



Verwendung:

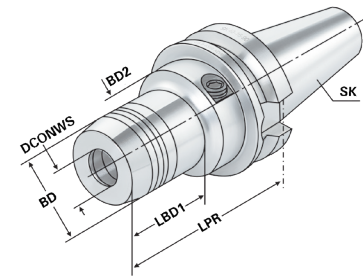
Zur Aufnahme von Werkzeugen mit Zylinderschaft nach DIN 1835 Form A+B+E und DIN 6535 Form HB+HE (größer Ø 20 mm nur mit Reduzierung).

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).



Bestell-Nr. Order no. Référence	SK	DCONWS	LPR	BD	BD2	LSCX	ADJRGA	LBD1	DRVS	THID
305.H06*	BT 30	6	60	26	45	37	10	33	5	M6x1
305.H08*	BT 30	8	64	28	45	37	10	29	5	M6x1
305.H10*	BT 30	10	64	30	45	42	10	37	5	M6x1
305.H12*	BT 30	12	72	32	45	47	10	43	5	M8x1
305.H14*	BT 30	14	70	34	45	47	10	41	5	M10x1
305.H16*	BT 30	16	90	38	45	52	10	52	5	M12x1
305.H18*	BT 30	18	90	40	45	52	10	52	5	M12x1
305.H20*	BT 30	20	90	42	45	52	10	52	5	M12x1
405.H06	BT 40	6	90	26	50	37	10	43	5	M6x1
405.H08	BT 40	8	90	28	50	37	10	43,5	5	M6x1
405.H10	BT 40	10	90	30	50	42	10	44	5	M8x1
405.H12	BT 40	12	90	32	50	47	10	44,5	5	M8x1
405.H14	BT 40	14	90	34	50	47	10	47,5	5	M10x1
405.H16	BT 40	16	90	38	50	52	10	47,5	5	M12x1
405.H18	BT 40	18	90	40	50	52	10	47,5	5	M12x1
405.H20	BT 40	20	90	42	50	52	10	47,5	5	M12x1
405.H25	BT 40	25	90	50	50	58	10	63	6	M8x1
405.H32	BT 40	32	110	60	60	62	10	83	6	M12x1
405.H06.1	BT 40	6	150	26	50	37	10	102	5	M6x1
405.H08.1	BT 40	8	150	28	50	37	10	103	5	M6x1
405.H10.1	BT 40	10	150	30	50	42	10	104	5	M8x1
405.H12.1	BT 40	12	150	32	50	47	10	105	5	M8x1
405.H14.1	BT 40	14	150	34	50	47	10	105	5	M10x1
405.H16.1	BT 40	16	150	38	50	52	10	106	5	M12x1
405.H18.1	BT 40	18	150	40	50	52	10	107	5	M12x1
405.H20.1	BT 40	20	150	42	50	52	10	108	5	M12x1
405.H25.1	BT 40	25	150	50	50	58	10	123	6	M12x1
405.H32.1	BT 40	32	150	60	60	64	10	123	6	M12x1

* Form JD (AD)

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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 Spannschlüssel

Delivery: Without wrench

Livraison: Sans clé de serrage



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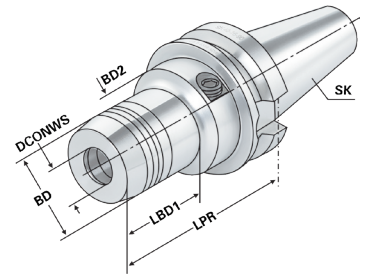
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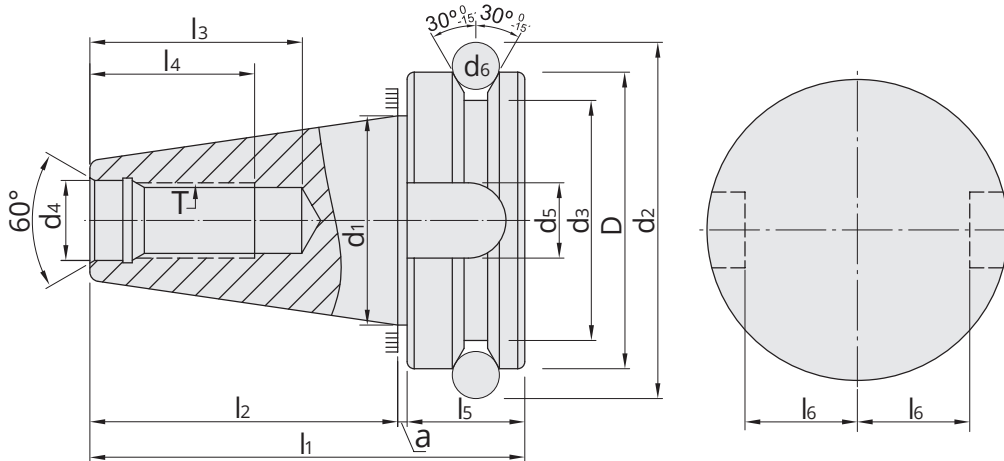
Bestell-Nr. Order no. Référence	SK	DCONWS	LPR	BD	BD2	LSCX	ADJRGA	LBD1	DRVS	THID
405.H06.2	BT 40	6	200	26	50	37	10	152	5	M6x1
405.H08.2	BT 40	8	200	28	50	37	10	153	5	M6x1
405.H10.2	BT 40	10	200	30	50	42	10	154	5	M8x1
405.H12.2	BT 40	12	200	32	50	47	10	155	5	M8x1
405.H14.2	BT 40	14	200	34	50	47	10	155	5	M10x1
405.H16.2	BT 40	16	200	38	50	52	10	156	5	M12x1
405.H18.2	BT 40	18	200	40	50	52	10	157	5	M12x1
405.H20.2	BT 40	20	200	42	50	52	10	158	5	M12x1
405.H25.2	BT 40	25	200	50	50	58	10	173	6	M12x1
405.H32.2	BT 40	32	200	60	50	62	10	173	6	M12x1
505.H06	BT 50	6	110	26	80	37	10	43	5	M6x1
505.H08	BT 50	8	110	28	80	37	10	43,5	5	M6x1
505.H10	BT 50	10	110	30	80	42	10	44	5	M8x1
505.H12	BT 50	12	110	32	80	47	10	42	5	M8x1
505.H14	BT 50	14	110	34	80	47	10	42	5	M10x1
505.H16	BT 50	16	110	38	80	52	10	45	5	M12x1
505.H18	BT 50	18	110	40	80	52	10	47,5	5	M12x1
505.H20	BT 50	20	110	42	80	52	10	47,5	5	M12x1
505.H25	BT 50	25	110	50	80	58	10	47,5	6	M16x1
505.H32	BT 50	32	110	60	80	62	10	47,5	6	M16x1

LSCX = Einspannlänge, max.
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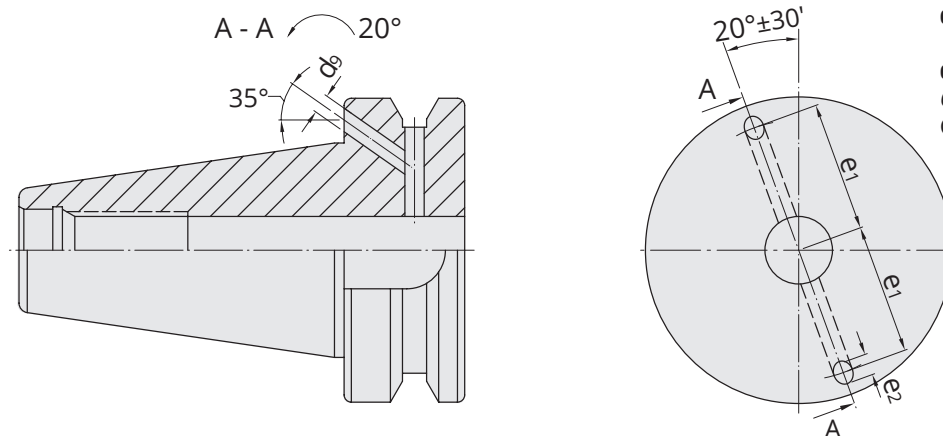
ADJRGA = Verstellweg, max.
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Lieferumfang: Ohne Spannschlüssel
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SK	D	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	d ₉	a	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	e ₁	e ₂	T
	H8				H8	H12		H12	±0,4		±0,2	min	min		⁰ _{-0,2}	±0,1	max	
30	46	31,75	56,14	38	12,5	16,1	8	-	2	70,4	48,4	34	24	20	16,3	-	-	M12
40	63	44,45	75,679	53	17	16,1	10	4	2	92,4	65,4	43	30	25	22,6	27	5	M16
50	100	69,85	119,02	85	25	25,7	15	6	3	139,8	101,8	62	45	35	35,4	42	7	M24

Mit innerer Kühlmittelzufuhr über den Bund - Form JD/JF (AD/B)
With internal coolant through the collar - form JD/JF (AD/B)
Avec arrosage interne par la collerette - forme JD/JF (AD/B)
Vorgewuchtet
Pre-balanced
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.

Form JD/JF: Lieferung in Ausführung JD (AD), Form JF (B) mit lösbaren Gewindestiften verschlossen.

Genauigkeit: Kegelwinkel - Toleranzqualität < AT 3 nach DIN 7187 und DIN 2080.

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.*

Form JD/JF: *Delivery in form JD (AD), form JF (B) closed with releasable headless screws.*

Accuracy: *Quality of taper < AT 3 according to DIN 7187 and DIN 2080.*

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.

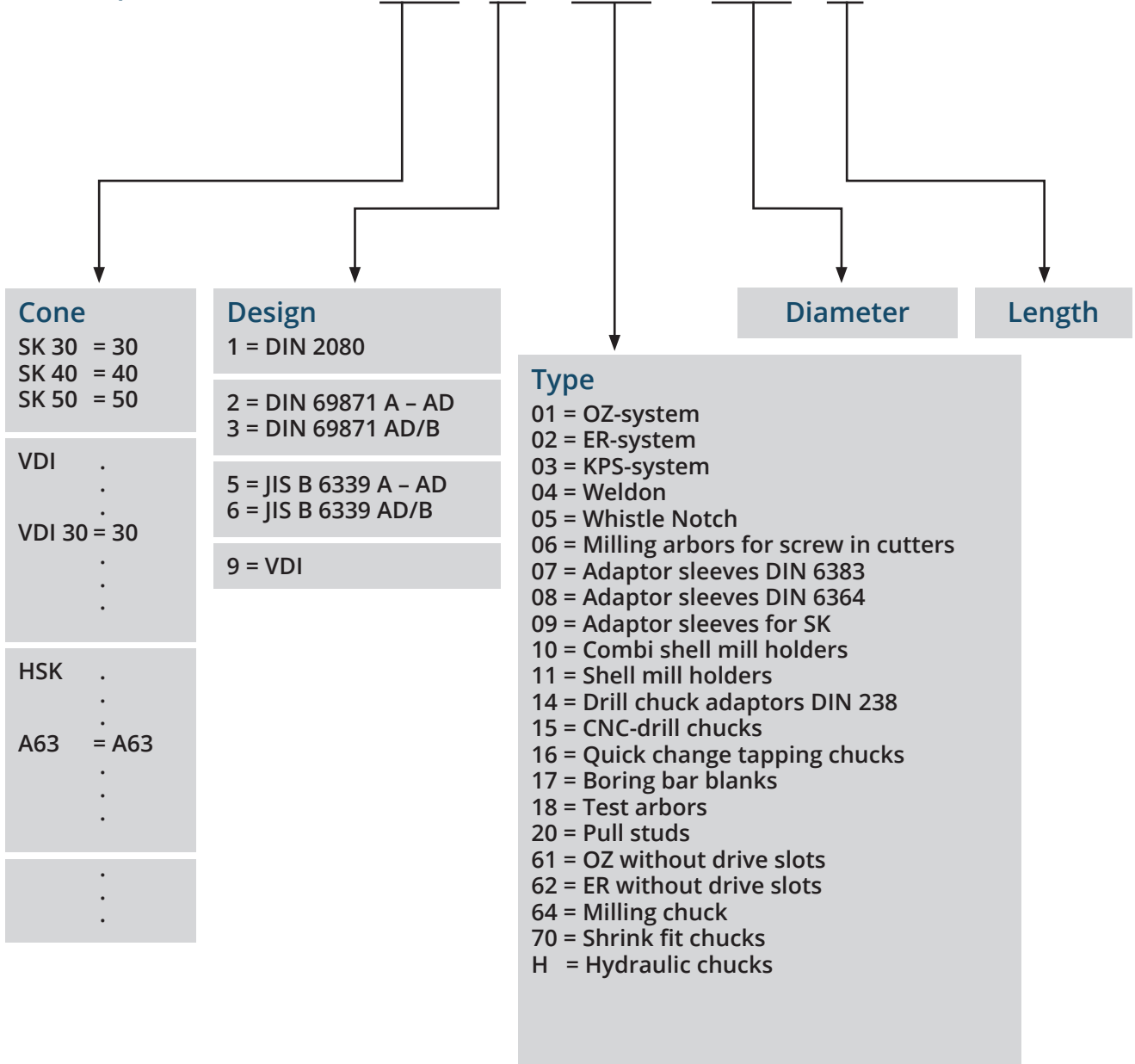
Forme JD/JF: Livraison en forme JD (AD), forme JF (B) fermée avec des vis amovibles sans tête.

Précision: Qualité du cône < AT 3 selon DIN 7187 et DIN 2080.



Example:

40 3 . 02 . 20 . 1



K Hydraulic expansion chucks



Modern machining processes place heavy demands on tool holding. Hydraulic expansion chucks provide excellent clamping characteristics combined with precise concentricity. Furthermore, they enable a simple and fast tool change.

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 sleeves are applied that are able to hold varying tool diameters, the tool application may be extended without problem. If such sleeves are not applied, it is essential to observe the minimum clamping length!


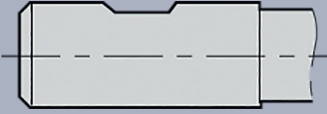

Advantages

- 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

Chart of technical data

Clamping Ø [mm]	Tightening torque [Nm]	Minimum clamping depth of the tool [mm]	Admissible transmissible torque [Nm]	Shank tolerance	max. RPM [min ⁻¹]	
					LPR ≤ 125 mm	LPR > 125 mm
6	10	27	12	h6	40.000	20.000
8	10	27	30	h6	40.000	20.000
10	10	31	40	h6	40.000	20.000
12	10	36	70	h6	40.000	20.000
14	10	36	100	h6	40.000	20.000
16	10	39	135	h6	40.000	20.000
18	10	39	180	h6	40.000	20.000
20	10	41	220	h6	40.000	20.000
25	10	47	500	h6	20.000	10.000
32	10	51	700	h6	20.000	10.000

Usable shank types

DIN 6535 DIN 1835-1	Ø 6 - 20 mm	Ø 25 - 32 mm	Using Reduction sleeves
 Form HA	✓	✓	✓
 Form HB/ E	✓	✗	✓
 Form HE/ E	✗	✗	✓
Run out (↗)		≤ 0,003 mm	≤ 0,005 mm



To ensure a flawless function of the hydraulic expansion chucks, please observe the following instructions:

Usage of straight shank tools according to DIN 1835 and DIN 6535 form (HA) and B (HB) up to \varnothing 20 mm shaft diameter with tolerance h_6 , precision grinded $Ra_{min} = 0.3$.

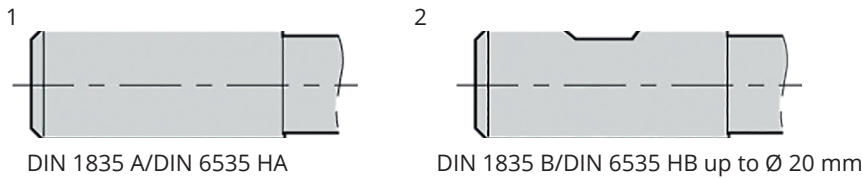
Shafts according to DIN 6535 form HE (Whistle Notch) can only be clamped by using reduction sleeves. All hydraulic expansion chucks are standard balanced to G 6.3 15,000 rev/min.

Clamping and unclamping the tool

1. Clean the holding fixture bore and the tool shaft of grease and dirt. Insert tools up to the end stop. Observe the minimum clamping depth and the length adjustment range.
2. Clamp the shaft by turning the clamping screw up to the end stop. The tool is clamped. To avoid breaking of the hydraulic sleeve, do not carry out clamping action without a tool.
3. To unclamp the tool, turn the screw approx. 5 to 6 revs. counter clockwise and remove the tool.



Note: Never clamp without a clamped tooling!



Cleaning

Attention should be paid to the cleanliness of the holding fixture bore and the tool shaft.

Temperature

Optimal temperature range between 10 – 50°. Do not use with temperatures above 80°.

Storage

Store the hydraulic expansion chuck untensioned, cleaned and lightly oiled.

Clamping shafts

Clamp only tool shafts conforming to the requirements of DIN 1835 form A and form B (up to 20 mm).

