-A	30385189
40	6	12	22	120	36	10	26	M5	1,0	MTC-SK040-06-120-3-0-A	30385190
40	6	12	24	160	36	10	26	M5	1,1	MTC-SK040-06-160-3-0-A	30385191
40	6	12	24	200	36	10	26	M5	1,4	MTC-SK040-06-200-3-0-A	30797077
40	8	14	19	80	36	10	26	M6	0,9	MTC-SK040-08-080-3-0-A	30385192
40	8	14	24	120	36	10	26	M6	1,0	MTC-SK040-08-120-3-0-A	30385193
40	8	14	26	160	36	10	26	M6	1,2	MTC-SK040-08-160-3-0-A	30385194
40	8	14	26	200	36	10	26	M6	1,4	MTC-SK040-08-200-3-0-A	30797078
40	10	16	21	80	41	10	31	M8x1	0,9	MTC-SK040-10-080-3-0-A	30385195
40	10	16	26	120	41	10	31	M8x1	1,1	MTC-SK040-10-120-3-0-A	30385196
40	10	16	28	160	41	10	31	M8x1	1,2	MTC-SK040-10-160-3-0-A	30385197
40	10	16	28	200	41	10	31	M8x1	1,6	MTC-SK040-10-200-3-0-A	30797080
40	12	18	23	80	47	10	37	M10x1	0,9	MTC-SK040-12-080-3-0-A	30385198
40	12	18	28	120	47	10	37	M10x1	1,1	MTC-SK040-12-120-3-0-A	30385199

\* without axial tool length adjustment

Continued on next page.

## Shrink chucks ThermoChuck | With axial tool length adjustment | Shank SK in accordance ISO 7388-1 Form AD/AF

SK	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	12	18	30	160	47	10	37	M10x1	1,3	MTC-SK040-12-160-3-0-A	30385200
40	12	18	30	200	47	10	37	M10x1	1,5	MTC-SK040-12-200-3-0-A	30797081
40	14	20	26	80	47	10	37	M10x1	0,9	MTC-SK040-14-080-3-0-A	30385201
40	14	20	30	120	47	10	37	M10x1	1,1	MTC-SK040-14-120-3-0-A	30385202
40	14	20	32	160	47	10	37	M10x1	1,3	MTC-SK040-14-160-3-0-A	30385203
40	14	20	32	200	47	10	37	M10x1	1,6	MTC-SK040-14-200-3-0-A	30797082
40	16	22	28	80	50	10	40	M12x1	1,0	MTC-SK040-16-080-3-0-A	30385204
40	16	22	32	120	50	10	40	M12x1	1,2	MTC-SK040-16-120-3-0-A	30385205
40	16	22	34	160	50	10	40	M12x1	1,4	MTC-SK040-16-160-3-0-A	30385206
40	16	22	34	200	50	10	40	M12x1	2,6	MTC-SK040-16-200-3-0-A	30797083
40	18	24	30	80	50	10	40	M12x1	1,0	MTC-SK040-18-080-3-0-A	30385207
40	18	24	34	120	50	10	40	M12x1	1,2	MTC-SK040-18-120-3-0-A	30385208
40	18	24	36	160	50	10	40	M12x1	1,5	MTC-SK040-18-160-3-0-A	30385209
40	18	24	36	200	50	10	40	M12x1	2,8	MTC-SK040-18-200-3-0-A	30797086
40	20	26	32	80	52	10	42	M16x1	1,0	MTC-SK040-20-080-3-0-A	30385210
40	20	26	36	120	52	10	42	M16x1	1,2	MTC-SK040-20-120-3-0-A	30385211
40	20	26	38	160	52	10	42	M16x1	1,6	MTC-SK040-20-160-3-0-A	30385212
40	20	26	38	200	52	10	42	M16x1	2,9	MTC-SK040-20-200-3-0-A	30797087

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws or pull studs.

Design: Permissible run-out deviation on the taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Normal setting Form AD, if Form AF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

For pull studs, see section "Accessories, spare parts and measuring equipment".

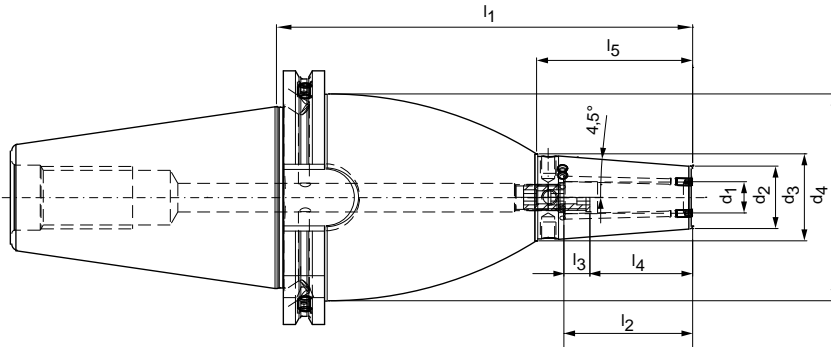
Fine balancing screws on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



Heavy-duty design, with two cooling channel bores, resealable

SK	Dimensions									G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>				
50	6	21	28	-	80	36	10	26	-	M5	2,9	MTC-SK050-06-080-3-0-A	30655283
50	6	21	29	79,5	160	36	10	26	51	M5	5,0	MTC-SK050-06-160-3-0-A	30655291
50	8	21	28	-	80	36	10	26	-	M6	2,9	MTC-SK050-08-080-3-0-A	30655284
50	8	21	29	79,5	160	36	10	26	51	M6	5,0	MTC-SK050-08-160-3-0-A	30655292
50	10	24	31	-	80	41	10	31	-	M8x1	3,0	MTC-SK050-10-080-3-0-A	30655285
50	10	24	33	79,5	160	41	10	31	55	M8x1	5,1	MTC-SK050-10-160-3-0-A	30655293
50	12	24	31	-	80	47	10	37	-	M10x1	3,0	MTC-SK050-12-080-3-0-A	30655286
50	12	24	33,5	79,5	160	47	10	37	60	M10x1	5,0	MTC-SK050-12-160-3-0-A	30655294
50	16	27	34,5	-	80	50	10	40	-	M12x1	3,0	MTC-SK050-16-080-3-0-A	30655287
50	16	27	37,5	79,5	160	50	10	40	65	M12x1	5,0	MTC-SK050-16-160-3-0-A	30655295
50	20	33	41	-	80	52	10	52	-	M16x1	3,1	MTC-SK050-20-080-3-0-A	30655288
50	20	33	44	79,5	160	52	10	52	70	M16x1	5,1	MTC-SK050-20-160-3-0-A	30655296
50	25	44	56	-	100	58	10	48	-	M16x1	3,7	MTC-SK050-25-100-3-0-A	30655289
50	25	44	56	79,5	160	58	10	48	75	M16x1	5,6	MTC-SK050-25-160-3-0-A	30655297
50	32	44	56	-	100	62	10	52	-	M16x1	3,5	MTC-SK050-32-100-3-0-A	30655290
50	32	44	56	79,5	160	62	10	52	80	M16x1	5,4	MTC-SK050-32-160-3-0-A	30655298

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws or pull studs.

Design: Permissible run-out deviation on the taper shank in relation to the clamping diameter d<sub>1</sub> = 3 μm. The clamping diameter is designed for a shank tolerance of h6.

Normal setting Form AD, if Form AF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

For pull studs, see section "Accessories, spare parts and measuring equipment".

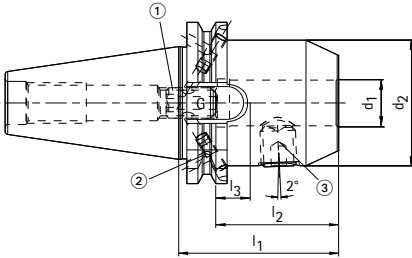
Fine balancing screws on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Chucks for cylindrical shanks

with angled clamping surface and axial tool length adjustment

Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions					G	Weight [kg]	Specification	Order No.	① Order No. length adjustment screw
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>					
40	6	25	50	36	10	M5	0,9	MNC-SK040-06-050-3-0-A	10060812	30326221
40	8	28	50	36	10	M6	1,0	MNC-SK040-08-050-3-0-A	10060813	30326224
40	10	35	50	40	10	M8	1,0	MNC-SK040-10-050-3-0-A	10060814	30326226
40	12	42	50	45	10	M10	1,1	MNC-SK040-12-050-3-0-A	10060815	30326232
40	14	44	50	45	10	M10	1,1	MNC-SK040-14-050-3-0-A	10060817	30326232
40	16	48	63	48	10	M12	1,3	MNC-SK040-16-063-3-0-A	10060818	30326237
40	18	50	63	48	10	M12	1,4	MNC-SK040-18-063-3-0-A	10060819	30326237
40	20	52	63	50	10	M16	1,4	MNC-SK040-20-063-3-0-A	10060820	30326239
40	25	65	100	56	10	M20	2,4	MNC-SK040-25-100-3-0-A	10060822	30326243
40	32	72	100	60	10	M20	2,6	MNC-SK040-32-100-3-0-A	10073683	30326243
50	6	25	63	36	10	M5	2,7	MNC-SK050-06-063-3-0-A	10073684	30326221
50	8	28	63	36	10	M6	2,8	MNC-SK050-08-063-3-0-A	10073685	30326224
50	10	35	63	40	10	M8	2,9	MNC-SK050-10-063-3-0-A	10073686	30326226
50	12	42	63	45	10	M10	3,0	MNC-SK050-12-063-3-0-A	10073687	30326232
50	14	44	63	45	10	M10	3,0	MNC-SK050-14-063-3-0-A	10073688	30326232
50	16	48	63	48	10	M12	3,1	MNC-SK050-16-063-3-0-A	10073689	30326237
50	18	50	63	48	10	M12	3,1	MNC-SK050-18-063-3-0-A	10073690	30326237
50	20	52	63	50	10	M16	3,2	MNC-SK050-20-063-3-0-A	10073691	30326239
50	25	65	80	56	10	M20	3,8	MNC-SK050-25-080-3-0-A	10073692	30326243
50	32	72	100	60	10	M20	4,6	MNC-SK050-32-100-3-0-A	10073693	30326243

Dimensions in mm.

Use: For mounting milling cutters and drills with cylindrical shank and angled clamping surface (2°) in accordance with DIN 1835 Form E and DIN 6535 Form HE.

Items included: With built-in clamping screw and length adjustment screw, without pull stud.

Design: Permissible run-out deviation on the taper shank in relation to the clamping diameter d<sub>1</sub> = 3 μm. The bore tolerance is much tighter than DIN 1835 (dH4) to obtain machining accuracies of the highest quality. Normal setting Form AD, if Form AF is required, please state with the order.

Note: From clamping diameter d<sub>1</sub> = 25 mm two clamping screw are provided.

The length adjustment screws have a through hole for coolant.

Balancing value: G 2.5 up to 16,000 min<sup>-1</sup> as delivered.

# Chucks for cylindrical shanks

with angled clamping surface and axial tool length adjustment  
Shank SK in accordance with ISO 7388-1 Form AD/AF

## Spare parts

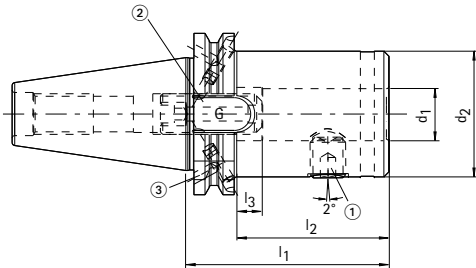
For clamping diameter $d_1$	③ Clamping screw in accordance with DIN 1835-B	
	Size	Order No.
6	M6x9	10060983
8	M8x9	10042517
10	M10x12	10004134
12, 14	M12x14	30002947
16, 18	M14x16	10004136
20	M16x16	10004137
25	M18x2x20	10004141
32	M20x2x20	10004129

Dimensions in mm.

SK	Quantity required	② Threaded pin in accordance with ISO 4026	
		Size	Order No.
40, 50	2	M5x5	10036757

# Chucks for cylindrical shanks

with angled clamping surface and axial tool length adjustment  
 Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions					G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	16	48	80	50	4	M12x1,25	1,6	MNC-SK040-16-080-3-0-A	10058633
40	20	50	80	50	4	M16x1,5	1,6	MNC-SK040-20-080-3-0-A	10058644
40	25	65	95	56	4	M20x1,5	2,3	MNC-SK040-25-095-3-0-A	10058647
45	16	48	80	48	4	M12x1,25	2,4	MNC-SK045-16-080-3-0-A	10058634
45	20	52	85	50	4	M16x1,5	2,6	MNC-SK045-20-085-3-0-A	10058645
45	25	63	90	56	4	M20x1,5	3	MNC-SK045-25-090-3-0-A	10058648
45	40	80	104	70	4	M20x1,5	3,8	MNC-SK045-40-104-3-0-A	10058650
50	16	48	80	48	4	M12x1,25	3,6	MNC-SK050-16-080-3-0-A	10058636
50	20	52	85	50	4	M16x1,5	3,8	MNC-SK050-20-085-3-0-A	10058646
50	25	65	90	56	4	M20x1,5	4,3	MNC-SK050-25-090-3-0-A	10058649
50	40	80	104	70	4	M20x1,5	5,1	MNC-SK050-40-104-3-0-A	10058651

## Spare parts

For clamping diameter d <sub>1</sub>	① Clamping screw in accordance with DIN 1835-B		② Length adjustment screw	
	Size	Order No.	Size	Order No.
16	M10x12	10004134	M12x1,25x35	30326183
20	M12x14	30002947	M16x1,5x40	30326184
25	M12x14	30002947	M20x1,5x45	30326185
40	M12x14	30002947	M20x1,5x45	30326185

For SK	Quantity required	③ Threaded pin in accordance with ISO 4026	
		Size	Order No.
40, 45, 50	2	M5x5	10021808

Dimensions in mm.

Use: For mounting MAPAL NC reamers with cylindrical shank and angled clamping surface (2°) similar to DIN 1835 Form E.

Items included: With built-in clamping screw and length adjustment screw, without pull stud.

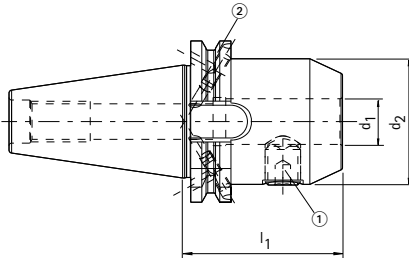
Design: Permissible run-out deviation on the taper shank in relation to the clamping diameter d<sub>1</sub> ≤ 3 μm. The bore tolerance is reduced to 3 μm to obtain the highest quality machining accuracies. Normal setting Form AD, if Form AF is required, please state with the order.

Note: From clamping diameter d<sub>1</sub> = 40 mm two clamping screw are provided. The length adjustment screws have a through hole for coolant. For pull studs, see section "Accessories, spare parts and measuring equipment".  
 Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# Chucks for cylindrical shanks

with lateral drive area

Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>			
40	6	25	50	0,9	MWC-SK040-06-050-3-0-W	10059555
40	6	25	100	1,1	MWC-SK040-06-100-3-0-W	10060644
40	6	25	160	1,3	MWC-SK040-06-160-3-0-W	10060645
40	8	28	50	0,9	MWC-SK040-08-050-3-0-W	10060646
40	8	28	100	1,1	MWC-SK040-08-100-3-0-W	10060647
40	8	28	160	1,4	MWC-SK040-08-160-3-0-W	10060648
40	10	35	50	1,0	MWC-SK040-10-050-3-0-W	10060649
40	10	35	100	1,3	MWC-SK040-10-100-3-0-W	10060650
40	10	35	160	1,7	MWC-SK040-10-160-3-0-W	10060651
40	12	42	50	1,1	MWC-SK040-12-050-3-0-W	10060652
40	12	42	100	1,5	MWC-SK040-12-100-3-0-W	10060653
40	12	42	160	2,1	MWC-SK040-12-160-3-0-W	10060654
40	14	44	50	1,3	MWC-SK040-14-050-3-0-W	10060655
40	14	44	100	1,3	MWC-SK040-14-100-3-0-W	10060656
40	14	44	160	1,3	MWC-SK040-14-160-3-0-W	10060657
40	16	48	63	3,1	MWC-SK040-16-063-3-0-W	10060658
40	16	48	100	1,8	MWC-SK040-16-100-3-0-W	10060660
40	16	48	160	2,5	MWC-SK040-16-160-3-0-W	10060661
40	18	50	63	1,3	MWC-SK040-18-063-3-0-W	10060662
40	18	50	100	1,8	MWC-SK040-18-100-3-0-W	10060663
40	18	50	160	2,7	MWC-SK040-18-160-3-0-W	10060664
40	20	52	63	1,3	MWC-SK040-20-063-3-0-W	10059554
40	20	52	100	1,9	MWC-SK040-20-100-3-0-W	10060666
40	20	52	160	2,8	MWC-SK040-20-160-3-0-W	10060667
40	25	65	100	2,3	MWC-SK040-25-100-3-0-W	10060668
40	25	65	160	3,8	MWC-SK040-25-160-3-0-W	10060669
40	32	72	100	2,5	MWC-SK040-32-100-3-0-W	10064102

Continued on next page.



## Chucks for cylindrical shanks | With lateral drive area | Shank SK in accordance with ISO 7388-1 Form AD/AF

SK	Dimensions			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>			
50	6	25	63	2,7	MWC-SK050-06-063-3-0-W	10073656
50	6	25	100	2,8	MWC-SK050-06-100-3-0-W	10073657
50	6	25	160	3,2	MWC-SK050-06-160-3-0-W	10073658
50	8	28	63	2,7	MWC-SK050-08-063-3-0-W	10073659
50	8	28	100	2,9	MWC-SK050-08-100-3-0-W	10073660
50	8	28	160	3,3	MWC-SK050-08-160-3-0-W	10073661
50	10	35	63	2,8	MWC-SK050-10-063-3-0-W	10073662
50	10	35	100	3,0	MWC-SK050-10-100-3-0-W	10073663
50	10	35	160	3,7	MWC-SK050-10-160-3-0-W	10073664
50	12	42	63	2,9	MWC-SK050-12-063-3-0-W	10073665
50	12	42	100	3,3	MWC-SK050-12-100-3-0-W	10073666
50	12	42	160	3,0	MWC-SK050-12-160-3-0-W	10073667
50	14	44	63	3,2	MWC-SK050-14-063-3-0-W	10073668
50	14	44	100	3,3	MWC-SK050-14-100-3-0-W	10073669
50	14	44	160	3,9	MWC-SK050-14-160-3-0-W	10073670
50	16	48	63	3,1	MWC-SK050-16-063-3-0-W	10073671
50	16	48	100	3,5	MWC-SK050-16-100-3-0-W	10073672
50	16	48	160	4,2	MWC-SK050-16-160-3-0-W	10073673
50	18	50	63	3,1	MWC-SK050-18-063-3-0-W	10073674
50	18	50	100	3,5	MWC-SK050-18-100-3-0-W	10073675
50	18	50	160	4,4	MWC-SK050-18-160-3-0-W	10073676
50	20	52	63	3,1	MWC-SK050-20-063-3-0-W	10073677
50	20	52	100	3,6	MWC-SK050-20-100-3-0-W	10073678
50	20	52	160	4,5	MWC-SK050-20-160-3-0-W	10073679
50	25	65	80	3,7	MWC-SK050-25-080-3-0-W	10073680
50	25	65	160	5,6	MWC-SK050-25-160-3-0-W	10073681
50	32	72	100	4,5	MWC-SK050-32-100-3-0-W	10059057
50	32	72	160	6,3	MWC-SK050-32-160-3-0-W	10073682

## Spare parts

For clamping diameter d <sub>1</sub>	① Clamping screw in accordance with DIN 1835-B	
	Size	Order No.
6	M6x9	10060983
8	M8x9	10042517
10	M10x12	10004134
12, 14	M12x14	30002947
16, 18	M14x16	10004136
20	M16x16	10004137
25	M18x2x20	10004141
32	M20x2x20	10004129

For SK	Quantity required	② Threaded pin in accordance with ISO 4026	
		Size	Order No.
40, 50	2	M5x5	10021808

Dimensions in mm.

Use: For mounting milling cutters and drills with cylindrical shank and angled clamping surface (2°) in accordance with DIN 1835 Form E and DIN 6535 Form HE.

Items included: With built-in clamping screw. Without pull stud.

Design: Permissible run-out deviation on the taper shank in relation to the clamping diameter d<sub>1</sub> = 3 µm. The bore tolerance is much tighter than DIN 1835 (dH4) to obtain machining accuracies of the highest quality. Normal setting Form AD, if Form AF is required, please state with the order.

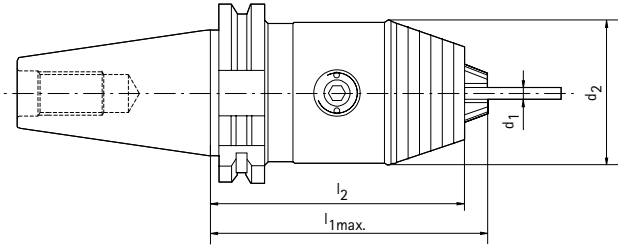
Note: From clamping diameter d<sub>1</sub> = 25 mm two clamping screw are provided.

The length adjustment screws have a through hole for coolant.

Balancing value: G 2.5 up to 16,000 min<sup>-1</sup> as delivered.

# Precision-DrillChuck

with radial actuation, without internal coolant supply  
Shank SK in accordance with ISO 7388-1 Form A



SK	Dimensions				Weight [kg]	Spare part code	Specification	Order No.
	$d_1$	$d_2$	$l_{1max}$	$l_2$				
30	0,3 - 8	36	73	70	0,7	DCT-08-A	MPC-SK030-08-073-0-0-W	30259829
30	0,5 - 13	50	117	111	1,5	DCT-13-A	MPC-SK030-13-117-0-0-W	30259831
40	0,3 - 8	36	73	70	1,3	DCT-08-A	MPC-SK040-08-073-0-0-W	30259830
40	0,5 - 13	50	96	90	1,6	DCT-13-A	MPC-SK040-13-096-0-0-W	30259832
40	2,5 - 16	57	101	95	1,8	DCT-16-A	MPC-SK040-16-101-0-0-W	30259835
45	0,5 - 13	50	96	90	2,4	DCT-13-A	MPC-SK045-13-096-0-0-W	30259833
45	2,5 - 16	57	101	95	2,6	DCT-16-A	MPC-SK045-16-101-0-0-W	30259836
50	0,5 - 13	50	112	106	4,1	DCT-13-A	MPC-SK050-13-112-0-0-W	30259834
50	2,5 - 16	57	117	111	4,3	DCT-16-A	MPC-SK050-16-117-0-0-W	30259837

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc, or pull stud.

Design: No internal coolant supply.

Note: You will find pull studs and spare parts via the spare part code in section "Accessories, spare parts and measuring equipment".

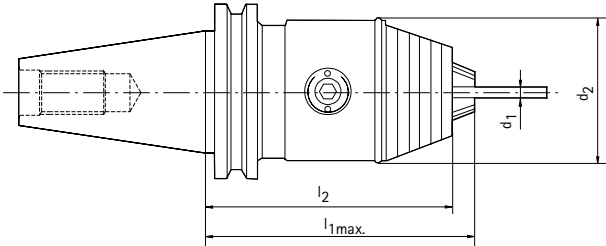
Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

## Precision-DrillChuck

with radial actuation, without internal coolant supply and without key block slots

Shank SK similar to ISO 7388-1 Form A

for machining wood



SK	Dimensions				Weight [kg]	Spare part code	Specification	Order No.
	$d_1$	$d_2$	$l_{1max}$	$l_2$				
30	0,5 - 13	50	96	90	1,2	DCT-13-A	MPC-SK030-13-096-0-0-W	30259838
30	0,5 - 13	50	117	111	1,5	DCT-13-A	MPC-SK030-13-117-0-0-W	30259839
30	2,5 - 16	57	101	95	1,4	DCT-16-A	MPC-SK030-16-101-0-0-W	30259840
30	2,5 - 16	57	122	116	1,4	DCT-16-A	MPC-SK030-16-122-0-0-W	30259841
40	0,5 - 13	50	96	90	1,6	DCT-13-A	MPC-SK040-13-096-0-0-W	30259842
40	2,5 - 16	57	101	95	1,8	DCT-16-A	MPC-SK040-16-101-0-0-W	30259843

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc, or pull stud.

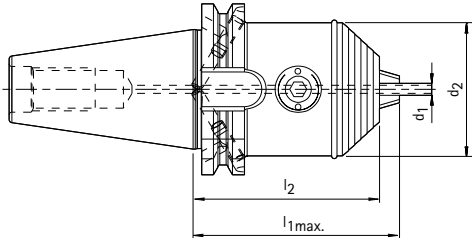
Design: No internal coolant supply.

Note: You will find pull studs and spare parts via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

# Precision-DrillChuck

with radial actuation and internal coolant supply  
Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions				Weight [kg]	Spare part code	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1max.</sub>	l <sub>2</sub>				
40	0,3 - 8	36	76	73	1,3	DCT-08-B	MPC-SK040-08-076-3-0-W	30259844
40	0,5 - 13	50	96	90	1,7	DCT-13-B	MPC-SK040-13-096-3-0-W	30259845
40	2,5 - 16	57	101	95	1,9	DCT-16-B	MPC-SK040-16-101-3-0-W	30259848
45	0,5 - 13	50	102	96	2,5	DCT-13-B	MPC-SK045-13-102-3-0-W	30259846
45	2,5 - 16	57	107	101	2,7	DCT-16-B	MPC-SK045-16-107-3-0-W	30259849
50	0,5 - 13	50	112	106	3,9	DCT-13-B	MPC-SK050-13-112-3-0-W	30259847
50	2,5 - 16	57	117	111	4,1	DCT-16-B	MPC-SK050-16-117-3-0-W	30259850

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc, or pull stud.

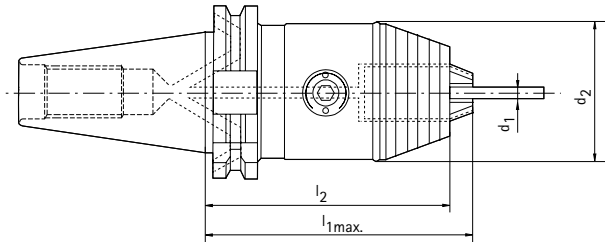
Design: With internal coolant supply.

Note: You will find pull studs and spare parts via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

# Precision-DrillChuck

with radial actuation and internal coolant supply  
Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions				Weight [kg]	Spare part code	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1max.</sub>	l <sub>2</sub>				
40	0,3 - 8	36	76	73	1,3	DCT-08-A	MPC-SK040-08-076-3-0-W	30259851
40	0,5 - 13	50	96	90	1,7	DCT-13-A	MPC-SK040-13-096-3-0-W	30259852
40	2,5 - 16	57	101	95	1,9	DCT-16-A	MPC-SK040-16-101-3-0-W	30259855
45	0,5 - 13	50	102	96	2,5	DCT-13-A	MPC-SK045-13-102-3-0-W	30259853
45	2,5 - 16	57	107	101	2,7	DCT-16-A	MPC-SK045-16-107-3-0-W	30259856
50	0,5 - 13	50	112	106	3,9	DCT-13-A	MPC-SK050-13-112-3-0-W	30259854
50	2,5 - 16	57	117	111	4,1	DCT-16-A	MPC-SK050-16-117-3-0-W	30259857

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Without sealing disc, or pull stud.

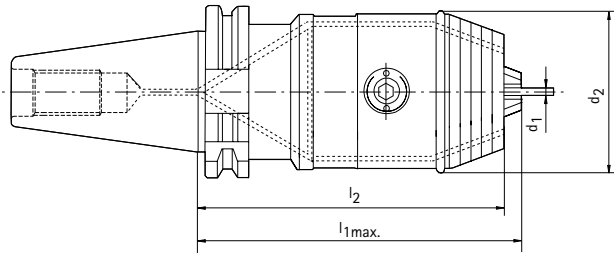
Design: With central coolant supply and decentral coolant outlet for tools without coolant ducts.

Note: You will find pull studs and spare parts via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 25,000 min<sup>-1</sup>

# Precision-DrillChuck

with radial actuation and internal coolant supply  
Shank SK in accordance with ISO 7388-1 Form AD



SK	Dimensions				Weight [kg]	Spare part code	Specification	Order No.
	$d_1$	$d_2$	$l_{1max}$	$l_2$				
40	0,5 - 13	57	119	113	1,7	DCT-13-D	MPC-SK040-13-119-1-0-W	30259966
40	2,5 - 16	57	124	113	1,9	DCT-16-D	MPC-SK040-16-124-1-0-W	30259967

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc, or pull stud.

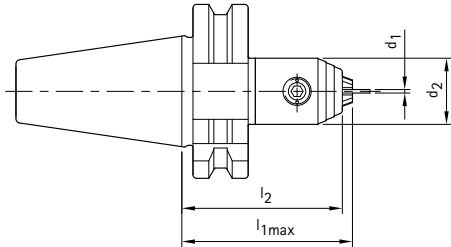
Design: With central coolant supply and decentral coolant outlet for tools without coolant ducts.

Note: You will find pull studs and spare parts via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

# Micro-Precision DrillChuck

with radial actuation and internal coolant supply  
Shank SK in accordance with ISO 7388-1 Form AD



SK	Clamping range $d_1$	Dimensions			Weight [kg]	Specification	Order No.
		$d_2$	$l_2$	$l_{1max}$			
30	0,2 - 3,4	19	45	48	0,4	MPC-SK030-03-048-1-0-W	30551228
30	0,2 - 6,4	25	55	59	0,8	MPC-SK030-06-059-1-0-W	30608018

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc, or pull stud.

Design: With internal coolant supply.

Note: You will find pull studs and spare parts via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.







# CHUCKS WITH BT AND V-FLANGE MODULE CAT

## BT chucks

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HighTorque Chuck HTC with narrow contour 3 degrees \_\_\_\_\_ 247

Hydraulic chucks HydroChuck with axial length adjustment \_\_\_\_\_ 248



Shrink chucks ThermoChuck \_\_\_\_\_ 253

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Chucks for cylindrical shanks with lateral drive area \_\_\_\_\_ 261

Chucks for cylindrical shanks with angled clamping surface \_\_\_\_\_ 262

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Precision-DrillChuck \_\_\_\_\_ 264

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## CAT chucks

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HighTorque Chuck HTC \_\_\_\_\_ 268

Hydraulic chucks HydroChuck with axial length adjustment \_\_\_\_\_ 269



Shrink chucks ThermoChuck \_\_\_\_\_ 272

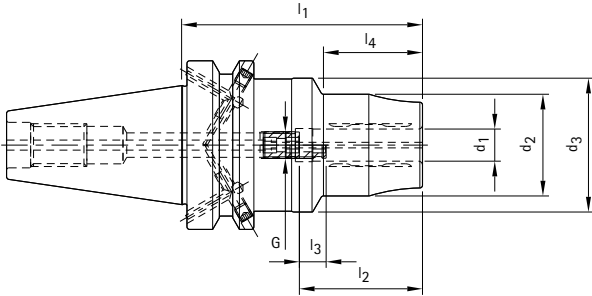


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# HighTorque Chuck HTC

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



BT	Dimensions							G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$				
40	6	32	50	80	37	10	26	M5	1,6	HTC-BT040-06-080-3-0-A	30490562
40	8	34	50	80	37	10	27	M6	1,6	HTC-BT040-08-080-3-0-A	30490563
40	10	36	50	85	41	10	32	M8x1	1,6	HTC-BT040-10-085-3-0-A	30490564
40	12	38	50	90	46	10	37	M10x1	1,7	HTC-BT040-12-090-3-0-A	30490565
40	14	40	50	90	46	10	37	M10x1	1,8	HTC-BT040-14-090-3-0-A	30490566
40	16	42	50	95	49	10	42	M12x1	1,8	HTC-BT040-16-095-3-0-A	30490567
40	18	44	50	95	49	10	42	M12x1	1,9	HTC-BT040-18-095-3-0-A	30490568
40	20	48	50	100	51	10	45	M16x1	1,9	HTC-BT040-20-100-3-0-A	30490569
40	25	57	52	110	57	10	60	M16x1	2,4	HTC-BT040-25-110-3-0-A	30490570
40	32	63	62	120	61	10	65	M16x1	2,7	HTC-BT040-32-120-3-0-A	30490571

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screws.  
Without pull stud.

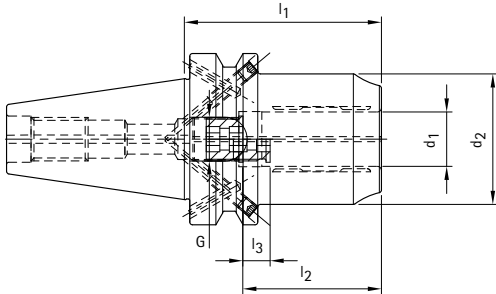
Design: Normal setting Form JD, if Form JF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.  
Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



## Short heavy-duty design

BT	Dimensions					G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$l_1$	$l_2$	$l_3$				
40	12	42	50	46	10	M8x1	1,1	HTC-BT040-12-050-3-0-A	30524705
40	20	49	73	51	10	M16x1	1,4	HTC-BT040-20-073-3-0-A	30490572
50	12	42	69	46	10	M8x1	3,4	HTC-BT050-12-069-3-0-A	30524707
50	20	49	84	51	10	M16x1	4,0	HTC-BT050-20-084-3-0-A	30490573
50	32	72	90	61	10	M16x1	4,6	HTC-BT050-32-090-3-0-A	30490574

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screws.

Without pull stud.

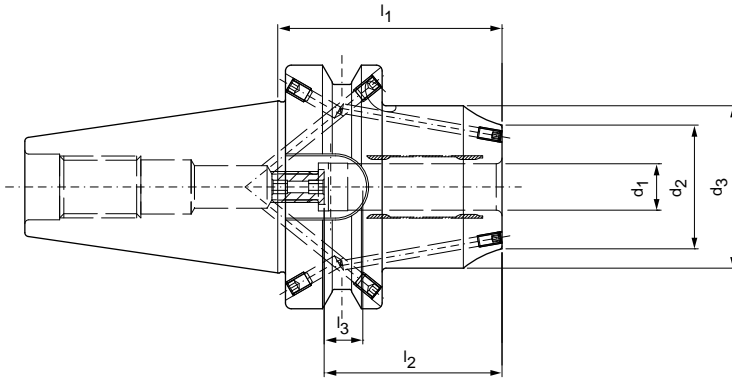
Design: Normal setting Form JD, if Form JF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request. Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



Short heavy-duty design with two cooling channel bores, resealable

BT	Dimensions							G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$				
40	12	42	-	58	46	10	-	M8x1	1,2	HTC-BT040-12-058-3-0-A	30655669
40	16	46	-	72,5	49	10	-	M12x1	1,4	HTC-BT040-16-073-3-0-A	30655670
40	20	49	-	72,5	51	10	-	M16x1	1,4	HTC-BT040-20-073-3-0-A	30655671

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 20$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw.

Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected. Normal setting Form JD, if Form JF is required, please state with the order.

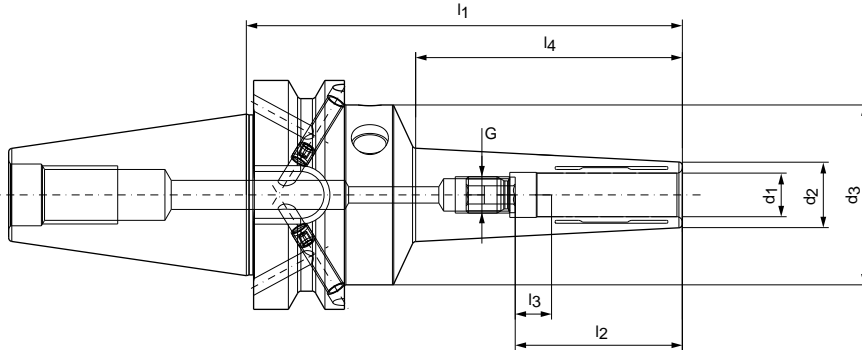
Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



Narrow design, 3 degrees

BT	Dimensions							G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$				
40	3	9	49,5	120	28	16	79,5	M3	1,3	HTC-BT040-03-120-3-0-A	30781286
40	4	10	49,5	120	28	12	79,5	M3	1,3	HTC-BT040-04-120-3-0-A	30781287
40	5	11	49,5	120	28	8	71	M3	1,3	HTC-BT040-05-120-3-0-A	30781290
40	6	12	49,5	120	37	10	79,9	M5	1,3	HTC-BT040-06-120-3-0-A	30757078
40	8	14	49,5	120	37	10	72,4	M6	1,3	HTC-BT040-08-120-3-0-A	30757080
40	10	16	49,5	120	41	10	72,9	M8x1	1,3	HTC-BT040-10-120-3-0-A	30757081
40	12	18	49,5	120	46	10	73,4	M10x1	1,3	HTC-BT040-12-120-3-0-A	30757082

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 12$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw.

Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected. Normal setting Form JD, if Form JF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment".

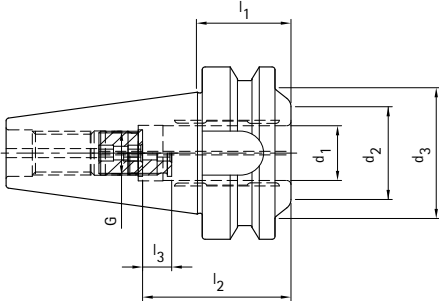
Length adjustment screws available on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD (JIS B 6339)



## Ultra-short design

BT	Dimensions						G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	20	34	48	32,5	51	10	M16x1	0,7	MHC-BT040-20-033-1-0-A	30524713

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1835 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 20$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw.

Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA.

With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ .

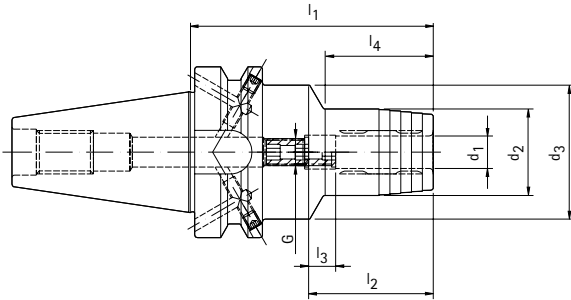
On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment".  
Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



BT	Dimensions							G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$				
30*	6	26	45	51	37	10	12	M5	0,7	MHC-BT030-06-051-1-0-A	30270438
30*	8	28	45	51	37	10	13	M6	0,7	MHC-BT030-08-051-1-0-A	30270439
30*	10	30	45	51	41	10	13	M8x1	0,7	MHC-BT030-10-051-1-0-A	30270440
30*	12	32	45	51	46	10	14	M8x1	0,7	MHC-BT030-12-051-1-0-A	30270441
30*	14	34	45	90	46	10	45	M8x1	1,0	MHC-BT030-14-090-1-0-A	30270442
30*	16	38	45	90	49	10	50	M8x1	1,0	MHC-BT030-16-090-1-0-A	30270443
30*	18	40	45	90	49	10	50	M8x1	1,0	MHC-BT030-18-090-1-0-A	30270444
30*	20	42	45	90	51	10	50	M8x1	1,0	MHC-BT030-20-090-1-0-A	30270445
40	6	26	49,5	90	37	10	29	M5	1,5	MHC-BT040-06-090-3-0-A	30251037
40	6	26	49,5	140	37	10	29	M5	2,1	MHC-BT040-06-140-3-0-A	30270446
40	8	28	49,5	90	37	10	30	M6	1,6	MHC-BT040-08-090-3-0-A	30251038
40	8	28	49,5	140	37	10	30	M6	2,1	MHC-BT040-08-140-3-0-A	30270447
40	10	30	49,5	90	41	10	35	M8x1	1,6	MHC-BT040-10-090-3-0-A	30251039
40	10	30	49,5	140	41	10	35	M8x1	2,1	MHC-BT040-10-140-3-0-A	30270448
40	12	32	49,5	90	46	10	40	M10x1	1,6	MHC-BT040-12-090-3-0-A	30251040
40	12	32	49,5	140	46	10	40	M10x1	2,1	MHC-BT040-12-140-3-0-A	30270449
40	14	34	49,5	90	46	10	40	M10x1	1,6	MHC-BT040-14-090-3-0-A	30251041
40	14	34	49,5	140	46	10	40	M10x1	2,1	MHC-BT040-14-140-3-0-A	30270450
40	16	38	49,5	90	49	10	45	M12x1	1,6	MHC-BT040-16-090-3-0-A	30251042
40	16	38	49,5	140	49	10	45	M12x1	2,1	MHC-BT040-16-140-3-0-A	30270451
40	18	40	49,5	90	49	10	46	M12x1	1,6	MHC-BT040-18-090-3-0-A	30251043
40	18	40	49,5	140	49	10	46	M12x1	2,1	MHC-BT040-18-140-3-0-A	30270452
40	20	42	49,5	90	51	10	47	M16x1	1,6	MHC-BT040-20-090-3-0-A	30251044
40	20	42	49,5	140	51	10	47	M16x1	2,1	MHC-BT040-20-140-3-0-A	30270453
40	25	55	52,0	90	57	10	50	M16x1	1,9	MHC-BT040-25-090-3-0-A	30251045
40	25	55	52,0	140	57	10	75	M16x1	2,8	MHC-BT040-25-140-3-0-A	30270454
40	32	63	62,0	90	61	10	48	M16x1	2,1	MHC-BT040-32-090-3-0-A	30251046
40	32	63	59,0	140	61	10	61	M16x1	2,9	MHC-BT040-32-140-3-0-A	30270455

\* Design: Steep taper size SK30 is not available in combined design JD/JF.

Continued on next page.



**Hydraulic chucks HydroChuck | With axial tool length adjustment | Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)**

BT	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
50	6	26	49,5	90	37	10	29	M5	4,2	MHC-BT050-06-090-3-0-A	30251047
50	6	26	49,5	140	37	10	29	M5	5,0	MHC-BT050-06-140-3-0-A	30270456
50	8	28	49,5	90	37	10	30	M6	4,2	MHC-BT050-08-090-3-0-A	30251048
50	8	28	49,5	140	37	10	30	M6	5,0	MHC-BT050-08-140-3-0-A	30270457
50	10	30	49,5	90	41	10	34	M8x1	4,2	MHC-BT050-10-090-3-0-A	30251049
50	10	30	49,5	140	41	10	35	M8x1	5,0	MHC-BT050-10-140-3-0-A	30270458
50	12	32	49,5	90	46	10	34	M10x1	4,2	MHC-BT050-12-090-3-0-A	30251050
50	12	32	49,5	140	46	10	40	M10x1	5,0	MHC-BT050-12-140-3-0-A	30270459
50	14	34	49,5	90	46	10	34	M10x1	4,2	MHC-BT050-14-090-3-0-A	30251051
50	14	34	49,5	140	46	10	40	M10x1	5,0	MHC-BT050-14-140-3-0-A	30270460
50	16	38	49,5	90	49	10	35	M12x1	4,2	MHC-BT050-16-090-3-0-A	30251052
50	16	38	49,5	140	49	10	45	M12x1	5,0	MHC-BT050-16-140-3-0-A	30270461
50	18	40	49,5	90	49	10	35	M12x1	4,2	MHC-BT050-18-090-3-0-A	30251053
50	18	40	49,5	140	49	10	46	M12x1	5,1	MHC-BT050-18-140-3-0-A	30270462
50	20	42	49,5	90	51	10	35	M16x1	4,2	MHC-BT050-20-090-3-0-A	30251054
50	20	42	49,5	140	51	10	42	M16x1	5,1	MHC-BT050-20-140-3-0-A	30270463
50	25	55	63,0	110	57	10	48	M16x1	4,6	MHC-BT050-25-110-3-0-A	30251055
50	25	55	63,0	140	57	10	48	M16x1	5,5	MHC-BT050-25-140-3-0-A	30270464
50	32	63	70,0	110	61	10	50	M16x1	5,0	MHC-BT050-32-110-3-0-A	30251056
50	32	63	70,0	140	61	10	50	M16x1	5,7	MHC-BT050-32-140-3-0-A	30270465

\* Design: Steep taper size SK30 is not available in combined design JD/JF.

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1855 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw. Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA.

With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy 3  $\mu\text{m}$ .

On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected. Normal setting Form JD, if Form JF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment".

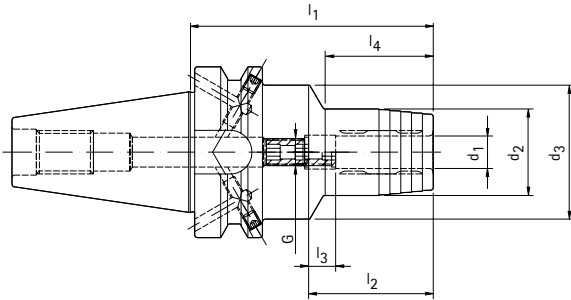
Length adjustment screws available on request.

Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



INCH

BT	Dimensions								G	Weight [kg]	Specification	Order No.
	inch	d <sub>1</sub> mm	d <sub>2</sub> mm	d <sub>3</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	l <sub>4</sub> mm				
40	1/4	6,35	26	45	90	37	10	43,50	M5	1,40	MHC-BT040-1/4"-090-3-0-A	30780818
40	3/8	9,53	30	45	90	41	10	44,50	M8X1	1,40	MHC-BT040-3/8"-090-3-0-A	30780819
40	1/2	12,70	32	45	90	46	10	44,50	M10X1	1,50	MHC-BT040-1/2"-090-3-0-A	30780820
40	5/8	15,88	42	45	90	49	10	47,50	M12X1	1,40	MHC-BT040-5/8"-090-3-0-A	30780821
40	3/4	19,05	42	45	90	51	10	47,50	M16X1	1,60	MHC-BT040-3/4"-090-3-0-A	30780822

Use: For clamping tools with smooth cylindrical shanks up to clamping diameter  $d_1 = 3/4"$  as well as recesses. The clamping diameter is designed for a tool tolerance of h6.  
Items included: With length adjustment screw.

Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface the accuracy may be affected. Normal setting Form JD, if Form JF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment".

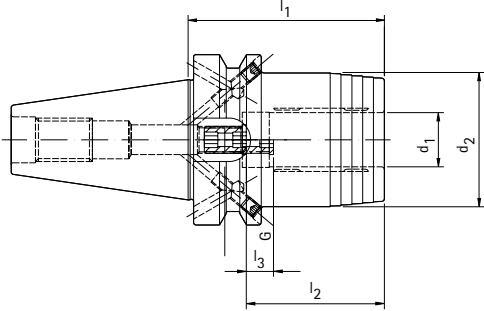
Length adjustment screws available on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



## Short heavy-duty design

BT	Dimensions					G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	20	49,5	72,5	51	10	M16x1	1,5	MHC-BT040-20-073-3-0-A	30251057
50	32	72,0	90,0	61	10	M16x1	4,7	MHC-BT050-32-090-3-0-A	30251058

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1855 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw. Without pull stud.

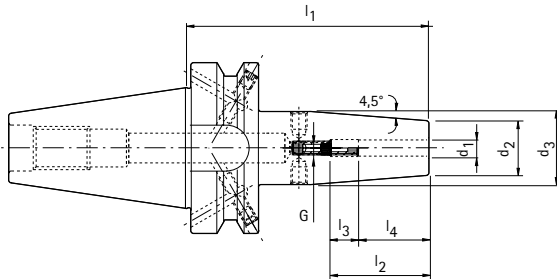
Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy  $3 \mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected. Normal setting Form JD, if Form JF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For pull studs and reducing sleeves for reducing the clamping diameter (on the usage of the reducing sleeve the accuracy may be degraded) see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request. Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



BT	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
30*	3	10	17	85	28	16	12	M6	0,7	MTC-BT030-03-085-1-0-A	30329402
30*	4	15	22	85	28	12	16	M6	0,7	MTC-BT030-04-085-1-0-A	30329453
30*	5	15	22	85	30	10	20	M6	0,7	MTC-BT030-05-085-1-0-A	30329454
30*	6	21	27	85	36	10	26	M5	0,8	MTC-BT030-06-085-1-0-A	30329455
30*	8	21	27	85	36	10	26	M6	0,8	MTC-BT030-08-085-1-0-A	30308274
30*	10	24	32	85	41	10	31	M8x1	0,8	MTC-BT030-10-085-1-0-A	30308275
30*	12	24	32	85	47	10	37	M10x1	0,9	MTC-BT030-12-085-1-0-A	30325011
30*	14	27	34	85	47	10	37	M10x1	0,9	MTC-BT030-14-085-1-0-A	30329458
30*	16	27	34	85	50	10	40	M12x1	0,9	MTC-BT030-16-085-1-0-A	30329447
30*	18	33	42	85	50	10	40	M12x1	1,0	MTC-BT030-18-085-1-0-A	30329460
30*	20	33	42	85	52	10	42	M16x1	1,0	MTC-BT030-20-085-1-0-A	30300170
40	3	10	20	90	28	16	12	M6	1,0	MTC-BT040-03-090-3-0-A	30261814
40**	3	10	20	120	-	-	12	-	1,2	MTC-BT040-03-120-3-0-W	30261815
40**	3	10	20	160	-	-	12	-	1,4	MTC-BT040-03-160-3-0-W	30261816
40	4	15	25	90	28	12	16	M6	1,1	MTC-BT040-04-090-3-0-A	30261817
40**	4	15	22	120	-	-	16	-	1,3	MTC-BT040-04-120-3-0-W	30261818
40**	4	15	22	160	-	-	16	-	1,5	MTC-BT040-04-160-3-0-W	30261819
40	5	15	25	90	30	10	20	M6	1,1	MTC-BT040-05-090-3-0-A	30261820
40**	5	15	22	120	-	-	20	-	1,3	MTC-BT040-05-120-3-0-W	30261821
40**	5	15	22	160	-	-	20	-	1,5	MTC-BT040-05-160-3-0-W	30261822
40	6	21	27	90	36	10	26	M5	1,1	MTC-BT040-06-090-3-0-A	30261823
40	6	21	27	120	36	10	26	M5	1,3	MTC-BT040-06-120-3-0-A	30261824
40	6	21	27	160	36	10	26	M5	1,5	MTC-BT040-06-160-3-0-A	30261825
40	7	21	27	90	36	10	26	M5	1,1	MTC-BT040-07-090-3-0-A	30267102
40	8	21	27	90	36	10	26	M6	1,1	MTC-BT040-08-090-3-0-A	30261826
40	8	21	27	120	36	10	26	M6	1,3	MTC-BT040-08-120-3-0-A	30261827
40	8	21	27	160	36	10	26	M6	1,5	MTC-BT040-08-160-3-0-A	30261828
40	9	21	27	90	36	10	26	M6	1,1	MTC-BT040-09-090-3-0-A	30267103
40	10	24	32	90	41	10	31	M8x1	1,2	MTC-BT040-10-090-3-0-A	30261829
40	10	24	32	120	41	10	31	M8x1	1,4	MTC-BT040-10-120-3-0-A	30261830
40	10	24	32	160	41	10	31	M8x1	1,6	MTC-BT040-10-160-3-0-A	30261831
40	11	24	32	90	41	10	31	M8x1	1,2	MTC-BT040-11-090-3-0-A	30267105
40	12	24	32	90	47	10	37	M10x1	1,2	MTC-BT040-12-090-3-0-A	30261832
40	12	24	32	120	47	10	37	M10x1	1,4	MTC-BT040-12-120-3-0-A	30261833

\* Design: Steep taper size BT30 is not available in combined design JD/JF.

\*\* Without axial tool length adjustment

Continued on next page.

## Shrink chucks ThermoChuck | With axial tool length adjustment | Shank BT in acc. with ISO 7388-2 Form JD/JF (JIS B 6339)

BT	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	12	24	32	160	47	10	37	M10x1	1,6	MTC-BT040-12-160-3-0-A	30261834
40	13	24	32	90	47	10	37	M10x1	1,2	MTC-BT040-13-090-3-0-A	30267106
40	14	27	34	90	47	10	37	M10x1	1,2	MTC-BT040-14-090-3-0-A	30261835
40	14	27	34	120	47	10	37	M10x1	1,4	MTC-BT040-14-120-3-0-A	30261836
40	14	27	34	160	47	10	37	M10x1	1,6	MTC-BT040-14-160-3-0-A	30261837
40	15	27	34	90	47	10	37	M10x1	1,2	MTC-BT040-15-090-3-0-A	30267107
40	16	27	34	90	50	10	40	M12x1	1,2	MTC-BT040-16-090-3-0-A	30261838
40	16	27	34	120	50	10	40	M12x1	1,4	MTC-BT040-16-120-3-0-A	30261839
40	16	27	34	160	50	10	40	M12x1	1,6	MTC-BT040-16-160-3-0-A	30261840
40	18	33	42	90	50	10	40	M12x1	1,3	MTC-BT040-18-090-3-0-A	30261841
40	18	33	42	120	50	10	40	M12x1	1,6	MTC-BT040-18-120-3-0-A	30261842
40	18	33	42	160	50	10	40	M12x1	1,9	MTC-BT040-18-160-3-0-A	30261843
40	20	33	42	90	52	10	42	M16x1	1,3	MTC-BT040-20-090-3-0-A	30261844
40	20	33	42	120	52	10	42	M16x1	1,6	MTC-BT040-20-120-3-0-A	30261845
40	20	33	42	160	52	10	42	M16x1	1,9	MTC-BT040-20-160-3-0-A	30261846
40	25	44	53	100	58	10	48	M16x1	1,7	MTC-BT040-25-100-3-0-A	30261847
40	25	44	53	120	58	10	48	M16x1	2,0	MTC-BT040-25-120-3-0-A	30261848
40	25	44	53	160	58	10	48	M16x1	2,3	MTC-BT040-25-160-3-0-A	30261849
40	32	44	53	100	62	10	52	M16x1	1,5	MTC-BT040-32-100-3-0-A	30261850
40	32	44	53	120	62	10	52	M16x1	1,8	MTC-BT040-32-120-3-0-A	30261851
40	32	44	53	160	62	10	52	M16x1	2,0	MTC-BT040-32-160-3-0-A	30261852
50**	3	10	17	100	-	-	12	-	3,6	MTC-BT050-03-100-3-0-W	30261853
50**	3	10	20	120	-	-	12	-	3,7	MTC-BT050-03-120-3-0-W	30261854
50**	3	10	20	160	-	-	12	-	3,9	MTC-BT050-03-160-3-0-W	30261855
50**	4	15	22	100	-	-	16	-	3,7	MTC-BT050-04-100-3-0-W	30261856
50**	4	15	22	120	-	-	16	-	3,5	MTC-BT050-04-120-3-0-W	30261857
50**	4	15	22	160	-	-	16	-	4,0	MTC-BT050-04-160-3-0-W	30261858
50**	5	15	22	100	-	-	20	-	3,7	MTC-BT050-05-100-3-0-W	30261859
50**	5	15	22	120	-	-	20	-	3,8	MTC-BT050-05-120-3-0-W	30261860
50**	5	15	22	160	-	-	20	-	4,0	MTC-BT050-05-160-3-0-W	30261861
50	6	21	27	100	36	10	26	M5	3,7	MTC-BT050-06-100-3-0-A	30261862
50	6	21	27	120	36	10	26	M5	3,8	MTC-BT050-06-120-3-0-A	30261863
50	6	21	27	160	36	10	26	M5	4,0	MTC-BT050-06-160-3-0-A	30261864
50	6	21	27	200	36	10	26	M5	4,3	MTC-BT050-06-200-3-0-A	30796851
50	8	21	27	100	36	10	26	M6	3,7	MTC-BT050-08-100-3-0-A	30261865
50	8	21	27	120	36	10	26	M6	3,8	MTC-BT050-08-120-3-0-A	30261866
50	8	21	27	160	36	10	26	M6	4,0	MTC-BT050-08-160-3-0-A	30261867
50	8	21	27	200	36	10	26	M6	4,2	MTC-BT050-08-200-3-0-A	30796852
50	10	24	32	100	41	10	31	M8x1	3,8	MTC-BT050-10-100-3-0-A	30261868
50	10	24	32	120	41	10	31	M8x1	4,0	MTC-BT050-10-120-3-0-A	30261869
50	10	24	32	160	41	10	31	M8x1	4,2	MTC-BT050-10-160-3-0-A	30261870
50	10	24	32	200	41	10	31	M8X1	4,5	MTC-BT050-10-200-3-0-A	30796853
50	12	24	32	100	47	10	37	M10x1	3,8	MTC-BT050-12-100-3-0-A	30261871
50	12	24	32	120	47	10	37	M10x1	4,0	MTC-BT050-12-120-3-0-A	30261872
50	12	24	32	160	47	10	37	M10x1	4,2	MTC-BT050-12-160-3-0-A	30261873
50	12	24	32	200	47	10	37	M10X1	4,5	MTC-BT050-12-200-3-0-A	30796854
50	14	27	34	100	47	10	37	M10x1	3,8	MTC-BT050-14-100-3-0-A	30261874
50	14	27	34	120	47	10	37	M10x1	4,0	MTC-BT050-14-120-3-0-A	30261875
50	14	27	34	160	47	10	37	M10x1	4,2	MTC-BT050-14-160-3-0-A	30261876
50	16	27	34	100	50	10	40	M12x1	3,8	MTC-BT050-16-100-3-0-A	30259977

\*\* Design: without axial tool length adjustment

**Shrink chucks ThermoChuck | With axial tool length adjustment | Shank BT in acc. with ISO 7388-2 Form JD/JF (JIS B 6339)**

BT	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
50	16	27	34	120	50	10	40	M12x1	4,0	MTC-BT050-16-120-3-0-A	30261878
50	16	27	34	160	50	10	40	M12x1	4,2	MTC-BT050-16-160-3-0-A	30261879
50	16	27	34	200	50	10	40	M12X1	4,6	MTC-BT050-16-200-3-0-A	30796855
50	18	33	42	100	50	10	40	M12x1	3,9	MTC-BT050-18-100-3-0-A	30261880
50	18	33	42	120	50	10	40	M12x1	4,2	MTC-BT050-18-120-3-0-A	30261881
50	18	33	42	160	50	10	40	M12x1	4,6	MTC-BT050-18-160-3-0-A	30261882
50	20	33	42	100	52	10	42	M16x1	3,8	MTC-BT050-20-100-3-0-A	30261883
50	20	33	42	120	52	10	42	M16x1	4,2	MTC-BT050-20-120-3-0-A	30261884
50	20	33	42	160	52	10	42	M16x1	4,6	MTC-BT050-20-160-3-0-A	30261885
50	20	33	42	200	52	10	42	M16X1	5,1	MTC-BT050-20-200-3-0-A	30796856
50	25	44	53	110	58	10	48	M16x1	4,2	MTC-BT050-25-110-3-0-A	30261886
50	25	44	53	120	58	10	48	M16x1	4,5	MTC-BT050-25-120-3-0-A	30261887
50	25	44	53	160	58	10	48	M16x1	4,8	MTC-BT050-25-160-3-0-A	30261888
50	32	44	53	110	62	10	52	M16x1	4,1	MTC-BT050-32-110-3-0-A	30261889
50	32	44	53	120	62	10	52	M16x1	4,4	MTC-BT050-32-120-3-0-A	30261890
50	32	44	53	160	62	10	52	M16x1	4,6	MTC-BT050-32-160-3-0-A	30261891

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks in accordance with DIN 1855 Form A, DIN 6535 Form HA up to clamping diameter  $d_1 = 32$  mm as well as with recesses in accordance with DIN 1835 Form B, E and DIN 6535 Form HB, HE directly and without reducing sleeve in the clamping diameter. The clamping diameter is designed for a shank tolerance of h6.

Items included: With length adjustment screw. Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks in accordance with DIN 1835 Form A and DIN 6535 Form HA. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy 3  $\mu\text{m}$ . On usage of cylindrical shanks with angled clamping surface (Form E and Form HE) the accuracy may be affected. Normal setting Form JD, if Form JF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

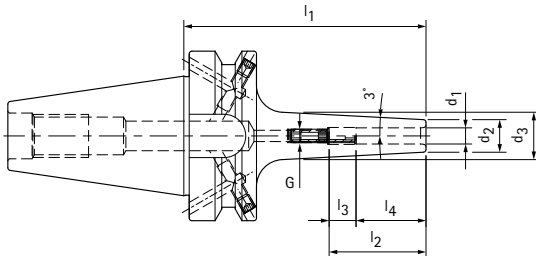
Length adjustment screws and fine balancing screws available on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



## Slender design, 3 degrees

BT	Dimensions							G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$				
40	3	9	15	90	28	16	12	M6	1,0	MTC-BT040-03-090-3-0-A	30385213
40*	3	9	16	120	-	-	12	-	1,1	MTC-BT040-03-120-3-0-W	30385214
40*	3	9	19	160	-	-	12	-	1,2	MTC-BT040-03-160-3-0-W	30385215
40*	3	9	19	200	-	-	12	-	1,2	MTC-BT040-03-200-3-0-A	30654915
40	4	10	16	90	28	12	16	M6	1,0	MTC-BT040-04-090-3-0-A	30385216
40*	4	10	17	120	-	-	16	-	1,1	MTC-BT040-04-120-3-0-W	30385217
40*	4	10	20	160	-	-	16	-	1,2	MTC-BT040-04-160-3-0-W	30385218
40*	4	10	20	200	-	-	16	-	1,3	MTC-BT040-04-200-3-0-A	30654916
40	5	11	17	90	30	10	20	M6	1,1	MTC-BT040-05-090-3-0-A	30385219
40*	5	11	18	120	-	-	20	-	1,1	MTC-BT040-05-120-3-0-W	30385220
40*	5	11	21	160	-	-	20	-	1,2	MTC-BT040-05-160-3-0-W	30385221
40*	5	11	21	200	-	-	20	-	1,3	MTC-BT040-05-200-3-0-A	30654917
40	6	12	18	90	36	10	26	M5	1,1	MTC-BT040-06-090-3-0-A	30385222
40	6	12	21	120	36	10	26	M5	1,1	MTC-BT040-06-120-3-0-A	30385223
40	6	12	24	160	36	10	26	M5	1,2	MTC-BT040-06-160-3-0-A	30385224
40	6	12	24	200	36	10	26	M5	1,3	MTC-BT040-06-200-3-0-A	30654918
40	8	14	20	90	36	10	26	M6	1,1	MTC-BT040-08-090-3-0-A	30385225
40	8	14	23	120	36	10	26	M6	1,2	MTC-BT040-08-120-3-0-A	30385226
40	8	14	26	160	36	10	26	M6	1,3	MTC-BT040-08-160-3-0-A	30385227
40	8	14	26	200	36	10	26	M6	1,4	MTC-BT040-08-200-3-0-A	30654919
40	10	16	22	90	41	10	31	M8x1	1,1	MTC-BT040-10-090-3-0-A	30385228
40	10	16	25	120	41	10	31	M8x1	1,2	MTC-BT040-10-120-3-0-A	30385229
40	10	16	28	160	41	10	31	M8x1	1,3	MTC-BT040-10-160-3-0-A	30385230
40	10	16	28	200	41	10	31	M8x1	1,5	MTC-BT040-10-200-3-0-A	30654920
40	12	18	24	90	47	10	37	M10x1	1,1	MTC-BT040-12-090-3-0-A	30385231
40	12	18	27	120	47	10	37	M10x1	1,2	MTC-BT040-12-120-3-0-A	30385232
40	12	18	30	160	47	10	37	M10x1	1,4	MTC-BT040-12-160-3-0-A	30385233
40	12	18	30	200	47	10	37	M10x1	1,6	MTC-BT040-12-200-3-0-A	30654921
40	14	20	26	90	47	10	37	M10x1	1,1	MTC-BT040-14-090-3-0-A	30385234
40	14	20	29	120	47	10	37	M10x1	1,3	MTC-BT040-14-120-3-0-A	30385235
40	14	20	32	160	47	10	37	M10x1	1,5	MTC-BT040-14-160-3-0-A	30385236
40	14	20	32	200	47	10	37	M10x1	1,7	MTC-BT040-14-200-3-0-A	30654922
40	16	22	28	90	50	10	40	M12x1	1,2	MTC-BT040-16-090-3-0-A	30385237
40	16	22	31	120	50	10	40	M12x1	1,3	MTC-BT040-16-120-3-0-A	30385238

\* without axial tool length adjustment

**Shrink chucks ThermoChuck | With axial tool length adjustment | Shank BT in acc. with ISO 7388-2 Form JD/JF (JIS B 6339)**

BT	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	16	22	34	160	50	10	40	M12x1	1,5	MTC-BT040-16-160-3-0-A	30385239
40	16	22	34	200	50	10	40	M12x1	1,8	MTC-BT040-16-200-3-0-A	30654923
40	18	24	30	90	50	10	40	M12x1	1,2	MTC-BT040-18-090-3-0-A	30385240
40	18	24	33	120	50	10	40	M12x1	1,3	MTC-BT040-18-120-3-0-A	30385241
40	18	24	36	160	50	10	40	M12x1	1,6	MTC-BT040-18-160-3-0-A	30385242
40	18	24	36	200	50	10	40	M12x1	1,9	MTC-BT040-18-200-3-0-A	30654924
40	20	26	32	90	52	10	42	M16x1	1,2	MTC-BT040-20-090-3-0-A	30385243
40	20	26	35	120	52	10	42	M16x1	1,3	MTC-BT040-20-120-3-0-A	30385244
40	20	26	38	160	52	10	42	M16x1	1,7	MTC-BT040-20-160-3-0-A	30385245
40	20	26	38	200	52	10	42	M16x1	2,0	MTC-BT040-20-200-3-0-A	30654925

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole. Without pull stud.

Design: Permissible run-out deviation on the taper in relation to the clamping diameter d<sub>1</sub> = 3 µm. The clamping diameter is designed for a shank tolerance of h6.

Normal setting Form JD, if Form JF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

Length adjustment screws and fine balancing screws available on request.

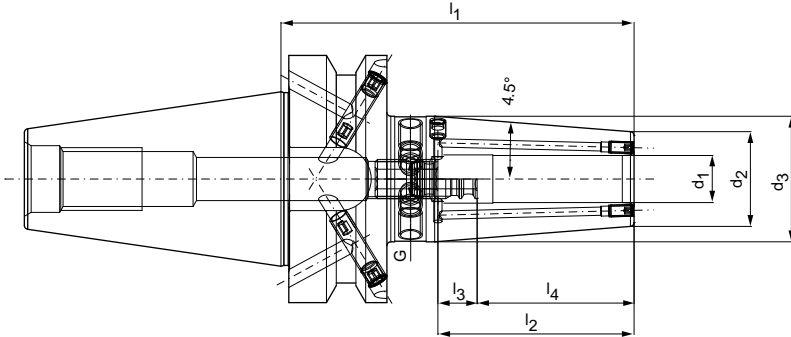
Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.



# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



## Design with two cooling channel bores, resealable

BT	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	3	10	17	90	28	16	12	M6	1,0	MTC-BT040-03-090-3-0-A	30655724
40*	3	10	20	120	-	-	12	-	1,2	MTC-BT040-03-120-3-0-W	30655737
40	4	15	22	90	28	12	16	M6	1,1	MTC-BT040-04-090-3-0-A	30655725
40*	4	15	22	120	-	-	16	-	1,3	MTC-BT040-04-120-3-0-W	30655738
40	5	15	22	90	30	10	20	M6	1,1	MTC-BT040-05-090-3-0-A	30655726
40*	5	15	22	120	-	-	20	-	1,3	MTC-BT040-05-120-3-0-W	30655739
40	6	21	27	90	36	10	26	M5	1,1	MTC-BT040-06-090-3-0-A	30655727
40	6	21	27	120	36	10	26	M5	1,3	MTC-BT040-06-120-3-0-A	30655740
40	8	21	27	90	36	10	26	M6	1,1	MTC-BT040-08-090-3-0-A	30655728
40	8	21	27	120	36	10	26	M6	1,3	MTC-BT040-08-120-3-0-A	30655741
40	10	24	32	90	41	10	31	M8x1	1,2	MTC-BT040-10-090-3-0-A	30655729
40	10	24	32	120	41	10	31	M8x1	1,4	MTC-BT040-10-120-3-0-A	30655742
40	12	24	32	90	47	10	37	M10x1	1,2	MTC-BT040-12-090-3-0-A	30655730
40	12	24	34	120	47	10	37	M10x1	1,4	MTC-BT040-12-120-3-0-A	30655743
40	14	27	34	90	47	10	37	M10x1	1,2	MTC-BT040-14-090-3-0-A	30655731
40	14	27	34	120	47	10	37	M10x1	1,4	MTC-BT040-14-120-3-0-A	30655744
40	16	27	34	90	50	10	40	M12x1	1,2	MTC-BT040-16-090-3-0-A	30655732
40	16	27	34	120	50	10	40	M12x1	1,4	MTC-BT040-16-120-3-0-A	30655745
40	18	33	42	90	50	10	40	M12x1	1,3	MTC-BT040-18-090-3-0-A	30655733
40	18	33	42	120	50	10	40	M12x1	1,6	MTC-BT040-18-120-3-0-A	30655746
40	20	33	42	90	52	10	42	M16x1	1,3	MTC-BT040-20-090-3-0-A	30655734
40	20	33	42	120	52	10	42	M16x1	1,6	MTC-BT040-20-120-3-0-A	30655747
40	25	44	53	100	58	10	48	M16x1	1,7	MTC-BT040-25-100-3-0-A	30655735
40	25	44	53	120	58	10	48	M16x1	2,0	MTC-BT040-25-120-3-0-A	30655748
40	32	44	53	100	62	10	52	M16x1	1,5	MTC-BT040-32-100-3-0-A	30655736
40	32	44	53	120	62	10	52	M16x1	1,8	MTC-BT040-32-120-3-0-A	30655749

\* without axial tool length adjustment

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws or pull studs.

Design: Permissible run-out deviation on the taper in relation to the clamping diameter d<sub>1</sub> = 3 µm. The clamping diameter is designed for a shank tolerance of h6.

Normal setting Form JD, if Form JF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

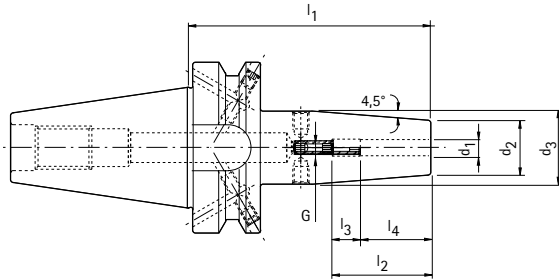
Length adjustment screws and fine balancing screws available on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



INCH

BT	Dimensions								G	Weight [kg]	Specification	Order No.
	inch	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm				
40	1/8	3,18	10	17	90	28	16	12	M6	1,1	MTC-BT040-1/8"-090-3-0-A	30323006
40	3/16	4,76	10	17	90	30	10	20	M6	1,1	MTC-BT040-3/16"-090-3-0-A	30323008
40	1/4	6,35	21	27	90	36	10	26	M5	1,3	MTC-BT040-1/4"-090-3-0-A	30323009
40	5/16	7,94	21	27	90	36	10	26	M6	1,2	MTC-BT040-5/16"-090-3-0-A	30780887
40	3/8	9,53	24	32	90	41	10	31	M8x1	1,3	MTC-BT040-3/8"-090-3-0-A	30323010
40	7/16	11,11	24	32	90	41	10	31	M10x1	1,3	MTC-BT040-7/16"-090-3-0-A	30780888
40	1/2	12,70	24	32	90	47	10	37	M10x1	1,3	MTC-BT040-1/2"-090-3-0-A	30323011
40	5/8	15,88	27	34	90	50	10	40	M12x1	1,3	MTC-BT040-5/8"-090-3-0-A	30780889
40	3/4	19,05	33	42	90	52	10	42	M16x1	1,4	MTC-BT040-3/4"-090-3-0-A	30780890
40	7/8	22,23	33	42	90	52	10	42	M16x1	1,4	MTC-BT040-7/8"-090-3-0-A	30780891
40	1	25,40	44	53	100	58	10	48	M16x1	1,8	MTC-BT040-1"-100-3-0-A	30780892
40	1 1/4	31,75	44	53	100	62	10	52	M16x1	1,7	MTC-BT040-1_1/4"-100-3-0-A	30780893

Dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws or pull studs.

Design: Permissible run-out deviation on the taper in relation to the clamping diameter  $d_1$  = 3  $\mu$ m. The clamping diameter is designed for a shank tolerance of h6.

Normal setting Form JD, if Form JF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

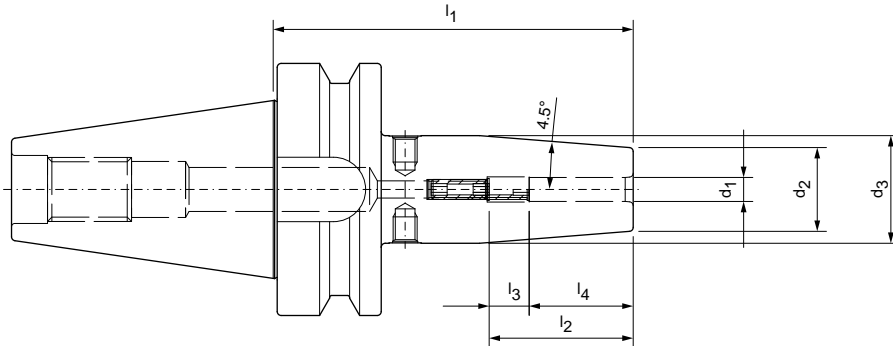
Length adjustment screws and fine balancing screws available on request.

Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank similar to ISO 7388-2 Form JD



BT	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
30	3	10	17	85	28	16	12	M6	0,7	MTC-JD-FC030-03-085-1-0-A	30660218
30	4	15	22	85	28	12	16	M6	0,7	MTC-JD-FC030-04-085-1-0-A	30660219
30	5	15	22	85	30	10	20	M6	0,7	MTC-JD-FC030-05-085-1-0-A	30660220
30	6	21	27	85	36	10	26	M5	0,8	MTC-JD-FC030-06-085-1-0-A	30660221
30	8	21	27	85	36	10	26	M6	0,8	MTC-JD-FC030-08-085-1-0-A	30660222
30	10	24	32	85	41	10	31	M8x1	0,8	MTC-JD-FC030-10-085-1-0-A	30660223
30	12	24	32	85	47	10	37	M10x1	0,9	MTC-JD-FC030-12-085-1-0-A	30660224
30	14	27	34	85	47	10	37	M10x1	0,9	MTC-JD-FC030-14-085-1-0-A	30660225
30	16	27	34	85	50	10	40	M12x1	0,9	MTC-JD-FC030-16-085-1-0-A	30660226
30	18	33	42	85	50	10	40	M12x1	1,0	MTC-JD-FC030-18-085-1-0-A	30660227
30	20	33	42	85	52	10	42	M16x1	1,0	MTC-JD-FC030-20-085-1-0-A	30660228
40	3	10	17	90	28	16	12	M6	1,0	MTC-JD-FC040-03-090-1-0-A	30660229
40	4	15	22	90	28	12	16	M6	1,1	MTC-JD-FC040-04-090-1-0-A	30660230
40	5	15	22	90	30	10	20	M6	1,1	MTC-JD-FC040-05-090-1-0-A	30660231
40	6	21	27	90	36	10	26	M5	1,1	MTC-JD-FC040-06-090-1-0-A	30660232
40	8	21	27	90	36	10	26	M6	1,1	MTC-JD-FC040-08-090-1-0-A	30660233
40	10	24	32	90	41	10	31	M8x1	1,2	MTC-JD-FC040-10-090-1-0-A	30660234
40	12	24	32	90	47	10	37	M10x1	1,2	MTC-JD-FC040-12-090-1-0-A	30660235
40	14	27	34	90	47	10	37	M10x1	1,2	MTC-JD-FC040-14-090-1-0-A	30660236
40	16	27	34	90	50	10	40	M12x1	1,2	MTC-JD-FC040-16-090-1-0-A	30660237
40	18	33	42	90	50	10	40	M12x1	1,3	MTC-JD-FC040-18-090-1-0-A	30660238
40	20	33	42	90	52	10	42	M16x1	1,3	MTC-JD-FC040-20-090-1-0-A	30660239
40	25	44	53	100	58	10	48	M16x1	1,7	MTC-JD-FC040-25-100-1-0-A	30660240
40	32	44	53	100	62	10	52	M16x1	1,5	MTC-JD-FC040-32-100-1-0-A	30660241
50*	3	10	17	100	-	-	12	-	3,6	MTC-JD-FC050-03-100-1-0-W	30660242
50*	4	15	22	100	-	-	16	-	3,7	MTC-JD-FC050-04-100-1-0-W	30660243
50*	5	15	22	100	-	-	20	-	3,7	MTC-JD-FC050-05-100-1-0-W	30660244
50	6	21	27	100	36	10	26	M5	3,7	MTC-JD-FC050-06-100-1-0-A	30660245
50	8	21	27	100	36	10	26	M6	3,7	MTC-JD-FC050-08-100-1-0-A	30660246
50	10	24	32	100	41	10	31	M8x1	3,8	MTC-JD-FC050-10-100-1-0-A	30660247
50	12	24	32	100	47	10	37	M10x1	3,8	MTC-JD-FC050-12-100-1-0-A	30660248
50	14	27	34	100	47	10	37	M10x1	3,8	MTC-JD-FC050-14-100-1-0-A	30660249
50	16	27	34	100	50	10	40	M12x1	3,8	MTC-JD-FC050-16-100-1-0-A	30660250
50	18	33	42	100	50	10	40	M12x1	3,9	MTC-JD-FC050-18-100-1-0-A	30660251
50	20	33	42	100	52	10	42	M16x1	3,8	MTC-JD-FC050-20-100-1-0-A	30660252
50	25	44	53	110	58	10	48	M16x1	4,2	MTC-JD-FC050-25-110-1-0-A	30660257
50	32	44	53	110	62	10	52	M16x1	4,1	MTC-JD-FC050-32-110-1-0-A	30660258

\* without axial tool length adjustment | dimensions in mm.

Items included: Built-in length adjustment screw with through hole.

Without fine balancing screws or pull studs.

Design: Permissible run-out deviation on the taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

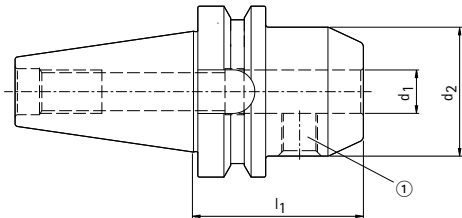
Length adjustment screws and fine balancing screws available on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Chucks for cylindrical shanks

with lateral drive area

Shank BT in accordance with ISO 7388-2 Form JD (JIS B 6339)



BT	Dimensions			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>			
40	6	25	50	1,1	MWC-BT040-06-050-1-0-W	10073633
40	8	28	50	1,1	MWC-BT040-08-050-1-0-W	10073634
40	10	35	63	1,2	MWC-BT040-10-063-1-0-W	10073635
40	12	42	63	1,3	MWC-BT040-12-063-1-0-W	10073636
40	14	44	63	1,3	MWC-BT040-14-063-1-0-W	10073637
40	16	48	63	1,4	MWC-BT040-16-063-1-0-W	10073638
40	18	50	63	1,4	MWC-BT040-18-063-1-0-W	10073639
40	20	52	63	1,4	MWC-BT040-20-063-1-0-W	10073640
40	25	65	90	2,2	MWC-BT040-25-090-1-0-W	10053062
40	32	72	100	2,7	MWC-BT040-32-100-1-0-W	10073641

## Spare parts

For clamping diameter	① Clamping screw in accordance with DIN 1835-B	
	Size	Order No.
d <sub>1</sub>		
6	M6x9	10060983
8	M8x9	10042517
10	M10x12	10004134
12	M12x14	30002947
14	M12x14	30002947
16	M14x16	10004136
18	M14x16	10004136
20	M16x16	10004137
25	M18x2x20	10004141
32	M20x2x20	10004129

Dimensions in mm.

Use: For mounting milling cutters and drills with cylindrical shank and lateral drive area in accordance with DIN 1835 Form B and in accordance with DIN 6535 Form HB.

Items included: With built-in clamping screw. Without pull stud.

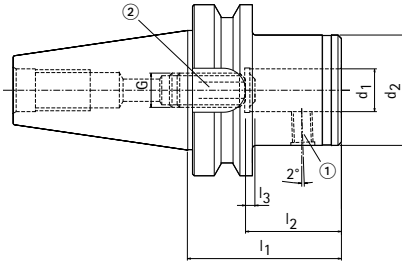
Design: Permissible radial run-out accuracy of the taper in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ .

Note: From clamping diameter  $d_1 = 25 \text{ mm}$  two clamping screw are provided. For pull studs, see section "Accessories, spare parts and measuring equipment". Balancing value: G 2.5 at  $16,000 \text{ min}^{-1}$  as delivered.

# Chucks for cylindrical shanks

with angled clamping surface and axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD (JIS B 6339)



BT	Dimensions					G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
30	16	48	75	48	4	M12x1,25	1,1	MNC-BT030-16-075-1-0-A	30320057
30	20	52	75	50	4	M16x1,5	1,1	MNC-BT030-20-075-1-0-A	30320058
40	16	48	80	48	4	M12x1,25	1,7	MNC-BT040-16-080-1-0-A	30320059
40	20	52	80	50	4	M16x1,5	1,7	MNC-BT040-20-080-1-0-A	30320060
40	25	65	80	56	4	M20x1,5	2,1	MNC-BT040-25-080-1-0-A	30320061
45	16	48	85	48	4	M12x1,25	2,8	MNC-BT045-16-085-1-0-A	30320062
45	20	52	85	50	4	M16x1,5	2,9	MNC-BT045-20-085-1-0-A	30320063
50	16	48	90	48	4	M12x1,25	4,2	MNC-BT050-16-090-1-0-A	30320064
50	20	52	90	50	4	M16x1,5	4,3	MNC-BT050-20-090-1-0-A	30320065
50	25	65	90	56	4	M20x1,5	4,7	MNC-BT050-25-090-1-0-A	30320066

## Spare parts

For clamping diameter d <sub>1</sub>	① Clamping screw in accordance with DIN 1835-B		② Length adjustment screw	
	Size	Order No.	Size	Order No.
16	M10x12	10004134	M12x1,25x30	30326187
20	M12x14	30002947	M16x1,5x35	30326188
25	M12x14	30002947	M20x1,5x40	30326189

Dimensions in mm.

Use: For mounting MAPAL NC reamers with cylindrical shank and angled clamping surface (2°) similar to DIN 1835 Form E.

Items included: With built-in clamping screw. Without pull stud.

Design: Permissible run-out deviation on the taper in relation to the clamping diameter d<sub>1</sub> ≤ 3 μm. The bore tolerance is reduced to 3 μm to obtain the highest quality machining accuracies.

Note: The length adjustment screws have a through hole for coolant.

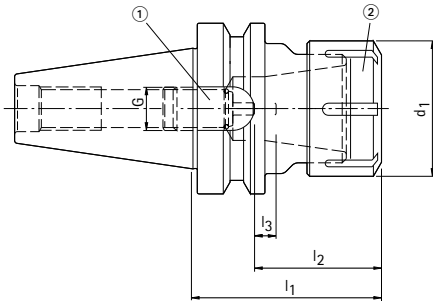
For pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# Chucks for collets

with axial tool length adjustment

Shank BT in accordance with ISO 7388-2 Form JD (JIS B 6339)



BT	Clamping range	Nominal size	Dimensions				G	Weight [kg]	Specification	Order No.
			d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	0,5 - 10	ER-16	28	70	27	10	M10	1,1	MCC-BT040-16-070-1-0-A	10073408
40	0,5 - 10	ER-16	28	100	27	10	M10	1,2	MCC-BT040-16-100-1-0-A	10073410
40	2 - 20	ER-32	50	70	27	10	M16	1,3	MCC-BT040-32-070-1-0-A	10073411
40	3 - 26	ER-40	63	70	27	10	M16	1,4	MCC-BT040-40-080-1-0-A	10073412

## Spare parts

BT	Clamping range	Nominal size	① Length adjustment screw (with through hole for coolant) for clamping diameter					② Clamping nut in accordance with ISO 15488
			Order No.	Order No.	Order No.	Order No.	Order No.	
			ø 2,8 - 5	ø 4,8 - 7	ø 6,8 - 10			
40	0,5 - 10	ER-16	30326191	30326192	30326193			10013273
			ø 3,8 - 7	ø 6,8 - 10	ø 9,8 - 13	ø 12,8 - 20	ø 19,9 - 26	
40	2 - 20	ER-32	30326213	30326214	30326215	30326217		10023401
40	3 - 26	ER-40	30326213	30326214	30326215	30326217	30326210	10022176

Dimensions in mm.

Use: For clamping tools with cylindrical shank in collets ER.

Items included: With clamping nut in accordance with ISO 15488.

Without length adjustment screw, collet or pull stud.

Design: Permissible run-out deviation on the taper shank in relation to the clamping diameter d<sub>1</sub> = 3 µm.

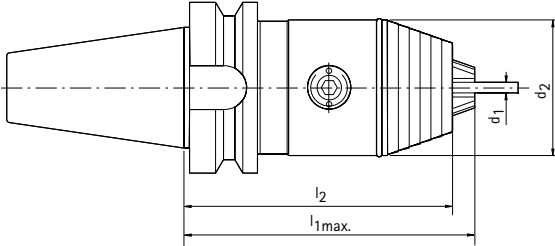
Note: Chucks have a through hole with internal thread for length adjustment screws.

For collets, pull studs and assembly tools, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Precision-DrillChuck

with radial actuation and without internal coolant supply  
Shank BT to ISO 7388-2 Form J (JIS B 6339)



BT	Dimensions				Weight [kg]	Spare part code	Specification	Order No.
	$d_1$	$d_2$	$l_{1max}$	$l_2$				
30	0,3 - 8	36	77	74	0,7	DCT-08-A	MPC-BT030-08-077-0-0-W	30259913
30	0,5 - 13	50	102	96	1,3	DCT-13-A	MPC-BT030-13-102-0-0-W	30259915
40	0,3 - 8	36	81	78	1,4	DCT-08-A	MPC-BT040-08-081-0-0-W	30259914
40	0,5 - 13	50	104	98	1,8	DCT-13-A	MPC-BT040-13-104-0-0-W	30259916
40	2,5 - 16	57	109	103	2,0	DCT-16-A	MPC-BT040-16-109-0-0-W	30259918
50	0,5 - 13	50	116	110	4,4	DCT-13-A	MPC-BT050-13-116-0-0-W	30259917
50	2,5 - 16	57	121	115	4,7	DCT-16-A	MPC-BT050-16-121-0-0-W	30259919

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc, or pull stud.

Design: No internal coolant supply.

Note: For spare parts in accordance with spare part code,

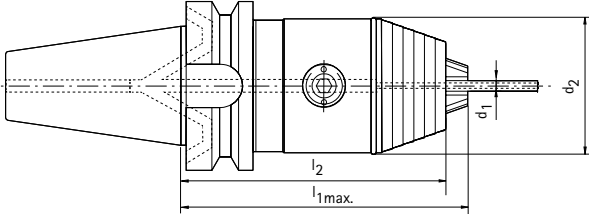
see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

# Precision-DrillChuck

with radial actuation and internal coolant supply

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



BT	Dimensions				Weight [kg]	Spare part code	Specification	Order No.
	$d_1$	$d_2$	$l_{1max}$	$l_2$				
40	0,3 - 8	36	84	81	1,3	DCT-08-D	MPC-BT040-08-084-3-0-W	30259920
40	0,5 - 13	50	104	98	1,8	DCT-13-B	MPC-BT040-13-104-3-0-W	30259921
40	2,5 - 16	57	109	103	2,0	DCT-16-B	MPC-BT040-16-109-3-0-W	30259923
50	0,5 - 13	50	116	110	4,5	DCT-13-B	MPC-BT050-13-116-3-0-W	30259922
50	2,5 - 16	57	121	115	4,7	DCT-16-B	MPC-BT050-16-121-3-0-W	30259924

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc, or pull stud.

Design: Normal setting Form JD, if Form JF is required, please state with the order.

Note: For spare parts in accordance with spare part code,

see section "Accessories, spare parts and measuring equipment".

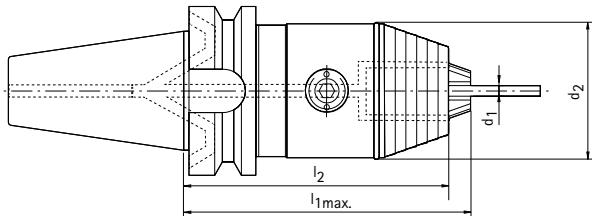
Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.



# Precision-DrillChuck

with radial actuation and internal coolant supply

Shank BT in accordance with ISO 7388-2 Form JD/JF (JIS B 6339)



BT	Dimensions				Weight [kg]	Spare part code	Specification	Order No.
	$d_1$	$d_2$	$l_{1max}$	$l_2$				
40	0,3 - 8	36	84	81	1,3	DCT-08-A	MPC-BT040-08-084-3-0-W	30259925
40	0,5 - 13	50	104	98	1,8	DCT-13-A	MPC-BT040-13-104-3-0-W	30259926
50	0,5 - 13	50	116	110	4,5	DCT-13-A	MPC-BT050-13-116-3-0-W	30259927
40	2,5 - 16	57	109	103	2,0	DCT-16-A	MPC-BT040-16-109-3-0-W	30259928
50	2,5 - 16	57	121	115	4,7	DCT-16-A	MPC-BT050-16-121-3-0-W	30259929

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks.

Items included: Without sealing disc, or pull stud.

Design: Normal setting Form JD, if Form JF is required, please state with the order.

With central coolant supply and decentral coolant outlet for tools without coolant ducts.

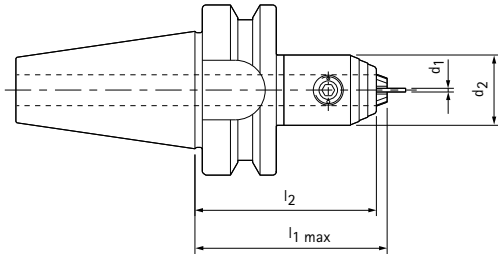
Note: For spare parts in accordance with spare part code, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 25,000 min<sup>-1</sup> as delivered.

# Micro-Precision DrillChuck

with radial actuation and internal coolant supply

Shank BT in accordance with ISO 7388-2 Form JD (JIS B 6339)



BT	Clamping range $d_1$	Dimensions			Weight [kg]	Specification	Order No.
		$d_2$	$l_{1 \text{ max}}$	$l_2$			
30	0,2 - 3,4	19	48	45	0,4	MPC-BT030-03-048-1-0-W	30551229
30	0,2 - 6,4	25	62	58	0,9	MPC-BT030-06-062-1-0-W	30608027

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks

Items included: Without sealing disc, or pull stud.

Design: With internal coolant supply.

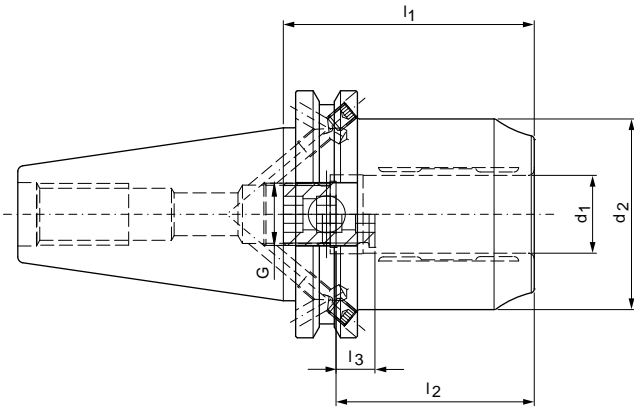
Note: Spare parts and accessories can be found via the spare part code in section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# HighTorque Chuck HTC

with axial tool length adjustment

Shank similar to "CAT" in accordance with ASME B5.50-1994 with coolant supply in accordance with ISO 7388-1 Form AD/AF



## Short heavy-duty design

CAT	Dimensions							G	Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$d_3$	$l_1$	$l_2$	$l_3$	$l_4$				
40	20	49	-	64,5	51	10	-	M16x1	1,3	HTC-CAT040-20-065-3-0-A	30774774
50	20	49	-	64,5	51	10	-	M16x1	3,1	HTC-CAT050-20-065-3-0-A	30705525

INCH

CAT	Dimensions								G	Weight [kg]	Specification	Order No.
	inch	$d_1$ mm	$d_2$ mm	$d_3$ mm	$l_1$ mm	$l_2$ mm	$l_3$ mm	$l_4$ mm				
40	1/2	12,70	42	-	50	46	10	-	M8x1	1,1	HTC-CAT040-1/2"-050-3-0-A	30780799
40	5/8	15,88	44,5	-	50	49	10	-	M12x1	1,1	HTC-CAT040-5/8"-050-3-0-A	30780800
40	3/4	19,05	49	-	64,5	51	10	-	M16x1	1,3	HTC-CAT040-3/4"-065-3-0-A	30693156
50	1 1/4	31,75	72	-	81	61	10	-	M16X1	4,1	HTC-CAT050-1_1/4"-081-3-0-A	30796847
50	3/4	19,05	49	-	64,5	51	10	-	M16X1	3,1	HTC-CAT050-3/4"-065-3-0-A	30796849

Use: For clamping tools with smooth cylindrical shanks as well as recesses.

The clamping diameter is designed for a tool tolerance of h6.

Items included: With length adjustment screw.

Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks. With a projection length of  $2.5 \times D$  (max. 50 mm) radial run-out accuracy 3  $\mu$ m. On usage of cylindrical shanks with angled clamping surface the accuracy may be affected. Normal setting Form UD, if Form UF is required, please state with the order.

Note: Chuck with axial tool length adjustment. For reducing sleeve for reducing the clamping diameter, see section "Accessories, spare parts and measuring equipment". (The accuracy may be affected by the use of the reducing sleeve)

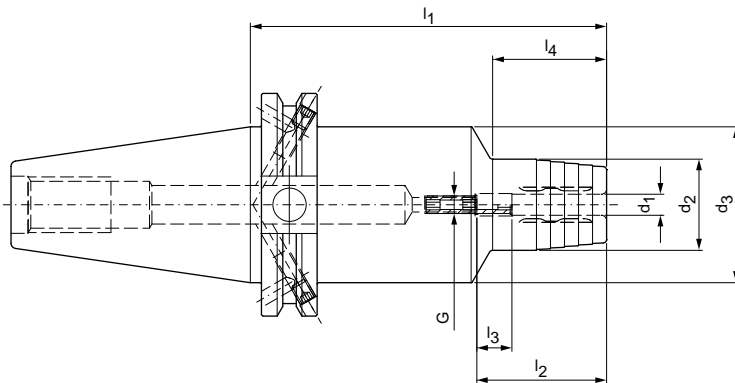
Length adjustment screw available on request.

Balancing value: G 2.5 at 25,000  $\text{min}^{-1}$  as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank similar to "CAT" in accordance with ASME B5.50-1994 with coolant supply in accordance with ISO 7388-1 Form AD/AF



CAT	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	6	26	44,5	101,6	37	10	32,5	M5	1,5	MHC-CAT040-06-102-3-0-A	30703537
40	8	28	44,5	101,6	37	10	35,5	M6	1,5	MHC-CAT040-08-102-3-0-A	30717843
40	10	30	44,5	101,6	41	10	41,5	M8X1	1,5	MHC-CAT040-10-102-3-0-A	30717844
40	12	32	44,5	101,6	46	10	41,5	M10X1	1,5	MHC-CAT040-12-102-3-0-A	30717845
40	14	34	44,5	101,6	46	10	49,5	M10X1	1,5	MHC-CAT040-14-102-3-0-A	30717846
40	16	38	44,5	101,6	49	10	49,5	M12X1	1,6	MHC-CAT040-16-102-3-0-A	30717847
40	18	40	44,5	101,6	49	10	49,5	M12X1	1,6	MHC-CAT040-18-102-3-0-A	30717848
40	20	42	44,5	101,6	51	10	49,5	M16X1	1,6	MHC-CAT040-20-102-3-0-A	30717849
40	25	55	65	101,6	57	10	66,0	M16X1	2,1	MHC-CAT040-25-102-3-0-A	30717850
40	32	63	80	101,6	61	10	56,0	M16X1	2,2	MHC-CAT040-32-102-3-0-A	30717851
50	6	26	69,85	101,6	37	10	32,5	M5	3,7	MHC-CAT050-06-102-3-0-A	30720837
50	8	28	69,85	101,6	37	10	36,0	M6	3,7	MHC-CAT050-08-102-3-0-A	30720838
50	10	30	69,85	101,6	41	10	36,0	M8X1	3,7	MHC-CAT050-10-102-3-0-A	30720839
50	12	32	69,85	101,6	46	10	41,5	M10X1	3,7	MHC-CAT050-12-102-3-0-A	30720840
50	14	34	69,85	101,6	46	10	41,5	M10X1	3,7	MHC-CAT050-14-102-3-0-A	30720841
50	16	38	69,85	101,6	49	10	47,5	M12X1	3,7	MHC-CAT050-16-102-3-0-A	30720842
50	18	40	69,85	101,6	49	10	47,5	M12X1	3,8	MHC-CAT050-18-102-3-0-A	30720844
50	20	42	69,85	101,6	51	10	49,5	M16X1	3,8	MHC-CAT050-20-102-3-0-A	30720845
50	25	57	69,85	101,6	57	10	49,5	M16X1	4,2	MHC-CAT050-25-102-3-0-A	30720846
50	32	64	69,85	101,6	61	10	65,0	M16X1	4,3	MHC-CAT050-32-102-3-0-A	30720847

Dimensions in mm.

Use: For clamping tools with smooth cylindrical shanks as well as recesses.

The clamping diameter is designed for a tool tolerance of h6.

Items included: With length adjustment screw.

Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks. With a projection length of 2.5 x D (max. 50 mm) radial run-out accuracy 3 µm. On usage of cylindrical shanks with angled clamping surface the accuracy may be affected. Normal setting Form UD, if Form UF is required, please state with the order.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

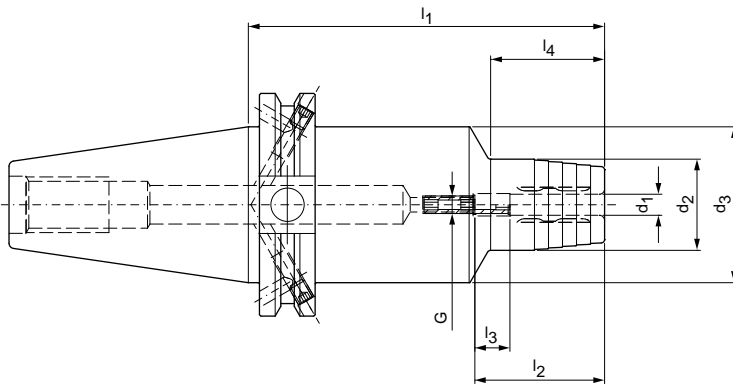
For reducing sleeve for reducing the clamping diameter, see section "Accessories, spare parts and measuring equipment". (The accuracy may be affected by the use of the reducing sleeve) Length adjustment screw available on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank similar to "CAT" in accordance with ASME B5.50-1994 with coolant supply in accordance with ISO 7388-1 Form AD/AF



INCH

CAT	Dimensions								G	Weight [kg]	Specification	Order No.
	d <sub>1</sub> inch	d <sub>1</sub> mm	d <sub>2</sub> mm	d <sub>3</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	l <sub>4</sub> mm				
40	1/4	6,35	26	44,5	101,6	37	10	32,5	M5	1,5	MHC-CAT040-1/4"-102-3-0-A	30780804
40	3/8	9,53	30	44,5	101,6	41	10	41,5	M8x1	1,5	MHC-CAT040-3/8"-102-3-0-A	30780805
40	1/2	12,70	32	44,5	101,6	46	10	41,5	M10x1	1,5	MHC-CAT040-1/2"-102-3-0-A	30780806
40	5/8	15,88	38	44,5	101,6	49	10	49,5	M12x1	1,6	MHC-CAT040-5/8"-102-3-0-A	30780807
40	3/4	19,05	42	44,5	101,6	51	10	49,5	M16x1	2,1	MHC-CAT040-3/4"-102-3-0-A	30780808
40	1	25,40	55	61	101,6	57	10	66,5	M16x1	2,2	MHC-CAT040-1"-102-3-0-A	30780809
40	1 1/4	31,75	61	61	101,6	61	10	-	M16x1	3,7	MHC-CAT040-1_1/4"-102-3-0-A	30780810
50	1/4	6,35	26	69,85	101,6	37	10	32,5	M5	1,4	MHC-CAT050-1/4"-102-3-0-A	30780811
50	3/8	9,53	30	69,85	101,6	41	10	36,0	M8x1	3,7	MHC-CAT050-3/8"-102-3-0-A	30780812
50	1/2	12,70	32	69,85	101,6	46	10	41,5	M10x1	3,7	MHC-CAT050-1/2"-102-3-0-A	30780813
50	5/8	15,88	38	69,85	101,6	49	10	47,5	M12x1	3,7	MHC-CAT050-5/8"-102-3-0-A	30780814
50	3/4	19,05	42	69,85	101,6	51	10	49,5	M16x1	3,7	MHC-CAT050-3/4"-102-3-0-A	30780815
50	1	25,40	57	69,85	101,6	57	10	49,5	M16x1	4,2	MHC-CAT050-1"-102-3-0-A	30780816
50	1 1/4	31,75	64	69,85	101,6	61	10	65,0	M16x1	4,3	MHC-CAT050-1_1/4"-102-3-0-A	30780817

Use: For clamping tools with smooth cylindrical shanks as well as recesses.

The clamping diameter is designed for a tool tolerance of h6.

Items included: With length adjustment screw.

Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks. With a projection length of 2.5 x D (max. 50 mm) radial run-out accuracy 3 µm. On usage of cylindrical shanks with angled clamping surface the accuracy may be affected. Normal setting Form UD, if Form UF is required, please state with the order.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

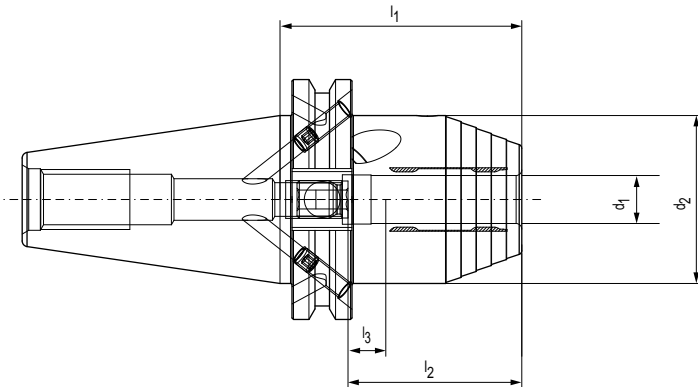
For reducing sleeve for reducing the clamping diameter, see section "Accessories, spare parts and measuring equipment". (The accuracy may be affected by the use of the reducing sleeve) Length adjustment screw available on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Hydraulic chucks HydroChuck

with axial tool length adjustment

Shank similar to "CAT" in accordance with ASME B5.50-1994 with coolant supply in accordance with ISO 7388-1 Form AD/AF



CAT	Dimensions					G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>				
40	20	44,5	64	51	10	M16x1	1,2	MHC-CAT040-20-064-3-0-A	30781146

Dimensions in mm.

INCH

CAT	Dimensions						G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>		d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
	Inch	mm	mm	mm	mm	mm				
40	1/2	12,70	44,5	64,0	46	10	M10x1	1,3	MHC-CAT040-1/2"-064-3-0-A	30780801
40	5/8	15,88	44,5	64,0	49	10	M12x1	1,3	MHC-CAT040-5/8"-064-3-0-A	30780802
40	3/4	19,05	44,5	64,0	51	10	M16x1	1,2	MHC-CAT040-3/4"-064-3-0-A	30780803

Use: For clamping tools with smooth cylindrical shanks as well as recesses.

The clamping diameter is designed for a tool tolerance of h6.

Items included: With length adjustment screw.

Without pull stud.

Design: Longest tool lives and highest manufacturing quality on usage of smooth cylindrical shanks. With a projection length of 2.5 x D (max. 50 mm) radial run-out accuracy 3 µm. On usage of cylindrical shanks with angled clamping surface the accuracy may be affected. Normal setting Form UD, if Form UF is required, please state with the order.

Note: Chuck with axial tool length adjustment. Coolant supply via central through bore.

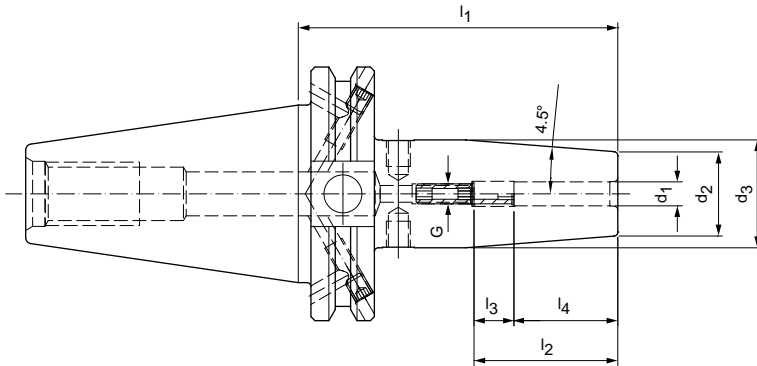
For reducing sleeve for reducing the clamping diameter, see section "Accessories, spare parts and measuring equipment". (The accuracy may be affected by the use of the reducing sleeve) Length adjustment screw available on request.

Balancing value: G 2.5 at 25,000 min<sup>-1</sup> as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank similar to "CAT" in accordance with ASME B5.50-1994 with coolant supply in accordance with ISO 7388-1 Form AD/AF



CAT	Dimensions							G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
40	3	10	17	80	28	16	12	M6	0,9	MTC-CAT040-03-080-3-0-A	30647425
40	4	15	22	80	28	12	16	M6	1,0	MTC-CAT040-04-080-3-0-A	30647426
40	5	15	22	80	30	10	20	M6	1,0	MTC-CAT040-05-080-3-0-A	30647427
40	6	21	27	80	36	10	26	M5	1,1	MTC-CAT040-06-080-3-0-A	30647428
40	8	21	27	80	36	10	26	M6	1,1	MTC-CAT040-08-080-3-0-A	30647429
40	10	24	32	80	41	10	31	M8x1	1,1	MTC-CAT040-10-080-3-0-A	30647430
40	12	24	32	80	47	10	37	M10x1	1,1	MTC-CAT040-12-080-3-0-A	30647431
40	14	27	34	80	47	10	37	M10x1	1,2	MTC-CAT040-14-080-3-0-A	30647432
40	16	27	34	80	50	10	40	M12x1	1,1	MTC-CAT040-16-080-3-0-A	30647433
40	18	33	42	80	50	10	40	M12x1	1,3	MTC-CAT040-18-080-3-0-A	30647434
40	20	33	42	80	52	10	42	M16x1	1,2	MTC-CAT040-20-080-3-0-A	30647435
40	25	44	53	100	58	10	48	M16x1	1,8	MTC-CAT040-25-100-3-0-A	30647436
40	32	44	53	100	62	10	52	M16x1	1,7	MTC-CAT040-32-100-3-0-A	30647437
50*	3	10	17	80	-	-	12	-	2,8	MTC-CAT050-03-080-3-0-W	30781173
50*	4	15	22	80	-	-	16	-	2,8	MTC-CAT050-04-080-3-0-W	30781174
50*	5	15	22	80	-	-	20	-	2,8	MTC-CAT050-05-080-3-0-W	30781175
50	6	21	27	80	36	10	26	M5	2,9	MTC-CAT050-06-080-3-0-A	30781176
50	8	21	27	80	36	10	26	M6	2,9	MTC-CAT050-08-080-3-0-A	30781177
50	10	24	32	80	41	10	31	M8x1	2,9	MTC-CAT050-10-080-3-0-A	30781178
50	12	24	32	80	47	10	37	M10x1	2,9	MTC-CAT050-12-080-3-0-A	30781179
50	14	27	34	80	47	10	37	M10x1	3,0	MTC-CAT050-14-080-3-0-A	30781180
50	16	27	34	80	50	10	40	M12x1	3,0	MTC-CAT050-16-080-3-0-A	30781181
50	18	33	42	80	50	10	40	M12x1	3,1	MTC-CAT050-18-080-3-0-A	30781182
50	20	33	42	80	52	10	42	M16x1	3,1	MTC-CAT050-20-080-3-0-A	30781183
50	25	44	53	100	58	10	48	M16x1	3,7	MTC-CAT050-25-100-3-0-A	30781185
50	32	44	53	100	62	10	52	M16x1	3,5	MTC-CAT050-32-100-3-0-A	30781186

\* Without axial tool length adjustment

Dimensions in mm.

Items included: With length adjustment screw, without pull stud.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6. Normal setting Form UD, if Form UF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

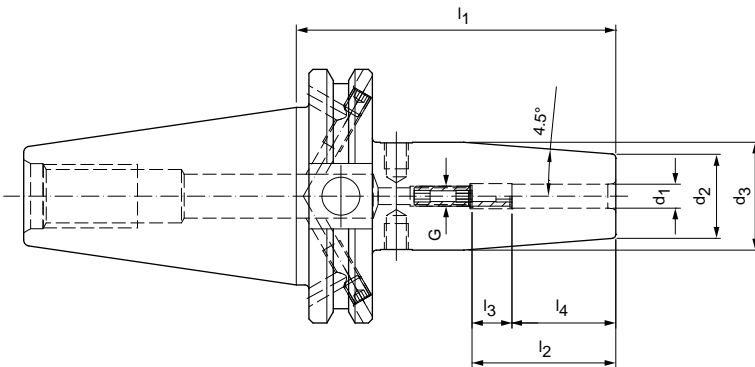
Fine balancing screws on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

# Shrink chucks ThermoChuck

with axial tool length adjustment

Shank similar to "CAT" in accordance with ASME B5.50-1994 with coolant supply in accordance with ISO 7388-1 Form AD/AF



INCH

CAT	Dimensions								G	Weight [kg]	Specification	Order No.
	d <sub>1</sub> inch	d <sub>1</sub> mm	d <sub>2</sub> mm	d <sub>3</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	l <sub>4</sub> mm				
40	1/8	3,18	10	17	80	28	16	12	M6	0,9	MTC-CAT040-1/8"-080-3-0-A	30780830
40	3/16	4,76	10	17	80	30	10	20	M6	0,9	MTC-CAT040-3/16"-080-3-0-A	30780831
40	1/4	6,35	21	27	80	36	10	26	M5	1,1	MTC-CAT040-1/4"-080-3-0-A	30780832
40	5/16	7,94	21	27	80	36	10	26	M6	1,1	MTC-CAT040-5/16"-080-3-0-A	30780833
40	3/8	9,53	24	32	80	41	10	31	M8x1	1,1	MTC-CAT040-3/8"-080-3-0-A	30780869
40	7/16	11,11	24	32	80	41	10	31	M10x1	1,1	MTC-CAT040-7/16"-080-3-0-A	30780870
40	1/2	12,70	24	32	80	47	10	37	M10x1	1,1	MTC-CAT040-1/2"-080-3-0-A	30780871
40	5/8	15,88	27	34	80	50	10	40	M12x1	1,1	MTC-CAT040-5/8"-080-3-0-A	30780872
40	3/3	19,05	33	42	80	52	10	42	M16x1	1,3	MTC-CAT040-3/4"-080-3-0-A	30780873
40	7/8	22,23	33	42	80	52	10	42	M16x1	1,2	MTC-CAT040-7/8"-080-3-0-A	30780874
40	1	25,40	44	53	100	58	10	48	M16x1	1,8	MTC-CAT040-1"-100-3-0-A	30780875
40	1 1/4	31,75	44	53	100	62	10	52	M16x1	1,7	MTC-CAT040-1_1/4"-100-3-0-A	30780876
50	1/4	6,35	21	27	80	36	10	26	M5	2,9	MTC-CAT050-1/4"-080-3-0-A	30780877
50	5/16	7,94	21	27	80	36	10	26	M6	2,9	MTC-CAT050-5/16"-080-3-0-A	30780878
50	3/8	9,53	24	32	80	41	10	31	M8x1	3,0	MTC-CAT050-3/8"-080-3-0-A	30780879
50	7/16	11,11	24	32	80	41	10	31	M10x1	2,9	MTC-CAT050-7/16"-080-3-0-A	30780880
50	1/2	12,70	24	32	80	47	10	37	M10x1	2,9	MTC-CAT050-1/2"-080-3-0-A	30780881
50	5/8	15,88	27	34	80	50	10	40	M12x1	3,0	MTC-CAT050-5/8"-080-3-0-A	30780882
50	3/3	19,05	33	42	80	52	10	42	M16x1	3,1	MTC-CAT050-3/4"-080-3-0-A	30780883
50	7/8	22,23	33	42	80	52	10	42	M16x1	3,0	MTC-CAT050-7/8"-080-3-0-A	30780884
50	1	25,50	44	53	100	58	10	48	M16x1	3,6	MTC-CAT050-1"-100-3-0-A	30780885
50	1 1/4	31,75	44	53	100	62	10	52	M16x1	3,5	MTC-CAT050-1_1/4"-100-3-0-A	30780886

Items included: With length adjustment screw, without pull stud.

Design: Permissible run-out deviation on the hollow taper shank in relation to the clamping diameter  $d_1 = 3 \mu\text{m}$ . The clamping diameter is designed for a shank tolerance of h6. Normal setting Form UD, if Form UF is required, please state with the order.

Note: You will find tool extensions in the section "Chucks with cylindrical shank".

Fine balancing screws on request.

Balancing value: G 2.5 at  $25,000 \text{ min}^{-1}$  as delivered.

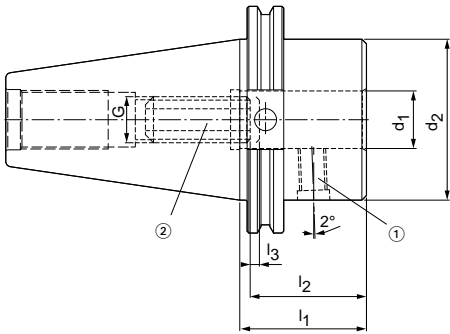


# Chucks for cylindrical shanks

with angled clamping surface and axial tool length adjustment

Shank "CAT" in accordance with ASME B5.50-1994

Precision adapter for MAPAL NC reamers



CAT	Dimensions					G	Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>				
40	16	48	70	48	4	M12x1,25	1,5	MNC-CAT040-16-070-1-0-A	30320101
40	20	52	75	50	4	M16x1,5	1,6	MNC-CAT040-20-075-1-0-A	30320102
40	25	65	80	56	4	M20x1,5	1,9	MNC-CAT040-25-080-1-0-A	30320103
50	16	70	55	48	4	M12x1,25	3,6	MNC-CAT050-16-055-1-0-A	30320104
50	20	70	55	50	4	M16x1,5	3,6	MNC-CAT050-20-055-1-0-A	30320105
50	25	70	55	56	4	M20x1,5	3,5	MNC-CAT050-25-056-1-0-A	30320106

## Spare parts

For clamping diameter d <sub>1</sub>	① Clamping screw in accordance with ISO 4028		② Length adjustment screw	
	Size	Order No.	Size	Order No.
16	M10x16-45H	10003951	M12x1,25x30	30326187
20	M12x16-45H	10003948	M16x1,5x35	30326188
25	M12x20-45H	10004663	M20x1,5x40	30326189

Dimensions in mm.

Use: For mounting MAPAL NC reamers with cylindrical shank and angled clamping surface (2°) similar to DIN 1835 Form E.

Items included: With built-in clamping screw and length adjustment screw. Without pull stud.

Design: Permissible run-out deviation on the taper in relation to the clamping diameter d<sub>1</sub> ≤ 3 μm. The bore tolerance is reduced to 3 μm to obtain the highest quality machining accuracies.

Note: The length adjustment screws have a through hole for coolant. For pull studs, see section "Accessories, spare parts and measuring equipment".  
Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.



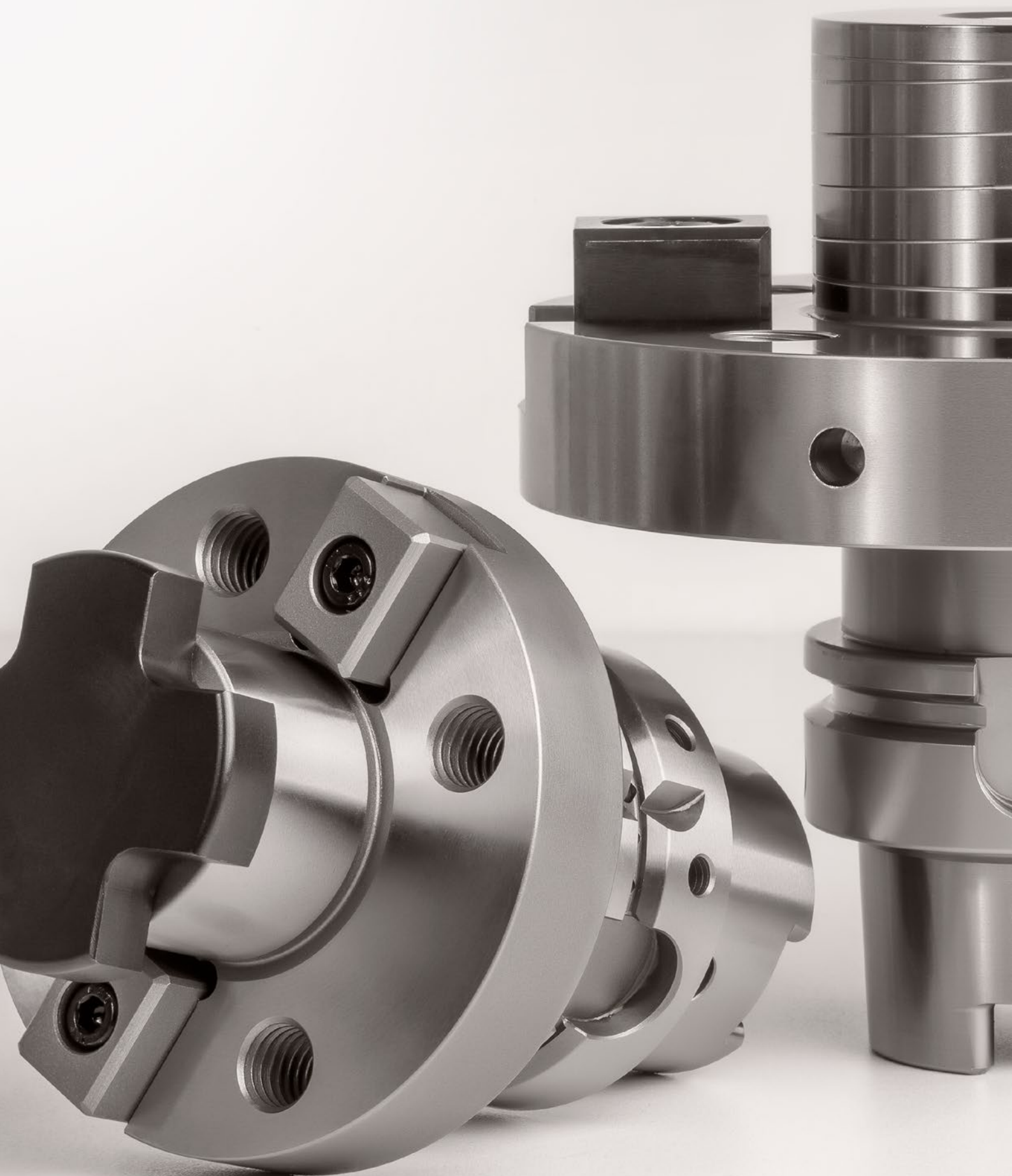
# MILLING CUTTER ARBORS

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Mechanical and hydraulic tool clamping









# MILLING CUTTER ARBORS

## Milling cutter arbors, hydraulic

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Milling cutter arbors, hydraulic \_\_\_\_\_ 280

## Milling cutter arbors, mechanical

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HSK-A milling cutter arbors with longitudinal and cross slot \_\_\_\_\_ 281

HSK-A milling cutter arbors with enlarged

face connection diameter \_\_\_\_\_ 282

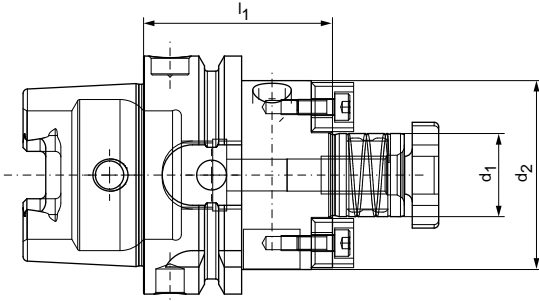
SK milling cutter arbors with enlarged face connection diameter — 285

BT milling cutter arbors with enlarged face connection diameter — 286

# Milling cutter arbors

Hydraulic tool clamping

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions			Weight [kg]	Specification	Order No.	Order No. chip version
	$d_1$	$d_2$	$l_1$				
63	22	50	50	1,1	MHA-HSK-A063-22-050-0-0-W	30637312	30678546
63	27	60	60	1,4	MHA-HSK-A063-27-060-0-0-W	30637313	30678547
63	32	78	60	1,7	MHA-HSK-A063-32-060-0-0-W	30637314	30678548
63	40 *	89	60	1,9	MHA-HSK-A063-40-060-0-0-W	30637315	30678549
63	60 */**	140	70	4,6	MHA-HSK-A063-60-070-0-0-W	30637316	30678550
80	22	50	50	1,5	MHA-HSK-A080-22-050-0-0-W	30637317	30678551
80	27	60	50	1,7	MHA-HSK-A080-27-050-0-0-W	30637318	30678552
80	32	78	60	2,3	MHA-HSK-A080-32-060-0-0-W	30637319	30678553
80	40 *	89	60	2,5	MHA-HSK-A080-40-060-0-0-W	30637320	30678554
80	60 *	140	70	5,2	MHA-HSK-A080-60-070-0-0-W	30637321	30678555
100	22	50	50	2,4	MHA-HSK-A100-22-050-0-0-W	30637322	30678556
100	27	60	50	2,5	MHA-HSK-A100-27-050-0-0-W	30637323	30678557
100	32	78	50	2,9	MHA-HSK-A100-32-050-0-0-W	30637324	30678558
100	40 *	89	60	3,5	MHA-HSK-A100-40-060-0-0-W	30637325	30678559
100	60 *	140	70	6,3	MHA-HSK-A100-60-070-0-0-W	30637326	30678560

The sizes marked with \* have four additional threaded bores for mounting cutter heads with tool fastening in accordance with DIN 2079. \*\* $d_1$  = 60 mm for nominal size HSK-A 63: maximum milling head diameter 250 mm. No balancing bores on the periphery.

Dimensions in mm.

Use: For clamping tools with smooth cylinder bores in accordance with DIN 138 up to clamping diameter  $d_1$  = 60 mm. The clamping diameter is designed for a tool tolerance of H7.

Items included: With key blocks attached, milling cutter clamping screw, without coolant tube.

Note: For coolant tubes and assembly tools, see section "Accessories, spare parts and measuring equipment". Length adjustment screws available on request.

Chip version: Equipped with Balluff code carrier see page 353.

Further code carriers on request.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

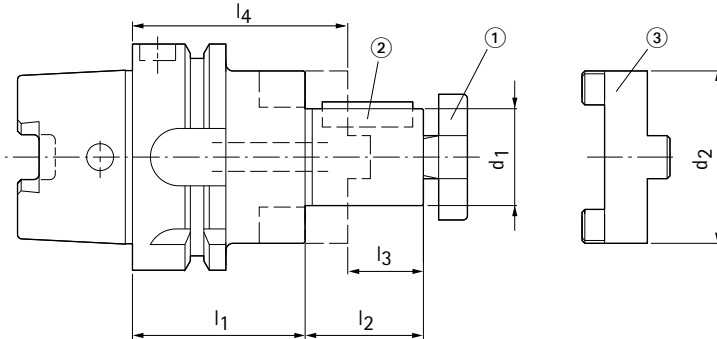


# Milling cutter arbors

## Mechanical tool clamping

For milling cutters with longitudinal or cross slot in accordance with DIN 69882-2

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions						Weight [kg]	Specification	Order No.	Order No. chip version
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>				
50	16	32	40	27	17	50	2,2	MCA-HSK-A050-16-040-0-0-W	30319344	On request
50	22	40	38	31	19	50	2,3	MCA-HSK-A050-22-038-0-0-W	30319345	On request
50	27	48	53	33	21	65	2,3	MCA-HSK-A050-27-053-0-0-W	30319346	On request
50	32	58	51	38	24	65	2,5	MCA-HSK-A050-32-051-0-0-W	30319347	On request
63	16	32	50	27	17	60	2,2	MCA-HSK-A063-16-050-0-0-W	30319348	30553392
63	22	40	48	31	19	60	2,2	MCA-HSK-A063-22-048-0-0-W	30319349	30553393
63	27	48	48	33	21	60	2,3	MCA-HSK-A063-27-048-0-0-W	30319350	30553394
63	32	58	46	38	24	60	2,5	MCA-HSK-A063-32-046-0-0-W	30319352	30553395
63	40	70	56	41	27	70	2,7	MCA-HSK-A063-40-056-0-0-W	30319353	30553396
80	16	32	50	27	17	60	2,2	MCA-HSK-A080-16-050-0-0-W	30319354	On request
80	22	40	48	31	19	60	2,2	MCA-HSK-A080-22-048-0-0-W	30319355	On request
80	27	48	48	33	21	60	2,3	MCA-HSK-A080-27-048-0-0-W	30319356	On request
80	32	58	46	38	24	60	2,5	MCA-HSK-A080-32-046-0-0-W	30319357	On request
80	40	70	56	41	27	70	2,7	MCA-HSK-A080-40-056-0-0-W	30319358	On request
100	16	32	50	27	17	60	2,2	MCA-HSK-A100-16-050-0-0-W	30319359	30553397
100	22	40	48	31	19	60	2,2	MCA-HSK-A100-22-048-0-0-W	30319360	30342078
100	27	48	48	33	21	60	2,3	MCA-HSK-A100-27-048-0-0-W	30319361	30553398
100	32	58	46	38	24	60	2,5	MCA-HSK-A100-32-046-0-0-W	30319362	30553399
100	40	70	56	41	27	70	2,7	MCA-HSK-A100-40-056-0-0-W	30319363	30466940
100	50	90	64	46	30	80	3,1	MCA-HSK-A100-50-064-0-0-W	30319364	30553400

Dimensions in mm.

Items included: With milling cutter clamping screw, parallel key with extraction thread and driving ring. Without coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the arbor d<sub>1</sub> = 8 μm.

Note: Milling cutter clamping screw supplied without internal cooling. For spare parts see page 284. For coolant tubes and assembly tools, see section "Accessories, spare parts and measuring equipment". Milling adapter rings in accordance with DIN 2084 on request. Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

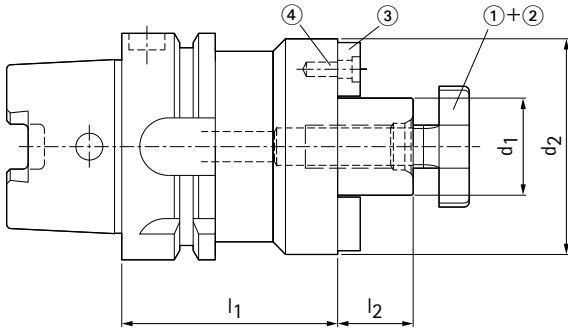


# Milling cutter arbors

Mechanical tool clamping

With enlarged face connection diameter in accordance with DIN 69882-3

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions				Weight [kg]	Specification	Order No. with milling cutter clamping screw	Order No. chip version
	$d_1$	$d_2$	$l_1$	$l_2$				
50	22	48	60	19	0,9	MCA-HSK-A050-22-060-0-0-W	30329251	On request
50	27	60	60	21	1,1	MCA-HSK-A050-27-060-0-0-W	30329252	On request
63	22	48	50	19	1,1	MCA-HSK-A063-22-050-0-0-W	30329254	30342079
63	27	60	60	21	1,4	MCA-HSK-A063-27-060-0-0-W	30329256	30342080
63	32	78	60	24	1,8	MCA-HSK-A063-32-060-0-0-W	30329257	30342081
63*	40	89	60	27	2,1	MCA-HSK-A063-40-060-0-0-W	30329259	30336556
80	22	48	50	19	1,5	MCA-HSK-A080-22-050-0-0-W	30329265	On request
80	27	60	50	21	1,8	MCA-HSK-A080-27-050-0-0-W	30329266	On request
80	32	78	60	24	2,4	MCA-HSK-A080-32-060-0-0-W	30329267	On request
80*	40	89	60	27	2,7	MCA-HSK-A080-40-060-0-0-W	30329269	On request
100	22	48	50	19	2,4	MCA-HSK-A100-22-050-0-0-W	30329270	30342082
100	27	60	50	21	2,6	MCA-HSK-A100-27-050-0-0-W	30329271	30342083
100	32	78	50	24	3,0	MCA-HSK-A100-32-050-0-0-W	30329272	30342084
100*	40	89	60	27	3,8	MCA-HSK-A100-40-060-0-0-W	30329274	30342085
100	50	120	70	30	5,6	MCA-HSK-A100-50-070-0-0-W	30329275	30554144
100*	60	140	70	40	6,8	MCA-HSK-A100-60-070-0-0-W	30329276	30342086

The sizes marked with \* have four additional threaded bores for mounting cutter heads with tool fastening in accordance with DIN 2079.

Dimensions in mm.

Items included: With key blocks attached and milling cutter clamping screw in accordance with DIN 6367. Without coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the arbor  $d_1 = 8 \mu\text{m}$ . Six balancing bores on the periphery.

Note: Milling cutter clamping screw supplied without internal cooling. For spare parts see page 284. For coolant tubes and assembly tools, see section "Accessories, spare parts and measuring equipment". Milling adapter rings in accordance with DIN 2084 on request. Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

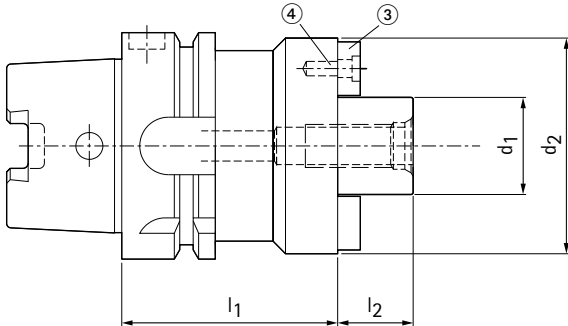
Balancing value: G 2.5 at  $16,000 \text{ min}^{-1}$  as delivered.

# Milling cutter arbors

Mechanical tool clamping

With enlarged face connection diameter in accordance with DIN 69882-3

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions				Weight [kg]	Specification	Order No. without milling cutter clamping screw	Order No. chip version
	$d_1$	$d_2$	$l_1$	$l_2$				
63	22	48	50	19	1,0	MCA-HSK-A063-22-050-1-0-W	10066802	10071567
63	27	60	60	21	1,4	MCA-HSK-A063-27-060-1-0-W	10066803	10078580
63	32	78	60	24	1,7	MCA-HSK-A063-32-060-1-0-W	10066804	10072205
63*	40	89	60	27	1,9	MCA-HSK-A063-40-060-1-0-W	10066805	10076023
63*	60**	140	70	40	4,5	MCA-HSK-A063-40-070-1-0-W	10067153	10093651
80	22	48	50	19	1,5	MCA-HSK-A080-22-050-1-0-W	10066806	On request
80	27	60	50	21	1,7	MCA-HSK-A080-27-050-1-0-W	10066808	On request
80	32	78	60	24	2,3	MCA-HSK-A080-32-060-1-0-W	10066810	On request
80*	40	89	60	27	2,5	MCA-HSK-A080-40-060-1-0-W	10066811	On request
100	22	48	50	19	2,3	MCA-HSK-A100-22-050-1-0-W	10066812	30201364
100	27	60	50	21	2,5	MCA-HSK-A100-27-050-1-0-W	10066813	10079983
100	32	78	50	24	2,9	MCA-HSK-A100-32-050-1-0-W	10066814	30192516
100*	40	89	60	27	3,5	MCA-HSK-A100-40-060-1-0-W	10066815	30192520
100	50	120	70	30	5,2	MCA-HSK-A100-50-070-1-0-W	10066816	30553602
100*	60	140	70	40	6,2	MCA-HSK-A100-60-070-1-0-W	10066817	10071573

The sizes marked with \* have four additional threaded bores for mounting cutter heads with tool fastening in accordance with DIN 2079. \*\* $d_1 = 60$  mm for nominal size HSK-A 63: maximum milling head diameter 250 mm. No balancing bores on the periphery.

Dimensions in mm.

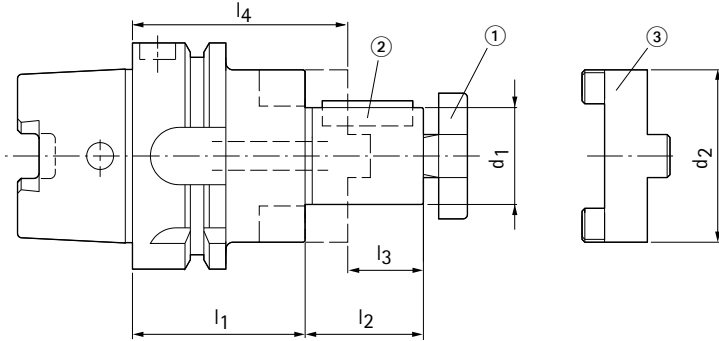
Items included: With key blocks attached. Without coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the arbor  $d_1 = 8 \mu\text{m}$ . Six balancing bores on the periphery.

Note: Milling cutter clamping screw supplied without internal cooling. For spare parts see page 284. For coolant tubes and assembly tools, see section "Accessories, spare parts and measuring equipment". Milling adapter rings in accordance with DIN 2084 on request. Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at  $16,000 \text{ min}^{-1}$  as delivered.

# Spare parts for milling cutter arbors



**For milling cutter arbors for milling cutters with longitudinal/cross slot in accordance with DIN 69882-2**

For arbor diameter $d_1$	① Milling cutter clamping screw in accordance with DIN 6367		② Parallel key DIN 6885 Form AS (however with extraction thread)		③ Driving ring in accordance with DIN 6366-1	
	Size	Order No.	Size	Order No.	Size	Order No.
16	M8	10007286	4x4x20	30433907	Gr.16	10008712
22	M10	10006016	6x6x25	10059420	Gr.22	10032860
27	M12	10005164	7x7x25	30433909	Gr.27	10018128
32	M16	10004065	8x7x28	30433910	Gr.32	10076829
40	M20	10004066	10x8x32	30433912	Gr.40	10004785
50	M24	10010417	12x8x36	30433914	Gr.50	10076830

**For milling cutter arbors with enlarged face connection diameter in accordance with DIN 69882-3**

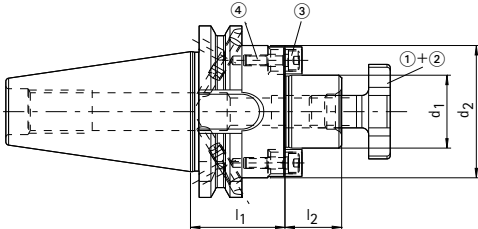
For arbor diameter $d_1$	① Milling cutter clamping screw in accordance with DIN 6367		② Milling cutter clamping screw with internal coolant supply (e.g. for MAPAL WWS milling heads)	③ Key block (2x)		④ Fastening screw in accordance with ISO 4762 (2x)	
	Size	Order No.		Specification	Order No.	Size	Order No.
22	M10	10006016	30326178	MT1013-01	10005640	M4x10 - 12.9	10003583
27	M12	10005164	30326179	MT1215-01	10005165	M4x16 - 12.9	10003586
32	M16	10004065	30326180	MT1422-01	10004063	M5x16 - 12.9	10003601
40	M20	10004066	30326181	MT1623-01	10004064	M5x16 - 12.9	10003601
50	M24	10010417	-	MT1832-01	30139744	M8x16 - 12.9	10003634
60	M30	10017544	-	MT2625-01	10010103	M12x25 - 12.9	10003675

# Milling cutter arbors

Mechanical tool clamping

With enlarged face connection diameter

Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Dimensions				Weight [kg]	Specification	Order No. with milling cutter clamping screw ①	Specification	Order No. without milling cutter clamping screw ②
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>					
40	22	48	35	19	1,1	MCA-SK040-22-035-0-0-W	10066833	MCA-SK040-22-035-3-0-W	10066837
40	27	50	35	21	1,2	MCA-SK040-27-035-0-0-W	10066834	MCA-SK040-27-035-3-0-W	10066838
40	32	78	50	24	1,8	MCA-SK040-32-050-0-0-W	10066835	MCA-SK040-32-050-3-0-W	10066839
40*	40	89	50	27	2,1	MCA-SK040-40-050-0-0-W	10066836	MCA-SK040-40-050-3-0-W	10066840
40*	60**	140	70	27	5,6	MCA-SK040-60-070-0-0-W	30655858	MCA-SK040-60-070-3-0-W	10011328
50	22	48	35	19	2,9	MCA-SK050-22-035-0-0-W	10073552	MCA-SK050-22-035-3-0-W	10073747
50	27	60	35	21	3,0	MCA-SK050-27-035-0-0-W	10073743	MCA-SK050-27-035-3-0-W	10073748
50	32	78	35	24	3,4	MCA-SK050-32-035-0-0-W	10073744	MCA-SK050-32-035-3-0-W	10073749
50	40	89	50	27	4,2	MCA-SK050-40-050-0-0-W	10073745	MCA-SK050-40-050-3-0-W	10073750
50	60	140	70	40	8,4	MCA-SK050-60-070-0-0-W	10073746	MCA-SK050-60-070-3-0-W	10073751

The sizes marked with \* have four additional threaded bores for mounting cutter heads with tool fastening in accordance with DIN 2079. \*\*d<sub>1</sub> = 60 mm for nominal size HSK-A 63: maximum milling head diameter 250 mm. No balancing bores on the periphery.

## Spare parts

For arbor diameter	① Milling cutter clamping screw in accordance with DIN 6367		② Milling cutter clamping screw with internal coolant supply (e.g. for MAPAL WWS milling heads)	③ Key block		④ Fastening screw in accordance with ISO 4762	
	Size	Order No.		Order No.	Specification	Order No.	Size
d <sub>1</sub>							
22	M10	10006016	30326178	MT1013-01	10005640	M4x10 - 12.9	10003583
27	M12	10005164	30326179	MT1215-01	10005165	M4x16 - 12.9	10003586
32	M16	10004065	30326180	MT1422-01	10004063	M5x16 - 12.9	10003601
40	M20	10004066	30326181	MT1623-01	10004064	M5x16 - 12.9	10003601
60	M30	10017544	-	MT2625-01	10010103	M12x25 - 12.9	10003675

Dimensions in mm.

Items included: With key blocks attached and milling cutter clamping screw in accordance with DIN 6367. Without pull stud. With key blocks attached, without milling cutter clamping screw or pull stud. Bores for coolant supply in accordance with Form AF sealed on delivery with threaded pins.

Design: Permissible run-out deviation on the steep taper in relation to the arbor diameter d<sub>1</sub> = 8 μm.

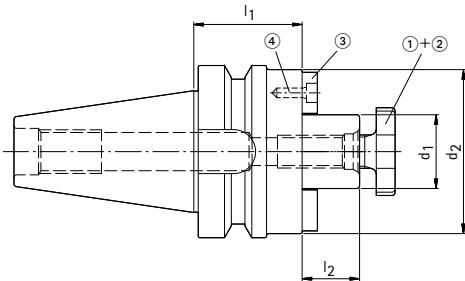
Note: For pull studs and assembly tools, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# Milling cutter arbors

Mechanical tool clamping

Shank BT in accordance with ISO 7388-2 Form JD (JIS B 6339)



BT	Dimensions				Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$l_1$	$l_2$			
30	27	46	35	21	0,7	MCA-BT030-27-035-0-0-W	50016666
40	22	48	35	19	1,2	MCA-BT040-22-035-0-0-W	10073629
40	27	60	35	21	1,3	MCA-BT040-27-035-0-0-W	10073630
40	32	78	50	24	2,0	MCA-BT040-32-050-0-0-W	10073631
40*	40	89	50	27	2,3	MCA-BT040-40-050-0-0-W	10073632

The sizes marked with \* have four additional threaded bores for mounting cutter heads with tool fastening in accordance with DIN 2079.

## Spare parts

For arbor diameter	① Milling cutter clamping screw in accordance with DIN 6367		② Milling cutter clamping screw with internal coolant supply	③ Key block	④ Fastening screw for key block in accordance with ISO 4762	
	Size	Order No.	Order No.	Order No.	Size	Order No.
$d_1$						
22	M10	10006016	30326178	10005640	M4x10 - 12.9	10003583
27	M12	10005164	30326179	10005165	M4x16 - 12.9	10003586
32	M16	10004065	30326180	10004063	M5x16 - 12.9	10003601
40	M20	10004066	30326181	10004064	M5x16 - 12.9	10003601

Dimensions in mm.

Items included: With key blocks attached and milling cutter clamping screw in accordance with DIN 6367. Without pull stud.

Design: Permissible run-out deviation on the taper in relation to the arbor diameter  $d_1 \leq 8 \mu\text{m}$ .

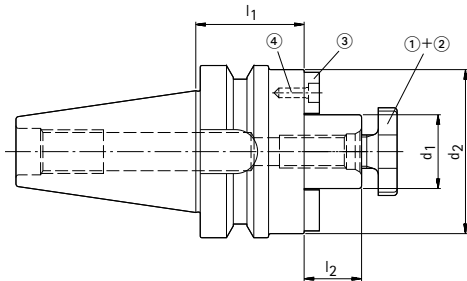
Note: For pull studs and assembly tools, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at  $16,000 \text{ min}^{-1}$  as delivered.

# Milling cutter arbors

Mechanical tool clamping

Shank similar to ISO 7388-2 Form JD (JIS B 6339)



BT	Dimensions				Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>			
30	27	70	45	20	1,0	MCA-JD-FC030-27-045-0-0-W	30487186
40	27	70	60	20	2,0	MCA-JD-FC040-27-060-0-0-W	30475457

## Spare parts

For arbor diameter	① Milling cutter clamping screw in accordance with DIN 6367		② Milling cutter clamping screw with internal coolant supply	③ Key block	④ Fastening screw for key block in accordance with ISO 4762	
	Size	Order No.	Order No.	Order No.	Size	Order No.
d <sub>1</sub>						
27	M12	10005164	30326179	10005165	M4x16 - 12.9	10003586

Dimensions in mm.

Items included: With key blocks attached and milling cutter clamping screw in accordance with DIN 6367. Without pull stud.

Design: Permissible run-out deviation on the taper in relation to the arbor diameter  $d_1 \leq 8 \mu\text{m}$ .

Note: For pull studs and assembly tools, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 2.5 at  $16,000 \text{ min}^{-1}$  as delivered.

# ADAPTERS AND BLANKS

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Extensions, reducers, module adapters and blanks









# ADAPTERS AND BLANKS

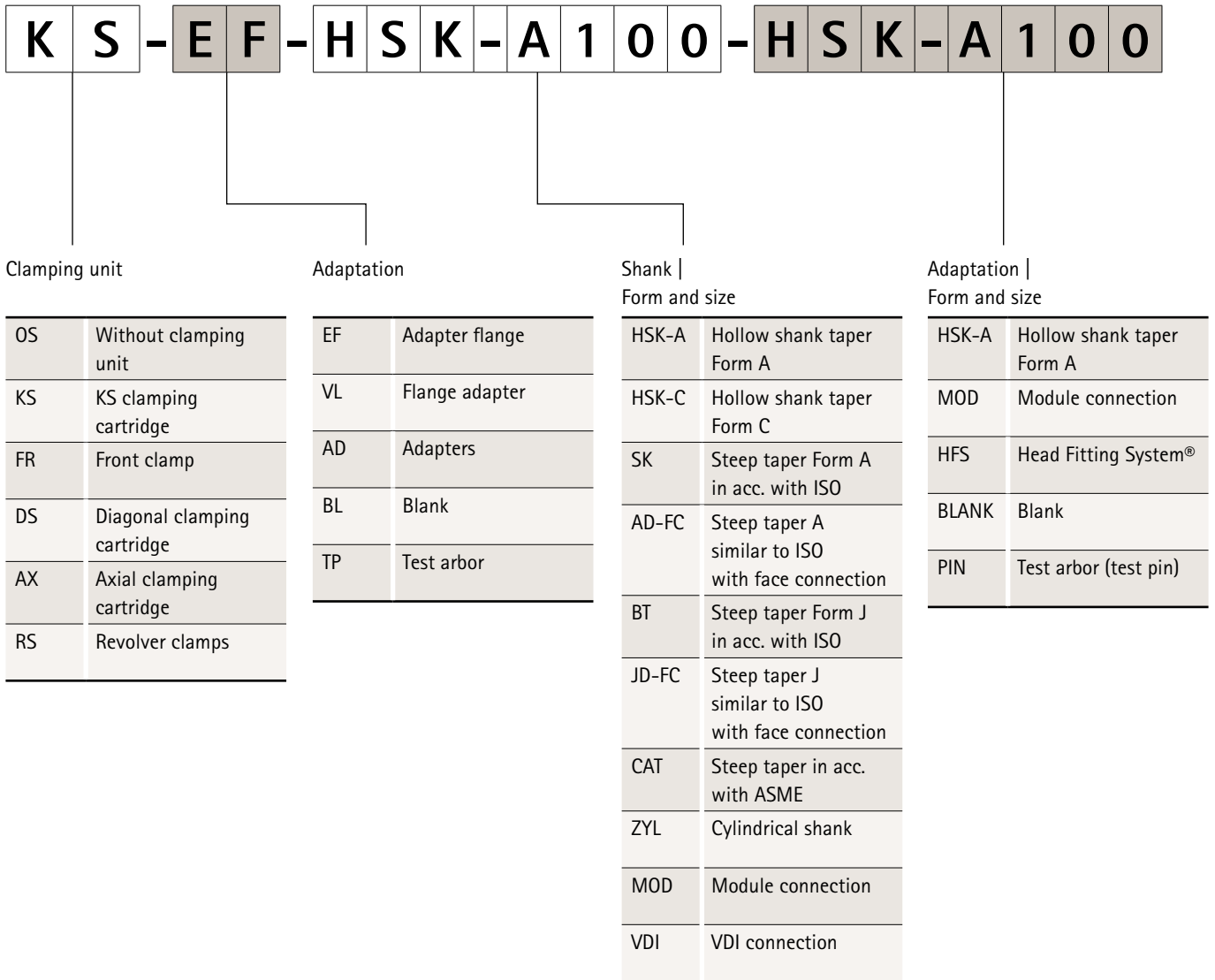
## Adapters

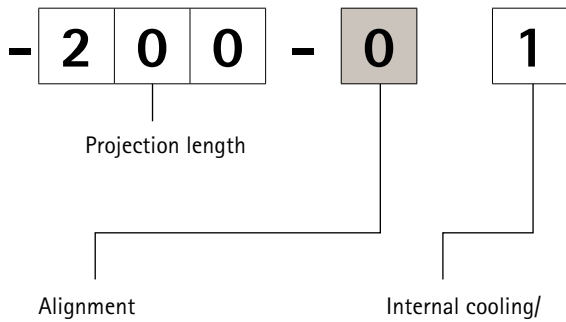
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Steep taper adapters .....	300
Blanks .....	311



# Designation code for adapter specification



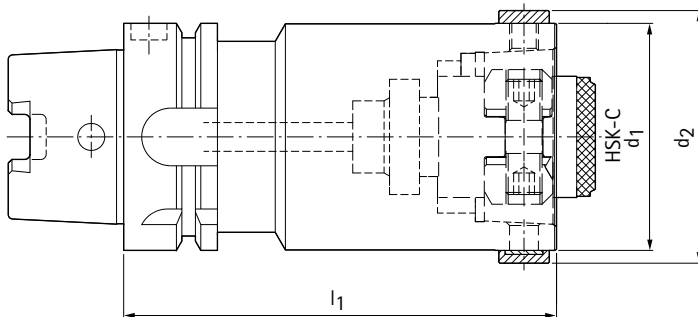


Alignment	
0	Without alignment
1	Radial alignment
2	Radial and angular alignment

Internal cooling/ MQL	
0	Without
1	Internal
2	Lateral (SK)
3	Internal and lateral combined
4	With MQL (1-channel system)
5	With MQL (2-channel system)
6	With MQL (not specified)
7	With MQL, MQL 1 clamping cartridge
8	With MQL, MQL clamping cartridge
9	With high pressure, HD clamping cartridge

# HSK extensions

Shank HSK-A in accordance with DIN 69893-1



HSK-A	HSK-C d <sub>1</sub>	Dimensions		Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>2</sub>	l <sub>1</sub>				
50	50	55	80	1,1	KS-AD-HSK-A050-HSK-C050-080-01	30319365	On request
50	50	55	100	1,4	KS-AD-HSK-A050-HSK-C050-100-01	30319366	On request
63	63	70	80	1,7	KS-AD-HSK-A063-HSK-C063-080-01	30319367	30342087
63	63	70	120	2,6	KS-AD-HSK-A063-HSK-C063-120-01	30319368	30342088
80	80	87	100	3,4	KS-AD-HSK-A080-HSK-C080-100-01	30319369	On request
80	80	87	160	5,8	KS-AD-HSK-A080-HSK-C080-160-01	30319370	On request
100	100	110	140	7,8	KS-AD-HSK-A100-HSK-C100-140-01	30319371	30342089
100	100	110	200	11,5	KS-AD-HSK-A100-HSK-C100-200-01	30319372	30342090

Dimensions in mm.

Items included: With standard KS clamping cartridge and sealing ring.  
Without coolant tube.

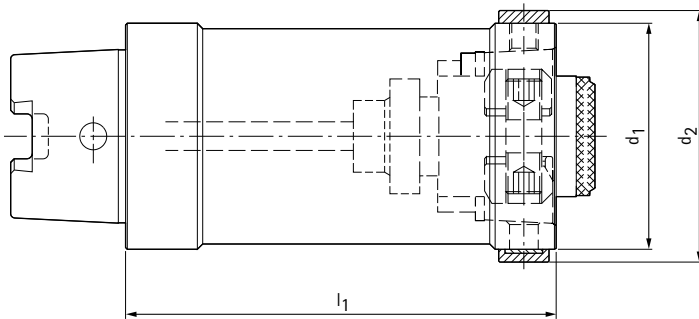
Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper = 5 µm.

Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and coolant tubes, see section "Accessories, spare parts and measuring equipment".  
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# HSK extensions

Shank HSK-C in accordance with DIN 69893-1



HSK-C	Dimensions			Weight [kg]	Specification	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>			
32	32	37	50	0,3	KS-AD-HSK-C032-HSK-C032-050-01	30319647
32	32	37	70	0,4	KS-AD-HSK-C032-HSK-C032-070-01	30319648
40	40	45	60	0,6	KS-AD-HSK-C040-HSK-C040-060-01	30319649
40	40	45	80	0,7	KS-AD-HSK-C040-HSK-C040-080-01	30319650
50	50	55	60	0,9	KS-AD-HSK-C050-HSK-C050-060-01	30319651
50	50	55	100	1,4	KS-AD-HSK-C050-HSK-C050-100-01	30319652
63	63	70	80	1,8	KS-AD-HSK-C063-HSK-C063-080-01	30319653
63	63	70	120	2,7	KS-AD-HSK-C063-HSK-C063-120-01	30319654
80	80	87	80	2,9	KS-AD-HSK-C080-HSK-C080-080-01	30319655
80	80	87	120	4,4	KS-AD-HSK-C080-HSK-C080-120-01	30319656
100	100	110	100	5,7	KS-AD-HSK-C100-HSK-C100-100-01	30319657
100	100	110	160	9,1	KS-AD-HSK-C100-HSK-C100-160-01	30319658

Dimensions in mm.

Items included: With standard KS clamping cartridge and sealing ring.  
Without coolant tube.

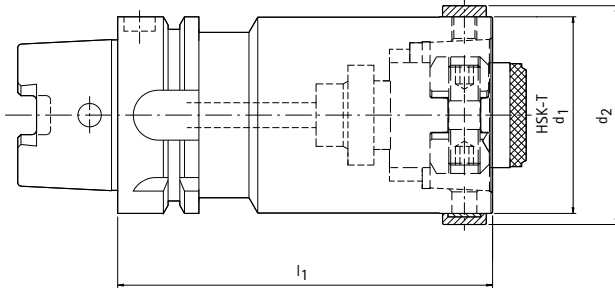
Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper 3 µm for extensions and reducers.

Note: For coolant tubes and assembly tools, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

## HSK-T extensions

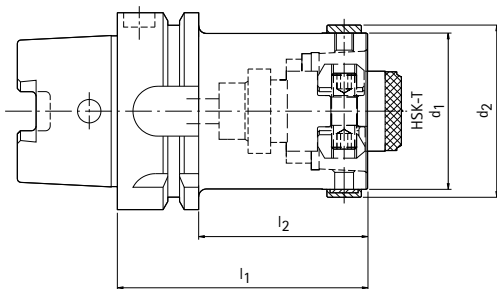
Shank HSK-T in accordance with ISO 12164-3



HSK-T	HSK-T $d_1$	Dimensions		Weight [kg]	Specification	Order No.
		$d_2$	$l_1$			
40	40	45	60	0,5	KS-AD-HSK-T040-HSK-T040-060-01	30317312
40	40	45	80	0,7	KS-AD-HSK-T040-HSK-T040-080-01	30317310
63	63	70	120	2,3	KS-AD-HSK-T063-HSK-T063-120-01	30298734
63	63	70	80	1,7	KS-AD-HSK-T063-HSK-T063-080-01	30298733
100	100	110	120	6,3	KS-AD-HSK-T100-HSK-T100-120-01	30298737

## HSK-T reducers

Shank HSK-T in accordance with ISO 12164-3



HSK-T	HSK-T $d_1$	Dimensions			Weight [kg]	Specification	Order No.
		$d_2$	$l_1$	$l_2$			
63	40	45	70	54	1,1	KS-AD-HSK-T063-HSK-T040-070-01	30317308
100	63	70	100	71	3,6	KS-AD-HSK-T100-HSK-T063-100-01	30298740
100	40	45	80	51	2,5	KS-AD-HSK-T100-HSK-T040-080-01	30317309

Dimensions in mm.

Items included: With clamping cartridge and sealing ring, does not include coolant tube.

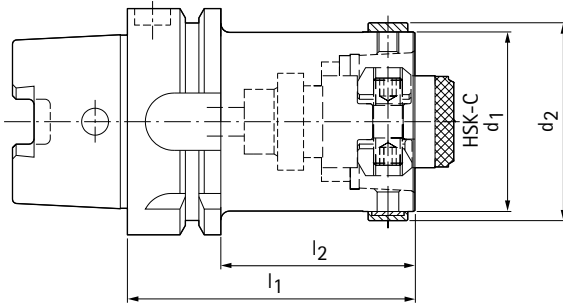
Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper = 5  $\mu\text{m}$ .

Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and coolant tubes, see section "Accessories, spare parts and measuring equipment".  
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 6.3 at 3,000  $\text{min}^{-1}$  as delivered.

# HSK reducers

Shank HSK-A in accordance with DIN 69893-1



HSK-A	HSK-C d <sub>1</sub>	Dimensions			Weight [kg]	Specification	Order No.	Order No. chip version
		d <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>				
50	32	37	60	34	0,6	KS-AD-HSK-A050-HSK-C032-060-01	30319373	On request
50	40	45	70	44	0,8	KS-AD-HSK-A050-HSK-C040-070-01	30319374	On request
63	32	37	70	44	0,9	KS-AD-HSK-A063-HSK-C032-070-01	30319375	30553401
63	40	45	80	54	1,2	KS-AD-HSK-A063-HSK-C040-080-01	30319376	30553402
63	50	55	80	54	1,4	KS-AD-HSK-A063-HSK-C050-080-01	30319377	30553403
80	40	45	80	54	1,6	KS-AD-HSK-A080-HSK-C040-080-01	30319378	On request
80	50	55	80	54	1,8	KS-AD-HSK-A080-HSK-C050-080-01	30319379	On request
80	63	70	90	64	2,5	KS-AD-HSK-A080-HSK-C063-090-01	30319380	On request
100	50	55	80	51	2,7	KS-AD-HSK-A100-HSK-C050-080-01	30319381	30342091
100	63	70	100	71	3,6	KS-AD-HSK-A100-HSK-C063-100-01	30319382	30410216
100	80	87	100	71	4,4	KS-AD-HSK-A100-HSK-C080-100-01	30319383	30342093

Dimensions in mm.

Items included: With standard KS clamping cartridge and sealing ring.  
Without coolant tube.

Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper = 5 µm.

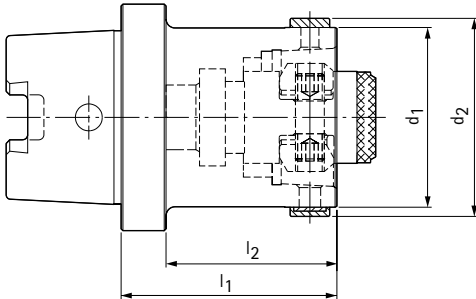
Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and coolant tubes, see section "Accessories, spare parts and measuring equipment".  
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.



# HSK reducers

Shank HSK-C in accordance with DIN 69893-1



HSK-C	Dimensions				Weight [kg]	Specification	Order No.
	$d_1$	$d_2$	$l_1$	$l_2$			
40	32	37	50	40	0,4	KS-AD-HSK-C040-HSK-C032-050-01	30319659
50	32	37	50	37,5	0,6	KS-AD-HSK-C050-HSK-C032-050-01	30319660
50	40	45	60	47,5	0,8	KS-AD-HSK-C050-HSK-C040-060-01	30319661
63	32	37	50	30	0,7	KS-AD-HSK-C063-HSK-C032-050-01	30319662
63	40	45	60	47,5	0,9	KS-AD-HSK-C063-HSK-C040-060-01	30319663
63	50	55	60	47,5	1,0	KS-AD-HSK-C063-HSK-C050-060-01	30319664
80	40	45	60	44	1,2	KS-AD-HSK-C080-HSK-C040-060-01	30319665
80	50	55	80	64	1,4	KS-AD-HSK-C080-HSK-C050-080-01	30319666
80	63	70	80	64	2,0	KS-AD-HSK-C080-HSK-C063-080-01	30319667
100	50	55	80	64	1,6	KS-AD-HSK-C100-HSK-C050-080-01	30319668
100	63	70	80	64	2,1	KS-AD-HSK-C100-HSK-C063-080-01	30319669
100	80	87	100	84	4,2	KS-AD-HSK-C100-HSK-C080-100-01	30319670

Dimensions in mm.

Items included: With standard KS clamping cartridge and sealing ring.  
Without coolant tube.

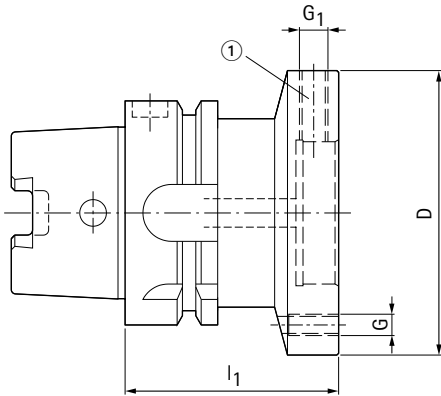
Design: Permissible run-out deviation on the hollow taper shank in relation to the internal taper 5  $\mu\text{m}$  for extensions and reducers.

Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and coolant tubes, see section "Accessories, spare parts and measuring equipment".  
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 6.3 at 3,000  $\text{min}^{-1}$  as delivered.

# HSK adapters

Shank HSK-A in accordance with DIN 69893-1



HSK-A	D	Dimensions			Weight [kg]	Specification	Order No.	Order No. chip version
		l <sub>1</sub>	G	G <sub>1</sub>				
40	60	60	M5	M8x1	0,7	OS-AD-HSK-A050-MOD060-060-11	30344525	On request
50	60	60	M5	M8x1	0,9	OS-AD-HSK-A050-MOD060-060-11	30319384	On request
50	70	60	M6	M8x1	1,0	OS-AD-HSK-A050-MOD070-060-11	30319385	On request
50	80	60	M6	M8x1	1,1	OS-AD-HSK-A050-MOD080-060-11	30319386	On request
63	60	60	M5	M8x1	1,3	OS-AD-HSK-A063-MOD060-060-11	30319387	30342094
63	70	60	M6	M8x1	1,4	OS-AD-HSK-A063-MOD070-060-11	30319388	30343171
63	80	60	M6	M8x1	1,5	OS-AD-HSK-A063-MOD080-060-11	30319389	30342096
63	100	65	M8	M10x1	2,1	OS-AD-HSK-A063-MOD100-065-11	30319390	30342097
63	117	65	M8	M10x1	2,5	OS-AD-HSK-A063-MOD117-065-11	30319391	30342098
80	60	50	M5	M8x1	1,6	OS-AD-HSK-A080-MOD060-050-11	30319392	On request
80	70	60	M6	M8x1	2,0	OS-AD-HSK-A080-MOD070-060-11	30319393	On request
80	80	60	M6	M8x1	2,1	OS-AD-HSK-A080-MOD080-060-11	30319394	On request
80	100	65	M8	M10x1	2,6	OS-AD-HSK-A080-MOD100-065-11	30319395	On request
80	117	65	M8	M10x1	3,1	OS-AD-HSK-A080-MOD117-065-11	30319396	On request
80	140	75	M10	M10x1	4,2	OS-AD-HSK-A080-MOD140-075-11	30319397	On request
100	60	55	M5	M8x1	2,8	OS-AD-HSK-A100-MOD060-055-11	30319398	30340276
100	70	55	M6	M8x1	2,8	OS-AD-HSK-A100-MOD070-055-11	30319399	30342099
100	80	55	M6	M8x1	3,0	OS-AD-HSK-A100-MOD080-055-11	30319400	30342100
100	100	65	M8	M10x1	3,7	OS-AD-HSK-A100-MOD100-065-11	30319401	30342101
100	117	65	M8	M10x1	4,0	OS-AD-HSK-A100-MOD117-065-11	30319402	30342102
100	140	75	M10	M10x1	5,3	OS-AD-HSK-A100-MOD140-075-11	30319403	30342103

## Spare parts

For module diameter D	Quantity re-quired	① Threaded pin		
		Size	Specification	Order No.
60 - 80	4	M8x1x16	K2865-24	10075355
100 - 140	4	M10x1x20	K2865-34	10075099

Dimensions in mm.

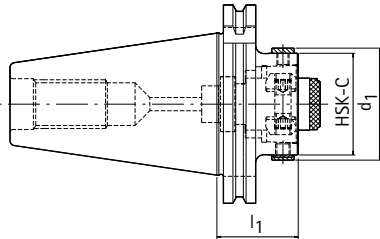
Items included: With standard KS clamping cartridge and sealing ring.  
Without coolant tube.

Note: For coolant tubes, see section "Accessories, spare parts and measuring equipment".  
Chip version: Equipped with Balluff code carrier see page 353. Further code carriers on request.

Balancing value: G 2.5 at 16,000 min<sup>-1</sup> as delivered.

# KS steep taper adapters

Shank SK in accordance with ISO 7388-1 Form AD



SK	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
30	32	37	40	0,5	KS-AD-SK030-HSK-C032-040-01	30319737
30	40	45	60	0,8	KS-AD-SK030-HSK-C040-060-01	30319738
40	32	37	40	1,0	KS-AD-SK040-HSK-C032-040-01	30319739
40	40	45	40	1,0	KS-AD-SK040-HSK-C040-040-01	30319740
40	50	55	60	1,4	KS-AD-SK040-HSK-C050-060-01	30319741
40	63	70	75	1,9	KS-AD-SK040-HSK-C063-075-01	30319742
45	32	37	40	1,7	KS-AD-SK045-HSK-C032-040-01	30319743
45	40	45	40	1,8	KS-AD-SK045-HSK-C040-040-01	30319744
45	50	55	40	1,9	KS-AD-SK045-HSK-C050-040-01	30319745
45	63	70	60	2,4	KS-AD-SK045-HSK-C063-060-01	30319746
45	80	87	80	3,3	KS-AD-SK045-HSK-C080-080-01	30319747
50	32	37	40	2,8	KS-AD-SK050-HSK-C032-040-01	30319748
50	40	45	40	2,9	KS-AD-SK050-HSK-C040-040-01	30319749
50	50	55	40	2,9	KS-AD-SK050-HSK-C050-040-01	30319750
50	63	70	40	3,1	KS-AD-SK050-HSK-C063-040-01	30319751
50	80	87	80	4,7	KS-AD-SK050-HSK-C080-080-01	30319752
50	100	110	95	6,2	KS-AD-SK050-HSK-C100-095-01	30319753

Dimensions in mm.

Use: For use in the machine spindle for mounting HSK tools.

Items included: With standard KS clamping cartridge and sealing ring.

Without pull stud.

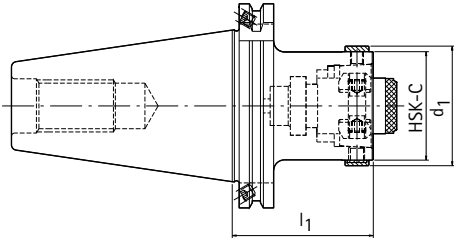
Design: Permissible run-out deviation on the steep taper in relation to the HSK internal taper 3 µm.

Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS steep taper adapters

Shank SK in accordance with ISO 7388-1 Form AF



SK	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
30	32	37	55	0,6	KS-AD-SK030-HSK-C032-055-02	30319754
30	40	45	60	0,8	KS-AD-SK030-HSK-C040-060-02	30319755
40	32	37	55	1,1	KS-AD-SK040-HSK-C032-055-02	30319756
40	40	45	60	1,2	KS-AD-SK040-HSK-C040-060-02	30319757
40	50	55	65	1,5	KS-AD-SK040-HSK-C050-065-02	30319758
40	63	70	75	1,9	KS-AD-SK040-HSK-C063-075-02	30319759
45	32	37	55	1,8	KS-AD-SK045-HSK-C032-055-02	30319760
45	40	45	60	2,0	KS-AD-SK045-HSK-C040-060-02	30319761
45	50	55	75	2,4	KS-AD-SK045-HSK-C050-075-02	30319762
45	63	70	75	2,7	KS-AD-SK045-HSK-C063-075-02	30319763
45	80	87	85	3,5	KS-AD-SK045-HSK-C080-085-02	30319764
50	32	37	55	2,9	KS-AD-SK050-HSK-C032-055-02	30319765
50	40	45	60	3,1	KS-AD-SK050-HSK-C040-060-02	30319766
50	50	55	65	3,3	KS-AD-SK050-HSK-C050-065-02	30319767
50	63	70	75	3,9	KS-AD-SK050-HSK-C063-075-02	30319768
50	80	87	85	4,9	KS-AD-SK050-HSK-C080-085-02	30319769
50	100	110	100	6,4	KS-AD-SK050-HSK-C100-100-02	30319770

Dimensions in mm.

Use: For use in the machine spindle for mounting HSK tools.

Items included: With standard KS clamping cartridge and sealing ring.

Without pull stud.

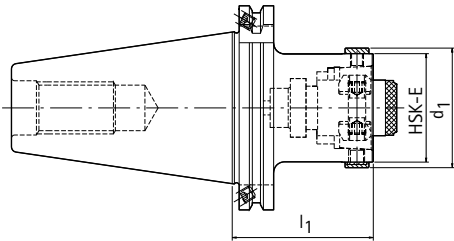
Design: Permissible run-out deviation on the steep taper in relation to the HSK internal taper 3 µm.

Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS steep taper adapters

Shank SK in accordance with ISO 7388-1 Form AF



SK	HSK-E*	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
50	32	37	40	2,9	KS-AD-SK050-HSK-E032-040-01	30509729
50	40	45	40	3,0	KS-AD-SK050-HSK-E040-040-01	30509731
50	50	55	40	3,2	KS-AD-SK050-HSK-E050-040-01	30509732
50	63	70	40	3,8	KS-AD-SK050-HSK-E063-040-01	30509733
50	80	87	80	4,8	KS-AD-SK050-HSK-E080-080-01	30509735
50	100	110	95	6,3	KS-AD-SK050-HSK-E100-095-01	30509737

\* Connection similar to HSK-E, but for shanks with access bore.

Dimensions in mm.

Use: For use in the machine spindle for mounting HSK tools.

Items included: With standard KS clamping cartridge and sealing ring.

Without pull stud.

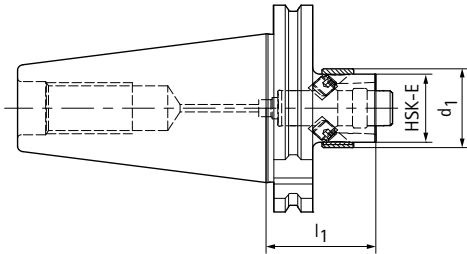
Design: Permissible run-out deviation on the steep taper in relation to the HSK internal taper 3 µm.

Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# DS step taper adapters

Shank SK in accordance with ISO 7388-1 Form AF



SK	HSK-E*	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
50	32	37	45	2,8	DS-AD-SK050-HSK-E032-045-01	30547258
50	40	45	55	3,0	DS-AD-SK050-HSK-E040-055-01	30547260
50	50	55	60	3,1	DS-AD-SK050-HSK-E050-060-01	30547262
50	63	70	70	3,6	DS-AD-SK050-HSK-E063-070-01	30547263
50	80	87	90	4,8	DS-AD-SK050-HSK-E080-090-01	30547264
50	100	110	120	7,2	DS-AD-SK050-HSK-E100-120-01	30547265

\* Connection similar to HSK-E, but for shanks with access bore.

Dimensions in mm.

Use: For use in the machine spindle for mounting HSK tools.

Items included: With standard KS clamping cartridge and sealing ring.

Without pull stud.

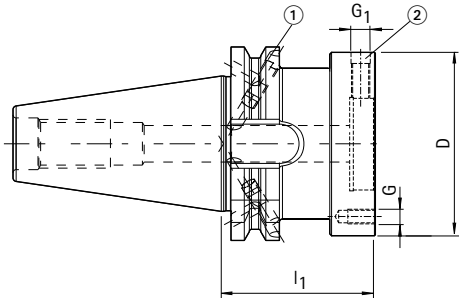
Design: Permissible run-out deviation on the steep taper in relation to the HSK internal taper 3 µm.

Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# Steep taper adapters

Shank SK in accordance with ISO 7388-1 Form AD/AF



SK	Module diameter D	l <sub>1</sub>	G	G <sub>1</sub>	Shape	Weight [kg]	Specification	Order No.
30*	60	50	M5	M8x1	AD	0,8	OS-AD-SK030-MOD060-050-11	30319771
30*	60	50	M5	M8x1	AF	0,9	OS-AD-SK030-MOD060-050-12	30319772
30*	70	50	M6	M8x1	AD	0,9	OS-AD-SK030-MOD070-050-11	30319773
30*	70	50	M6	M8x1	AF	0,9	OS-AD-SK030-MOD070-050-12	30319774
40	60	50	M5	M8x1	AD/AF	1,3	OS-AD-SK040-MOD060-050-13	10058658
40	70	50	M6	M8x1	AD/AF	1,4	OS-AD-SK040-MOD070-050-13	10058660
40	80	55	M6	M8x1	AD/AF	1,7	OS-AD-SK040-MOD080-055-13	10058661
40	100	60	M8	M10x1	AD/AF	2,2	OS-AD-SK040-MOD100-060-13	10058662
45	60	50	M5	M8x1	AD/AF	2,8	OS-AD-SK045-MOD060-050-13	10058663
45	70	50	M6	M8x1	AD/AF	2,9	OS-AD-SK045-MOD070-050-13	10058664
45	80	55	M6	M8x1	AD/AF	3,1	OS-AD-SK045-MOD080-055-13	10058665
45	100	60	M8	M10x1	AD/AF	3,3	OS-AD-SK045-MOD100-060-13	10058666
45	117	60	M8	M10x1	AD/AF	3,6	OS-AD-SK045-MOD117-060-13	10058667
50	60	50	M5	M8x1	AD/AF	3,4	OS-AD-SK050-MOD060-050-13	10058669
50	70	50	M6	M8x1	AD/AF	3,5	OS-AD-SK050-MOD070-050-13	10058670
50	80	50	M6	M8x1	AD/AF	3,7	OS-AD-SK050-MOD080-050-13	10058671
50	100	60	M8	M10x1	AD/AF	4,5	OS-AD-SK050-MOD100-060-13	10058672
50	117	60	M8	M10x1	AD/AF	4,9	OS-AD-SK050-MOD117-060-13	10058673
50	140	60	M10	M10x1	AD/AF	5,4	OS-AD-SK050-MOD140-060-13	10058675

\* Steep taper size SK30 is not available in combined design AD/AF.

## Spare parts

For SK	Quantity required	① Threaded pin in accordance with ISO 4026	
		Size	Order No.
40, 45, 50	2	M5x4	10036757

For module diameter D	Quantity required	② Threaded pin Order No.
60 - 80	4	10075355
100 - 140	4	10075099

Dimensions in mm.

Use: For use in the machine spindle for mounting KS flange adapters, shrink chucks, hydraulic chucks, chucks for cylindrical shanks or tools with a module shank in accordance with MAPAL works standard.

Items included: With threaded pins for aligning the radial run-out. Without pull stud.

Design: Normal setting Form AD, if Form AF is required, please state with the order.

Adjustable in relation to the steep taper due to threaded pins the radial run-out of a connection or tool fitted.

Note: In the section "Clamping tools with flange module" you will find the matching:

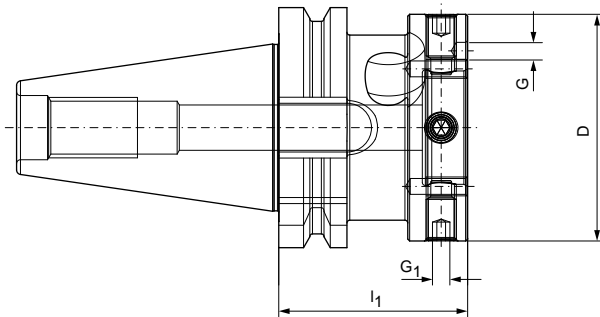
- KS flange adapters in accordance with MAPAL works standard
- Chucks for cylindrical shanks
- Hydraulic chucks HydroChuck
- Shrink chucks ThermoChuck

For pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# Steep taper adapters

Form AD similar to ISO 7388-1, with face connection



SK	Module diameter D	l <sub>1</sub>	G	G <sub>1</sub>	Weight [kg]	Specification	Order No.
30	60	50	M5	M8x1	0,8	OS-AD-AD-FC030-MOD060-050-11	30630793
30	70	50	M6	M8x1	0,9	OS-AD-AD-FC030-MOD070-050-11	30630794
40	60	50	M5	M8x1	1,3	OS-AD-AD-FC040-MOD060-050-11	30630796
40	70	50	M6	M8x1	1,4	OS-AD-AD-FC040-MOD070-050-11	30630797
40	80	55	M6	M8x1	1,7	OS-AD-AD-FC040-MOD080-055-11	30630798
40	100	60	M8	M10x1	2,2	OS-AD-AD-FC040-MOD100-060-11	30630799
50	60	50	M5	M8x1	3,4	OS-AD-AD-FC050-MOD060-050-11	30630800
50	70	50	M6	M8x1	3,5	OS-AD-AD-FC050-MOD070-050-11	30630801
50	80	50	M6	M8x1	3,7	OS-AD-AD-FC050-MOD080-050-11	30630802
50	100	60	M8	M10x1	4,5	OS-AD-AD-FC050-MOD100-060-11	30630803
50	117	60	M8	M10x1	4,9	OS-AD-AD-FC050-MOD117-060-11	30630804
50	140	60	M10	M10x1	5,4	OS-AD-AD-FC050-MOD140-060-11	30630805

## Spare parts

For SK	Quantity required	Threaded pin in accordance with ISO 4026	
		Size	Order No.
40, 45, 50	2	M5x4	10036757

For module diameter D	Quantity required	Threaded pin Order No.
60 - 80	4	10075355
100 - 140	4	10075099

Dimensions in mm.

Use: For use in the machine spindle for mounting KS flange adapters, shrink chucks, hydraulic chucks, chucks for cylindrical shanks or tools with a module shank in accordance with MAPAL works standard.

Items included: With threaded pins for aligning the radial run-out. Without pull stud.

Note: In the section "Clamping tools with flange module" you will find the matching:

- KS flange adapters in accordance with MAPAL works standard
- Chucks for cylindrical shanks
- Hydraulic chucks HydroChuck
- Shrink chucks ThermoChuck

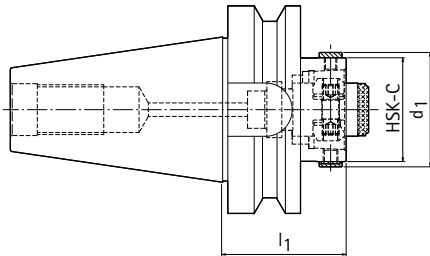
For pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.



# KS steep taper adapters

Shank BT in accordance with ISO 7388-2 Form JD (JIS B 6339)



BT	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
30	32	37	40	0,5	KS-AD-BT030-HSK-C032-040-01	30320067
30	40	45	40	0,6	KS-AD-BT030-HSK-C040-040-01	30320068
40	32	37	40	1,1	KS-AD-BT040-HSK-C032-040-01	30320069
40	40	45	40	1,1	KS-AD-BT040-HSK-C040-040-01	30320070
40	50	55	50	1,3	KS-AD-BT040-HSK-C050-050-01	30320071
40	63	70	70	1,9	KS-AD-BT040-HSK-C063-070-01	30320072
45	32	37	50	2,3	KS-AD-BT045-HSK-C032-050-01	30320073
45	40	45	50	2,3	KS-AD-BT045-HSK-C040-050-01	30320074
45	50	55	50	2,4	KS-AD-BT045-HSK-C050-050-01	30320075
45	63	70	60	2,7	KS-AD-BT045-HSK-C063-060-01	30320076
45	80	87	80	3,7	KS-AD-BT045-HSK-C080-080-01	30320077
50	32	37	50	3,8	KS-AD-BT050-HSK-C032-050-01	30320078
50	40	45	50	3,8	KS-AD-BT050-HSK-C040-050-01	30320079
50	50	55	60	4,0	KS-AD-BT050-HSK-C050-060-01	30320080
50	63	70	60	4,1	KS-AD-BT050-HSK-C063-060-01	30320081
50	80	87	60	4,2	KS-AD-BT050-HSK-C080-060-01	30320082
50	100	110	90	6,2	KS-AD-BT050-HSK-C100-090-01	30320083

Dimensions in mm.

Use: For use in the machine spindle for mounting HSK tools.

Items included: With standard KS clamping cartridge and sealing ring, without pull stud.

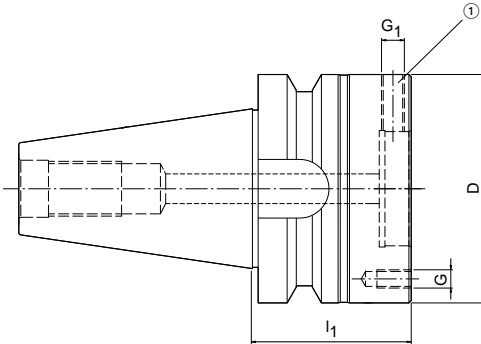
Design: Permissible run-out deviation on the steep taper in relation to the HSK internal taper 3 µm.

Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# Steep taper adapters

Shank BT in accordance with ISO 7388-2 Form JD (JIS B 6339)



BT	D	Dimensions			Weight [kg]	Specification	Order No.
		l <sub>1</sub>	G	G <sub>1</sub>			
30	60	40	M5	M8x1	0,7	OS-AD-BT030-MOD060-040-11	30320084
30	70	40	M6	M8x1	0,8	OS-AD-BT030-MOD070-040-11	30320085
40	60	55	M5	M8x1	1,5	OS-AD-BT040-MOD060-055-11	30320086
40	70	55	M6	M8x1	1,6	OS-AD-BT040-MOD070-055-11	30320087
40	80	65	M6	M8x1	2,1	OS-AD-BT040-MOD080-065-11	30320088
40	100	70	M8	M10x1	2,7	OS-AD-BT040-MOD100-070-11	30320089
45	60	65	M5	M8x1	3,1	OS-AD-BT045-MOD060-065-11	30320090
45	70	65	M6	M8x1	3,2	OS-AD-BT045-MOD070-065-11	30320091
45	80	65	M6	M8x1	3,3	OS-AD-BT045-MOD080-065-11	30320092
45	100	75	M8	M10x1	4,1	OS-AD-BT045-MOD100-075-11	30320093
45	117	75	M8	M10x1	4,6	OS-AD-BT045-MOD117-075-11	30320094
50	60	70	M5	M8x1	4,9	OS-AD-BT050-MOD060-070-11	30320095
50	70	70	M6	M8x1	5,0	OS-AD-BT050-MOD070-070-11	30320096
50	80	70	M6	M8x1	5,1	OS-AD-BT050-MOD080-070-11	30320097
50	100	70	M8	M10x1	5,3	OS-AD-BT050-MOD100-070-11	30320098
50	117	80	M8	M10x1	6,4	OS-AD-BT050-MOD117-080-11	30320099
50	140	80	M10	M10x1	7,0	OS-AD-BT050-MOD140-080-11	30320100

## Spare parts

For module diameter D	Quantity required	① Threaded pin Order No.
60 - 80	4	10075355
100	4	10075099
117	4	10075099
140	4	10075099

Dimensions in mm.

Use: For use in the machine spindle for mounting KS flange adapters, shrink chucks, hydraulic chucks, chucks for cylindrical shanks or tools with a module shank in accordance with MAPAL works standard.

Items included: With threaded pins for aligning the radial run-out, without pull stud.

Design: Adjustable in relation to the steep taper due to threaded pins the radial run-out of a connection or tool fitted.

Note: In the section "Clamping tools with flange module" you will find the matching:

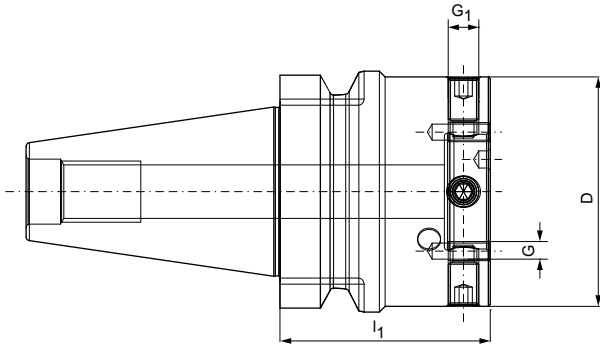
- KS flange adapters in accordance with MAPAL works standard
- Chucks for cylindrical shanks
- Hydraulic chucks HydroChuck
- Shrink chucks ThermoChuck

For pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# Steep taper adapters

Shank BT similar to ISO 7388-2 Form JD (JIS B 6339) with face connection



BT	D	Dimensions			Weight [kg]	Specification	Order No.
		l <sub>1</sub>	G	G <sub>1</sub>			
30	60	40	M5	M8x1	0,7	OS-AD-JD-FC030-MOD060-040-11	30630780
30	70	40	M6	M8x1	0,8	OS-AD-JD-FC030-MOD070-040-11	30630781
40	60	55	M5	M8x1	1,5	OS-AD-JD-FC040-MOD060-055-11	30630782
40	70	55	M6	M8x1	1,6	OS-AD-JD-FC040-MOD070-055-11	30630783
40	80	65	M8	M8x1	2,1	OS-AD-JD-FC040-MOD080-065-11	30630784
40	100	70	M5	M10x1	2,7	OS-AD-JD-FC040-MOD100-070-11	30630785
50	60	70	M6	M8x1	4,9	OS-AD-JD-FC050-MOD060-070-11	30630786
50	70	70	M6	M8x1	5,0	OS-AD-JD-FC050-MOD070-070-11	30630787
50	80	70	M6	M8x1	5,1	OS-AD-JD-FC050-MOD080-070-11	30630788
50	100	70	M8	M10x1	5,3	OS-AD-JD-FC050-MOD100-070-11	30630789
50	117	80	M8	M10x1	6,4	OS-AD-JD-FC050-MOD117-080-11	30630790
50	140	80	M10	M10x1	7,0	OS-AD-JD-FC050-MOD140-080-11	30630791

Dimensions in mm.

Use: For use in the machine spindle for mounting KS flange adapters, shrink chucks, hydraulic chucks, chucks for cylindrical shanks or tools with a module shank in accordance with MAPAL works standard.

Items included: With threaded pins for aligning the radial run-out. Without pull stud.

Design: Adjustable in relation to the steep taper due to threaded pins the radial run-out of a connection or tool fitted.

Note: In the section "Clamping tools with flange module" you will find the matching:

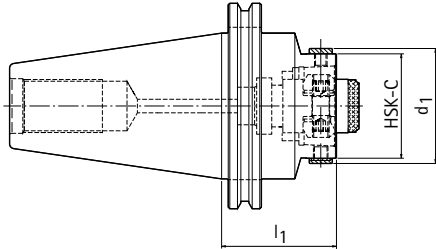
- KS flange adapters in accordance with MAPAL works standard
- Chucks for cylindrical shanks
- Hydraulic chucks HydroChuck
- Shrink chucks ThermoChuck

For pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# KS steep taper adapters

Shank "CAT" in accordance with ASME B5.50-1994



CAT	HSK-C	Dimensions		Weight [kg]	Specification	Order No.
		d <sub>1</sub>	l <sub>1</sub>			
30	32	37	45	0,5	KS-AD-CAT030-HSK-C032-045-01	30320107
30	40	45	60	0,7	KS-AD-CAT030-HSK-C040-060-01	30320108
40	32	37	50	1,2	KS-AD-CAT040-HSK-C032-050-01	30320109
40	40	45	50	1,2	KS-AD-CAT040-HSK-C040-050-01	30320110
40	50	55	60	1,4	KS-AD-CAT040-HSK-C050-060-01	30320111
40	63	70	75	1,9	KS-AD-CAT040-HSK-C063-075-01	30320112
45	32	37	50	2,1	KS-AD-CAT045-HSK-C032-050-01	30320113
45	40	45	50	2,1	KS-AD-CAT045-HSK-C040-050-01	30320114
45	50	55	55	2,2	KS-AD-CAT045-HSK-C050-055-01	30320115
45	63	70	60	2,4	KS-AD-CAT045-HSK-C063-060-01	30320116
45	80	87	80	3,3	KS-AD-CAT045-HSK-C080-080-01	30320117
50	32	37	50	3,2	KS-AD-CAT050-HSK-C032-050-01	30320118
50	40	45	50	3,2	KS-AD-CAT050-HSK-C040-050-01	30320119
50	50	55	55	3,4	KS-AD-CAT050-HSK-C050-055-01	30320120
50	63	70	55	3,5	KS-AD-CAT050-HSK-C063-055-01	30320121
50	80	87	80	4,6	KS-AD-CAT050-HSK-C080-080-01	30320122
50	100	110	95	6,0	KS-AD-CAT050-HSK-C100-095-01	30320123

Dimensions in mm.

Use: For use in the machine spindle for mounting HSK tools.

Items included: With clamping cartridge and sealing ring. Without pull stud.

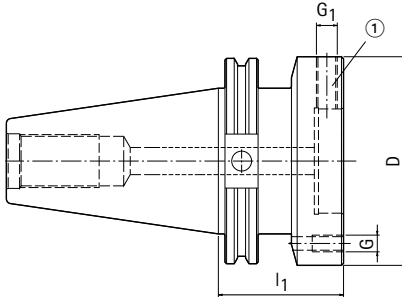
Design: Permissible run-out deviation on the steep taper in relation to the HSK internal taper 3 µm.

Note: For clamping cartridges, see section "Manual HSK clamping technology". For sealing rings and pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# Steep taper adapters

Shank "CAT" in accordance with ASME B5.50-1994



CAT	D	Dimensions			Weight [kg]	Specification	Order No.
		l <sub>1</sub>	G	G <sub>1</sub>			
30	60	50	M5	M8x1	0,7	OS-AD-CAT030-MOD060-050-11	30320124
30	70	50	M6	M8x1	0,8	OS-AD-CAT030-MOD070-050-11	30320125
40	60	50	M5	M8x1	1,5	OS-AD-CAT040-MOD060-050-11	30320126
40	70	50	M6	M8x1	1,6	OS-AD-CAT040-MOD070-050-11	30320127
40	80	55	M6	M8x1	2	OS-AD-CAT040-MOD080-055-11	30320128
40	100	60	M8	M10x1	2,6	OS-AD-CAT040-MOD100-060-11	30320129
45	60	50	M5	M8x1	3	OS-AD-CAT045-MOD060-050-11	30320130
45	70	50	M6	M8x1	3,1	OS-AD-CAT045-MOD070-050-11	30320131
45	80	55	M6	M8x1	3,3	OS-AD-CAT045-MOD080-055-11	30320132
45	100	60	M8	M10x1	3,5	OS-AD-CAT045-MOD100-060-11	30320133
45	117	60	M8	M10x1	4,4	OS-AD-CAT045-MOD117-060-11	30320134
50	60	50	M5	M8x1	4,8	OS-AD-CAT050-MOD060-050-11	30320135
50	70	50	M6	M8x1	4,9	OS-AD-CAT050-MOD070-050-11	30320136
50	80	50	M6	M8x1	5,1	OS-AD-CAT050-MOD080-050-11	30320137
50	100	60	M8	M10x1	5,3	OS-AD-CAT050-MOD100-060-11	30320138
50	117	60	M8	M10x1	6,3	OS-AD-CAT050-MOD117-060-11	30320139
50	140	60	M10	M10x1	6,6	OS-AD-CAT050-MOD140-060-11	30320140

Dimensions in mm.

Use: For use in the machine spindle for mounting KS flange adapters, shrink chucks, hydraulic chucks, chucks for cylindrical shanks or tools with a module shank in accordance with MAPAL works standard.

Items included: With threaded pins for aligning the radial run-out.

Without pull stud.

Design: Adjustable in relation to the steep taper due to threaded pins the radial run-out of a connection or tool fitted.

"Note: In the section "Clamping tools with flange module" you will find the matching:

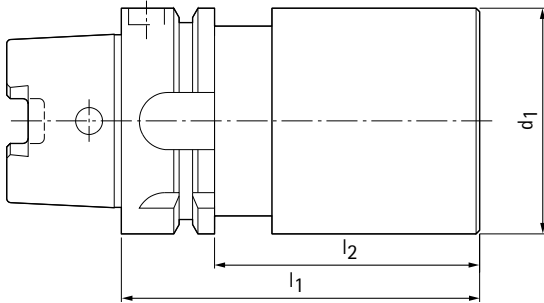
- KS flange adapters in accordance with MAPAL works standard
- Chucks for cylindrical shanks
- Hydraulic chucks HydroChuck
- Shrink chucks ThermoChuck

For pull studs, see section "Accessories, spare parts and measuring equipment".

Balancing value: G 6.3 at 3,000 min<sup>-1</sup> as delivered.

# HSK blanks

Shank HSK-A in accordance with DIN 69893-1



HSK-A	Dimensions			Specification	Order No. design 1	Order No. design 2
	$l_1$	$l_2$	$d_1$			
32	100	80	34	OS-BL-HSK-A032-BLANK034-100-00	30312301	30312314
32	150	130	53	OS-BL-HSK-A032-BLANK053-150-00	30312333	30312334
32	200	180	34	OS-BL-HSK-A032-BLANK034-200-00	30312318	30312320
40	100	80	40	OS-BL-HSK-A040-BLANK040-100-00	30312335	30312336
40	150	130	63	OS-BL-HSK-A040-BLANK063-150-00	30312339	30312340
40	200	180	40	OS-BL-HSK-A040-BLANK040-200-00	30312337	30312338
50	100	74	53	OS-BL-HSK-A050-BLANK053-100-00	30319404	30319416
50	175	149	83	OS-BL-HSK-A050-BLANK083-175-00	30319405	30319417
50	200	174	53	OS-BL-HSK-A050-BLANK053-200-00	30319406	30319418
63	100	74	63	OS-BL-HSK-A063-BLANK063-100-00	30319407	30319419
63	175	149	102	OS-BL-HSK-A063-BLANK102-175-00	30319408	30319420
63	200	174	63	OS-BL-HSK-A063-BLANK063-200-00	30319409	30319421
80	100	74	83	OS-BL-HSK-A080-BLANK083-100-00	30319410	30319422
80	200	174	83	OS-BL-HSK-A080-BLANK083-200-00	30319411	30319423
80	200	174	127	OS-BL-HSK-A080-BLANK127-200-00	30319412	30319424
100	100	71	102	OS-BL-HSK-A100-BLANK102-100-00	30319413	30319425
100	200	171	102	OS-BL-HSK-A100-BLANK102-200-00	30319414	30319426
100	200	171	127	OS-BL-HSK-A100-BLANK127-200-00	30319415	30319427

Dimensions in mm.

Items included: Without coolant tube.

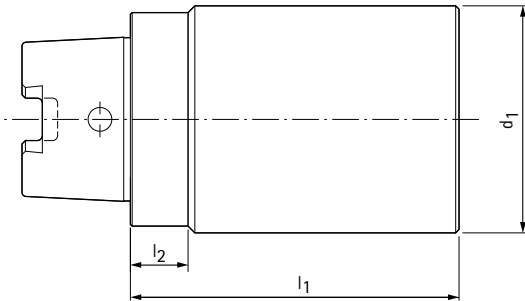
Design 1: Rough turned and milled. In the range of the HSK grinding allowance from HSK32 to HSK80 = 0.2 mm, from HSK100 = 0.3 mm at the taper or 0.15 mm at the face surface. Not hardened and not ground. Front part of blank not hardened or ground for further processing.

Design 2: Taper including collar hardened and finish ground. Front part of blank not hardened or ground for further processing. Important note on design 2: Excessive machining and any heat treatments of the completed blank may cause unacceptable distortion of the HSK shank. Claims against the warranty can therefore only be made for blanks that have not been processed.

Notes: In case of extensive machining on the front of the blank, it is recommended to use design 1. The HSK should be finish ground as the last machining step. Further dimensions on request. For coolant tubes, see section "Accessories, spare parts and measuring equipment".

# HSK blanks

Shank HSK-C in accordance with DIN 69893-1



HSK-C	Dimensions			Specification	Order No. design 1	Order No. design 2
	$d_1$	$l_1$	$l_2$			
32	34	100	10	OS-BL-HSK-C032-BLANK034-100-00	30319671	30320293
32	34	200	10	OS-BL-HSK-C032-BLANK034-200-00	30319672	30320294
32	53	150	10	OS-BL-HSK-C032-BLANK053-150-00	30319673	30320295
40	40	100	10	OS-BL-HSK-C040-BLANK040-100-00	30319674	30320296
40	40	200	10	OS-BL-HSK-C040-BLANK040-200-00	30319675	30320297
40	63	150	10	OS-BL-HSK-C040-BLANK063-150-00	30319676	30320298
50	53	100	12,5	OS-BL-HSK-C050-BLANK053-100-00	30319677	30320299
50	53	200	12,5	OS-BL-HSK-C050-BLANK053-200-00	30319678	30320300
50	82	175	12,5	OS-BL-HSK-C050-BLANK083-175-00	30319679	30320301
63	63	100	12,5	OS-BL-HSK-C063-BLANK063-100-00	30319680	30320302
63	63	200	12,5	OS-BL-HSK-C063-BLANK063-200-00	30319681	30320303
63	102	175	12,5	OS-BL-HSK-C063-BLANK102-175-00	30319682	30320304
80	83	100	16	OS-BL-HSK-C080-BLANK083-100-00	30319683	30320305
80	83	200	16	OS-BL-HSK-C080-BLANK083-200-00	30319684	30320306
80	127	200	16	OS-BL-HSK-C080-BLANK127-200-00	30319685	30320307
100	102	100	16	OS-BL-HSK-C100-BLANK102-100-00	30319686	30320308
100	102	200	16	OS-BL-HSK-C100-BLANK102-200-00	30319687	30320309
100	127	200	16	OS-BL-HSK-C100-BLANK127-200-00	30319688	30320310

Dimensions in mm.

Items included: Without coolant tube.

Design 1: Rough turned and milled. In the range of the HSK grinding allowance from HSK32 to HSK80 = 0.2 mm, from HSK100 0.3 mm at the taper or 0.15 mm at the face surface. Not hardened and not ground. Front part of blank not hardened or ground for further processing.

Design 2: Taper including collar hardened and finish ground. Front part of blank not hardened or ground for further processing.

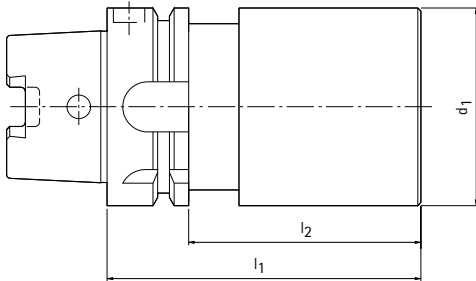
Important note on design 2: Excessive machining and any heat treatments of the completed blank may cause unacceptable distortion of the HSK shank. Claims against the warranty can therefore only be made for blanks that have not been processed.

Note: In case of extensive machining on the front of the blank, it is recommended to use design 1. The HSK should be finish ground as the last machining step. Further dimensions on request.

Material: 42CrMoS4

# HSK-T blanks

Shank HSK-T in accordance with ISO 12164-3



HSK-T	Dimensions			Specification	Order No.
	$l_1$	$l_2$	$d_1$		
40	55	35	54	OS-BL-HSK-T040-BLANK054-055-00	30308741
63	90	64	90	OS-BL-HSK-T063-BLANK090-090-00	30317098
63	210	184	72	OS-BL-HSK-T063-BLANK072-210-00	30317099
63	150	124	100	OS-BL-HSK-T063-BLANK100-150-00	30308742
100	100	71	110	OS-BL-HSK-T100-BLANK110-100-00	30308743
100	250	221	100	OS-BL-HSK-T100-BLANK100-250-00	30317101
100	160	131	120	OS-BL-HSK-T100-BLANK120-160-00	30317100

Dimensions in mm.

Design: Taper including collar hardened and finish ground. Front part of blank not hardened or ground for further processing.

Items included: Without coolant tube.

Note: Excessive machining and any heat treatments of the completed blank may cause unacceptable distortion of the HSK shank. Claims against the warranty can therefore only be made for blanks that have not been processed.





# ACCESSORIES

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Accessories, spare parts and measuring equipment





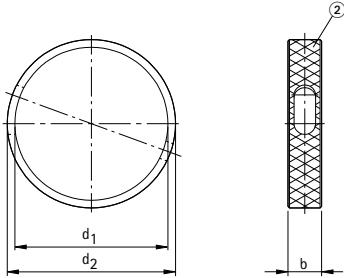
# ACCESSORIES, SPARE PARTS AND MEASURING EQUIPMENT

## Accessories, spare parts and measuring equipment

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## RE sealing rings



HSK-C	Dimensions			Holding screw Order No.	② Sealing ring Order No.
	d <sub>1</sub>	d <sub>2</sub>	b		
32	32	37	9	30326173	30326064
32	40	45	9	30326173	30326066
32	55	61	9	30326173	30326065
40	40	45	9	30326173	30326066
40	50	55	11	30326176	30326068
40	63	70	10	30326173	30326067
50	50	55	11	30326174	30326068
50	63	70	14	30373220	30326070
50	80	87	13	30326174	30326069
63	63	70	14	30326175	30326070
63	80	87	14	30326175	30326072
63	100	108	15	30326175	30326071
80	80	87	14	30326175	30326072
80	100	110	18	30326177	30326061
80	117	125	17	30326175	30326073
100	100	110	18	30326172	30326061
100	125	135	18	30326172	30326063
100	140	150	18	30326172	30326062

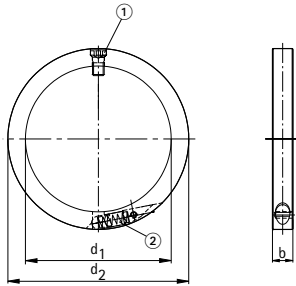
Dimensions in mm.

Use: For manually sealing the clamping bore on HSK spindles and adapters.  
Items included: Sealing ring, without holding screw. Suitable holding screw  
(see table) is to be ordered separately.

Note: On selecting sealing rings and holding screws pay attention  
to HSK nominal size and dimension d<sub>2</sub>.

Material: Sealing rings – brass holding screws – steel

# Sealing rings



HSK-C	Dimensions			Sealing ring complete Order No.	① Holding screw Order No.	② Seal Order No.
	d <sub>1</sub>	d <sub>2</sub>	b			
32	32	43	9	30326047	30325932	30325926
32	55	68	9	30326048	30325932	30325926
32	40	52	9	30326049	30325932	30325926
40	40	55	9	30326050	30325932	30325927
40	63	79	9	30326051	30325932	30325927
40	50	65	9	30326052	30325932	30325927
50	50	67	11	30326053	30325933	30325928
50	80	98	11	30326054	30325933	30325928
50	63	80	11	30326055	30325933	30325928
63	63	85	14	30326056	30325934	30325929
63	100	124	14	30326057	30325934	30325929
63	80	103	14	30326058	30325934	30325929
80	80	105	14	30326059	30325934	30325930
80	117	143	14	30326060	30325934	30325930
100	100	130	18	30326044	30325935	30325931
100	140	170	18	30326045	30325935	30325931
125	125	155	18	30326046	30325935	30325931

Dimensions in mm.

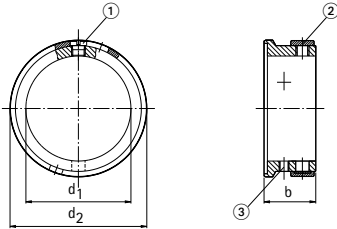
Use: For automatically sealing the clamping bore on HSK spindles and adapters.

Items included: Complete seal and holding screw.

Note: On selecting sealing rings pay attention to HSK nominal size and dimension d<sub>2</sub>.

Material: Steel (seal and screw)

# Sealing rings

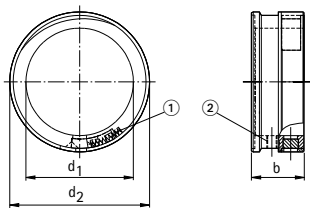


## SE centrifugal rings

HSK-C	Dimensions			Complete centrifugal ring Order No.	① Holding screw Order No.	② Sealing ring Order No.	③ Threaded pin in accordance with ISO 4027	
	d <sub>1</sub>	d <sub>2</sub>	b				Size	Order No.
25	25	38	15,5	30326080	30325925	30325940	M4x5-45H	10003897
32	32	43	19,5	30326081	30325923	30325936	M4x5-45H	10003897
32	32	48	19,5	30326082	30325923	30325936	M4x5-45H	10003897
40	40	57	21	30326083	30326173	30325937	M5x6-45H	10003905
50	50	70	24	30326084	30326174	30325938	M6x8-45H	10003912
63	63	82	31	30326085	30325924	30325939	M6x8-45H	10003912

Use: For manually sealing the clamping bore on HSK spindles in accordance with DIN 69002.  
 Items included: With sealing ring, holding screw and threaded pins.

Note: The centrifugal ring is fastened using 3 threaded pins. Please note on ordering.  
 Material: Centrifugal ring body + holding screw: Steel, sealing ring: Brass



## SE centrifugal rings

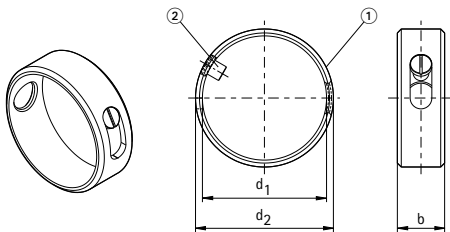
HSK-C	Dimensions			① Seal Order No.	② Threaded pin in accordance with ISO 4027 (3x)		Complete centrifugal ring Order No.
	d <sub>1</sub>	d <sub>2</sub>	b		Size	Order No.	
25	25	38	15,5	On request	M4x5-45H	10003897	On request
32	32	43	18,8	30325926	M4x5-45H	10003897	30326167
32	32	48	18,8	30325926	M4x5-45H	10003897	30326168
40	40	57	20,8	30325927	M5x6-45H	10003905	30326169
50	50	70	23,8	30325928	M6x8-45H	10003912	30326170
63	63	82	30,8	On request	M6x8-45H	10003912	30326171

Dimensions in mm.  
 Use: For automatically sealing the clamping bore on HSK spindles in accordance with DIN 69002.  
 Items included: Complete seal and threaded pins.

Note: The centrifugal ring is fastened using 3 threaded pins.  
 Material: Steel



# Accessories for DS diagonal clamping cartridge



Sealing rings for direct mounting in the spindle

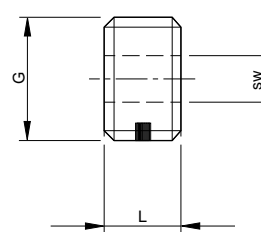
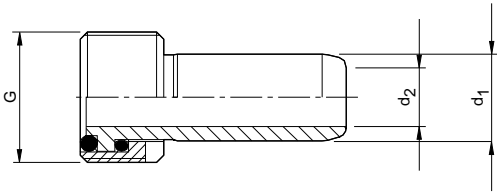
HSK-A/C	Dimensions			① Sealing ring Order No.	② Holding screw Order No.
	d <sub>1</sub>	d <sub>2</sub>	b		
32	32	37	12	10096586	30326173
40	40	45	16	10096587	30326173
50	50	55	20	10096588	30326174
63	63	70	25	10096589	30326175
80	80	87	32	10096590	30326175
100	100	110	40	10096591	30326172

Dimensions in mm.

Items included: Sealing ring, without holding screw. Suitable holding screw (see table) is to be ordered separately.



## Coolant tubes, blanking plugs



### Coolant tubes in accordance with DIN 69895

HSK	Dimensions			Order No.
	G	d <sub>1</sub>	d <sub>2</sub>	
32	M10x1	6	3,5	30326003
40	M12x1	8	5	30326004
50	M16x1	10	6,4	30326005
63	M18x1	12	8	30326006
80	M20x1,5	14	10	30326007
100	M24x1,5	16	12	30326008

### Blanking plugs

HSK	Dimensions			Order No.
	G	L	sw	
32	M10x1	5,5	4	30326075
40	M12x1	7,5	5	30326076
50	M16x1	9,5	6	30326077
63	M18x1	11,5	8	30326078
80	M20x1,5	13,5	10	30326079
100	M24x1,5	15,5	12	30326074

Dimensions in mm.

Items included: Coolant tube with two O-rings and union nut.

Design: Free angular movement 1° self-centring, axially sealed.

Note: Designed in accordance with DIN 69895. Leak tested up to 80 bar.

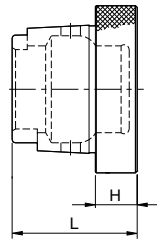
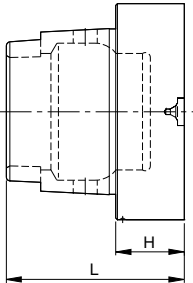
Use: For sealing the threaded bore in HSK tool shanks if a coolant tube is not used.

Design: With Nylok insert for screw locking.

Material: Stainless steel.

## Balance gauges

## Blanking caps

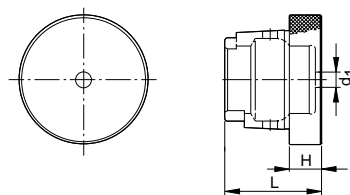


HSK	Dimensions		Order No.
	L	H	
32	31	15	30326032
40	35	15	30326033
50	43	18	30326034
63	52	20	30326035
80	65	25	30326036
100	75	25	30326037

HSK	Dimensions		Order No.
	L	H	
32	23	10	30326020
40	26	10	30326021
50	33	12,5	30326022
63	38	12,5	30326023
80	48	16	30326024
100	56	16	30326025

Use: For balancing HSK spindles and adapters as well as for sealing fast-rotating HSK spindles and adapters without a tool fitted.  
 Design: Permissible residual imbalance in accordance with DIN ISO 1940 Part 1.  
 Material: Stainless steel.  
 Balancing value: G 2.5 at 8,000 min<sup>-1</sup>

Use: For sealing spindle mountings without a tool fitted.  
 Design: Unbalanced.  
 Note: HSK balance gauges are recommended for sealing fast-rotating HSK adapters.

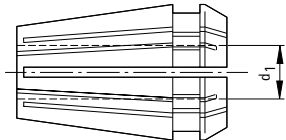


HSK	Dimensions			Order No.
	d <sub>1</sub>	L	H	
32	3	23	10	30326027
40	3	26	10	30326028
50	4	33	12,5	30326029
63	6	38	12,5	30326030
80	7	48	16	30326031
100	7	56	16	30326026

Dimensions in mm.  
 Use: For sealing spindle mountings without a tool fitted.  
 Design: Unbalanced, with central coolant bore.  
 Note: HSK balance gauges are recommended for sealing fast-rotating HSK adapters.

# ER collets

ISO 15488-B



Clamping range	Nominal size	Clamping diameter $d_1$	Order No.
0,5 - 10	ER-16	1 - 0,5	30326086
0,5 - 10	ER-16	2 - 1	30326087
0,5 - 10	ER-16	3 - 2	30326088
0,5 - 10	ER-16	4 - 3	30326089
0,5 - 10	ER-16	5 - 4	30326090
0,5 - 10	ER-16	6 - 5	30326091
0,5 - 10	ER-16	7 - 6	30326092
0,5 - 10	ER-16	8 - 7	30326093
0,5 - 10	ER-16	9 - 8	30326094
0,5 - 10	ER-16	10 - 9	30326095
1 - 13	ER-20	1 - 0,5	30326301
1 - 13	ER-20	2 - 1	30326300
1 - 13	ER-20	3 - 2	30326299
1 - 13	ER-20	4 - 3	30326099
1 - 13	ER-20	5 - 4	30326100
1 - 13	ER-20	6 - 5	30326101
1 - 13	ER-20	7 - 6	30326102
1 - 13	ER-20	8 - 7	30326103
1 - 13	ER-20	9 - 8	30326104
1 - 13	ER-20	10 - 9	30326105
1 - 13	ER-20	11 - 10	30326106
1 - 13	ER-20	12 - 11	30326107
1 - 13	ER-20	13 - 12	30326108

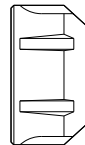
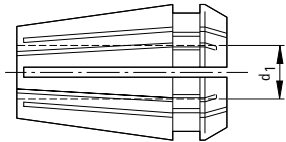
Clamping range	Nominal size	Clamping diameter $d_1$	Order No.
1 - 16	ER-25	1 - 0,5	30326109
1 - 16	ER-25	2 - 1	30326110
1 - 16	ER-25	3 - 2	30326111
1 - 16	ER-25	4 - 3	30326112
1 - 16	ER-25	5 - 4	30326113
1 - 16	ER-25	6 - 5	30326114
1 - 16	ER-25	7 - 6	30326115
1 - 16	ER-25	8 - 7	30326116
1 - 16	ER-25	9 - 8	30326117
1 - 16	ER-25	10 - 9	30326118
1 - 16	ER-25	11 - 10	30326119
1 - 16	ER-25	12 - 11	30326120
1 - 16	ER-25	13 - 12	30326121
1 - 16	ER-25	14 - 13	30326122
1 - 16	ER-25	15 - 14	30326123
1 - 16	ER-25	16 - 15	30326124
2 - 20	ER-32	3 - 2	30326125
2 - 20	ER-32	4 - 3	30326126
2 - 20	ER-32	5 - 4	30326127
2 - 20	ER-32	6 - 5	30326128
2 - 20	ER-32	7 - 6	30326129
2 - 20	ER-32	8 - 7	30326130
2 - 20	ER-32	9 - 8	30326131
2 - 20	ER-32	10 - 9	30326132
2 - 20	ER-32	11 - 10	30326133
2 - 20	ER-32	12 - 11	30326134
2 - 20	ER-32	13 - 12	30326135
2 - 20	ER-32	14 - 13	30326136
2 - 20	ER-32	15 - 14	30326137
2 - 20	ER-32	16 - 15	30326138
2 - 20	ER-32	17 - 16	30326139
2 - 20	ER-32	18 - 17	30326140
2 - 20	ER-32	19 - 18	30326141
2 - 20	ER-32	20 - 19	30326142

Dimensions in mm.

Note: Never clamp oversize shanks!

# ER collets

ISO 15488-B



Clamping range	Nominal size	Clamping diameter $d_1$	Order No.
3 - 26	ER-40	4 - 3	30326143
3 - 26	ER-40	5 - 4	30326144
3 - 26	ER-40	6 - 5	30326145
3 - 26	ER-40	7 - 6	30326146
3 - 26	ER-40	8 - 7	30326147
3 - 26	ER-40	9 - 8	30326148
3 - 26	ER-40	10 - 9	30326149
3 - 26	ER-40	11 - 10	30326150
3 - 26	ER-40	12 - 11	30326151
3 - 26	ER-40	13 - 12	30326152
3 - 26	ER-40	14 - 13	30326153
3 - 26	ER-40	15 - 14	30326154
3 - 26	ER-40	16 - 15	30326155
3 - 26	ER-40	17 - 16	30326156
3 - 26	ER-40	18 - 17	30326157
3 - 26	ER-40	19 - 18	30326158
3 - 26	ER-40	20 - 19	30326159
3 - 26	ER-40	21 - 20	30326160
3 - 26	ER-40	22 - 21	30326162
3 - 26	ER-40	23 - 22	30326163
3 - 26	ER-40	24 - 23	30326164
3 - 26	ER-40	25 - 24	30326165
3 - 26	ER-40	26 - 25	30326166

## Clamping nuts for internal coolant supply

Clamping range	Nominal size	Order No.
0,5 - 10	ERC-16	10007862
1 - 13	ERC-20	10008009
1 - 16	ERC-25	10014123
2 - 20	ERC-32	10007923
3 - 26	ERC-40	10008010

Use: For use up to 150 bar coolant pressure.

Design: The Hi-Q/ERC clamping nut is the version for internal coolant supply.

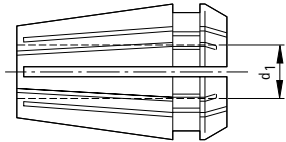
Together with the sealing discs DS/ER, using this clamping nut it is also possible to use existing collets for tools with internal coolant supply.

Dimensions in mm.

Note: Never clamp oversize shanks!

# Ultraprecision collets

compatible with ISO 15488-B



Clamping range	Nominal size	Clamping diameter $d_1$	Order No.
0,5 - 10	ER-16	1 - 0,5	30281150
0,5 - 10	ER-16	1,5 - 1	30480431
0,5 - 10	ER-16	2 - 1	10030696
0,5 - 10	ER-16	2,5 - 1,5	10030697
0,5 - 10	ER-16	3 - 2	10030698
0,5 - 10	ER-16	3,5 - 2,5	10030699
0,5 - 10	ER-16	4 - 3	10030700
0,5 - 10	ER-16	4,5 - 3,5	10030701
0,5 - 10	ER-16	5 - 4	10030722
0,5 - 10	ER-16	5,5 - 4,5	10030723
0,5 - 10	ER-16	6 - 5	10030724
0,5 - 10	ER-16	6,5 - 5,5	10030725
0,5 - 10	ER-16	7 - 6	10030726
0,5 - 10	ER-16	7,5 - 6,5	10030727
0,5 - 10	ER-16	8 - 7	10030728
0,5 - 10	ER-16	8,5 - 7,5	10030729
0,5 - 10	ER-16	9 - 8	10030730
0,5 - 10	ER-16	9,5 - 8,5	10030731
0,5 - 10	ER-16	10 - 9	10030732
1 - 13	ER-20	1 - 0,5	10030733
1 - 13	ER-20	1,5 - 1	10030734
1 - 13	ER-20	2 - 1	10030735
1 - 13	ER-20	2,5 - 1,5	10030736
1 - 13	ER-20	3 - 2	10030737
1 - 13	ER-20	3,5 - 2,5	10030738
1 - 13	ER-20	4 - 3	10030739
1 - 13	ER-20	4,5 - 3,5	10030740
1 - 13	ER-20	5 - 4	10030741
1 - 13	ER-20	5,5 - 4,5	10030742
1 - 13	ER-20	6 - 5	10030743
1 - 13	ER-20	6,5 - 5,5	10030744
1 - 13	ER-20	7 - 6	10030745
1 - 13	ER-20	7,5 - 6,5	10030746
1 - 13	ER-20	8 - 7	10030747
1 - 13	ER-20	8,5 - 7,5	10030748

Clamping range	Nominal size	Clamping diameter $d_1$	Order No.
1 - 13	ER-20	9 - 8	10030749
1 - 13	ER-20	9,5 - 8,5	10030750
1 - 13	ER-20	10 - 9	10030751
1 - 13	ER-20	10,5 - 9,5	10030752
1 - 13	ER-20	11 - 10	10030753
1 - 13	ER-20	11,5 - 10,5	10030754
1 - 13	ER-20	12 - 11	10030755
1 - 13	ER-20	12,5 - 11,5	10030756
1 - 13	ER-20	13 - 12	10030757
1 - 16	ER-25	1 - 0,5	10030758
1 - 16	ER-25	1,5 - 1	10030759
1 - 16	ER-25	2 - 1	10030760
1 - 16	ER-25	2,5 - 1,5	10030761
1 - 16	ER-25	3 - 2	10030762
1 - 16	ER-25	3,5 - 2,5	10030763
1 - 16	ER-25	4 - 3	10030764
1 - 16	ER-25	4,5 - 3,5	10030765
1 - 16	ER-25	5 - 4	10030766
1 - 16	ER-25	5,5 - 4,5	10030767
1 - 16	ER-25	6 - 5	10030768
1 - 16	ER-25	6,5 - 5,5	10030769
1 - 16	ER-25	7 - 6	10030770
1 - 16	ER-25	7,5 - 6,5	10030771
1 - 16	ER-25	8 - 7	10030772
1 - 16	ER-25	8,5 - 7,5	10030773
1 - 16	ER-25	9 - 8	10030774
1 - 16	ER-25	9,5 - 8,5	10030775
1 - 16	ER-25	10 - 9	10030776
1 - 16	ER-25	10,5 - 9,5	10030777
1 - 16	ER-25	11 - 10	10030778
1 - 16	ER-25	11,5 - 10,5	10030779
1 - 16	ER-25	12 - 11	10030780
1 - 16	ER-25	12,5 - 11,5	10030781
1 - 16	ER-25	13 - 12	10030782
1 - 16	ER-25	13,5 - 12,5	10030783

## Ultraprecision collets | Compatible with ISO 15488-B

Clamping range	Nominal size	Clamping diameter d <sub>1</sub>	Order No.
1 - 16	ER-25	14 - 13	10030784
1 - 16	ER-25	14,5 - 13,5	10030785
1 - 16	ER-25	15 - 14	10030786
1 - 16	ER-25	15,5 - 14,5	10030787
1 - 16	ER-25	16 - 15	10030788
2 - 20	ER-32	2 - 1	10030789
2 - 20	ER-32	2,5 - 1,5	10030790
2 - 20	ER-32	3 - 2	10030791
2 - 20	ER-32	3,5 - 2,5	10030792
2 - 20	ER-32	4 - 3	10030793
2 - 20	ER-32	4,5 - 3,5	10030794
2 - 20	ER-32	5 - 4	10030795
2 - 20	ER-32	5,5 - 4,5	10030796
2 - 20	ER-32	6 - 5	10030797
2 - 20	ER-32	6,5 - 5,5	10030798
2 - 20	ER-32	7 - 6	10030799
2 - 20	ER-32	7,5 - 6,5	10030800
2 - 20	ER-32	8 - 7	10030801
2 - 20	ER-32	8,5 - 7,5	10030802
2 - 20	ER-32	9 - 8	10030803
2 - 20	ER-32	9,5 - 8,5	10030804
2 - 20	ER-32	10 - 9	10030805
2 - 20	ER-32	10,5 - 9,5	10030806
2 - 20	ER-32	11 - 10	10030807
2 - 20	ER-32	11,5 - 10,5	10030808
2 - 20	ER-32	12 - 11	10030809
2 - 20	ER-32	12,5 - 11,5	10030810
2 - 20	ER-32	13 - 12	10030811
2 - 20	ER-32	13,5 - 12,5	10030812
2 - 20	ER-32	14 - 13	10030813
2 - 20	ER-32	14,5 - 13,5	10030814
2 - 20	ER-32	15 - 14	10030815
2 - 20	ER-32	15,5 - 14,5	10030816
2 - 20	ER-32	16 - 15	10030817
2 - 20	ER-32	16,5 - 15,5	10030818

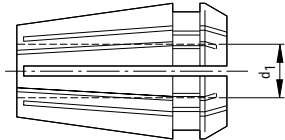
Clamping range	Nominal size	Clamping diameter d <sub>1</sub>	Order No.
2 - 20	ER-32	17 - 16	10030819
2 - 20	ER-32	17,5 - 16,5	10030820
2 - 20	ER-32	18 - 17	10030821
2 - 20	ER-32	18,5 - 17,5	10030822
2 - 20	ER-32	19 - 18	10030823
2 - 20	ER-32	19,5 - 18,5	10030824
2 - 20	ER-32	20 - 19	10030825
3 - 26	ER-40	4 - 3	10030826
3 - 26	ER-40	4,5 - 3,5	10030827
3 - 26	ER-40	5 - 4	10030828
3 - 26	ER-40	5,5 - 4,5	10030829
3 - 26	ER-40	6 - 5	10030830
3 - 26	ER-40	6,5 - 5,5	10030831
3 - 26	ER-40	7 - 6	10030832
3 - 26	ER-40	7,5 - 6,5	10030833
3 - 26	ER-40	8 - 7	10030834
3 - 26	ER-40	8,5 - 7,5	10030835
3 - 26	ER-40	9 - 8	10030836
3 - 26	ER-40	9,5 - 8,5	10030837
3 - 26	ER-40	10 - 9	10030838
3 - 26	ER-40	10,5 - 9,5	10030839
3 - 26	ER-40	11 - 10	10030840
3 - 26	ER-40	11,5 - 10,5	10030841
3 - 26	ER-40	12 - 11	10030842
3 - 26	ER-40	12,5 - 11,5	10030843
3 - 26	ER-40	13 - 12	10030844
3 - 26	ER-40	13,5 - 12,5	10030845
3 - 26	ER-40	14 - 13	10030846
3 - 26	ER-40	14,5 - 13,5	10030847
3 - 26	ER-40	15 - 14	10030848
3 - 26	ER-40	15,5 - 14,5	10030849
3 - 26	ER-40	16 - 15	10030850
3 - 26	ER-40	16,5 - 15,5	10030851
3 - 26	ER-40	17 - 16	10030862
3 - 26	ER-40	17,5 - 16,5	10030863

Dimensions in mm.

Note: Never clamp oversize shanks!

# Ultraprecision collets

compatible with ISO 15488-B



Clamping range	Nominal size	Clamping diameter $d_1$	Order No.
3 - 26	ER-40	18 - 17	10030864
3 - 26	ER-40	18,5 - 17,5	10030865
3 - 26	ER-40	19 - 18	10030866
3 - 26	ER-40	19,5 - 18,5	10030867
3 - 26	ER-40	20 - 19	10030868
3 - 26	ER-40	20,5 - 19,5	10030869
3 - 26	ER-40	21 - 20	10030870
3 - 26	ER-40	21,5 - 20,5	10030871
3 - 26	ER-40	22 - 21	10030872
3 - 26	ER-40	22,5 - 21,5	10030873
3 - 26	ER-40	23 - 22	10030874
3 - 26	ER-40	23,5 - 22,5	10030875
3 - 26	ER-40	24 - 23	10030876
3 - 26	ER-40	24,5 - 23,5	10030877
3 - 26	ER-40	25 - 24	10030878
3 - 26	ER-40	25,5 - 24,5	10030879
3 - 26	ER-40	26 - 25	10030880
3 - 26	ER-40	27 - 26	10030881
3 - 26	ER-40	28 - 27	10030882
3 - 26	ER-40	29 - 28	10030883
3 - 26	ER-40	30 - 29	10030884

Dimensions in mm.

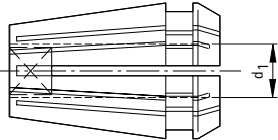
Design: The REGO-FIX® ultraprecision collet combines the advantages of ISO 15488 A+B in one collet. It has a clamping range like the standard collets in accordance with ISO 15488 Form B. In addition this collet has high radial run-out accuracy in accordance with ISO 15488 Form A.

Use: Primarily in high-speed machining for which very high radial run-out accuracies are required.

Note: Never clamp oversize shanks! E.g. never press a shank with  $\varnothing$  12.2 mm into a collet with  $\varnothing$  12-11 mm. Use the next collet size up (here  $\varnothing$  11.5-12.5 mm).

# Tapping collets

similar to ISO 15488 with square drive



Clamping range	Nominal size	Clamping diameter $d_1$	sw	Order No.
0,5 - 10	ER-16	4,5	3,4	10007899
0,5 - 10	ER-16	5,5	4,3	10076832
0,5 - 10	ER-16	6,0	4,9	10007047
0,5 - 10	ER-16	7,0	5,5	10007049
0,5 - 10	ER-16	8,0	6,2	10013102
0,5 - 10	ER-16	9,0	7	10022149
1 - 13	ER-20	4,5	3,4	10050677
1 - 13	ER-20	5,5	4,3	10079513
1 - 13	ER-20	6,0	4,9	10007329
1 - 13	ER-20	7,0	5,5	10006519
1 - 13	ER-20	8,0	6,2	10006520
1 - 13	ER-20	9,0	7	10006521
1 - 13	ER-20	10,0	8	10009228
1 - 13	ER-20	11,0	9	10024811
1 - 16	ER-25	4,5	3,4	10079512
1 - 16	ER-25	5,5	4,3	10079511
1 - 16	ER-25	6,0	4,9	10020035
1 - 16	ER-25	7,0	5,5	10020033
1 - 16	ER-25	8,0	6,2	10040822
1 - 16	ER-25	9,0	7	10021684
1 - 16	ER-25	10,0	8	10020034
1 - 16	ER-25	11,0	9	10041407
1 - 16	ER-25	12,0	9	10040836
1 - 16	ER-25	14,0	11	10040838
1 - 16	ER-25	16,0	12	10079470

Clamping range	Nominal size	Clamping diameter $d_1$	sw	Order No.
2 - 20	ER-32	4,5	3,4	10006783
2 - 20	ER-32	5,5	4,3	10076843
2 - 20	ER-32	6,0	4,9	10006801
2 - 20	ER-32	7,0	5,5	10006836
2 - 20	ER-32	8,0	6,2	10006683
2 - 20	ER-32	9,0	7	10006684
2 - 20	ER-32	10,0	8	10006685
2 - 20	ER-32	11,0	9	10008264
2 - 20	ER-32	12,0	9	10009677
2 - 20	ER-32	14,0	11	10017137
2 - 20	ER-32	16,0	12	10045058
2 - 20	ER-32	18,0	14,5	10020678
2 - 20	ER-32	20,0	16	10040083
3 - 26	ER-40	6,0	4,9	10038386
3 - 26	ER-40	7,0	5,5	10012631
3 - 26	ER-40	8,0	6,2	10007012
3 - 26	ER-40	9,0	7	10007009
3 - 26	ER-40	10,0	8	10007014
3 - 26	ER-40	11,0	9	10025161
3 - 26	ER-40	12,0	9	10007011
3 - 26	ER-40	14,0	11	10016524
3 - 26	ER-40	16,0	12	10076844
3 - 26	ER-40	18,0	14,5	10008214
3 - 26	ER-40	20,0	16	10047594
3 - 26	ER-40	22,0	18	10076845

Dimensions in mm.

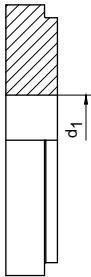
Design: Suitable for tap drills in accordance with DIN, ISO and JIS standards.

Note: Never clamp oversize shanks! E.g. never press a shank with  $\varnothing$  9.2 mm into a collet with  $\varnothing$  9.0 mm. Use the next collet size up (here  $\varnothing$  10.0 mm).



# ER sealing discs

for clamping nuts with internal coolant supply



Clamping range	Nominal size	Clamping diameter $d_1$	Order No.
0,5 - 10	ER-16	3,0 - 2,5	30325796
0,5 - 10	ER-16	3,5 - 3,0	30325797
0,5 - 10	ER-16	4,0 - 3,5	30325798
0,5 - 10	ER-16	4,5 - 4,0	30325799
0,5 - 10	ER-16	5,0 - 4,5	30325800
0,5 - 10	ER-16	5,5 - 5,0	30325801
0,5 - 10	ER-16	6,0 - 5,5	30325802
0,5 - 10	ER-16	6,5 - 6,0	30325803
0,5 - 10	ER-16	7,0 - 6,5	30325804
0,5 - 10	ER-16	7,5 - 7,0	30325805
0,5 - 10	ER-16	8,0 - 7,5	30325806
0,5 - 10	ER-16	8,5 - 8,0	30325807
0,5 - 10	ER-16	9,0 - 8,5	30325808
0,5 - 10	ER-16	9,5 - 9,0	30325809
0,5 - 10	ER-16	10,0 - 9,5	30325810
1 - 13	ER-20	3,0 - 2,5	30325811
1 - 13	ER-20	3,5 - 3,0	30325812
1 - 13	ER-20	4,0 - 3,5	30325813
1 - 13	ER-20	4,5 - 4,0	30325814
1 - 13	ER-20	5,0 - 4,5	30325815
1 - 13	ER-20	5,5 - 5,0	30325816
1 - 13	ER-20	6,0 - 5,5	30325817
1 - 13	ER-20	6,5 - 6,0	30325818
1 - 13	ER-20	7,0 - 6,5	30325819
1 - 13	ER-20	7,5 - 7,0	30325820
1 - 13	ER-20	8,0 - 7,5	30325821
1 - 13	ER-20	8,5 - 8,0	30325822
1 - 13	ER-20	9,0 - 8,5	30325823
1 - 13	ER-20	9,5 - 9,0	30325824
1 - 13	ER-20	10,0 - 9,5	30325825
1 - 13	ER-20	10,5 - 10,0	30325826
1 - 13	ER-20	11,0 - 10,5	30325827
1 - 13	ER-20	11,5 - 11,0	30325828
1 - 13	ER-20	12,0 - 11,5	30325829
1 - 13	ER-20	12,5 - 12,0	30325830
1 - 13	ER-20	13,0 - 12,5	30325831

Clamping range	Nominal size	Clamping diameter $d_1$	Order No.
1 - 16	ER-25	3,0 - 2,5	30325832
1 - 16	ER-25	3,5 - 3,0	30325833
1 - 16	ER-25	4,0 - 3,5	30325834
1 - 16	ER-25	4,5 - 4,0	30325835
1 - 16	ER-25	5,0 - 4,5	30325836
1 - 16	ER-25	5,5 - 5,0	30325837
1 - 16	ER-25	6,0 - 5,5	30325838
1 - 16	ER-25	6,5 - 6,0	30325839
1 - 16	ER-25	7,0 - 6,5	30325840
1 - 16	ER-25	7,5 - 7,0	30325841
1 - 16	ER-25	8,0 - 7,5	30325842
1 - 16	ER-25	8,5 - 8,0	30325843
1 - 16	ER-25	9,0 - 8,5	30325844
1 - 16	ER-25	9,5 - 9,0	30325845
1 - 16	ER-25	10,0 - 9,5	30325846
1 - 16	ER-25	10,5 - 10,0	30325847
1 - 16	ER-25	11,0 - 10,5	30325848
1 - 16	ER-25	11,5 - 11,0	30325849
1 - 16	ER-25	12,0 - 11,5	30325850
1 - 16	ER-25	12,5 - 12,0	30325851
1 - 16	ER-25	13,0 - 12,5	30325852
1 - 16	ER-25	13,5 - 13,0	30325853
1 - 16	ER-25	14,0 - 13,5	30325854
1 - 16	ER-25	14,5 - 14,0	30325855
1 - 16	ER-25	15,0 - 14,5	30325856
1 - 16	ER-25	15,5 - 15,0	30325857
1 - 16	ER-25	16,0 - 15,5	30325858
2 - 20	ER-32	3,0 - 2,5	30325859
2 - 20	ER-32	3,5 - 3,0	30325860
2 - 20	ER-32	4,0 - 3,5	30325861
2 - 20	ER-32	4,5 - 4,0	30325862
2 - 20	ER-32	5,0 - 4,5	30325863
2 - 20	ER-32	5,5 - 5,0	30325864
2 - 20	ER-32	6,0 - 5,5	30325865
2 - 20	ER-32	6,5 - 6,0	30325866
2 - 20	ER-32	7,0 - 6,5	30325867

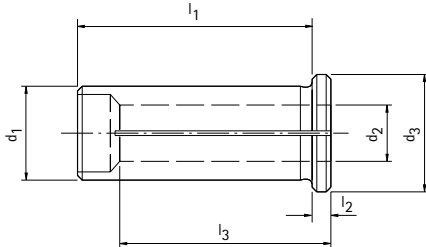
## ER sealing discs for clamping nuts with internal coolant supply

Clamping range	Nominal size	Clamping diameter d <sub>1</sub>	Order No.
2 - 20	ER-32	7,5 - 7,0	30325868
2 - 20	ER-32	8,0 - 7,5	30325869
2 - 20	ER-32	8,5 - 8,0	30325870
2 - 20	ER-32	9,0 - 8,5	30325871
2 - 20	ER-32	9,5 - 9,0	30325872
2 - 20	ER-32	10,0 - 9,5	30325873
2 - 20	ER-32	10,5 - 10,0	30325874
2 - 20	ER-32	11,0 - 10,5	30325875
2 - 20	ER-32	11,5 - 11,0	30325876
2 - 20	ER-32	12,0 - 11,5	30325877
2 - 20	ER-32	12,5 - 12,0	30325878
2 - 20	ER-32	13,0 - 12,5	30325879
2 - 20	ER-32	13,5 - 13,0	30325880
2 - 20	ER-32	14,0 - 13,5	30325881
2 - 20	ER-32	14,5 - 14,0	30325882
2 - 20	ER-32	15,0 - 14,5	30325883
2 - 20	ER-32	15,5 - 15,0	30325884
2 - 20	ER-32	16,0 - 15,5	30325885
2 - 20	ER-32	16,5 - 16,0	30325886
2 - 20	ER-32	17,0 - 16,5	30325887
2 - 20	ER-32	17,5 - 17,0	30325888
2 - 20	ER-32	18,0 - 17,5	30325889
2 - 20	ER-32	18,5 - 18,0	30325890
2 - 20	ER-32	19,0 - 18,5	30325891
2 - 20	ER-32	19,5 - 19,0	30325892
2 - 20	ER-32	20,0 - 19,5	30325893
3 - 26	ER-40	3,0 - 2,5	30325894
3 - 26	ER-40	3,5 - 3,0	30325895
3 - 26	ER-40	4,0 - 3,5	30325896
3 - 26	ER-40	4,5 - 4,0	30325897
3 - 26	ER-40	5,0 - 4,5	30325898
3 - 26	ER-40	5,5 - 5,0	30325899
3 - 26	ER-40	6,0 - 5,5	30325900
3 - 26	ER-40	6,5 - 6,0	30325901
3 - 26	ER-40	7,0 - 6,5	30325902
3 - 26	ER-40	7,5 - 7,0	30325903

Clamping range	Nominal size	Clamping diameter d <sub>1</sub>	Order No.
3 - 26	ER-40	8,0 - 7,5	30325904
3 - 26	ER-40	8,5 - 8,0	30325905
3 - 26	ER-40	9,0 - 8,5	30325906
3 - 26	ER-40	9,5 - 9,0	30325907
3 - 26	ER-40	10,0 - 9,5	30325908
3 - 26	ER-40	10,5 - 10,0	30325909
3 - 26	ER-40	11,0 - 10,5	30325910
3 - 26	ER-40	11,5 - 11,0	30325911
3 - 26	ER-40	12,0 - 11,5	30325912
3 - 26	ER-40	12,5 - 12,0	30325913
3 - 26	ER-40	13,0 - 12,5	30325914
3 - 26	ER-40	13,5 - 13,0	30325915
3 - 26	ER-40	14,0 - 13,5	30325916
3 - 26	ER-40	14,5 - 14,0	30325917
3 - 26	ER-40	15,0 - 14,5	30325918
3 - 26	ER-40	15,5 - 15,0	30325919
3 - 26	ER-40	16,0 - 15,5	30325920
3 - 26	ER-40	16,5 - 16,0	30325921
3 - 26	ER-40	17,0 - 16,5	30325922
3 - 26	ER-40	17,5 - 17,0	30347836
3 - 26	ER-40	18,0 - 17,5	30347837
3 - 26	ER-40	18,5 - 18,0	30347838
3 - 26	ER-40	19,0 - 18,5	30347839
3 - 26	ER-40	19,5 - 19,0	30347840
3 - 26	ER-40	20,0 - 19,5	30347841
3 - 26	ER-40	20,5 - 20,0	30347842
3 - 26	ER-40	21,0 - 20,5	30347843
3 - 26	ER-40	21,5 - 21,0	30347844
3 - 26	ER-40	22,0 - 21,5	30347845
3 - 26	ER-40	22,5 - 22,0	30347846
3 - 26	ER-40	23,0 - 22,5	30347847
3 - 26	ER-40	23,5 - 23,0	30347848
3 - 26	ER-40	24,0 - 23,5	30347849
3 - 26	ER-40	24,5 - 24,0	30347850
3 - 26	ER-40	25,0 - 24,5	30347851
3 - 26	ER-40	25,5 - 25,0	30347852
3 - 26	ER-40	26,0 - 25,5	30347853

# Reducing sleeves for hydraulic chucks

without length adjustment, coolant seal



Dimensions						Order No.
d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	
12	1	16	40	4	20	30503691
12	1,5	16	40	4	20	30503718
12	2	16	40	4	20	30503725
12	2,5	16	40	4	20	30503728
12	3	16	40	4	29	30251059
12	4	16	40	4	29	30251060
12	5	16	40	4	29	30251061
12	6	16	40	4	36	30251062
12	7	16	40	4	37	30251063
12	8	16	40	4	37	30251064
12	9	16	40	4	37	30251065
12	10	16	40	4	40	30251066
20	3	25	50	4	28	30251067
20	4	25	50	4	28	30251068
20	5	25	50	4	28	30251069
20	6	25	50	4	36	30251070
20	7	25	50	4	38	30251071
20	8	25	50	4	37	30251072
20	9	25	50	4	38	30251073
20	10	25	50	4	40	30251074
20	11	25	50	4	40	30251075
20	12	25	50	4	45	30251076
20	13	25	50	4	45	30251077
20	14	25	50	4	45	30251078
20	15	25	50	4	45	30251079
20	16	25	50	4	48	30251080
20	18	25	50	4	48	30486538
25	3	30	56	4	29	30251081
25	4	30	56	4	29	30251082
25	5	30	56	4	29	30251083
25	6	30	56	4	37	30251084
25	7	30	56	4	37	30251085
25	8	30	56	4	37	30251086
25	9	30	56	4	38	30251087
25	10	30	56	4	40	30251088
25	12	30	56	4	46	30251089

## Reducing sleeves for hydraulic chucks | Without length adjustment, coolant seal

Dimensions						Order No.
d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	
25	14	30	56	4	47	30251090
25	16	30	56	4	48	30251091
25	18	30	56	4	48	30251092
25	20	30	56	4	50	30251093
32	6	36	60	4	36	30251094
32	7	36	60	4	37	30251095
32	8	36	60	4	36	30251096
32	9	36	60	4	37	30251097
32	10	36	60	4	40	30251098
32	11	36	60	4	40	30251099
32	12	36	60	4	45	30251100
32	13	36	60	4	45	30251101
32	14	36	60	4	46	30251102
32	15	36	60	4	46	30251103
32	16	36	60	4	48	30251104
32	17	36	60	4	48	30251105
32	18	36	60	4	49	30251106
32	19	36	60	4	49	30251107
32	20	36	60	4	50	30251108
32	22	36	60	4	50	30251109
32	25	36	60	4	56	30251110

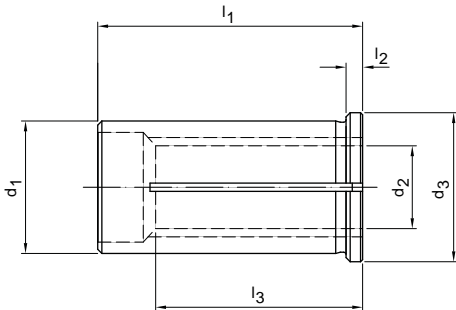
Dimensions in mm.

For diameter reduction on all hydraulic chucks. Metallic sealing on hydraulic chucks without outward dirt groove, coolant seal up to 80 bar, durable due to use of high quality hardened spring steel, radial run-out accuracy 3 µm, high diameter flexibility for the hydraulic chuck.

Note: Matching extraction wrench for simple removal of the reducing sleeves can be found in this section. Length adjustment via AAS can be found in this section. Imperial diameters also available on request.

# Reducing sleeves for hydraulic chucks

without length adjustment, with cooling channel bores



## For peripheral cooling – coolant seal

Dimensions						Order No.
d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	
12	3	16	44	4	29	30557343
12	4	16	44	4	29	30557344
12	5	16	44	4	29	30557345
12	6	16	44	4	36	30557346
12	8	16	44	4	37	30557347
20	3	25	54	4	28	30557348
20	4	25	54	4	28	30557350
20	5	25	54	4	28	30557351
20	6	25	54	4	36	30557352
20	8	25	54	4	37	30557353
20	10	25	54	4	40	30557354
20	12	25	54	4	45	30557355
20	14	25	54	4	45	30557356
20	16	25	54	4	48	30557358
32	6	36	64	4	36	30557359
32	8	36	64	4	36	30557360
32	10	36	64	4	40	30557361
32	12	36	64	4	45	30557362
32	14	36	64	4	46	30557364
32	16	36	64	4	48	30557365
32	18	36	64	4	49	30557366
32	20	36	64	4	50	30557367
32	25	36	64	4	56	30557369

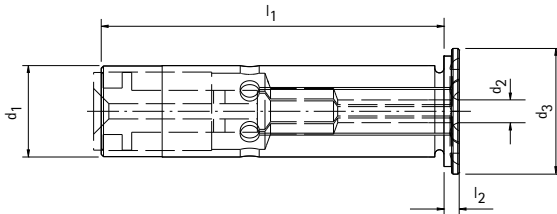
Dimensions in mm.

For diameter reduction specially for hydraulic chucks – suitable for all hydraulic chucks. Metallic sealing on hydraulic chucks without outward dirt groove, coolant seal up to 80 bar, durable due to use of high quality hardened spring steel, radial run-out accuracy 3 µm, high diameter flexibility for the hydraulic chuck.

Note: Matching extraction wrench for simple removal of the reducing sleeves can be found in this section. Length adjustment via AAS can be found in this section. Imperial diameters also available on request.

# Reducing sleeves for hydraulic chucks

with 10 mm length adjustment



For peripheral cooling – no coolant seal

Dimensions					Order No.
d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	
12	3	16,5	45,0	2,0	30317177
12	4	16,5	45,0	2,0	30317178
12	5	16,5	45,0	2,0	30317179
12	6	16,5	45,0	2,0	30317180
12	7	16,5	45,0	2,0	30317181
12	8	16,5	45,0	2,0	30317182
20	3	24,1	50,5	2,0	30317183
20	4	24,1	50,5	2,0	30317184
20	5	24,1	50,5	2,0	30317185
20	6	24,1	50,5	2,0	30317186
20	7	24,1	50,5	2,0	30317187
20	8	24,1	50,5	2,0	30317188
20	9	24,1	50,5	2,0	30317189
20	10	24,1	50,5	2,0	30317190
20	11	24,1	50,5	2,0	30317191
20	12	24,1	50,5	2,0	30317192
20	14	24,1	50,5	2,0	30317193
20	15	24,1	50,5	2,0	30317194
20	16	24,1	50,5	2,0	30317195
20	17	24,1	50,5	2,0	30317196
32	6	35,5	60,5	2,0	30317197
32	8	35,5	60,5	2,0	30317198
32	10	35,5	60,5	2,0	30317199
32	12	35,5	60,5	2,0	30317200
32	14	35,5	60,5	2,0	30317201
32	16	35,5	60,5	2,0	30317202
32	18	35,5	60,5	2,0	30317203
32	20	35,5	60,5	2,0	30317204
32	25	35,5	60,5	2,0	30317205

Dimensions in mm.

Note: For diameter reduction on hydraulic chucks and polygon chucks, no coolant seal.  
Radial run-out accuracy 3 µm. High diameter flexibility of the chuck.

## Reducing sleeves for hydraulic chucks | For internal coolant supply – coolant seal

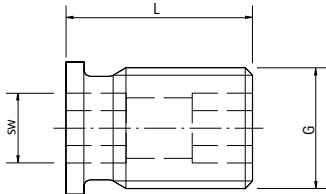
Dimensions					Order No.
d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	
12	3	16,5	45,0	2,0	30317206
12	4	16,5	45,0	2,0	30317207
12	5	16,5	45,0	2,0	30317208
12	6	16,5	45,0	2,0	30317209
12	7	16,5	45,0	2,0	30317210
12	8	16,5	45,0	2,0	30317211
20	3	24,1	50,5	2,0	30317212
20	4	24,1	50,5	2,0	30317213
20	5	24,1	50,5	2,0	30317214
20	6	24,1	50,5	2,0	30317215
20	7	24,1	50,5	2,0	30317216
20	8	24,1	50,5	2,0	30317217
20	9	24,1	50,5	2,0	30317218
20	10	24,1	50,5	2,0	30317219
20	11	24,1	50,5	2,0	30317220
20	12	24,1	50,5	2,0	30317221
20	13	24,1	50,5	2,0	30317222
20	14	24,1	50,5	2,0	30317223
20	15	24,1	50,5	2,0	30317224
20	16	24,1	50,5	2,0	30317225
20	17	24,1	50,5	2,0	30317226
22	6	25	50,5	2,0	30317227
22	8	25	50,5	2,0	30317228
22	10	25	50,5	2,0	30317229
22	12	25	50,5	2,0	30317230
22	14	25	50,5	2,0	30317231
22	16	25	50,5	2,0	30317232
25	6	29	54,5	2,0	30317233
25	8	29	54,5	2,0	30317234
25	10	29	54,5	2,0	30317235
25	12	29	54,5	2,0	30317236
25	14	29	54,5	2,0	30317237
25	16	29	54,5	2,0	30317238
25	18	29	54,5	2,0	30317239
25	20	29	54,5	2,0	30317240
32	6	35,5	60,5	2,0	30317241
32	8	35,5	60,5	2,0	30317242
32	10	35,5	60,5	2,0	30317243
32	12	35,5	60,5	2,0	30317244
32	14	35,5	60,5	2,0	30317245
32	16	35,5	60,5	2,0	30317246
32	18	35,5	60,5	2,0	30317247
32	20	35,5	60,5	2,0	30317248
32	25	35,5	60,5	2,0	30317249

Dimensions in mm.

Note: For diameter reduction on hydraulic chucks and polygon chucks, coolant seal up to 80 bar. Radial run-out accuracy 3 µm. High diameter flexibility of the chuck.

## Stop screws direct clamping

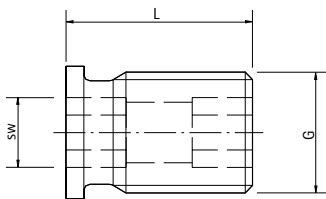
for axial length adjustment



G	sw	L	Weight [kg]	Order No.
M5	2	14	0,001	30336661
M5	2,5	12,5	0,001	30252539
M6	2	14	0,002	30252537
M6	3	12,5	0,002	30252540
M8x1	3	13,5	0,004	30252541
M10x1	5	13,5	0,006	30252542
M12x1	5	13,5	0,011	30252543
M16x1	5	13,5	0,017	30252544
M16x1	8	13,5	0,021	30252547

## Stop screw direct clamping

for HTC, suitable for MQL, for axial length adjustment

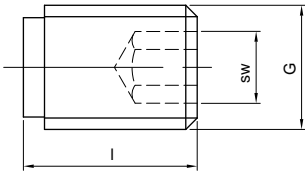


G	sw	L	Weight [kg]	Order No.
M5	2,5	15	0,001	30340240
M6	3	15	0,002	30340241
M8x1	3	15,5	0,005	30340242
M10x1	5	15,5	0,006	30340243
M10x1	5	16,5	0,008	30340244
M12x1	5	18	0,015	30340245
M12x1	5	20	0,02	30340246
M16x1	5	18,5	0,03	30340247
M16x1	5	22	0,05	30340249
M16x1	5	25	0,07	30340250



# Clamping screw HTC

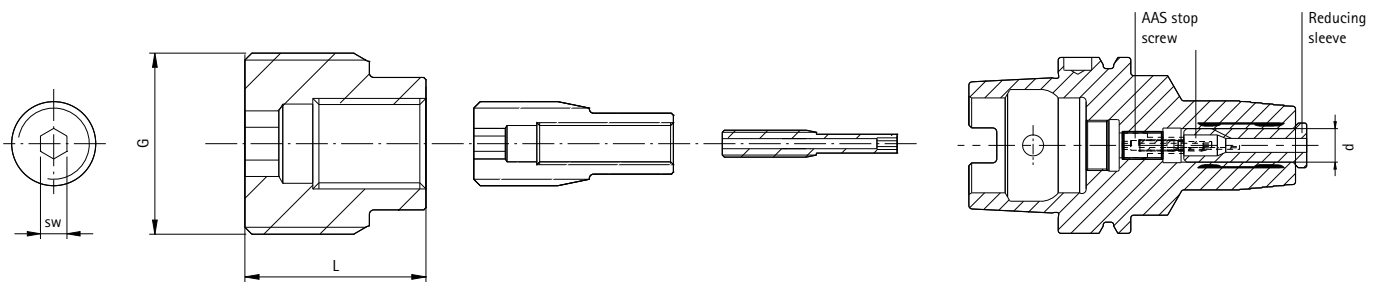
for application of pressure



G	sw	L	Weight [kg]	Order No.
M10	5	10	0,006	10003470
M10	5	14	0,009	10070217

# AAS stop screws

On the usage of reducing sleeves for axial length adjustment and secure axial fixing

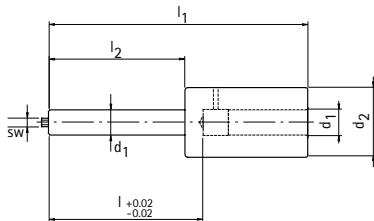


G	ø d	sw	L	Order No.
M4x0,5	12	2	26	30308901
M10x1	12	3	16	30308896
M16x1	20	5	16	30308897
M8x1	20	2,5	19	30308899
M4x0,5	20	2	26	30308901
M8x1	25	2,5	19	30308899
M4x0,5	25	2	26	30308901
M16x1	25	5	20	30308904
M8x1	32	2,5	19	30308899
M16x1	32	5	20	30308904

Dimensions in mm.

Note: For usage with reducing sleeves for hydraulic chucks.

# Length pre-adjusting adapters for shrink chucks



sw	Dimensions					Weight [kg]	Order No.
	d <sub>1</sub>	d <sub>2</sub>	l	l <sub>1</sub>	l <sub>2</sub>		
2	3	15	40	65	30	0,2	30279665
2	4	15	40	65	30	0,2	30697186
2	5	15	40	65	30	0,2	30697191
2,5	6	25	60	96	53	0,2	30262169
3	8	25	60	96	53	0,2	30262170
3	10	25	60	101	53	0,2	30262172
5	12	25	60	107	53	0,2	30262178
5	14	25	60	107	53	0,2	30262179
5	16	25	60	110	53	0,3	30262181
5	18	25	60	110	53	0,3	30262183
5	20	28	60	112	53	0,3	30262184
8	20	28	60	112	53	0,3	30262187
5	25	32	70	128	63	0,3	30393108
8	25	32	70	128	63	0,3	30393114
5	32	40	70	132	63	0,3	30627330
8	32	40	70	132	63	0,3	30627328

Dimensions in mm.

The MAPAL length pre-adjusting adapters are used for the straightforward adjustment of the length of the tools before the shrinking process. It is suitable for all shrink chucks with stop screw with the corresponding internal hexagon on the tool side of the chuck. With appropriately careful and exact use, after shrinking accuracies of +/- 0.03 mm are achieved.

Operating manual:

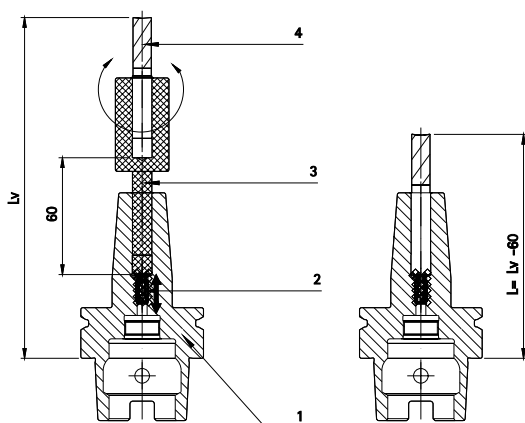
1. Prior to the shrinking process, assemble tool (4), MAPAL length pre-adjusting adapter (3) and MAPAL shrink chuck (1) with MAPAL stop screw (2).

2. Set required length by turning the length pre-adjusting adapter, this adjuster sets the stop screw to the required dimension. The required length (L) after shrinking is given by the pre-adjusted length (L<sub>v</sub>) from L = L<sub>v</sub>-60 mm.

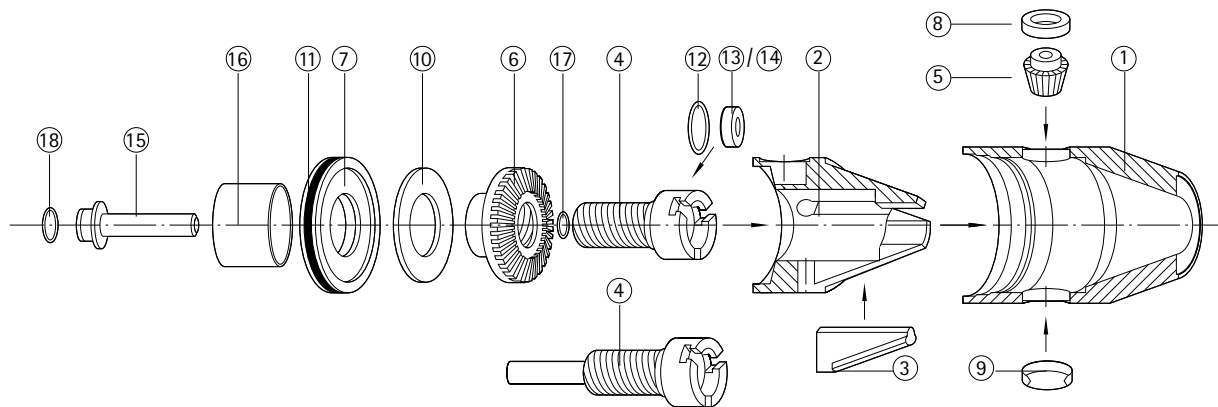
3. Remove length pre-adjusting adapter and shrink tool. The tool must sit on the stop screw.

Length adjustment: The length adjustment in the MAPAL shrink chuck is changed using a setting screw with an internal hexagon on both ends. There is a hole drilled through the middle of the screw for the internal coolant supply. The length adjustment can be made from both sides.

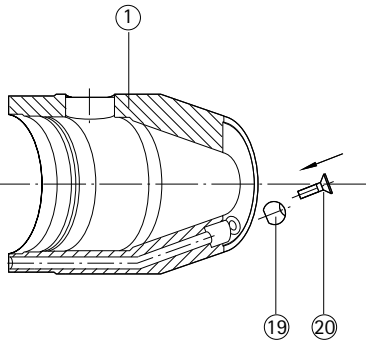
## 1. Length pre-adjustment



## Spare parts list Precision-DrillChuck

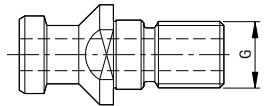


	Spare parts group	DCT-08-A	DCT-08-B	DCT-08-D	DCT-13-A
		Order No.	Order No.	Order No.	Order No.
①	Sleeve	30266093	30266093	30266094	30266096
②	Conical sleeve	30266130	30266130	30266130	30266133
③	Clamping jaw	30266138	30266138	30266138	30266139
④	Threaded spindle	30266107	30266108	30266107	30266111
⑤	Pinion	30266141	30266141	30266141	30266142
⑥	Bevel wheel	30266194	30266194	30266194	30266195
⑦	Thrust pad	30266164	30266164	30266164	30266165
⑧	Two-hole nut	30266192	30266192	30266192	30266193
⑨	Cover	30266152	30266152		30266153
⑩	Spacer disc	30266156	30266156	30266156	30266155
⑪	O-ring 24x1	10072512	10072512	10072512	
	O-ring 38x1.5				10019664
⑫	O-ring 8x1		10015675		
	O-ring 13x1.5				
	O-ring 16x1.5				
⑬	Sealing disc ø 1.8x4		30266123		
	Sealing disc ø 3-6				
⑭	Sealing disc ø 3.2-8		30266125		
	Sealing disc ø 6-13				
	Sealing disc ø 6-16				
⑮	Coolant tube				
⑯	Distance piece				
⑰	O-ring 6x1.5				
⑱	O-ring 8x1.5		10015676		
⑲	Ball nozzle ø 5.5			30266161	
	Ball nozzle ø 7.0				
⑳	Countersunk screw			10003770	



	DCT-13-B	DCT-13-C	DCT-13-D	DCT-16-A	DCT-16-B	DCT-16-C	DCT-16-D
	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
	30266096	30266096	30266097	30266099	30266099	30266099	30266100
	30266133	30266133	30266133	30266134	30266134	30266134	30266136
	30266139	30266139	30266139	30266139	30266139	30266139	30266139
	30266112	30266114	30266111	30266146	30266147	30266148	30266146
	30266142	30266142	30266142	30266143	30266143	30266143	30266143
	30266195	30266195	30266195	30266196	30266196	30266196	30266196
	30266165	30266165	30266165	30266165	30266165	30266165	30266165
	30266193	30266193	30266193	30266193	30266193	30266193	30266193
	30266153	30266153		30266153	30266153	30266153	
	30266155	30266155	30266155	30266155	30266155	30266155	30266155
	10019664	10019664	10019664	10019664	10019664	10019664	10019664
	10002538	10002538					
					10002547	10002547	
	30266126	30266126			30266128	30266128	
	30266127	30266127					
					30266129	30266129	
		30266167				30266167	
		30266168				30266168	
		10002608				10002608	
	10015676	10015676			10015676	10015676	
			30266163				30266163
			10003775				10003775

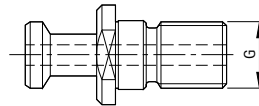
## Pull studs for steep taper adapters



### Pull studs for SK

In accordance with ISO7388-3 Form AD/AF

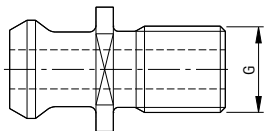
SK	Form	G	Order No.
30	AD	M12	10017955
30	AF	M12	10061282
40	AD	M16	10004416
40	AF	M16	10007995
45	AD	M20	10049470
45	AF	M20	10049469
50	AD	M24	10006581
50	AF	M24	10021618



### Pull studs for steep taper adapters

in accordance with ISO7388-3 Form JD 30°/45°

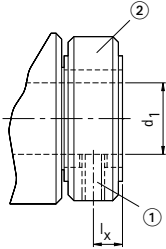
BT	Form	G	Order No.
30	30°	M12	10017954
30	45°	M12	10066211
40	30°	M16	10022405
40	45°	M16	10018129
45	30°	M20	10066212
45	45°	M20	10066213
50	30°	M24	10020619
50	45°	M24	10013983



### Pull studs for SK in accordance with ASME B 5.50 (CAT)

CAT	G	Order No.
30	1/2" - UNC	10066205
40	5/8" - UNC	10066206
45	3/4" - UNC	10066209
50	1" - UNC	10066210

# Spare parts for floating holders



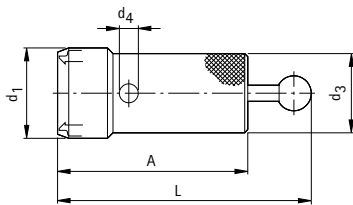
Clamping diameter $d_1$	$l_x$	① Threaded pin in accordance with ISO 4028		② Holder ring
		Size	Order No.	Order No.
10	5	M5x10-45H	10003907	10080864
10	6	M6x12-45H	10003917	10080865
16	6	M6x12-45H	10003917	10080865
16	7	M8x16-45H	10003935	10080996
16	9,5	M8x16-45H	10003935	10080862
20	7	M8x16-45H	10003935	10080996
20	9,5	M8x16-45H	10003935	10080862
25	7	M8x20-45H	10003937	10080995
25	9,5	M10x20-45H	10003956	10080863

You will find floating holders in the Reaming | Fine boring catalogue

Dimensions in mm.

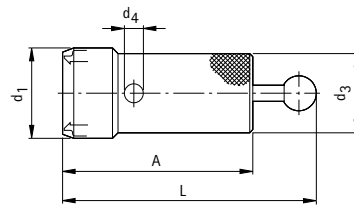
Note: The spare parts are dependent on the clamping diameter  $d_1$  and the position of the threaded pin.

## KS assembly tools



KS assembly tools

HSK-C	Dimensions					Order No.
	A	L	d <sub>1</sub>	d <sub>3</sub>	d <sub>4</sub>	
32	74	95	24	24	6	30326009
40	85	105	30	30	7	30326010
50	96	115	38	38	8	30326011
63	107	130	48	48	10	30326012
80	120	150	57	50	12	30326013
100	135	168	73	52	14	30326014



KS assembly tools for MQL applications

HSK-C	Dimensions					Order No.
	A	L	d <sub>1</sub>	d <sub>3</sub>	d <sub>4</sub>	
40	85	105	30	30	7	30326015
50	96	115	38	38	8	30326016
63	107	130	48	48	10	30326017
80	120	150	57	50	12	30326018
100	135	168	73	52	14	30326019

Dimensions in mm.

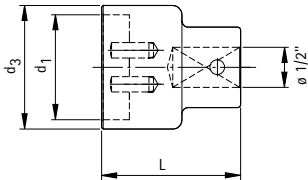
Use: For locking and unlocking or removing KS clamping cartridges (standard and high pressure cartridges). Fitting and removing clamping cartridges is very easy using the assembly tool, even in multiple spindle heads.

Note: Locking and unlocking the clamping cartridges can be made easier by using an extension bar that is inserted through the bore d<sub>4</sub>.

Items included: Without extension bar.

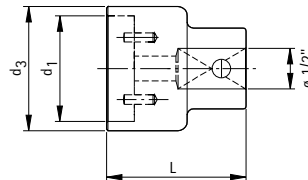
Material: Gripper jaws and assembly blade made of hardened steel.

# KS assembly sockets



**KS assembly sockets**

HSK-C	Dimensions			Order No.
	$d_1$	$d_3$	L	
32	17	22	45	30325992
40	21	26	45	30325993
50	26	32	45	30325994
63	34	40	45	30325995
80	42	48	45	30325996
100	53	60	45	30325997



**KS assembly sockets for MQL applications**

HSK-C	Dimensions			Order No.
	$d_1$	$d_3$	L	
40	21	26	45	30325998
50	26	32	45	30325999
63	34	40	45	30326000
80	42	48	45	30326001
100	53	60	45	30326002

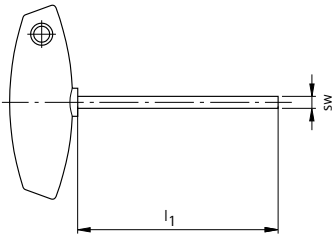
Dimensions in mm.

Use: For locking and unlocking KS clamping cartridges.

Note: With the reducer  $3/8'' - 1/2''$  (Order No MN5216-20) the assembly socket fits the torque wrench.

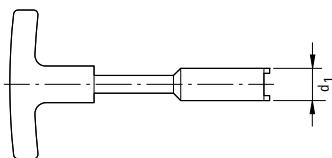


## Assembly tool



### Hexagonal T-keys

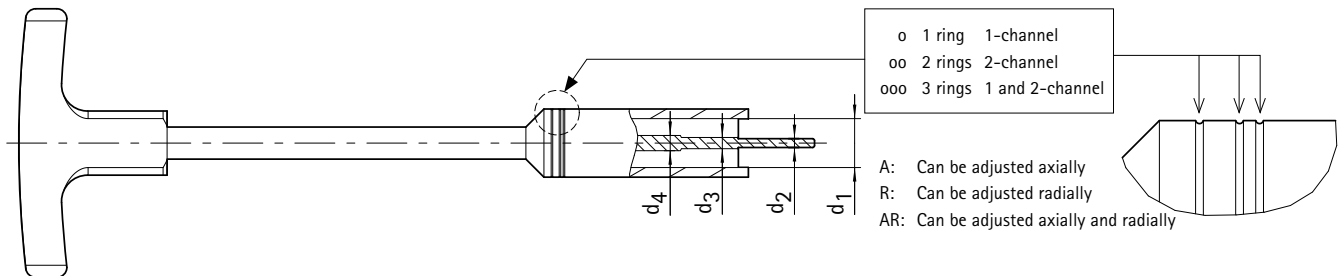
sw	Short design			Long design	
	$l_1$	Specification	Order No.	$l_1$	Order No.
2,0	100	-	10006942	200	10034235
2,5	100	-	10006233	200	10032722
3	100	MN5221-31	10006234	200	10025313
4	100	MN5221-32	10006235	200	10018010
5	100	MN5221-33	10006236	200	10013350
6	100	MN5221-34	10006237	-	-
8	100	MN5221-35	10006238	-	-
10	100	-	30353270	-	-
12	-	-	-	200	30353272



### Assembly tools for fitting and removing coolant tubes or adapter tubes on the KS MQL clamping cartridges

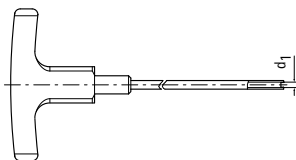
HSK	$d_1$	For coolant tube in accordance with DIN 69895		For blanking plugs/adapter tube on the KS clamping cartridges for MQL applications	
		Specification	Order No.	Specification	Order No.
32	9	MAT-HSK-A032-1	10074750	MAT-KS032-040-G	10079521
40	11	MAT-HSK-A040-1	10074751	MAT-KS032-040-G	10079521
50	15	MAT-HSK-A050-1	10074752	MAT-KS050-063-G	10079522
63	17	MAT-HSK-A063-1	10040110	MAT-KS050-063-G	10079522
80	18	MAT-HSK-A080-1	10074774	MAT-KS080-G	10079523
100	22	MAT-HSK-A100-1	10074775	MAT-KS100-G	10079525

# Assembly tool MQL



For MQL coolant supply unit for installation and removal of MQL coolant units

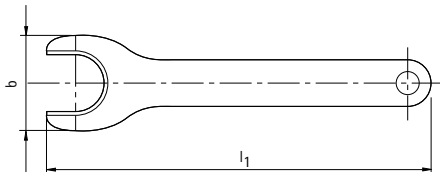
HSK-A	Dimensions				1-channel system					2-channel system				Order No.
					sw					sw				
	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	2	2.5	3	4	5	2	2.5	3	4	
32	6,3	2,2	2,8	3,8	A					A				10087512
40	8,2	3,2	-	3,8	AR					AR				10087513
40	8,2	2,2	2,8	3,8	R					AR				30487807
50	10,3	4,4	-	4,8	AR					AR				10087514
50	10,3	2,2	2,8	3,8	R					AR				30487808
50	10,3	3,2	-	3,8	AR					AR				30487809
63	12,2	4,4	-	6,8	A					AR				10087515
63	12,2	2,2	2,8	3,8	R					AR				30487810
63	12,2	3,2	-	3,8	AR					AR				30487811
63	12,2	4,4	-	4,8	R					AR				30487812
80	14,2	4,4	-	6,8	A					AR				10087516
80	14,2	2,2	2,8	3,8	R					AR				30487813
80	14,2	3,2	-	3,8	AR					AR				30487814
80	14,2	4,4	-	4,8	R					AR				30487815
100	16,5	4,4	-	6,8	A					AR				10087517
100	16,5	2,2	2,8	3,8	R					AR				30487816
100	16,5	3,2	-	3,8	AR					AR				30487817
100	16,5	4,4	-	4,8	R					AR				30487818



For 2-channel system MQL length adjustment screw for installation and removal of 2-channel MQL length adjustment screws with wrench size 1.5

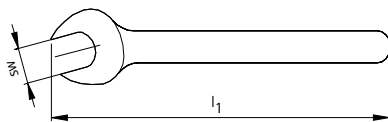
sw	Specification	Order No.
1,5	MAT-HSK-A032-100-F-06-18-SW1.5	30521506

## Assembly tool



Extraction wrench for simple removal of the reducing sleeves from the MAPAL hydraulic chucks

Nominal size	Dimensions		Specification	Order No.
	b	$l_1$		
HS12	24,6	100	MN5425-99	30251198
HS20	38	160	MN5427-99	30251199
HS25	51	180	MN5428-99	30251200
HS32	63	200	MN5429-99	30251201



Open-ended wrench DIN 894 for chucks for collets to DIN 69882-6 and Softsynchro tapping chucks

Clamping range	Nominal size	Dimensions		Specification	Order No.
		$l_1$	sw		
0,5 - 10	ER-16	215	25	MN5221-01	10074776
1 - 13	ER-20	260	30	MN5221-02	10080923

Dimensions in mm.

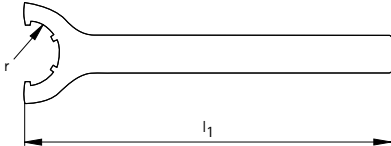
The extensions may only be shortened on the shank side.

The minimum clamping depth required is 2-3 x D.

The clamping diameter is designed for a shank tolerance of h6.

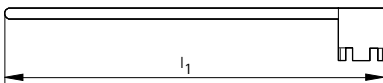
We assume no liability for modifications to tool adapters and their consequences.

# Assembly tool



Open-ended wrench for chucks for collets to DIN 69882-6 and Softsynchro tapping chucks

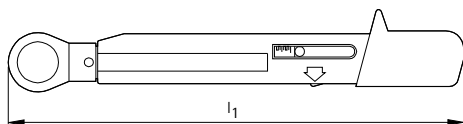
Clamping range	Nominal size	Dimensions		Specification	Order No.
		$l_1$	$r$		
1 - 16	ER-25	210	65	MN5221-10	10080922
2 - 20	ER-32	250	75	MN5221-11	10074777
3 - 26	ER-40	290	90	MN5221-12	10074955



Open-ended wrench DIN 6368 for milling cutter arbors

Arbor diameter $d_1$	Dimension $l_1$	Specification	Order No.
16	180	MN5221-21	10074778
22	200	MN5221-22	10074779
27	225	MN5221-23	10074780
32	250	MN5221-24	10074781
40	280	MN5221-25	10074782
50	315	MN5221-26	10074785
60	355	MN5221-27	10080921

# Torque wrench

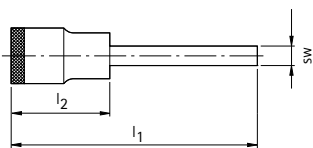


## Torque wrench

HSK-C	$l_1$	Torque range [Nm]	Order No.	Design reversible ratchet
32 - 40	210	4 - 20	30149002*	1/4"
32 - 40	210	4 - 20	10040125**	1/4"
50 - 80	240	8 - 40	30148986***	3/8"
50 - 80	240	8 - 40	10040126**	3/8"
100	333	10 - 60	30149001****	3/8"
-	333	10 - 60	10074788**	3/8"
-	435	25 - 130	30353267**	1/2"

### Items included:

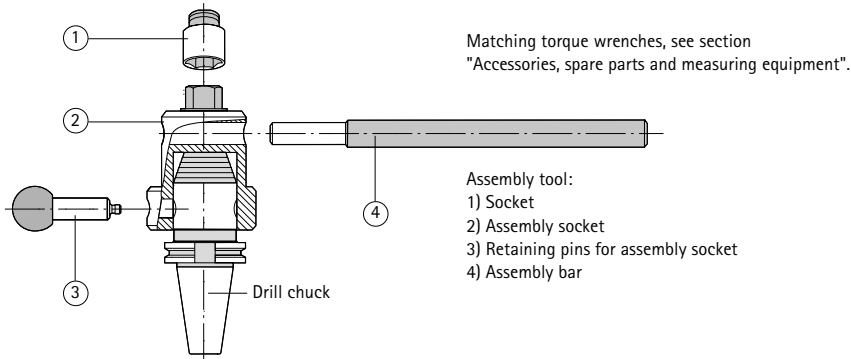
- \* As set with replaceable hexagonal insert (wrench size 3).
- \*\* Torque wrench without hexagonal insert.
- \*\*\* As set with replaceable hexagonal inserts (wrench size 4, 5, 6).
- \*\*\*\* As set with replaceable hexagonal insert (wrench size 8).



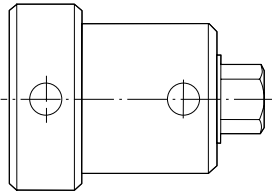
## Hexagonal inserts

Nominal size	Dimensions			Order No.	Design drive
	$l_1$	$l_2$	sw		
HSK-C	$l_1$	$l_2$	sw		
32 - 40	55	25	3	10040122	1/4"
50	63	28	4	10040123	3/8"
63	73	28	5	10040124	3/8"
80	78	28	6	10074792	3/8"
100	95	32	8	10074793	3/8"
-	140	38	10	30353265	1/2"
-	140	38	12	30353266	1/2"
-	140	38	14	30707823	1/2"

# Assembly tools, Precision-DrillChuck

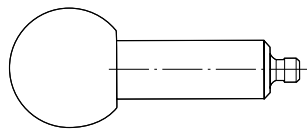


## Assembly socket ②



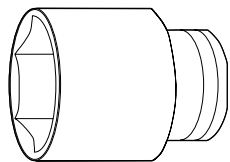
Suitable for (see list of spare parts with order number)	Weight [kg]	Order No.
DCT-08-A/DCT-08-B	0,3	30266169
DCT-08-D	0,3	30266170
DCT-13-A/DCT-13-B/DCT-13-C	0,4	30266171
DCT-13-D/DCT-16-A/DCT-16-B/DCT-16-C/DCT-16-D	0,5	30266173

## Retaining pin for assembly socket ③



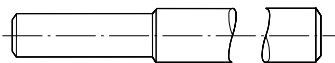
Weight [kg]	Order No.
0,03	30266175
0,03	30266176

## Socket ①



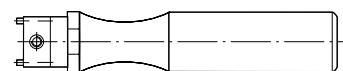
Internal hexagon	Square drive	Weight [kg]	Order No.
sw 19	1/2"	0,1	30266180

## Assembly bar ④



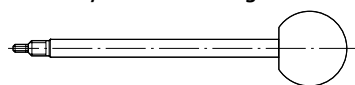
Suitable for (see list of spare parts with order number)	Weight [kg]	Order No.
All assembly sockets	1,0	30266181

## Screwdriver



For precision drill chuck	Weight [kg]	Order No.
Clamping diameter up to 8 mm	0,04	30266182
Clamping diameter > 8 mm	0,04	30266183

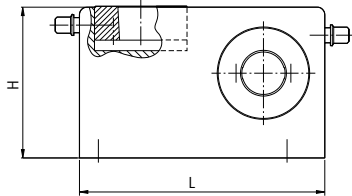
## Assembly tool for sealing discs



For precision drill chuck	Weight [kg]	Order No.
Clamping diameter up to 8 mm	0,03	30266184
Clamping diameter > 8 mm	0,03	30266185

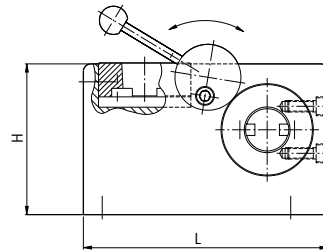
# Tool mounting blocks

For tools with hollow shank taper HSK32-100, Form A-F, T



**Design 1**

HSK	Dimensions			Order No.
	L	T	H	
32	260	130	160	30326038
40	260	130	160	30326039
50	260	130	160	30326040
63	260	130	160	30326041



**Design 2**

HSK	Dimensions			Order No.
	L	T	H	
80	260	130	160	30326287
100	260	130	160	30326043

Dimensions in mm.

**Design 1:** The tool adapters are clamped vertically and horizontally at the collar. In this way all taper forms with the same collar diameter can be clamped in one block. The torque is transmitted via friction locking.  
Items included: With horizontal and vertical adapter sleeve fitted, including control key.

**Note:** Design 1 can be used for all HSK forms in the nominal size.

**Design 2:** The tool adapter is simply inserted vertically and held in place by its own weight. The tool is held horizontally by the pivoting screw. The torque is transmitted via the driving element on the end of the taper.

Items included: With horizontal and vertical adapter sleeve fitted.

**Note:** Design 2 can only be used for the HSK Forms A and C in the related nominal size.

## Balluff code carrier



Name	Dimensions		Order No.
	d <sub>1</sub>	l <sub>1</sub>	
BIS C-122-04/L	10	4,5	10004178

Dimensions in mm.

Use: For fitting in tool shanks / chucks with shank HSK-A in accordance with DIN 69893.

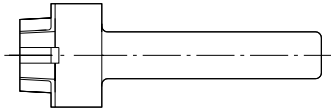
Design:

Housing material:	Compressed epoxy resin
Storage capacity:	511 bytes
Suitable read/write head:	BIS C-300 / 302 / 305 / 306 / 325
Max. read/write distance:	2.5 mm
Type of fit:	Flush
Working temperature:	0 to +70 °C
Storage temperature:	-20 to +85 °C
Ingress protection in acc. with IEC 60529:	IP 67
Programming cycles:	500 000 (up to 70 °C)

Note: The code carriers can be written as often as necessary. The code carrier does not need a battery to supply power. The power and data required by the code carrier are coupled inductively by the read/write head. The data transfer is safeguarded by a plausibility check. On request tool shanks / chucks are available with a code carrier bonded in place.



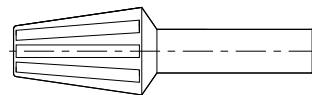
# Taper wipers



## For HSK connections

HSK	Order No.
32	30325980
40	30325981
50	30325982
63	30325983
80	30325984
100	30325985

Use: For cleaning taper and face connection on machine spindles and tool adapters.  
 Note: Face surface and taper are cleaned at the same time.

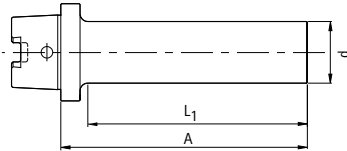


## For SK connections

HSK	Order No.
30	10013439
40	10013427
45	10013428
50	10007567

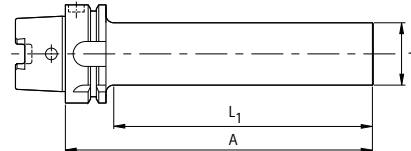
Use: For cleaning the steep taper on machine spindles and tool adapters.

# Test arbors



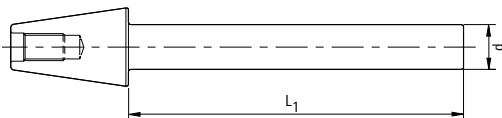
Test arbors HSK-C

HSK-C	Dimensions			Weight [kg]	Order No.
	d	A	$l_1$		
32	25	125	110	0,5	30326244
40	25	125	110	0,6	30326245
50	32	125	107,5	0,8	30326246
63	40	160	137,5	1,6	30326247
80	40	160	130	1,8	30326248
100	40	160	130	2,0	30326249



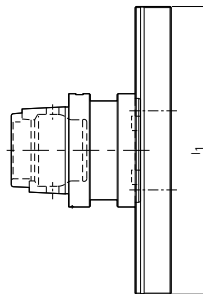
Test arbors HSK-A

HSK-A	Dimensions			Weight [kg]	Order No.
	d	A	$l_1$		
32	25	176	150	0,5	30326250
40	25	180	150	0,6	30326251
50	32	236	200	0,8	30326252
63	40	346	300	1,6	30326253
80	40	346	300	1,8	30326254
100	40	349	300	2,0	30326255



Test arbors SK

SK	Dimensions		Weight [kg]	Order No.
	d	$l_1$		
40	40	320	1,8	30326256
50	40	320	3,3	30326257

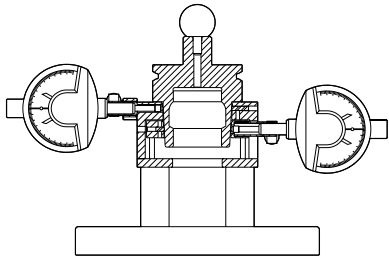


Angle setting gauges HSK-T

HSK-T	$l_1$	Order No.
40	120	30369153
63	160	30369152
100	200	30369151

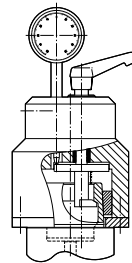
Use: For the acceptance test on machine tools.

## Gauges for HSK shanks



Gauges for nominal taper diameter  $d_2$   
and measuring point diameter  $d_k$

HSK	Order No.
32	10081088
40	10081089
50	10081090
63	10081091
80	10081092
100	10081093



Gauges for 30° clamping angle

HSK	Order No.
32	30325974
40	30325975
50	30325976
63	30325977
80	30325978
100	30325979

Dimensions in mm.

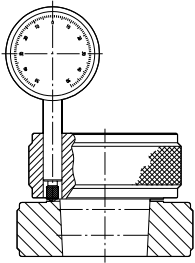
Use: For direct comparative measurement between calibrated taper plug gauge and tool shank or HSK external taper. With the taper measuring rings set using the taper plug gauge, the deviation on the shank from the nominal taper diameter  $d_2$  or the measuring point diameter  $d_k$  can be read on the dial gauges.

Items included: Measuring device mounted on a board in wooden case with two precision dial gauges for  $d_2$  and  $d_k$ , including master gauge in wooden case.

Use: For direct comparative measurement between calibrated setting gauge and tool shank or HSK external taper. Using the gauge calibrated with the setting gauge, the deviation on the shank from the clamping point distance  $L_6$  can be read on the dial gauge.

Items included: Setting gauge and dial gauge as set in wooden case.

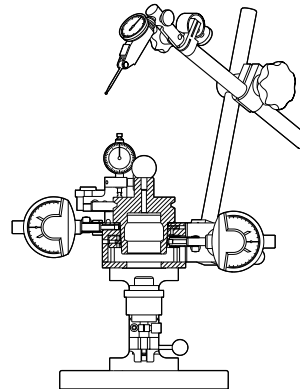
## Gauges for HSK spindles



### Mechanical gauges

HSK	Order No.
32	30325968
40	30325969
50	30325970
63	30325971
80	30325972
100	30325973

## Gauges for HSK shanks



HSK	Order No.
32	10081028
40	10081029
50	10081030
63	10081081
80	10081082
100	10081083

Dimensions in mm.

Use: For direct comparative measurement between calibrated taper gauge ring and tool shank or tool adapters. Using the taper gauge set to the taper gauge ring, the deviation of the spindle's internal taper can be read off on the dial gauge.

Items included: Taper gauge ring and gauge with dial gauge as set in wooden case.

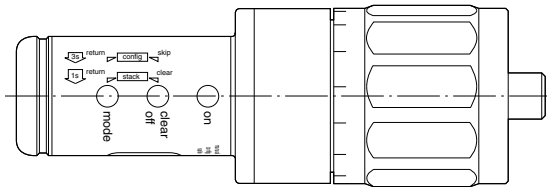
Use: For checking the principal function dimensions in one process.

1.  $d_2$  large taper diameter (direct measurement)
2.  $d_k$  small taper diameter (direct measurement)
3.  $L_5$  clamping shoulder distance  $30^\circ$
4.  $L_6$  bottom of the bore  
Circularity:  $d_2$ ,  $d_3$ ,  $L_5$  by rotating the workpiece in the measuring fixture
5.  $d_{11}$ ,  $f_3$  gripper groove

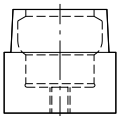
Items included: Gauge with measuring head including 6 dial gauges.

Note: The gauge is of modular design and is therefore available in various versions and combinations on request.

# Clamping force measuring device

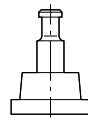


	Order No.
Basic device	30290047



### HSK adapters

HSK-A/-C	Order No.
32	30353380
40	30353383
50	30353387
63	30353418
80	30353420
100	30340278



### Steep taper adapters

SK	Order No.
30	30353422
40	30353423
45	30353424
50	30353426

Dimensions in mm.

Use: For measuring clamping forces on tool spindles with HSK and SK connection.

Using various adapters the measuring device can be adjusted to the following spindle sizes:

HSK-A32/B40 to HSK-A125/B160 SK 30 to SK 50 (in accordance with DIN/ISO).

Design:

- Universal usage for all common steep taper and hollow shank standards due to interchangeable adapters
- Complete force measuring unit in the basic device
- Does not require mains power
- Auto-power off
- Indication in kilonewtons
- Internal data memory for a large number of measurements
- Can be used at any time due to storage in the tool magazine
- Standby mode for low power consumption and as a result long battery life
- USB connection for reading the memory and charging the integrated Li-ion battery

Note: Further adapters available on request.

Technical data:

Measuring range: 10-75 kN

Measuring system: Strain gauge sensor

Accuracy: < 1 % of the maximum value

Weight: approx. 3 kg





# TECHNICAL APPENDIX

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Notes on standards, application and handling











# TECHNICAL APPENDIX

Important technical notes and background information on MAPAL clamping technology are given in the following. Along with the standards on HSK-A, HSK-C, HSK-T as well as the various SK variants, the fitting dimensions for the flange modules are documented. There are then important technical notes on the individual clamping tools and clamping systems in the catalogue.

The performance data on the KS clamping cartridges include information on clamping force and bending moment. The torques that can be transferred, radial run-out accuracy and accuracy of repetition as well as the spindle speed limits for the HSK connection are also explained. There follows information on the foolproofing for hollow taper shanks provided by MAPAL as an option to prevent operating errors during a tool change. Finally, there are helpful practical tips with notes on setting and handling related to the installation and assembly of the KS clamping cartridge, as well as the assembly and alignment of KS flange adapters, MAPAL Module connections and hydraulic clamping tools.

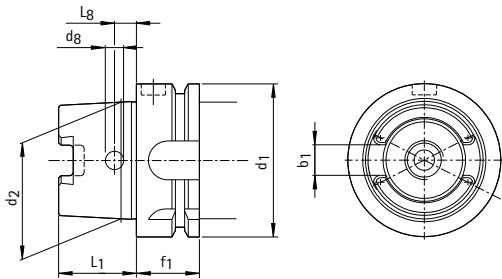
## Technical information

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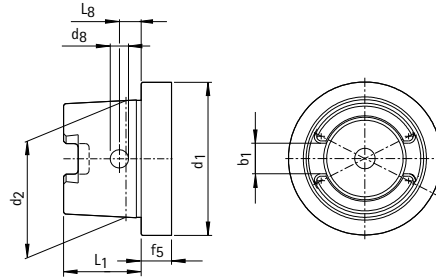
Standards and fitting dimensions .....	364
Overview of spindle connection contours .....	376
HSK-T description left/right design .....	377
Hydraulic clamping technology .....	378
Shrinking technology .....	382
Precision drilling technology .....	383
MQL technology, design and function .....	384
MQL modular system .....	386
Selection aid for KS MQL clamping cartridges .....	392
Information on KS clamping cartridges .....	398
Notes on setting and handling .....	410

# HSK standard

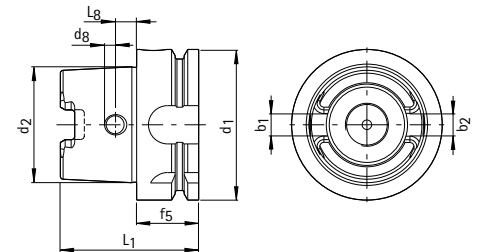
For hollow shanks DIN 69893-1 HSK-A, HSK-C and HSK-T



HSK-A for automatic and manual tool change



HSK-C for manual tool change

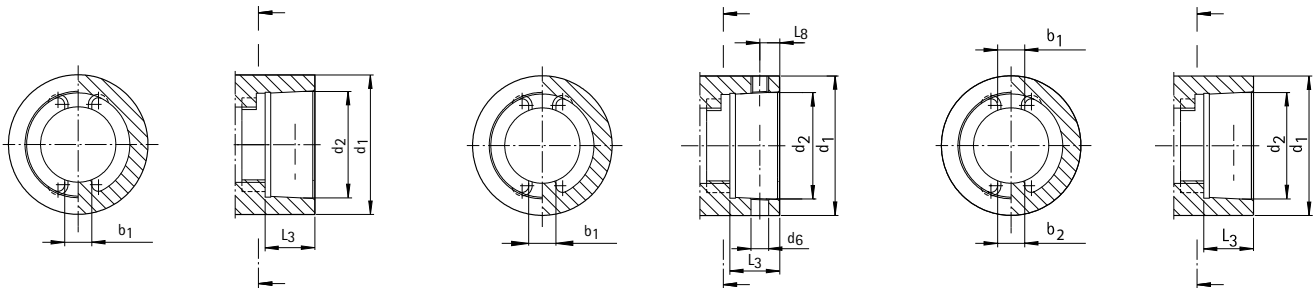


HSK-T for automatic and manual tool change

		HSK size					
Nominal size	$d_1$ h10	32	40	50	63	80	100
Taper diameter	$d_2$	24,007	30,007	38,009	48,01	60,012	75,013
Shank length	$L_1$ 0/-0,2	16	20	25	32	40	50
Slot width	$b_1$ +/-0,04	7,05	8,05	10,54	12,54	16,04	20,02
Bore diameter	$d_8$	4	4,6	6	7,5	8,5	12
Bore spacing	$L_8$ +/-0,1	5	6	7,5	9	12	15
Flange width HSK-A	$f_1$ 0/-0,1	20	20	26	26	26	29
Flange width HSK-C	$f_5$	10	10	12,5	12,5	16	16
Additional for HSK-T							
Slot width	$b_2$ +/-0,030	-	7,932	-	-	-	-
Slot width	$b_2$ +/-0,0350	-	-	-	12,425	-	19,91

# HSK standard

For connections DIN 69093-1 HSK-A, HSK-C and HSK-T



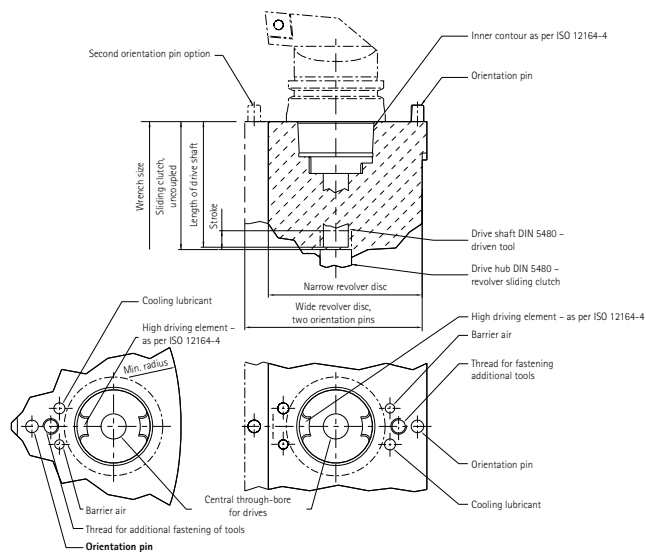
HSK-A for automatic tool change

HSK-C for manual tool change

HSK-T for automatic and manual tool change

		HSK size					
Nominal size	d <sub>1</sub>	32	40	50	63	80	100
Taper diameter	d <sub>2</sub>	23,998	29,998	37,998	47,998	59,997	74,997
Depth	L <sub>3</sub> +0,2	11,4	14,4	17,9	22,4	28,4	35,4
Driving element width	b <sub>1</sub> +/-0,05	6,8	7,8	10,3	12,3	15,8	19,78
Additional for HSK-C							
Bore diameter	d <sub>6</sub>	4	5	6	8	9	11
Bore spacing	L <sub>8</sub> +/-0,1	5	6	7,5	9	12	15
Additional for HSK-T							
Driving element width	b <sub>2</sub> -0,025	-	7,92	-	12,41	-	-
Driving element width	b <sub>2</sub> -0,03	-	-	-	-	-	19,98

In addition to the standard, the connection of driven tools using the HSK-T interface has been adopted.

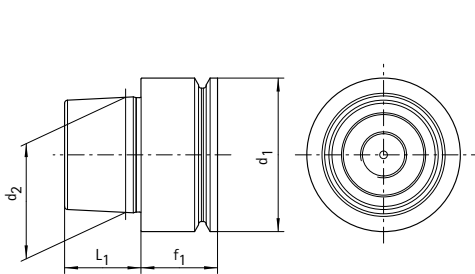


The following definitions were also established in the HSK-T working group:

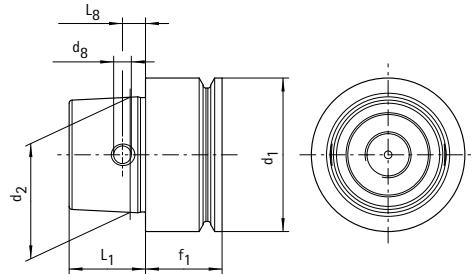
- Diameter of the drive shaft
- Drive shaft coupling type
- Position of the coupling
- Revolver wrench size
- Related HSK size
- Transfer point for cooling lubricants and barrier air
- Additional alignment feature for angled tool adapters

# HSK standard

For hollow shanks DIN 69893-5, HSK-E and DIN 69893-6, HSK-F

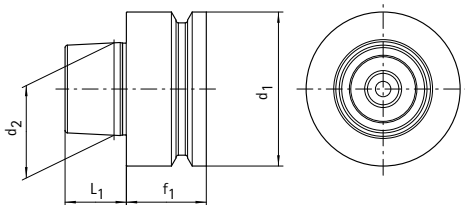


HSK-E for automatic tool change

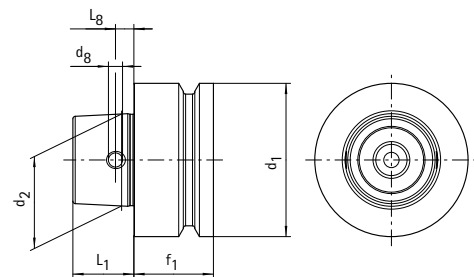


HSK-E for automatic and manual tool change

		HSK size				
Nominal size	$d_1$ h10	25	32	40	50	63
Taper diameter	$d_2$	19,006	24,007	30,007	38,009	48,01
Shank length	$L_1$ 0/-0,2	13	16	20	25	32
Bore diameter	$d_8$	3,7	4	4,6	6	7,5
Bore spacing	$L_8$ +/-0,1	4	5	6	7,5	9
Flange width HSK-E	$f_1$ 0/-0,1	10	20	20	26	26



HSK-F for automatic tool change

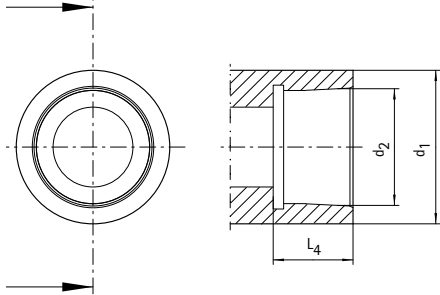


HSK-F for automatic and manual tool change

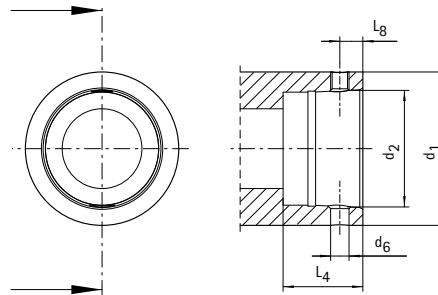
		HSK size				
Nominal size	$d_1$ h10	50	63	80		
Taper diameter	$d_2$	30,007	38,009	48,01		
Shank length	$L_1$ 0/-0,2	20	25	32		
Bore diameter	$d_8$	4,6	6	7,5		
Bore spacing	$L_8$ +/-0,1	6	7,5	9		
Flange width HSK-F	$f_1$ 0/-0,1	26	26	26		

# HSK standard

For adapters DIN 69893-5, HSK-E



HSK-E for automatic tool change



HSK-E for manual tool change

		HSK size			
Nominal size	$d_1$	32	40	50	63
Taper diameter	$d_2$	23,998	29,998	37,998	47,998
Depth	$L_4 +0,2$	16,5	20,5	25,5	33
Bore diameter	$d_6$	4,5	5	6	8
Bore spacing	$L_8 +/-0,1$	5	6	7,5	9

Dimensions in mm.

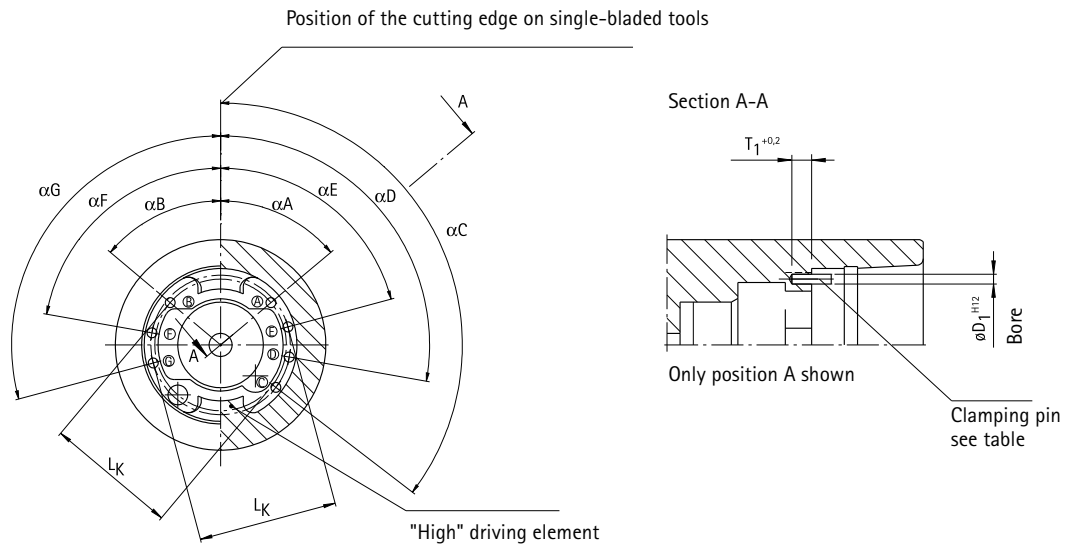
Items included: Sealing ring, without holding screw.

# Foolproofing for hollow taper shanks

Multiple spindle drill heads are often used in custom machines. In this case a large number of spindles are arranged in a small space. So that operating errors can be excluded during the tool change, DIN 69894 "Foolproofing for hollow taper shanks" was prepared. With this system

additional pins in the tool spindles and slots on the end of the HSK shank ensure unambiguous allocation of a tool to a specific spindle.

## Foolproofing for tool spindles:

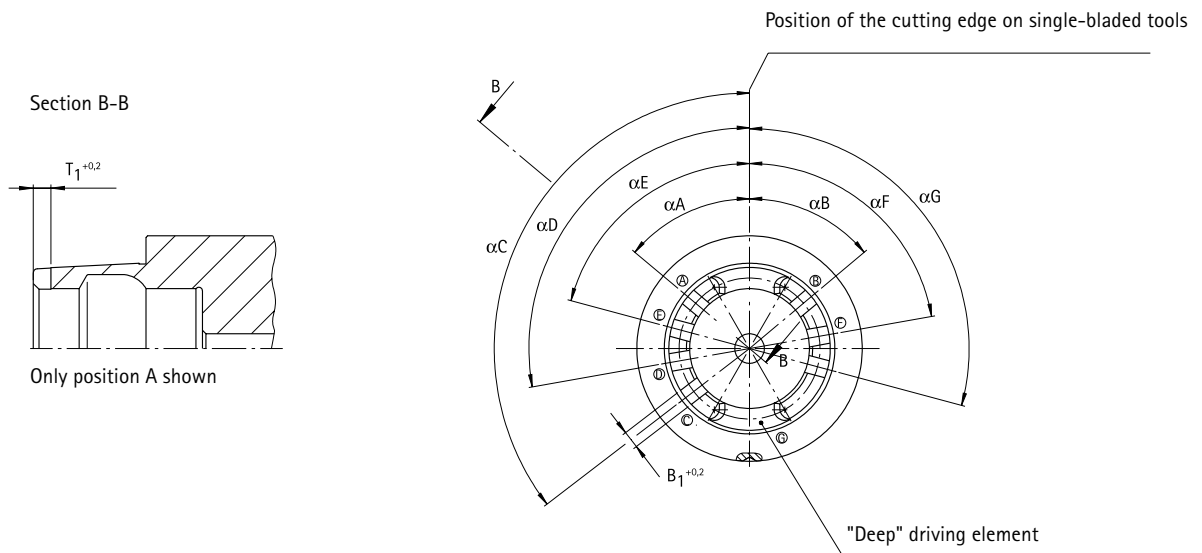


Position HSK	Ⓐ α A	Ⓑ α B	Ⓒ α C	Ⓓ α D	Ⓔ α E	Ⓕ α F	Ⓖ α G	D <sub>1</sub>	T <sub>1</sub>	L <sub>K</sub>	Clamping pin
32	50°	50°	127,5°	100°	75°	80°	105°	1,5	3		ISO 8752-1,5x6
40	52,5°	52,5°	127,5°	100°	75°	80°	105°	2	3		ISO 8752-2x6
50	55°	55°	125°	100°	75°	80°	105°	2,5	3		ISO 8752-2,5x6
63	60°	60°	120°	105°	75°	75°	105°	3,5	4		ISO 8752-3,5x8
80	60°	60°	120°	105°	75°	75°	105°	4,5	5		ISO 8752-4,5x10
100	45°	45°	135°	105°	75°	75°	105°	4,5	7		ISO 8752-4,5x12
125	45°	45°	135°	105°	75°	75°	105°	4,5	7		ISO 8752-4,5x12
160	45°	45°	135°	105°	75°	75°	105°	4,5	7		ISO 8752-4,5x12

■ = use as a matter of preference!

# Foolproofing for hollow taper shanks

## Foolproofing for tool shanks:



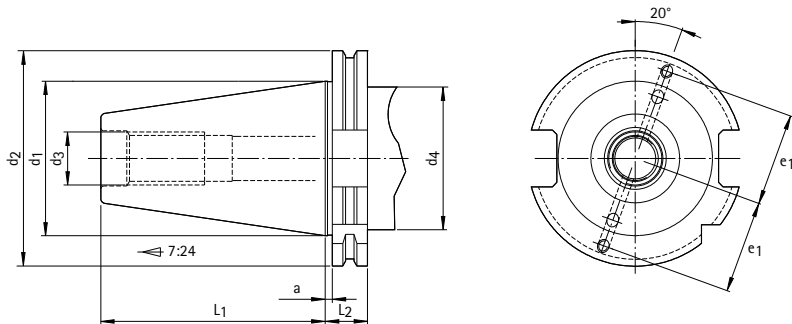
Position HSK	Ⓐ α A	Ⓑ α B	Ⓒ α C	Ⓓ α D	Ⓔ α E	Ⓕ α F	Ⓖ α G	B <sub>1</sub>	T <sub>1</sub>
32	50°	50°	127,5°	100°	75°	80°	105°	2,5	2,5
40	52,5°	52,5°	127,5°	100°	75°	80°	105°	3	2,5
50	55°	55°	125°	100°	75°	80°	105°	3,5	2,5
63	60°	60°	120°	105°	75°	75°	105°	4,5	3,5
80	60°	60°	120°	105°	75°	75°	105°	5,5	4,5
100	45°	45°	135°	105°	75°	75°	105°	5,5	5
125	45°	45°	135°	105°	75°	75°	105°	5,5	5
160	45°	45°	135°	105°	75°	75°	105°	5,5	5

= use as a matter of preference!



# Standard

For tool shanks SK in accordance with ISO 7388-1

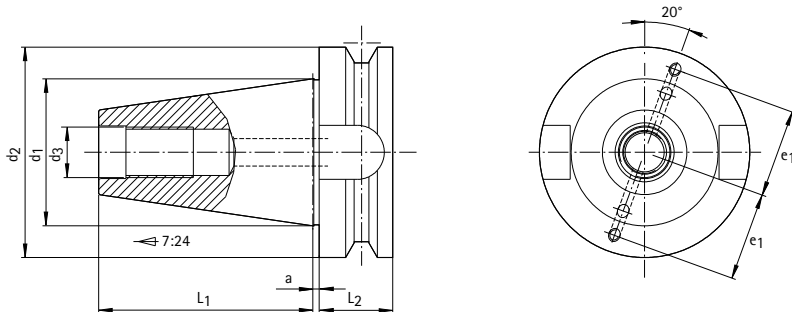


For automatic tool change Form A, Form AD, Form AF and design with data carrier

	Size			
	30	40	45	50
a +/-0.1	3.2	3.2	3.2	3.2
d <sub>1</sub>	31.75	44.45	57.15	69.85
d <sub>2</sub> 0/-0.1	50	63.55	82.55	97.5
d <sub>3</sub>	M 12	M 16	M 20	M 24
d <sub>4</sub> max.	45	50	63	80
e <sub>1</sub> +/-0.1	21	27	35	42
L <sub>1</sub> 0/-0.3	47.8	68.4	82.7	101.75
L <sub>2</sub> 0/-0.1	19.1	19.1	19.1	19.1

# Standard

For tool shanks BT in accordance with ISO 7388-2



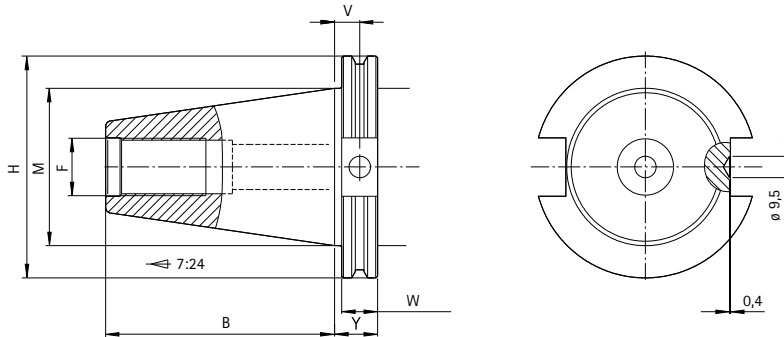
For automatic tool change Form J, Form JF, Form JD and design with data carrier

	Size		
	30	40	50
a $\pm 0.4^*$	2	2	3
d <sub>1</sub>	31.75	44.45	69.85
d <sub>2</sub> h8	46	63	100
d <sub>3</sub>	M 12	M 16	M 24
e <sub>1</sub> $\pm 0.1$	20	27	42
L <sub>1</sub> $\pm 0.2$	48.4	65.4	101.8
L <sub>2</sub> min.	22	27	38

\* + 0.1 for Form JF

## SK standard

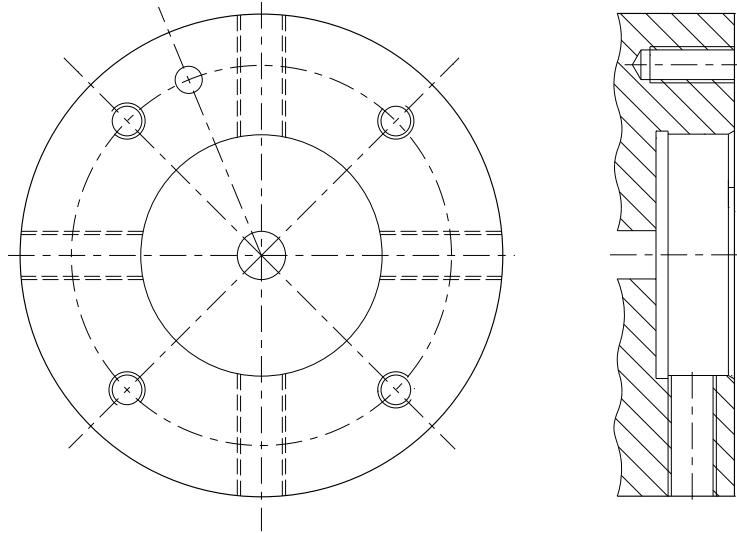
For steep taper shanks with V-flange module in accordance with ASME B5.50-1994 (MN633)



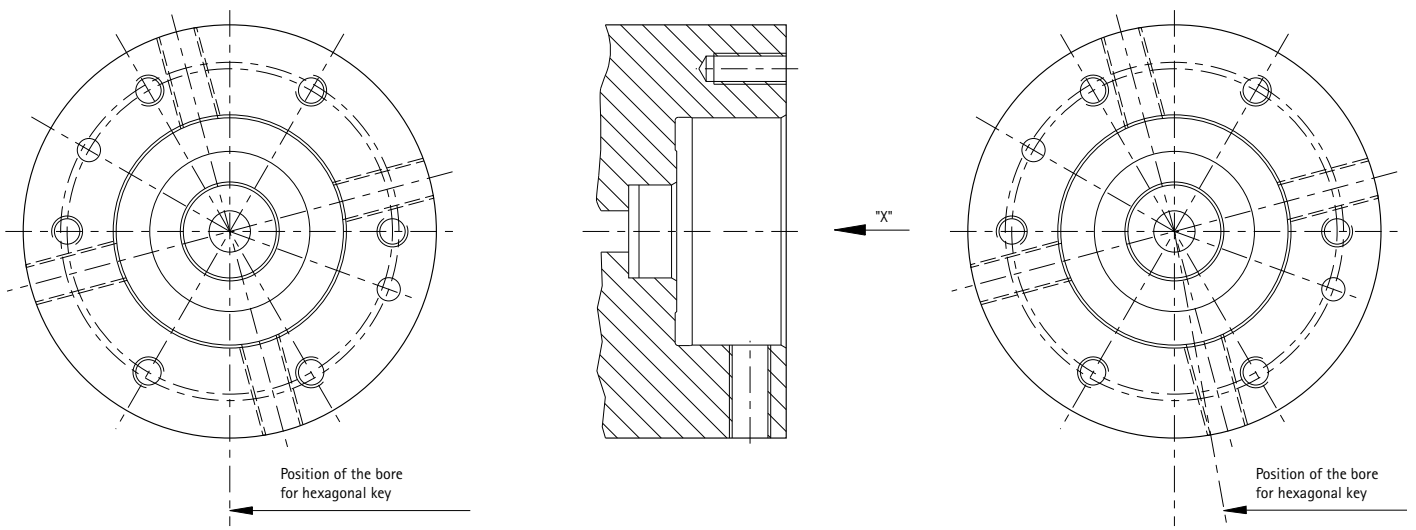
		Steep taper size			
		30	40	45	50
B	+/-0,1	47,65	68,25	82,55	101,6
F	UNC-2B	1/2"-13	5/8"-11	3/4"-10	1"-8
H	+/-0,5	46,02	63,5	82,55	98,43
M	+/-0,13	31,75	44,45	57,15	69,85
V	+/-0,25	11,2	11,2	11,2	11,2
W	+/-0,05	15,88	15,88	15,88	15,88
Y	+/-0,05	19,05	19,05	19,05	19,05

# Fitting dimensions for KS flanges

Spindle connection contour for flange adapter MN5520\* and MN5523\* in accordance with MN5000-14



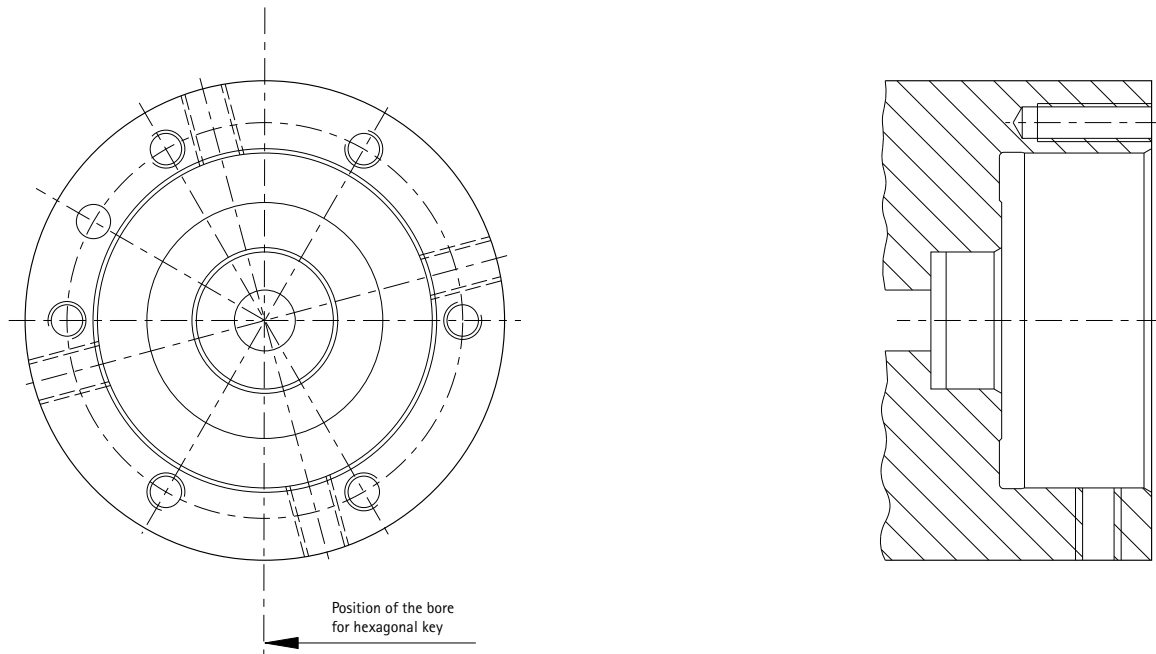
Spindle connection contour for adapter flange MN5521\* and MN5524\* in accordance with MN5000-12



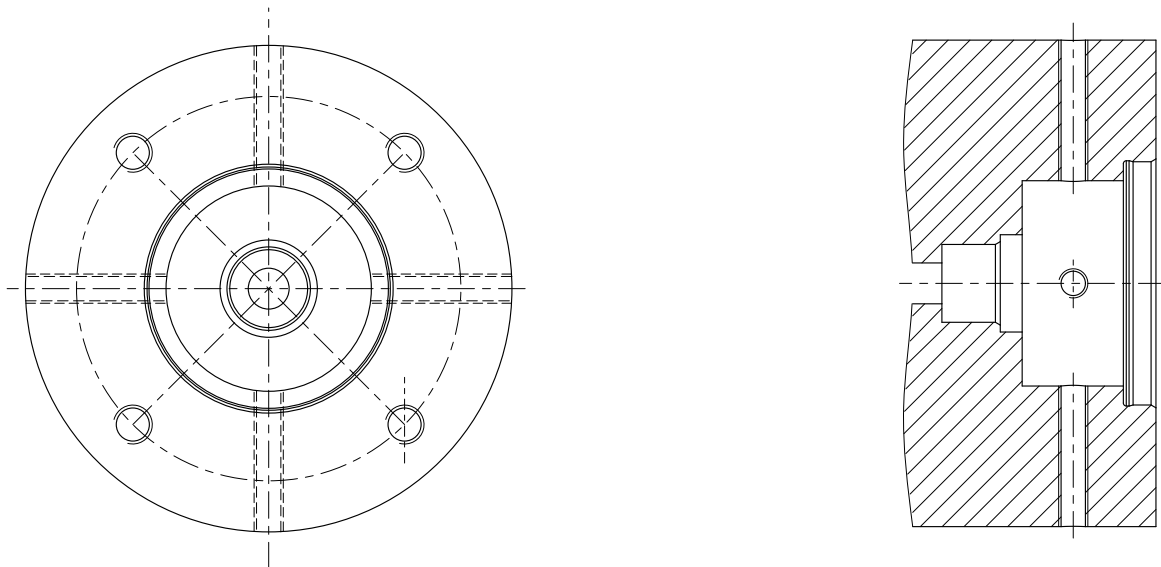
\* Due to possible technical changes, we recommend requesting the latest manufacturing documentation if needed. You will find an overview on this aspect on page 376.

## Fitting dimensions for KS flanges

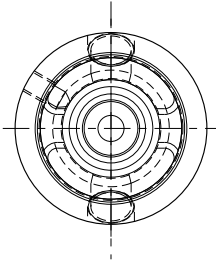
Spindle connection contour for adapter flange for short spindles MN5522\* in accordance with MN5000-13



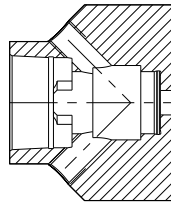
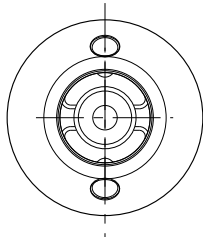
Spindle connection contour for DS clamping system with reduced installation in accordance with MN5000-73\*



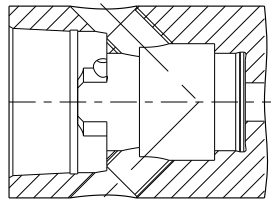
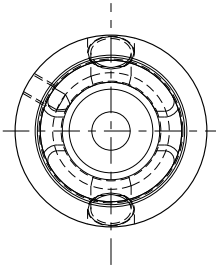
\* Due to possible technical changes, we recommend requesting the latest manufacturing documentation if needed. You will find an overview on this aspect on page 376.



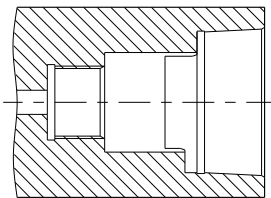
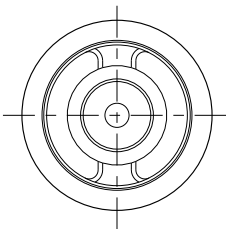
Internal spindle contour for DS clamping system, direct installation\*



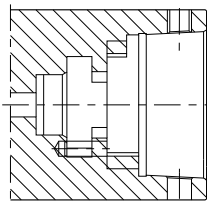
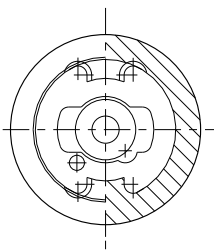
Internal spindle contour for DS clamping system, direct installation, without internal coolant supply\*



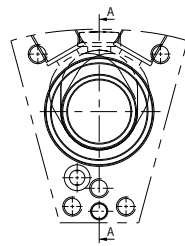
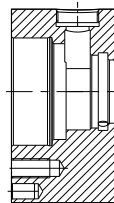
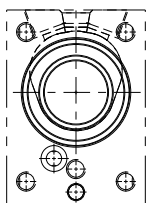
Internal spindle contour for DS clamping system, direct installation, with sealing ring, without coolant supply\*



Spindle connection contour for AX clamping system in accordance with MN5000-77\*



Connection for taper hollow shanks HSK-T ISO 12164, KS\*



Adapter flange for star revolvers and drum revolvers\*

\* Due to possible technical changes, we recommend requesting the latest manufacturing documentation if needed. You will find an overview on this aspect on page 376.

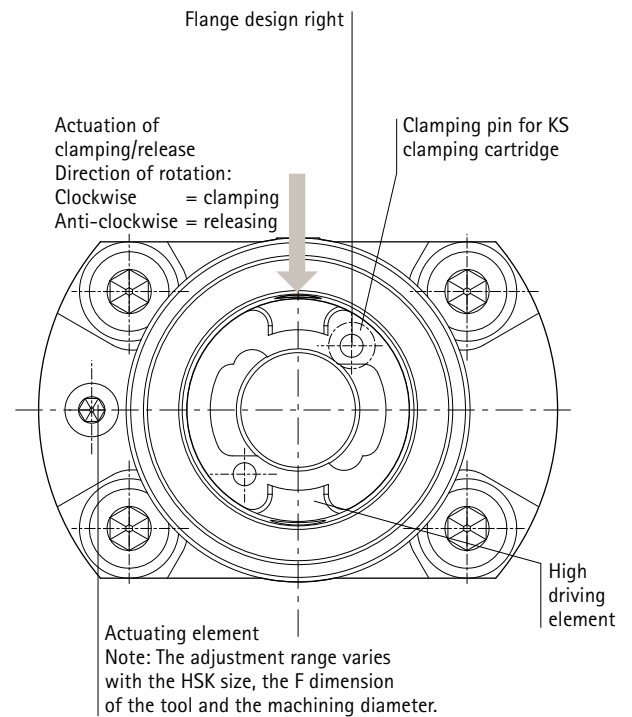
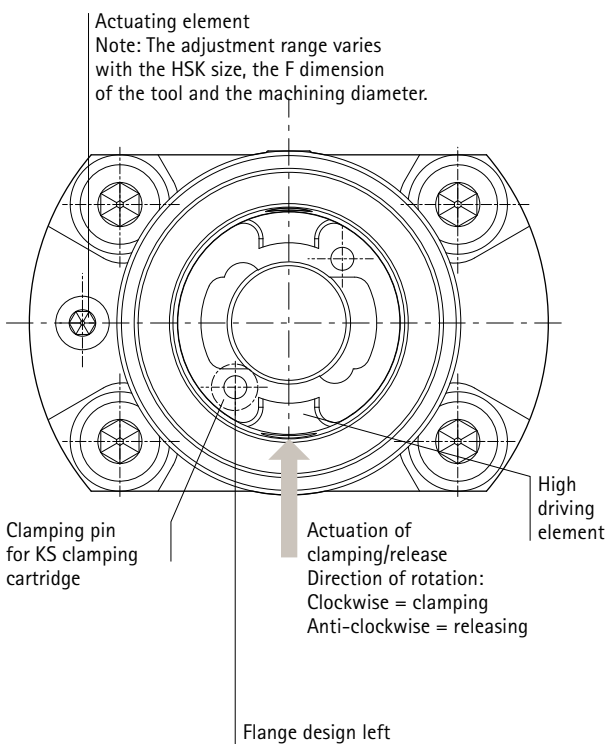
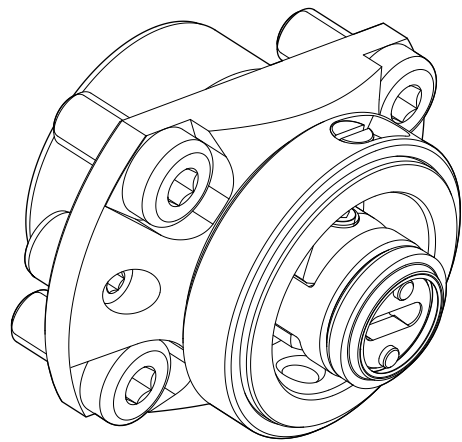
## Overview of spindle connection contours

Document	Description
MN5000-12	Internal spindle contour for adapter flange MN5521 and MN5524
MN5000-13	Internal spindle contour for adapter flange MN5522
MN5000-14	Internal spindle contour for flange adapter MN5520 and MN5523
MN5000-40	Hollow shank adapter HSK-C DIN 69063-1, KS
MN5000-49	Connection for hollow taper shanks HSK-T ISO 12164, KS
MN5000-50	Adapter flange for star revolvers and drum revolvers
MN5000-72	Adapter flange DS-VF with diagonal clamp and reduced installation space, rotating, without internal cooling
MN5000-73	Adapter flange DS-VF with diagonal clamp and reduced installation space, rotating, with internal cooling
MN5000-77	Internal spindle contour HSK-C, AX clamping system, direct installation
MN5000-82	Internal spindle contour HSK-C, DS clamping system, direct installation, with internal cooling
MN5000-83	Internal spindle contour HSK-C, DS clamping system, direct installation, without internal cooling
MN5000-85	Internal spindle contour HSK-C, DS clamping system, direct installation, without internal cooling

# HSK-T description left/right design

## General explanation of flanges:

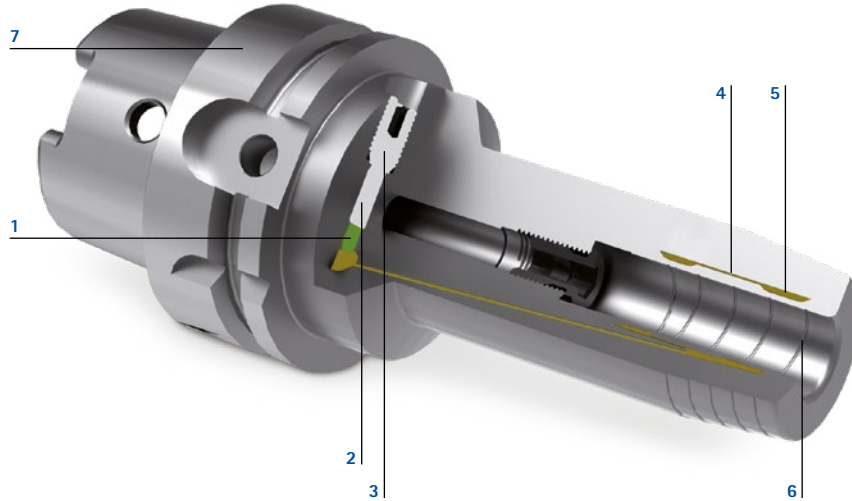
- The flanges are designed such that the direction of rotation during clamping is in clockwise direction and releasing is always in anti-clockwise direction.
- The flange design right is actuated on the side with the low driving element, the flange design left on the side with the high driving element.
- The location of the clamping cartridge and hence the flange design can be changed by moving the heavy-duty clamping pin to the opposite side.





# Hydraulic clamping technology

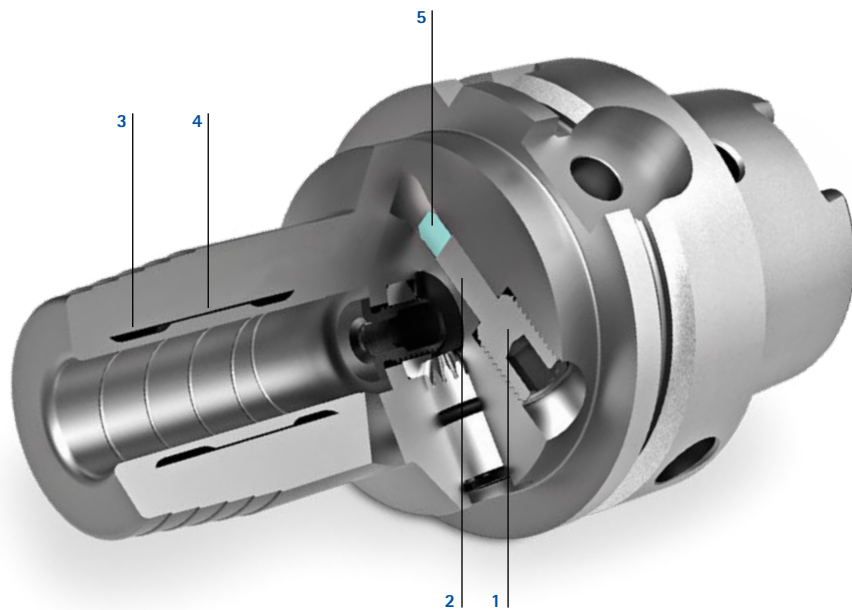
## 1. Elements of the hydraulic clamping technology



- 1 Sealing element** Seepage losses in the clamping bore are prevented by the lip seal.
- 2 Piston** Presses the hydraulic medium into the chamber system.
- 3 Clamping screw** A torque wrench is not necessary to actuate the piston for clamping.
- 4 Expanding sleeve** Clamps the tool shank centrally with evenly applied pressure.
- 5 Chamber system** Is produced by the connection of the expanding sleeve and body. Due to the hydraulic medium has a damping action on the tool and therefore a wear-reducing effect.
- 6 Groove** Oil, grease or lubricant residue is displaced into the groove by the high clamping pressure. The clamping surfaces remain largely dry, the transmission of the torque is ensured.
- 7 Body material** MAPAL hydraulic chucks are available for all common machine-side connections (HSK-A, HSK-C, SK, BT and flange module).

On clamping using hydraulic clamping technology, an even pressure is built up in a sealed chamber system using a clamping screw and a piston. This pressure is applied to the tool via the built-in expanding sleeve.

## 2. Functional principle



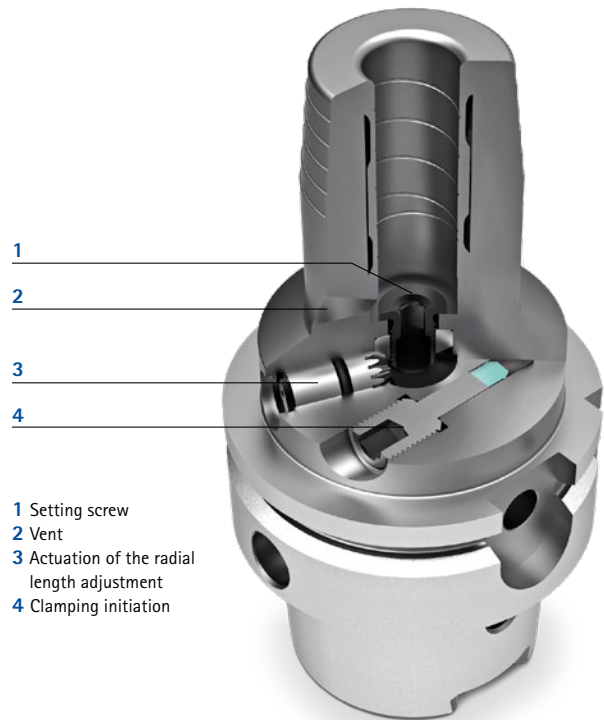
- 1** The clamping screw is screwed in to the stop using a hex wrench.
- 2** The piston presses the hydraulic medium into the expansion chamber and causes the pressure to increase.
- 3** The thin-walled expanding sleeve bows evenly against the tool shank. Due this clamping process the tool shank is first centred and then powerfully clamped over a large area.
- 5** The sealing element ensures absolute freedom from leaks and a long service life.

### Technical data

- Material 1600-1800 N/mm<sup>2</sup> tensile strength
- Adjustment travel 10 mm
- Hardness 52 + 2 HRc
- DIN 1835 Form A, B, C, D
- Balanced tool holders
- DIN 6535 Form HA, HB, HE
- Laser inscription
- Coolant pressure max. 80 bar
- Max. spindle speed 40,000 min<sup>-1</sup>  
(note spindle speed limit for connection, fine balancing recommended!)
- Optimum operating temperature range 20-50 °C; higher temperatures on request, do not use above 80 °C
- Shanks suitable for clamping (tolerance h6) with and without reducing sleeves:
- DIN 1835 Form A, B, E
- DIN 6535 Form HA, HB, HE

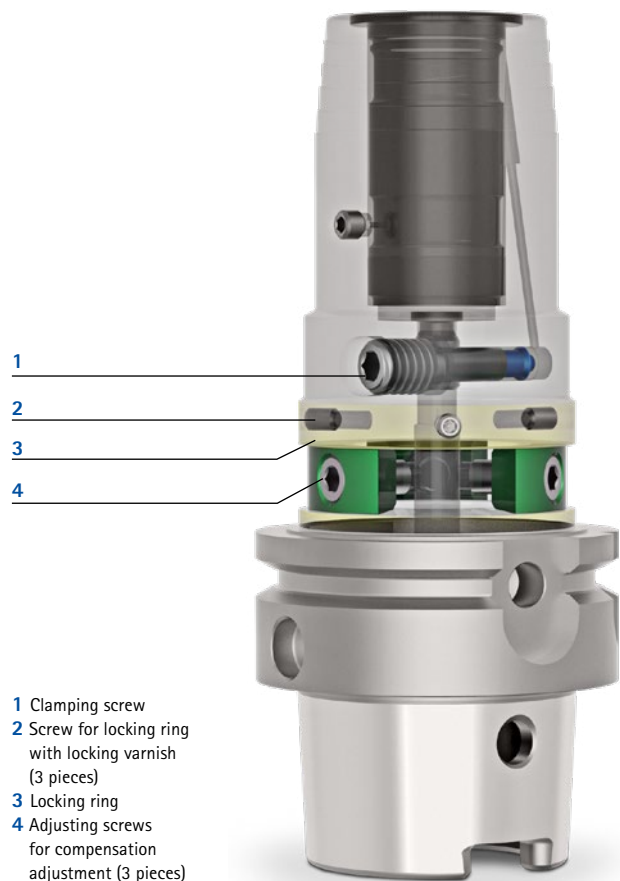
### 3. Radial tool length adjustment

In the area of clamping tools with HSK connection, MAPAL offers hydraulic chucks with radial tool length adjustment. Also with this setting method, radial run-out accuracies  $\leq 3 \mu\text{m}$  are ensured.



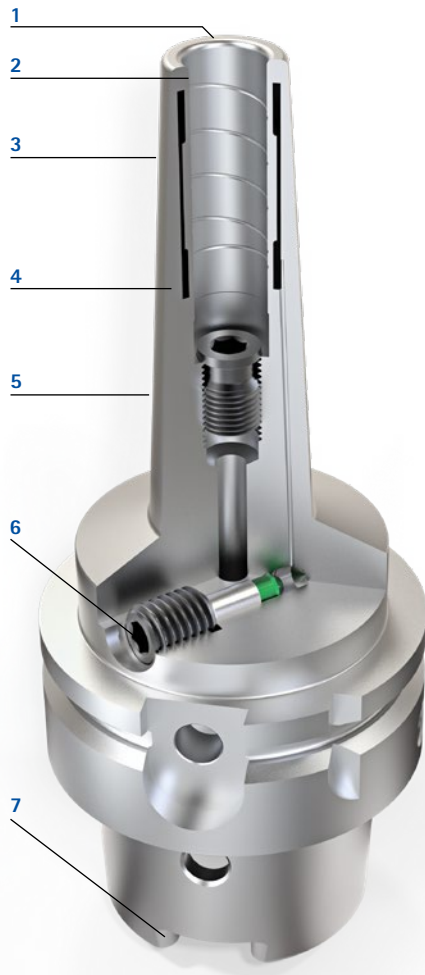
### 4. Hydraulic clamping technology with compensation technology

The "compensation" chuck is perfectly suited to light clamping tasks with multi-bladed reamers. It builds on hydraulic clamping technology and the radial run-out can be set exactly using three adjustment elements. The radial run-out is corrected straightforwardly and quickly using a hex wrench depending on the direction of the error. The setting range is up to  $10 \mu\text{m}$ . Wedges in the chuck align the tool, jamming of the tool is prevented. The system is self-locking, unintentional movement during fine machining is impossible. A fixed ring seals the alignment system. It is therefore low maintenance and not susceptible to dirt.



# Hydraulic clamping technology

## 5. Additively manufactured hydraulic clamping technology



- 1 Optimum radial run-out as the clamping range is located close to the chuck tip
- 2 High torque transmission and thermal stability
- 3 A back taper of 3° on the outer contour allows machining in contour-critical areas
- 4 All-in-one – no brazed joint between sleeve and tool body
- 5 High flexural strength despite lean design
- 6 Quick and simple clamping thanks to hexagon head screw
- 7 Optionally with dynamically balanced HSK



## 6. Torque transmission

### HydroChuck

Please refer to the table for the torque that can be transferred.

The torques stated apply for cylindrical shanks in accordance with DIN 6535 Form A and DIN 1835.

#### Transferable torques with direct clamping, oiled shank, clamping diameter hydraulic chuck $d_1 = 6\text{--}32\text{ mm}$

$d_1$ [mm]	6	8	10	12	14	16	18	20	25	32
Minimum/maximum value [Nm] for shank h <sub>6</sub>	20/30	30/45	47/85	80/140	100/160	160/230	200/270	330/400	400/470	650/730

#### Transferable torques, measured with reducing sleeve, oiled shank, clamping diameter hydraulic chuck $d_1 = 32\text{ mm}$

$d_1$ [mm]	6	8	10	12	14	16	18	20	25	32
Minimum/maximum value [Nm] for shank h <sub>6</sub>	30/45	45/65	60/110	120/170	120/170	180/230	220/300	250/320	360/440	

#### Clamping diameter hydraulic chuck $d_1 = 20\text{ mm}$

$d_1$ [mm]	3	4	5	6	7	8	9	10	11	12
Minimum/maximum value [Nm] for shank h <sub>6</sub>	6/10	9/12	16/22	30/40		55/75		90/120		120/150

$d_1$ [mm]	13	14	15	16	17					
Minimum/maximum value [Nm] for shank h <sub>6</sub>		135/170		190/260						

#### $d_1 = 12\text{ mm}$

$d_1$ [mm]	3	4	5	6	8					
Minimum/maximum value [Nm] for shank h <sub>6</sub>	3/4	4/8	7/12	12/20	18/26					

### HighTorque Chuck HTC

All HTC chucks except narrow design, 3 degrees, at operating temperature: 20–80 °C

Clamping diameter [mm]	Permissible transferable torque for shank h <sub>6</sub> minimum value [Nm]
6	30
8	50
10	100
12	150
14	210
16	280
18	360
20	550
25	650
32	800

Narrow design, 3 degrees, at operating temperature: 20–120 °C

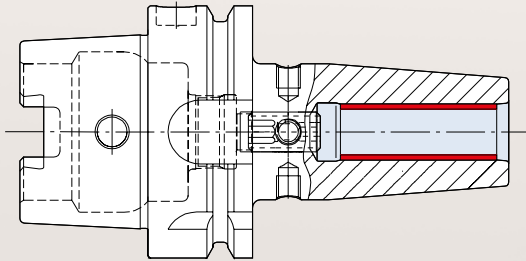
Clamping diameter [mm]	Permissible transferable torque for shank h <sub>6</sub> minimum value [Nm]
3	3
4	6
5	10
6	20
8	35
10	65
12	110
14	120
16	160
18	200
20	260

Dimensions in mm.

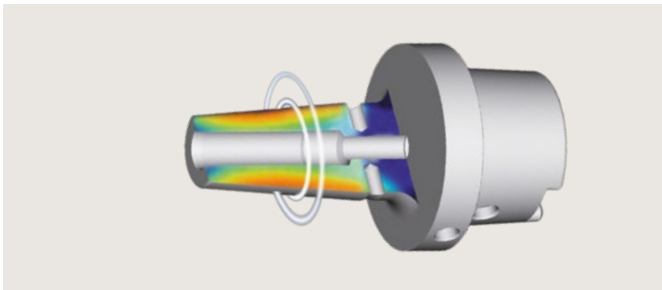
## Shrinking technology

Shrinking technology makes use of thermally-related expansion for tool clamping. An induction coil heats the shrink chuck. The chuck expands, the cold tool shank can be inserted. The shrink chuck is

cooled down again, contracts and forms a connection with force closure due to the oversize on the tool shank.



### Functional principle



#### 1. Heating the chuck

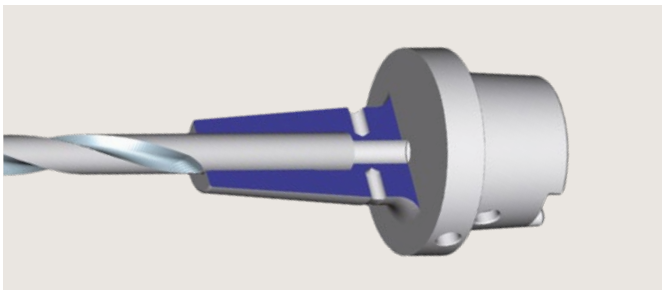
The chuck is heated specifically at the clamping point using the latest induction technology. For this purpose an induction coil generates quickly changing eddy currents that act directly on the shrink chuck and heats exactly in the place where the tool shank sits. The diameter of the bore expands.

#### 2. Fitting the tool shank

The cold tool shank is inserted in the heated shrink chuck.

#### 3. Cooling

The shrink chuck is cooled, the clamping diameter returns to its original size and clamps the tool shank. A powerful device with water-cooled cooling elements makes it possible to cool the chuck within 30 seconds. As a consequence there is no heating of the taper or the data chip. It is possible to cool extensions and non-standardised shrink chucks using adapters that can be fitted to the cooling element.



#### The result:

Tool changes can be realised in seconds due to the inductive heating. Shrink chuck and tool shank form a joint with force closure. It is possible to clamp carbide as well as HSS tools. The tools sits highly accurately with maximum clamping force in the tool adapter.

## Precision drilling technology



### Technical data

Clamping range	0.2 - 3.4 mm	0.3 - 8 mm	0.5 - 13 mm	2.5 - 16 mm
Max. run-out deviation at a tightening torque	< 5 µm * from 1.5 Nm	0.03 mm * from 8 Nm	0.03 mm * from 15 Nm	0.03 mm * from 15 Nm
Holding torque at a tightening torque	4.5 Nm ** of 1.5 Nm	18 Nm ** of 8 Nm	40 Nm ** of 15 Nm	45 Nm ** of 15 Nm
Maximum permissible tightening torque	2 Nm	10 Nm	20 Nm	20 Nm
Holding torque at a tightening torque	6 Nm ** of 2 Nm	30 Nm ** of 10 Nm	80 Nm ** of 20 Nm	90 Nm ** of 20 Nm
Max. permissible spindle speed	60,000 min <sup>-1</sup> ***	35,000 min <sup>-1</sup> ***	35,000 min <sup>-1</sup> ***	35,000 min <sup>-1</sup> ***

\* Run-out deviation check as per MAPAL "Precision" inspection report.

\*\* All precision drill chucks are clamped at the side via a bevel gear using a hexagonal T-key (see operating manual).

A tightening torque of 8 Nm or 15 Nm on the hexagonal T-key is adequate for the usage of the drill chuck. The higher holding torques that can be achieved with the precision drill chucks are for additional safety and are not necessary for normal usage.

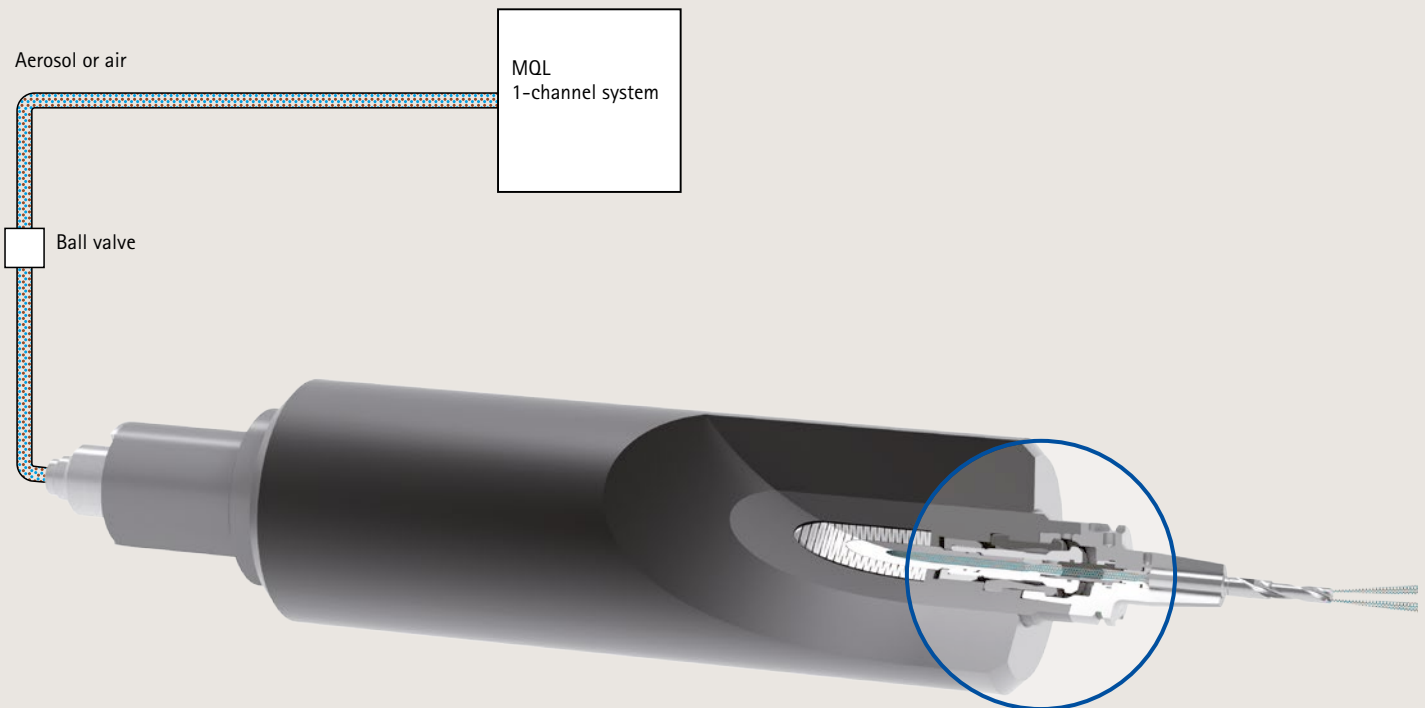
\*\*\* The precision drill chucks are fine balanced as per the catalogue data.

For the use of high spindle speeds, the drill chuck must also be balanced as per the balancing classes – taking into account the spindle speed and balancing value.

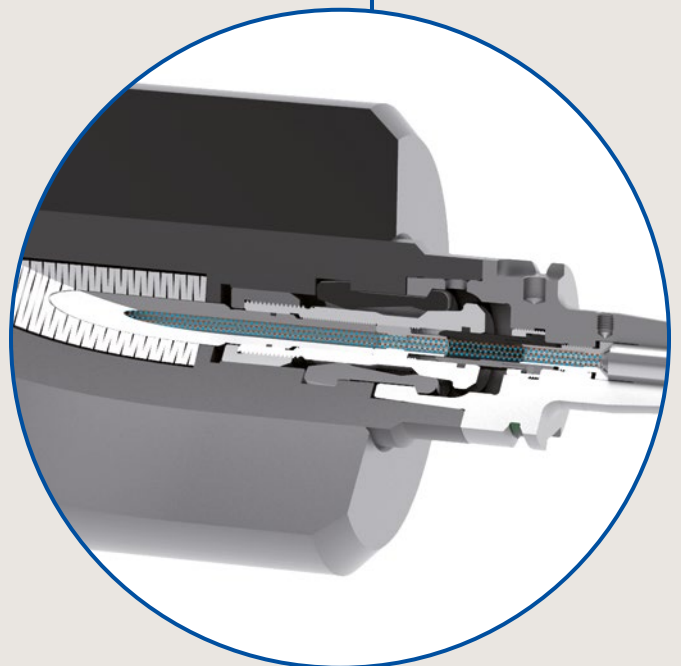


# MQL clamping technology

## Layout and principle of operation 1-channel system

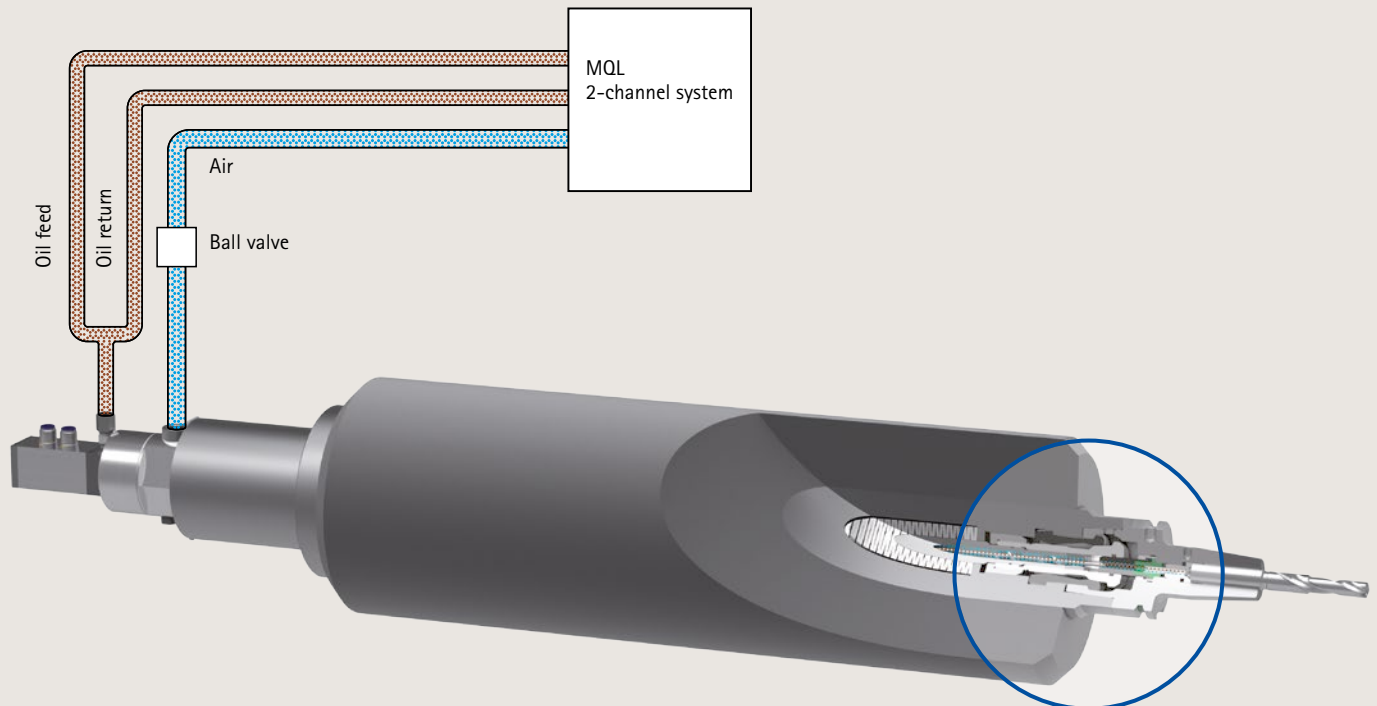


On the 1-channel system a mixture of oil and air (aerosol) is generated in an external unit and transferred as a finished product via the aerosol tube through the rotary feed-through and the spindle to the tool. The oil droplets finely distributed in the air are as a rule  $< 2 \mu\text{m}$ . To keep the delay (time from switching on the MQL supply to the exit of the MQL medium from the tool) as low as possible, a ball valve is integrated in the aerosol pipe near the rotary feed-through as a shut-off valve. The 1-channel systems can transport aerosol or pure compressed air to the tool.



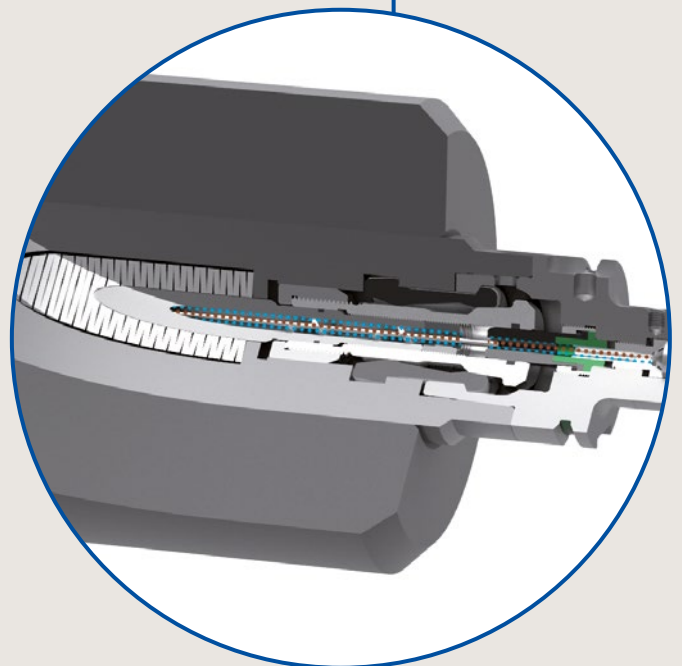
# MQL clamping technology

## Layout and principle of operation 2-channel system



The basic difference to the 1-channel system is that oil and air are transported separately through the spindle to the tool and mixed together in the tool. For this reason a so-called lance is integrated into the spindle; this lance connects to the rotary feed-through. The lance protrudes around 3-5 mm into the mixing chamber on the coolant supply unit for the related application (e.g. coolant tube). The oil transported through the central bore of the lance is carried from the mixing chamber into the tool by the air that flows through the spindle's central bore outside the lance. The largest portion of the oil is transported along the coolant bores to the tool's cutting points as "wall oil". The significantly lower residual portion of oil flows out of the coolant outlets on the tools with the air in the form of oil droplets. Unlike the 1-channel system, as a consequence an aerosol is not produced in the 2-channel system, for this reason the term oil-air mixture is used in this case.

The fast-action valve, which in the majority of cases forms a unit with the rotary feed-through, is responsible for the exact dosing of the quantity of oil. With the activation of the MQL supply by the fast-action valve, oil droplets with a specific size are transported through the lance to the tool at a defined interval. As on the 1-channel systems, either oil and air or only air can be transferred to the tool.





# Manual clamping technology for MQL

## The MQL1 and MQL clamping cartridge modular system

The modular system permits the combination of all available variants of the three components.

### Component 3:

Adapter tubes and blanking plugs  
The selection is made based on the spindle side supply



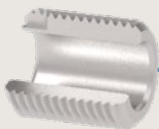
#### Adapter tubes with spigot connection

- Supply of the MQL medium via a central bore in the spindle
- The sealing element on the spigot that connects to the spindle ensures blind end-free and loss-free transfer



#### Adapter tube with bore transition

- Supply of the MQL medium via an integrated supply tube built into the spindle
- The supply tube fitted in the spindle protrudes into the bore of the adapter tube. The joint is sealed using an O-ring
- Blind end-free and loss-free transfer

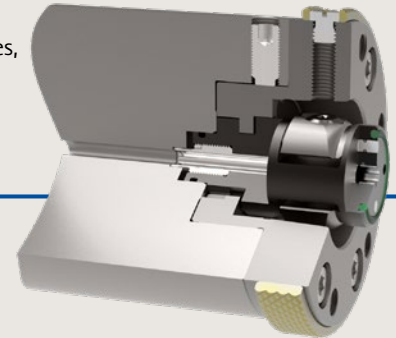


#### Blanking plug

- Supply of the MQL medium via an integrated supply tube built into the spindle
- The supply tube fitted in the spindle passes through the clamping cartridge and terminates flush with the end face of the cartridge
- A blanking plug is used instead of an adapter tube

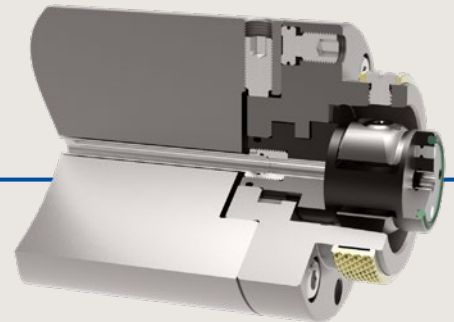
### Component 2:

Installation situation of the KS clamping cartridges, KS adapter flanges, KS flange adapters or direct mounting in the spindle



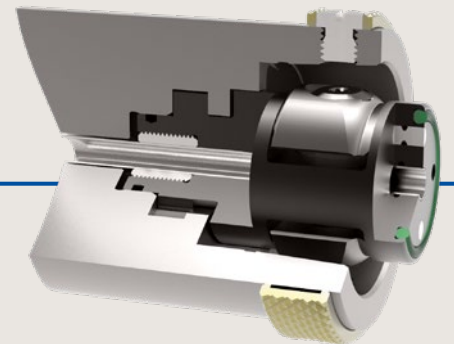
#### KS adapter flange

- With radial alignment
- With radial and angular alignment
- For short spindles with radial alignment



#### KS flange adapter

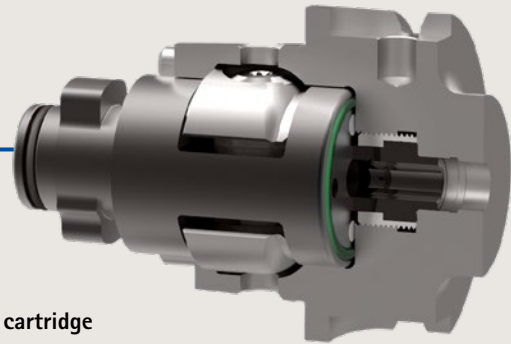
- With radial alignment
- With radial and angular alignment



#### KS clamping cartridge

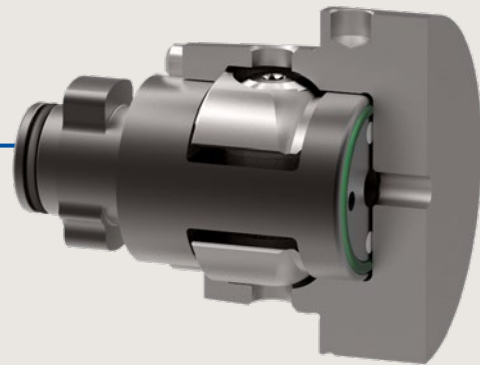
- With direct mounting in the spindle

**Component 1:**  
The KS clamping cartridges  
MQL1 and MQL



**MAPAL MQL1 clamping cartridge**

- With outer O-ring for sealing at the end face in the HSK
- Universal solution for HSK-A tools with filler piece and for HSK-C tools



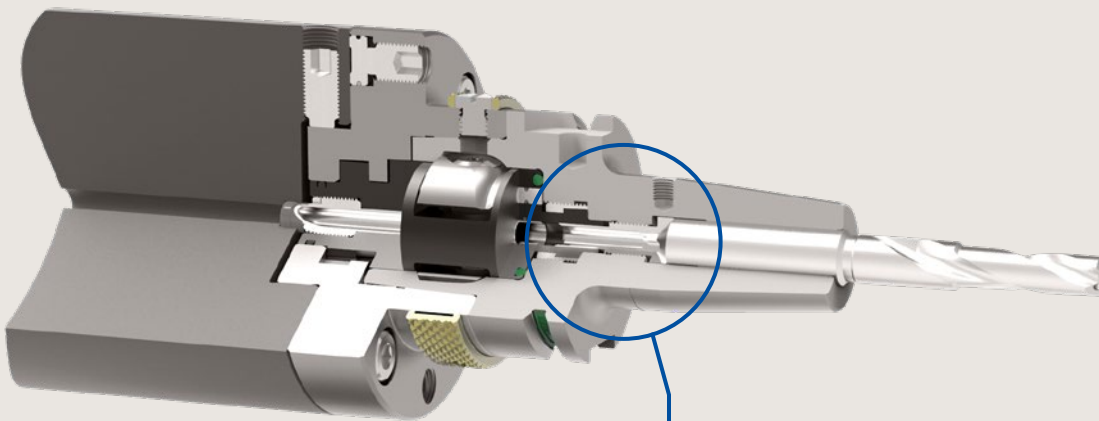
**MAPAL MQL clamping cartridge**

- With inner O-ring for sealing at the end face in the HSK
- Usage particularly for HSK-C tools
- Minimum blind end space on HSK-C tools without filler piece due to adaptation of the O-ring

# MQL technology – from the spindle to the cutting edge

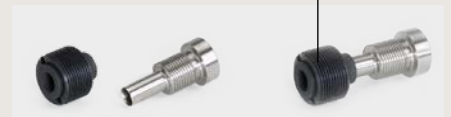
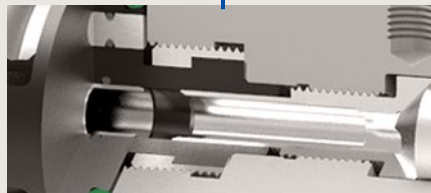
## Construction of 1-channel system

### Manual tool change

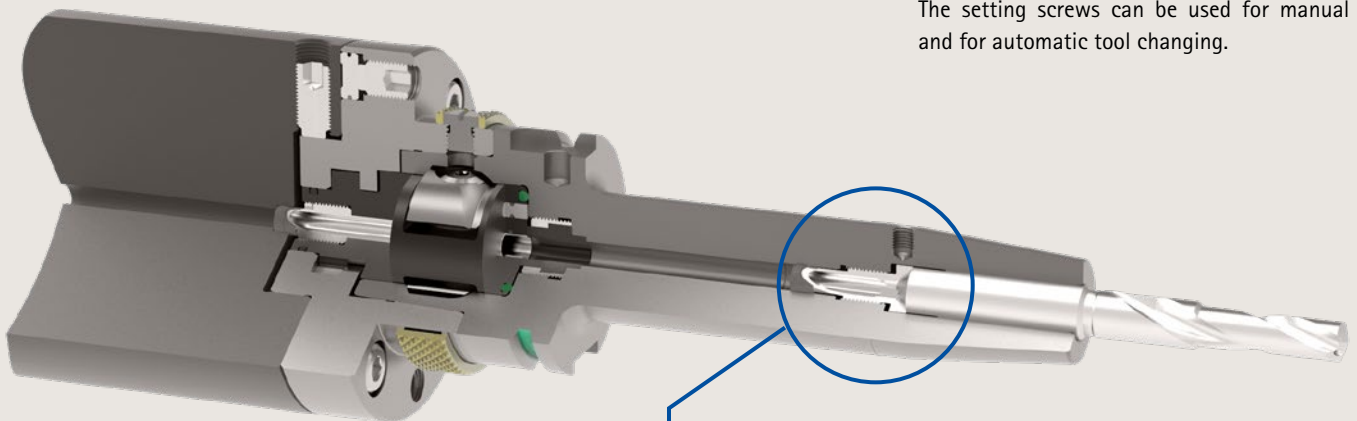


Sealing elements for 1-channel systems are shown in black.

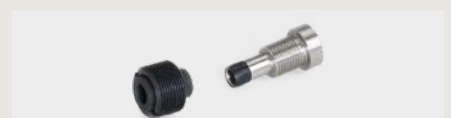
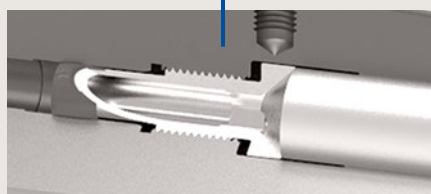
The MAPAL filler piece with rubber sealing element seals the end face on the MAPAL MQL1 clamping cartridge. In the case of short design chucks the length adjustment screw forms a seal in the filler piece. In this way blind end-free and streamlined transfer is ensured.



The flexible modular system makes it possible to use the same add-on parts for all short design, axially adjustable chucks. The setting screws can be used for manual and for automatic tool changing.



In the case of long design chucks the length adjustment screw forms a seal in the tool body.

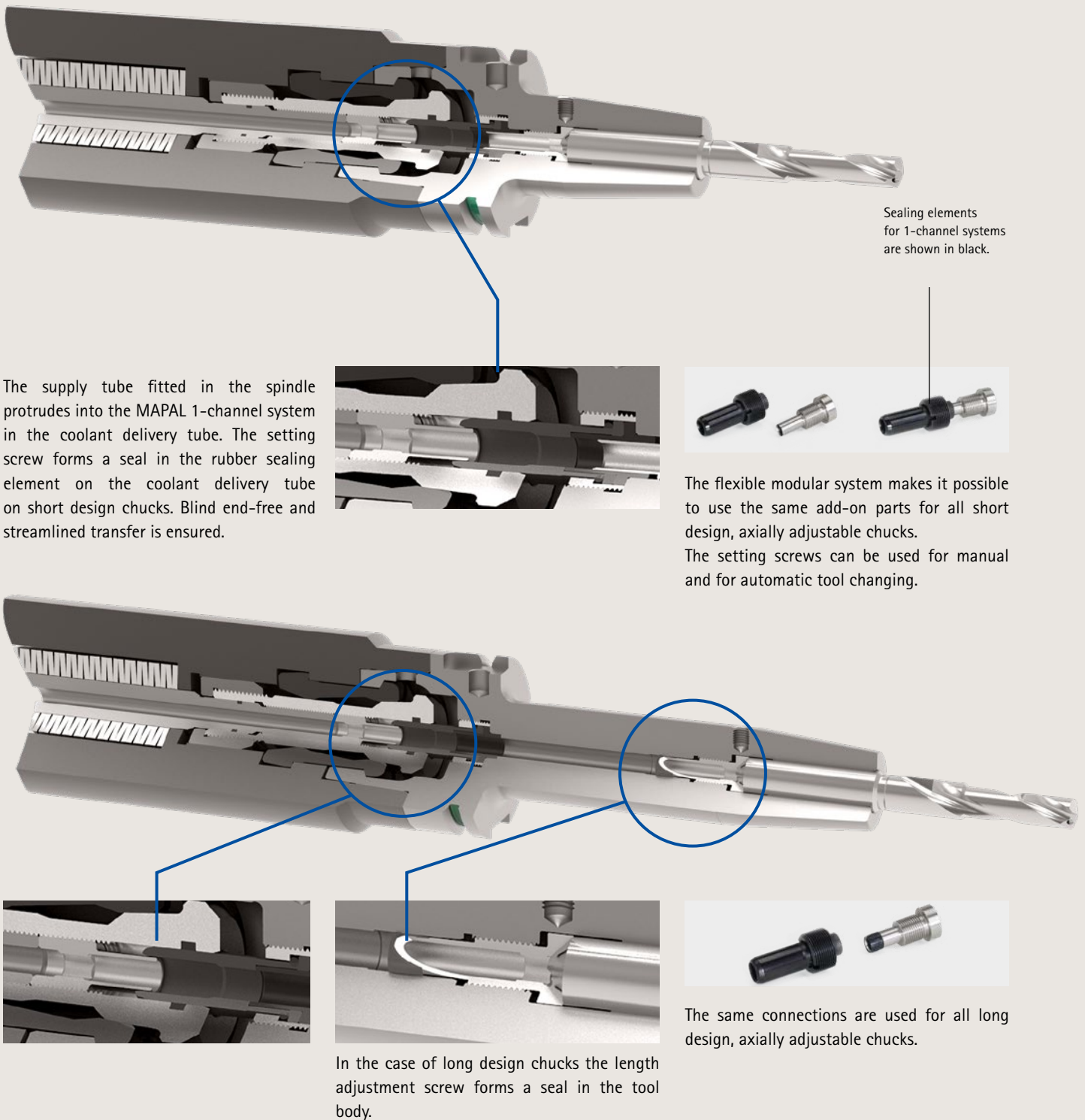


The same connections are used for all long design, axially adjustable chucks.

# MQL technology – from the spindle to the cutting edge

## Construction of 1-channel system

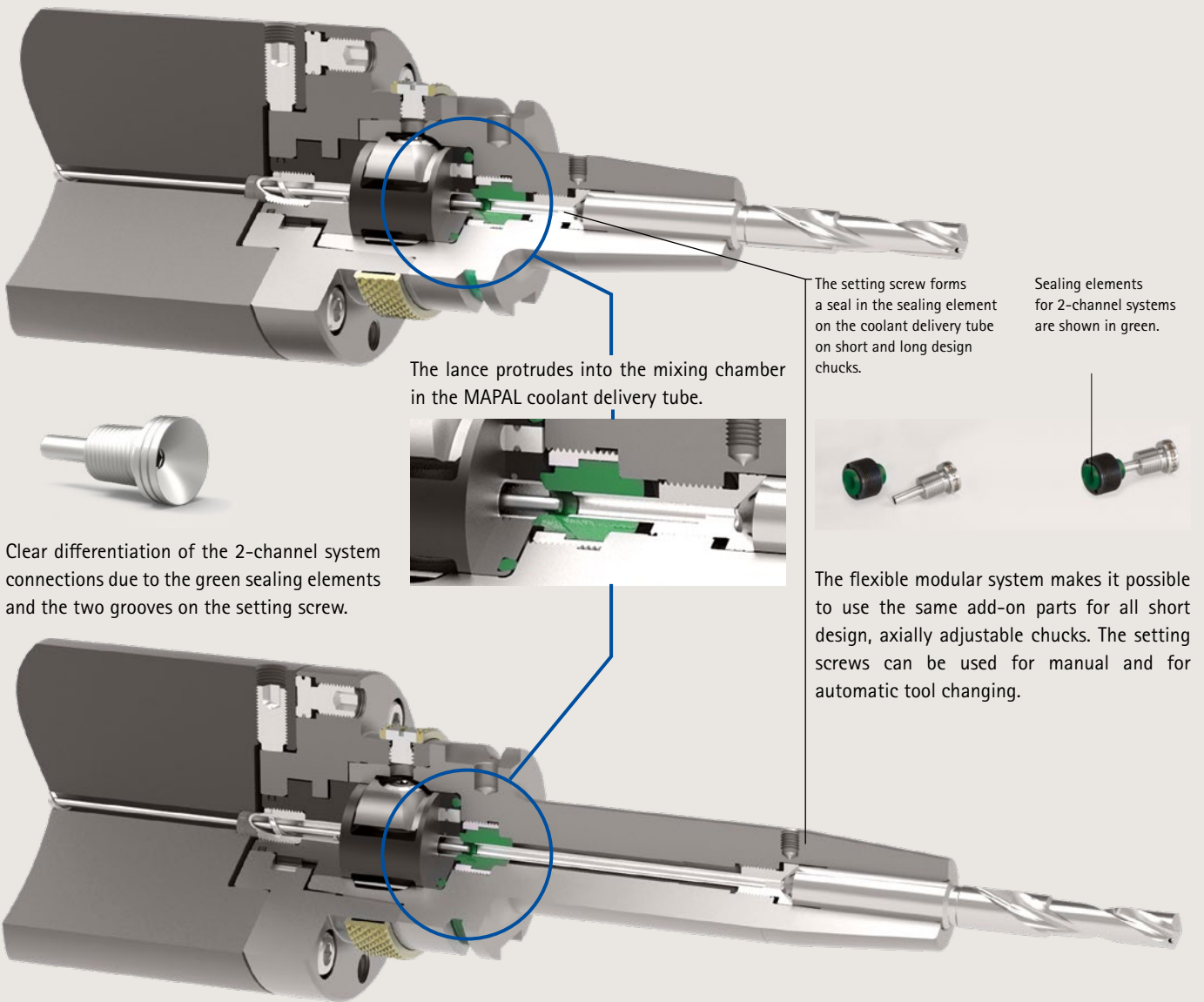
### Automatic tool change



# MQL technology – from the spindle to the cutting edge

## Construction of 2-channel system

### Manual tool change



The lance protrudes into the mixing chamber in the MAPAL coolant delivery tube.

The setting screw forms a seal in the sealing element on the coolant delivery tube on short and long design chucks.

Sealing elements for 2-channel systems are shown in green.

Clear differentiation of the 2-channel system connections due to the green sealing elements and the two grooves on the setting screw.

The flexible modular system makes it possible to use the same add-on parts for all short design, axially adjustable chucks. The setting screws can be used for manual and for automatic tool changing.

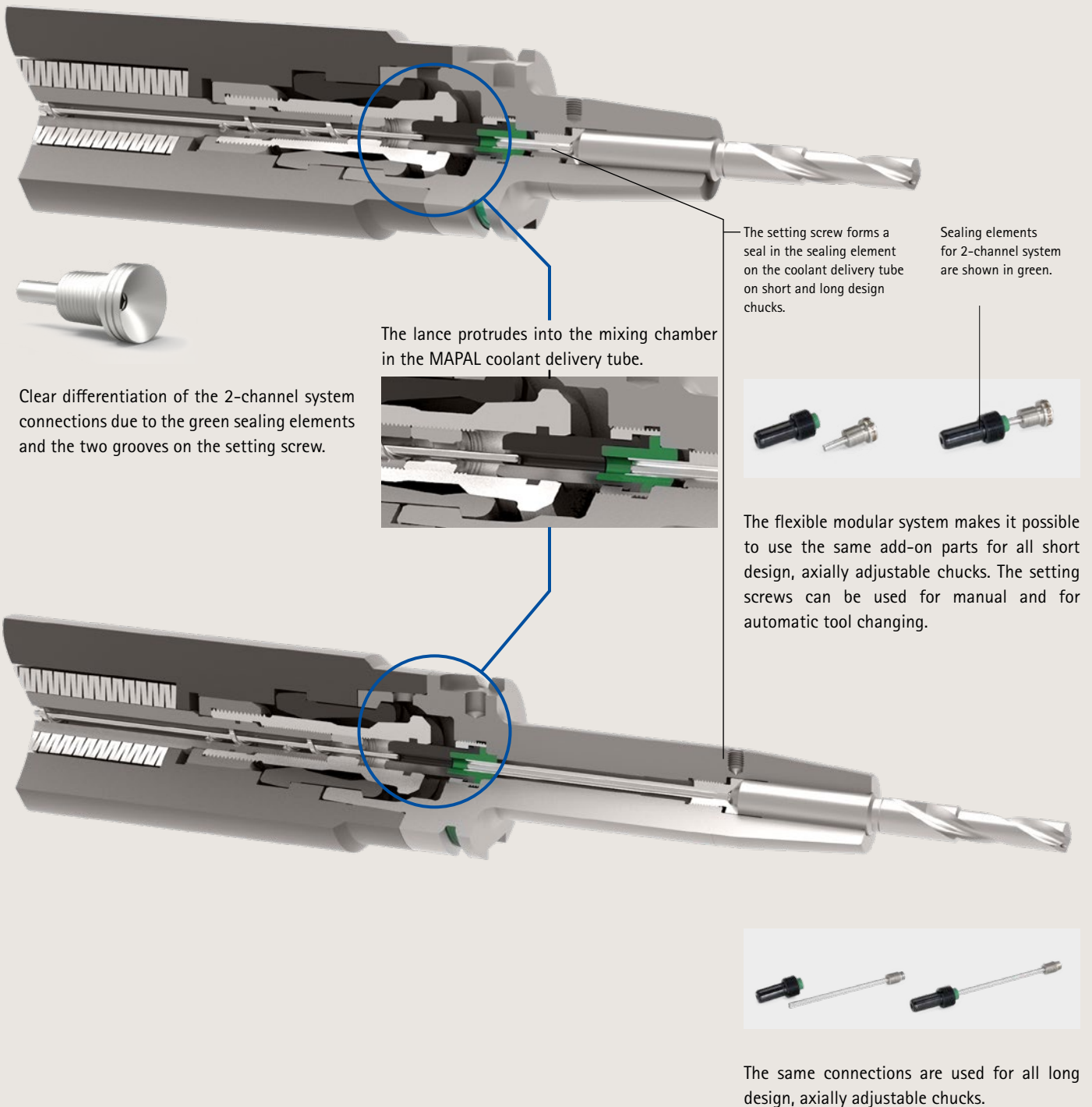
All chuck types available on request for 2-channel system with manual tool change.

The same connections are used for all long design, axially adjustable chucks.

# MQL technology – from the spindle to the cutting edge

## Construction of 2-channel system

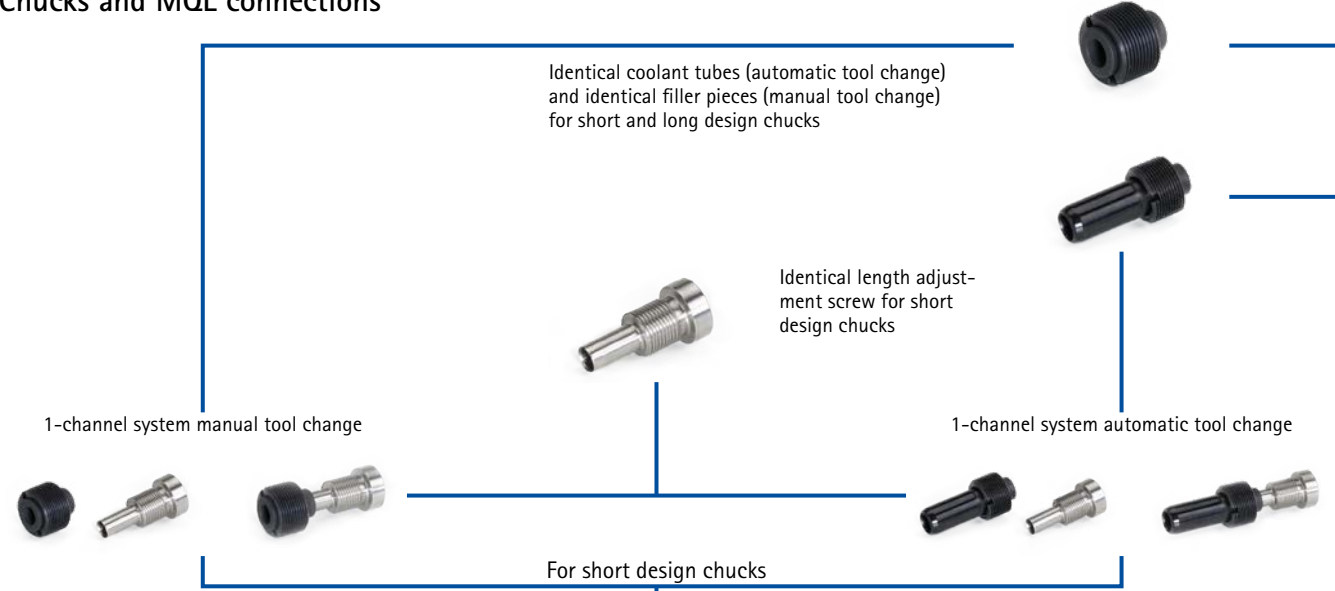
### Automatic tool change





### Chucks and MQL connections

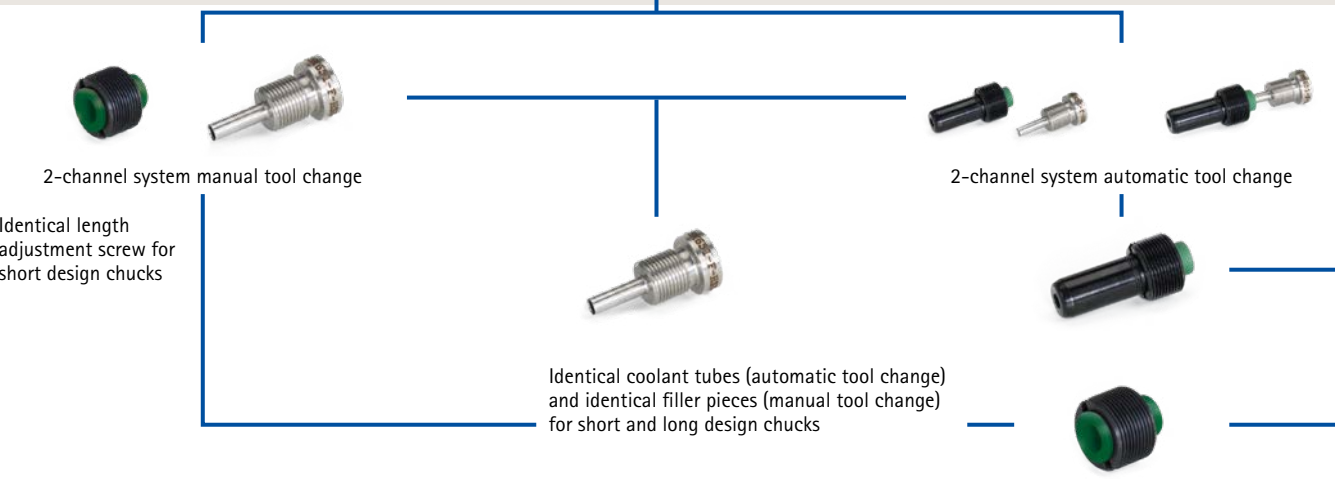
1-channel system connections



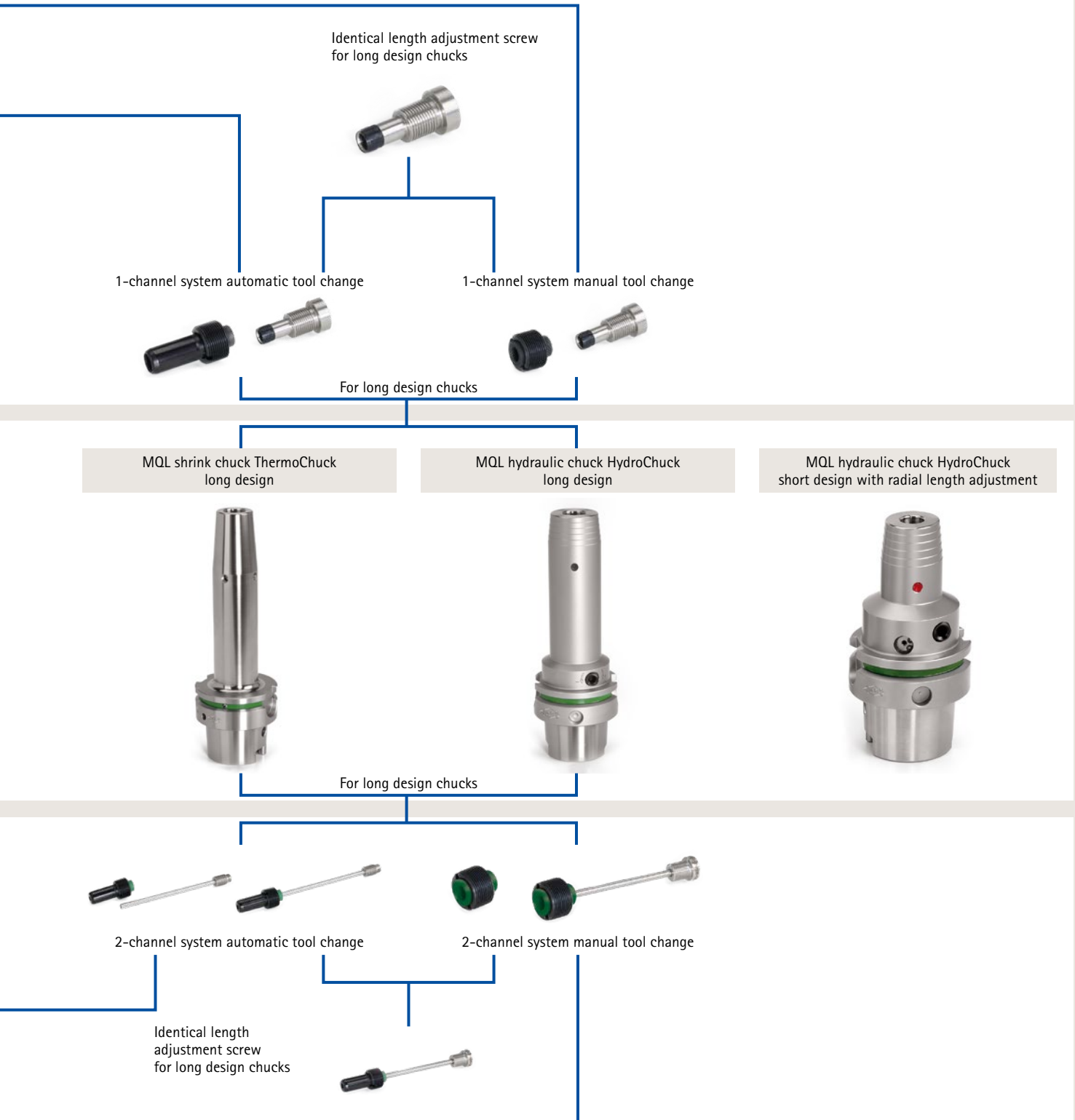
Chucks



2-channel system connections



### The modular system





# 100 % service – the new exchange service

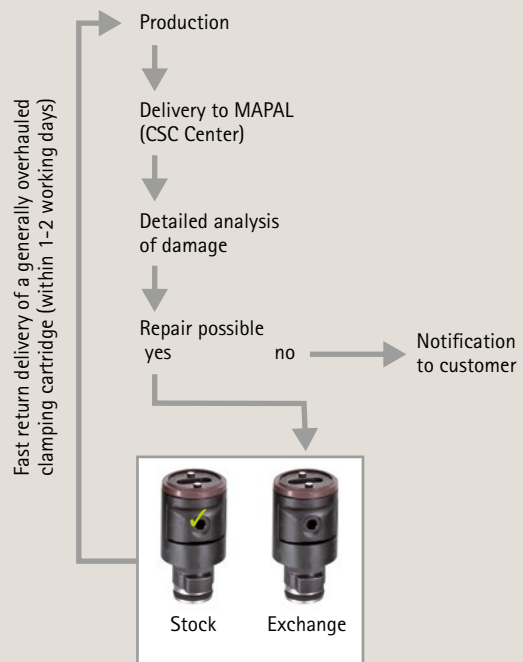
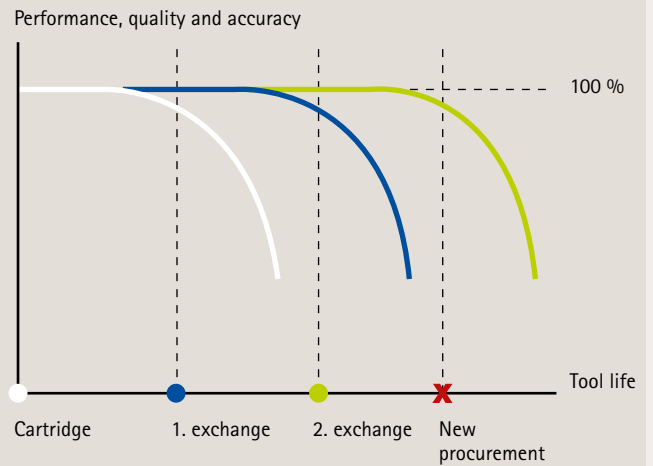
## Exchange service – straightforward:

MAPAL offers an exchange service for the KS clamping cartridges to ensure consistent function and reliability in the process. In this way mistakes during assembly are avoided, the need to stock spare parts and the logistics effort are minimised.

## Reconditioning – possible twice:

All individual parts are checked and wearing parts replaced. After a thorough function check a generally overhauled clamping cartridge is shipped within 1-2 working days.

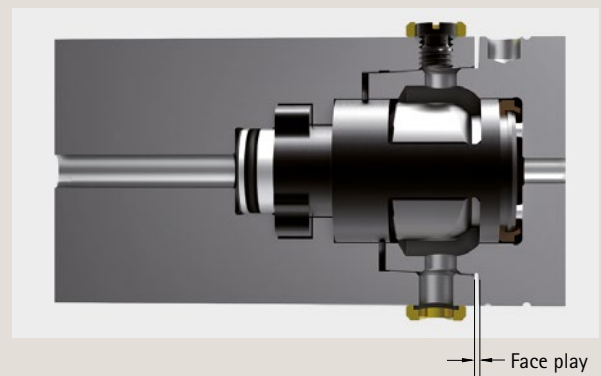
The generally overhauled clamping cartridges are no different to new cartridges in relation to clamping force behaviour, radial run-out accuracy and sealing.



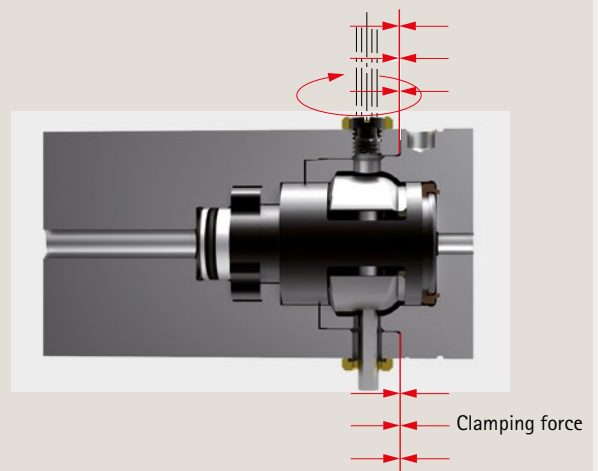
# Features of the KS clamping cartridge

## Clamping force and bending moment

The pre-loaded HSK connection draws its effectiveness from a high clamping force acting on the face connection with force acting simultaneously on the taper shank. The tolerances on the HSK shank and connection result in oversizes. The predominant portion of the clamping force acts on the face connection and, along with the face connection diameter, is responsible for the absorption of high bending moments.

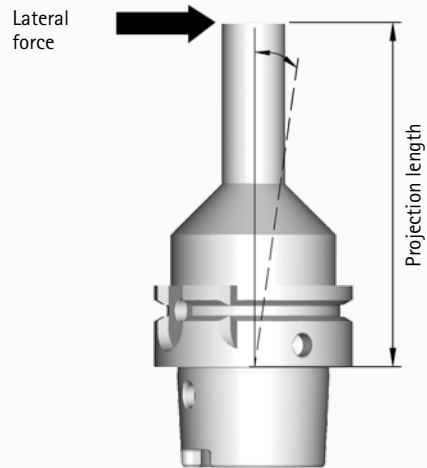
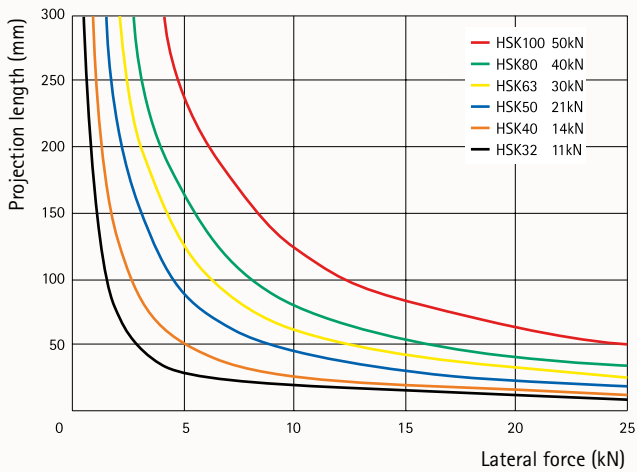


Unclamped face connection-taper joint



Clamped face connection-taper joint

# Clamping force measuring device



Permissible bending load on the HSK connection with the use of the KS cartridge

The MAPAL KS clamping permits higher clamping forces than recommended in accordance with DIN due to the particularly compact design of the clamping mechanism. As a result an extremely high bending moment load can be applied and the connection has high rigidity.

The values given in the table are the result of extensive tests in research and practice and represent an orientation aid for the user. Depending on the specific case, even higher loads may be possible.

In practical use this means: Absorption of high machining forces even at high projection lengths as well as improved tool lives and therefore maximum productivity. Depending on the external load, the lower DIN clamping forces may also be sufficient.

## Clamping force and lifting moment

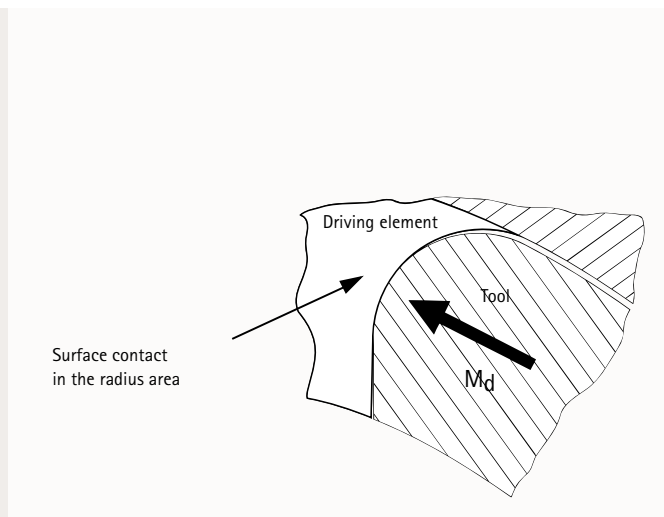
Nominal size HSK	32	40	50	63	80	100
Shank diameter $d_1$ [mm]	24	30	38	48	60	75
Clamping force (DIN 69893) [kN]	4,5	6,8	11	18	29	45
Clamping force (MAPAL KS) [kN]	11	14	21	30	40	50
Clamping moment [Nm]	6	7	15	20	30	50
Lifting moment $M_{Lifting}$ [Nm]	150	260	460	625	1.005	1.400

# Features of the KS clamping cartridge

## Transferable torque

HSK connections transmit both force closure and form closure torques. The high clamping force of the MAPAL KS clamping results in high friction forces on the taper and face connection, and therefore in correspondingly high friction moments ( $M_d$ , friction).

The positive torque transmission features compact driving elements in the connections; the radii on these driving elements mesh exactly and therefore permit the highest transferable values.



On tools made of 16MnCr5/1.7131, the positive torque transmission on its own permits a very high maximum permissible torque ( $M_d$ , max). On the use of high quality materials, for instance 1.6582 or 1.2343, these values increase.

Ideal torque transmission with meshing in the radius area

## Radial run-out and accuracy of repetition

The accuracy of the HSK connection is the outstanding feature of this standardised connection system. In conjunction with the non-coercive KS clamping, changeover accuracies and accuracies of repetition in the  $\mu\text{m}$  range are possible that open up new perspectives for improving quality.

The accuracy of repetition of the HSK connection is  $< 1 \mu\text{m}$  axially and  $< 3 \mu\text{m}$  radially.

## Transferable torques

Nominal size HSK	32	40	50	63	80	100
Clamping force [kN]	11	14	21	30	40	50
Torque $M_d$ , friction [Nm]	35	57	115	250	450	900
Torque $M_d$ , max [Nm]	275	500	900	1.600	3.300	6.000

## Spindle speed limits

The spindle speed limit for the HSK connection is defined by numerous factors. The length of the location taper, the oversize between taper shank and taper holder and also the clamping system used have a major effect. For applications at high spindle speeds, it is therefore necessary to determine the spindle speed limit on a case-by-case basis. The adjacent values can be used as rough estimates.

## Estimated spindle speed limits for HSK connections

Nominal size HSK	Spindle speed limit $\text{min}^{-1}$
32	50.000
40	42.000
50	30.000
63	24.000
80	20.000
100	16.000

# Installation of the KS clamping cartridge in the machine spindle, the chuck or adapter with assembly tool

Designation of the individual components of the KS assembly tool



Opening the KS assembly tool



Inserting the KS clamping cartridge into the KS assembly tool

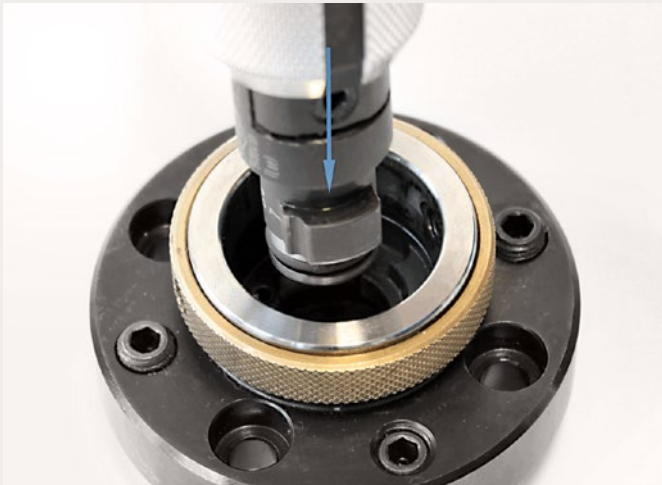
### NOTE

- For the KS clamping cartridge in standard and high-pressure design, only use the KS assembly tool for standard and high-pressure designs with the flute.
- For the MQL design KS clamping cartridges only use the KS assembly tool for the MQL design with the two pins.

1. Open the KS assembly tool gripper jaws by pushing down the ball head.
2. Keep the ball head pressed down.
3. Insert the KS clamping cartridge into the KS assembly tool.
4. Release the ball head.

The KS clamping cartridge is now connected to the KS assembly tool.

## Installation of the KS clamping cartridge in the machine spindle, the chuck or adapter with assembly tool



Inserting the KS clamping cartridge

### NOTE

- Make sure that the corresponding contours of the clamping cartridge and the machine spindle or the adapter match each other. The KS clamping cartridge can only be inserted into the machine spindle or into the adapter in one position.



Locking the KS clamping cartridge

5. Insert the KS clamping cartridge into the machine spindle or the adapter in the correct position.
6. Rotate the KS assembly tool clockwise until the lug of the KS clamping cartridge audibly and noticeably engages.
7. Press the ball head of the KS assembly tool down to pull the assembly tool back off.

# Installation of the KS clamping cartridge in the machine spindle, the chuck or adapter with assembly tool



1. Insert clamping cartridge in the spindle or in the adapter.



2. Fit socket to the clamping cartridge.



3. Turn clockwise until the lug on the clamping cartridge engages with the clamping pin.

## Clamping the tool

Nominal size	HSK32	HSK40	HSK50	HSK63	HSK80	HSK100
Tightening torque [Nm]	6	7	15	20	30	50
Clamping force [kN]	11	14	21	30	40	50

Tightening torque and clamping force for the individual nominal sizes of the KS clamping cartridge, standard design.

Nominal size	HSK32	HSK40	HSK50	HSK63	HSK80	HSK100
Tightening torque [Nm]	6	7	15	20	30	50
Clamping force [kN]	11	14	21	30	40	50

Tightening torque and clamping force for the individual nominal sizes of the KS clamping cartridge, high-pressure design

Nominal size	HSK32	HSK40	HSK50	HSK63	HSK80	HSK100
Tightening torque [Nm]	n. a.	6	15	20	30	50
Clamping force [kN]	n. a.	11	21	30	40	50

Tightening torque and clamping force for the individual nominal sizes of the KS clamping cartridge, MQL design

## Notes on the use of the KS clamping system

On the operation of spindles or adapters that are equipped with a clamping cartridge and that are operated without a tool, a cap should always be used. In this way the system and user are protected, soiling is prevented. In case of tool usage with low radial loads, e.g. drilling and reaming operations, it is allowed to drop approx. 25 % below the maximum tightening torque.

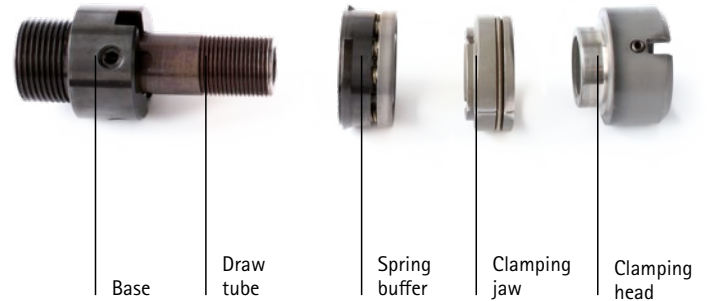
## Maintenance and care

During each tool change the taper should be cleaned using a taper wiper.

The clamping cartridge should be regreased after extended use. This interval depends on the frequency of tool changing, the type of machining and the coolant. However, regreasing should be undertaken at least once ever six months.

# Installation of AX clamping cartridge in machine spindle

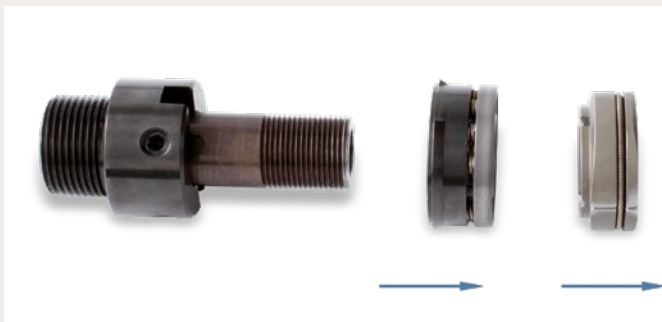
Terms used for the individual components of the axial clamping cartridge



Loosening threaded pin of the clamping head



Unscrewing clamping head



Pulling off clamping jaws and spring buffer

## NOTE

The axial clamping cartridge is supplied assembled.

1. Loosen the threaded pin (1) using the hex-wrench.
2. Unscrew the clamping head for the axial clamping cartridge counter clockwise by hand.
3. Pull off the clamping jaw and the spring buffer.

The clamping head, clamping jaws and spring buffer are removed.

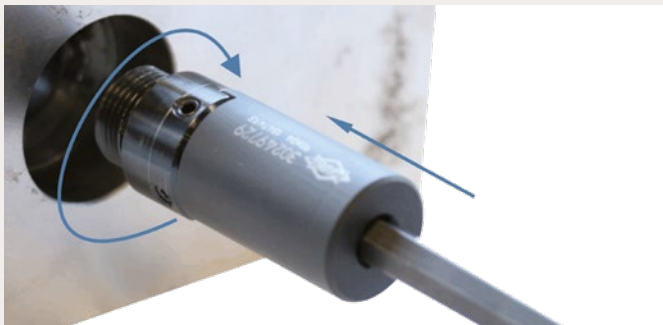


# Installation of AX clamping cartridge in machine spindle

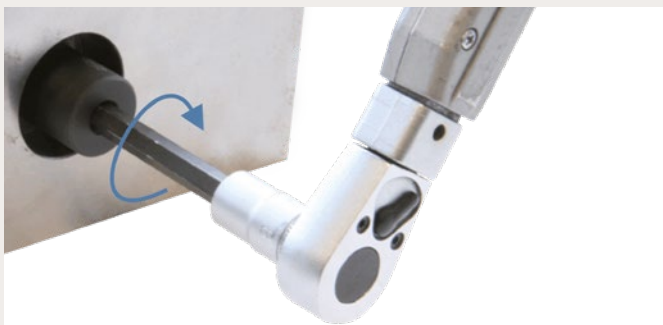
## Installing the axial clamping cartridge in the machine spindle



Fitting assembly aid



Screwing in base using assembly aid



Tightening base using assembly aid and torque wrench

### Tightening torque for fastening the draw tube

Nominal size HSK	32	40	50	63	80	100
Tightening torque [Nm]	18	30	45	60	120	150

### NOTE

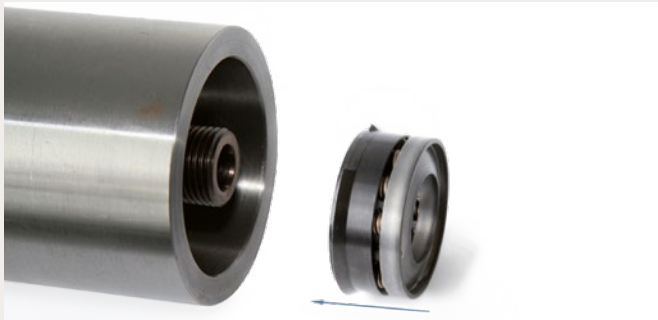
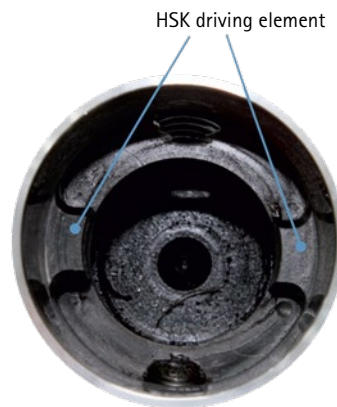
- Ensure the lugs on the assembly aid and the slot on the base are fully engaged.

4. Fit the assembly aid (not included) to the base of the draw tube.
5. Apply Loctite® 243 locking and sealing agent from Henkel to the thread of the base.
6. Using the Allen key, screw the base clockwise into the machine spindle using the assembly aid until hand-tight.
7. Fit the hex. socket bit to the torque wrench.
8. Tighten the base of the draw tube in clockwise direction to a suitable tightening torque (see table) using the torque wrench.
9. Remove the assembly aid.

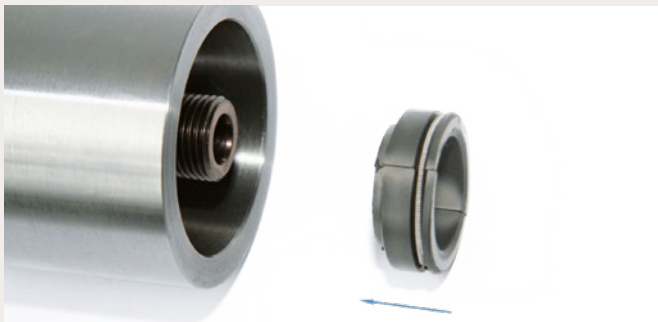
The base of the AX clamping cartridge is mounted in the machine spindle using the stipulated tightening torque.

# Installation of AX clamping cartridge in machine spindle

HSK driving element of the machine spindle



Pushing the spring buffer onto the draw tube



Pushing on the clamping jaw



Screwing on the clamping head

## NOTE

- When fitting the spring buffer, ensure the recesses are correctly positioned in the HSK driving element provided in the machine spindle.

10. Push the spring buffer onto the draw tube.

The spring buffer is installed in the machine spindle and can no longer be turned completely.

11. Push the clamping jaws onto the draw tube.

12. Screw the clamping head clockwise onto the thread on the draw tube.

The axial clamping cartridge is completely installed and fitted in the machine spindle.

# Installation of AX clamping cartridge in machine spindle

## Adjusting setting dimension



1. Completely unscrew the draw tube in anti-clockwise direction using an Allen key up to the stop.
2. Adjust the setting dimension (see table) with the aid of the depth gauge by turning the clamping head.
3. Tighten the threaded pin in clockwise direction using the Allen key until it is hand-tight.

The axial clamping cartridge has been set, fitted in the machine spindle and is completely ready for use.

## Setting dimensions for the different nominal sizes

Nominal size HSK	32	40	50	63	80	100
Setting dimension [mm]	8,3 $\pm 0,1$	8,4 $\pm 0,1$	10,5 $\pm 0,1$	10,6 $\pm 0,1$	13,2 $\pm 0,1$	13,3 $\pm 0,1$

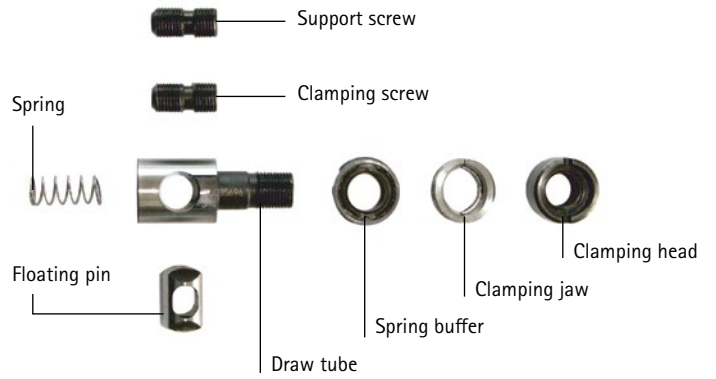
## Clamping the tool

### Clamping force and actuation torque for the different nominal sizes

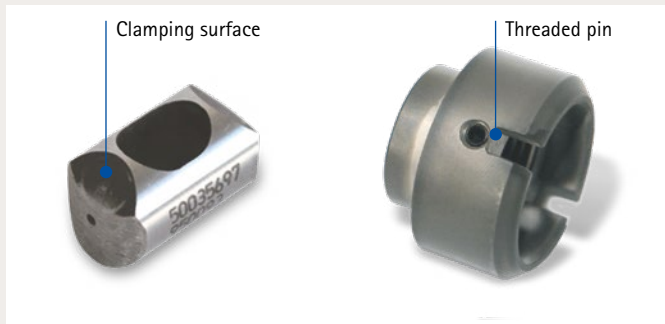
Nominal size HSK	32	40	50	63	80	100
Clamping force [kN]	10	16	20	25	40	50
Actuation torque [Nm]	12	20	30	40	80	100

# Installation of DS clamping cartridge in machine spindle

## Designation of the individual components of the diagonal clamping cartridge



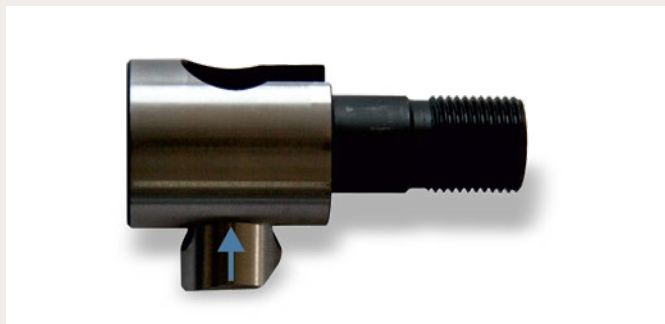
### Detailed view of the floating pin and clamping head



Floating pin with clamping surface

Clamping head with threaded pin

### Preparation of floating pin and draw tube



Inserting the floating pin



Alignment of the clamping surface

### NOTE

- Ensure that the floating pin is sufficiently greased.
- Ensure that the contact surfaces of the floating pin are visible through the thread and that the floating pin is not twisted.

1. Insert the floating pin in the correct position into the draw tube.
2. Position the floating pin in the middle.
3. Align the floating pin so that the contact surfaces for the supporting and clamping screw are facing towards the thread.

The floating pin is correctly positioned in the draw tube.

# Installation of DS clamping cartridge in machine spindle

## Installing the diagonal clamping cartridge in the machine spindle



Pushing in the draw tube and pressure spring



Screwing the support screw into the connection contour of the machine spindle



Adjustment of the setting depth

### NOTE

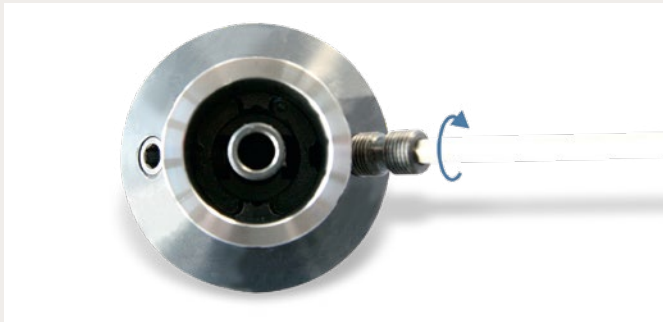
- Ensure that the contact surfaces of the floating pin are visible through the thread and that the floating pin is not twisted.

4. Push the draw tube with the inserted floating pin and pressure spring into the connection contour of the machine spindle.
5. Clean the support screw thoroughly.
6. Grease the end of the support screw.
7. Apply Loctite® 243 locking and sealing agent from Henkel to the end of the support screw thread.
8. Push the draw tube into the connection contour of the machine spindle until the contact surfaces of the floating pin are visible through the threaded bore of the supporting and clamping screw.
9. Screw the support screw in clockwise direction into the connection contour of the machine spindle using the Allen key until the supporting screw just contacts the surface of the floating pin.
10. Adjust the setting depth of the draw tube (see table) using a depth gauge by turning the support screw.
11. Grease the end and thread of the clamping screw.

The diagonal clamping cartridge is adjusted.

# Installation of DS clamping cartridge in machine spindle

## Setting depths for the different nominal sizes



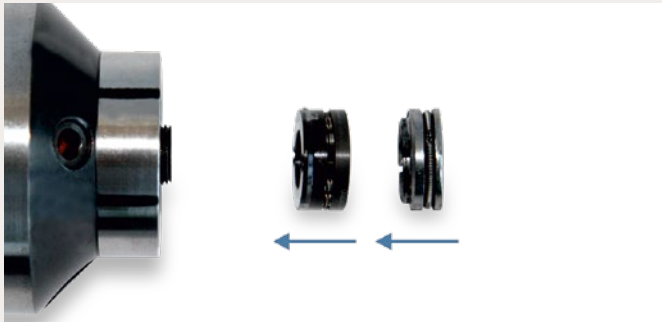
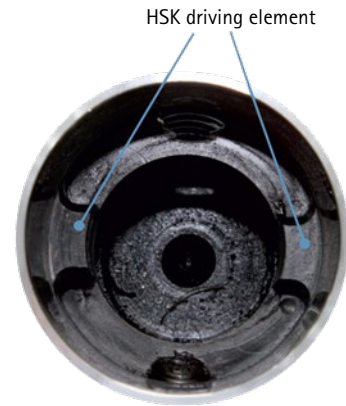
Screwing the clamping screw into the connection contour of the machine spindle

12. Screw the clamping screw in clockwise direction into the connection contour of the machine spindle using the Allen key until the clamping screw just contacts the surface of the floating pin.

Nominal size HSK	32	40	50	63	80	100
Setting depth [mm]	4,41 <sup>±0,05</sup>	3,38 <sup>±0,05</sup>	4,38 <sup>±0,05</sup>	2,95 <sup>±0,05</sup>	3,84 <sup>±0,05</sup>	2,04 <sup>±0,05</sup>

# Installation of DS clamping cartridge in machine spindle

HSK driving element of the machine spindle



Pushing the spring buffer and clamping jaws onto the draw tube



Screwing on the clamping head

## NOTE

- When fitting the spring buffer, ensure the recesses are correctly positioned in the HSK driving element provided in the machine spindle.

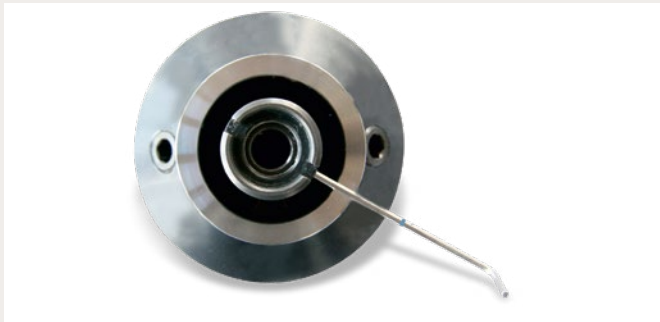
13. Push the spring buffer onto the draw tube.
14. Push the clamping jaws onto the draw tube.
15. Screw the clamping head in clockwise direction onto the thread of the draw tube until the end of the draw tube is flush with the inner end of the clamping head.
16. Tighten the lateral threaded pin of the clamping head in clockwise direction using the Allen key until it is hand-tight.

## NOTE

- When sealing the support screw, observe the safety and handling notes from the sealing compound manufacturer.

17. Seal the support screw with the sealing compound.

# Installation of DS clamping cartridge in machine spindle



Tightening the threaded pin of the clamping head

## NOTE

- When sealing, ensure that the hex. socket contour of the support screw is completely sealed for safety reasons.

The diagonal clamping cartridge is completely installed and fitted in the machine spindle.

### Clamping the tool

#### Tightening torque and clamping force for the individual nominal sizes of the diagonal clamping cartridge

Nominal size HSK	32	40	50	63	80	100
Tightening torque [Nm]	7	16	22	40	80	100
Clamping force [kN]	10	16	22	25	40	50



# Notes on setting and handling KS flange adapter

## 1. Assembling and aligning the KS flange adapter with radial alignment



1. Clean taper and face surfaces on the flange adapter and adapter.



4. Insert test arbor or tool and fasten using clamping screw.



2. Insert flange adapter. Tighten fastening screws to 50 % of the tightening torque stated (see table).



5. Place dial gauge in contact at the position for the radial run-out check. On MAPAL tools it is also possible to use the HSK collar for alignment. Take highest measuring point and set dial gauge to "zero".



3. Clean taper and face surface on test arbor or tool.





6. Roughly align flange adapter (approx. 0.01 mm).  
Relieve adjusting screws again after each actuation.



7. Set radial run-out using adjusting screws.  
Again relieve the adjusting screws after each actuation. Repeat process until radial run-out error is  $< 3 \mu\text{m}$ .

8. Tighten fastening screws diagonally and bring up to tightening torque (see table). After reaching the full tightening torque, check radial alignment again and correct if necessary. Place adjusting screws in light contact.

The radial alignment can also be undertaken using measuring probes. For this purpose the feeler is placed in contact with the taper on the flange adapter.

### Tightening torques

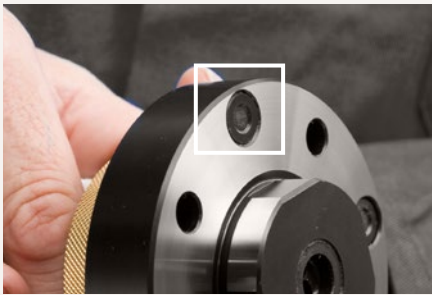
Nominal size	Module diameter [mm]	Fastening screw	Tightening torque [Nm]
HSK32	60	ISO 4762 – M5x16 – 12.9	8,7
HSK40	70	ISO 4762 – M6x20 – 12.9	15
HSK50	80	ISO 4762 – M6x20 – 12.9	15
HSK63	100	ISO 4762 – M8x25 – 12.9	36
HSK80	117	ISO 4762 – M8x25 – 12.9	36
HSK100	140	ISO 4762 – M10x30 – 12.9	72

The basis for the maximum tightening torque of the cylinder head screws in accordance with DIN 912 is the general DIN standard for strength class 10.9.

MAPAL only uses cylinder head screws in accordance with ISO 4762 with the property class 12.9.

## Notes on setting and handling KS flange adapter

### 2. Assembling and aligning KS flange adapters and MAPAL Module adapters with radial and angular alignment



1. Clean face surfaces on flange adapter and adapter. Ensure that the face surface on the alignment screw does not protrude beyond the face surface in the flange adapter.



2. Insert flange adapter.  
Place fastening screws in contact.



3. Clean taper and face surface on the test arbor very carefully. Insert test arbor or tool.



4. Place dial gauge in contact at the position for the radial run-out check. On MAPAL tools it is also possible to use the HSK collar for alignment. Take lowest measuring point and set dial gauge to "zero". Align radially.



5. For the angular alignment, the dial gauge is positioned at the upper point to be checked or approx. 100 mm from the connection. Align angularly using alignment screws. Do not relieve the alignment screws after actuation.

6. Once the angular alignment is set to  $< 3 \mu\text{m}$ , check again radial alignment at the position for the radial run-out check on the collar and correct if necessary. Should it be necessary to correct the radial alignment, then check the angular alignment again afterwards.

## Notes on setting and handling hydraulic clamping arbor

The hydraulic clamping arbors impress with their easy handling with good stability and damping. The hydraulic clamping arbors are optimally suited to finish and face milling.

Tools with fit tolerances of H6 can be precisely, permanently and reliably clamped with high accuracy of repetition. Overtightening is not possible.

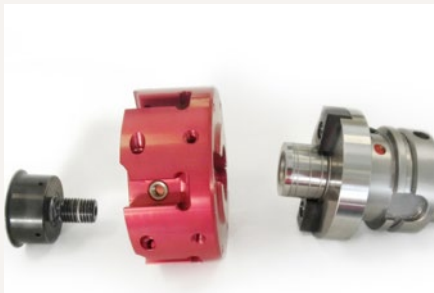
### NOTE

During each tool change make sure that all components of the hydraulic clamping arbor and the tool are free of dirt and grease and are also free of damage.

#### Note:

Only for trained personnel.

## Changing and clamping the tool



1. Clean the mounting area of the tool and the hydraulic clamping arbor using a cloth.



2. Place the tool, with bore and face connection first, on the face connection of the hydraulic clamping arbor.



3. Note:  
The centring screws is not secured against falling out.

Turn the centring screw to the stop with the aid of a suitable hexagonal T-key. During this process pay attention to the minimum turns (see table below).



4. Set the torque wrench to the tightening torque of 7 Nm. Tighten the milling cutter clamping screw to the stop with the aid of the torque wrench. Mount the tool in accordance with the information from the manufacturer or using the milling cutter clamping screw in accordance with DIN 6367.

#### Result:

The tool is centred, fully clamped in the hydraulic clamping arbor and ready for use.

Clamping diameter [mm]*	Minimum turns for centring	Transferable torque [Nm]	Spindle speed n max. [min <sup>-1</sup> ]
22	0,5	Only centring	22.000
27	0,5	Only centring	22.000
32	1	Only centring	22.000
40	1	Only centring	10.000
60	1,5	Only centring	10.000

\*Tool clamping with bore tolerance H7

# Setting and handling notes for the run-out alignment of the HydroChuck Compensation

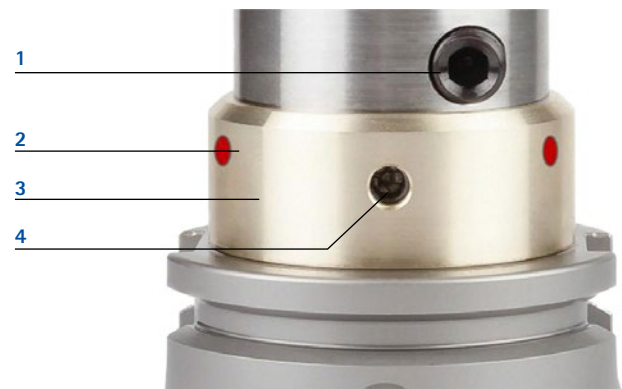
## NOTE

The locking ring (3) is secured by a screw with locking varnish (2) and is not allowed to be removed.

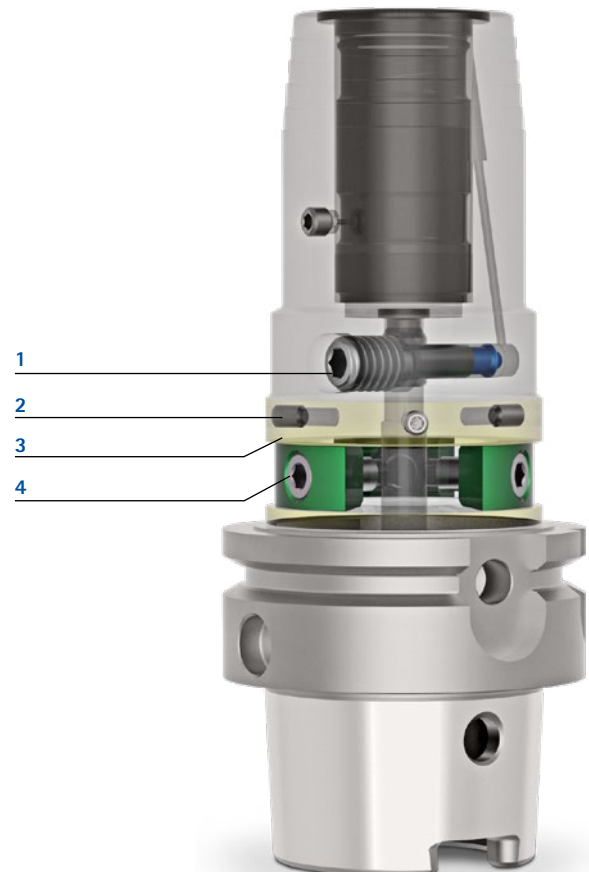
1. Tighten the three adjusting screws (4) to a tightening torque of 1 Nm.
2. Measure the HydroChuck Compensation using a run-out measuring device.
3. Tighten the adjusting screws (4) (to maximum 3 Nm) until the HydroChuck Compensation has the stipulated radial run-out.
4. After the radial run-out alignment, set the required balancing value.

### Result:

The radial run-out alignment of the HydroChuck Compensation is complete.



- 1 Clamping screw
- 2 Screw for locking ring with locking varnish (3 pieces)
- 3 Locking ring
- 4 Adjusting screws for compensation adjustment (3 pieces)







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