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Tool Holders

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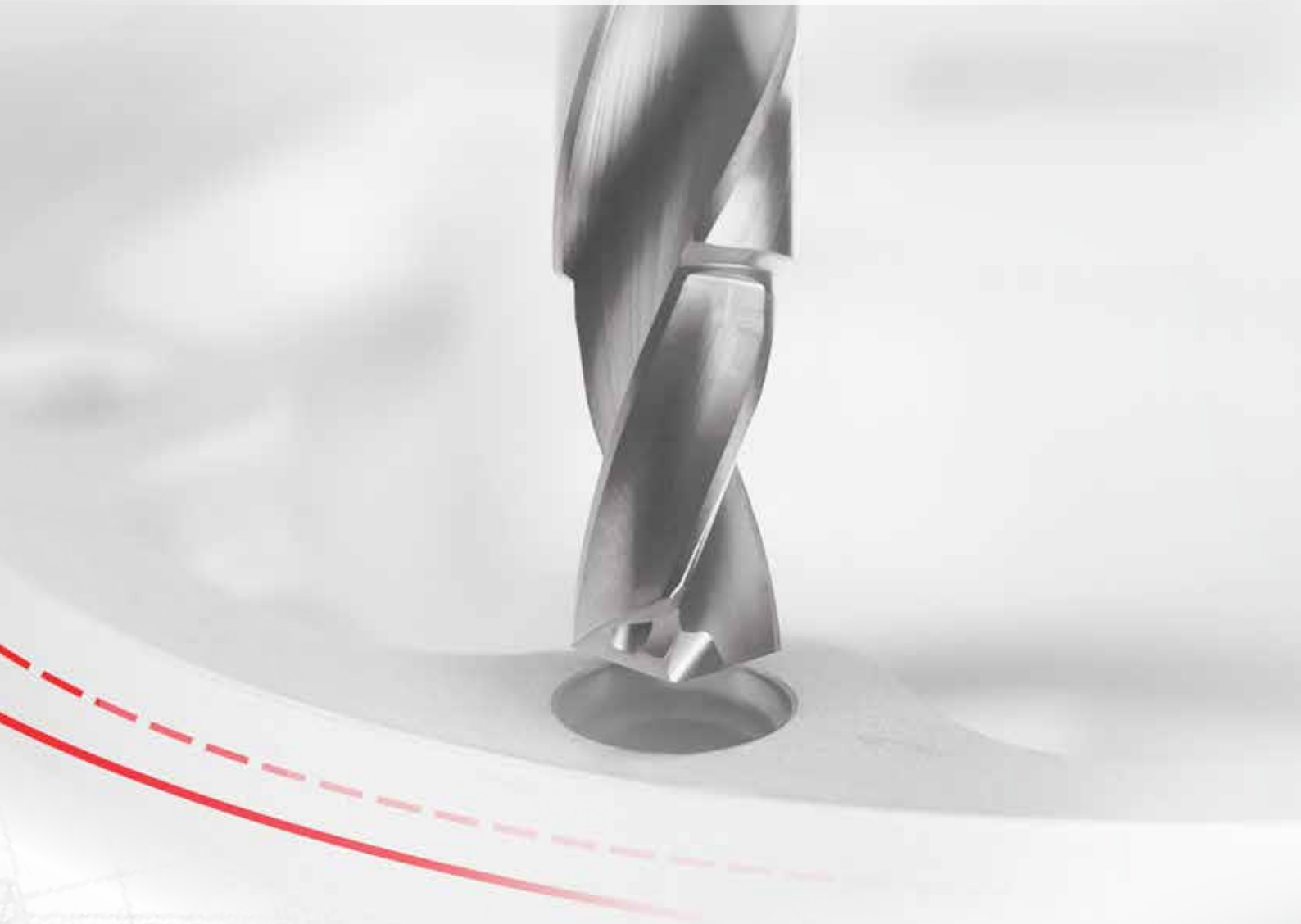
Chip – by Chip – to the Top



PRECISION CUTTING TOOLS

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Delivery conditions

General conditions of delivery
Products are supplied according to our terms of delivery and payment only.

Delivery conditions of special tools
In case of special tools we are allowed to deliver approx. 10%. however minimum 2 pcs. more or less. The delivered quantity will be invoiced.

Minimum order charges
For orders below € 100.00 we may add an appropriate minimum charge.

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TOOL HOLDERS

TAPPING CHUCKS

TECHNICAL INFORMATION

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GENERAL INFORMATION

Quick View

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*) in combination with the relevant straight-shank or basic-toolholder

	Shrink fit chucks	Hydraulic chucks	Side lock holders ”Weldon“/ ”Whistle-Notch“
Clamping chucks / tool holders for cylindrical shanks			
Characteristics	maximum concentricity; very slender non-interference; good rigidity; high clamping force; modularly extendable; patented dampening screw ensures concentricity	high dampening with maximum concentricity; simple handling; flexible application thanks to reduction bushes also with peripherical cooling	robust, cost-efficient clamping chuck for heavy machining in the lower speed and accuracy range
Main application	drilling, countersinking, milling, reaming, universal and HSC application	reaming, drilling, countersinking, HSC application, light milling	roughing, milling, drilling
Main feature	accurate and universal; slender; high clamping force	simple handling	simple operation; secure clamping
Concentricity	< 3µm	< 3µm	< 10µm
with 5xD	< 5µm	< 5µm	< 25µm
Clamping force	very high	very high	very safe
Rigidity	very high	high	very high
Dampening	low	very high	low
Interference contour	small / minimal	medium	large
Handling	good	very good / very flexible	good
Actuation	shrink fit device	hexagon key	hexagon key

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HYDRAULIC CHUCKS

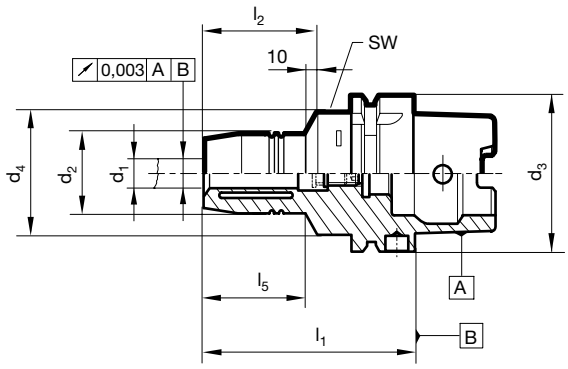
Hydraulic chucks HSK-A

Catalog no. 78299

Standard	**DIN 69882-7**
Shank	**HSK-A**
Discount group	**147**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- suitable for tools with internal cooling
- for tool shank tolerance h6

Scope of delivery
- incl. adjustment screw
- incl. hexagon chuck key
- order coolant delivery set separately



HSK-A d3	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	SW	kg	Code no.
63	6.000	26.000	50.000	70.00	37.00	24.00	5.00	0.97	6.063
63	8.000	28.000	50.000	70.00	37.00	24.00	5.00	0.97	8.063
63	10.000	30.000	50.000	80.00	41.00	35.00	5.00	1.00	10.063
63	12.000	32.000	50.000	85.00	46.00	40.00	5.00	1.12	12.063
63	14.000	34.000	50.000	85.00	46.00	40.00	5.00	1.18	14.063
63	16.000	38.000	50.000	95.00	49.00	46.00	5.00	1.18	16.063
63	18.000	40.000	50.000	95.00	49.00	47.00	5.00	1.18	18.063
63	20.000	42.000	50.000	95.00	51.00	48.00	5.00	1.20	20.063
63	25.000	50.000	50.000	110.00	57.00	59.00	6.00	2.11	25.063
63	32.000	60.000	50.000	125.00	61.00	63.00	6.00	2.43	32.063
100	6.000	26.000	50.000	75.00	37.00	26.00	5.00	2.40	6.100
100	8.000	28.000	50.000	75.00	37.00	26.00	5.00	2.40	8.100
100	10.000	30.000	50.000	90.00	41.00	42.00	5.00	2.50	10.100
100	12.000	32.000	50.000	95.00	46.00	47.00	5.00	2.50	12.100
100	14.000	34.000	50.000	95.00	46.00	47.00	5.00	2.50	14.100
100	16.000	38.000	50.000	100.00	49.00	53.00	5.00	2.70	16.100
100	18.000	40.000	50.000	100.00	49.00	53.00	5.00	2.70	18.100
100	20.000	42.000	75.000	105.00	51.00	59.00	5.00	3.20	20.100
100	25.000	50.000	75.000	110.00	57.00	62.00	6.00	3.30	25.100
100	32.000	60.000	75.000	110.00	61.00	62.00	6.00	3.80	32.100

Hydraulic chucks

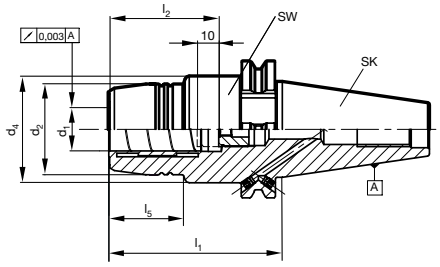
Hydraulic chucks ISO

Catalog no. 78213

Standard	**Stock std.**
Shank	**ISO-taper**
Discount group	**147**

Product information
- ISO taper to DIN 69871 form AD/B
- form B supplied with threaded pins in bores
- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- for tool shank tolerance h6
- suitable for tools with internal cooling

Scope of delivery
- incl. adjustment screw
- incl. hexagon chuck key
- order pull studs separately



ISO-taper SK	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	SW	kg	Code no.
40	6.000	26.000	49.500	80.50	37.00	29.50	5.00	1.50	6.040
40	8.000	28.000	49.500	80.50	37.00	30.00	5.00	1.50	8.040
40	10.000	30.000	49.500	80.50	41.00	31.00	5.00	1.50	10.040
40	12.000	32.000	49.500	80.50	80.50	31.20	5.00	1.40	12.040
40	14.000	34.000	49.500	80.50	46.00	31.50	5.00	1.50	14.040
40	16.000	38.000	49.500	80.50	49.00	33.00	5.00	1.50	16.040
40	18.000	40.000	49.500	80.50	49.00	33.00	5.00	1.50	18.040
40	20.000	49.500	49.500	64.50	64.50		5.00	1.40	20.040
50	12.000	32.000	49.500	80.50	46.00	31.50	5.00	3.50	12.050
50	20.000	42.000	49.500	80.50	80.50	33.70	5.00	4.10	20.050
40	20.000	42.000	49.500	80.50	80.50	33.70	5.00	1.50	20.140
50	32.000	72.000	72.000	81.00	81.00		6.00	4.10	32.050

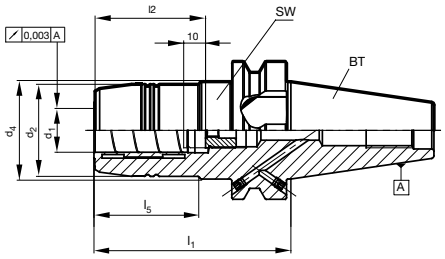
Hydraulic chucks MAS-BT

Catalog no. 78221

Standard	**Stock std.**
Shank	**MAS-BT**
Discount group	**147**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- axial length setting
- for tool shank tolerance h6
- suitable for tools with internal cooling
- MAS-BT to JIS B 6339

Scope of delivery
- incl. adjustment screw
- incl. hexagon chuck key
- order pull studs separately



BT	Form	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	l5 mm	SW	kg	Code no.
40	JD/JF	6.000	26.000	44.500	90.00	37.00	43.00	5.00	1.50	6.040
40	JD/JF	8.000	28.000	44.500	90.00	37.00	44.50	5.00	1.50	8.040
40	JD/JF	10.000	30.000	44.500	90.00	41.00	44.50	5.00	1.50	10.040
40	JD/JF	12.000	32.000	44.500	90.00	46.00	44.50	5.00	1.50	12.040
40	JD/JF	14.000	34.000	44.500	90.00	46.00	44.50	5.00	1.50	14.040
40	JD/JF	16.000	38.000	44.500	90.00	49.00	47.50	5.00	1.50	16.040
40	JD/JF	18.000	40.000	44.500	90.00	49.00	47.50	5.00	1.50	18.040
40	JD/JF	20.000	49.500	49.500	72.50	51.00		5.00	1.50	20.040
40	JD/JF	20.000	42.000	44.500	90.00	51.00	47.50	6.00	1.50	20.140
50	JD/JF	12.000	32.000	44.500	90.00	46.00	34.00	5.00	4.00	12.050
50	JD/JF	20.000	42.000	44.500	90.00	51.00	34.00	5.00	4.00	20.050
50	JD/JF	32.000	72.000	72.000	90.00	61.00		6.00	4.00	32.050

Hydraulic chucks

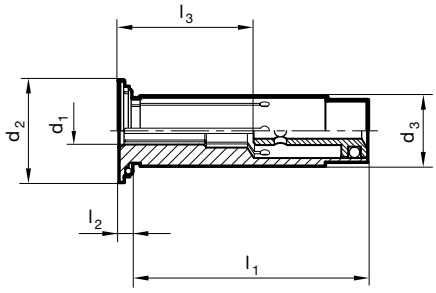
Reduction bushes

Catalog no. 78368

Standard	**Stock std.**
Shank	
Discount group	**114**

Product information
- for clamping smaller shank-Ø in hydraulic chucks
- clamping-Ø for tool shank tolerance h6
- closed endface, therefore leakproof up to 80 bar
- concentricity ≤ 2 µm
- with adjustable limit stop
- the application of reduction bushes makes it possible to increase the permissible transferable torque by approx. 25% in comparsion to direct clamping

Scope of delivery
- incl. stop element
- special versions on request



for shank Ø d1 mm	d3 mm	d2 mm	l1 mm	l2 mm	l3 mm	Code no.
3.000	12.000	16.500	45.00	2.00	26.50	3.012
3.000	20.000	24.000	50.50	2.00	28.50	3.020
4.000	12.000	16.500	45.00	2.00	26.50	4.012
4.000	20.000	24.000	50.50	2.00	28.50	4.020
6.000	12.000	16.500	45.00	2.00	34.50	6.012
6.000	20.000	24.000	50.50	2.00	37.50	6.020
6.000	32.000	35.500	60.50	3.00	35.50	6.032
8.000	12.000	16.500	45.00	2.00	34.50	8.012
8.000	20.000	24.000	50.50	2.00	37.50	8.020
8.000	32.000	35.500	60.50	3.00	35.50	8.032
10.000	20.000	24.000	50.50	2.00	42.50	10.020
10.000	32.000	35.500	60.50	3.00	40.50	10.032
12.000	20.000	24.000	50.50	2.00	47.50	12.020
12.000	32.000	35.500	60.50	3.00	42.50	12.032
14.000	20.000	24.000	50.50	2.00	47.50	14.020
14.000	32.000	35.500	60.50	3.00	42.50	14.032
16.000	20.000	24.100	50.50	2.00	47.50	16.020
16.000	32.000	35.500	60.50	3.00	50.50	16.032
18.000	32.000	35.500	60.50	3.00	50.50	18.032
20.000	32.000	35.500	60.50	3.00	50.50	20.032
25.000	32.000	35.500	60.50	3.00	58.50	25.032

Hydraulic chucks

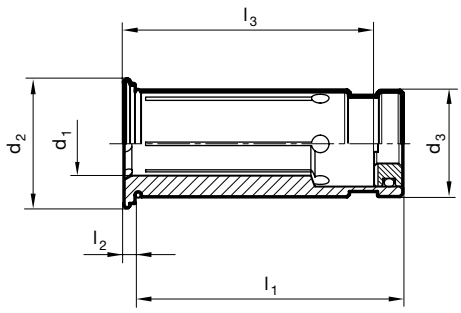
Reduction bushes with peripherical cooling

Standard	**Stock std.**
Shank	
Discount group	**114**

Catalog no. 78369

Product information
- for clamping smaller shank-Ø in hydraulic chucks
- clamping-Ø for tool shank tolerance h6
- with coolant slots for peripheral cooling, therefore process and tool life improvement
- concentricity ≤ 2 µm
- with adjustable limit stop
- the application of reduction bushes makes it possible to increase the permissible transferable torque by approx. 25% in comparsion to direct clamping

Scope of delivery
- incl. stop element
- special versions on request



for shank Ø d1 mm	d3 mm	d2 mm	l1 mm	l2 mm	l3 mm	Code no.
3.000	12.000	16.500	45.00	2.00	26.50	3.012
3.000	20.000	24.000	50.50	2.00	28.50	3.020
4.000	12.000	16.500	45.00	2.00	26.50	4.012
4.000	20.000	24.000	50.50	2.00	28.50	4.020
6.000	12.000	16.500	45.00	2.00	34.50	6.012
6.000	20.000	24.000	50.50	2.00	37.50	6.020
6.000	32.000	35.500	60.50	3.00	35.50	6.032
8.000	12.000	16.500	45.00	2.00	34.50	8.012
8.000	20.000	24.000	50.50	2.00	37.50	8.020
8.000	32.000	35.500	60.50	3.00	35.50	8.032
10.000	20.000	24.000	50.50	2.00	42.50	10.020
10.000	32.000	35.500	60.50	3.00	40.50	10.032
12.000	20.000	24.000	50.50	2.00	47.50	12.020
12.000	32.000	35.500	60.50	3.00	42.50	12.032
14.000	20.000	24.000	50.50	2.00	47.50	14.020
14.000	32.000	35.500	60.50	3.00	42.50	14.032
16.000	20.000	24.100	50.50	2.00	47.50	16.020
16.000	32.000	35.500	60.50	3.00	50.50	16.032
18.000	32.000	35.500	60.50	3.00	50.50	18.032
20.000	32.000	35.500	60.50	3.00	50.50	20.032
25.000	32.000	35.500	60.50	3.00	58.50	25.032

SHRINK FIT TECHNOLOGY

Shrink fit technology

Shrink fit chucks HSK-A

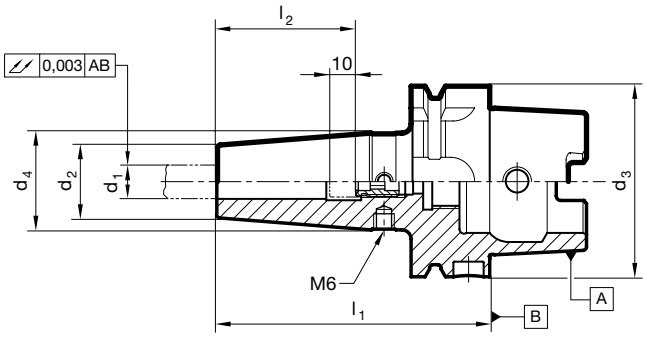
Catalog no. 78736

Standard	**DIN 69882-8**
Shank	**HSK-A**
Discount group	**148**

- balancing quality: G6.3 / 15,000 rev./min

Product information
- incl. balancing thread 4xM6/6xM6
- for tool shank tolerance h6
- suitable for tools with internal cooling

Scope of delivery
- incl. adjustment screw
- for conventional cooling order coolant delivery set separately
- special versions on request



HSK-A d3	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	kg	Code no.
63	3.000	10.000	18.000	80.00	30.00	0.70	3.063
63	4.000	10.000	18.000	80.00	35.00	0.70	4.063
63	6.000	21.000	27.000	80.00	36.00	0.83	6.063
63	8.000	21.000	27.000	80.00	36.00	0.82	8.063
63	10.000	24.000	32.000	85.00	41.00	0.91	10.063
63	12.000	24.000	32.000	90.00	46.00	0.92	12.063
63	14.000	27.000	34.000	90.00	46.00	0.97	14.063
63	16.000	27.000	34.000	95.00	49.00	0.98	16.063
63	18.000	33.000	42.000	95.00	49.00	1.16	18.063
63	20.000	33.000	42.000	100.00	51.00	1.18	20.063
63	25.000	44.000	53.000	115.00	57.00	1.77	25.063
63	32.000	44.000	53.000	120.00	61.00	1.69	32.063
100	6.000	21.000	27.000	85.00	36.00	2.18	6.100
100	8.000	21.000	27.000	85.00	36.00	2.17	8.100
100	10.000	24.000	32.000	90.00	41.00	2.27	10.100
100	12.000	24.000	32.000	95.00	46.00	2.28	12.100
100	14.000	27.000	34.000	95.00	46.00	2.33	14.100
100	16.000	27.000	34.000	100.00	49.00	2.34	16.100
100	18.000	33.000	42.000	100.00	49.00	2.52	18.100
100	20.000	33.000	42.000	105.00	51.00	2.54	20.100
100	25.000	44.000	53.000	115.00	57.00	3.06	25.100
100	32.000	44.000	53.000	120.00	61.00	2.98	32.100

Shrink fit technology

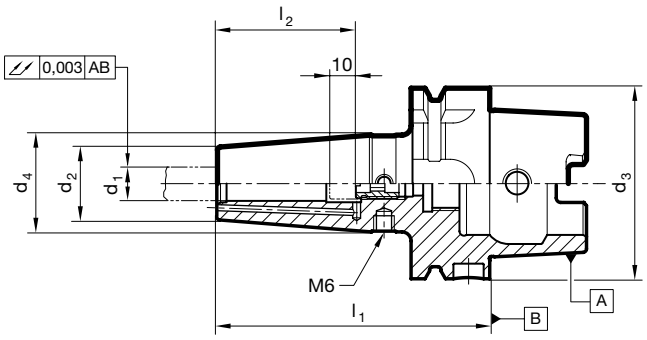
Shrink fit chucks HSK-A with peripherical cooling

Catalog no. 78755

Standard	**DIN 69882-8**
Shank	**HSK-A**
Discount group	**148**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- for tool shank tolerance h6
- also suitable for tools with internal cooling

Scope of delivery
- incl. adjustment screw
- for conventional cooling order coolant delivery set separately
- special versions on request



HSK-A d3	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	kg	Code no.
63	6.000	21.000	27.000	80.00	36.00	0.83	6.063
63	8.000	21.000	27.000	80.00	36.00	0.82	8.063
63	10.000	24.000	32.000	85.00	41.00	0.91	10.063
63	12.000	24.000	32.000	90.00	46.00	0.92	12.063
63	14.000	27.000	34.000	90.00	46.00	0.97	14.063
63	16.000	27.000	34.000	95.00	49.00	0.98	16.063
63	18.000	33.000	42.000	95.00	49.00	1.16	18.063
63	20.000	33.000	42.000	100.00	51.00	1.18	20.063
100	6.000	21.000	27.000	85.00	36.00	2.18	6.100
100	8.000	21.000	27.000	85.00	36.00	2.17	8.100
100	10.000	24.000	32.000	90.00	41.00	2.27	10.100
100	12.000	24.000	32.000	95.00	46.00	2.28	12.100
100	14.000	27.000	34.000	95.00	46.00	2.33	14.100
100	16.000	27.000	34.000	100.00	49.00	2.34	16.100
100	18.000	33.000	42.000	100.00	49.00	2.52	18.100
100	20.000	33.000	42.000	105.00	51.00	2.54	20.100
100	25.000	44.000	53.000	115.00	57.00	3.06	25.100
100	32.000	44.000	53.000	120.00	61.00	2.98	32.100

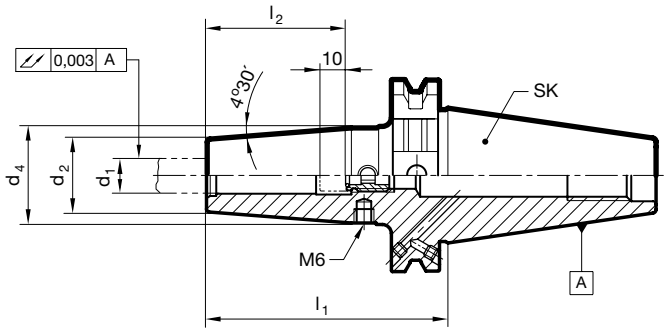
Shrink fit chucks ISO

Catalog no. 78738

Standard	**Stock std.**
Shank	**ISO-taper**
Discount group	**148**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- ISO taper to DIN 69871 form AD/B
- for tool shank tolerance h6
- suitable for tools with internal cooling

Scope of delivery
- incl. adjustment screw
- order pull studs separately
- special versions on request



ISO-taper SK	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	kg	Code no.
40	3.000	10.000	18.000	80.00	30.00	0.90	3.040
40	4.000	10.000	18.000	80.00	35.00	0.90	4.040
40	6.000	21.000	27.000	80.00	36.00	1.00	6.040
40	8.000	21.000	27.000	80.00	36.00	1.00	8.040
40	10.000	24.000	32.000	80.00	41.00	1.10	10.040
40	12.000	24.000	32.000	80.00	46.00	1.00	12.040
40	14.000	27.000	34.000	80.00	46.00	1.10	14.040
40	16.000	27.000	34.000	80.00	49.00	1.10	16.040
40	18.000	33.000	42.000	80.00	49.00	1.20	18.040
40	20.000	33.000	42.000	80.00	51.00	1.50	20.040
40	25.000	44.000	53.000	100.00	57.00	1.50	25.040
40	32.000	44.000	53.000	100.00	61.00	1.50	32.040
50	3.000	10.000	18.000	80.00	30.00	2.60	3.050
50	4.000	10.000	18.000	80.00	35.00	2.60	4.050
50	6.000	21.000	27.000	80.00	36.00	2.80	6.050
50	8.000	21.000	27.000	80.00	36.00	2.80	8.050
50	10.000	24.000	32.000	80.00	41.00	2.80	10.050
50	12.000	24.000	32.000	80.00	46.00	2.80	12.050
50	14.000	27.000	34.000	80.00	46.00	2.80	14.050
50	16.000	27.000	34.000	80.00	49.00	2.80	16.050
50	18.000	33.000	42.000	80.00	49.00	3.00	18.050
50	20.000	33.000	42.000	80.00	51.00	3.00	20.050
50	25.000	44.000	53.000	100.00	57.00	3.50	25.050
50	32.000	44.000	53.000	100.00	61.00	3.30	32.050

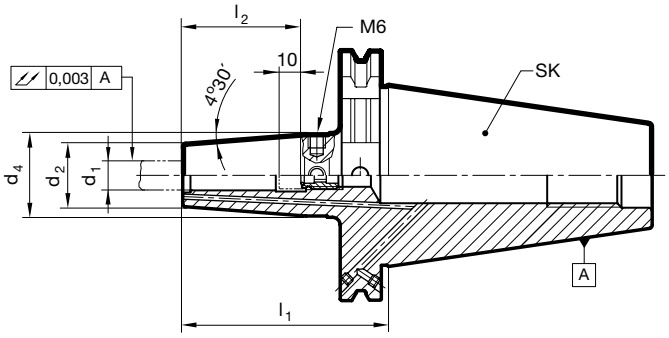
Shrink fit chucks ISO with peripherical cooling

Catalog no. 78729

Standard	**Stock std.**
Shank	**ISO-taper**
Discount group	**148**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- ISO taper to DIN 69871 form AD/B
- for tool shank tolerance h6
- good chip evacuation and increased process reliability
- also suitable for tools with internal cooling

Scope of delivery
- incl. adjustment screw
- order pull studs separately
- special versions on request



ISO-taper SK	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	kg	Code no.
40	6.000	21.000	27.000	80.00	36.00	1.00	6.040
40	8.000	21.000	27.000	80.00	36.00	1.00	8.040
40	10.000	24.000	32.000	80.00	41.00	1.10	10.040
40	12.000	24.000	32.000	80.00	46.00	1.00	12.040
40	14.000	27.000	34.000	80.00	46.00	1.10	14.040
40	16.000	27.000	34.000	80.00	49.00	1.10	16.040
40	18.000	33.000	42.000	80.00	49.00	1.20	18.040
40	20.000	33.000	42.000	80.00	51.00	1.50	20.040
50	6.000	21.000	27.000	80.00	36.00	2.80	6.050
50	8.000	21.000	27.000	80.00	36.00	2.80	8.050
50	10.000	24.000	32.000	80.00	41.00	2.80	10.050
50	12.000	24.000	32.000	80.00	46.00	2.80	12.050
50	14.000	27.000	34.000	80.00	46.00	2.80	14.050
50	16.000	27.000	34.000	80.00	49.00	2.80	16.050
50	18.000	33.000	42.000	80.00	49.00	3.00	18.050
50	20.000	33.000	42.000	80.00	51.00	3.00	20.050
50	25.000	44.000	53.000	100.00	57.00	3.50	25.050
50	32.000	44.000	53.000	100.00	61.00	3.30	32.050

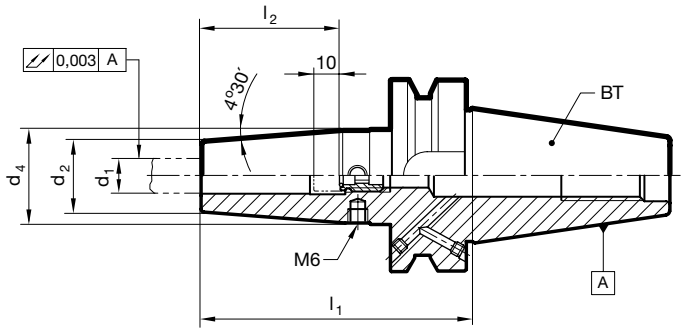
Shrink fit chucks MAS-BT

Catalog no. 78739

Standard	**Stock std.**
Shank	**MAS-BT**
Discount group	**148**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- incl. balancing thread 4xM6/6xM6
- MAS-BT to JIS B 6339
- for tool shank tolerance h6
- suitable for tools with internal cooling

Scope of delivery
- incl. adjustment screw
- order pull studs separately
- special versions on request



BT	Form	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	kg	Code no.
40	JD/JF	3.000	10.000	18.000	85.00	30.00	1.00	3.040
40	JD/JF	4.000	10.000	18.000	85.00	35.00	1.00	4.040
40	JD/JF	6.000	21.000	27.000	90.00	36.00	1.20	6.040
40	JD/JF	8.000	21.000	27.000	90.00	36.00	1.20	8.040
40	JD/JF	10.000	24.000	32.000	90.00	41.00	1.30	10.040
40	JD/JF	12.000	24.000	32.000	90.00	46.00	1.30	12.040
40	JD/JF	14.000	27.000	34.000	90.00	46.00	1.40	14.040
40	JD/JF	16.000	27.000	34.000	90.00	49.00	1.40	16.040
40	JD/JF	18.000	33.000	42.000	90.00	49.00	1.70	18.040
40	JD/JF	20.000	33.000	42.000	90.00	51.00	1.70	20.040
40	JD/JF	25.000	44.000	53.000	100.00	57.00	1.80	25.040
40	JD/JF	32.000	44.000	53.000	100.00	61.00	0.757	32.040
50	JD/JF	6.000	21.000	27.000	100.00	36.00	2.90	6.050
50	JD/JF	8.000	21.000	27.000	100.00	36.00	2.90	8.050
50	JD/JF	10.000	24.000	32.000	100.00	41.00	2.90	10.050
50	JD/JF	12.000	24.000	32.000	100.00	46.00	2.90	12.050
50	JD/JF	14.000	27.000	34.000	100.00	46.00	3.00	14.050
50	JD/JF	16.000	27.000	34.000	100.00	49.00	3.00	16.050
50	JD/JF	18.000	33.000	42.000	100.00	49.00	1.90	18.050
50	JD/JF	20.000	33.000	42.000	100.00	51.00	1.90	20.050
50	JD/JF	25.000	44.000	53.000	110.00	57.00	2.20	25.050
50	JD/JF	32.000	44.000	53.000	110.00	61.00	2.20	32.050

TOOL HOLDERS

Side lock holders HSK-A with peripherical cooling, Weldon type

Catalog no. 78232

Standard	**DIN 69882-4**
Shank	**HSK-A**
Discount group	**114**

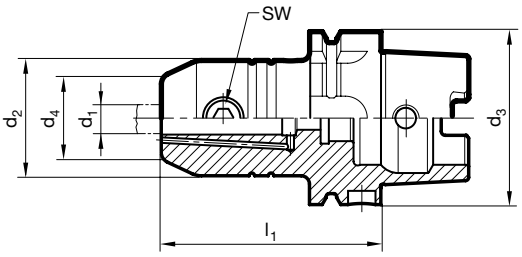
Product information
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form B "Weldon"
- from bore d1 = 25 with two clamping screws
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- coolant ducts:

d = 6 - 14 with two coolant ducts

d = 16 - 40 with four coolant ducts

- also suitable for tools with internal cooling

Scope of delivery
- incl. clamping screw
- order coolant delivery set separately
- special versions on request



HSK-A d3	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	SW	kg	Code no.
63	6.000	25.000	15.000	65.00	3.00	0.80	6.063
63	8.000	28.000	20.000	65.00	4.00	0.80	8.063
63	10.000	35.000	25.000	65.00	5.00	0.90	10.063
63	12.000	42.000	30.000	80.00	6.00	1.20	12.063
63	14.000	44.000	32.000	80.00	6.00	1.20	14.063
63	16.000	48.000	36.000	80.00	6.00	1.30	16.063
63	18.000	50.000	38.000	80.00	6.00	1.40	18.063
63	20.000	52.000	40.000	80.00	8.00	1.40	20.063
63	25.000	65.000	45.000	110.00	10.00	2.40	25.063
63	32.000	72.000	56.000	110.00	10.00	2.70	32.063
100	6.000	25.000	15.000	80.00	3.00	3.00	6.100
100	8.000	28.000	20.000	80.00	4.00	3.20	8.100
100	10.000	35.000	25.000	80.00	5.00	3.40	10.100
100	12.000	42.000	30.000	80.00	6.00	3.40	12.100
100	14.000	44.000	32.000	80.00	6.00	3.50	14.100
100	16.000	48.000	36.000	100.00	6.00	3.80	16.100
100	18.000	50.000	38.000	100.00	6.00	3.80	18.100
100	20.000	52.000	40.000	100.00	8.00	3.90	20.100
100	25.000	65.000	45.000	100.00	10.00	3.90	25.100
100	32.000	72.000	56.000	100.00	10.00	4.20	32.100
100	40.000	85.000	60.000	110.00	10.00	4.60	40.100

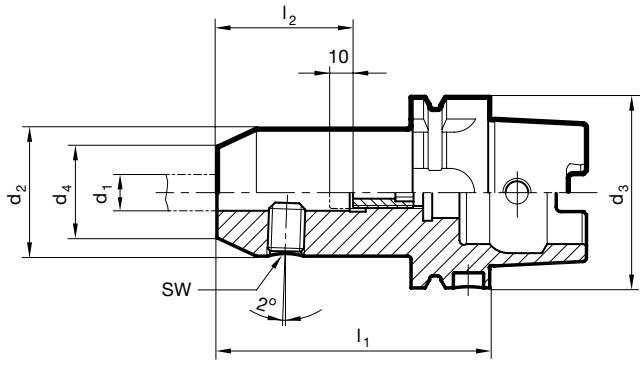
Side lock holders HSK-A, Whistle Notch type

Catalog no. 78334

Standard	**DIN 69882-5**
Shank	**HSK-A**
Discount group	**114**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form E „Whistle Notch“
- from bore d1 = 25 with two clamping screws
- suitable for tools with internal cooling

Scope of delivery
- incl. clamping screw and adjustment screw
- order coolant delivery set separately



HSK-A d3	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	SW	kg	Code no.
63	6.000	25.000	15.000	80.00	36.00	3.00	0.86	6.063
63	8.000	28.000	20.000	80.00	36.00	4.00	0.90	8.063
63	10.000	35.000	25.000	80.00	40.00	5.00	1.00	10.063
63	12.000	42.000	30.000	90.00	45.00	6.00	1.24	12.063
63	14.000	44.000	32.000	90.00	45.00	6.00	1.28	14.063
63	16.000	48.000	36.000	100.00	48.00	6.00	1.53	16.063
63	18.000	50.000	38.000	100.00	48.00	6.00	1.60	18.063
63	20.000	52.000	40.000	100.00	50.00	8.00	1.65	20.063
63	25.000	65.000	45.000	110.00	56.00	10.00	2.34	25.063
63	32.000	72.000	56.000	110.00	60.00	10.00	2.54	32.063
100	6.000	25.000	15.000	90.00	36.00	3.00	2.60	6.100
100	8.000	28.000	20.000	90.00	36.00	4.00	2.60	8.100
100	10.000	35.000	25.000	90.00	40.00	5.00	2.60	10.100
100	12.000	42.000	30.000	100.00	45.00	6.00	2.80	12.100
100	14.000	44.000	32.000	100.00	45.00	6.00	2.85	14.100
100	16.000	48.000	36.000	100.00	48.00	6.00	2.97	16.100
100	18.000	50.000	38.000	100.00	48.00	6.00	3.10	18.100
100	20.000	52.000	40.000	110.00	50.00	8.00	3.23	20.100
100	25.000	65.000	45.000	120.00	56.00	10.00	4.06	25.100
100	32.000	72.000	56.000	120.00	60.00	10.00	4.40	32.100

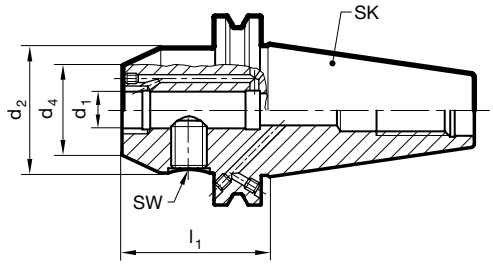
Side lock holders ISO with peripherical cooling, Weldon type

Catalog no. 78317

Standard	**Stock std.**
Shank	**ISO-taper**
Discount group	**114**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form B "Weldon"
- ISO taper to DIN 69871 form AD/B
- from bore d1 = 25 with two clamping screws
- form B supplied with threaded pins in bores
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- also suitable for tools with internal cooling

Scope of delivery
- incl. clamping screw
- order pull studs separately



ISO-taper SK	Form	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	SW	kg	Code no.
40	AD/B	6.000	25.000	15.000	50.00	3.00	0.90	6.040
40	AD/B	8.000	28.000	20.000	50.00	4.00	0.90	8.040
40	AD/B	10.000	35.000	25.000	50.00	5.00	1.00	10.040
40	AD/B	12.000	42.000	30.000	50.00	6.00	1.20	12.040
40	AD/B	14.000	44.000	32.000	50.00	6.00	1.20	14.040
40	AD/B	16.000	48.000	36.000	63.00	6.00	1.20	16.040
40	AD/B	18.000	50.000	38.000	63.00	6.00	1.40	18.040
40	AD/B	20.000	52.000	40.000	63.00	8.00	1.50	20.040
40	AD/B	25.000	65.000	45.000	100.00	10.00	2.30	25.040
40	AD/B	32.000	72.000	56.000	100.00	10.00	2.50	32.040
50	AD/B	6.000	25.000	15.000	63.00	3.00	2.70	6.050
50	AD/B	8.000	28.000	20.000	63.00	4.00	2.70	8.050
50	AD/B	10.000	35.000	25.000	63.00	5.00	2.90	10.050
50	AD/B	12.000	42.000	30.000	63.00	6.00	3.00	12.050
50	AD/B	14.000	44.000	32.000	63.00	6.00	3.00	14.050
50	AD/B	16.000	48.000	36.000	63.00	6.00	3.00	16.050
50	AD/B	18.000	50.000	38.000	63.00	6.00	3.00	18.050
50	AD/B	20.000	52.000	40.000	63.00	8.00	3.10	20.050
50	AD/B	25.000	65.000	45.000	80.00	10.00	3.70	25.050
50	AD/B	32.000	72.000	56.000	100.00	10.00	4.50	32.050

Tool holders

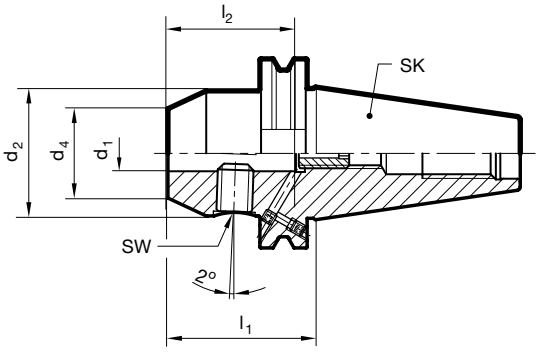
Side lock holders ISO, Whistle Notch type

Catalog no. 78322

Standard	**Stock std.**
Shank	**ISO-taper**
Discount group	**114**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- with bore to DIN 1835-2 form E „Whistle Notch“
- ISO taper to DIN 69871 form AD/B
- from bore d1 = 25 with two clamping screws
- suitable for tools with internal cooling

Scope of delivery
- incl. clamping screw and adjustment screw
- order pull studs separately



ISO-taper SK	Form	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	SW	kg	Code no.
40	AD/B	6.000	25.000	15.000	50.00	36.00	3.00	0.90	6.040
40	AD/B	8.000	28.000	20.000	50.00	36.00	4.00	0.90	8.040
40	AD/B	10.000	35.000	25.000	50.00	40.00	5.00	1.00	10.040
40	AD/B	12.000	42.000	30.000	50.00	45.00	6.00	1.20	12.040
40	AD/B	14.000	44.000	32.000	50.00	45.00	6.00	1.20	14.040
40	AD/B	16.000	48.000	36.000	63.00	48.00	6.00	1.20	16.040
40	AD/B	18.000	50.000	38.000	63.00	48.00	6.00	1.40	18.040
40	AD/B	20.000	52.000	40.000	63.00	50.00	8.00	1.50	20.040
40	AD/B	25.000	65.000	45.000	100.00	56.00	10.00	2.30	25.040
40	AD/B	32.000	72.000	56.000	100.00	60.00	10.00	2.50	32.040
50	AD/B	6.000	25.000	15.000	63.00	36.00	3.00	2.70	6.050
50	AD/B	8.000	28.000	20.000	63.00	36.00	4.00	2.70	8.050
50	AD/B	10.000	35.000	25.000	63.00	40.00	5.00	2.90	10.050
50	AD/B	12.000	42.000	30.000	63.00	45.00	6.00	3.00	12.050
50	AD/B	14.000	44.000	32.000	63.00	45.00	6.00	3.00	14.050
50	AD/B	16.000	48.000	36.000	63.00	48.00	6.00	3.00	16.050
50	AD/B	18.000	50.000	38.000	63.00	48.00	6.00	3.00	18.050
50	AD/B	20.000	52.000	40.000	63.00	50.00	8.00	3.10	20.050
50	AD/B	25.000	65.000	45.000	80.00	56.00	10.00	3.70	25.050
50	AD/B	32.000	72.000	56.000	100.00	60.00	10.00	4.50	32.050

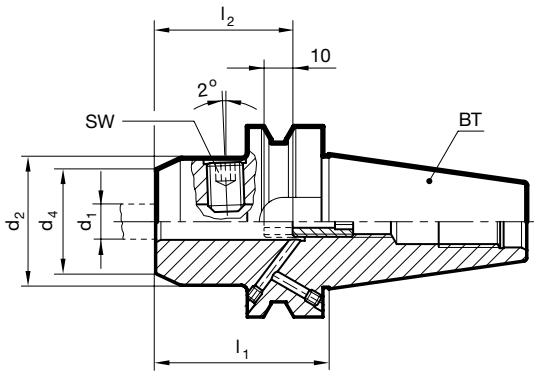
Side lock holders MAS-BT, Whistle Notch type

Catalog no. 78233

Standard	**Stock std.**
Shank	**MAS-BT**
Discount group	**114**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- MAS-BT to JIS B 6339
- with bore to DIN 1835-2 form E „Whistle Notch“
- from bore d1 = 25 with two clamping screws
- coolant supply form JD/JF (*: BT50 version JD without coolant supply over collar)
- suitable for tools with internal cooling

Scope of delivery
- incl. clamping screw and adjustment screw
- order pull studs separately



BT	Form	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	l2 mm	SW	kg	Code no.
40	JD/JF	6.000	25.000	15.000	50.00	36.00	3.00	0.019	6.040
40	JD/JF	8.000	28.000	20.000	50.00	36.00	4.00	0.033	8.040
40	JD/JF	10.000	35.000	25.000	63.00	40.00	5.00	0.058	10.040
40	JD/JF	12.000	42.000	30.000	63.00	45.00	6.00	0.083	12.040
40	JD/JF	14.000	44.000	32.000	63.00	45.00	6.00	0.113	14.040
40	JD/JF	16.000	48.000	36.000	116.40	48.00	6.00	0.209	16.040
40	JD/JF	18.000	50.000	38.000	63.00	48.00	6.00	0.186	18.040
40	JD/JF	20.000	52.000	40.000	63.00	50.00	8.00	0.23	20.040
40	JD/JF	25.000	63.000	45.000	90.00	56.00	10.00	0.435	25.040
40	JD/JF	32.000	72.000	56.000	100.00	60.00	10.00	0.757	32.040
50	JD	6.000	25.000	15.000	62.60	36.00	3.00	0.027	6.050
50	JD	8.000	28.000	20.000	62.60	36.00	4.00	0.048	8.050
50	JD	10.000	35.000	25.000	62.60	40.00	5.00	0.074	10.050
50	JD	12.000	42.000	30.000	80.00	45.00	6.00	0.118	12.050
50	JD	14.000	44.000	32.000	80.00	45.00	6.00	0.16	14.050
50	JD	16.000	48.000	36.000	80.00	48.00	6.00	0.209	16.050
50	JD	18.000	50.000	38.000	80.00	48.00	6.00	0.264	18.050
50	JD	20.000	52.000	40.000	80.00	50.00	8.00	0.326	20.050
50	JD	25.000	65.000	45.000	100.00	56.00	10.00	0.565	25.050
50	JD	32.000	72.000	56.000	105.00	60.00	10.00	0.948	32.050

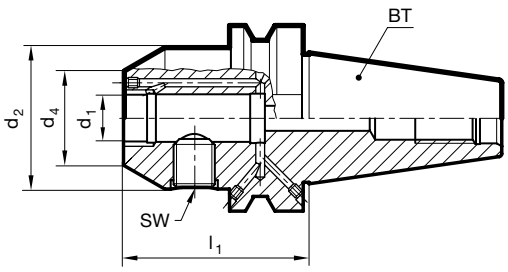
Side lock holders MAS-BT with peripherical cooling, Weldon type

Catalog no. 78234

Standard	**Stock std.**
Shank	**MAS-BT**
Discount group	**114**

Product information
- balancing quality: G6.3 / 15,000 rev./min
- for tool shank tolerance h6
- MAS-BT to JIS B 6339
- with bore to DIN 1835-2 form B "Weldon"
- from bore d1 = 25 with two clamping screws
- with coolant ducts in the bore for peripheral cooling, improving process and tool life
- coolant supply form JD/JF
- also suitable for tools with internal cooling

Scope of delivery
- incl. clamping screw
- order pull studs separately
- special versions on request



BT	Form	for shank Ø d1 mm	d2 mm	d4 mm	l1 mm	SW	kg	Code no.
40	JD/JF	6.000	25.000	15.000	50.00	3.00	0.019	6.040
40	JD/JF	8.000	28.000	20.000	50.00	4.00	0.033	8.040
40	JD/JF	10.000	35.000	25.000	63.00	5.00	0.058	10.040
40	JD/JF	12.000	42.000	30.000	63.00	6.00	0.083	12.040
40	JD/JF	14.000	44.000	32.000	63.00	6.00	0.113	14.040
40	JD/JF	16.000	48.000	36.000	63.00	6.00	0.147	16.040
40	JD/JF	18.000	50.000	38.000	63.00	6.00	0.186	18.040
40	JD/JF	20.000	52.000	40.000	63.00	8.00	0.23	20.040
40	JD/JF	25.000	63.000	45.000	90.00	10.00	0.435	25.040
40	JD/JF	32.000	72.000	56.000	100.00	10.00	0.757	32.040

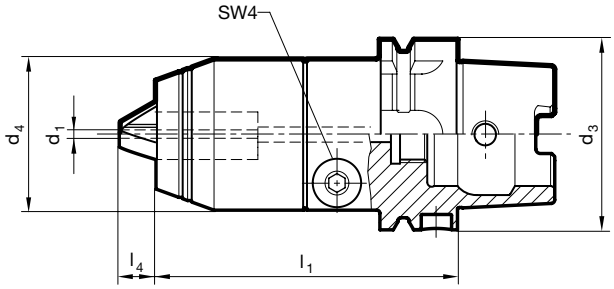
Drilling chucks HSK-A

Catalog no. 78346

Standard	**Stock std.**
Shank	**HSK-A**
Discount group	**114**

Product information
- for clamping all straight shank tools
- HSK-A to DIN 69893
- continous Ø-range
- high clamping force thanks to robust worm gear
- max. coolant pressure up to 50 bar
- NC drilling chucks are suitable for speeds up to 7,000 rev. /min. With optional fine balancing up to max. 18,000 rev./min
- also suitable for tools with internal cooling

Scope of delivery
- incl. hexagon chuck key
- order coolant delivery set separately



HSK-A d3	clamping range d1 mm	d4 mm	l1 mm	l4 mm	kg	Code no.
63	1,0-16,0	57.000	104.00	11.00	1.85	16.063
100	1,0-16,0	57.000	110.00	11.00	3.30	16.100

Tool holders

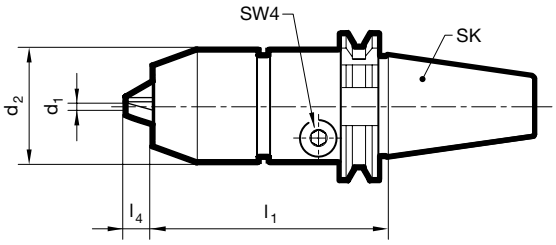
Drilling chucks ISO

Catalog no. 78242

Standard	**Stock std.**
Shank	**ISO-taper**
Discount group	**114**

Product information
- for clamping all straight shank tools
- ISO taper to DIN 69871 form AD
- continous Ø-range
- high clamping force thanks to robust worm gear
- max. coolant pressure up to 50 bar
- NC drilling chucks are suitable for speeds up to 7,000 rev. /min. With optional fine balancing up to max. 18,000 rev./min
- also suitable for tools with internal cooling

Scope of delivery
- incl. hexagon chuck key
- order pull studs separately



ISO-taper SK	clamping range d1 mm	d2 mm	l1 mm	l4 mm	kg	Code no.
40	1,0-16,0	50.000	92.00	12.00	0.17	16.040
50	1,0-16,0	50.000	92.00	12.00	0.209	16.050

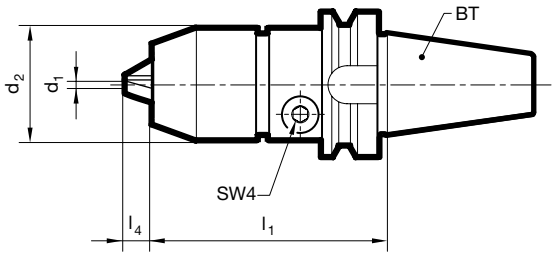
Drilling chucks MAS-BT

Catalog no. 78240

Standard	**Stock std.**
Shank	**MAS-BT**
Discount group	**114**

Product information
- for clamping all straight shank tools
- MAS-BT to JIS B 6339
- continous Ø-range
- high clamping force thanks to robust worm gear
- max. coolant pressure up to 50 bar
- NC drilling chucks are suitable for speeds up to 7,000 rev. /min. With optional fine balancing up to max. 18,000 rev./min
- also suitable for tools with internal cooling

Scope of delivery
- incl. hexagon chuck key
- order pull studs separately



BT	clamping range d1 mm	d2 mm	l1 mm	l4 mm	kg	Code no.
40	1,0-16,0	50.000	100.00	12.00	0.176	16.040
50	1,0-16,0	50.000	111.00	12.00	0.231	16.050

TAPPING CHUCKS

Tapping chucks

Synchro tapping chucks with straight shank

Catalog no. 78326

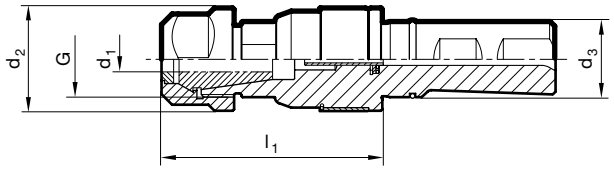
Standard	**Stock std.**
Shank	**DIN 1835 B/E**
Discount group	**114**

Product information

- compensate synchronisation errors
- minimal length compensation in tension and compression direction balances very small pitch differences between synchro spindle and tap, which can cause high frictional forces on the thread flanks and increase thread quality and tool life
- length-setting screw allows 2 to 3 mm re-adjustment
- suitable for internal cooling
- max. coolant pressure up to 50 bar

Scope of delivery

- incl. sealed IC/ER clamping
- incl. adjustment key for adjustment screws
- order adjustment screws „plan“ no. 78364, tapping collet, no. 78308, sealing washer, no. 78335 and clamping key separately



d3 mm	nom. size	clamping range d1 mm	d2 mm	l1 mm	tension/compr. +- mm	torque Nm	G	kg	Code no.
25.000	ER20	4,0-11,0	34.000	72.00	0.15	40	M25 X1,5	0.54	20.025
25.000	ER32	4,0-20,0	50.000	88.00	0.15	170	M40 X1,5	1.31	32.025

Tapping chucks

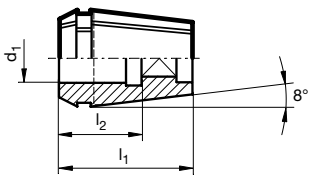
Tapping collets

Catalog no. 78308

Standard	**Stock std.**
Shank	
Discount group	**114**

Product information

- for clamping taps with square in synchro tapping chucks or collet holders



nom. size d2	for shank Ø d1 mm	□ mm	l1 mm	l2 mm	Code no.
ER20	4.000	3.00	31.50	15.00	4.020
ER20	4.500	3.40	31.50	18.00	4.520
ER20	5.500	4.30	31.50	18.00	5.520
ER20	6.000	4.90	31.50	18.00	6.020
ER20	7.000	5.50	31.50	18.00	7.020
ER20	8.000	6.20	31.50	22.00	8.020
ER20	9.000	7.00	31.50	22.00	9.020
ER20	10.000	8.00	31.50	25.00	10.020
ER20	11.000	9.00	31.50	25.00	11.020
ER32	4.000	3.00	40.00	15.00	4.032
ER32	4.500	3.40	40.00	18.00	4.532
ER32	5.500	4.30	40.00	18.00	5.532
ER32	6.000	4.90	40.00	18.00	6.032
ER32	7.000	5.50	40.00	18.00	7.032
ER32	8.000	6.20	40.00	22.00	8.032
ER32	9.000	7.00	40.00	22.00	9.032
ER32	10.000	8.00	40.00	25.00	10.032
ER32	11.000	9.00	40.00	25.00	11.032
ER32	12.000	9.00	40.00	25.00	12.032
ER32	14.000	11.00	40.00	25.00	14.032
ER32	16.000	12.00	40.00	25.00	16.032
ER32	18.000	14.50	40.00	25.00	18.032
ER32	20.000	16.00	40.00	28.00	20.032

Tapping chucks

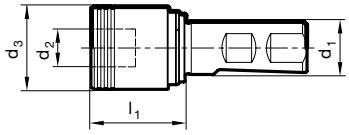
Quick change tapping chucks

Catalog no. 78340

Standard	**Stock std.**
Shank	**DIN 1835 B/E**
Discount group	**114**

Product information

- quick change tapping chucks are provided with a ball guided length compensator that compensates any length difference between spindle feed and pitch of tap thread



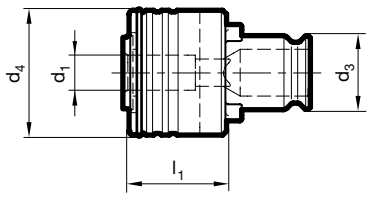
nom. size	d1 mm	d2 mm	d3 mm	l1 mm	tension/compr. +- mm	kg	Code no.
M3-M12	25.000	19.000	36.000	39.00	7.50	0.40	19.025
M8-M20	25.000	31.000	53.000	63.00	10.00	0.90	31.025

Quick change tapping chuck adaptors

Catalog no. 78206

Standard	**Stock std.**
Shank	
Discount group	**114**

Product information
- with safety clutch
- suitable for HSS taps
- for solid carbide taps a clamping groove is required on the shank to provide additional drive
- suitable for internal cooling
- max. coolant pressure up to 50 bar



nom. size	for shank Ø d1	□	d3	d4	l1	Code no.
	mm	mm	mm	mm	mm	
M3-M12	2.200		19.000	32.000	25.00	19.022
M3-M12	2.500	2.10	19.000	32.000	25.00	19.025
M3-M12	2.800	2.10	19.000	32.000	25.00	19.028
M3-M12	3.500	2.70	19.000	32.000	25.00	19.035
M3-M12	4.000	3.00	19.000	32.000	25.00	19.040
M3-M12	4.500	3.40	19.000	32.000	25.00	19.045
M3-M12	5.500	4.50	19.000	32.000	25.00	19.055
M3-M12	6.000	4.90	19.000	32.000	25.00	19.060
M3-M12	7.000	5.50	19.000	32.000	25.00	19.070
M3-M12	8.000	6.20	19.000	32.000	25.00	19.080
M3-M12	9.000	7.00	19.000	32.000	25.00	19.090
M3-M12	10.000	8.00	19.000	32.000	25.00	19.100
M8-M20	6.000	4.90	31.000	50.000	34.00	31.060
M8-M20	7.000	5.50	31.000	50.000	34.00	31.070
M8-M20	8.000	6.20	31.000	50.000	34.00	31.080
M8-M20	9.000	7.00	31.000	50.000	34.00	31.090
M8-M20	10.000	8.00	31.000	50.000	34.00	31.100
M8-M20	11.000	9.00	31.000	50.000	34.00	31.110
M8-M20	12.000	9.00	31.000	50.000	34.00	31.120
M8-M20	14.000	11.00	31.000	50.000	34.00	31.140
M8-M20	16.000	12.00	31.000	50.000	34.00	31.160

Setting screws

Catalog no. 78364

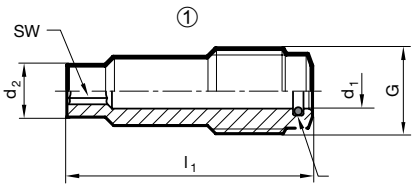
Standard	**Stock std.**
Shank	
Discount group	**114**

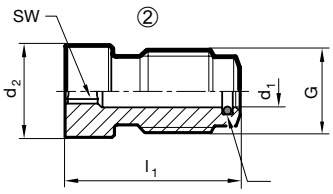
Product information

- for synchro tapping chucks with straight shank no. 78326
- for conventional internal cooling
- with facing stop for standard shank ends

Scope of delivery

- with O-ring for secure seal





nom. size	for shank Ø mm	□ mm	G	d1 mm	d2 mm	l1 mm	SW	Fig.	Code no.
ER20	6.000	4.9	M 8 X1	3.600	4.800	26.00	2.50	1	6.020
ER20	7.000	5.5	M 8 X1	3.600	5.400	25.80	2.50	1	7.020
ER20	8.000	6.2	M 8 X1	3.600	6.100	20.90	2.50	1	8.020
ER20	9.000	7.0	M 8 X1	3.600	6.900	20.25	2.50	1	9.020
ER20	10.000	8.0	M 8 X1	3.600	7.800	15.80	2.50	2	10.020
ER20	11.000	9.0	M 8 X1	3.600	8.800	14.80	2.50	2	11.020
ER32	6.000	4.9	M10 X1	4.100	4.800	34.00	3.00	1	6.032
ER32	7.000	5.5	M10 X1	4.100	5.400	33.80	3.00	1	7.032
ER32	8.000	6.2	M10 X1	4.100	6.100	28.80	3.00	1	8.032
ER32	9.000	7.0	M10 X1	4.100	6.900	28.25	3.00	1	9.032
ER32	10.000	8.0	M10 X1	4.100	7.800	23.80	3.00	1	10.032
ER32	11.000	9.0	M10 X1	4.100	8.800	22.90	3.00	1	11.032
ER32	14.000	11.0	M10 X1	4.100	10.800	20.65	3.00	2	14.032
ER32	16.000	12.0	M10 X1	4.100	11.800	19.65	3.00	2	16.032
ER32	18.000	14.5	M10 X1	4.100	14.300	18.00	3.00	2	18.032

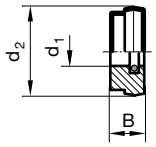
Sealing washers

Catalog no. 78335

Standard	**Stock std.**
Shank	
Discount group	**114**

Product information

- The range of these washers comprises all sizes between the given increments by ordering the next larger diameter i.e. for dia. 6.3 mm please order size 6.5 mm

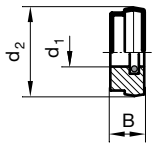


nom. size	d1 mm	d2 mm	B mm	Code no.
ER16	3.000	13.000	4.00	3.016
ER16	3.500	13.000	4.00	3.516
ER16	4.000	13.000	4.00	4.016
ER16	4.500	13.000	4.00	4.516
ER16	5.000	13.000	4.00	5.016
ER16	5.500	13.000	4.00	5.516
ER16	6.000	13.000	4.00	6.016
ER16	6.500	13.000	4.00	6.516
ER16	7.000	13.000	4.00	7.016
ER16	7.500	13.000	4.00	7.516
ER16	8.000	13.000	4.00	8.016
ER16	8.500	13.000	4.00	8.516
ER16	9.000	13.000	4.00	9.016
ER16	9.500	13.000	4.00	9.516
ER16	10.000	13.000	4.00	10.016
ER20	3.000	16.000	4.00	3.020
ER20	3.500	16.000	4.00	3.520
ER20	4.000	16.000	4.00	4.020
ER20	4.500	16.000	4.00	4.520
ER20	5.000	16.000	4.00	5.020
ER20	5.500	16.000	4.00	5.520
ER20	6.000	16.000	4.00	6.020
ER20	6.500	16.000	4.00	6.520
ER20	7.000	16.000	4.00	7.020

Tapping chucks

Sealing washers

Catalog no. 78335

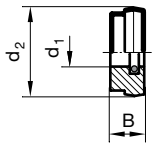


nom. size	d1 mm	d2 mm	B mm	Code-Nr.
ER20	7.500	16.000	4.00	7.520
ER20	8.000	16.000	4.00	8.020
ER20	8.500	16.000	4.00	8.520
ER20	9.000	16.000	4.00	9.020
ER20	9.500	16.000	4.00	9.520
ER20	10.000	16.000	4.00	10.020
ER20	10.500	16.000	4.00	10.520
ER20	11.000	16.000	4.00	11.020
ER20	11.500	16.000	4.00	11.520
ER20	12.000	16.000	4.00	12.020
ER20	12.500	16.000	4.00	12.520
ER20	13.000	16.000	4.00	13.020
ER25	3.000	21.000	4.00	3.025
ER25	3.500	21.000	4.00	3.525
ER25	4.000	21.000	4.00	4.025
ER25	4.500	21.000	4.00	4.525
ER25	5.000	21.000	4.00	5.025
ER25	5.500	21.000	4.00	5.525
ER25	6.000	21.000	4.00	6.025
ER25	6.500	21.000	4.00	6.525
ER25	7.000	21.000	4.00	7.025
ER25	7.500	21.000	4.00	7.525
ER25	8.000	21.000	4.00	8.025
ER25	8.500	21.000	4.00	8.525
ER25	9.000	21.000	4.00	9.025
ER25	9.500	21.000	4.00	9.525
ER25	10.000	21.000	4.00	10.025
ER25	10.500	21.000	4.00	10.525
ER25	11.000	21.000	4.00	11.025
ER25	11.500	21.000	4.00	11.525
ER25	12.000	21.000	4.00	12.025
ER25	12.500	21.000	4.00	12.525
ER25	13.000	21.000	4.00	13.025
ER25	13.500	21.000	4.00	13.525
ER25	14.000	21.000	4.00	14.025
ER25	14.500	21.000	4.00	14.525
ER25	15.000	21.000	4.00	15.025
ER25	15.500	21.000	4.00	15.525
ER25	16.000	21.000	4.00	16.025
ER32	3.000	27.000	4.00	3.032
ER32	3.500	27.000	4.00	3.532
ER32	4.000	27.000	4.00	4.032
ER32	4.500	27.000	4.00	4.532
ER32	5.000	27.000	4.00	5.032
ER32	5.500	27.000	4.00	5.532
ER32	6.000	27.000	4.00	6.032
ER32	6.500	27.000	4.00	6.532
ER32	7.000	27.000	4.00	7.032

Tapping chucks

Sealing washers

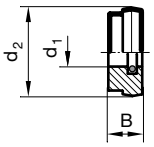
Catalog no. 78335



nom. size	d1 mm	d2 mm	B mm	Code-Nr.
ER32	7.500	27.000	4.00	7.532
ER32	8.000	27.000	4.00	8.032
ER32	8.500	27.000	4.00	8.532
ER32	9.000	27.000	4.00	9.032
ER32	9.500	27.000	4.00	9.532
ER32	10.000	27.000	4.00	10.032
ER32	10.500	27.000	4.00	10.532
ER32	11.000	27.000	4.00	11.032
ER32	11.500	27.000	4.00	11.532
ER32	12.000	27.000	4.00	12.032
ER32	12.500	27.000	4.00	12.532
ER32	13.000	27.000	4.00	13.032
ER32	13.500	27.000	4.00	13.532
ER32	14.000	27.000	4.00	14.032
ER32	14.500	27.000	4.00	14.532
ER32	15.000	27.000	4.00	15.032
ER32	15.500	27.000	4.00	15.532
ER32	16.000	27.000	4.00	16.032
ER32	16.500	27.000	4.00	16.532
ER32	17.000	27.000	4.00	17.032
ER32	17.500	27.000	4.00	17.532
ER32	18.000	27.000	4.00	18.032
ER32	18.500	27.000	4.00	18.532
ER32	19.000	27.000	4.00	19.032
ER32	19.500	27.000	4.00	19.532
ER32	20.000	27.000	4.00	20.032
ER40	3.500	33.500	4.00	3.540
ER40	4.000	33.500	4.00	4.040
ER40	4.500	33.500	4.00	4.540
ER40	5.000	33.500	4.00	5.040
ER40	5.500	33.500	4.00	5.540
ER40	6.000	33.500	4.00	6.040
ER40	6.500	33.500	4.00	6.540
ER40	7.000	33.500	4.00	7.040
ER40	7.500	33.500	4.00	7.540
ER40	8.000	33.500	4.00	8.040
ER40	8.500	33.500	4.00	8.540
ER40	9.000	33.500	4.00	9.040
ER40	9.500	33.500	4.00	9.540
ER40	10.000	33.500	4.00	10.040
ER40	10.500	33.500	4.00	10.540
ER40	11.000	33.500	4.00	11.040
ER40	11.500	33.500	4.00	11.540
ER40	12.000	33.500	4.00	12.040
ER40	12.500	33.500	4.00	12.540
ER40	13.000	33.500	4.00	13.040
ER40	13.500	33.500	4.00	13.540
ER40	14.000	33.500	4.00	14.040

Sealing washers

Catalog no. 78335



nom. size	d1 mm	d2 mm	B mm	Code-Nr.
ER40	14.500	33.500	4.00	14.540
ER40	15.000	33.500	4.00	15.040
ER40	15.500	33.500	4.00	15.540
ER40	16.000	33.500	4.00	16.040
ER40	16.500	33.500	4.00	16.540
ER40	17.000	33.500	4.00	17.040
ER40	17.500	33.500	4.00	17.540
ER40	18.000	33.500	4.00	18.040
ER40	18.500	33.500	4.00	18.540
ER40	19.000	33.500	4.00	19.040
ER40	19.500	33.500	4.00	19.540
ER40	20.000	33.500	4.00	20.040
ER40	20.500	33.500	4.00	20.540
ER40	21.000	33.500	4.00	21.040
ER40	21.500	33.500	4.00	21.540
ER40	22.000	33.500	4.00	22.040
ER40	22.500	33.500	4.00	22.540
ER40	23.000	33.500	4.00	23.040
ER40	23.500	33.500	4.00	23.540
ER40	24.000	33.500	4.00	24.040
ER40	24.500	33.500	4.00	24.540
ER40	25.000	33.500	4.00	25.040
ER40	25.500	33.500	4.00	25.540
ER40	26.000	33.500	4.00	26.040

TECHNICAL INFORMATION

Technical information and advantages

• High torque transmission and defined radial positioning

The wedging effect between the hollow taper shank and the holder or spindle causes a friction contact over the full taper surface and the plane supporting face (fig. 1). Two keys engage with the shank end of the tool holder and provide form-closed, radial positioning, thereby excluding any possible setting errors.

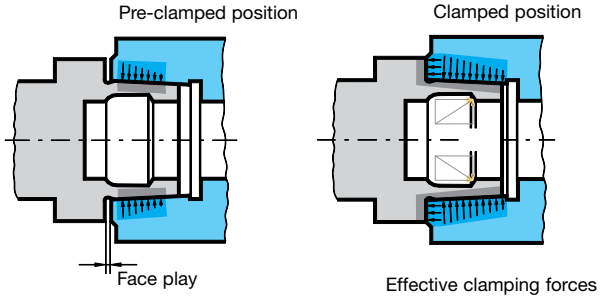
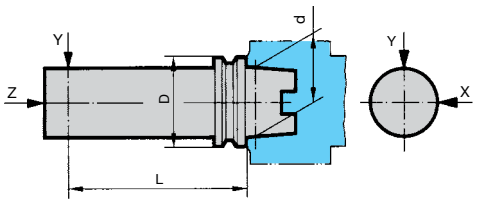


Fig. 1
Prestressing and frictional forces of hollow taper shank at the interface.

• High tool change accuracy and repeatability

The circular form engagement of the clamping claws within the hollow tool shank provides a totally tight connection between the shank and spindle or holder respectively (fig. 1, fig. 2).



HSK-size D	d mm	L mm	X mm	Y mm	Z mm
32	24	50	0,002	0,002	0,002
40	30	60	0,002	0,002	0,002
50	38	75	0,002	0,002	0,002
63	48	100	0,002	0,002	0,002
100	75	150	0,002	0,002	0,002

Fig. 2
Radial and axial repeatability of interface for manual and automatic clamping

• High speed machining performance

The higher the number of revolutions the better, as this increases both the power and effectiveness of the locking of the clamping mechanism. The direct initial stress between the hollow taper shank and the spindle holder compensates for the spindle expansion generated by the centrifugal force so that there is absolutely no radial play (fig. 1). The plane clamping position prevents any slipping in the axial direction.

• Short tool changing time

Efficient tool change due to a short shank length (approx. 1/3 of the conventional ISO taper) and light weight (approx. 50% of the ISO taper).

• Simple, cost-efficient shank design

No moving components at the tool shank means no wearing parts.

• Insensitive to foreign matter

The uninterrupted design of the ring-shaped axial plane clamping simplifies the cleaning of the coupling. During automatic tool change compressed air provides ideal cleaning in the interface.

• Coding and identification

To allow for the attachment of common identification systems, a hole of 10 mm dia. and 4.5 mm depth is provided for the data media (coding chips) in the vicinity of the collar.

• Standardising of interface

Corresponds to ISO 12164-1/DIN 69893.

• Coolant feed

The tools for automatic clamping, HSK-A, are designed for a central coolant feed by means of a duct. Tools with manual change also operate with a central coolant feed. The clamping elements are entirely sealed against the entry of coolant so that fouling is prevented.

• Installation of the coolant supply set

Coolant supply sets are to be ordered separately. The installation of the coolant duct must be carried out by the user.

Technical information and advantages

Stock has considerably expanded its ISO taper and MAS-BT tool holder program. Naturally, the tool holders are of the usual high Stock quality. This means: ISO taper and MAS-BT tool holders are produced in a special, alloyed case hardened steel with a minimum tensile strength at the core of 900 N/mm2, hardened in a low distortion hardening process to HRC 58 at a case hardening depth of 0.8 to 1.0 mm. For reasons of longevity, the surface of the tool holder is subjected to an abrasive blasting process and protected against corrosion..

Quality through precision

Stock's demand for highest precision also applies to tool holders. Therefore, ISO taper and MAS-BT chucks are precision ground: in the vicinity of the ISO taper to Ra ≤ 0.2, at the holder face to Ra ≤ 0.4. The taper tolerance is better than AT 3 with a measuring accuracy of ≤ 1µm.
Detailed information regarding the form and positional tolerances can be found for the individual tool holders on the respective pages in the catalogue. The tolerances of the holder bore and the spigot are approximately 2/3 of the DIN tolerance.

Tool holders suitable for increased speeds are generally pre-balanced. For this purpose, we have determined the imbalance and entered the balancing areas as well as balancing bores on the drawings. This levels out the imbalance to a large extent and up to approximately 8000 rev./min precision balancing is unnecessary. For higher revolutions, the pre-balanced tool holders must be precision balanced to G 6.3 or G 2.5 respectively.

Type AD/B

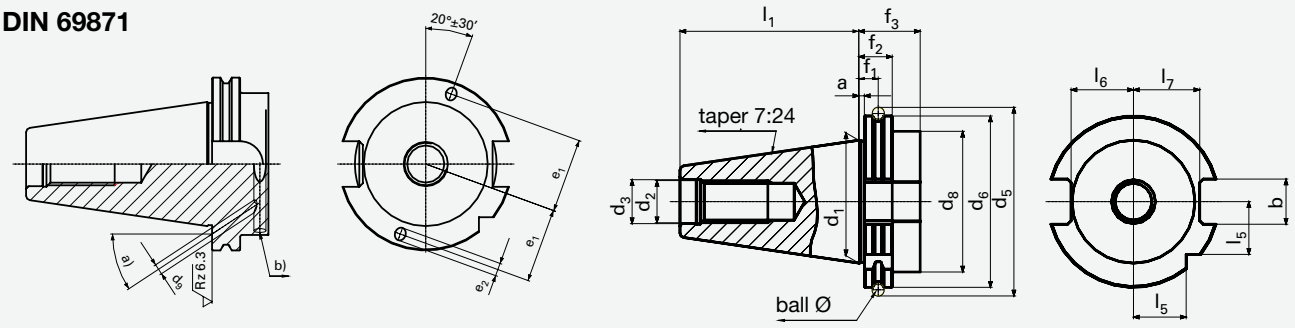
ISO taper tool holders generally produced are type AD/B. Supplied is type AD, the coolant bores at the collar are sealed with screws.

General dimensions and tolerances

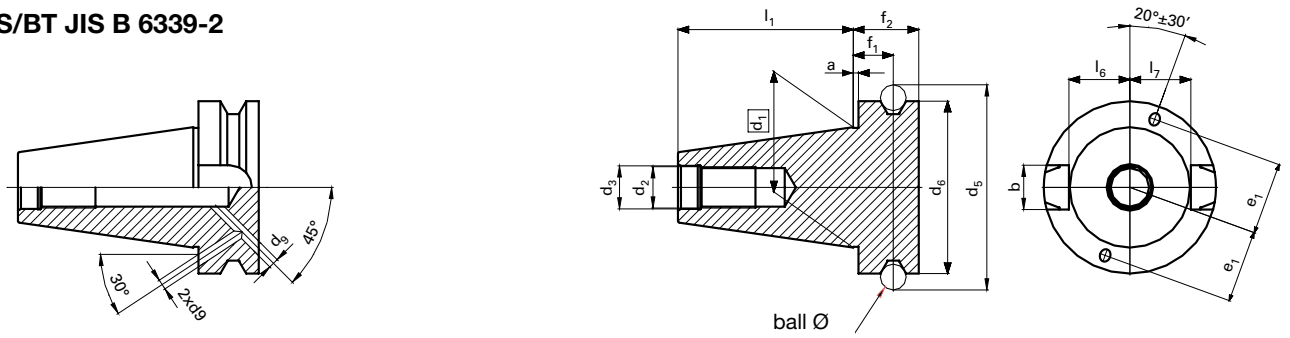
The following dimensions apply to our ISO taper and MAS-BT tool holders:

Balancing

SK DIN 69871



MAS/BT JIS B 6339-2

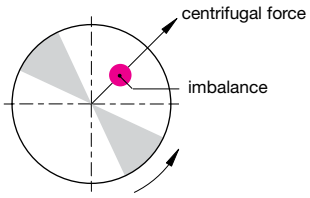


ISO taper	a mm	ball-Ø mm	b mm	d_1 mm	d_2 mm	d_3 mm	d_5 mm	d_6 mm	d_8 mm	d_9 mm	e_1 mm	f_1 mm	f_2 mm	f_3 mm	l_1 mm	l_5 mm	l_6 mm	l_7 mm
SK30	3.2	7	16.1	31.75	M12	13	59.3	50.00	45	4	21	11.1	19.1	35	47.80	15.00	16.4	19.0
SK40	3.2	7	16.1	44.45	M16	17	72.3	63.55	50	4	27	11.1	19.1	35	68.40	18.5	22.8	25.0
SK50	3.2	7	25.7	69.85	M24	25	107.25	97.50	80	6	42	11.1	19.1	35	101.75	30.0	35.5	37.7
BT30	2.0	8	16.1	31.75	M12	12.5	56.03	46.00	–	–	–	13.6	22.0	–	48.40	–	16.3	16.3
BT40	2.0	10	16.1	44.45	M16	17	75.56	63.00	–	4	27	16.6	27.0	–	65.4	–	22.6	22.6
BT50	3.0	15	25.7	69.85	M24	25	118.89	100.00	–	5.4	42	23.2	38.0	–	101.8	–	35.4	35.4

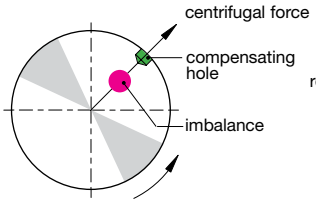
Effects of imbalance on machine spindles, tool holders and tools

Imbalance
An imbalance produces a centrifugal force during the rotation of the spindle impeding the smooth running of the tool. This imbalance influences the working process and the life span of the spindle bearings.
The centrifugal force F increases linear with the imbalance U and squared with the number of revolutions according to the formula below.

$$F = U \cdot \omega$$

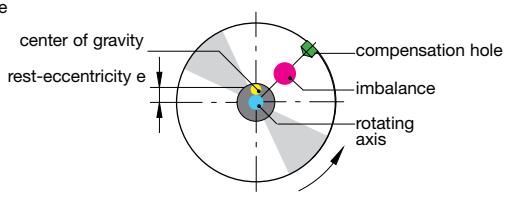


Counter balancing
To compensate for unwanted centrifugal forces, the symmetrical distribution of mass must be restored with the aim of eliminating any centrifugal forces influencing the spindle bearing. Tool holders generally have compensation holes or areas which assist in directing the total amount of all centrifugal forces influencing the axis towards zero (see DIN ISO 1940).



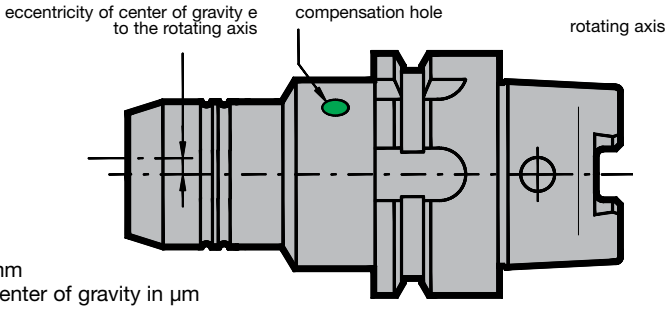
Eccentricity of center of gravity
The imbalance of a spindle causes its center of gravity to deviate a certain distance from the rotating axis in direction of the imbalance. This distance is called rest-eccentricity e or eccentricity of center of gravity. The heavier the weight of the balance body mass m, the greater the rest-imbalance U permissible.

$$e = \frac{U}{m}$$



Calculation imbalance
Imbalance is a measure, specifying how much unsymmetrical distributed mass deviates radially from the rotating axis.

Imbalance is measured in gmm. The measure of distance e determines the distance of the center of gravity of an element to the rotating axis. Imbalance is calculated as follows:



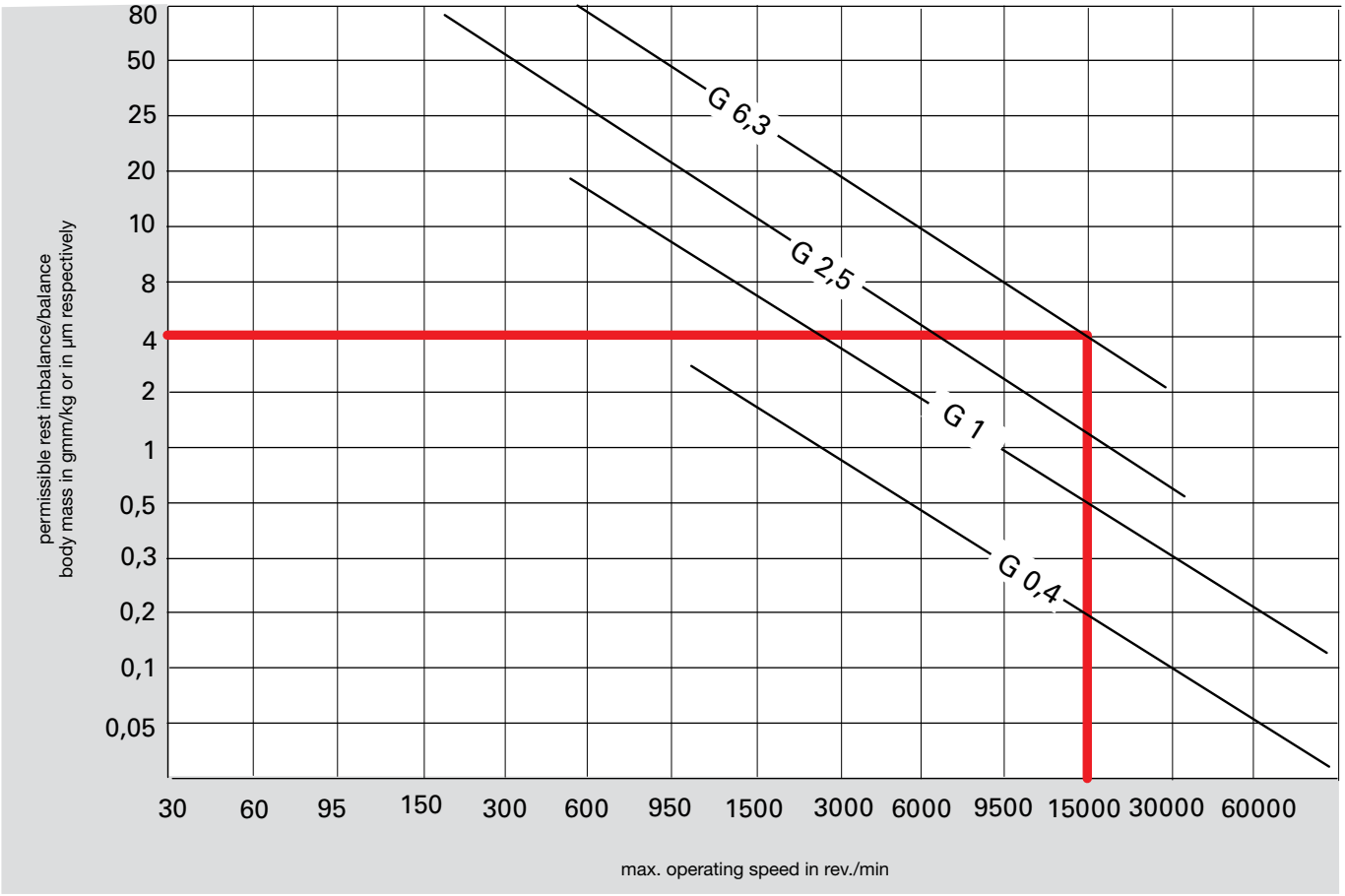
$$U = m \cdot e$$

U = imbalance in gmm
e = eccentricity of center of gravity in µm
m = mass in kg

Balancing limits
In accordance with DIN ISO 1940 the balance grade is denoted with G as well as the units gmm/kg or µm respectively and is relative to the number of revolutions. At a speed of 15.000 rev./min and a weight of 1 kg, G6.3 corresponds with a permissible center deviation between rotational axis and center of gravity axis of the spindle of 4 µm.

At twice the speed of 30,000 rev./min it would be 2 µm. If the tool holder was only half the weight, i.e. 0.5 kg, the permissible counter balancing tolerance is also halved.
Aim of counter balancing is to find a compromise between the technically feasible and the economically efficient. Because the radial interchange accuracy for a brand-new HSK holder can be 2 to 3 µm and for an ISO taper shank holder can be 5 to 10 µm, it means an initial quality limit of G2.5 or G6.3 respectively at 10,000 rev./min.
The following diagram shows the quality grades to DIN ISO 1940-1, i.e. the permissible rest imbalance in relation to the balance body mass for different counter balance qualities G relative to the maximum operating speed.

Effects of imbalance on machine spindles, tool holders and tools



Stock tool holders are balanced to G6.3/15,000 rev./min. As an option, i.e. when specified by the machine tool manufacturer, it is possible to precision balance including balancing protocol to a rest imbalance of 0.3 gmm.

Technical information and advantages

Shrink fit chucks ensure an optimal connection between shrink fit chuck and shank tool.
While some manufacturers use conventional case hardened steel, Stock applies a special, application orientated tool steel. The result is an increased expansion rate as well as improved temperature adaptability. There is no limit to the number of shrink fit insertion or withdrawal operations.

Advantages:
- short shrink fit times
- maximum clamping force
- shrink fit chucks available for tool shank diameters from 3 mm to 32 mm
- longevity

These advantages are of particular interest in the field of HSC milling, difficult and rough cutting operations, drilling, reaming and internal grinding operations as well as for woodworking.

Convincing characteristics:
- excellent concentricity
- extreme clamping force and rigidity
- improved tool life
- insignificant imbalance through rotation symmetry
- economic efficiency

A gripping principle
When tools to be hold in shrink fit chucks, the decisive factors for ensuring the safe clamping of the tool in the tool holder are solely the heating and cooling of the tool holder. The heating process expands the shrink fit chuck enabling a tool to be inserted or withdrawn respectively. During the cooling process it contracts again and clamps the inserted tool with maximum clamping force.
Because the shrink fit chucks can become extremely hot in localised areas during the heating process and the tools shrink fitted for insertion or withdrawal respectively possess very sharp cutting edges, it is a matter of priority that the operator wears Kevlar gloves during the shrink fit operation to prevent burns and cuts to the hands.

Shrink fit extensions: Increase performance
Shrink fit extensions increase the scope of a tool‘s performance and reduce tool surface imperfections. As with shrink fit chucks, the tool is clamped in the shrink fit extension and ideally in an hydraulic chuck. Naturally, shrink fit extensions can also be clamped in shrink fit chucks.

Perfect team: shrink fit chucks and shrink fit systems
For the shrink fitting for withdrawal and insertion of tools in our shrink fit chucks we offer various shrink fit systems to satisfy individual customer requirements.

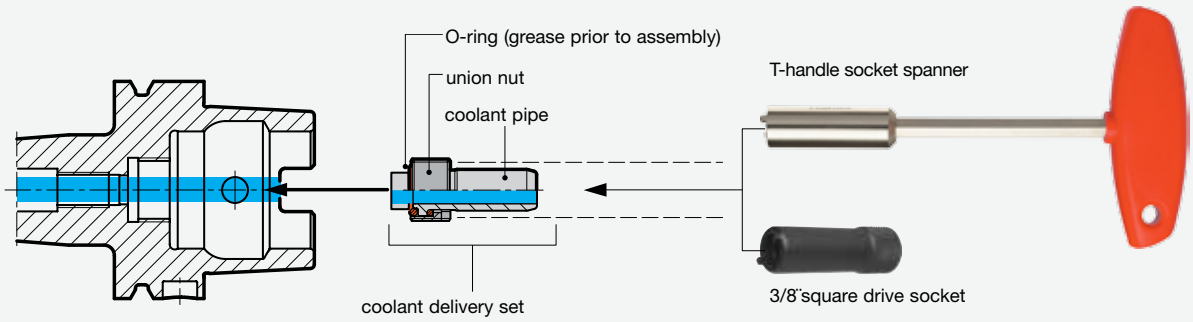
Installation coolant delivery set/MQL coolant delivery unit

1. The HSK holder must be clean, free of swarf and undamaged.
2. Grease the O-rings prior to assembly.
3. Centrally insert the complete coolant delivery set (coolant pipe, union nut and 2 O-rings) in the HSK with the assistance of the socket spanner. When inserting the MQL coolant delivery unit, it is essential to ensure that the MQL pipe is inserted centrally and undamaged into the MQL length setting screw (do not kink).
4. Screw in the coolant delivery set/coolant delivery unit and tighten (see table for torque figures)
5. Check coolant pipe for radial mobility.

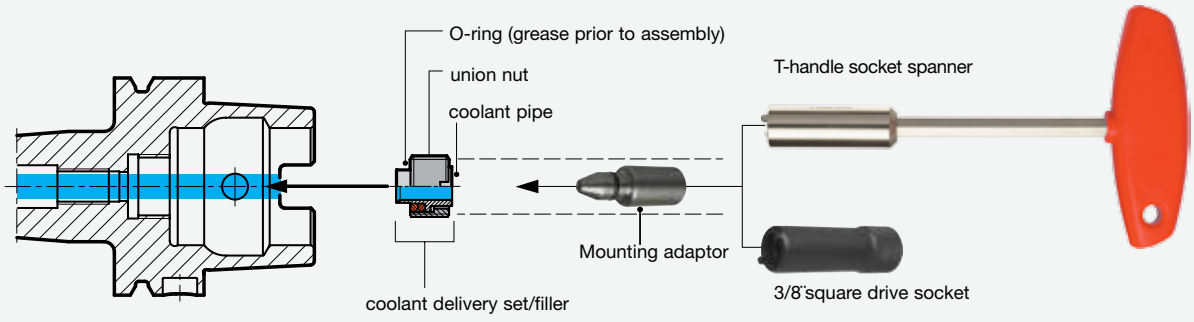
Torque figures

for HSK	MA Nm
32	7
40	11
50	15
63	20
80	25
100	30

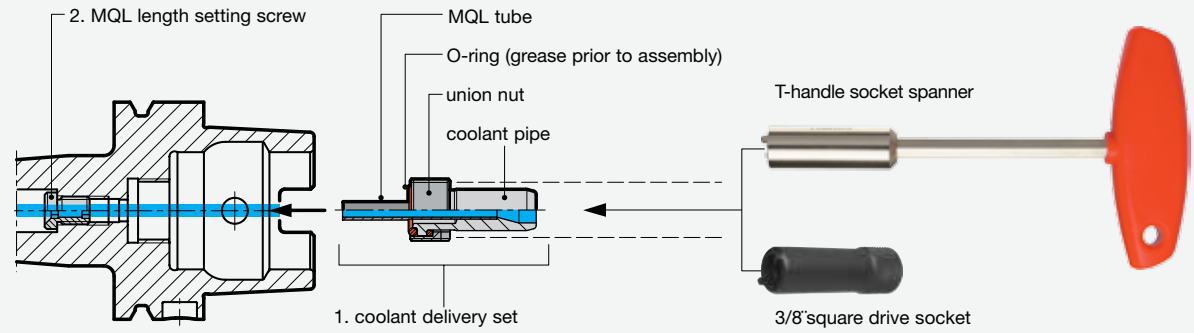
Installation of MQL coolant delivery set



Installation of MQL coolant delivery set filler



Installation of MQL coolant delivery unit



Technical information and advantages

Clamping standard tool shanks to DIN 6535 in hydraulic chucks

Direct clamping
of tool preferred
run-out ≤ 0.003 mm

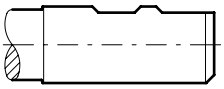
Form HA Ø 6 ... 20 mm

Form HA Ø 25 ... 32 mm

Form HB Ø 6 ... 20 mm

Clamping of tool shank
only with reduction bushes
run-out ≤ 0.005 mm

Form HB Ø 25 ... 32 mm



Form HE Ø 6 ... 20 mm

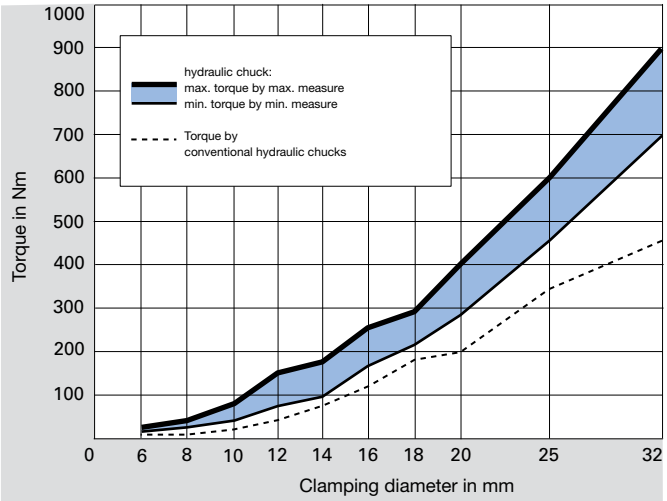
Form HE Ø 25 ... 32 mm

General notes:
Our hydraulic chucks must not be operated with motor-driven tools (impulse screwdrivers or similar). The hexagonal key should not exceed the key size over its entire length, this largely prevents excessive torque being transferred. We recommend the hexagon clamping key. A tightening moment of 10 Nm must not be exceeded.

Hydraulic chucks are suitable for clamping rotary symmetrical tools or workpieces. Straight shank tools without drive flats may be clamped up to Ø 32 mm, but also shanks according to DIN 6535 form HA and HB up to Ø 20 mm without reduction bushes. The given values in the table below are not to be exceeded. If the inserted length is less than the given minimum insertion depth or other tool shanks than specified above are applied, lower accuracy and breakage may occur!

Above all it is the high revolutions with High-Speed-Cutting operations that puts special demands on the tool holder. The clamping of the tool in a hydraulic chuck is, therefore, especially significant. Stock has developed a hydraulic chuck that offers reliable and powerful clamping with higher torque figures, guaranteeing excellent tool clamping in the tool holder.

Combined with precise concentricity (max. 3 µm deviation from concentricity), a very fast and simple tool change as well as the vibration cushioning effect of the pressure chamber, the new hydraulic chuck can tackle the most demanding of machining tasks. The result is optimal tool life and excellent surface qualities or dimensional accuracy of the workpiece respectively.



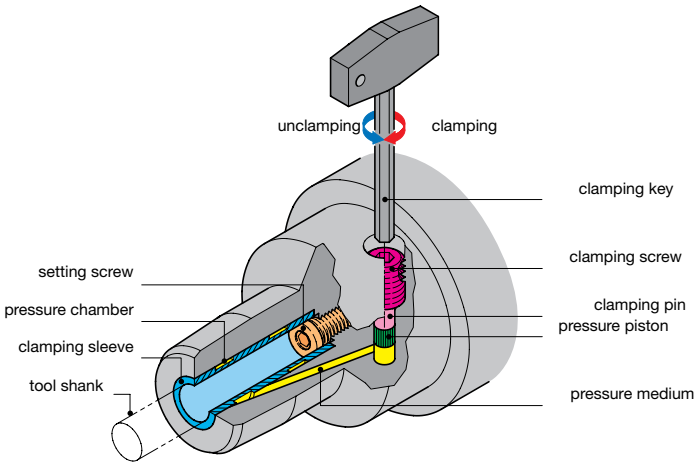
Considerably higher:
The clamping force of Stock's new HSK-A hydraulic chuck in comparison to conventional chucks.

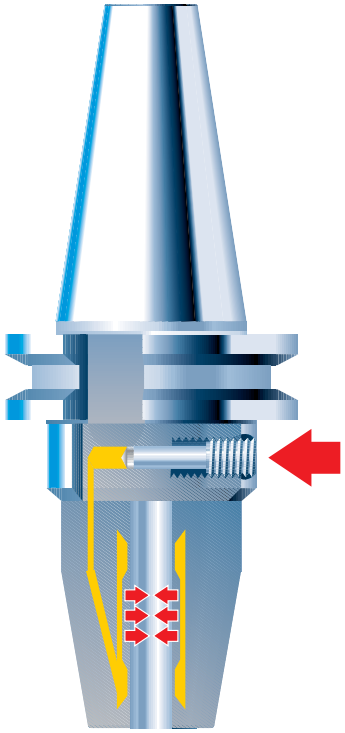
Technical information and advantages

Modern machining processes place heavy demands on tool holding. Hydraulic chucks provide excellent clamping characteristics combined with precise concentricity. Furthermore, they enable a simple and fast tool change, with the assistance of a special extraction key.
Turning the pressure screw generates sufficient pressure in the pressure chamber resulting in an elastic deformation of the clamping bush, providing powerful tool clamping and precise concentricity. A safe and powerful fit is guaranteed. If reduction bushes are applied that are able to hold varying tool diameters, the tool application may be extended without problem. If such bushes are not applied, it is essential to observe the minimum clamping length!

A summary of the advantages:

- precise tool clamping with a maximum 3 µm deviation from concentricity
- transmission of high torque through (excellent clamping) optimised bush clamping system
- high speed compatibility (no centrifugal forces from clamping segments)
- precise concentricity, therefore excellent surface qualities and dimensional accuracy of the workpiece
- rapid tool change thanks to simple operation of the clamping screw
- optimal tool life
- hydraulic cushioning has vibration absorbing effect





Convincing operation: the pressure medium is compressed via a screw and ensures safe positioning of the tool.

for shank-Ø in mm	**max. r.p.m. in 1/min**	max. transferable rpm in Nm	min. insertion depth in mm	max. adjustment l_3 mm	max. rad. force F on chuck with 50 mm from the nose in N	operating temperature in °C	max. coolant pressure in bar
6 h_6	50 000	16	27	10	225	20 - 50	80
8 h_6	50 000	26	27	10	370	20 - 50	80
10 h_6	50 000	50	31	10	540	20 - 50	80
12 h_6	50 000	82	36	10	650	20 - 50	80
14 h_6	50 000	125	36	10	900	20 - 50	80
16 h_6	50 000	190	39	10	1410	20 - 50	80
18 h_6	50 000	275	39	10	1580	20 - 50	80
20 h_6	50 000	310	41	10	1860	20 - 50	80
25 h_6	25 000	520	47	10	4400	20 - 50	80
32 h_6	25 000	770	51	10	6500	20 - 50	80

Our Program

Products

- Twist Drills
- Taps
- Milling Cutters
- Reamers
- Countersinks & -bores
- Chamfering Tools
- Special HSS and Carbide Tools
  (to your specifications, or our solutions)
- Tool Holders

Services

- Regrinding
- Modifications
- Recoating
- Paid labour coating
- Coating removal
- Intelligent Tool Depot Systems
- Technical assistance

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