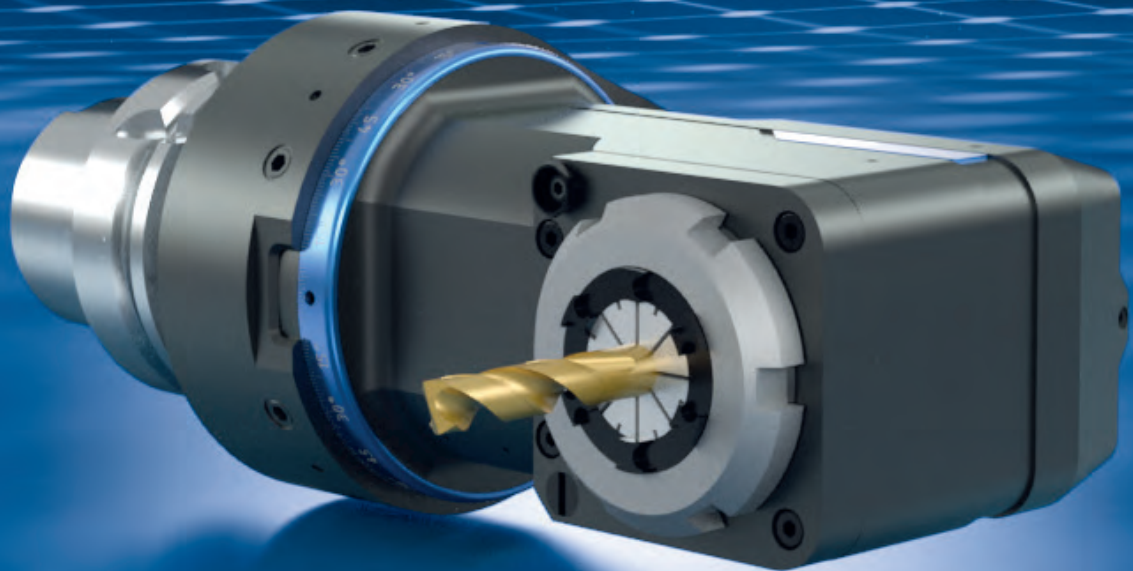


EWS .millLine

Winkelköpfe // Milling heads

**Winkelköpfe für die Komplettbearbeitung auf
Bearbeitungszentren**

Angle heads for the complete machining on
machining centers



DOWNLOAD
PDF



www.ews-tools.de

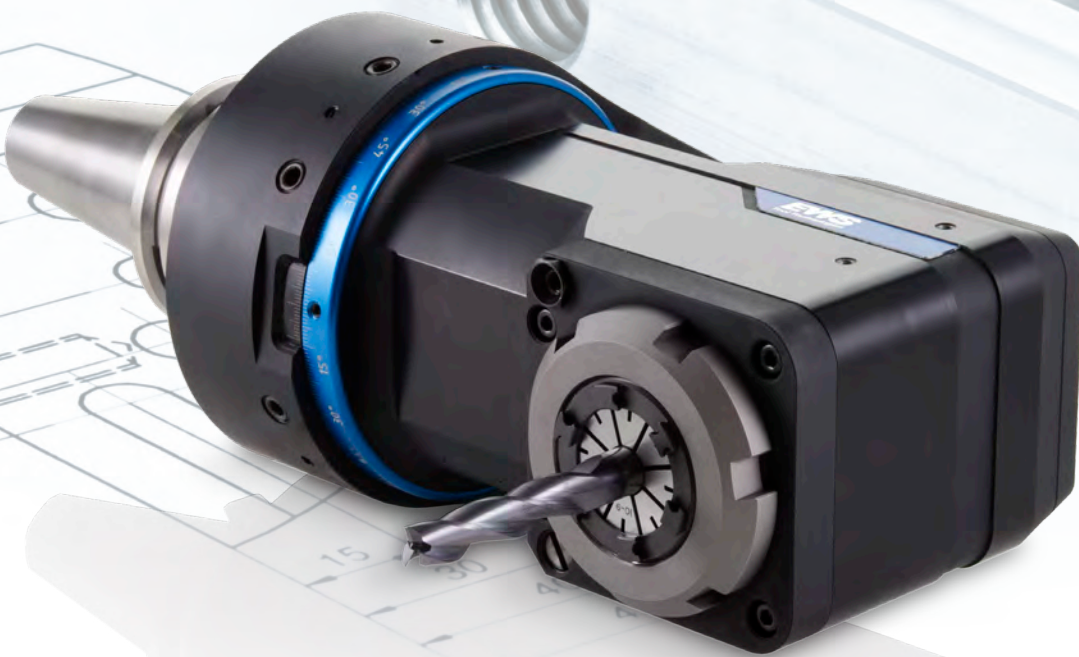
EWS
Tool Technologies

EWS.millLine

Das neue EWS.millLine Programm bringt die bewährte Technologie mit neuen Features auf die Bearbeitungszentren.

The new EWS.millLine program provides the trusted technology with new features for machining centres.





WINKELKÖPFE / ANGLE HEADS

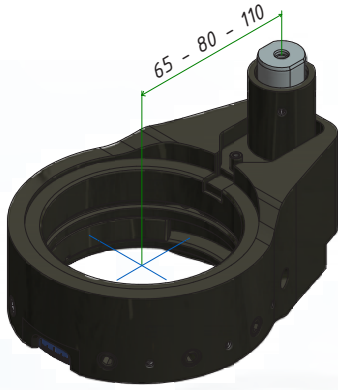
Vorteile

- die smarte Lösung eine fehlende Bearbeitungsachse zu kompensieren
- Bearbeitung schwerzugänglicher Werkstücke
- Innenbohrungsbearbeitung
- stufenlose Winkeleinstellung um die Horizontalachse, mit tangential wirkender Doppelkegel Klemmung $M_R > 250 \text{ Nm}$

Advantages

- The smart solution to compensate a missing machining axis
- Operation of hardly accessible workpieces
- Inner bore operation
- Fluent angular setting over the horizontal axis with tangential effecting bi-cone clamping $M_R > 250 \text{ Nm}$

TORQUE ARM



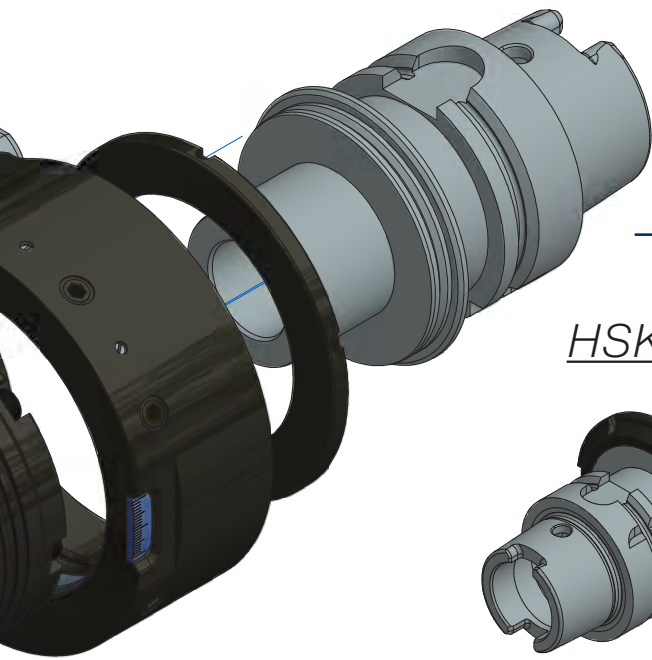
TYPE OF HEAD

BASIC

OFFSET

DUPLEX



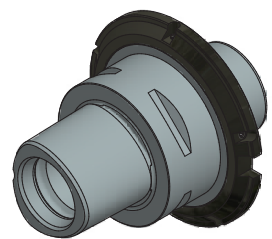
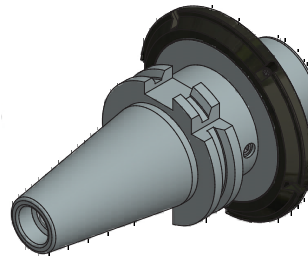
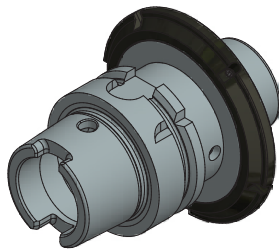


DRIVE SHAFT

HSK

SK-BT-CT

EWS.PSC

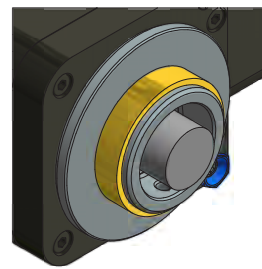
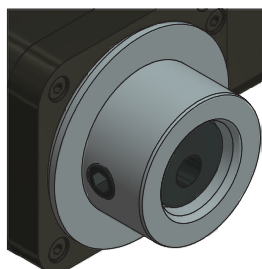
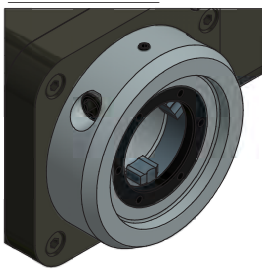


TOOL OUTPUT

VARIA VX

KM

HSK

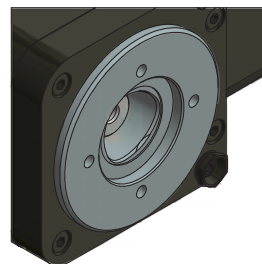
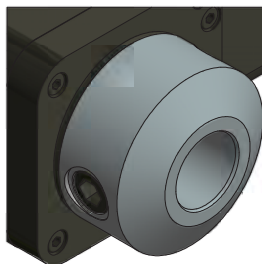
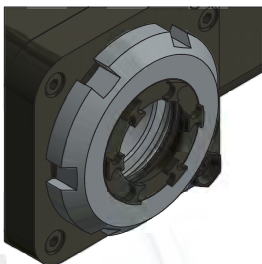


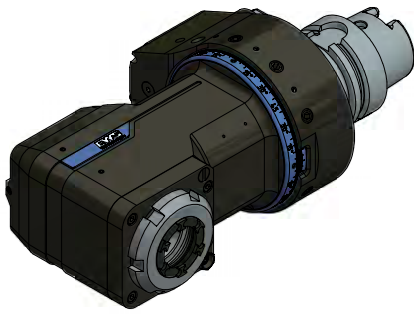
WELDON

ER-COLLET

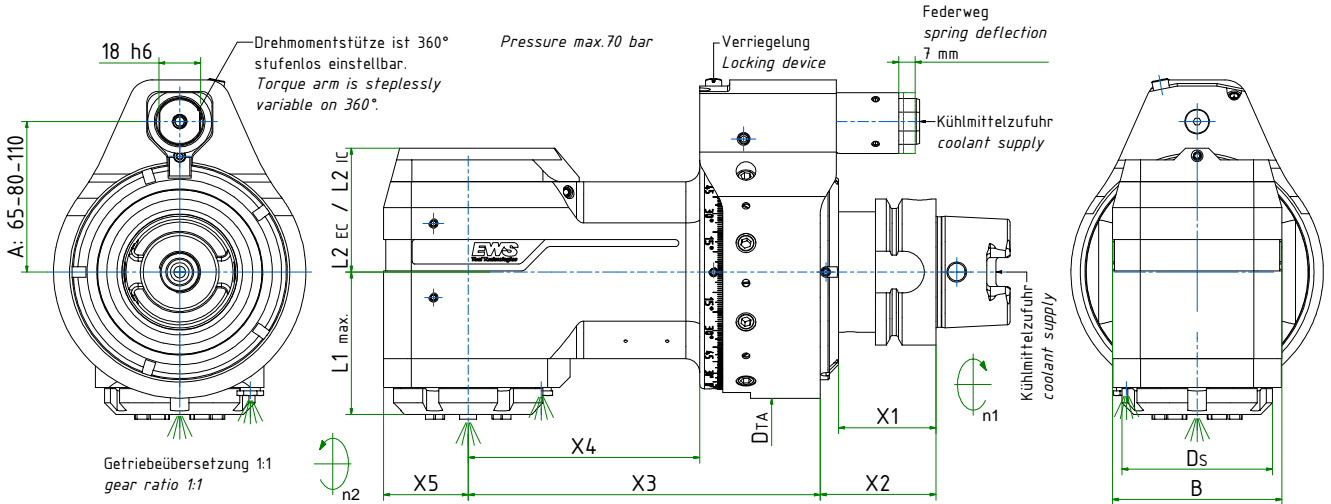
WHISTLE NOTCH

EWS.PSC

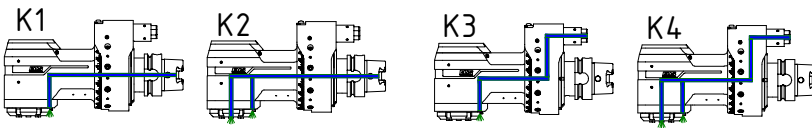




BASIC



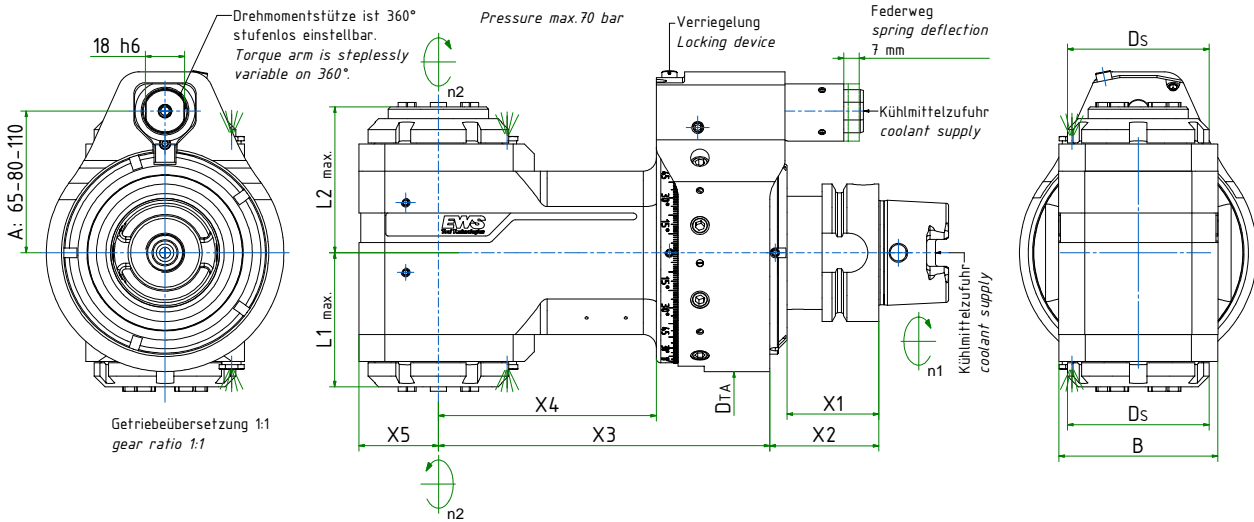
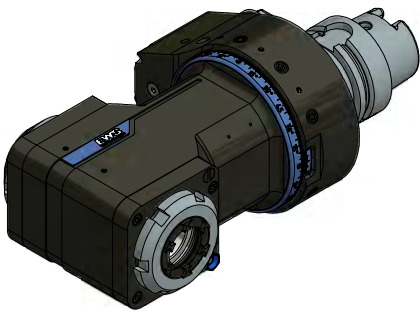
Coolant Type



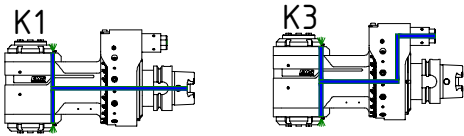
SHAFT	BT40	BT50	SK40	SK50	CAT 40	CAT 50	PSC 40	PSC 50	PSC 63	PSC 80	HSK40	HSK50	HSK63	HSK80	HSK100
X1	43	50	35	35	35	35	26	27	29	30	35	42	42	42	45
X2	51	58	43	43	43	43	34	35	37	38	43	50	50	50	53

SIZE	STD COLLET	T (Nm)	RPM	LENGTH	X3	X4	X5	L1	B	DS Ø	L2 EC (with ext. coolant)	L2 IC (with int. coolant)	DTA Ø	COOLANT TYPE	WEIGHT (kg)
1	ER20	15	10000	SHORT	97	51,5	24,0	43,5	48	46	35,1	42,0	85	K3 K4	4,2
1	ER20	15	10000	STANDARD	147	101,5	24,0	43,5	48	46	35,1	42,0	85	K1 K2 K3 K4	4,7
1	ER20	15	10000	LONG	177	131,5	24,0	43,5	48	46	35,1	42,0	85	K1 K2 K3 K4	4,8
2	ER25	30	8000	SHORT	90	38,0	26,0	56,9	54	52	37,0	44,0	98	K3 K4	4,9
2	ER25	30	8000	SHORT	113	61,0	26,0	56,9	54	52	37,0	44,0	98	K1 K2 K3 K4	5,2
2	ER25	30	8000	STANDARD	137	85,0	26,0	56,9	54	52	37,0	44,0	98	K1 K2 K3 K4	5,7
2	ER25	30	8000	LONG	197	145,0	26,0	56,9	54	52	37,0	44,0	98	K1 K2 K3 K4	6,3
5	ER32	70	6000	SHORT	107	55,0	36,5	62,6	73	65	48,5	53,5	109	K3 K4	6,5
5	ER32	70	6000	STANDARD	152	100,0	36,5	62,6	73	65	48,5	53,5	109	K1 K2 K3 K4	9,5
5	ER32	70	6000	LONG	217	165,0	36,5	62,6	73	65	48,5	53,5	109	K1 K2 K3 K4	10,5

DUPLEX

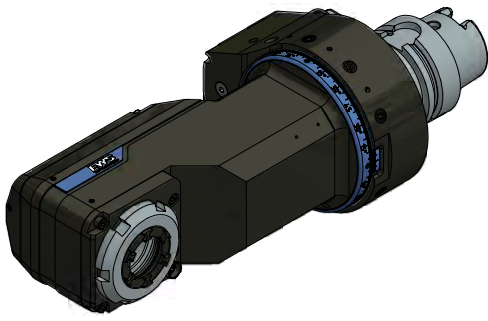


Coolant Type

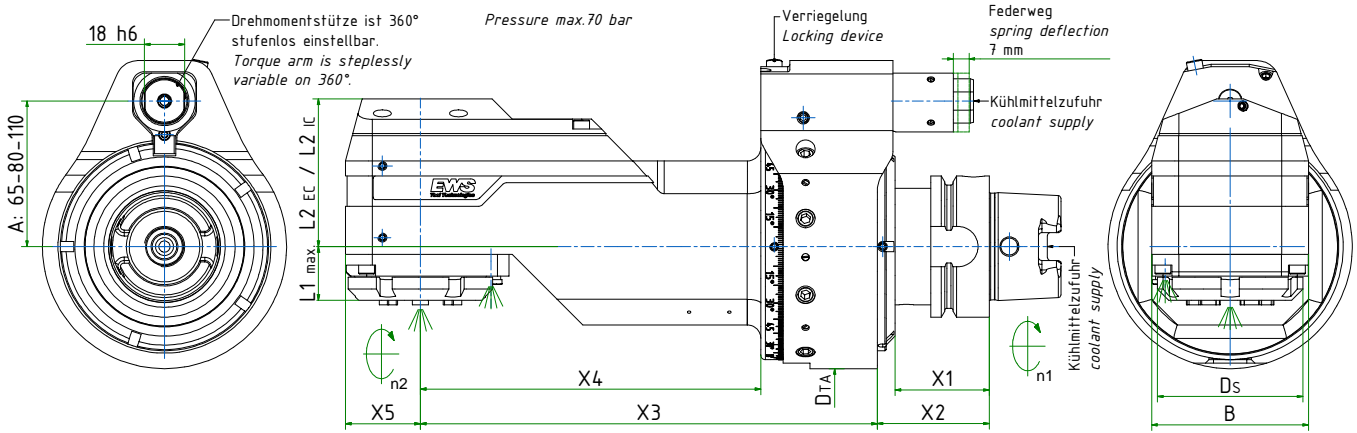


SHAFT	BT40	BT50	SK40	SK50	CAT 40	CAT 50	PSC 40	PSC 50	PSC 63	PSC 80	HSK40	HSK50	HSK63	HSK80	HSK100
X1	43	50	35	35	35	35	26	27	29	30	35	42	42	42	45
X2	51	58	43	43	43	43	34	35	37	38	43	50	50	50	53

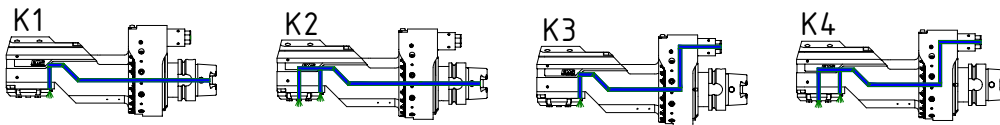
SIZE	STD COLLET	T (Nm)	RPM	LENGTH	X3	X4	X5	L1	L2	B	DS Ø	DTA Ø	COOLANT TYPE	WEIGHT (kg)
1	ER20	15	10000	SHORT	97	51,5	24,0	44,1	56,5	48	46	85	K3	4,4
1	ER20	15	10000	STANDARD	147	101,5	24,0	44,1	56,5	48	46	85	K1 K3	5,0
1	ER20	15	10000	LONG	177	131,5	24,0	44,1	56,5	48	46	85	K1 K3	5,3
2	ER25	30	8000	SHORT	90	38,0	26,0	56,9	61,9	54	52	98	K3	5,1
2	ER25	30	8000	STANDARD	137	85,0	26,0	56,9	61,9	54	52	98	K1 K3	5,8
2	ER25	30	8000	LONG	197	145,0	26,0	56,9	61,9	54	52	98	K1 K3	6,6
5	ER32	70	6000	SHORT	107	55,0	36,5	62,6	68,0	73	65	109	K3	6,6
5	ER32	70	6000	STANDARD	152	100,0	36,5	62,6	68,0	73	65	109	K1 K3	7,8
5	ER32	70	6000	LONG	217	165,0	36,5	62,6	68,0	73	65	109	K1 K3	9,2



OFFSET



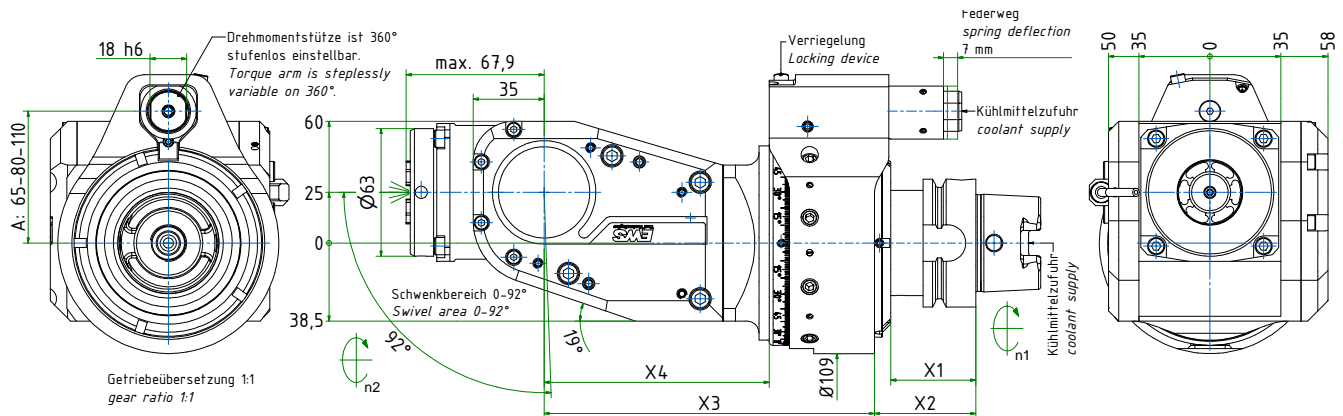
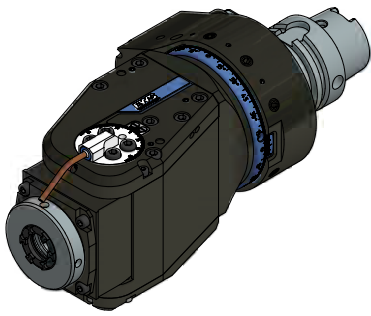
Coolant Type



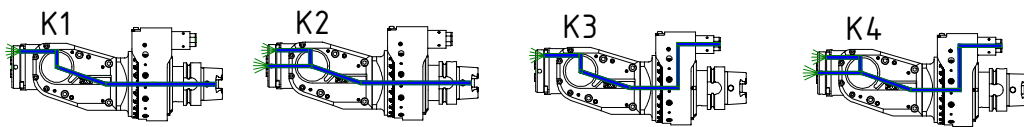
SHAFT	BT40	BT50	SK40	SK50	CAT 40	CAT 50	PSC 40	PSC 50	PSC 63	PSC 80	HSK40	HSK50	HSK63	HSK80	HSK100
X1	43	50	35	35	35	35	26	27	29	30	35	42	42	42	45
X2	51	58	43	43	43	43	34	35	37	38	43	50	50	50	53

SIZE	STD COLLET	T (Nm)	RPM	i	LENGTH	X3	X4	X5	L1	B	DS Ø	L2 EC (with ext. coolant)	L2 IC (with int. coolant)	DTA Ø	COOLANT TYPE	WEIGHT (kg)
1	ER11	18/12	5300/8000	1:1,5	STANDARD	170,0	124,5	17,0	7,2	41	34	48,0	/	85	K1 K3	5,7
1	ER11	18/12	5300/8000	1:1,5	LONG	202,5	157,0	17,0	7,2	41	34	48,0	/	85	K1 K3	6,2
1	ER16	18/15	6700/8000	1:1,2	STANDARD	173,0	127,5	20,5	14,1	41	33	49,0	/	85	K1 K3	5,8
1	ER16	18/15	6700/8000	1:1,2	LONG	215,5	170,0	20,5	14,1	41	33	49,0	/	85	K1 K3	6,3
1	ER16	18/15	6700/8000	1:1,2	LONG	248	202,5	20,5	14,1	41	33	49,0	/	85	K1 K3	6,3
1	ER20	15	8000	1:1	STANDARD	175,0	129,5	23,0	17,5	46	38	50,0	/	85	K1 K3	6,2
1	ER20	15	8000	1:1	LONG	217,5	172,0	23,0	17,5	46	38	50,0	/	85	K1 K3	6,7
2	ER25	30	8000	1:1	SHORT	129,0	77,0	26,0	24,4	58	52	47,5	54,5	98	K3 K4	5,2
2	ER25	30	8000	1:1	SHORT	129,0	77,0	26,0	24,4	58	52	66,5	59,5	98	K1 K2	5,2
2	ER25	30	8000	1:1	STANDARD	176,0	124,0	26,0	24,4	58	52	47,5	54,5	98	K1 K2 K3 K4	5,7
2	ER25	30	8000	1:1	LONG	236,0	184,0	26,0	24,4	58	52	47,5	54,5	98	K1 K2 K3 K4	6,5
5	ER32	70	6000	1:1	SHORT	157,0	105,0	33,5	25,1	70	65	60,5	66,0	109	K1 K2 K3 K4	6,8
5	ER32	70	6000	1:1	STANDARD	204,0	152,0	33,5	25,1	70	65	60,5	66,0	109	K1 K2 K3 K4	8,0
5	ER32	70	6000	1:1	LONG	255,0	203,0	33,5	25,1	70	65	60,5	66,0	109	K1 K2 K3 K4	9,2

SWIVEL

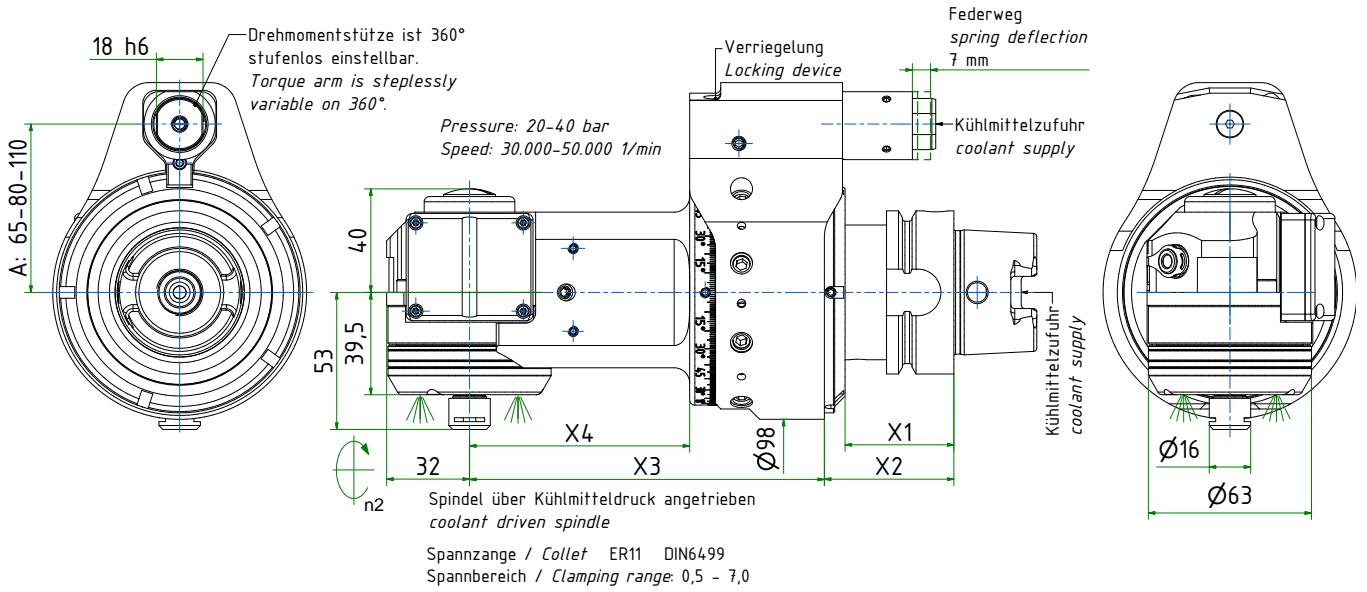
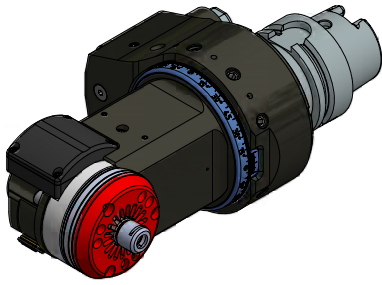


Coolant Type

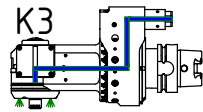
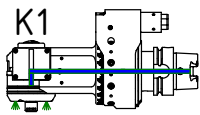


SHAFT	BT40	BT50	SK40	SK50	CAT 40	CAT 50	PSC 40	PSC 50	PSC 63	PSC 80	HSK40	HSK50	HSK63	HSK80	HSK100
X1	43	50	35	35	35	35	26	27	29	30	35	42	42	42	45
X2	51	58	43	43	43	43	34	35	37	38	43	50	50	50	53

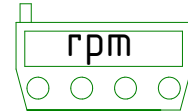
SIZE	STD COLLET	T (Nm)	RPM	LENGTH	X3	X4	COOLANT TYPE	WEIGHT (kg)
5	ER25	35	6000	STANDARD	163	111	K1 K2 K3 K4	10,3



Coolant Type



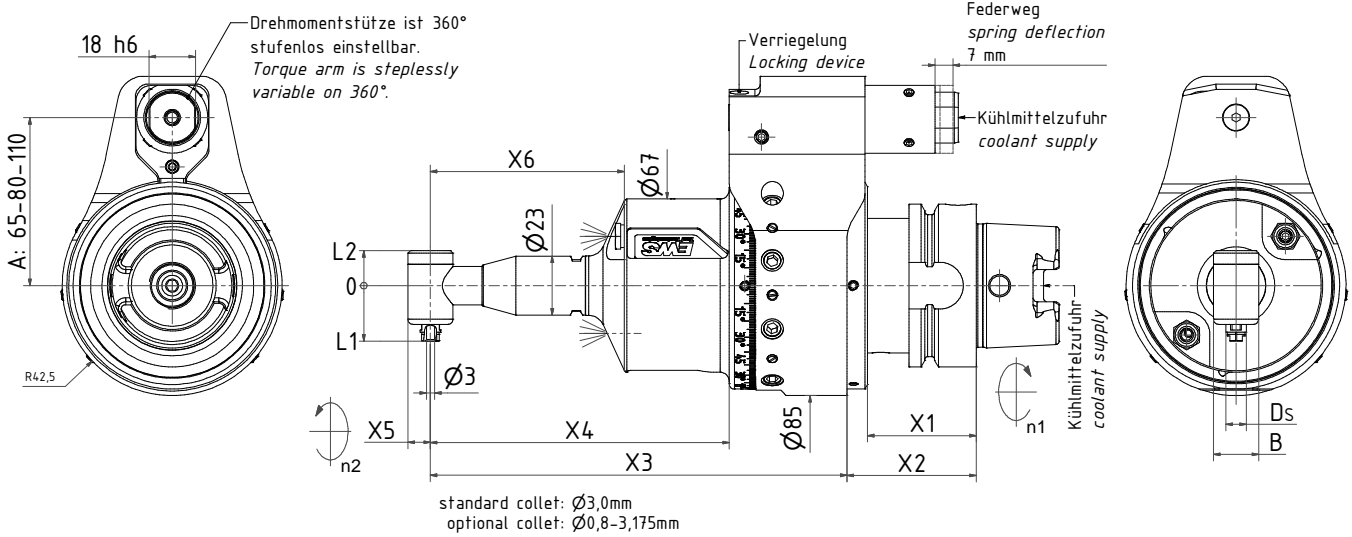
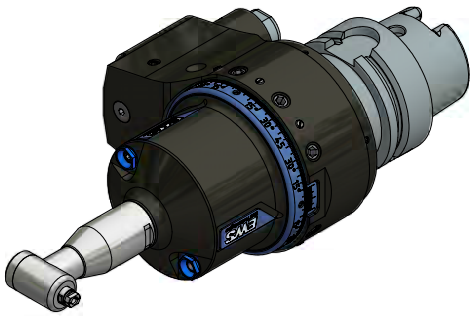
Drehzahlanzeige / rpm-display
EWS-Artikel: WS Display
Artikel-Nr.: 179661



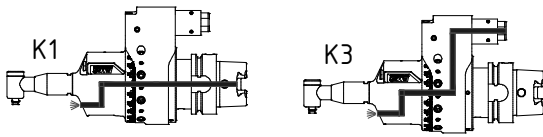
Muss separat bestellt werden!
Must be ordered separately!

SHAFT	BT40	BT50	SK40	SK50	CAT 40	CAT 50	PSC 40	PSC 50	PSC 63	PSC 80	HSK40	HSK50	HSK63	HSK80	HSK100
X1	43	50	35	35	35	35	26	27	29	30	35	42	42	42	45
X2	51	58	43	43	43	43	34	35	37	38	43	50	50	50	53

LENGTH	X3	X4	COOLANT TYPE	WEIGHT (kg)
SHORT	103	51	K1 K3	4,5
STANDARD	137	85	K1 K3	4,8
LONG	197	145	K1 K3	5,4

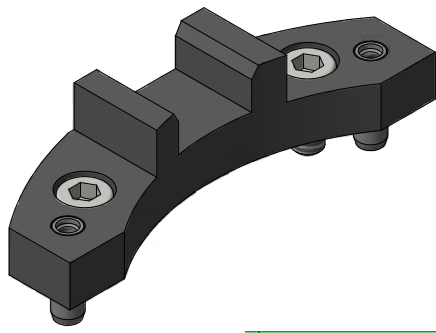


Coolant Type

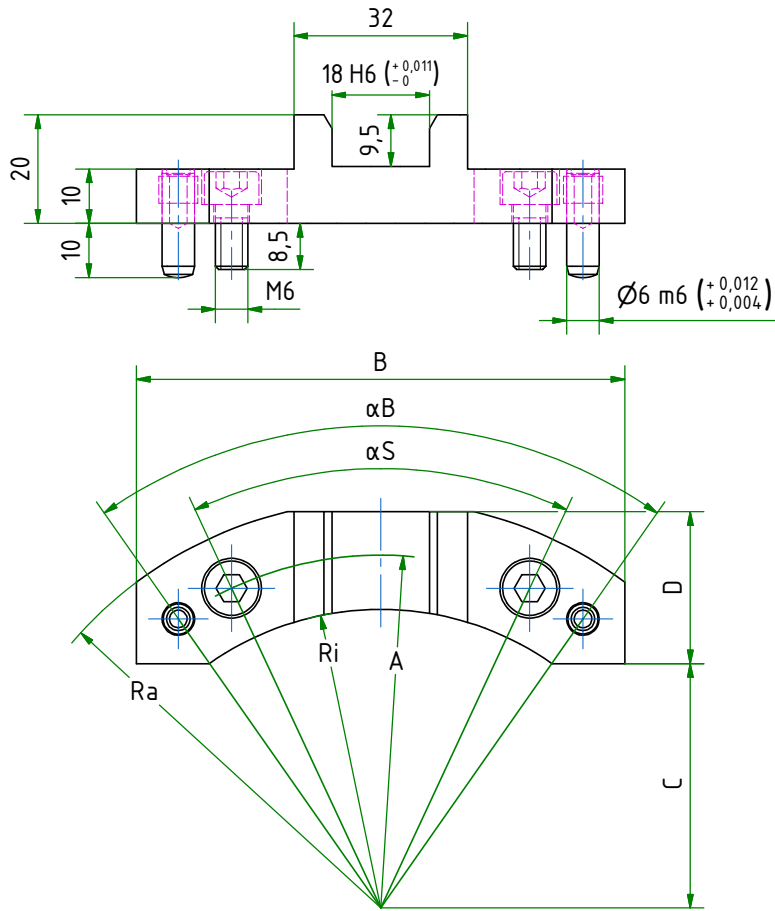


SHAFT	BT40	BT50	SK40	SK50	CAT 40	CAT 50	PSC 40	PSC 50	PSC 63	PSC 80	HSK40	HSK50	HSK63	HSK80	HSK100
X1	43	50	35	35	35	35	26	27	29	30	35	42	42	42	45
X2	51	58	43	43	43	43	34	35	37	38	43	50	50	50	53

SIZE	RPM	i	LENGTH	X3	X4	X5	X6	L1	L2	B	DS Ø	COOLANT TYPE	WEIGHT (kg)
R2	7650/5100	1,5:1	STANDARD	161	115,5	8,7	70	21,5	13,5	17,4	8	K1 K3	3,5
R1	7650/2870	2,67:1	STANDARD	171	125,5	11,4	80	28,2	20,1	22,8	9	K1 K3	3,6

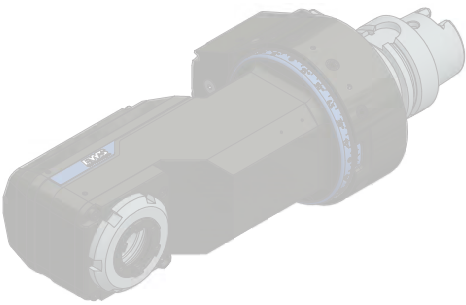


TORQUE SUPPORT



TYPES OF TORQUE SUPPORT

ARTICLE	A	B	C	D	Ra	Ri	B	S
SB-A065 55X75X20	65	90	45	28	R75	R55	70	50
SB-A80 70X90X20	80	110	54	34	R90	R70	70	50
SB-A110 100X120X20	110	130	87	31	R120	R100	60	40



EXAMPLE

Choose:

Type / Shaft / Size / Tool / Length / A = Distance to Torque Arm / Coolant Type

OFFSET

Coolant Type

SHAFT	BT40	BT50	SK40	SK50	CAT 40	CAT 50	PSC 40	PSC 50	PSC 63	PSC 80	HSK40	HSK50	HSK63	HSK80	HSK100
X1	43	50	35	35	35	35	26	27	29	30	35	42	42	42	45
X2	51	58	43	43	43	43	34	35	37	38	43	50	50	50	53

SIZE	STD COLLET	T (Nm)	RPM	i	LENGTH	X3	X4	X5	L1	B	DS Ø	L2 EC (with ext. coolant)	L2 IC (with int. coolant)	DTA Ø	COOLANT TYPE	WEIGHT (kg)
1	ER11	18/12	5300/8000	1:1,5	STANDARD	170,0	124,5	17,0	7,2	41	34	48,0	/	85	K1 K3	5,7
1	ER11	18/12	5300/8000	1:1,5	LONG	202,5	157,0	17,0	7,2	41	34	48,0	/	85	K1 K3	6,2
1	ER16	18/15	6700/8000	1:1,2	STANDARD	173,0	127,5	20,5	14,1	41	33	49,0	/	85	K1 K3	5,8
1	ER16	18/15	6700/8000	1:1,2	LONG	215,5	170,0	20,5	14,1	41	33	49,0	/	85	K1 K3	6,3
1	ER16	18/15	6700/8000	1:1,2	LONG	248	202,5	20,5	14,1	41	33	49,0	/	85	K1 K3	6,3
1	ER20	15	8000	1:1	STANDARD	175,0	129,5	23,0	17,5	46	38	50,0	/	85	K1 K3	6,2
1	ER20	15	8000	1:1	LONG	217,5	172,0	23,0	17,5	46	38	50,0	/	85	K1 K3	6,7
2	ER25	30	8000	1:1	SHORT	129,0	77,0	26,0	24,4	58	52	47,5	54,5	98	K3 K4	5,2
2	ER25	30	8000	1:1	SHORT	129,0	77,0	26,0	24,4	58	52	66,5	59,5	98	K1 K2	5,2
2	ER25	30	8000	1:1	STANDARD	176,0	124,0	26,0	24,4	58	52	47,5	54,5	98	K1 K2 K3 K4	5,7
2	ER25	30	8000	1:1	LONG	236,0	184,0	26,0	24,4	58	52	47,5	54,5	98	K1 K2 K3 K4	6,5
5	ER32	70	6000	1:1	SHORT	157,0	105,0	33,5	25,1	70	65	60,5	66,0	109	K1 K2 K3 K4	6,8
5	ER32	70	6000	1:1	STANDARD	204,0	152,0	33,5	25,1	70	65	60,5	66,0	109	K1 K2 K3 K4	8,0

	TYPE	SHAFT	SIZE	TOOL	LENGTH	A (SEE DRAWING)	COOLANT TYPE
Example	OFFSET	BT40	1	ER20	LONG	80	K3
1							
2							
3							

Precision meets Motion

Innovation

Die Genialität einer Erfindung liegt im Nutzen, nicht in der Komplexität ihrer Ausführung. Mit unseren Innovationen möchten wir daher die Basis für Ihren Markterfolg schaffen. Genial einfach.

Innovation

The genius of an invention lies in the benefits, not in the complexity of its embodiment. Therefore, our innovations aim at creating the basis for your success in the market. Ingeniously simple.



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n



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