BT Shank

DINOX NC TOTAL TOOLING SYSTEM

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BT-DHE

Hydraulic expansion chuck

MAS 403-BT	G6.3	15,000	5㎛	C			
Shank	G value	Max RPM	Run-out	Coolant System	Milling	Reaming	Chamfering

Fig.1

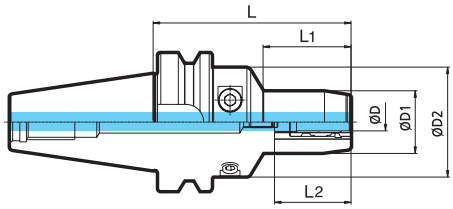
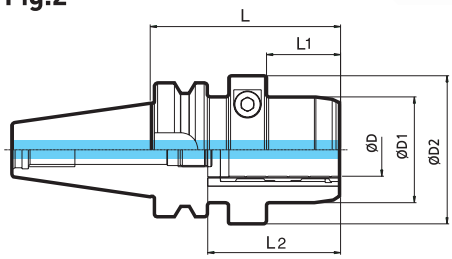


Fig.2



- **L2**: Depth of tool insertion (MIN.~MAX.)

C Internal coolant system installed.

- For more information on the product features, see **Page 22**. 22P
- For more information on the applicable collet, see **Page 62**. 62P
- For more information on the related parts, see **Page 63**. 63P
- For more information, see **Page 146** for HSK shank and **Page 158** for SK shank. 146,158P

	Designation	ØD	L	ØD1	ØD2	L1	L2	ADJ SCREW	Fig.	Kg	Total Weight (Kg)
BT30	BT30-DHE6-65	6	65	29	46	33	30~39.8	M5	1	0.7	0.8
	BT30-DHE8-65	8	65	31	46	33	30~39.8	M5	1	0.7	0.8
	BT30-DHE10-65	10	65	32	46	34	35~44.8	M5	1	0.7	0.8
	BT30-DHE12-70	12	70	35	46	34	41~50.8	M5	1	0.8	0.8
	BT30-DHE14-90	14	90	36	46	40	43~52.8	M5	1	1.0	1.1
	BT30-DHE16-90	16	90	40	46	45	46~55.8	M5	1	1.0	1.1
	BT30-DHE18-90	18	90	42	46	40	49~58.8	M5	1	1.1	1.2
	BT30-DHE20-90	20	90	44	46	45	49~58.8	M5	1	1.1	1.2
BT40	BT40-DHE6-90	6	90	29	50	40	30~39.8	M5	1	1.4	1.6
	BT40-DHE6-140	6	140	29	50	40	30~39.8	M5	1	2.2	2.5
	BT40-DHE8-90	8	90	31	50	40	30~39.8	M5	1	1.4	1.6
	BT40-DHE8-140	8	140	31	50	40	30~39.8	M5	1	2.2	2.5
	BT40-DHE10-90	10	90	33	50	40	35~44.8	M5	1	1.5	1.7
	BT40-DHE10-140	10	140	33	50	40	35~44.8	M5	1	2.2	2.4
	BT40-DHE12-90	12	90	35	50	40	41~50.8	M10	1	1.5	1.7
	BT40-DHE12-140	12	140	35	50	40	41~50.8	M10	1	2.3	2.5
	BT40-DHE14-90	14	90	36	50	40	43~52.8	M10	1	1.5	1.7
	BT40-DHE14-140	14	140	36	50	40	43~52.8	M10	1	2.2	2.4
	BT40-DHE16-90	16	90	40	50	45	46~55.8	M10	1	1.5	1.7
	BT40-DHE16-140	16	140	40	50	45	46~55.8	M10	1	2.2	2.5
	BT40-DHE18-90	18	90	42	50	45	49~58.8	M10	1	1.5	1.7
	BT40-DHE18-140	18	140	42	50	45	49~58.8	M10	1	2.2	2.5
	BT40-DHE20-90	20	90	44	50	47	49~58.8	M10	1	1.5	1.7
	BT40-DHE20-140	20	140	44	50	50	49~58.8	M10	1	2.3	2.5
	BT40-DHE25-90	25	90	50	70	35	58~67.8	M16	2	2.0	2.2
	BT40-DHE32-90	32	90	63	80	35	58~67.8	M16	2	2.3	2.5

BT-DHE

Hydraulic expansion chuck

MAS 403-BT	G6.3	15,000	5㎛	C			
Shank	G value	Max RPM	Run-out	Coolant System	Milling	Reaming	Chamfering

Fig.1

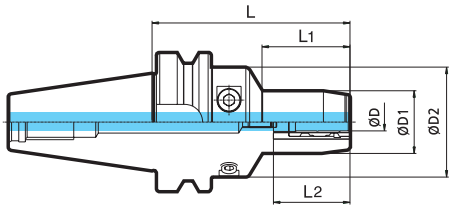
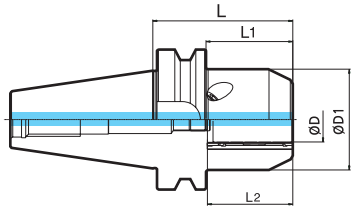


Fig.2



- **L2** : Depth of tool insertion (MIN.~MAX.)

C Internal coolant system installed.

- For more information on the product features, see **Page 22**. 22P
- For more information on the applicable collet, see **Page 62** . 62P
- For more information on the related parts, see **Page 63** . 63P
- For more information, see **Page 146** for HSK shank and see **Page 158** for SK shank. 146,158P

BT50

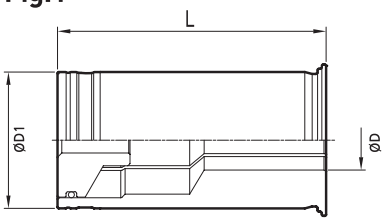
Designation	ØD	L	ØD1	ØD2	L1	L2	ADJ SCREW	Fig.	Kg	Total Weight (Kg)
BT50-DHE6-90	6	90	29	50	34	30~39.8	M5	1	3.9	4.2
BT50-DHE6-140	6	140	29	50	40	30~39.8	M5	1	4.4	4.8
BT50-DHE8-90	8	90	31	50	34	30~39.8	M5	1	4.2	4.5
BT50-DHE8-140	8	140	31	50	40	30~39.8	M5	1	4.6	5
BT50-DHE10-90	10	90	33	50	34	35~44.8	M5	1	3.9	4.2
BT50-DHE10-140	10	140	33	50	34	35~44.8	M5	1	4.5	4.9
BT50-DHE12-90	12	90	35	50	34	41~50.8	M10	1	4.0	4.3
BT50-DHE12-140	12	140	35	50	34	41~50.8	M10	1	4.6	5
BT50-DHE14-90	14	90	36	50	34	43~52.8	M10	1	3.9	4.2
BT50-DHE14-140	14	140	36	50	34	43~52.8	M10	1	4.5	4.9
BT50-DHE16-90	16	90	40	50	34	46~55.8	M10	1	4.1	4.4
BT50-DHE16-140	16	140	40	50	34	46~55.8	M10	1	4.7	5.1
BT50-DHE18-90	18	90	42	50	40	49~58.8	M10	1	4.0	4.3
BT50-DHE18-140	18	140	42	50	45	49~58.8	M10	1	4.5	4.9
BT50-DHE20-90	20	90	44	50	34	49~58.8	M10	1	4.0	4.3
BT50-DHE20-140	20	140	44	50	47	49~58.8	M10	1	4.5	4.9
BT50-DHE25-90	25	90	66	-	52	58~67.8	M16	2	4.7	5
BT50-DHE32-90	32	90	72	-	52	58~67.8	M16	2	5.8	6.2

DHC Collet (general & waterproof type)

DHE Collet (general type) / DHE Collet (waterproof type)

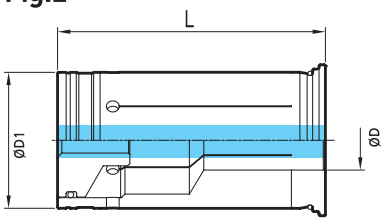
5㎛ Run-out | C Coolant System

Fig.1



C This product does not support the internal coolant system.

Fig.2



C Internal coolant system installed.

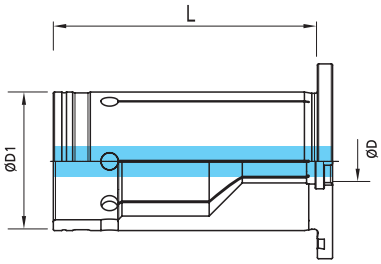
• Systems in other sizes are custom-made.

Designation (general type)	ØD	ØD1	L	Fig.	Kg
DHC12- 3,4,5,6,8	3,4,5,6,8	12	47	1	0.08
DHC20- 3,4,5,6,7,8,9,10,11,12,14,16	3,4,5,6,7,8,9,10,11,12,14,16	20	52	1	0.08
DHC32-6,8,10,12,14,16,18,19,20,25	6,8,10,12,14,16,18,19,20,25	32	63	1	0.08
Designation (waterproof type)	**ØD**	**ØD1**	**L**	**Fig.**	**Kg**
DHC12- 3(P),4(P),5(P),6(P),8(P)	3,4,5,6,8	12	47	2	0.08
DHC20- 3(P),4(P),5(P),6(P),7(P),8(P),9(P), 10(P),11(P),12(P),14(P),16(P)	3,4,5,6,7,8,9,10,11,12,14,16	20	52	2	0.08
DHC32- 6(P),8(P),10(P),12(P),14(P),16(P), 18(P),19(P),20(P),25(P)	6,8,10,12,14,16,18,19,20,25	32	63	2	0.08

DHJ Collet (jet coolant)

DHJ JET Coolant collet

3㎛ Run-out | C Coolant System



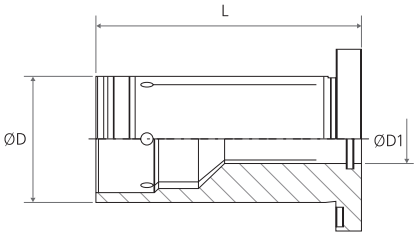
C Internal coolant system installed.

Designation	ØD	ØD1	L	Kg	Total Weight (Kg)
DHJ20-8	8	20	50	0.14	0.14
DHJ20-10	10	20	50	0.1	0.1
DHJ20-12	12	20	50	0.1	0.1
DHJ20-14	14	20	50	0.08	0.08
DHJ20-16	16	20	50	0.08	0.08

DZC Collet

Zero fit collet

≤2㎛ Run-out | C Coolant System



C This product does not support internal coolant system.

Designation	ØD	ØD1	L
DZC20-6	20	6	56.5
DZC20-8	20	8	56.5
DZC20-10	20	10	56.5
DZC20-12	20	12	56.5
DZC20-14	20	14	56.5
DZC20-16	20	16	56.5
DZC32-6	32	6	67.5
DZC32-8	32	8	67.5
DZC32-10	32	10	67.5
DZC32-12	32	12	67.5
DZC32-16	32	16	67.5
DZC32-20	32	20	67.5
DZC32-25	32	25	67.5

DHE SPARE PART

Parts for hydraulic expansion chuck

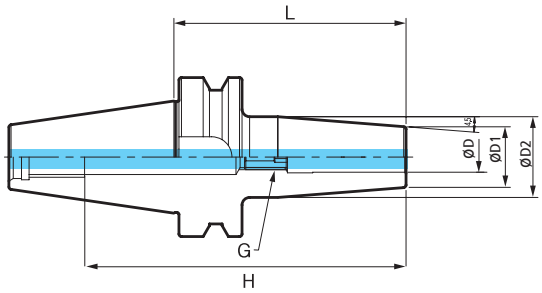
Spare Part

Main Components					
Type		Clamp bolt	Wrench	Type	Adjustable screw
Model No. \ Images				Model No. \ Images	
BT30 / SK30 / HSK50	DHE 6, 8, 10, 12	BTF1010	DHETW-5	DHE 6, 8, 10	DHE-M5 (ADJ)
	DHE 14, 16, 18, 20	BTF1010			
BT40 / BT50 / SK40 / SK50 / HSK63A HSK100A	DHE 6, 8, 10, 12, 14, 16, 18, 20	BTF1010		DHE 12, 14, 16, 18, 20	DHE-M10 (ADJ)
	DHE 25, 32	BTF1212-1.5	DHETW-6	DHE 25, 32	DHE-M16 (ADJ)

BT-DSC

Shrinking chuck

MAS 403-BT	G2.5	25,000	3μm	C				
Shank	G value	Max RPM	Run-out	Coolant System	Milling	**Drilling**	Reaming	Chamfering



- For more information on the product features, see **Page 23**. 23P
- For more information on the related parts (adjustable screw), see **Page 70**. 70P

C Internal coolant system installed.

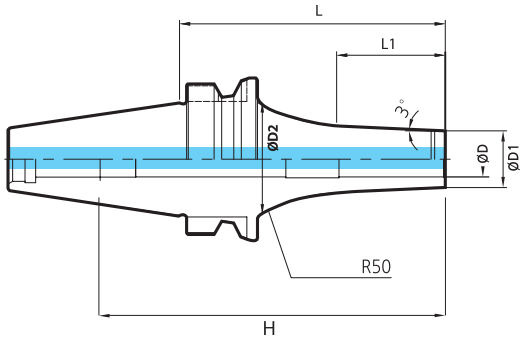
BT30, BT40

Designation	ØD	L	ØD1	ØD2	H	G	RPM	Kg	Total Weight (Kg)
BT30-DSC3-60	3	60	11	18.5	82	-	25,000	0.4	0.5
BT30-DSC4-60	4	60	13	20.5	82	-	25,000	0.4	0.5
BT40-DSC6-90	6	90	21	27	36	M5	20,000	1.1	1.3
BT40-DSC6-120	6	120	21	27	36	M5	20,000	1.2	1.5
BT40-DSC6-160	6	160	21	27	36	M5	20,000	1.4	1.7
BT40-DSC8-90	8	90	21	27	36	M5	20,000	1.1	1.3
BT40-DSC8-120	8	120	21	27	36	M5	20,000	1.2	1.4
BT40-DSC8-160	8	160	21	27	36	M5	20,000	1.4	1.7
BT40-DSC10-90	10	90	24	32	42	M8	20,000	1.1	1.3
BT40-DSC10-120	10	120	24	32	42	M8	20,000	1.3	1.6
BT40-DSC10-160	10	160	24	32	42	M8	20,000	1.6	1.8
BT40-DSC12-90	12	90	24	32	47	M8	20,000	1.1	1.3
BT40-DSC12-120	12	120	24	32	47	M8	20,000	1.3	1.5
BT40-DSC12-160	12	160	24	32	47	M8	20,000	1.6	1.8
BT40-DSC16-90	16	90	27	34	50	M12	20,000	1.2	1.4
BT40-DSC16-120	16	120	27	34	50	M12	20,000	1.3	1.6
BT40-DSC16-160	16	160	27	34	50	M12	20,000	1.7	1.9
BT40-DSC20-90	20	90	33	42	52	M12	20,000	1.3	1.5
BT40-DSC20-120	20	120	33	42	52	M12	20,000	1.5	1.8
BT40-DSC20-160	20	160	33	42	52	M12	20,000	2.0	2.3

BT-DSC/M MONO CURVE TYPE

Shrinking chuck

MAS 403-BT	G2.5	25,000	3㎛	C				
Shank	G value	Max RPM	Run-out	Coolant System	Milling	Drilling	Reaming	Chamfering



※ This product does not support adjust screw.

C Internal coolant system installed.

• For more information on the features of product, see **Page 23**. 23P

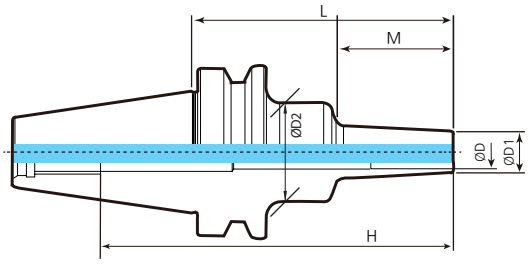
BT30

Designation	ØD	L	ØD1	ØD2	L1	H	RPM	Kg	Total Weight (Kg)
BT30-DSC3M-75S	3	75	8	25	29.8	97	25,000	0.4	0.5
BT30-DSC4M-75S	4	75	10	25	31.8	97	25,000	0.4	0.5
BT30-DSC6M-75S	6	75	12	30	28.9	97	25,000	0.5	0.5
BT30-DSC8M-75S	8	75	14	32	28.9	97	25,000	0.5	0.5
BT30-DSC10M-75S	10	75	16	32	30.7	45	25,000	0.5	0.5
BT30-DSC12M-75S	12	75	19	32	33.8	45	25,000	0.5	0.5

BT-DSC/M MONO TYPE

Shrinking chuck

MAS 403-BT	G2.5	25,000	3μm	C				
Shank	G value	Max RPM	Run-out	Coolant System	Milling	Drilling	Reaming	Chamfering



- For more information on the features of product, see **Page 23**. 23P
- For more information on ST shank, see **Page 138**. 138P
- For more information, see **Page 147** for HSK shank and **Page 159** for SK shank. 147,159P

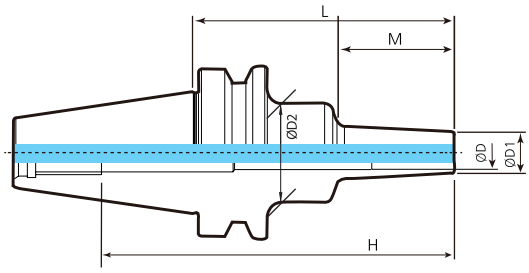
C Internal coolant system installed.

	Designation	ØD	L	ØD1	ØD2	M	H	RPM	Kg	Total Weight (Kg)
BT40	BT40-DSC3M-95	3	95	8	26	42	128	20,000	0.8	1.0
	BT40-DSC4M-95	4	95	8	26	42	128	20,000	0.8	1.0
	BT40-DSC6M-95	6	95	10	26	42	128	20,000	1.0	1.2
	BT40-DSC6M-120	6	120	10	26	67	153	20,000	1.0	1.2
	BT40-DSC6M-160	6	160	10	36	97	193	20,000	1.2	1.5
	BT40-DSC8M-95	8	95	13	36	42	128	20,000	1.1	1.4
	BT40-DSC8M-120	8	120	13	36	67	153	20,000	1.3	1.5
	BT40-DSC8M-160	8	160	13	36	97	193	20,000	1.3	1.5
	BT40-DSC10M-95	10	95	16	36	42	128	20,000	1.1	1.3
	BT40-DSC10M-120	10	120	16	36	67	153	20,000	1.1	1.4
	BT40-DSC10M-160	10	160	16	36	97	193	20,000	1.3	1.6
	BT40-DSC12M-95	12	95	19	36	42	128	20,000	1.1	1.3
	BT40-DSC12M-120	12	120	19	36	67	153	20,000	1.2	1.4
	BT40-DSC12M-160	12	160	19	36	97	193	20,000	1.4	1.6
	BT40-DSC16M-95	16	95	24	50	42	47	20,000	1.3	1.5
	BT40-DSC16M-120	16	120	24	50	67	47	20,000	1.4	1.6
	BT40-DSC16M-160	16	160	24	50	97	47	20,000	1.7	2.0
	BT40-DSC20M-95	20	95	29	50	42	55	20,000	1.3	1.5
	BT40-DSC20M-120	20	120	29	50	67	55	20,000	1.5	1.7
	BT40-DSC20M-160	20	160	29	50	97	55	20,000	1.9	2.1
BT50	BT50-DSC6M-110	6	110	10	26	42	163	15,000	3.5	3.8
	BT50-DSC6M-160	6	160	10	36	97	213	15,000	3.6	4.0
	BT50-DSC8M-110	8	110	13	36	42	163	15,000	3.7	4.0
	BT50-DSC8M-160	8	160	13	36	97	213	15,000	3.7	4.1
	BT50-DSC10M-110	10	110	16	36	42	163	15,000	3.7	4.0
	BT50-DSC10M-160	10	160	16	36	97	213	15,000	3.7	4.1
	BT50-DSC12M-110	12	110	19	36	42	163	15,000	3.7	4.0
	BT50-DSC12M-160	12	160	19	50	97	213	15,000	4.0	4.4
	BT50-DSC16M-110	16	110	24	50	42	163	15,000	3.9	4.2
	BT50-DSC16M-160	16	160	24	50	97	213	15,000	4.1	4.5
	BT50-DSC20M-110	20	110	29	50	42	55	15,000	3.9	4.2
	BT50-DSC20M-160	20	160	29	50	97	55	15,000	4.2	4.6

BT-DSC/S MONO SLIM TYPE

Shrinking chuck

MAS 403-BT	G2.5	25,000	3㎛	C				
Shank	G value	Max RPM	Run-out	Coolant System	Milling	Drilling	Reaming	Chamfering



※ This product does not support adjust screw.

C Internal coolant system installed.

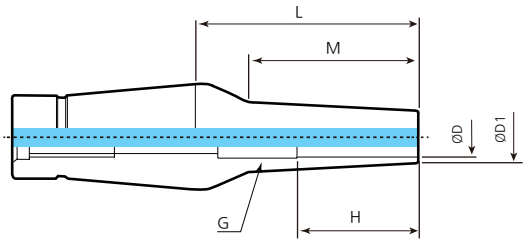
- For more information on the features of product, see **Page 23**. 23P
- For more information on S shank, see **Page 139**. 139P

	Designation	ØD	L	ØD1	ØD2	M	H	RPM	Kg	Total Weight (Kg)
BT30, BT40	BT30-DSC6S-60	6	60	9	20	22	82	25,000	0.4	0.5
	BT30-DSC6S-80	6	80	9	20	42	102	25,000	0.5	0.5
	BT30-DSC6S-120	6	120	9	25	67	142	25,000	0.5	0.6
	BT40-DSC6S-95	6	95	9	26	42	128	20,000	1.0	1.2
	BT40-DSC6S-120	6	120	9	26	67	153	20,000	1.0	1.2
	BT40-DSC6S-160	6	160	9	36	97	193	20,000	1.2	1.4
	BT40-DSC8S-95	8	95	11	36	42	128	20,000	1.1	1.3
	BT40-DSC8S-120	8	120	11	36	67	153	20,000	1.1	1.3
	BT40-DSC8S-160	8	160	11	36	97	193	20,000	1.2.	1.5
	BT40-DSC10S-95	10	95	13	36	42	128	20,000	1.0	1.2
	BT40-DSC10S-120	10	120	13	36	67	153	20,000	1.1	1.3
	BT40-DSC10S-160	10	160	13	36	97	193	20,000	1.2	1.5
	BT40-DSC12S-95	12	95	15	36	42	128	20,000	1.1	1.3
	BT40-DSC12S-120	12	120	15	36	67	153	20,000	1.1	1.3
	BT40-DSC12S-160	12	160	15	36	97	193	20,000	1.2	1.4
BT50	BT50-DSC6S-110	6	110	9	26	42	166	15,000	3.5	3.8
	BT50-DSC6S-160	6	160	9	36	97	216	15,000	3.6	4.0
	BT50-DSC8S-110	8	110	11	36	42	166	15,000	3.6	3.9
	BT50-DSC8S-160	8	160	11	36	97	216	15,000	3.6	4.0
	BT50-DSC10S-110	10	110	13	36	42	166	15,000	3.6	3.9
	BT50-DSC10S-160	10	160	13	36	97	216	15,000	3.6	4.0
	BT50-DSC12S-110	12	110	15	36	42	166	15,000	3.6	3.9
	BT50-DSC12S-160	12	160	15	36	97	216	15,000	3.7	4.1

CS/CM 2PIECES TYPE

Shrinking chuck

5μm Run-out | C Coolant System | Milling | Drilling | Reaming | Chamfering



※ This product does not support adjust screw.

※ Stock management will be discontinued.

C Internal coolant system installed.

• For more information on the features of product, see **Page 23**. 23P

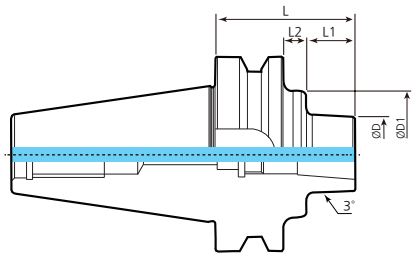
	Designation	ØD	L	ØD1	M	H	Kg	Total Weight (Kg)
CS	CS12-6-35	6	35	9	22	55	0.1	0.2
	CS12-6-55	6	55	9	42	75	0.2	0.2
	CS12-6-80	6	80	9	67	100	0.2	0.2
	CS12-6-110	6	110	9	97	130	0.2	0.3
	CS12-8-35	8	35	11	22	55	0.1	0.2
	CS12-8-55	8	55	11	42	75	0.2	0.2
	CS12-8-80	8	80	11	67	100	0.2	0.2
	CS12-8-110	8	110	11	97	130	0.3	0.3
	CS12-10-35	10	35	13	22	45	0.1	0.2
	CS12-10-55	10	55	13	42	49.5	0.2	0.2
	CS12-10-80	10	80	13	67	65	0.2	0.3
	CS12-10-110	10	110	13	97	65	0.3	0.4
	CS12-12-35	12	35	15	22	45	0.1	0.2
	CS12-12-55	12	55	15	42	49.5	0.2	0.2
	CS12-12-80	12	80	15	67	65	0.2	0.3
	CS12-12-110	12	110	15	97	65	0.3	0.4

	Designation	ØD	L	ØD1	M	H	Kg	Total Weight (Kg)
CM	CM12-6-35	6	35	12	22	55	0.2	0.2
	CM12-6-55	6	55	12	42	75	0.2	0.2
	CM12-6-80	6	80	12	67	100	0.2	0.3
	CM12-8-35	8	35	14	22	55	0.2	0.2
	CM12-8-55	8	55	14	42	75	0.2	0.2
	CM12-8-80	8	80	14	67	100	0.3	0.3
	CM12-10-35	10	35	16	22	45	0.2	0.2
	CM12-10-55	10	55	16	42	45	0.2	0.3
	CM12-10-80	10	80	16	67	45	0.3	0.3
	CM12-12-35	12	35	20	22	45	0.2	0.2
	CM12-12-55	12	55	20	42	45	0.3	0.3
	CM12-12-80	12	80	20	52	55	0.3	0.4

BT-SLK 2PIECES TYPE

Shrinking chuck

MAS 403-BT	G2.5	5㎛	C
Shank	G value	Run-out	Coolant System



※ BT30-SLK12-35 requires exclusive pull stud bolt.

※ Stock management will be discontinued.

C Internal coolant system installed.

• For more information on the features of product, see **Page 23**. 23P

BT30, BT40, BT50

Designation	ØD	L	ØD1	L1	L2	Kg	Total Weight (Kg)
BT30-SLK12-35	38	35	-	13	-	0.4	0.5
BT40-SLK12-45	38	45	-	18	-	1.0	1.2
BT40-SLK12-45F	41	45	-	18	-	1.0	1.2
BT40-SLK12-75	38	75	-	48	-	1.3	1.5
BT40-SLK12-75F	41	75	-	48	-	1.3	1.5
BT40-SLK12-135F	41	135	-	108	-	2.1	2.4
BT50-SLK12-75	38	75	65	25	12	4.1	4.4
BT50-SLK12-75F	41	75	65	25	12	4.1	4.4
BT50-SLK12-105F	41	105	65	55	12	4.5	4.8
BT50-SLK12-135F	41	135	65	85	12	5.3	5.7
BT50-SLK12-225	38	225	65	150	37	6.2	6.6
BT50-SLK12-315	38	315	90	150	127	11.5	11.9

DSC SPARE PART

Parts for shrinking chuck

Main Components

Adjust screw

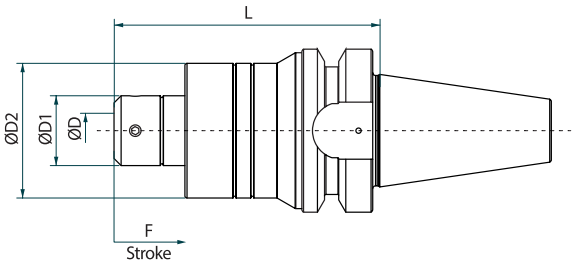
※ Slim type is not connected

Main Components										
Type	DSC6	DSC8	DSC10	DSC12	DSC14	DSC16	DSC18	DSC20	DSC25	DSC32
Adjust screw	M520C		M820C		M1230C					

BT-OFH

Floating holder for brush

MAS 403-BT	G6.3	15,000	6mm	C	
Shank	G value	Max RPM	Sleeve	Coolant System	Deburring



- For more information on the product features, see **Page 33.** 33P
- For more information on ST shank, see **Page 139**. 139P

C This product does not support internal coolant system.

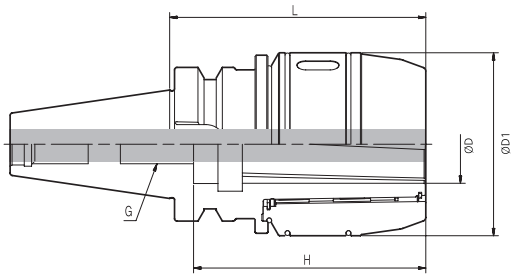
BT30

Designation	Sleeve Dia. (ØD)	L	ØD1	ØD2	ØD3	L1	L2	Sleeve stroke(F)	RPM
BT30-OFH6-75	6	75	19.7	38	6	0.7	0.8	6	15,000

BT-CPM

Champion milling chuck

MAS 403-BT	15㎛	130~500 kgf·m	C		
Shank	Run-out	Clamping Force	Coolant System	Milling	Drilling



- For more information on the product features, see **Page 26**. 26P
- For more information on the applicable collet, see **Page 74**. 74P
- For more information on the composition of set, see NPM set on **Page 73**. 73P

※ CPM Set available.

C Internal coolant system optional.

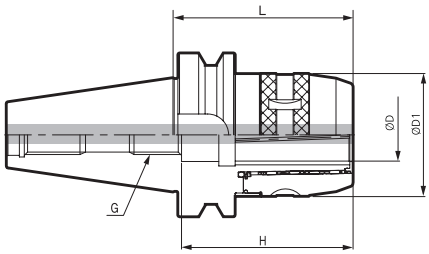
BT30, BT40, BT50

Designation	ØD	L	ØD1	H	G	Applied collet (option)	Kg	Total Weight (Kg)
BT30-CPM20-80	20	80	54	80	M16	DC20, DCS20	1.1	1.2
BT40-CPM20-90	20	90	54	80	M16	DC20, DCS20	1.7	1.9
BT40-CPM32-90	32	90	75	85	M16	DC32, DCS32	2.3	2.5
BT40-CPM32-105	32	105	75	95	M16	DC32, DCS32	2.7	2.9
BT50-CPM32-105	32	105	75	95	M24	DC32, DCS32	4.8	5.2
BT50-CPM32-135	32	135	75	95	M24	DC32, DCS32	5.7	6.1
BT50-CPM32-165	32	165	75	95	M24	DC32, DCS32	6.6	7.0

BT-NPM

New power milling chuck

MAS 403-BT	15㎛	130~500 kgf·m	C		
Shank	Run-out	Clamping Force	Coolant System	Milling	Drilling



- For more information on the product features, see **Page 24**. 24P
- For more information on the applicable collet, see **Page 74**. 74P
- For more information on the related parts, see **Page 76**. 76P
- For more information, see **Page 148** for HSK shank and **Page 160** for SK shank. 148,160P
- For more information on NT shank, see **Page 174**. 174P

C Internal coolant system optional.

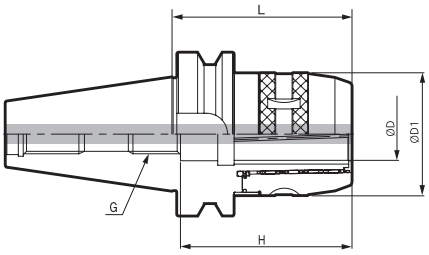
	Designation	ØD	L	ØD1	H	G	COLLET	Kg	Total Weight (Kg)
BT30, BT40	BT30-NPM20-85	20	85	54	85	M16	DC20, DCS20	1.2	1.3
	BT40-NPM20-85	20	85	54	85	M16	DC20, DCS20	2.6	2.8
	BT40-NPM20-100	20	100	54	85	M16	DC20, DCS20	2.3	2.5
	BT40-NPM25-85	25	85	61	85	M16	DC25	1.7	1.9
	BT40-NPM32-90	32	90	75	87	M16	DC32, DCS32	2.3	2.5
	BT40-NPM32-110	32	110	75	95	M16	DC32, DCS32	2.8	3.1
	BT40-NPM32-135	32	135	75	95	M16	DC32, DCS32	3.5	3.8
BT50	BT50-NPM20-95	20	95	54	85	M16	DC20, DCS20	4.3	4.6
	BT50-NPM20-125	20	125	54	85	M16	DC20, DCS20	4.7	5.1
	BT50-NPM20-165	20	165	54	85	M16	DC20, DCS20	5.2	5.6
	BT50-NPM32-110	32	110	75	105	M24	DC32, DCS32	7.1	9.4
	BT50-NPM32-135	32	135	75	105	M24	DC32, DCS32	5.7	6.1
	BT50-NPM32-165	32	165	75	105	M24	DC32, DCS32	6.9	7.3
	BT50-NPM42-110	42	110	90	125	M24	DC42, DCS42	5.4	5.7
	BT50-NPM42-135	42	135	90	125	M24	DC42, DCS42	6.5	6.9
	BT50-NPM42-165	42	165	90	125	M24	DC42, DCS42	7.9	8.3

※ If L≤90 , it is recommended to use a short cap; use a longer product for heavy cutting.

NPM SET

New power milling chuck SET

MAS 403-BT	15㎛	130~500 kgf·m	C		
Shank	Run-out	Clamping Force	Coolant System	Milling	Drilling



C Internal coolant system optional.

• HSK, SK / B Set are customizable.

BT40, BT50

Designation	Body	Collet	Spanner
BT40-NPM32-110(A)	BT40-NPM32-110	DC32-6, 8, 10, 12, 16, 20, 25	75-79
BT50-NPM32-110(A)	BT50-NPM32-110	DC32-6, 8, 10, 12, 16, 20, 25	75-79
BT50-NPM42-110(A)	BT50-NPM42-110	DC42-6, 8, 10, 12, 16, 20, 25, 32	92-96

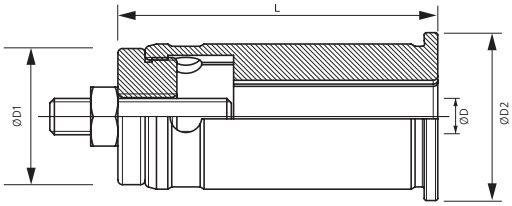
※ B SET includes the items above as well as MT collet and DJT collet.

A Set

B Set

DCS

Straight collet

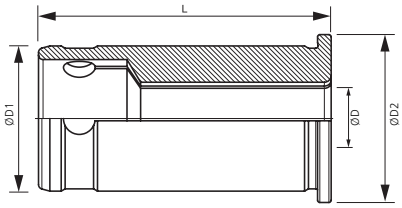


- Users can adjust the length with using adjustment screw.

Designation	ØD	L	ØD1	ØD2	Kg	Total Weight (Kg)
DCS20- 6,8,10,12,16	6,8,10,12,16	57	20	25	0.1	0.2
DCS32- 6,8,10,12,14,16,19,20,25	6,8,10,12,14,16,19,20,25	70.5	32	37	0.3	0.4
DCS42- 6,8,10,12,16,20,25,32	6,8,10,12,16,20,25,32	80	42	47	0.6	0.7

DC

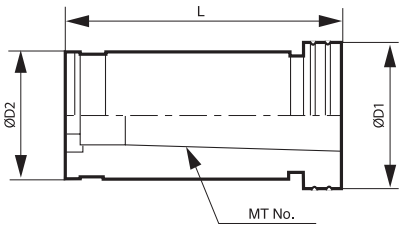
Straight collet



Designation	ØD	L	ØD1	ØD2	Kg	Total Weight (Kg)
DC20- 6,8,10,12,14,16	6,8,10,12,14,16	53	20	25	0.1	0.1
DC25- 6,8,10,12,16,20	6,8,10,12,16,20	61.5	25	29	0.2	0.2
DC32- 6,8,10,12,14,16,19,20,25	6,8,10,12,14,16,19,20,25	64.5	32	37	0.2	0.3
DC42- 6,8,10,12,16,20,25,32	6,8,10,12,16,20,25,32	73	42	47	0.5	0.5

TC

Taper collet

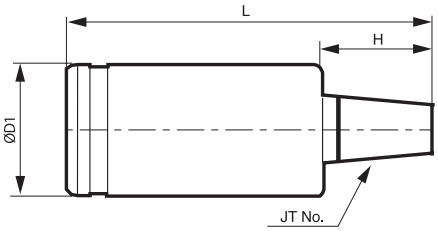


Designation	MT No.	L	ØD2	ØD1	Kg	Total Weight (Kg)
TC20-1	MT1	60	20	26	0.1	0.1
TC20-2	MT2	72	20	26	0.1	0.1
TC25-1	MT1	60	25	32	0.2	0.2
TC25-2	MT2	72	25	32	0.2	0.2
TC32-1	MT1	60	32	38	0.4	0.4
TC32-2	MT2	72	32	38	0.4	0.4

Designation	MT No.	L	ØD2	ØD1	Kg	Total Weight (Kg)
TC32-3	MT3	90	32	38	0.4	0.4
TC42-1	MT1	60	42	48	0.6	0.6
TC42-2	MT2	72	42	48	0.7	0.7
TC42-3	MT3	90	42	48	0.8	0.8
TC42-4	MT4	112.5	42	48	0.8	0.8

DJT

Drill chuck arbor



Designation	JT No.	L	ØD1	H	Kg	Total Weight (Kg)
DJT20-6	JT6	83	20	28	0.2	0.2
DJT32-6	JT6	93	32	28	0.5	0.5
DJT42-6	JT6	103	42	28	0.9	0.9

NPM SPARE PART

New power milling chuck

Option (BT/SK)

Spare Part

Components Not Included			
Type	Coolant system (BT/SK)	Collet	Spanner
Images / Designation			
NPM20	CTC20-20	DCS20, DC20	57-60
NPM32	CTC32-32	DCS32, DC32	75-79
NPM42	CTC42-42	DCS42, DC42	92-96

Option (HSK)

Spare Part

Components Not Included	
Coolant tube	
Classification of shank type	
HSK50	HSK50A-CNS
HSK63	HSK63A-CNS
HSK100	HSK100A-CNS

RTJW

Jet coolant disk

Jet coolant Inside coolant

- For more information on the product features, see **Page 29**. 29P
- For more information on the applicable products, see **Page 78**. 78P

※ Product less than Ø5 can't be ordered.

	Designation	ER Size	Inner diameter
RTJW16, RTJW20	RTJW16-6	16	6
	RTJW16-7	16	7
	RTJW16-8	16	8
	RTJW20-6	20	6
	RTJW20-7	20	7
	RTJW20-8	20	8
	RTJW20-9	20	9
	RTJW20-10	20	10
RTJW25	RTJW25-6	25	6
	RTJW25-7	25	7
	RTJW25-8	25	8
	RTJW25-9	25	9
	RTJW25-10	25	10
	RTJW25-11	25	11
	RTJW25-12	25	12
	RTJW25-13	25	13
	RTJW25-14	25	14
	RTJW25-15	25	15
	RTJW25-16	25	16

	Designation	ER Size	Inner diameter
RTJW32	RTJW32-6	32	6
	RTJW32-7	32	7
	RTJW32-8	32	8
	RTJW32-9	32	9
	RTJW32-10	32	10
	RTJW32-11	32	11
	RTJW32-12	32	12
	RTJW32-13	32	13
	RTJW32-14	32	14
	RTJW32-15	32	15
	RTJW32-16	32	16
	RTJW32-17	32	17
	RTJW32-18	32	18
	RTJW32-20	32	20
RTJW40	RTJW40-18	40	18
	RTJW40-19	40	19
	RTJW40-20	40	20
	RTJW40-21	40	21
	RTJW40-22	40	22
	RTJW40-24	40	24

SDC/P

NEW

Precision collet chuck for multi-purpose machining

MAS 403-BT	Ø26	C			
Shank	Max Dia	Coolant System	Milling	Drilling	Chamfering

Fig.1

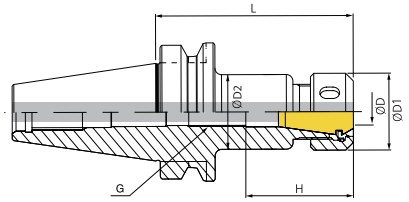


Fig.2

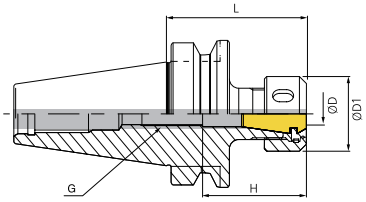
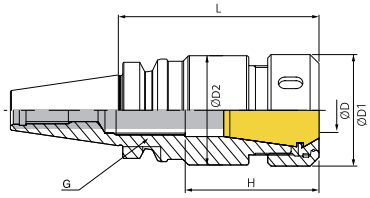


Fig.3



- For more information on the product features, see **Page 28**. 28P
- For more information on the applicable collet, see **Page 62**. 62P
- For more information on the related parts, see **Page 87**. 87P
- For more information, see **Page 149** for HSK shank and **Page 161** for SK shank. 149,161P

※ Use correct size of collet for coolant-through

C Internal coolant system is optional.

	Designation	ØD	L	ØD1	ØD2	H	COLLET/STEP	G	Fig.	Kg	Total Weight (Kg)
BT30	BT30-SDC7P-70	1.0~7.0	70	18	17	33	GERC11/0.5	M7	1	0.5	0.5
	BT30-SDC7P-100	1.0~7.0	100	18	17	33	GERC11/0.5	M7	1	0.5	0.6
	BT30-SDC10P-50	1.0~10.0	50	32	-	44.5	GERC16/1.0	M10	2	0.5	0.6
	BT30-SDC10P-70	1.0~10.0	70	32	31	44.5	GERC16/1.0	M10	1	0.6	0.6
	BT30-SDC10P-100	1.0~10.0	100	32	31	44.5	GERC16/1.0	M10	1	0.7	0.9
	BT30-SDC13P-50	1.0~13.0	50	35	-	49	GERC20/1.0	M13	2	0.5	0.6
	BT30-SDC13P-70	1.0~13.0	70	35	34	49	GERC20/1.0	M13	1	0.6	0.7
	BT30-SDC13P-100	1.0~13.0	100	35	34	49	GERC20/1.0	M13	1	0.8	0.9
	BT30-SDC16P-50	1.0~16.0	50	42	-	50	GERC25/1.0	M18	2	0.5	0.6
	BT30-SDC16P-70	1.0~16.0	70	42	41	50	GERC25/1.0	M18	1	0.7	0.8
	BT30-SDC16P-100	1.0~16.0	100	42	41	50	GERC25/1.0	M18	1	1.0	1.1
	BT30-SDC20P-60	1.0~20.0	60	50	-	60	GERC32/1.0	M22	2	0.6	0.7
	BT30-SDC20P-90	1.0~20.0	90	50	49	60	GERC32/1.0	M22	3	1.0	1.1
	BT30-SDC20P-120	1.0~20.0	120	50	49	60	GERC32/1.0	M22	3	1.4	1.5
BT40	BT40-SDC7P-70	1.0~7.0	70	18	17	33	GERC11/0.5	M7	1	0.9	1.1
	BT40-SDC7P-90	1.0~7.0	90	18	17	33	GERC11/0.5	M7	1	0.9	1.2
	BT40-SDC7P-130	1.0~7.0	130	18	17	33	GERC11/0.5	M7	1	1.0	1.2
	BT40-SDC10P-70	1.0~10.0	70	32	31	44.5	GERC16/1.0	M10	1	1.0	1.2
	BT40-SDC10P-90	1.0~10.0	90	32	31	44.5	GERC16/1.0	M10	1	1.2	1.4
	BT40-SDC10P-130	1.0~10.0	130	32	31	44.5	GERC16/1.0	M10	2	1.4	1.5
	BT40-SDC13P-70	1.0~13.0	70	35	34	49	GERC20/1.0	M13	1	1.1	1.2
	BT40-SDC13P-90	1.0~13.0	90	35	34	49	GERC20/1.0	M13	1	1.2	1.4
	BT40-SDC13P-130	1.0~13.0	130	35	34	49	GERC20/1.0	M13	1	1.4	1.6
	BT40-SDC13P-150	1.0~13.0	150	35	34	49	GERC20/1.0	M13	1	1.6	1.8
	BT40-SDC16P-70	1.0~16.0	70	42	41	50	GERC25/1.0	M18	1	1.1	1.3
	BT40-SDC16P-90	1.0~16.0	90	42	41	50	GERC25/1.0	M18	1	1.3	1.5
	BT40-SDC16P-130	1.0~16.0	130	42	41	50	GERC25/1.0	M18	1	1.7	1.9
	BT40-SDC20P-70	1.0~20.0	70	50	-	60	GERC32/1.0	M22	2	1.1	1.3
	BT40-SDC20P-90	1.0~20.0	90	50	49	60	GERC32/1.0	M22	1	1.4	1.6
	BT40-SDC20P-130	1.0~20.0	130	50	49	60	GERC32/1.0	M22	1	1.9	2.2
	BT40-SDC20P-150	1.0~20.0	150	50	49	60	GERC32/1.0	M22	1	2.2	2.5
	BT40-SDC26P-90	3.0~26.0	90	63	62	71	GERC40/1.0	M28	1	1.7	1.9

SDC/P NEW

Precision collet chuck for multi purpose machining

MAS 403-BT | Ø26 | C | Milling | Drilling | Chamfering

Shank | Max Dia | Coolant System | Milling | Drilling | Chamfering

Fig.1

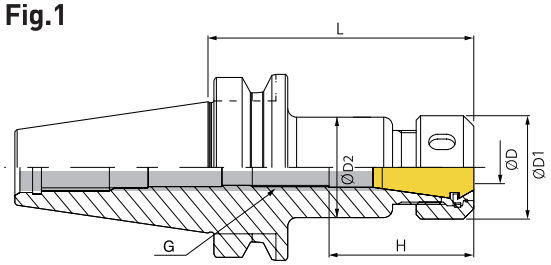
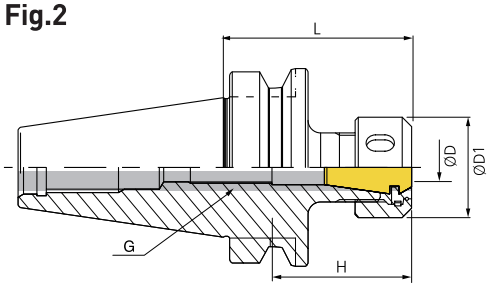


Fig.2



- For more information on the features of product, see **Page 28**. 28P
- For more information on the applicable collet, see **Page 62**. 62P
- For more information on the related parts, see **Page 87**. 87P
- For more information, see **Page 149** for HSK shank and see **Page 161** for SK shank. 149,161P

※ Use correct size of collet for coolant-through

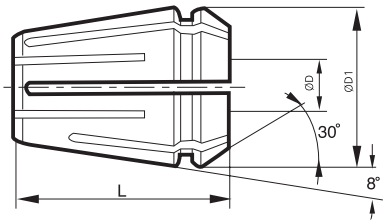
C Internal coolant system is optional.

BT50

Designation	ØD	L	ØD1	ØD2	H	COLLET/STEP	G	Fig.	Kg	Total Weight (Kg)
BT50-SDC10P-100	1.0~10.0	100	32	31	44.5	GERC16/1.0	M10	1	3.7	4.0
BT50-SDC10P-120	1.0~10.0	120	32	31	44.5	GERC16/1.0	M10	1	3.7	4.1
BT50-SDC10P-160	1.0~10.0	160	32	31	44.5	GERC16/1.0	M10	1	3.8	4.4
BT50-SDC13P-100	1.0~13.0	100	35	34	49	GERC20/1.0	M13	1	3.8	4.1
BT50-SDC13P-130	1.0~13.0	130	35	34	49	GERC20/1.0	M13	1	3.8	4.2
BT50-SDC13P-160	1.0~13.0	160	35	34	49	GERC20/1.0	M13	1	4.1	4.5
BT50-SDC13P-180	1.0~13.0	180	35	34	49	GERC20/1.0	M13	1	4.2	4.6
BT50-SDC16P-100	1.0~16.0	100	42	41	50	GERC25/1.0	M18	1	3.9	4.2
BT50-SDC16P-160	1.0~16.0	160	42	41	50	GERC25/1.0	M18	1	4.3	4.7
BT50-SDC20P-70	1.0~20.0	70	50	-	60	GERC32/1.0	M22	2	3.7	4.0
BT50-SDC20P-100	1.0~20.0	100	50	49	60	GERC32/1.0	M22	1	4.0	4.3
BT50-SDC20P-130	1.0~20.0	130	50	49	60	GERC32/1.0	M22	1	4.3	4.7
BT50-SDC20P-160	1.0~20.0	160	50	49	60	GERC32/1.0	M22	1	4.7	5.1
BT50-SDC20P-180	1.0~20.0	180	50	49	60	GERC32/1.0	M22	1	5.0	5.4
BT50-SDC26P-160	3.0~26.0	160	63	62	71	GERC40/1.0	M28	1	5.5	5.9

GERC COLLET

GERC collet (general type, precision type)



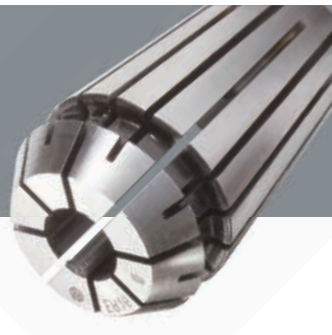
Designation	ER Size	ØD MAX.	L	ØD1	Step	Accuracy	
						General type	Precision type (HP)
GERC11-ØD(HP)	11	7.0	18.0	11.5	0.5	5㎛	2㎛
GERC16-ØD(HP)	16	10.0	27.5	17.0	1.0	5㎛	2㎛
GERC20-ØD(HP)	20	13.0	31.5	21.0	1.0	5㎛	2㎛
GERC25-ØD(HP)	25	16.0	34.0	26.0	1.0	5㎛	2㎛
GERC32-ØD(HP)	32	20.0	40.0	33.0	1.0	5㎛	2㎛
GERC40-ØD(HP)	40	26.0	46.0	41.0	1.0	5㎛	2㎛

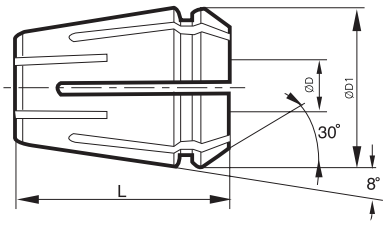
※ Example of customization: Order GERC16-4.0 / Order precision-type GERC16-4.0HP

※ Waterproof type can't be ordered.

ER COLLET

ER collet (general type, waterproof type)





Designation	ER Size	ØD MAX.	L	ØD1	Through coolant type MIN. Ø	Step	Accuracy
ER11-ØD	11	7.0	18.0	11.5	X	0.5	10㎛
ER16-ØD(C)	16	10.0	27.5	17.0	4.0	1.0	10㎛
ER20-ØD(C)	20	13.0	31.5	21.0	6.0	1.0	10㎛
ER25-ØD(C)	25	16.0	34.0	26.0	6.0	1.0	10㎛
ER32-ØD(C)	32	20.0	40.0	33.0	8.0	1.0	10㎛

※ Ordering Example : General type ER16-4
Coolant type ER16-4.0C

GERC COLLET SET

GERC collet (general type)

Designation	ØD	Step	Amount of collet	Accuracy	Kg	Total Weight (Kg)
GERC11 1.0-7.0mm/0.5mm	1.0-7.0	0.5	13pcs	5㎛	0.1	0.3
GERC16 1.0-10.0mm/1.0mm	1.0-10.0	1.0	10pcs	5㎛	0.2	0.4
GERC20 2.0-13.0mm/1.0mm	2.0-13.0	1.0	12pcs	5㎛	0.5	0.8
GERC25 2.0-16.0mm/1.0mm	2.0-16.0	1.0	15pcs	5㎛	1.1	1.5
GERC32 3.0-20.0mm/1.0mm	3.0-20.0	1.0	18pcs	5㎛	2.6	3.1
GERC40 4.0-26.0mm/1.0mm	4.0-26.0	1.0	23pcs	5㎛	5.8	6.9

ER COLLET SET

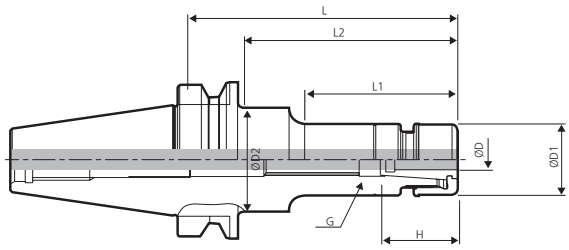
ER collet (general type)

Designation	ØD	Step	Amount of collet	Accuracy	Kg	Total Weight (Kg)
ER11(SET)	1.0-7.0	0.5	13pcs	10㎛	0.1	0.2
ER16(SET)	1.0-10.0	1.0	10pcs	10㎛	0.1	0.3
ER20(SET)	2.0-13.0	1.0	12pcs	10㎛	0.4	0.7
ER25(SET)	2.0-16.0	1.0	15pcs	10㎛	1.1	1.5
ER32(SET)	3.0-20.0	1.0	18pcs	10㎛	2.6	3.1
ER40(SET)	4.0-26.0	1.0	23pcs	10㎛	5.8	6.9

BT-GSK

Great speed slim collet chuck

MAS 403-BT	G2.5	25,000	Ø25	C		
Shank	G value	Max RPM	Max Dia	Coolant System	Milling	Drilling



- For more information on the product features, see **Page 30**. 30P
- For more information on the applicable collet, see **Page 86**. 86P
- For more information on the related parts, see **Page 86**. 86P
- For more information, see **Page 150** for HSK shank and **Page 162** for SK shank. 150,162P

※ Use coolant collet for coolant system

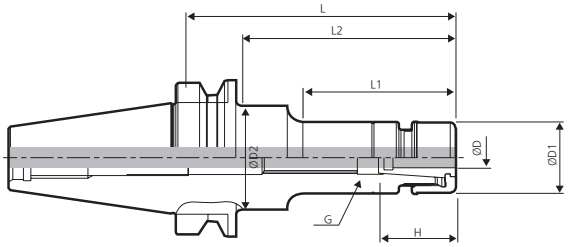
C Internal coolant system is optional.

	Designation	ØD	L	ØD1	ØD2	L1	L2	H	Collet/ Step	G	MAX. RPM	Kg	Total Weight
BT30	BT30-GSK6-60	1.0~6.0	60	19.5	19.5	33	33	31	HC6/1.0	M8	25,000	0.4	0.4
	BT30-GSK6-90	1.0~6.0	90	19.5	32	56	65	31	HC6/1.0	M8	25,000	0.5	0.6
	BT30-GSK10-60	2.0~10.0	60	27	27	35	35	38	HC10/1.0	M12	25,000	0.5	0.6
	BT30-GSK10-90	2.0~10.0	90	27	27	65	65	38	HC10/1.0	M12	25,000	0.6	0.7
	BT30-GSK13-60	3.0~13.0	60	35	35	36	36	43	HC13/1.0	M12	25,000	0.6	0.7
	BT30-GSK16-60	3.0~16.0	60	40	40	37	37	52	HC16/1.0	M12	25,000	0.6	0.7
	BT30-GSK16-90	3.0~16.0	90	40	40	67	67	52	HC16/1.0	M18	25,000	0.8	0.9
	BT30-GSK25-90	16.0~25.0	90	55	55	67.5	67.5	63.5	HC25/1.0	M12	25,000	1.0	1.1
BT40	BT40-GSK6-90	1.0~6.0	90	19.5	32	51	61	31	HC6/1.0	M8	20,000	1.0	1.2
	BT40-GSK6-120	1.0~6.0	120	19.5	32	60	90	31	HC6/1.0	M8	20,000	1.2	1.5
	BT40-GSK6-150	1.0~6.0	150	19.5	25	60	120	31	HC6/1.0	M8	20,000	1.2	1.4
	BT40-GSK10-90	2.0~6.0	90	27	40	48	60	38	HC10/1.0	M12	20,000	1.1	1.3
	BT40-GSK10-120	2.0~6.0	120	27	40	73	90	38	HC10/1.0	M12	20,000	1.3	1.5
	BT40-GSK10-150	2.0~6.0	150	27	34.5	73	118	38	HC10/1.0	M12	20,000	1.4	1.6
	BT40-GSK13-90	3.0~13.0	90	35	35	59	59	43	HC13/1.0	M15	20,000	1.2	1.4
	BT40-GSK16-90	3.0~16.0	90	40	40	58	58	52	HC16/1.0	M18	20,000	1.3	1.5
	BT40-GSK16-120	3.0~16.0	120	40	40	88	88	52	HC16/1.0	M18	20,000	1.5	1.7
	BT40-GSK16-150	3.0~16.0	150	40	40	118	118	52	HC16/1.0	M18	20,000	1.8	2.0
	BT40-GSK20-90	4.0~20.0	90	48	48	60	60	60	HC20/1.0	M22	20,000	1.4	1.6
	BT40-GSK20-120	4.0~20.0	120	48	48	90	90	60	HC20/1.0	M22	20,000	1.8	2.0
	BT40-GSK25-90	16.0~25.0	90	55	55	61	61	63.5	HC25/1.0	M28	20,000	1.6	1.8
	BT40-GSK25-120	16.0~25.0	120	55	55	91	91	63.5	HC25/1.0	M28	20,000	2.0	2.2

BT-GSK

Great speed slim collet chuck

MAS 403-BT	G2.5	25,000	Ø25	C		
Shank	G value	Max RPM	Max Dia	Coolant System	Milling	Drilling



- For more information on the features of product, see **Page 30**. 30P
- For more information on the applicable collet, see **Page 86**. 86P
- For more information on the related parts, see **Page 86**. 86P
- For more information, see **Page 150** for HSK shank and **Page 162** for SK shank. 150,162P

※ Use coolant collet for coolant system

C Internal coolant system is optional.

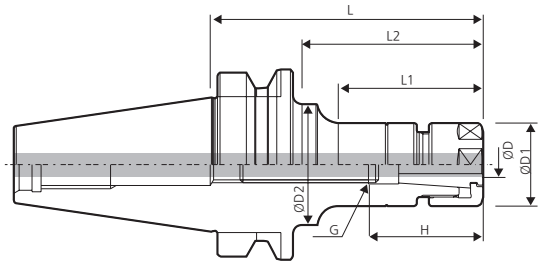
BT50

Designation	ØD	L	ØD1	ØD2	L1	L2	H	Collet/ Step	G	MAX. RPM	Kg	Total Weight
BT50-GSK6-105	1.0~6.0	105	19.5	32	55	64	31	HC6/1.0	M8	15,000	3.6	3.9
BT50-GSK6-135	1.0~6.0	135	19.5	32	60	92	31	HC6/1.0	M8	15,000	3.6	4.0
BT50-GSK6-165	1.0~6.0	165	19.5	32	60	114	31	HC6/1.0	M8	15,000	3.9	4.3
BT50-GSK10-105	2.0~10.0	105	27	27	57	57	38	HC10/1.0	M12	15,000	3.7	4.0
BT50-GSK10-135	2.0~10.0	135	27	32	70	92	38	HC10/1.0	M12	15,000	3.7	4.1
BT50-GSK10-165	2.0~10.0	165	27	36	75	114	38	HC10/1.0	M12	15,000	4.0	4.4
BT50-GSK13-135	3.0~13.0	135	35	35	92	92	43	HC13/1.0	M15	15,000	3.9	4.3
BT50-GSK16-105	3.0~16.0	105	40	40	62	62	52	HC16/1.0	M18	15,000	3.9	4.2
BT50-GSK16-135	3.0~16.0	135	40	40	92	92	52	HC16/1.0	M18	15,000	4.1	4.5
BT50-GSK16-165	3.0~16.0	165	40	50	40	122	52	HC16/1.0	M18	15,000	4.3	4.7
BT50-GSK20-105	4.0~20.0	105	48	-	62	62	60	HC20/1.0	M22	15,000	4.1	4.4
BT50-GSK20-135	4.0~20.0	135	48	-	92	92	60	HC20/1.0	M22	15,000	4.4	4.8
BT50-GSK20-165	4.0~20.0	165	48	-	122	122	60	HC20/1.0	M22	15,000	4.9	5.1
BT50-GSK25-105	16.0~25.0	105	55	55	62	62	63.5	HC25/1.0	M28	15,000	4.2	4.5
BT50-GSK25-135	16.0~25.0	135	55	55	92	92	63.5	HC25/1.0	M28	15,000	4.6	5.0
BT50-GSK25-165	16.0~25.0	165	55	55	122	122	63.5	HC25/1.0	M28	15,000	5.1	5.5

BT-DSK

Slim-type collet chuck

MAS 403-BT	G6.3	15,000	Ø25	C		
Shank	G value	Max RPM	Max Dia	Coolant System	Milling	Drilling



- For more information on the product features, see **Page 32**. 32P
- For more information on the applicable collet, see **Page 86**. 86P
- For more information on the related parts, see **Page 87**. 87P

※ Use coolant collet for coolant through system

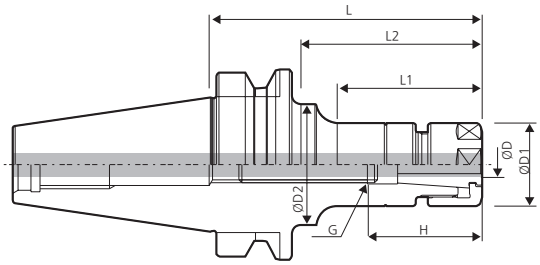
C Internal coolant system is optional.

	Designation	ØD (Clamping Range)	L	ØD1	ØD2	L1	L2	H	Collet/ Step	G	MAX RPM	Kg	Total Weight
BT30	BT30-DSK6-60	1.0~6.0	60	19.5	19.5	33	33	31	HC6/1.0	M8	15,000	0.4	0.5
	BT30-DSK6-90	1.0~6.0	90	19.5	32	56	65	31	HC6/1.0	M8	15,000	0.5	0.6
	BT30-DSK10-60	2.0~10.0	60	27.5	27.5	35	35	38	HC10/1.0	M12	15,000	0.5	0.6
	BT30-DSK10-90	2.0~10.0	90	27.5	27.5	65	65	38	HC10/1.0	M12	15,000	0.6	0.7
	BT30-DSK13-60	3.0~13.0	60	33	33	36	36	43	HC13/1.0	M12	15,000	0.5	0.6
	BT30-DSK16-60	3.0~16.0	60	40	40	37	37	52	HC16/1.0	M12	15,000	0.6	0.7
	BT30-DSK16-90	3.0~16.0	90	40	40	67	67	52	HC16/1.0	M18	15,000	0.8	0.9
	BT30-DSK25-90	16.0~25.0	90	55	55	67.5	67.5	63.5	HC25/1.0	M12	15,000	0.9	1.1
BT40	BT40-DSK6-90	1.0~6.0	90	19.5	32	51	61	31	HC6/1.0	M8	10,000	1.1	1.3
	BT40-DSK6-120	1.0~6.0	120	19.5	32	60	90	31	HC6/1.0	M8	10,000	1.1	1.3
	BT40-DSK6-150	1.0~6.0	150	19.5	25	60	120	31	HC6/1.0	M8	10,000	1.1	1.4
	BT40-DSK10-90	2.0~6.0	90	27.5	40	48	60	38	HC10/1.0	M12	10,000	1.2	1.4
	BT40-DSK10-120	2.0~6.0	120	27.5	40	73	90	38	HC10/1.0	M12	10,000	1.2	1.5
	BT40-DSK10-150	2.0~6.0	150	27.5	34.5	73	118	38	HC10/1.0	M12	10,000	1.4	1.7
	BT40-DSK13-90	3.0~13.0	90	33	33	59	59	43	HC13/1.0	M15	10,000	1.3	1.5
	BT40-DSK16-90	3.0~16.0	90	40	40	58	58	52	HC16/1.0	M18	10,000	1.3	1.5
	BT40-DSK16-120	3.0~16.0	120	40	40	88	88	52	HC16/1.0	M18	10,000	1.5	1.7
	BT40-DSK16-150	3.0~16.0	150	40	40	118	118	52	HC16/1.0	M18	10,000	1.9	2.1
	BT40-DSK20-90	4.0~20.0	90	48.5	48.5	60	60	60	HC20/1.0	M22	10,000	1.5	1.7
	BT40-DSK20-120	4.0~20.0	120	48.5	48.5	90	90	60	HC20/1.0	M22	10,000	1.8	2.0
	BT40-DSK25-90	16.0~25.0	90	55	55	61	61	63.5	HC25/1.0	M28	10,000	1.6	1.8
	BT40-DSK25-120	16.0~25.0	120	55	55	91	91	85	HC25/1.0	M28	10,000	2.0	2.3

BT-DSK

Slim-type collet chuck

MAS 403-BT	G6.3	15,000	Ø25	C		
Shank	G value	Max RPM	Max Dia	Coolant System	Milling	Drilling



※ Use coolant collet for coolant through system

C Internal coolant system is optional.

- For more information on the features of product, see **Page 32**. 32P
- For more information on the applicable collet, see **Page 86**. 86P
- For more information on the related parts, see **Page 87**. 87P

BT50

Designation	ØD (Clamping Range)	L	ØD1	ØD2	L1	L2	H	Collet/ Step	G	MAX RPM	Kg	Total Weight
BT50-DSK6-105	1.0~6.0	105	19.5	32	55	64	31	HC6/1.0	M8	8,000	3.6	3.9
BT50-DSK6-135	1.0~6.0	135	19.5	32	60	92	31	HC6/1.0	M8	8,000	3.7	4.1
BT50-DSK6-165	1.0~6.0	165	19.5	32	60	114	31	HC6/1.0	M8	8,000	4.1	4.4
BT50-DSK10-105	2.0~10.0	105	27.5	27.5	57	57	38	HC10/1.0	M12	8,000	3.8	4.1
BT50-DSK10-135	2.0~10.0	135	27.5	32	70	92	38	HC10/1.0	M12	8,000	3.9	4.3
BT50-DSK10-165	2.0~10.0	165	27.5	36	75	114	38	HC10/1.0	M12	8,000	4.1	4.5
BT50-DSK13-135	3.0~13.0	135	33	33	92	92	43	HC13/1.0	M15	8,000	3.8	4.2
BT50-DSK16-105	3.0~16.0	105	40	40	62	62	52	HC16/1.0	M18	8,000	4.0	4.3
BT50-DSK16-135	3.0~16.0	135	40	40	92	92	52	HC16/1.0	M18	8,000	4.2	4.6
BT50-DSK16-165	3.0~16.0	165	40	50	40	122	52	HC16/1.0	M18	8,000	4.6	5.0
BT50-DSK20-105	4.0~20.0	105	48	40	62	62	60	HC20/1.0	M22	8,000	4.2	4.5
BT50-DSK20-135	4.0~20.0	135	48	40	92	92	60	HC20/1.0	M22	8,000	4.5	4.9
BT50-DSK20-165	4.0~20.0	165	48	40	122	122	60	HC20/1.0	M22	8,000	4.9	5.3
BT50-DSK25-105	16.0~25.0	105	55	55	62	62	63.5	HC25/1.0	M28	8,000	4.4	4.7
BT50-DSK25-135	16.0~25.0	135	55	55	92	92	63.5	HC25/1.0	M28	8,000	4.5	4.9
BT50-DSK25-165	16.0~25.0	165	55	55	122	122	63.5	HC25/1.0	M28	8,000	5.2	5.6

GSK SPARE PART

Parts for great speed slim collet chuck

Main Components

Spare Part

Main Components			
Type	Nut	Adjust screw	Device to extract
Images / Designation			
GSK6	GN6	BN0825	DSK-6CE
GSK10	GN10	BN1230	DSK-10CE
GSK13	GN13	BN1230&BN1524F	DSK-13CE
GSK16	GN16	BN1830F	DSK-16CE
GSK20	GN20	BN2230F	DSK-20CE
GSK25	GN25	BN2838F	DSK-25CE

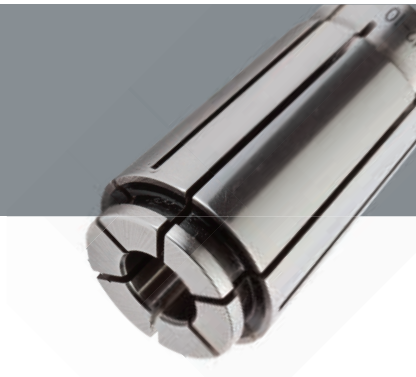
Components Not Included

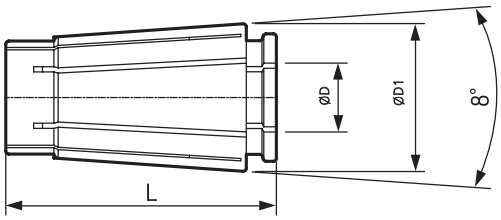
Spare Part

Components Not Included		
Images	Applied chuck	Spanner Model No.
	GSK6	GSK6 SPANNER
	GSK10	GSK10 SPANNER
	GSK13	GSK13 SPANNER
	GSK16	GSK16 SPANNER
	GSK20	GSK20 SPANNER
	GSK25	GSK25 SPANNER

HC COLLET

HC slim collet (general type, precision type)





Designation	ØD1	L	MAX. ØD	Step	General	Precision (P)
HC6 ØD(P)	10.5	25.0	6.0	1.0	5㎛	3㎛
HC10 ØD(P)	15.6	30.5	10.0	1.0	5㎛	3㎛
HC13 ØD(P)	20.1	39.0	13.0	1.0	5㎛	3㎛
HC16 ØD(P)	24.6	45.0	16.0	1.0	5㎛	3㎛
HC20 ØD(P)	29.2	54.3	20.0	1.0	5㎛	3㎛
HC25 ØD(P)	35.7	57.0	25.0	1.0	5㎛	3㎛

※ Ordering Example : General type HC16-8.0
Precision type HC16-8.0P

DSK SPARE PART

Parts for slim collet chuck

Main Components

Spare Part

Main Components			
Type	Nut	Adjust screw	Device to extract
Images / Designation			
DSK6	DN6	BN0825	DSK-6CE
DSK10	DN10	BN1230	DSK-10CE
DSK13	DN13	BN1230&BN1524F	DSK-13CE
DSK16	DN16	BN1830F	DSK-16CE
DSK20	DN20	BN2230F	DSK-20CE
DSK25	DN25	BN2838F	DSK-25CE

Components Not Included

Spare Part

Components Not Included		
Images	Applied chuck	Spanner Model No.
	DSK6	DSS-6
	DSK10	DSS-10
	DSK13	DSS-13
	DSK16	DSS-16
	DSK20	DSS-20
	DSK25	DSS-25

SDC/P SPARE PART

Parts for ER collet chuck

Spare Part

Main Components		
Type	Sleeve bearing nut	Adjust screw
Images / Designation		
SDC 7P	RN11	BN0716F
SDC 10P	RN16	BN1025F
SDC 13P	RN20	BN1325F
SDC 16P	RN25	BN1830F
SDC 20P	RN32	BN2230F
SDC 26P	RN40	BN2838F

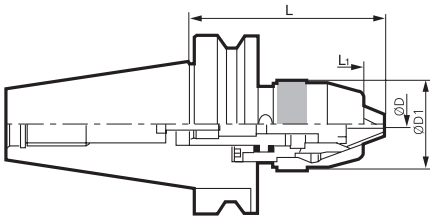
Spare Part

Components Not Included		
Type	Spanner	GERC / ER
Images / Designation		
SDC 7P	20-22	GERC/ER 11-ØD
SDC 10P	32-35	GERC/ER 16-ØD
SDC 13P	35-38	GERC/ER 20-ØD
SDC 16P	42-46	GERC/ER 25-ØD
SDC 20P	48-52	GERC/ER 32-ØD
SDC 26P	62-65	GERC/ER 40-ØD

BT-NPU

Drill chuck

MAS 403-BT — Shank
C — Coolant System
Drilling



- For more information on the related parts, see **Page 89**. 89P
- For more information, see **Page 151** for HSK shank and **Page 163** for SK shank. 151,163P

C This product does not support the internal coolant system.

BT30, BT40, BT50

Designation	ØD	L	ØD1	L1	Kg	Total Weight (Kg)
BT30-NPU8-97	0~8	97	38	8.5	0.8	0.9
BT30-NPU13-125	1~13	125	50	12.5	1.4	1.6
BT40-NPU8-87	0~8	87	38	8.5	1.2	1.4
BT40-NPU13-105	1~13	105	50	12.5	1.6	1.9
BT40-NPU13-130	1~13	130	50	12.5	1.9	2.2
BT50-NPU13-130	1~13	130	50	12.5	4.5	4.9
BT50-NPU13-190	1~13	190	50	12.5	5.3	5.7

NPU SPARE PART

Parts for drill chuck

Main Components

Spare Part

Main Components		
Type	Drill chuck head	Bolt
Images / Designation		
NPU8	NPU08	BX0620
NPU13	NPU13	BX0825

Components Not Included

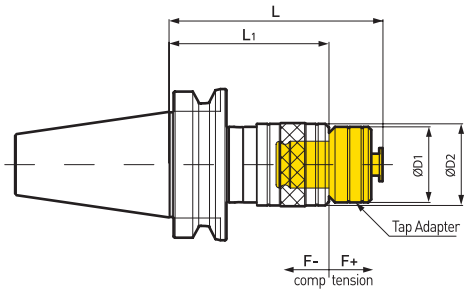
Spare Part

Components Not Included	
Type	Spanner
Images / Designation	
NPU8	NPU0836
NPU13	NPU1348

BT-DTN

Tapping holder

MAS 403-BT — Shank
C — Coolant System
Tapping



- For more information on the product features, see **Page 34**. 34P
- For more information on the applied adapter, see **Page 91**. 91P
- For more information on S and ST shanks, see **Page 144**. 144P
- For more information on SK shank, see **Page 163**. 163P

C This product does not support internal coolant system.

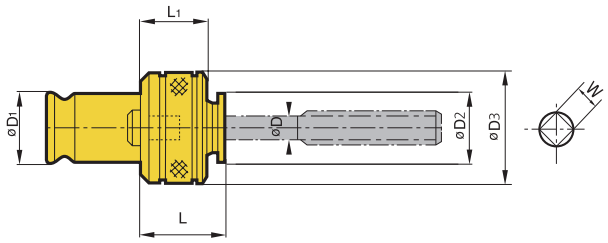
BT30, BT40, BT50

Designation	Tap Size	L	L1	ØD	ØD1	Applied Adapter	F-	F+	Kg	Total Weight (Kg)
BT30-DTN12-85	M3~M12	85	60	32	39	TCA1-M	4	10	0.5	0.7
BT40-DTN12-90	M3~M12	90	65	32	39	TCA1-M	4	10	1.2	1.4
BT40-DTN12-120	M3~M12	120	95	32	39	TCA1-M	4	10	1.5	1.7
BT40-DTN22-130	M8~M24	130	96	50	56	TCA2-M	12.5	12.5	1.7	1.9
BT40-DTN22-160	M8~M24	160	126	50	56	TCA2-M	12.5	12.5	2.2	2.4
BT50-DTN12-100	M3~M12	100	75	32	39	TCA1-M	4	10	3.9	4.2
BT50-DTN12-130	M3~M12	130	105	32	39	TCA1-M	4	10	3.9	4.3
BT50-DTN22-140	M8~M24	140	106	50	56	TCA2-M	12.5	12.5	4.3	4.7
BT50-DTN22-170	M8~M24	170	136	50	56	TCA2-M	12.5	12.5	4.7	5.1
BT50-DTN38-185	M16~M38	185	140	72	81	TCA3-M	20	20	5.7	6.1
BT50-DTN38-215	M16~M38	215	170	72	81	TCA3-M	20	20	6.7	7.1

TCA

Tap adapter

C
Coolant System



※ DIN standard is customizable.

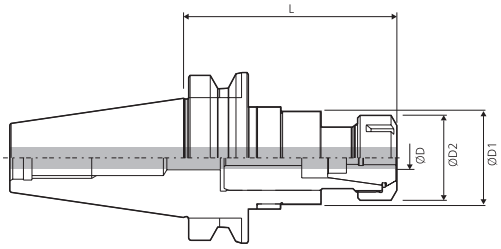
C This product does not support internal coolant system.

	Designation	ØD	ØD1	L	L1	ØD2	ØD3	W	Kg	Total Weight (Kg)
TCA1	TCA1-M3	4	19	24	22	19	32	3.2	0.2	0.2
	TCA1-M4	5	19	24	22	19	32	4	0.2	0.2
	TCA1-M5	5.5	19	24	22	19	32	4	0.2	0.2
	TCA1-M6, 1/4U	6	19	24	22	19	32	4	0.2	0.2
	TCA1-M8	6.2	19	38	22	19	32	5	0.2	0.2
	TCA1-M10, 3/8U	7	19	38	22	19	32	5.5	0.2	0.2
	TCA1-M11	8	19	38	22	19	32	6	0.2	0.2
	TCA1-M12	8.5	19	38	22	19	32	6.5	0.2	0.2
TCA2	TCA2-M8	6.2	31	38	28	30	50	5	0.6	0.6
	TCA2-M10	7	31	38	28	30	50	5.5	0.6	0.6
	TCA2-M12	8.5	31	39	28	30	50	6.5	0.6	0.6
	TCA2-M14, 3/4U	10.5	31	41	28	30	50	8	0.6	0.6
	TCA2-P1/4	11	31	31	28	30	50	9	0.6	0.6
	TCA2-M16	12.5	31	43	28	30	50	10	0.6	0.6
	TCA2-M18, P3/8	14	31	44	28	30	50	11	0.6	0.6
	TCA2-M22	17	31	46	28	30	50	13	0.6	0.6
	TCA2-P1/2	18	31	36	28	30	50	14	0.6	0.6
	TCA2-M24	19	31	46	28	30	50	15	0.6	0.6
TCA3	TCA3-M16	12.5	48	35	37	47	72	10	1.8	1.8
	TCA3-M18	14	48	36	37	47	72	11	1.8	1.8
	TCA3-M20	15	48	37	37	47	72	12	1.8	1.8
	TCA3-M22	17	48	38	37	47	72	13	1.8	1.8
	TCA3-M24	19	48	44	37	47	72	15	1.8	1.8
	TCA3-M27, 1U	20	48	62	37	47	72	15	1.8	1.8
	TCA3-M30, P3/4	23	48	62	37	47	72	17	1.8	1.8
	TCA3-M33	25	48	66	37	47	72	19	1.8	1.8
	TCA3-M36, M38	28	48	68	37	47	72	21	1.8	1.8

BT-DST

High-speed synchro tapping chuck

MAS 403-BT	G6.3	C	
Shank	G value	Coolant System	Tapping



- For more information on the product features, see **Page 35**. 35P
- For more information on TER collet, see **Page 93**. 93P
- For more information on ER collet, see **Page 80**. 80P
- For more information, see **Page 139** for ST shank. 139P
- For more information, see **Page 151** for HSK shank and **Page 164** for SK shank. 151,164P

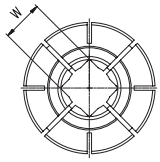
C Internal coolant system is optional.

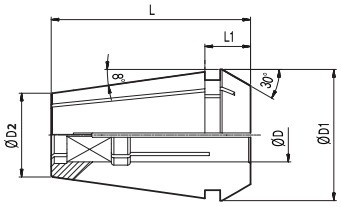
BT30, BT40, BT50

Designation	ØD	L	ØD1	ØD2	Applied Collet	F-	F+	Kg	Total Weight (Kg)
BT30-DST3-70	M1~M3	70	20	19	ER11	0.5	0.5	0.5	0.5
BT30-DST10-100	M3~M10	100	40.4	28	TER16	0.5	0.5	0.8	0.9
BT40-DST3-70	M1~M3	70	20	19	ER11	0.5	0.5	1.0	1.1
BT40-DST10-100	M3~M10	100	40.4	28	TER16	0.5	0.5	1.3	1.4
BT40-DST22-110	M6~M22	110	60	49.5	TER32	0.7	0.7	1.7	2.0
BT50-DST10-110	M3~M10	110	60	49.5	TER16	0.5	0.5	3.8	4.1
BT50-DST22-130	M6~M22	125	60	49.5	TER32	0.7	0.7	4.5	4.9

TER

TER collet





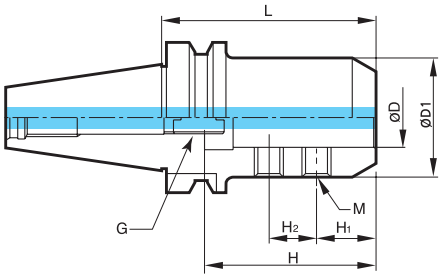
※ Coolant-through taps can be used with RTJW and RUT nuts (only for correct size).

	Designation	Applied Tap	ØD	L	W	ØD1	ØD2	L1	Kg	Total Weight (Kg)
TER16	TER16-4x3.2	M3	4	27.5	3.2	16.74	10.1	6.3	0.03	0.03
	TER16-5x4	M4	5	27.5	4	16.74	10.1	6.3	0.03	0.03
	TER16-5.5x4.5	M5	5.5	27.5	4.5	16.74	10.1	6.3	0.03	0.03
	TER16-6x4.5	M6,U1/4	6	27.5	4.5	16.74	10.1	6.3	0.03	0.03
	TER16-6.2x5	M7, M8	6.2	27.5	5	16.74	10.1	6.3	0.03	0.03
	TER16-7x5.5	M9, M10, U3/8	7	27.5	5.5	16.74	10.1	6.3	0.03	0.03
TER20	TER20-5x4	M4	5	31.5	4	20.74	13.2	7.2	0.05	0.05
	TER20-5.5x4.5	M5	5.5	31.5	4.5	20.74	13.2	7.2	0.05	0.05
	TER20-6x4.5	M6,U1/4	6	31.5	4.5	20.74	13.2	7.2	0.05	0.05
	TER20-6.2x5	M7, M8	6.2	31.5	5	20.74	13.2	7.2	0.05	0.05
	TER20-7x5.5	M9, M10, U3/8	7	31.5	5.5	20.74	13.2	7.2	0.05	0.05
	TER20-8x6	M11, U7/16, P1/8	8	31.5	6	20.74	13.2	7.2	0.05	0.05
	TER20-8.5x6.5	M12	8.5	31.5	6.5	20.74	13.2	7.2	0.05	0.05
TER25	TER25-5x4	M4	5	34	4	25.74	17.6	7.5	0.1	0.1
	TER25-5.5x4.5	M5	5.5	34	4.5	25.74	17.6	7.5	0.1	0.1
	TER25-6x4.5	M6	6	34	4.5	25.74	17.6	7.5	0.1	0.1
	TER25-6.2x5	M7, M8	6.2	34	5	25.74	17.6	7.5	0.1	0.1
	TER25-7x5.5	M9, M10, U3/8	7	34	5.5	25.74	17.6	7.5	0.1	0.1
	TER25-8.5x6.5	M12	8.5	34	6.5	25.74	17.6	7.5	0.1	0.1
TER32	TER32-6x4.5	M6,U1/4	6	40	4.5	32.74	23.1	8.2	0.2	0.2
	TER32-6.2x5	M7, M8	6.2	40	5	32.74	23.1	8.2	0.2	0.2
	TER32-7x5.5	M9, M10, U3/8	7	40	5.5	32.74	23.1	8.2	0.2	0.2
	TER32-8X6	M11, U7/16, P1/8	8	40	6	32.74	23.1	8.2	0.2	0.2
	TER32-8.5x6.5	M12	8.5	40	6.5	32.74	23.1	8.2	0.2	0.2
	TER32-10.5x8	M14, U9/16	10.5	40	8	32.74	23.1	8.2	0.2	0.2
	TER32-12.5x10	M16	12.5	40	10	32.74	23.1	8.2	0.2	0.2
	TER32-14x11	M18, P3/8	14	40	11	32.74	23.1	8.2	0.1	0.1
	TER32-15x12	M20	15	40	12	32.74	23.1	8.2	0.1	0.1
	TER32-17x13	M22, U7/8	17	40	13	32.74	23.1	8.2	0.1	0.1
	TER32-11x9	P1/4	11	40	9	32.74	23.1	8.2	0.2	0.2
	TER32-12x9	U5/8	12	40	9	32.74	23.1	8.2	0.2	0.2
	TER32-9x7	U1/2	9	40	7	32.74	23.1	8.2	0.2	0.2

BT-SLA

Side lock arbor

MAS 403-BT — Shank | C — Coolant System | Milling | Drilling



- For more information on the related parts, see **Page 95**. 95P
- For more information, see **Page 152** for HSK shank and **Page 165** for SK shank. 152,165P

C Internal coolant system installed.

BT30, BT40, BT50

Designation	ØD	L	ØD1	H	H1	H2	M	G	Kg	Total Weight (Kg)
BT30-SLA16-90	16	90	40	72	25	20	M10	M12	0.9	1.0
BT30-SLA20-90	20	90	50	72	25	20	M12	M12	1.2	1.3
BT30-SLA25-90	25	90	50	72	25	20	M12	M12	1.1	1.2
BT40-SLA16-90	16	90	40	72	25	20	M10	M12	1.4	1.6
BT40-SLA20-90	20	90	50	72	25	20	M12	M12	1.8	2.0
BT40-SLA25-90	25	90	50	72	25	20	M12	M12	1.6	1.8
BT40-SLA32-90	32	90	60	82	25	25	M14	M12	1.8	2.0
BT40-SLA32-105	32	105	60	82	25	25	M14	M12	2.0	2.3
BT40-SLA40-105	40	105	80	82	25	25	M16	M12	2.9	3.1
BT50-SLA20-105	20	105	50	72	25	20	M12	M12	4.4	4.7
BT50-SLA25-105	25	105	50	72	25	20	M12	M12	4.3	4.6
BT50-SLA32-105	32	105	60	82	25	25	M14	M12	4.5	4.8
BT50-SLA40-105	40	105	90	82	25	20	M16	M12	6.1	6.4
BT50-SLA45-105	45	105	90	82	25	25	M16	M12	5.9	6.2

SLA SPARE PART

Parts for side lock arbor

Main Components

Spare Part

Main Components			
Type	Set screw		Adjust screw
Images / Designation			
	BT type	HSK / SK type	
SLA16	BTF1010	BTF1414 - 1.5	M1230C
SLA20	BTF1212-1.5	BTF1616 - 1.5	M1230C
SLA25	BTF1212-1.5	BTF1818 - 1.5	M1230C
SLA32	BTF1414-1.5	BTF2020 - 1.5	M1230C
SLA40	BTF1624-1.5	BTF2020 - 1.5	M1230C
SLA42	BTF1624-1.5	BTF2020 - 1.5	M1230C

※ HSK type may use a different adjustable screw.

Components Not Included

Spare Part

Components Not Included		
Type	Wrench	
Images / Designation		
	BT type	HSK / SK type
SLA16	LW - 5	LW - 6
SLA20	LW - 6	LW - 8
SLA25	LW - 6	LW - 8
SLA32	LW - 6	LW - 10
SLA40	LW - 8	LW - 10
SLA42	LW - 8	LW - 10

BT-FMA

Facemill arbor

MAS 403-BT — Shank
C — Coolant System
Facing

Fig.1

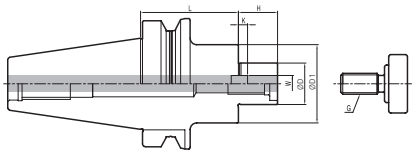


Fig.2

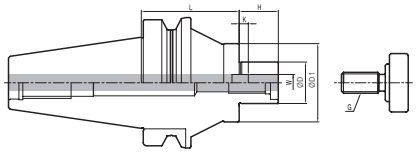


Fig.3

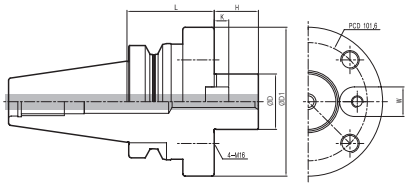
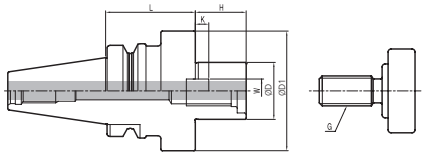


Fig.4



- For more information on clamp bolt, see **Page 98**. 98P
- For more information on the related parts, see **Page 98**. 98P
- For more information on NT shank, see **Page 176**. 176P

※ The weight of face cutter is not included.

C Internal coolant system is optional.

	Designation	Cutter diameter	ØD	ØD1	L	H	W	K	G	Fig.	Kg	Total Weight (Kg)
BT30, BT40	BT30-FMA25.4-45	80	25.4	50	45	22	9.5	5	M12	4	1.0	1.0
	BT40-FMA25.4-45	80	25.4	50	45	22	9.5	5	M12	1	1.4	1.6
	BT40-FMA25.4-90	80	25.4	50	90	22	9.5	5	M12	1	2.2	2.4
	BT40-FMA31.75-45	100	31.75	60	45	30	12.7	7	M16	1	1.6	1.8
	BT40-FMA31.75-90	100	31.75	60	90	30	12.7	7	M16	1	2.5	2.7
	BT40-FMA38.1-60	125	38.1	80	60	34	15.87	9	M20	4	2.6	2.8
BT50	BT50-FMA25.4-45	80	25.4	50	45	22	9.5	5	M12	1	4.0	4.3
	BT50-FMA25.4-90	80	25.4	50	90	22	9.5	5	M12	1	4.7	5.0
	BT50-FMA25.4-150	80	25.4	50	150	22	9.5	5	M12	2	6.4	6.8
	BT50-FMA31.75-45	100	31.75	60	45	30	12.7	7	M16	1	4.1	4.4
	BT50-FMA31.75-75	100	31.75	60	75	30	12.7	7	M16	1	4.8	5.1
	BT50-FMA31.75-105	100	31.75	60	105	30	12.7	7	M16	2	5.6	5.9
	BT50-FMA38.1-45	125	38.1	80	45	34	15.87	9	M20	1	4.4	4.7
	BT50-FMA38.1-75	125	38.1	80	75	34	15.87	9	M20	1	5.6	5.9
	BT50-FMA50.8-45	160	50.8	100	45	36	19.05	10	M24	1	4.9	5.2
	BT50-FMA50.8-75	160	50.8	100	75	36	19.05	10	M24	1	6.8	7.1
	BT50-FMA47.625-75	200	47.625	128	75	38	25.4	12.5	-	3	8.3	8.6

BT-FMC

Facemill arbor

MAS 403-BT — Shank | C — Coolant System | Facing

Fig.1

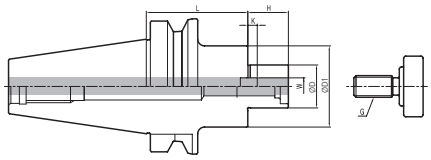


Fig.2

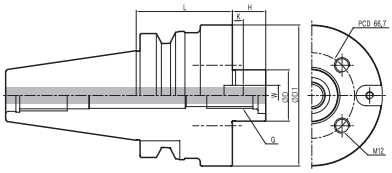
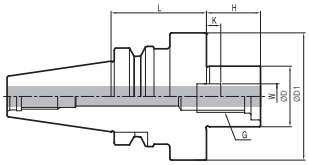


Fig.3



- For more information on clamp bolt, see **Page 99**. 99P
- For more information on the related parts, see **Page 99**. 99P
- For more information, see **Page 153** for HSK shank and **Page 166** for SK shank. 153,166P

※ Weight of face cutter is not included.

C Internal coolant system is optional.

	Designation	Cutter diameter	ØD	ØD1	L	H	W	K	G	Fig.	Kg	Total Weight (Kg)
BT30, BT40	BT30-FMC16-45	40	16	38	45	17	8	5.0	M8	1	0.7	0.7
	BT30-FMC22-45	50/63	22	48	45	19	10	5.6	M10	2	0.8	0.9
	BT30-FMC27-50	80	27	60	50	21	12	6.3	M12	2	1.0	1.1
	BT40-FMC16-60	40	16	38	60	17	8	5.0	M8	1	1.3	1.5
	BT40-FMC22-45	50/63	22	48	45	19	10	5.6	M10	1	1.3	1.5
	BT40-FMC22-90	50/63	22	48	90	19	10	5.6	M10	1	1.9	2.1
	BT40-FMC27-60	80	27	60	60	21	12	6.3	M12	1	1.8	2.0
	BT40-FMC27-90	80	27	60	90	21	12	6.3	M12	1	2.4	2.6
	BT40-FMC32-60	100	32	78	60	24	14	7.0	M16	2	2.1	2.3
	BT40-FMC40-50	125/160	40	89	50	27	15.87	8.0	M20	3	2.3	2.5
BT50	BT50-FMC16-60	40	16	38	60	17	8	5.0	M8	1	3.9	4.2
	BT50-FMC22-60	50/63	22	48	60	19	10	5.6	M10	1	4.1	4.4
	BT50-FMC27-40	80	27	60	40	21	12	6.3	M12	1	3.8	4.1
	BT50-FMC27-90	80	27	60	90	21	12	6.3	M12	1	4.8	5.1
	BT50-FMC27-150	80	27	60	150	21	12	6.3	M12	1	6.1	6.5
	BT50-FMC32-45	100	32	78	45	24	14	7.0	M16	1	4.1	4.4
	BT50-FMC32-75	100	32	78	75	24	14	7.0	M16	1	5.2	5.5
	BT50-FMC32-105	100	32	78	105	24	14	7.0	M16	1	6.3	6.6
	BT50-FMC40-50	125/160	40	89	50	27	15.87	8.0	M20	3	4.6	4.9

FMA SPARE PART

Parts for facemill arbor

Main Components

Spare Part

Main Components				
Type	Key	Key Bolt	Mount Bolt	Clamp Bolt
Images / Designation				
FMA25.4	K9.5	BX0412	MBA-M12	BX1230
FMA31.75	K12.7	BX0515	MBA-M16	-
FMA38.1	K15.87	BX0616	MBA-M20	-
FMA50.8	K19.05	BX0820	MBA-M24	-
FMA47.625	K25.4	BX1020		BX1645

Components Not Included

Spare Part

Components Not Included	
Type	Wrench
Images / Designation	
FMA25.4	LW-10
FMA31.75	LW-14
FMA38.1	LW-17
FMA50.8	LW-19
S-FMA25.4	LW-10
S-FMA31.75	LW-14

FMC SPARE PART

Parts for face mill arbor

Main Components

Spare Part

Main Components				
Type	Key	Key Bolt	Mount Bolt	Clamp Bolt
Images / Designation				
FMC16	K8.0	BX0310	-	BX0830
FMC22	K10.0	BX0412	-	BX0830
FMC27	K12.0	BX0616	MBA-M12	BX1230
FMC32	K14.0	BX0616	MBA-M16	-
FMC40	K15.87	BX0616	MBA-M20	BX1230

Components Not Included

Spare Part

Components Not Included	
Type	Wrench
Images / Designation	
FMC16	LW-6
FMC22	LW-8
FMC27	LW-10
FMC32	LW-14
FMC40	LW-17

BT-MD

Modular arbor

MAS 403-BT — Shank
G6.3 — G value
C — Coolant System

Fig.1

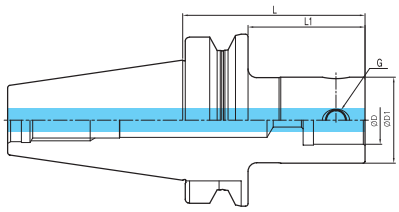
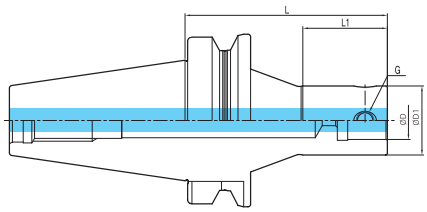


Fig.2



- For more information on the related parts, see **Page 103**. 103P
- For more information, see **Page 154** for HSK shank and **Page 167** for SK shank. 154,167P

C Internal coolant system installed.

	Designation	ØD	ØD1	L	L1	G	Fig.	Kg	Total Weight (Kg)
BT30	BT30-MD19F-70	11	19	70	45	M5	1	0.5	0.5
	BT30-MD25F-90	14	25	90	63	M6	1	0.6	0.7
	BT30-MD32F-80	18	32	80	55	M8	1	0.7	0.7
	BT30-MD40F-45	22	40	45	22	M10	1	0.5	0.6
	BT30-MD40F-60	22	40	60	36	M10	1	0.7	0.7
	BT30-MD40F-80	22	40	80	56	M10	1	0.9	0.9
	BT30-MD50F-70	28	50	70	48	M12	1	0.9	1.0
BT40	BT40-MD19F-70	11	19	70	40	M5	1	1.0	1.2
	BT40-MD25F-95	14	25	95	63	M6	1	1.1	1.3
	BT40-MD25F-105R	14	25	105	40	M6	2	1.2	1.4
	BT40-MD32F-100	18	32	100	70	M8	1	1.2	1.5
	BT40-MD32F-115R	18	32	115	45	M8	2	1.5	1.8
	BT40-MD40F-60	22	40	60	31	M10	1	1.1	1.3
	BT40-MD40F-110R	22	40	110	60	M10	2	1.6	1.9
	BT40-MD40F-115	22	40	115	83	M10	1	1.6	1.8
	BT40-MD50F-105	28	50	105	73	M12	1	1.8	2.1
	BT40-MD63F-64	36	63	64	37	M16	1	1.5	1.7
	BT40-MD63F-110	36	63	110	83	M16	1	2.4	2.6
	BT40-MD63F-135	36	63	135	108	M16	1	3.0	3.3
	BT40-MD80F-100	45	80	100	73	M16	1	2.9	3.1

BT-MD

Modular arbor

MAS 403-BT — Shank
G6.3 — G value
C — Coolant System

Fig.1

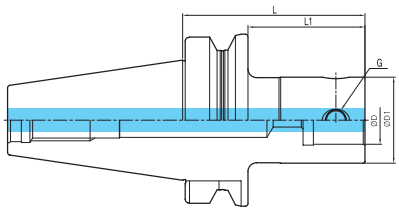
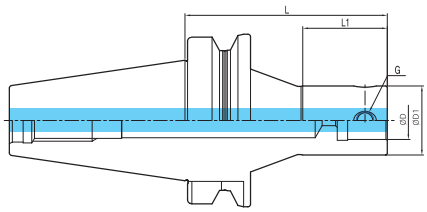


Fig.2



- For more information on the related parts, see **Page 103**. 103P
- For more information, see **Page 154** for HSK shank and see **Page 167** for SK shank. 154,167P

C Internal coolant system installed.

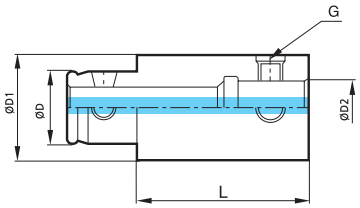
BT50

Designation	ØD	ØD1	L	L1	G	Fig.	Kg	Total Weight (Kg)
BT50-MD19F-85	11	19	85	44	M5	1	3.7	4.0
BT50-MD25F-105	14	25	105	62	M6	1	3.8	4.1
BT50-MD25F-120R	14	25	120	40	M6	2	3.8	4.1
BT50-MD32F-110	18	32	110	67	M8	1	4.0	4.3
BT50-MD32F-115R	18	32	115	45	M8	2	4.1	4.5
BT50-MD32F-235R	18	32	235	115	M8	2	5.5	5.9
BT50-MD40F-60	22	40	60	22	M10	1	3.7	4.0
BT50-MD40F-195	22	40	195	152	M10	1	4.8	5.2
BT50-MD40F-230R	22	40	230	180	M10	2	5.0	5.4
BT50-MD50F-125	28	50	125	82	M12	1	4.6	5.0
BT50-MD50F-225	28	50	225	182	M12	1	6.0	6.4
BT50-MD50F-250R	28	50	250	81	M12	2	7.0	7.4
BT50-MD63F-75	36	63	75	35	M16	1	4.2	4.5
BT50-MD63F-130	36	63	130	87	M16	1	5.3	5.7
BT50-MD63F-195	36	63	195	152	M16	1	6.8	7.2
BT50-MD63F-230	36	63	230	187	M16	1	7.5	7.9
BT50-MD80F-75	45	80	75	36	M16	1	4.3	4.6
BT50-MD80F-110	45	80	110	69	M16	1	5.7	6.0
BT50-MD80F-175	45	80	175	134	M16	1	8.0	8.4
BT50-MD90F-75	45	90	75	34	M16	1	4.8	5.1
BT50-MD90F-145	45	90	145	104	M16	1	7.4	7.8
BT50-MD90F-195	45	90	195	154	M16	1	9.4	9.8

EXT

Extension bar

C
Coolant System



C Internal coolant system installed.

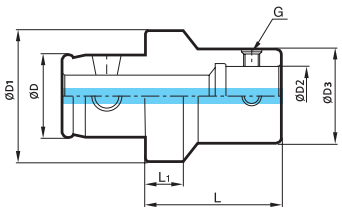
EXT

Designation	ØD	ØD1	L	ØD2	G	Kg	Total Weight (Kg)
EXT1930F	11	19	30	11	M5	0.1	0.1
EXT1950F	11	19	50	11	M5	0.1	0.1
EXT2530F	14	25	30	14	M6	0.1	0.1
EXT2550F	14	25	50	14	M6	0.2	0.2
EXT3235F	18	32	35	18	M8	0.2	0.2
EXT3260F	18	32	60	18	M8	0.4	0.4
EXT4040F	22	40	40	22	M10	0.4	0.4
EXT4090F	22	40	90	22	M10	0.9	0.9
EXT5050F	28	50	50	28	M12	0.7	0.7
EXT50100F	28	50	100	28	M12	1.4	1.5
EXT6360F	36	63	60	36	M16	1.4	1.5
EXT63120F	36	63	120	36	M16	2.9	2.9
EXT8070F	45	80	70	45	M16	2.5	2.7
EXT80120F	45	80	120	45	M16	4.5	4.7
EXT9080F	45	90	80	45	M16	3.8	4.0
EXT90130F	45	90	130	45	M16	6.4	6.6

RDC

Reducer bar

C
Coolant System



C Internal coolant system installed.

RDC

Designation	ØD	ØD1	L	ØD2	ØD3	L1	G	Kg	Total Weight (Kg)
RDC3225F	18	32	30	14	25	9	M6	0.1	0.2
RDC4025F	22	40	30	14	25	9	M6	0.3	0.3
RDC4032F	22	40	30	18	32	9	M8	0.2	0.2
RDC5025F	28	50	30	14	25	9	M6	0.3	0.4
RDC5032F	28	50	40	18	32	9	M8	0.3	0.4
RDC5040F	28	50	40	22	40	10	M10	0.5	0.6
RDC6325F	36	63	30	14	25	9	M6	0.6	0.7
RDC6332F	36	63	40	18	32	9	M8	0.6	0.7
RDC6340F	36	63	45	22	40	10	M10	0.7	0.8
RDC6350F	36	63	45	28	50	10	M12	0.9	1.0
RDC8040F	45	80	40	22	40	10	M10	1.2	1.4
RDC8050F	45	80	45	28	50	10	M12	1.3	1.5
RDC8063F	45	80	50	36	63	13	M16	1.6	1.8

MD SPARE PART

Main Components

Spare Part

Main Components		
Type	Taper screw	Wrench
Images / Designcation		
MD19F	BTT0506F	LW-2.5
MD25F	BTT0608F	LW-3
MD32F	BTT0810F	LW-4
MD40F	BTT1013F	LW-5
MD50F	BTT1215F	LW-6
MD63F	BTT1620F	LW-8
MD80F	BTT1626F	LW-8
MD90F	BTT1631F	LW-8

Components Not Included

Spare Part

Components Not Included	
Coolant tube	
Classification of shank type	
HSK50	HSK50A-CNS
HSK63	HSK63A-CNS
HSK100	HSK100A-CNS

• For more information on the size of taper screw parts, see **page 29**. 29P

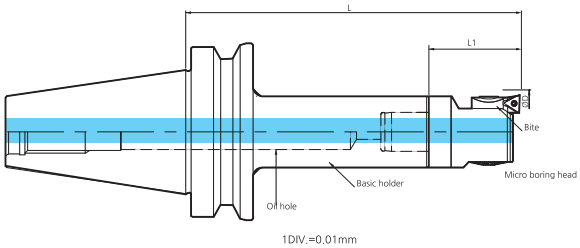
BT-FBH/B

Micro boring bar (balanced type)

G6.3 — G value

C — Coolant System

Boring



- For more information on the product features, see **Page 38**. 38P
- For more information on the related parts, see **Page 105**. 105P
- For more information on BT arbor, see **Page 100**. 100P
- For more information, see **Page 154** for HSK arbor and **Page 167** for SK arbor. 154,167P

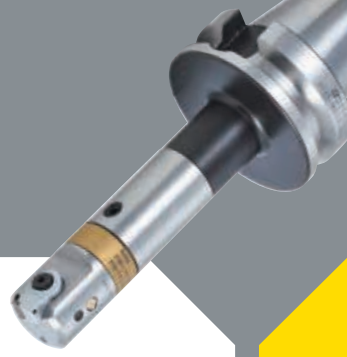
C Internal coolant system installed.

	Designation			Boring range		L	L1	MAX. boring depth	Kg	Total Weight (Kg)
	Head model no.	Bite model No.	Body model No.	MIN.	MAX.					
BT30	FBH1920B	FBB20N-□-□□	BT30-MD19F-70	20(24)	26(30)	105.4	31.7	60	0.2	0.2
	FBH2526B	FBB26N-□-□□	BT30-MD25F-90	26(32)	34(40)	130.9	37	80	0.2	0.2
	FBH3233B	FBB33N-□-□□	BT30-MD32F-80	33(40)	43(50)	120.9	38	80	0.3	0.3
	FBH4042B	FBB42N-□-□□	BT30-MD40F-80	42(50)	54(62)	130.5	46.5	96	0.5	0.5
	FBH5053B	FBB53N-□-□□	BT30-MD50F-70	53(65)	70(82)	128.4	54	97	0.8	0.9
BT40	FBH1920B	FBB20N-□-□□	BT40-MD19F-70	20(24)	26(30)	105.4	31.7	45	0.2	0.2
	FBH2526B	FBB26N-□-□□	BT40-MD25F-95	26(32)	34(40)	135.9	37	59	0.2	0.2
	FBH3233B	FBB33N-□-□□	BT40-MD32F-100	33(40)	43(50)	140.9	38	77	0.3	0.3
	FBH4042B	FBB42N-□-□□	BT40-MD40F-115	42(50)	54(62)	165.5	46.5	107	0.5	0.5
	FBH5053B	FBB53N-□-□□	BT40-MD50F-105	53(65)	70(82)	163.4	54	135	0.8	0.9
	FBH6368B	FBB68N-□-□□	BT40-MD63F-110	68(90)	100(122)	190.6	76	154	2.1	2.3
	FBH6398B	FBB68N-□-□□	BT40-MD63F-135	98(120)	150(172)	235.6	96	179	3.6	3.8
	FBH8098B	FBB68N-□-□□	BT40-MD80F-100	98(120)	150(172)	200.6	69	144	4.8	5.1
BT50	FBH1920B	FBB20N-□-□□	BT50-MD19F-85	20(24)	26(30)	120.4	31.7	80	0.2	0.2
	FBH2526B	FBB26N-□-□□	BT50-MD25F-105	26(32)	34(40)	145.9	37	59	0.2	0.2
	FBH3233B	FBB33N-□-□□	BT50-MD32F-110	33(40)	43(50)	150.9	38	77	0.3	0.3
	FBH4042B	FBB42N-□-□□	BT50-MD40F-195	42(50)	54(62)	245.5	46.5	130	0.5	0.5
	FBH5053B	FBB53N-□-□□	BT50-MD50F-225	53(65)	70(82)	283.4	54	182	0.8	0.9
	FBH6368B	FBB68N-□-□□	BT50-MD63F-230	68(90)	100(122)	295.6	76	220	2.1	2.3
	FBH6398B	FBB68N-□-□□	BT50-MD63F-195	98(120)	150(172)	310.6	96	191	3.6	3.8
	FBH8098B	FBB68N-□-□□	BT50-MD80F-175	98(120)	150(172)	275.6	96	208	4.8	5.1

- The user can adjust the depth of boring with a combination of MD arbors and extension bars.
  For more information, see the page on MD arbor.
- FBB Bite is largely divided into general-type FBB□□N and extended-type FBB□□N-1,
  and is available as FBB□□N-□-C09, T11 depending on the insert.
  FBBOON, FBBOON-1 : TPGT, TPGW0802□□L
  FBBOON-□-C : CCMT,CCGT0602□□L
  FBBOON-□-C09 : CCMT,CCGT09T3□□L
  FBBOON-□-T11 : TPGT1103□□L

FBH/B SPARE PART

Parts for micro boring (balanced type)



Main Components

Spare Part

Type (FBH)	Lock screw	Clamp screw
FBH1920B	BTF0404	BXC0304
FBH2526B	BTF0505	BXC0405
FBH3233B	BTF0606	BXC0506
FBH4042B	BTF0808	BXC0610
FBH5053B	BTF0812	BXC0610
FBH6368B	BTF1016	BXC0810
FBH6398B	BTF1012	BXC0810
FBH8098B	BTF1014	BXC0810

FBB Bite

Designation

FBB	–	20	N	–	1
FBH Bite		Head No.	New Type		Non : General type 1 : Expansion type

Spare Part

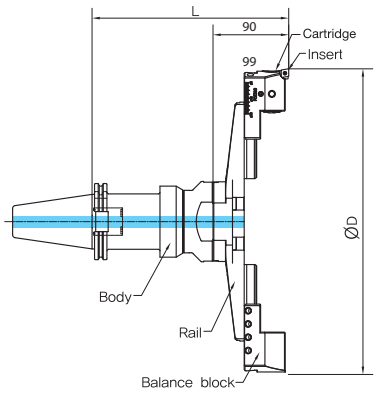
Designation	Boring Range	Insert	Insert screw	Clamp bolt
FBB15C	Ø15 ~ Ø18mm	CCET0301-□□L	BFTX01604N	BFTX02506N
	Ø18 ~ Ø22mm	CCET0301-□□L	BFTX01604N	BFTX02506N
FBB20N	Ø20 ~ Ø26mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0304
FBB20N-C	Ø20 ~ Ø26mm	CCET0401□□L	FTNA0238	BXC0304
FBB20N-1	Ø24 ~ Ø30mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0304
FBB20N-1-C	Ø24 ~ Ø30mm	CCET0401□□L	FTNA0238	BXC0304
FBB26N	Ø26 ~ Ø34mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0405
FBB26N-C	Ø26 ~ Ø34mm	CCET0401□□L	FTNA0238	BXC0405
FBB26N-1	Ø32 ~ Ø40mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0405
FBB26N-1-C	Ø32 ~ Ø40mm	CCET0401□□L	FTNA0238	BXC0405
FBB33N	Ø33 ~ Ø43mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0506
FBB33N-C	Ø33 ~ Ø43mm	CCMT0602□□,CCGT0602□□	BFTX02506N	BXC0506
FBB33N-1	Ø41~ Ø50mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0506
FBB33N-1-C	Ø41~ Ø50mm	CCMT0602□□,CCGT0602□□L	BFTX02506N	BXC0506
FBB42N	Ø42~ Ø54mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0610
FBB42N-C	Ø42~ Ø54mm	CCMT0602□□CCGT0602□□L	BFTX02506N	BXC0610
FBB42N-11	Ø42~ Ø54mm	TPGT1103□□L	BFTX0307A	BXC0610
FBB42N-1	Ø50~ Ø62mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0610
FBB42N-1-C	Ø50~ Ø62mm	CCMT0602□□,CCGT0602□□L	BFTX02506N	BXC0610
FBB42N-1-T11	Ø50~ Ø62mm	TPGT1103□□L	BFTX0307A	BXC0610
FBB53N	Ø53~ Ø70mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0610
FBB53N-C	Ø53~ Ø70mm	CCMT09T3□□,CCGT09T3□□L	BFTX02506N	BXC0610
FBB53N-11	Ø53~ Ø70mm	TPGT1103□□L	BFTX0307A	BXC0610
FBB53N-1	Ø65~ Ø82mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0610
FBB53N-1-C	Ø65~ Ø82mm	CCMT0602□□CCGT0602□□L	BFTX02506N	BXC0610
FBB53N-1-C09	Ø65~ Ø82mm	CCMT09T3□□,CCGT09T3□□L	BFTX0409N	BXC0610
FBB53N-1-T11	Ø65~ Ø82mm	TPGT1103□□L	BFTX0307A	BXC0610
FBB68N	Ø68~ Ø100mm /Ø98~ Ø150mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0810
FBB68N-C	Ø68~ Ø100mm/Ø98~ Ø150mm	CCMT09T3□□,CCGT09T3□□L	BFTX0409N	BXC0810
FBB68N-11	Ø68~ Ø100mm /Ø98~ Ø150mm	TPGT1103□□L	BFTX0307A	BXC0810
FBB68N-1	Ø90~ Ø122mm/ Ø120~ Ø172mm	TPGT0802□□L,TPGW0802□□	BFTX0204A	BXC0810
FBB68N-1-C09	Ø90~ Ø122mm / Ø120~ Ø172mm	CCMT09T3□□,CCGT09T3□□L	BFTX0409N	BXC0810
FBB68N-1-T11	Ø90~ Ø122mm / Ø120~ Ø172mm	TPGT1103□□L	BFTX0307A	BXC0810

BT-FBC

Wide diameter balance cut tool for fine boring

MAS 403-BT — Shank

C — Coolant System



※ Body and head sets are sold separately.

C Internal coolant system installed.

- For more information on the product features, see **Page 37**. 37P
- For more information on the related parts, see **Page 108**. 108P
- For more information on SK shank, see **Page 170**. 170P

BT50

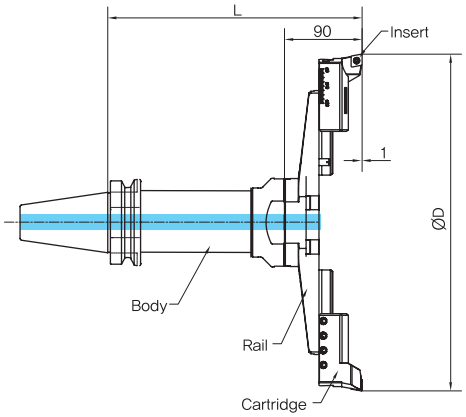
Designation					ØD	
Body	Kg	Finishing Boring(FBC)				
		TBC HEAD SET (rail+cartridge)	L	Kg	MIN.	MAX.
BT50-FMD50-85	5.9	FBC130S(TBR130+FCC130+FCB310)	182	3.8	130	180
BT50-FMD50-155	7.9	FBC130S(TBR130+FCC130+FCB310)	252	3.8	130	180
BT50-FMD50-205	9.7	FBC130S(TBR130+FCC130+FCB310)	302	3.8	130	180
BT50-FMD50-255	10.4	FBC130S(TBR130+FCC130+FCB310)	352	3.8	130	180
BT50-FMD50-85	5.9	FBC175S(TBR175+FCC130+FCB310)	182	4.1	175	225
BT50-FMD50-155	7.9	FBC175S(TBR175+FCC130+FCB310)	252	4.1	175	225
BT50-FMD50-205	9.7	FBC175S(TBR175+FCC130+FCB310)	302	4.1	175	225
BT50-FMD50-255	10.4	FBC175S(TBR175+FCC130+FCB310)	352	4.1	175	225
BT50-FMD50-85	5.9	FBC220S(TBR220+FCC130+FCB310)	182	4.5	220	270
BT50-FMD50-155	7.9	FBC220S(TBR220+FCC130+FCB310)	252	4.5	220	270
BT50-FMD50-205	9.7	FBC220S(TBR220+FCC130+FCB310)	302	4.5	220	270
BT50-FMD50-255	10.4	FBC220S(TBR220+FCC130+FCB310)	352	4.5	220	270
BT50-FMD50-85	5.9	FBC265S(TBR265+FCC130+FCB310)	182	4.6	265	315
BT50-FMD50-155	7.9	FBC265S(TBR265+FCC130+FCB310)	252	4.6	265	315
BT50-FMD50-205	9.7	FBC265S(TBR265+FCC130+FCB310)	302	4.6	265	315
BT50-FMD50-255	10.4	FBC265S(TBR265+FCC130+FCB310)	352	4.6	265	315
BT50-FMD50-85	5.9	FBC310S(TBR310+FCC310+FCB310)	182	5.5	310	390
BT50-FMD50-155	7.9	FBC310S(TBR310+FCC310+FCB310)	252	5.5	310	390
BT50-FMD50-205	9.7	FBC310S(TBR310+FCC310+FCB310)	302	5.5	310	390
BT50-FMD50-255	10.4	FBC310S(TBR310+FCC310+FCB310)	352	5.5	310	390
BT50-FMD50-85	5.9	FBC385S(TBR385+FCC310+FCB310)	182	5.8	385	465
BT50-FMD50-155	7.9	FBC385S(TBR385+FCC310+FCB310)	252	5.8	385	465
BT50-FMD50-205	9.7	FBC385S(TBR385+FCC310+FCB310)	302	5.8	385	465
BT50-FMD50-255	10.4	FBC385S(TBR385+FCC310+FCB310)	352	5.8	385	465
BT50-FMD50-85	5.9	FBC460S(TBR460+FCC310+FCB310)	182	12.8	460	540
BT50-FMD50-155	7.9	FBC460S(TBR460+FCC310+FCB310)	252	12.8	460	540
BT50-FMD50-205	9.7	FBC460S(TBR460+FCC310+FCB310)	302	12.8	460	540
BT50-FMD50-255	10.4	FBC460S(TBR460+FCC310+FCB310)	352	12.8	460	540

BT-TBC

Wide diameter balance cut tool for rough boring

MAS 403-BT — Shank

C — Coolant System



- For more information on the product features, see **Page 36**. 36P
- For more information on the related parts, see **Page 108**. 108P
- For more information on SK shank, see **Page 170**. 170P

※ Body and head sets are sold separately.

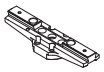
C Internal coolant system installed.

	Designation					ØD	
	Body	Kg	Rough Boring(TBC)				
			TBC HEAD SET (rail+cartridge)	L	Kg	MIN.	MAX.
BT50	BT50-FMD50-85	5.9	TBC130S(TBR130+BCC1348)	175	3.5	130	180
	BT50-FMD50-155	7.9	TBC130S(TBR130+BCC1348)	245	3.5	130	180
	BT50-FMD50-205	9.7	TBC130S(TBR130+BCC1348)	295	3.5	130	180
	BT50-FMD50-255	10.4	TBC130S(TBR130+BCC1348)	345	3.5	130	180
	BT50-FMD50-85	5.9	TBC175S(TBR175+BCC1348)	175	3.9	175	225
	BT50-FMD50-155	7.9	TBC175S(TBR175+BCC1348)	245	3.9	175	225
	BT50-FMD50-205	9.7	TBC175S(TBR175+BCC1348)	295	3.9	175	225
	BT50-FMD50-255	10.4	TBC175S(TBR175+BCC1348)	345	3.9	175	225
	BT50-FMD50-85	5.9	TBC220S(TBR220+BCC1348)	175	4.3	220	270
	BT50-FMD50-155	7.9	TBC220S(TBR220+BCC1348)	245	4.3	220	270
	BT50-FMD50-205	9.7	TBC220S(TBR220+BCC1348)	295	4.3	220	270
	BT50-FMD50-255	10.4	TBC220S(TBR220+BCC1348)	345	4.3	220	270
	BT50-FMD50-85	5.9	TBC265S(TBR265+BCC1348)	175	4.5	265	315
	BT50-FMD50-155	7.9	TBC265S(TBR265+BCC1348)	245	4.5	265	315
	BT50-FMD50-205	9.7	TBC265S(TBR265+BCC1348)	295	4.5	265	315
	BT50-FMD50-255	10.4	TBC265S(TBR265+BCC1348)	345	4.5	265	315
	BT50-FMD50-85	5.9	TBC310S(TBR310+BCC1354)	175	5.5	310	390
	BT50-FMD50-155	7.9	TBC310S(TBR310+BCC1354)	245	5.5	310	390
	BT50-FMD50-205	9.7	TBC310S(TBR310+BCC1354)	295	5.5	310	390
	BT50-FMD50-255	10.4	TBC310S(TBR310+BCC1354)	345	5.5	310	390
	BT50-FMD50-85	5.9	TBC385S(TBR385+BCC1354)	175	5.8	385	465
	BT50-FMD50-155	7.9	TBC385S(TBR385+BCC1354)	245	5.8	385	465
	BT50-FMD50-205	9.7	TBC385S(TBR385+BCC1354)	295	5.8	385	465
	BT50-FMD50-255	10.4	TBC385S(TBR385+BCC1354)	345	5.8	385	465
	BT50-FMD50-85	5.9	TBC460S(TBR460+BCC1354)	175	12.8	460	540
	BT50-FMD50-155	7.9	TBC460S(TBR460+BCC1354)	245	12.8	460	540
	BT50-FMD50-205	9.7	TBC460S(TBR460+BCC1354)	295	12.8	460	540
	BT50-FMD50-255	10.4	TBC460S(TBR460+BCC1354)	345	12.8	460	540

FBC/TBC SPARE PART

Parts for wide diameter balance cut tool

Spare Part

Type	Main Components								
	Rail	Cartridge (TBC)	Cartridge (FBC)	Clamp Bolt	Clamp Bolt	Balance Block	Wrench	Clamp Screw	Torx Wrench
Head Set									
TBC130S	TBR130	BCC1348	-	BX0820	BT0645	-	LW-3	BFTX0511N	TRX26
TBC175S	TBR175	BCC1348	-	BX0820	BT0645	-	LW-3	BFTX0511N	TRX26
TBC220S	TBR220	BCC1348	-	BX0820	BT0645	-	LW-3	BFTX0511N	TRX26
TBC265S	TBR265	BCC1348	-	BX0820	BT0645	-	LW-3	BFTX0511N	TRX26
TBC310S	TBR310	BCC1354	-	BX0820	BT0660	-	LW-3	BFTX0511N	TRX26
TBC385S	TBR385	BCC1354	-	BX0820	BT0660	-	LW-3	BFTX0511N	TRX26
TBC460S	TBR460	BCC1354	-	BX0820	BT0660	-	LW-3	BFTX0511N	TRX26
FBC130S	TBR130	-	FCC130	BX0820	BT0645	FCB130	LW-3	-	-
FBC175S	TBR175	-	FCC130	BX0820	BT0645	FCB130	LW-3	-	-
FBC220S	TBR220	-	FCC130	BX0820	BT0645	FCB130	LW-3	-	-
FBC265S	TBR265	-	FCC130	BX0820	BT0645	FCB130	LW-3	-	-
FBC310S	TBR310	-	FCC310	BX0820	BT0660	FCB310	LW-3	-	-
FBC385S	TBR385	-	FCC310	BX0820	BT0660	FCB310	LW-3	-	-
FBC460S	TBR460	-	FCC310	BX0820	BT0660	FCB310	LW-3	-	-

FBB

FBB bite (for FBC)

Designation	Insert
FBB130-C09	CCMT09T3□□, CCGT09T3□□
FBB130-C12	CCMT1204□□
FBB130-T11	TPMT1103□□, TPGT1103□□

BT-DBC

Balance cut tool for rough boring

C Coolant System Boring

Fig.1

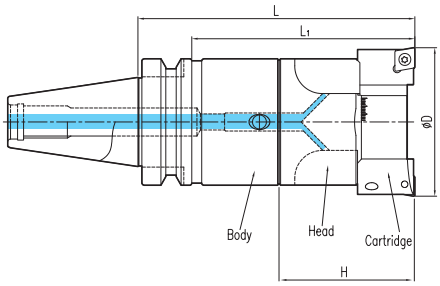
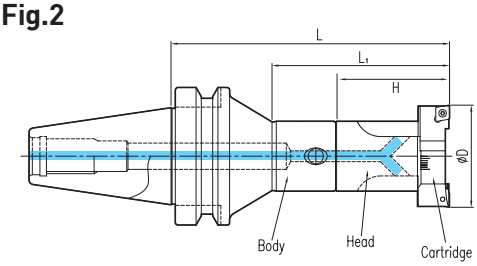


Fig.2



- For more information on BT arbor, see **Page 100**. 100P
- For more information, see **Page 154** for HSK arbor and **Page 167** for SK arbor. 154,167P

C Internal coolant system installed.

	Designation				ØD		L	MAX. boring depth (L1)	H	Fig.
	Head set model No.	Kg	Body model No.	Kg	MIN.	MAX.				
BT30	DBC2528S	0.3	BT30-MD25F-90	0.4	28	35	150	93	60	1
	DBC3235S	0.4	BT30-MD32F-80	0.4	35	46	145	114	65	1
	DBC4046S	0.6	BT30-MD40F-80	0.5	46	58	150	119	70	1
	DBC5058S	1.1	BT30-MD50F-70	0.8	58	74	150	128	80	1
BT40	DBC2528S	0.3	BT40-MD25F-105R	1.9	28	35	165	100	60	2
	DBC3235S	0.4	BT40-MD32F-115R	2.4	35	46	180	110	65	2
	DBC4046S	0.6	BT40-MD40F-110R	2.7	46	58	180	130	70	2
	DBC5058S	1.1	BT40-MD50F-105	2.7	58	74	185	130	80	1
	DBC6374S	2.0	BT40-MD63F-110	3.6	74	94	200	150	90	1
	DBC8094S	3.5	BT40-MD80F-100	4.8	94	120	200	173	100	1
BT50	DBC2528S	0.3	BT50-MD25F-120R	4.7	28	35	180	100	60	2
	DBC3235S	0.4	BT50-MD32F-235R	5.3	35	46	300	180	65	2
	DBC4046S	0.6	BT50-MD40F-230R	5.6	46	58	300	250	70	2
	DBC5058S	1.1	BT50-MD50F-250R	6.5	58	74	330	280	80	2
	DBC6374S	2.0	BT50-MD63F-230	8.4	74	94	320	280	90	1
	DBC8094S	3.5	BT50-MD80F-175	9.5	94	120	275	225	100	1
	DBC120S	5.3	BT50-MD80F-175	9.5	120	175	275	235	100	1

- User can adjust the depth of boring with a combination of MD arbors and extension bars.

For more information, see the page of MD arbor.

DBC SPARE PART

Parts for DBC

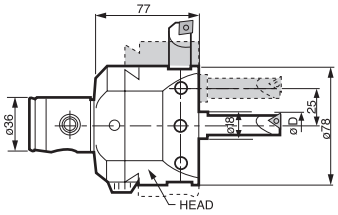
Main Components

Spare Part

Type	Main Components								
	Head	Spring pin	Wrench bolt	Wrench	Cartridge	Set Screw	Wrench	Clamp Screw	Torx Wrench
Head Set									
DBC2528S	DBC2528	SP0308	BX0416	LW-3	BCC28	BT0306	LW-1.5	FTKA02565	TRX7
DBC3235S	DBC3235	SP0410	BX0516	LW-4	BCC35	BT0308	LW-1.5	FTKA02565	TRX7
DBC4046S	DBC4046	SP0516	BX0620	LW-5	BCC46	BT0408	LW-2	FTNA0408	TRX15
DBC5058S	DBC5058	SP0616	BX0620	LW-5	BCC58	BT0412	LW-2	FTNA0408	TRX15
DBC6374S	DBC6374	SP0818	BX0830	LW-6	BCC74	BT0516	LW-2.5	BFTX0511N	TRX20
DBC8094S	DBC8094	SP1020	BX1035	LW-8	BCC94	BT0620	LW-3	BFTX0511N	TRX20
DBC120S	DBC120N	SP1020	BX0830	LW-6	BCC120	BT0830	LW-4	BFTX0511N	TRX20

BT-KMB

Micro boring



1DIV = ø0.02mm

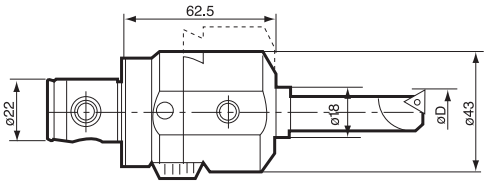
- For more information on the boring range, see **Page 114**. 114P
- For more information on the related parts, see **Page 115**. 115P
- For more information, see **Page 154** for HSK arbor and **Page 167** for SK arbor. 154,167P

C This product does not support the internal coolant system.

Boring head	Bite	Designation	L (length of head)	Kg
KMB6336	BB18-□(S)	BT□□-MD63F	77	2.2

BT-SMB

Small micro boring bar



1DIV = ø0.02mm

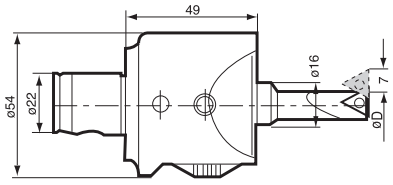
- For more information on the boring range, see **Page 114**. 114P
- For more information on the related parts, see **Page 115**. 115P
- For more information, see **Page 154** for HSK arbor and **Page 167** for SK arbor. 154,167P

C This product does not support the internal coolant system.

Boring head	Bite	Designation	L(length of head)	Kg
SMB4022	BB18-□(S)	BT□□-MD40F	62.5	0.6

BT-SMH

Small micro boring bar (precision type)



1DIV = ø0.01mm

- For more information on the boring range, see **Page 114**. 114P
- For more information on the related parts, see **Page 115**. 115P
- For more information, see **Page 154** for HSK arbor and **Page 167** for SK arbor. 154,167P

C This product does not support the internal coolant system.

Boring head	Bite	Designation	L(length of head)	Kg
SMH4022	BB16-□(S)	BT□□-MD40F	49	0.7

SMH SET

Small micro boring Set

SMH(SET1)

SMH(SET2)

SMHW(SET3)

SMH(SET4)

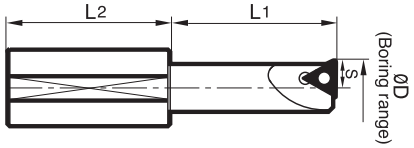
SET NUMBER

Type	Designation	SMH (SET1)	SMH (SET2)	SMHW (SET3)	SMH (SET4)	Applicable insert
Boring head	SMH4022	1	1	1	1	
Body	BT40-MD40F-60	1				
Body	BT50-MD40F-60		1			
BB Bite (STEEL)	BB16-0624(S)	1	1		1	WBGT060102L
BB Bite (STEEL)	BB16-0832(S)	1	1		1	WBGT060102L
BB Bite (STEEL)	BB16-1040(S)	1	1		1	TPG080202L
BB Bite (STEEL)	BB16-1253(S)	1	1		1	TPG080202L
BB Bite (STEEL)	BB16-1668(S)	1	1		1	TPG110304L
BB Bite (STEEL)	BB16-2083(S)	1	1		1	TPG110304L
BB Bite (STEEL)	BB16-2590(S)	1	1		1	TPG110304L
BB Bite (STEEL)	BB16-3090(S)	1	1		1	TPG110304L
Carbide tool bite	JB8-1S			1		
Carbide tool bite	JB8-4S			1		
Carbide tool bite	CB6-5S95			1		WBGT060102L
Carbide tool bite	CB8-9S-115			1		TPGT080202L
Carbide tool bite	SCB12-14S-140			1		TPGT080304L
Carbide tool bite	CB16-19S-175			1		TPGT080304L
Sleeve	SMH-CS06			1		
Sleeve	SMH-CS08			1		
Sleeve	SMH-CS12			1		
Screw	BFTX0203A	2	2	2	2	
Screw	BFTX0204A	2	2	2	2	
Screw	BFTX0307A	2	2	2	2	
Wrench	LW-3	1	1	1	1	
Wrench	LW-5	1	1	1	1	
Wrench	TRX06	1	1	1	1	
Wrench	TRX10	1	1	1	1	

BB BITE

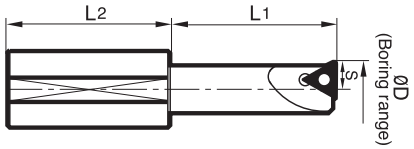
BB Bite (for SMB, SMH, KMB)

Boring Bite: BB type (for KMB)



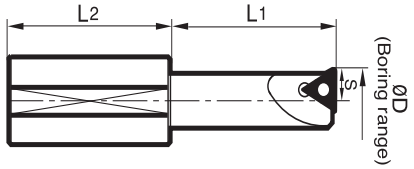
Designation	Boring range (center)		Boring range (flank)		L1	L2	S	Applied insert	Insert screw
	MIN.	MAX.	MIN.	MAX.					
BB18-7(S)	7	40	43	91	30	30	3.5	TBGT0601□□L	BFTX0204A
BB18-9(S)	9	42	45	93	40	30	4.5	TPGT0802□□L	BFTX0204A
BB18-11(S)	11	44	47	95	45	30	5.5	TPGT1103□□L	BFTX0307A
BB18-13(S)	13	46	49	97	45	40	6.5	TPGT1103□□L	BFTX0307A
BB18-15(S)	15	48	51	99	50	40	7.5	TPGT1103□□L	BFTX0307A
BB18-17(S)	17	50	53	101	50	40	8.5	TPGT1103□□L	BFTX0307A

Boring Bite: BB type (for SMB)



Designation	Boring range		L1	L2	S	Applied insert	Insert screw
	MIN.	MAX.					
BB18-7(S)	7	27	30	30	3.5	TBGT0601□□L	BFTX0204A
BB18-9(S)	9	29	40	30	4.5	TPGT0802□□L	BFTX0204A
BB18-11(S)	11	31	45	30	5.5	TPGT1103□□L	BFTX0307A
BB18-13(S)	13	33	45	40	6.5	TPGT1103□□L	BFTX0307A
BB18-15(S)	15	35	50	40	7.5	TPGT1103□□L	BFTX0307A
BB18-17(S)	17	37	50	40	8.5	TPGT1103□□L	BFTX0307A

Boring Bite : BB type(for SMH)



Designation	Boring range		L1	L2	S	Applied insert	Insert screw	Wrench
	MIN.	MAX.						
BB16-5(S)	5.5	19	20	34	2.75	WBGT0601□□L	BFTX0203A	TRX06
BB16-7(S)	7	21	30	34	3.5	TBGT0601□□L	BFTX0204A	TRX06
BB16-9(S)	9	23	40	34	4.5	TPGT0802□□L	BFTX0204A	TRX06
BB16-11(S)	11	25	45	34	5.5	TPGT1103□□L	BFTX0307A	TRX10
BB16-15(S)	15	29	50	34	7.5	TPGT1604□□L	BFTX0307A	TRX10
BB16-19(S)	19	33	34	60	9.5	TPGT1103□□L	BFTX0410A	TRX15

KMB SPARE PART

Parts for micro boring

Spare Part

Type	Main Components			Components Not Included	
	Boring head	Taper screw	Wrench	Boring bite	MD arbor
Images / Designation					
KMB	KMB6336	BTT1620F	LW-4.0	BB18	MD63F

- By default, taper screw is connected to arbor.

SMB SPARE PART

Parts for small micro boring bar

Spare Part

Type	Main Components			Components Not Included	
	Boring head	Taper screw	Wrench	Boring bite	MD arbor
Images / Designation					
SMB	SMB4022	BTT1013F	LW-2.5	BB18	MD40F

- By default, taper screw is connected to arbor.

SMH SPARE PART

Parts for small micro boring bar (precision type)

Spare Part

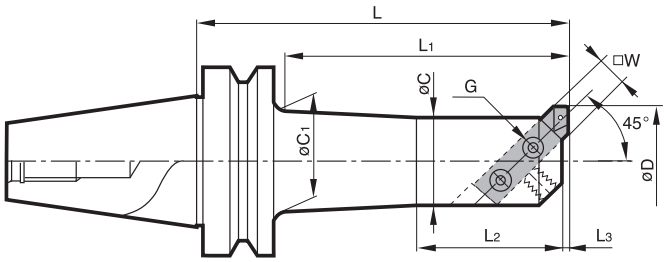
Type	Main Components			Components Not Included	
	Boring head	Taper screw	Wrench	Boring bite	MD arbor
Images / Designation					
SMH	SMH4022	BTT1013F	LW-3.0	BB16	MD40F

- By default, taper screw is connected to arbor.

BT-BSA

Square boring bar

MAS 403-BT — Shank | C — Coolant System | Boring



※ Bite is sold separately.

C This product does not support the internal coolant system.

- For more information on the related parts, see **Page 118**. 118P
- For more information on the exclusive bite, see **Page 119**. 119P

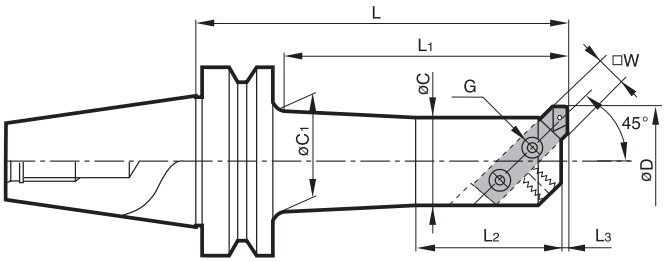
BT40

Designation	ØD MIN.	ØD MAX.	L	ØC	L1	L2	L3	ØC1	W	G	Kg	Total Weight (Kg)
BT40-BSA25-135	25	38	135	20	103	35	1	22	8	M6	1.2	1.5
BT40-BSA30-135	30	42	135	24	103	40	1.6	26	8	M6	1.3	1.6
BT40-BSA38-165	38	52	165	30	133	50	2.6	33	10	M8	1.7	1.9
BT40-BSA42-180	42	56	180	34	150	60	2	37	10	M8	2.1	2.3
BT40-BSA50-165	50	65	165	40	133	65	3	44	13	M10	2.2	2.5
BT40-BSA50-210	50	65	210	40	178	65	3	44	13	M10	2.8	3.0
BT40-BSA62-165	62	90	165	50	133	80	2	50	16	M10	2.8	3.0

BT-BSA

Square boring bar

MAS 403-BT — Shank | C — Coolant System | Boring



※ Bite is sold separately.

C This product does not support internal coolant system.

- For more information on the related parts, see **Page 118**. 118P
- For more information on the exclusive bite, see **Page 119**. 119P

BT50

Designation	ØD MIN.	ØD MAX.	L	ØC	L1	L2	L3	ØC1	W	G	Kg	Total Weight (Kg)
BT50-BSA25-135	25	38	135	20	92	35	1	22	8	M6	3.8	4.2
BT50-BSA30-165	30	42	165	24	122	40	1.6	26	8	M6	4.1	4.5
BT50-BSA38-180	38	52	180	30	137	50	2.6	33	10	M8	4.5	4.9
BT50-BSA42-210	42	56	210	34	167	60	2	37	10	M8	4.9	5.3
BT50-BSA50-180	50	65	180	40	137	65	3	46	13	M10	5.1	5.5
BT50-BSA50-240	50	65	240	40	197	65	3	44	13	M10	5.8	6.2
BT50-BSA62-195	62	90	195	50	152	80	2	56	16	M10	5.9	6.3
BT50-BSA62-270	62	90	270	50	227	80	2	56	16	M10	7.4	7.8
BT50-BSA72-195	72	110	195	60	152	95	2.4	66	19	M12	6.8	7.2
BT50-BSA72-285	72	110	285	60	242	95	2.4	66	19	M12	9.1	9.5
BT50-BSA90-210	90	125	210	75	167	110	4	80	19	M12	9.1	9.5
BT50-BSA105-195	105	160	195	90	154	130	3	-	25	M12	10.3	10.7

BSA SPARE PART

Parts for BSA

Main Components

Spare Part

Type	Main Components
	Set screw
Images / Designation	
BSA25	BTF0606
BSA30	BTF0606
BSA38	BTF0808
BSA42	BTF0810
BSA50	BTF1012
BSA62	BTF1016
BSA72	BTF1216
BSA90	BTF1220
BSA105	BTF1225

Components Not Included

Spare Part

Type	Components Not Included	
	Bite	Wrench
Images / Designation		
BSA25	BH408	LW-3
BSA30	BH408	LW-4
BSA38	BH410	LW-4
BSA42	BH410	LW-5
BSA50	BH413	LW-5
BSA62	BH416	LW-5
BSA72	BH419	LW-5
BSA90	BH419	LW-6
BSA105	BH425	LW-6

BH

Square boring bite for BSA

Boring

BH400 series for BSA

Fig.1

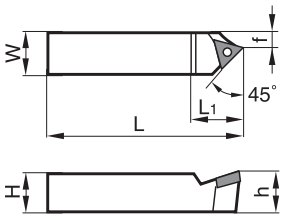
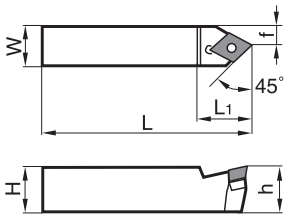


Fig.2



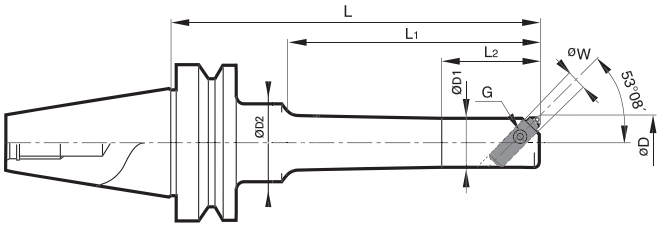
BH

Designation	Fig.	W=H	H	L	L1	F	Applied insert	Insert screw	Insert wrench
BH408	1	8	7.8	40	9	3.2	TPGT0802□□L	BFTX0204A	TRX06
BH410	2	10	9.8	50	10	4.2	CPMT0602□□	BFTX02056N	TRX08
BH413	2	13	12.8	60	14	6.2	CPMT0803□□	BFTX0307N	TRX10
BH416	2	16	15.8	80	18	7.3	CPMT0903□□	BFTX0407A	TRX15
BH419	2	19	18.8	95	22	10.3	CPMH1204□□	BFN0511T	TRX20
BH425	2	25	24.8	125	26	14.2	CPMH1604□□	BFX0611R	LW-3.0

BT-BKA

FZ Micro boring bar

MAS 403-BT — Shank | C — Coolant System | Boring



※ For more information on the boring range and applied insert, see the FZ unit Table.

C This product does not support the internal coolant system.

- Boring unit is sold separately.
- For more information on the related parts, see **Page 122**. 122P
- For more information on the unit, see **Page 123**. 123P

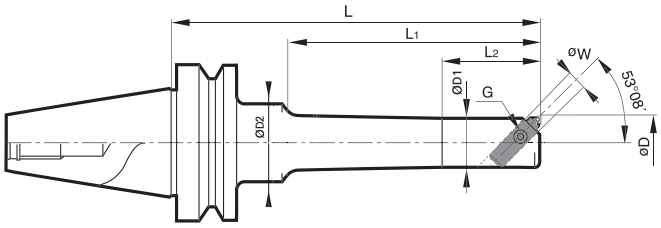
BT30, BT40

Designation	ØD	L	L1	L2	ØD1	ØD2	W	G	Kg	Total Weight (Kg)
BT30-BKA28-150	FZ10-□□-3(S)	150	123	-	25	-	10	M6	0.9	1.0
BT30-BKA36-150	FZ12-□□-3(S)	150	125	-	32	-	12	M8	1.2	1.3
BT30-BKA45-150	FZ16-□□-3(S)	150	128	-	40	-	16	M10	1.6	1.7
BT40-BKA23-150	FZ8-□□-3	150	95	40	20	22	8	M6	1.6	1.9
BT40-BKA23-225	FZ8-□□-3	225	95	40	20	22	8	M6	2.8	3.1
BT40-BKA28-165	FZ10-□□-3(S)	165	122	50	25	26	10	M6	1.5	1.7
BT40-BKA28-225	FZ10-□□-3(S)	225	125	50	25	26	10	M6	2.6	2.9
BT40-BKA36-165	FZ12-□□-3(S)	165	133	60	32	35	12	M8	1.9	2.1
BT40-BKA36-225	FZ12-□□-3(S)	225	193	60	32	35	12	M8	2.8	3.1
BT40-BKA45-165	FZ16-□□-3(S)	165	133	70	40	44	16	M10	2.3	2.6
BT40-BKA45-225	FZ16-□□-3(S)	225	208	70	40	44	16	M10	3.0	3.2
BT40-BKA56-165	FZ20-□□-3(S)	165	-	70	50	54	20	M12	3.0	3.2
BT40-BKA56-240	FZ20-□□-3(S)	240	-	70	50	54	20	M12	4.2	4.5
BT40-BKA72-165	FZ25-□□-3(S)	165	-	-	63	-	25	M16	4.0	4.2
BT40-BKA72-240	FZ25-□□-3(S)	240	-	-	63	-	25	M16	5.7	5.9
BT40-BKA90-165	FZ32-□□-3(S)	165	-	100	80	-	32	M20	4.9	5.2
BT40-BKA90-240	FZ32-□□-3(S)	240	-	100	80	-	32	M20	6.8	7.0

BT-BKA

FZ Micro boring bar

MAS 403-BT — Shank | C — Coolant System | Boring



※ For more information on boring range and applied insert, see FZ unit Table.

C This product does not support internal coolant system.

- Boring unit is sold separately.
- For more information on the related parts, see **Page 122**. 122P
- For more information on the unit, see **Page 123**. 123P

BT50

Designation	ØD	L	L1	L2	ØD1	ØD2	W	G	Kg	Total Weight (Kg)
BT50-BKA23-150	FZ8-□□-3	150	95	40	20	22	8	M6	4.2	4.6
BT50-BKA23-225	FZ8-□□-3	225	95	40	20	22	8	M6	5.3	5.7
BT50-BKA28-165	FZ10-□□-3(S)	165	122	50	25	26	10	M6	4.1	4.5
BT50-BKA28-225	FZ10-□□-3(S)	225	122	50	25	26	10	M6	5.1	5.5
BT50-BKA36-165	FZ12-□□-3(S)	165	122	60	32	35	12	M8	4.4	4.8
BT50-BKA36-225	FZ12-□□-3(S)	225	182	60	32	35	12	M8	4.9	5.3
BT50-BKA45-165	FZ16-□□-3(S)	165	122	70	40	44	16	M10	4.8	5.2
BT50-BKA45-225	FZ16-□□-3(S)	225	182	70	40	44	16	M10	5.5	5.9
BT50-BKA56-165	FZ20-□□-3(S)	165	122	70	50	54	20	M12	5.5	5.9
BT50-BKA56-240	FZ20-□□-3(S)	240	197	70	50	54	20	M12	6.7	7.1
BT50-BKA72-165	FZ25-□□-3(S)	165	122	80	63	68	25	M16	6.5	6.9
BT50-BKA72-240	FZ25-□□-3(S)	240	197	80	63	68	25	M16	8.5	8.9
BT50-BKA90-165	FZ32-□□□-3(S)	165	122	197	80	-	32	M20	7.9	8.3
BT50-BKA90-240	FZ32-□□□-3(S)	240	197	-	80	-	32	M20	10.9	11.3
BT50-BKA110-270	FZ32-□□□-3(S)	270	-	-	100	-	32	M20	14.8	15.2

BKA SPARE PART

Parts for BKA

Main Components

Spare Part

Type	Main Components
	Set screw
Images / Designation	
BKA23	BTF0606
BKA28	BTF0606
BKA36	BTF0808
BKA45	BTF1010
BKA56	BTF1212
BKA72	BTF1616
BKA90	BTF2020
BKA110	BTF2020

Components Not Included

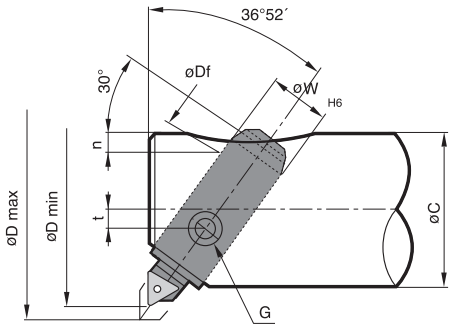
Spare Part

Type	Components Not Included		
	Bite		Wrench
Images / Designation			
BKA23	FZ 8-23-3(P10, K10)		LW-3
BKA28	FZ10-28-3(S)	FZ10-32-3(S)	LW-3
BKA36	FZ12-36-3(S)	FZ12-40-3(S)	LW-4
BKA45	FZ16-45-3(S)	FZ16-50-3(S)	LW-5
BKA56	FZ20-56-3(S)	FZ20-64-3(S)	LW-4
BKA72	FZ25-72-3(S)	FZ25-80-3(S)	LW-8
BKA90	FZ32-90-3(S)	FZ32-100-3(S)	LW-10
BKA110	FZ32-110-3(S)	FZ32-125-3(S)	LW-10

FZ UNIT

FZ unit Inclined mounting type

C Coolant System Boring



※ Ø0.02mm for each gradation.

C This product does not support internal coolant system.

• For more information on the insert, see **Page 125**. 125P

FZ8, FZ10, FZ12, FZ16, FZ20, FZ25, FZ32

Designation	ØD MIN.	ØD MAX.	Insert holder	Insert	ØC	n	ØDf	t	G	W	Kg	Total Weight (Kg)
FZ8-23-3(P10,K10)	23	29(32)	8Z3 (Brazed tip)	-	20	3	8	1.5	M6	8	0.04	0.04
FZ8-26-3(P10,K10)	26	32(34)	8Z3 (Brazed tip)	-	20	3	8	1.5	M6	8	0.04	0.04
FZ10-28-3(S)	28	34(38)	U10Z3S	TBGT0601□□L	25	3.5	8	2	M6	10	0.1	0.1
FZ10-32-3(S)	32	38(44)	U10Z3S	TBGT0601□□L	25	3.5	8	2	M6	10	0.1	0.1
FZ12-36-3(S)	36	44(48)	U12Z3S	TBGT0601□□L	32	4	10	2.5	M8	12	0.1	0.1
FZ12-40-3(S)	40	48(55)	U12Z3S	TBGT0601□□L	32	4	10	2.5	M8	12	0.1	0.1
FZ16-45-3(S)	45	54(60)	U16Z3S	TBGT0802□□L	40	6.5	12	3	M10	16	0.1	0.0
FZ16-50-3(S)	50	59(68)	U16Z3S	TBGT0802□□L	40	6.5	12	3	M10	16	0.1	0.1
FZ20-56-3(S)	56	68(78)	U20Z3S	TBGT0802□□L	50	7	16	5	M12	20	0.2	0.2
FZ20-64-3(S)	64	76(90)	U20Z3S	TBGT0802□□L	50	7	16	5	M12	20	0.2	0.2
FZ25-72-3(S)	72	88(100)	U25Z3S	TPGT1103□□L	63	8	20	4	M16	25	0.3	0.3
FZ25-80-3(S)	80	96(114)	U25Z3S	TPGT1103□□L	63	8	20	4	M16	25	0.3	0.3
FZ32-90-3(S)	90	114(126)	U32Z3S	TPGT1103□□L	80	10	25	6	M20	32	0.6	0.6
FZ32-100-3(S)	100	124(140)	U32Z3S	TPGT1103□□L	80	10	25	6	M20	32	0.6	0.6
FZ32-110-3(S)	110	134(150)	U32Z3S	TPGT1103□□L	100	10	25	12	M20	32	0.7	0.7
FZ32-125-3(S)	125	149(175)	U32Z3S	TPGT1103□□L	100	10	25	12	M20	32	0.8	0.8

FZ UNIT SPARE PART

Parts for FZ unit

Main Components

Spare Part

Type	Main Components		
	Housing	Spindle	Insert screw
Images / Designation			
FZ8-23, 26-3, P10	8-23, 26-3	8Z3(P10)	-
FZ8-23, 26-3, K10	8-23, 26-3	8Z3(P10)	-
FZ10-28, 32-3(S)	10-28, 32-3	U10Z3(S)	BFTX0204A
FZ12-36, 40-3(S)	12-36, 40-3	U12Z3(S)	BFTX0204A
FZ16-45, 50-3(S)	16-45, 50-3	U16Z3(S)	BFTX0204A
FZ20-56, 64-3(S)	20-56, 64-3	U20Z3(S)	BFTX0204A
FZ25-72, 80-3(S)	25-72, 80-3	U25Z3(S)	BFTX0307A
FZ32-90, 100, 110, 125-3(S)	32-90, 100-3	U32Z3(S)	BFTX0307A

Components Not Included

Spare Part

Type	Components Not Included		
	Torx wrench	L-wrench	Torx wrench
Images / Designation			
FZ8-23, 26-3, P10	-	LW-1.5	R0/N0
FZ8-23, 26-3, K10	-	LW-1.5	R0/N0
FZ10-28, 32-3(S)	TRX6	LW-2.0	R2/N1
FZ12-36, 40-3(S)	TRX6	LW-2.5	R2A/N2
FZ16-45, 50-3(S)	TRX6	LW-3.0	N3
FZ20-56, 64-3(S)	TRX6	LW-4.0	R4/N4
FZ25-72, 80-3(S)	TRX10	LW-4.0	ZV25
FZ32-90, 100, 110, 125-3(S)	TRX10	LW-5.0	R5/N5

INSERT

FZ unit, FF unit

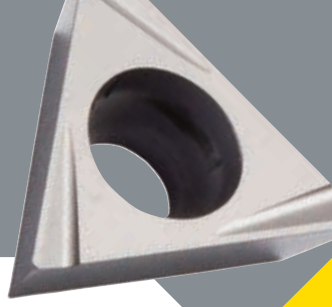


Fig. 1
(With Chip Breaker)

Fig. 2
(Without Chip Breaker)

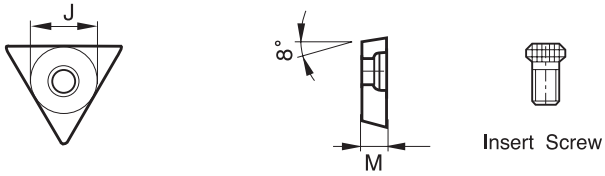


Fig.	Grade of Insert	Workpiece
1	K10(W.C)	Cast iron, Aluminum
1	P10(W.C)	Steel, Stainless Steel
1	CN1000 or CN2000(Cermet)	Steel
2	K10(W.C)	Exclusive for Cast Iron

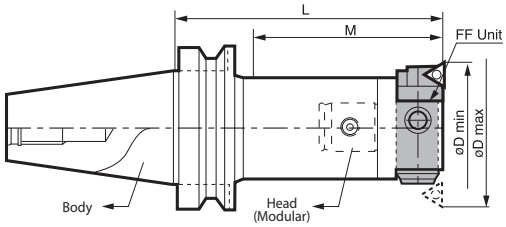
General Inserts complying with ISO Standard

Insert	Fig.	J	R	M	E	Insert screw	Wrench
TBGT0601□□L	1	3.97	0.2	1.59	2.2	BFTX0204A	TRX6
TPGT0802□□L	1	4.76	0.2	2.38	2.4	BFTX0204A	TRX6
TPGT1103□□L	1	6.35	0.4	3.18	2.8	BFTX0307A	TRX10

BT-BCF

Micro boring bar

MAS 403-BT — Shank | C — Coolant System | Boring



- For more information on the insert, see **Page 128**. 128P
- For more information on BT arbor, see **Page 100**. 100P
- For more information, see **Page 154** for HSK arbor and **Page 167** for SK arbor. 154,167P

※ Body, boring unit, and head sets are sold separately.

C This product does not support internal coolant system.

BCF

Designation		ØD		L	Kg	Basic holder	Boring depth	Kg
Head	Boring unit	MIN.	MAX.					
BCF2530	FF10-30(S)	29.5	42	140	0.3	BT30-MD25F-90	93	0.6
BCF3239	FF12-39(S)	39	50	140	0.4	BT30-MD32F-80	99	0.7
BCF4047	FF16-47(S)	47	66	170	0.6	BT30-MD40F-80	109	0.9
BCF5058	FF20-58(S)	58	83	125	1.0	BT30-MD50F-70	98	0.9
BCF2530	FF10-30(S)	29.5	42	145	0.3	BT40-MD25F-95	72	1.1
BCF3239	FF12-39(S)	39	50	160	0.4	BT40-MD32F-100	96	1.1
BCF4047	FF16-47(S)	47	66	175	0.6	BT40-MD40F-115	120	1.6
BCF5058	FF20-58(S)	58	83	175	1.0	BT40-MD50F-105	143	1.8
BCF6379	FF25-79(S)	79	108	180	1.7	BT40-MD63F-110	148	2.4
BCF100	FF32-100(S)	100	141	200	3.8	BT40-MD80F-100	168	2.9
BCF2530	FF10-30(S)	29.5	42	155	0.3	BT50-MD25F-105	72	3.8
BCF3239	FF12-39(S)	39	50	170	0.4	BT50-MD32F-110	96	4.0
BCF4047	FF16-47(S)	47	66	255	0.6	BT50-MD40F-195	143	4.8
BCF5058	FF20-58(S)	58	83	295	1.0	BT50-MD50F-225	195	6.0
BCF6379	FF25-79(S)	79	108	265	1.6	BT50-MD63F-195	222	6.8
BCF100	FF32-100(S)	100	141	275	3.8	BT50-MD80F-175	232	8.0

BT-BCF

Micro boring bar

MAS 403-BT — Shank | C — Coolant System | Boring

Fig.1

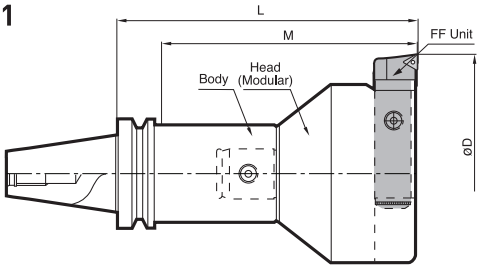
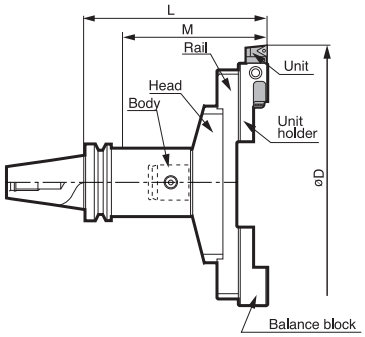


Fig.2



1DIV. = Ø0.02mm

- For more information on the insert, see **Page 128**. 128P
- For more information on BT-MD arbor, see **Page 100**. 100P
- For more information, see **Page 154** for HSK arbor and see **Page 167** for SK arbor. 154,167P

※ Body, boring unit and head sets are sold separately.

C This product does not support internal coolant system.

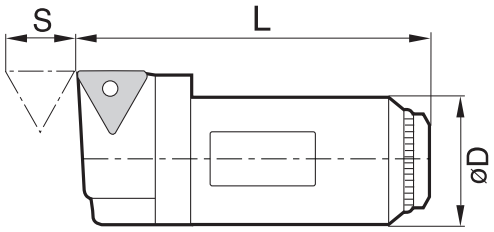
BCF

Designation		ØD		Length of head	MD No.	Fig.	Kg
Head	Boring unit	MIN.	MAX.				
BCF138	FF32-138(S)	138	159	100	BT50-MD90F-□□□	1	5.0
BCF150	FF32-138(S)	150	171	100	BT50-MD90F-□□□	1	5.1
BCF170	FF32-138(S)	170	191	100	BT50-MD90F-□□□	1	5.3
BCF190	FF32-138(S)	190	211	100	BT50-MD90F-□□□	1	5.7
BCF210	FF32-138(S)	210	231	100	BT50-MD90F-□□□	1	5.9
BCF230	FF32-138(S)	230	251	100	BT50-MD90F-□□□	1	6.1
BCF250FS	FF25-79(S)	250	355	107	BT50-MD90F-□□□	2	9.0
BCF350FS	FF25-79(S)	355	450	107	BT50-MD90F-□□□	2	9.8

FF

FF unit_micro boring unit

C Coolant System Boring



C This product does not support internal coolant system.

FF

Designation	ØD	L	S	Applied insert
FF10-30(S)	10	28.5	3.5	TBGT0601□□L
FF12-39(S)	12	37.5	3.5	TBGT0601□□L
FF16-47(S)	16	45	5	TPGT0802□□L
FF20-58(S)	20	56	7	TPGT0802□□L
FF25-79(S)	25	77.5	8	TPGT1103□□L
FF32-100(S)	32	97	11	TPGT1103□□L
FF32-138(S)	32	131	11	TPGT1103□□L

FF UNIT SPARE PART

Parts for FF unit

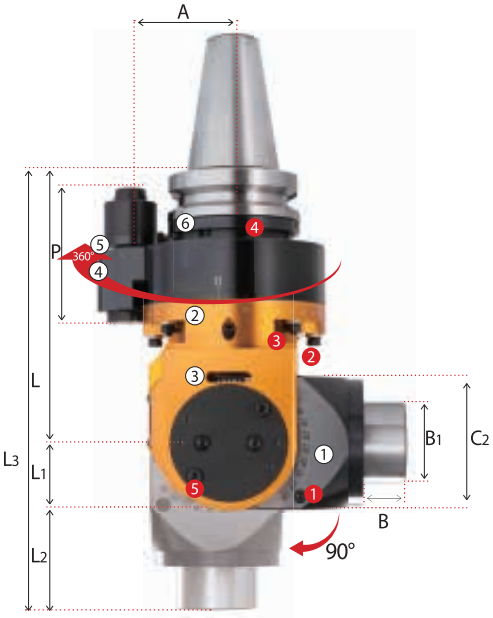
Main Components

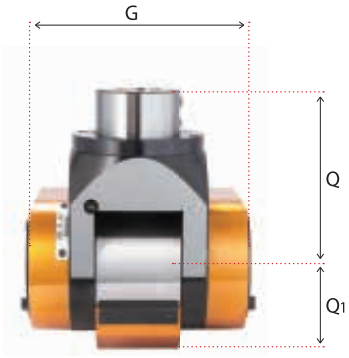
Spare Part

Type	Main Components		
	Clamp screw	Torx wrench	Wrench
Images / Designation			
FF10-30(S)	BFTX0204A	TRX06	LW-2
FF12-39(S)	BFTX0204A	TRX06	LW-2.5
FF16-47(S)	BFTX0204A	TRX06	LW-3
FF20-58(S)	BFTX0204A	TRX06	LW-4
FF25-79(S)	BFTX0307A	TRX10	LW-4
FF32-100(S)	BFTX0307A	TRX10	LW-5

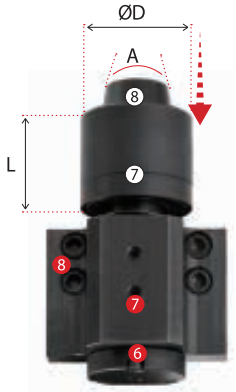
BT-MAH

Universial Angular Head_Rigidity-reinforced side-lock type





POSITIONING PIN



Shank size	L	A	ØD
BT50	56.5	20°	Ø40

No.	Name
①	Tilt angle graduation (0~90°, vertical)
②	Rotation angle graduation (360°)
③	Head
④	Positioning pin part
⑤	Encounter key
⑥	Positioning ring
⑦	Positioning cover
⑧	Positioning pin

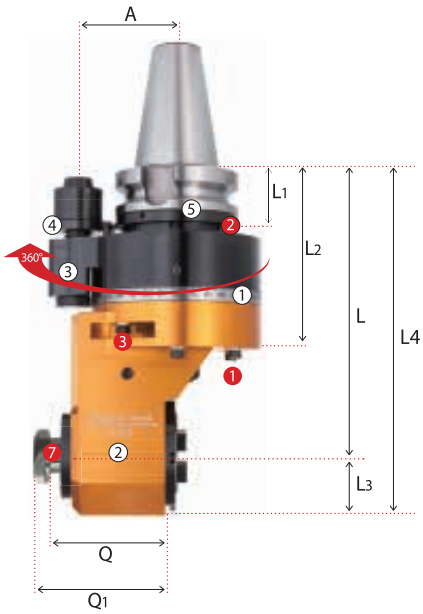
No.	Names of Parts Parts	Designation
1	Tilt angle graduation screw	BT1216
2	Head captive bolts	BT0645
3	Rotation angle graduation screw	BT0640
4	Positioning ring set screw	MSST5-12
5	Tilt axis captive bolts	BH0616
6	Positioning pin height adjust screw	BT0516
7	Positioning pin set screw	BT0512
8	Body position block set bolt	BX0516

Designation	ØD	L	L1	L2	L3	C	C1	G	C2	Q	Q1	B	B1	P	A	MAX. RPM	Installation of tool	Kg	Total Weight (Kg)
BT50-MAH32-200	32	200	47	78	325	136	95	54	95	125	63	31	60	95	80	3,000	SIDE LOCK	19.6	32.0

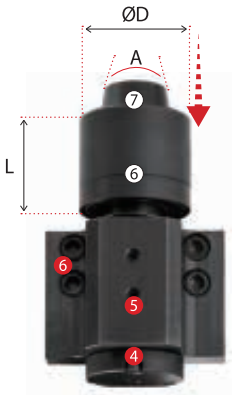
- For more information on A/H, see **Page 39**. 39P
- For more information on positioning block, see **Page 208**. 208P

BT-HRAG

90˚ Angular Head_Rigidity-reinforced interchangeable adapter type



POSITIONING PIN



Shank size	L	A	ØD
BT50	56.5	20°	Ø40

No.	Name
①	Rotation angle graduation (360°)
②	Head
③	Positioning pin part
④	Encounter key
⑤	Positioning ring
⑥	Positioning cover
⑦	Positioning pin

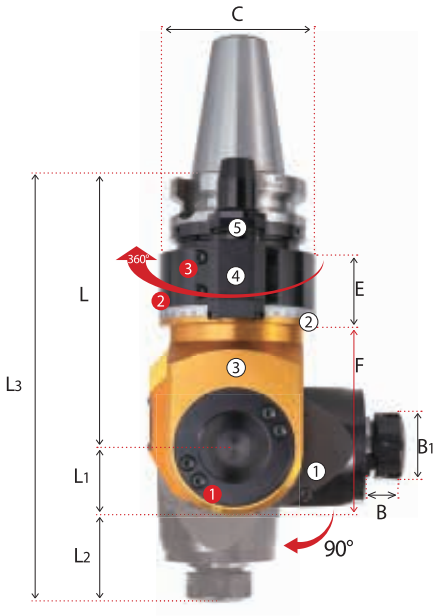
No.	Name of Parts	Designation
1	Head captive bolts	BX0660
2	Positioning ring set screw	MSST5-12
3	Rotation angle graduation screw	BT0648
4	Positioning pin height adjust screw	BT0516
5	Positioning pin set screw	BT0512
6	Body position block set screw	BX0516
7	BT / NT bolts	

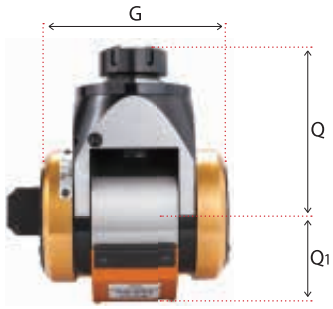
Designation	L	L1	L2	Q	Q1	A	G1	G	MAX. RPM	Mounting tool shank	Kg	Total Weight (Kg)
BT50-HRAG40-230	230	56.5	145	89	101	80	136	93	3,000	BT/NT40	18.2	30.6

- For more information on A/H, see **Page 39**. 39P
- For more information on positioning block, see **Page 208**. 208P

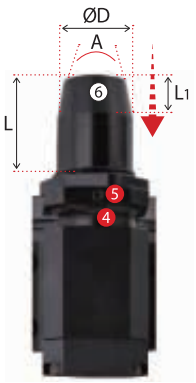
BT-KHU

Universial Angular Head_Collet chuck type





POSITIONING PIN



Shank Designation	L	L1	A	ØD
BT40	Max : 32 Min : 26	10	20°	Ø19.6
BT50	Max : 35 Min : 29	15	20°	Ø28

No.	Name
①	Tilt angle graduation (0~90°, vertical)
②	Rotation angle graduation (360°)
③	Head
④	Positioning pin part
⑤	Encounter key
⑥	Height-adjusting wrench hole

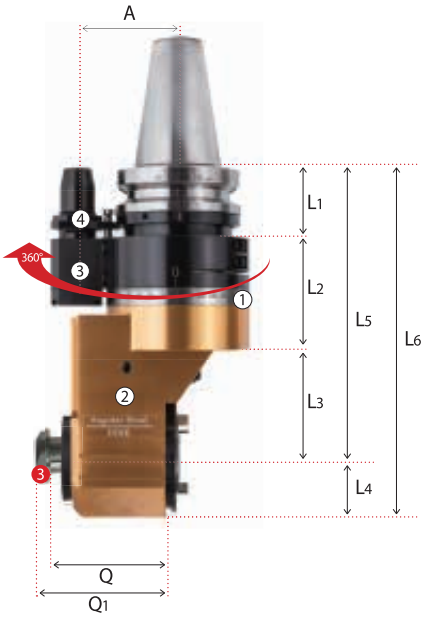
No.	Name of Parts	Designation
1	Tilt axies captive bolts	BH0630
2	Bracket angle captive bolts	BX0630
3	Position block, captive bolts	BX0512
4	Set screw	BT0404
5	Captive bolts	BX05630

Designation	ØD (Clamping Range)	B	B1	C	E	F	C2	L1	L2	L3	L	ØD1	A	G	Q	Q1	Gear ratio	compared to spindle Rotation direction	MAX. RPM	Applied Collet	Kg	Total Weight (Kg)
BT40-KHU10-160	1.0~10.0	22	28	96	51	98	96	160	33	54	247	58	65	90	87	40	1:2	Normal rotation	6,000	GERC16	8.3	15.2
BT50-KHU10-180	1.0~10.0	22	28	114	53	103	114	180	33	54	267	84	80	90	87	40	1:2	Normal rotation	6,000	GERC16	11.5	23.9
BT50-KHU20-195	1.0~20.0	29	50	114	53	132	114	195	47	73	315	84	80	124	120	63	1:1	Normal rotation	3,000	GERC32	17.9	30.3

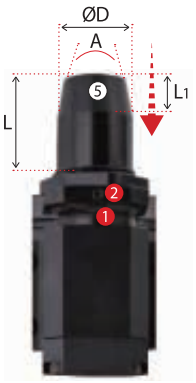
- For more information on A/H, see **Page 39**. 39P
- For more information on positioning block, see **Page 208**. 208P

BT-KAG

90° Angular Head_Interchangeable adapter type



POSITIONING PIN



Shank Designation	L	L1	A	ØD
BT40	Max : 32 Min : 26	10	20°	Ø19.6
BT50	Max : 35 Min : 29	15	20°	Ø28

No.	Name
①	Rotation angle graduation (360°)
②	Head
③	Positioning pin part
④	Encounter key
⑤	Height adjusting wrench hole

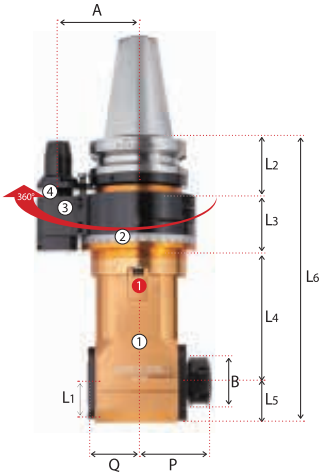
No.	Name of Parts	Designation
1	Set screw	BT0404
2	Captive bolts	BX50630
3	BT / NT bolts	

Designation	L	L1	L2	L3	Q	Q1	A	C	G	Gear ratio	compared to spindle Rotation direction	MAX. RPM	Mounting holder Shank	Kg	Total Weight (Kg)
BT40-KAG30-195	195	44	86	65	66	70	65	96	75	1:1	Normal rotation	4,000	BT/NT30	7.2	14.0
BT50-KAG40-230	230	57	88	85	89	94	80	114	93	1:1	Normal rotation	3,000	BT/NT40	15.7	28.1

- For more information on A/H, see **Page 39**. 39P
- For more information on positioning block, see **Page 208**. 208P

BT-KAH

Modular Angular Head_Fixed 90°



POSITIONING PIN

Shank Designation	L	L1	A	ØD
BT40	Max : 32 Min : 26	10	20°	Ø19.6
BT50	Max : 35 Min : 29	15	20°	Ø28

No.	Name
①	Head
②	Rotation angle graduation (360°)
③	Positioning pin part
④	Encounter key
⑤	Height adjusting wrench hole

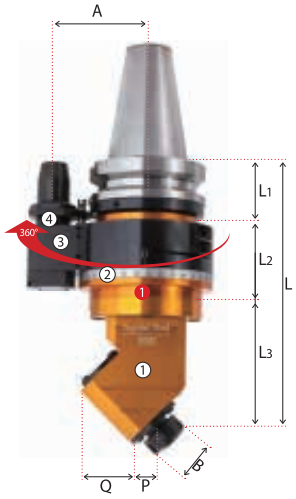
No.	Name of Parts	Designation
1	Head captive bolts	BX0618
2	Set screw	BT0404
3	Captive bolts	BX50630

Designation	ØD	L	L1	L2	L3	L4	L5	L6	B	A	P	Q	G	G1	Gear ratio	MAX. RPM	Applied collet	Kg
BT40-KAH7-170	1.0~7.0	170	20	44	71	55	20	190	19	65	37	24.5	40	96	1:1	5,000	GERC11	4.6
BT40-KAH10-195	1.0~10.0	195	25	44	71	80	25	220	28	65	46	32	58	96	1:1	5,000	GERC16	5.8
BT40-KAH13-165	1.0~13.0	165	28	44	71	50	28	193	35	65	53	35	60	96	1:1	5,000	GERC20	5.7
BT40-KAH20-180	2.0~20.0	180	38	44	71	65	38	218	50	65	71	49	76	96	1:1	3,500	GERC32	6.7
BT50-KAH07-220	1.0~7.0	220	20	57	54	109	20	240	19	80	37	24.5	40	96	1:1	5,000	GERC11	9.8
BT50-KAH10-215	1.0~10.0	215	25	57	54	104	25	240	28	80	46	32	58	96	1:1	5,000	GERC16	10.7
BT50-KAH10-260	1.0~10.0	260	25	57	54	149	25	285	28	80	46	32	58	96	1:1	5,000	GERC16	11
BT50-KAH13-260	1.0~13.0	260	28	57	54	149	28	288	35	80	53	35	60	96	1:1	5,000	GERC20	11.2
BT50-KAH20-200	2.0~20.0	200	38	57	54	89	38	238	50	80	71	49	76	96	1:1	3,500	GERC32	11.6
BT50-KAH20-240	2.0~20.0	240	38	57	54	129	38	278	50	80	71	49	76	96	1:1	3,500	GERC32	12.4

- For more information on A/H, see **Page 39**. 39P
- For more information on positioning block, see **Page 208**. 208P

BT-KAC

Modular Angular Head_Fixed 45°



POSITIONING PIN

Shank Designation	L	L1	A	ØD
BT40	Max : 32 Min : 26	10	20°	Ø19.6
BT50	Max : 35 Min : 29	15	20°	Ø28

No.	Name
①	Head
②	Rotation angle graduation (360°)
③	Positioning pin part
④	Encounter key
⑤	Height adjusting wrench hole

No.	Name of Parts	Designation
1	Head captive bolts	BX0618
2	Set screw	BT0404
3	Captive bolts	BX50630

Designation	ØD (Clamping Range)	L	L1	L2	L3	B	G	G1	P	Q	A	MAX. RPM	Applied Collet	Kg
BT40-KAC10-220	1.0~10.0	220	44	71	105	28	60	96	25	54	65	5,000	GERC16	5.3
BT40-KAC13-220	1.0~13.0	220	44	71	105	28	60	96	25	54	65	5,000	GERC20	5.5
BT40-KAC20-230	2.0~20.0	230	44	71	115	50	72	96	30	60	65	3,500	GERC32	6.8
BT50-KAC10-240	1.0~10.0	240	57	54	129	28	60	96	25	54	80	5,000	GERC16	10.2
BT50-KAC13-240	1.0~13.0	240	57	54	129	28	60	96	25	54	80	5,000	GERC20	10.4
BT50-KAC20-250	2.0~20.0	250	57	54	139	50	72	96	30	60	80	3,500	GERC32	11.7

- For more information on A/H, see **Page 39**. 39P
- For more information on positioning block, see **Page 208**. 208P

BT-SAH

NEW

Slim angular head

3,500 Max RPM

Drilling

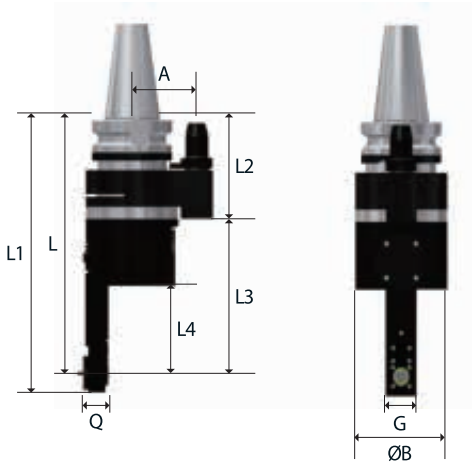
Features

- Angular head for tight space
(MIN. inner diameter of workpiece: Ø40, MIN. width 32mm)
- MAX. 3,500RPM, Spindle : applied rotation ratio 1:1.37
- Clamping range: Ø3, Ø4, Ø6

Designation

BT50	–	SAH	6	–	277
Spindle		Slim Angular head	Tool Dia.		Length

Details



Machining Features

Min. Ø40 hole (except tool length)

Min. 32mm gap (except tool length)

Designation	L	L1	L2	L3	L4	A	Q	G	ØB	Rotation ratio (IN:OUT)	Rotating direction	MAX RPM	Weight (Kg)
BT50-SAH6-277	277	298	183.5	166.5	93.5	80(110)	31.5	40	76	1:1.37	CW:CW	3,500	14

Clamping Force

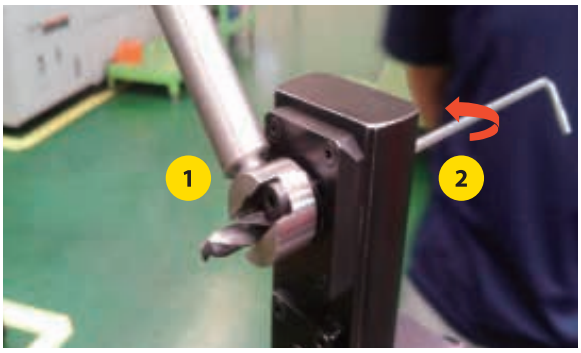
	Measurement	Readings (N-m)			
Clamp torque	2	2.5	3	3.5	4
Clamping Force	Not measurable	5.5	6.5	7	7

※ The moderate clamp torque of collet is 3.5N-m.

Exclusive collet

Designation	Clamping Range
SAH6-C3	3
SAH6-C4	4
SAH6-C6	6

How to Clamp



1. Connect tool with SAH-exclusive collet
2. Insert the tool in SAH and fix with -couple-dedicated tightening jig
3. Clamping by turning the bolt using a wrench.

• BT : 136P