

**Verwendung:**

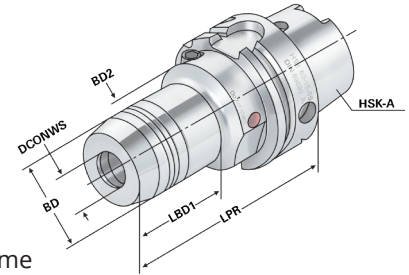
Zur Aufnahme von Werkzeugen mit Zylinderschaft nach DIN 1835 Form A+B+E und DIN 6535 Form HB+HE (größer Ø 20 mm nur mit Reduzierung).

Application:

For mounting straight-shank tools acc. DIN 1835 form A+B+E and DIN 6535 form HB+HE (larger than Ø 20 mm only with reduction sleeve).

Application:

Pour le serrage d'outils avec queue cylindrique suivant DIN 1835 forme A+B+E et DIN 6535 forme HB+HE (à partir de Ø 20 mm seulement avec réduction).



ISO 12164	Form A	≤ 3µm	G2.5 25.000 min ⁻¹	RFID Chip
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Bestell-Nr. Order no. Référence	HSK	DCONWS	LPR	BD	BD2	LSCX	ADJRG	LBD1	DRVS	THID
A80.H06	HSK-A 80	6	85	26	56	37	10	54	5	M6x1
A80.H08	HSK-A 80	8	85	28	56	37	10	53	5	M6x1
A80.H10	HSK-A 80	10	90	30	56	42	10	53	5	M8x1
A80.H12	HSK-A 80	12	95	32	56	47	10	52	5	M10x1
A80.H14	HSK-A 80	14	95	34	56	47	10	51	5	M10x1
A80.H16	HSK-A 80	16	100	38	56	52	10	50	5	M12x1
A80.H18	HSK-A 80	18	100	40	56	52	10	50	5	M12x1
A80.H20	HSK-A 80	20	105	42	56	52	10	49	5	M12x1
A80.H25	HSK-A 80	25	115	50	56	58	10	62	5	M16x1
A80.H32	HSK-A 80	32	120	60	56	62	10	26	5	M16x1
A100.H06	HSK-A 100	6	85	26	63	37	10	33	5	M6x1
A100.H08	HSK-A 100	8	85	28	63	37	10	33,5	5	M6x1
A100.H10	HSK-A 100	10	90	30	63	42	10	39	5	M8x1
A100.H12	HSK-A 100	12	95	32	63	47	10	44,5	5	M8x1
A100.H14	HSK-A 100	14	95	34	63	47	10	46	5	M8x1
A100.H16	HSK-A 100	16	100	38	63	52	10	53	5	M12x1
A100.H18	HSK-A 100	18	100	40	63	52	10	52	5	M12x1
A100.H20	HSK-A 100	20	105	42	63	52	10	51	5	M12x1
A100.H25	HSK-A 100	25	115	50	63	58	10	64	6	M12x1
A100.H32	HSK-A 100	32	120	60	63	62	10	61	6	M12x1
A100.H06.1	HSK-A 100	6	150	26	63	37	10	97	5	M6
A100.H08.1	HSK-A 100	8	150	28	63	37	10	98	5	M6
A100.H10.1	HSK-A 100	10	150	30	63	42	10	99	5	M8x1
A100.H12.1	HSK-A 100	12	150	32	63	47	10	99	5	M8x1
A100.H14.1	HSK-A 100	14	150	34	63	47	10	101	5	M8x1
A100.H16.1	HSK-A 100	16	150	38	63	52	10	101	5	M12x1
A100.H18.1	HSK-A 100	18	150	40	63	52	10	102	5	M12x1
A100.H20.1	HSK-A 100	20	150	42	63	52	10	101	5	M12x1
A100.H25.1	HSK-A 100	25	150	50	63	58	10	99	6	M12x1
A100.H32.1	HSK-A 100	32	150	60	63	62	10	100	6	M12x1

LSCX = Einspannlänge, max.
LSCX = Clamping depth, max.
LSCX = Profondeur d'insertion, max.

ADJRG = Verstellweg, max.
ADJRG = Length adjustment range, max.
ADJRG = Course de réglage, max.

Lieferumfang: Ohne Spannschlüssel
Delivery: Without wrench
Livraison: Sans clé de serrage





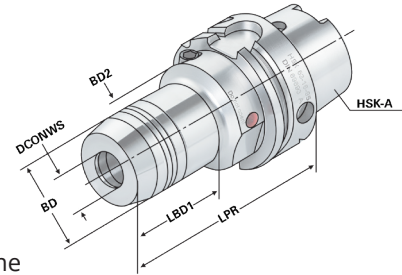
Hydraulic expansion chucks
Mandrins expansibles hydrauliques



Verwendung:
Zur Aufnahme von Werkzeugen mit Zylinderschaft nach DIN 1835 Form A+B+E und DIN 6535 Form HB+HE (größer Ø 20 mm nur mit Reduzierung).

Application:
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Application:
Pour le serrage d'outils avec queue cylindrique suivant DIN 1835 forme A+B+E et DIN 6535 forme HB+HE (à partir de Ø 20 mm seulement avec réduction).



Bestell-Nr. Order no. Référence	HSK	DCONWS	LPR	BD	BD2	LSCX	ADJRGA	LBD1	DRVS	THID
A100.H06.2	HSK-A 100	6	200	26	50	37	10	56	5	M6x1
A100.H08.2	HSK-A 100	8	200	28	50	37	10	55,5	5	M6x1
A100.H10.2	HSK-A 100	10	200	30	50	42	10	55	5	M8x1
A100.H12.2	HSK-A 100	12	200	32	50	47	10	54,5	5	M10x1
A100.H14.2	HSK-A 100	14	200	34	50	47	10	53	5	M10x1
A100.H16.2	HSK-A 100	16	200	38	50	52	10	52,5	5	M12x1
A100.H18.2	HSK-A 100	18	200	40	50	52	10	52	5	M12x1
A100.H20.2	HSK-A 100	20	200	42	50	52	10	51	5	M12x1
A100.H25.2	HSK-A 100	25	200	50	50	58	10	-	6	M16x1
A100.H32.2	HSK-A 100	32	200	60	60	62	10	-	6	M16x1

LSCX = Einspannlänge, max.
LSCX = Clamping depth, max.
LSCX = Profondeur d'insertion, max.

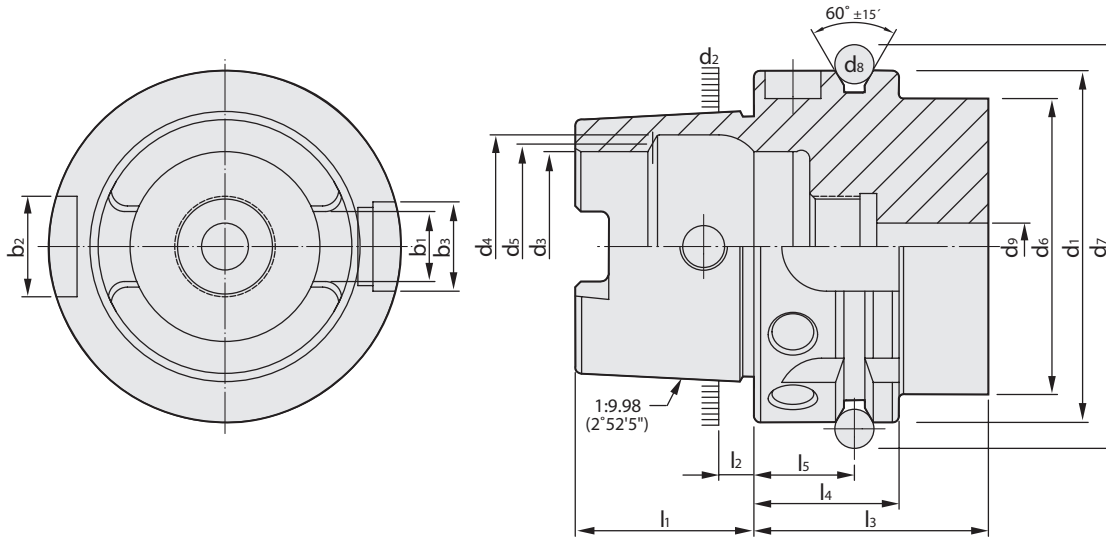
ADJRGA = Verstellweg, max.
ADJRGA = Length adjustment range, max.
ADJRGA = Course de réglage, max.

Lieferumfang: Ohne Spanschlüssel
Delivery: Without wrench
Livraison: Sans clé de serrage



Spannkraft-Prüfgerät für Hydrodehnspannfutter - Seite 12.59
Clamping force proofing instrument for hydraulic chucks - page 12.59
Appareil de contrôle des forces de serrage pour mandrin expansibles hydrauliques - page 12.59





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HSK	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	d ₇	d ₈	d ₉	l ₁	l ₂	l ₃	l ₄	l ₅	b ₁	b ₂	b ₃
	h10		H10	H11		max	⁰ _{-0,1}		max	⁰ _{-0,2}		min	⁰ _{-0,1}	±0,1	±0,04	H10	H10
25	25	19,006	14	16,4	15	20	28,5	3	3	13	2,5	20	10	4,5	6,05	6	7
32	32	24,007	17	20,5	19	26	37	4	4,2	16	3,2	35	20	16	7,05	7	9
40	40	30,007	21	25,5	23	34	45	4	5	20	4	35	20	16	8,05	9	11
50	50	38,009	26	32	29	42	59,3	7	6,8	25	5	42	26	18	10,54	12	14
63	63	48,010	34	40	37	53	72,3	7	8,4	32	6,3	42	26	18	12,54	16	18
80	80	60,012	42	50	46	68	88,8	7	10,2	40	8	42	26	18	16,04	18	20
100	100	75,013	53	63	58	88	109,75	7	12	50	10	45	29	20	20,02	20	22
125	125	95,016	67	80	73	111	134,75	7	14	63	12,5	45	29	20	25,02	25	28

Vorgewuchtet G 6,3 15.000 min-1
 Pre-balanced G 6,3 15.000 min-1
 Pré-équilibré G 6,3 15.000 min-1

G 2,5 Feinwuchten gegen Aufpreis
 G 2.5 Fine balancing at extra charge
 G 2,5 Equilibrage fin contre un supplément

Werkstoff: Legierter Einsatzstahl mit einer Zugfestigkeit im Kern von min. 950 N / mm². Einsatzgehärtet HRC 60 ± 2 (HV 700 ± 50), Härtetiefe 0,8 mm ± 0,2 mm, brüniert und präzisionsgeschliffen.

Material: Alloyed case-hardened steel, tensile core strength of min. 950 N / mm². Case hardened HRC 60 ± 2 (HV 700 ± 50), hardening depth 0.8 mm ± 0.2 mm, black-finished and precisely grinded.

Matière: Acier de cémentation allié. Résistance à la traction dans le noyau de min 950 N / mm². Cémentation à HRC 60 ± 2 (HV 700 ± 50), profondeur de cémentation 0,8 mm ± 0,2 mm, bruni et rectifié précisément.

Normative Verweise:

ISO 12164-1:2001-12
 Hohlkegelschnittstelle mit Plananlage
 - Teil 1: Schäfte; Maße

Normative references:

ISO 12164-1:2001
 Hollow taper interface with flange contact surface
 - Part 1: Shanks; Dimensions

Références normatives:

ISO 12164-1:2001
 Interfaces à cône creux-face
 - Partie 1: Queues; Dimensions

DIN 69893-1:2011
 Kegel-Hohlschäfte mit Plananlage besteht aus:
 - Teil 1: Kegel-Hohlschäfte Form A und Form C;
 Maße und Ausführung

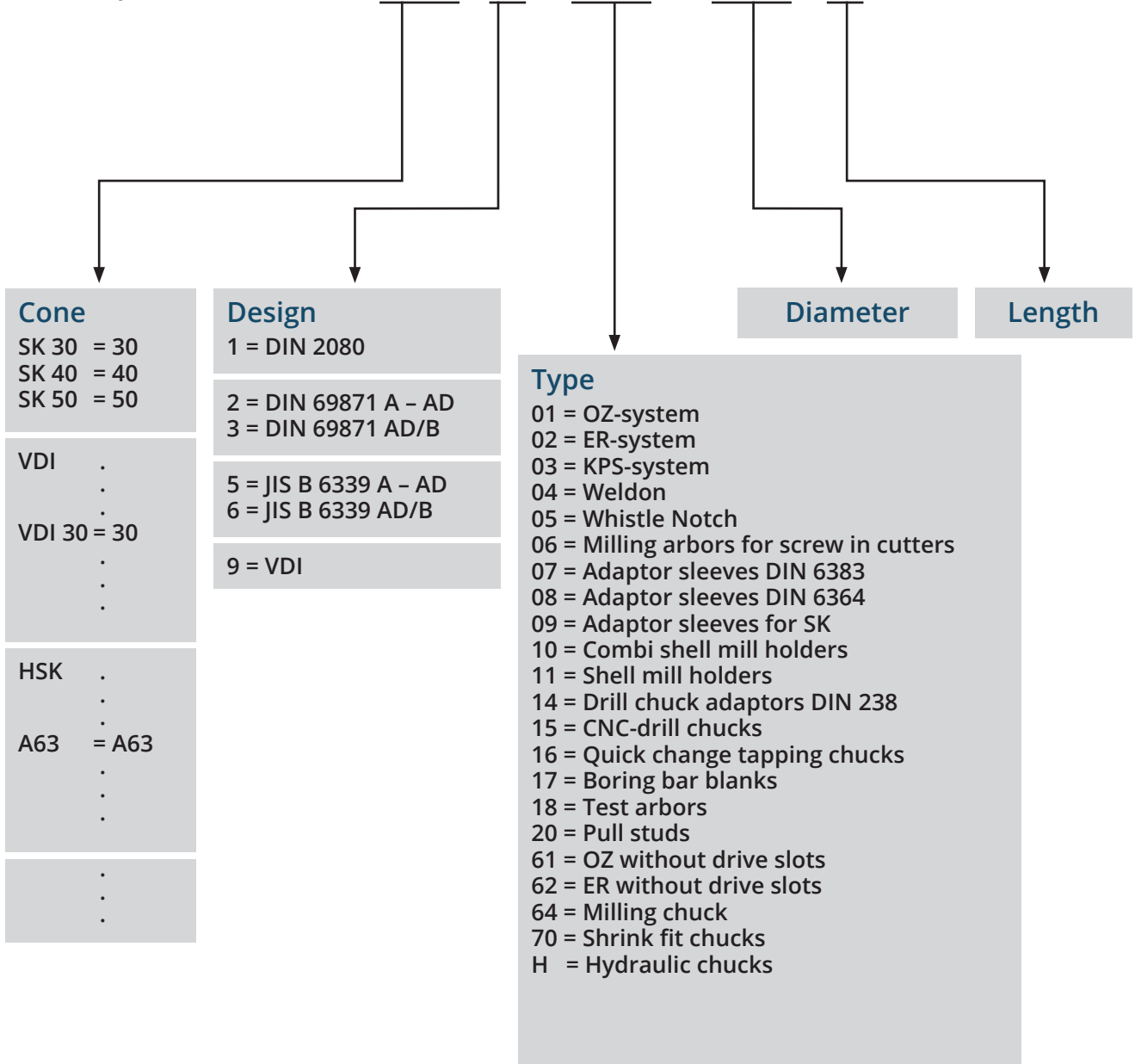
DIN 69893-1:2011
 Hollow taper shanks with flange contact surface:
 - Part 1: Hollow taper shanks type A and type C;
 Dimensions and design

DIN 69893-1:2011
 Queues creuses coniques à surface de contact plane:
 - Partie 1: Queues creuses coniques type A et type C;
 Dimensions et conception



Example:

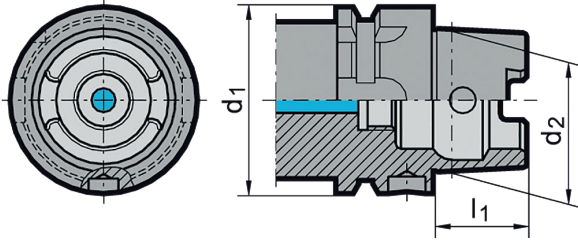
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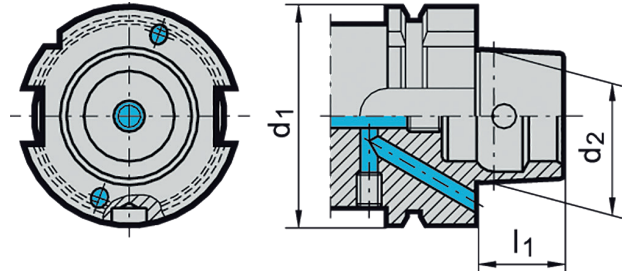
DIN 69063-1 (ISO 12164-1) Form A

Standard type for machining centres and milling machines. HSK for automatic tool change with gripper groove and index notch. Manual operation is via access hole in taper. Form B relies on driving dogs on the joint face as shank isn't slotted. Torque is transmitted through highly accurate connection.



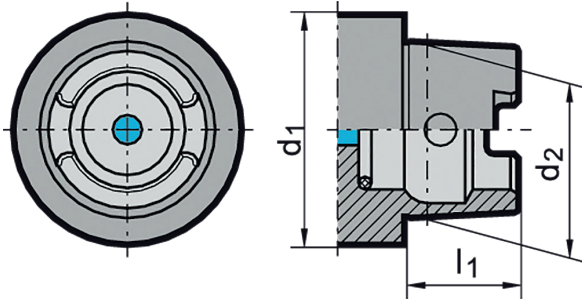
DIN 69063-2 (ISO 12164-1) Form B

For machining centres, milling and turning machines. With enlarged flange size for rigid machining. For automatic tool change. Coolant supply through the flange. Drive keys at the flange. Hole for data carrier DIN STD 69873 at the flange.



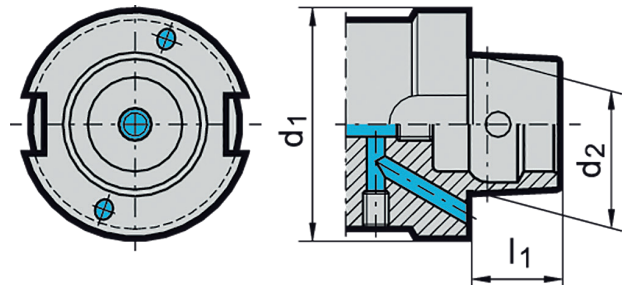
DIN 69063-1 (ISO 12164-1) Form C

For transfer lines, special machines and modular tooling systems. HSK for manual tool change. Operation is via access hole in taper. Form D relies on driving dogs on the joint face as shank isn't slotted. Torque is transmitted through highly accurate connection.



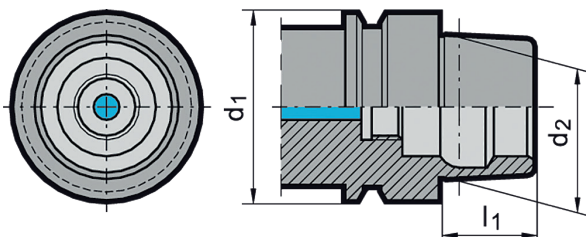
DIN 69063-2 (ISO 12164-2) Form D

For special machines. With enlarged flange size for rigid machining. For manual tool change. Coolant supply through the flange. Drive keys at the flange.



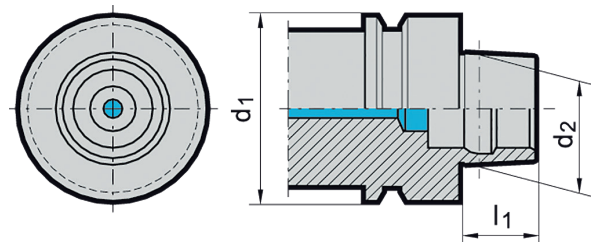
DIN 69063-5 Form E

For high-speed applications. For automatic tool change. HSK for automatic tool change. Torque is transmitted through highly accurate connection. Version with access hole acc. to DIN 69893-1 by arrangement.



DIN 69063-6 Form F

For high-speed applications mainly in woodworking industries. HSK for automatic tool change. Torque is transmitted through highly accurate connection. Version with access hole acc. to DIN 69893-1 by arrangement.





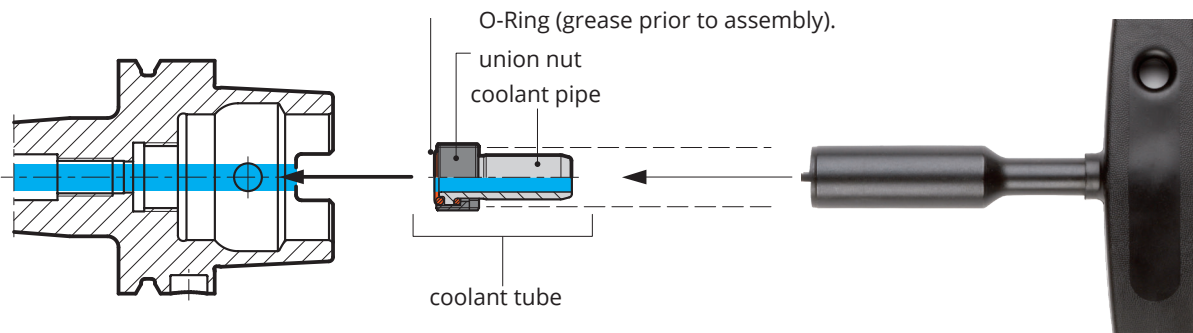
HSK form A, -B or -D holders must be equipped with a coolant tube.

Using holders without a coolant tube could cause unseen machine spindle damage.

DIN 69893 Form C, -E and -F do not require a coolant tube. Through coolant and sealing functions are provided by the locking unit.

The coolant tube is ideally mounted in vertical direction – from the bottom to the top. In this manner the sealing ring is prevented from being compressed during location which would cause the loss of its sealing function.

After mounting, the coolant pipe can be moved only to a minimum degree according to DIN ($\pm 1^\circ$).



Installation

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 tube (coolant pipe, union nut and 2 O-rings) in the HSK with the assistance of the socket spanner.
4. Screw in the coolant tube and tighten (see table for torque figures)
5. Check coolant pipe for radial mobility.

Torque figures

for HSK	Mt (Nm)
32	7
40	11
50	15
63	20
80	25
100	30