



Boring tool

DINOX NC TOOLING SYSTEM

FBH/B	134
DBCA	144
DBC	155
TBCA	160
TBC	166
FBC	171
SMB	176
KMB	178
SMH	180
BB BITE	184
BH	185
BSA	186
BKA	188
FZ UNIT	190
BCF	192
FF	194



FBH/B

FBH Back boring & balanced type



G6.3 **C**

G value Coolant System Boring

Features

- High-speed boring and back boring applicable
- High-precision balanced boring: G6.3
- Minimum adjustment range: 2 μ m

NAMING	FBH	32	33	B
	Fine boring head	MD Arbor Size	Boring Range(Min)	Balance type



Back boring range calculation



- A : Boring range(\emptyset)
- B : FBH/B BODY Size(\emptyset)
- C : Diameter for pass(\emptyset)

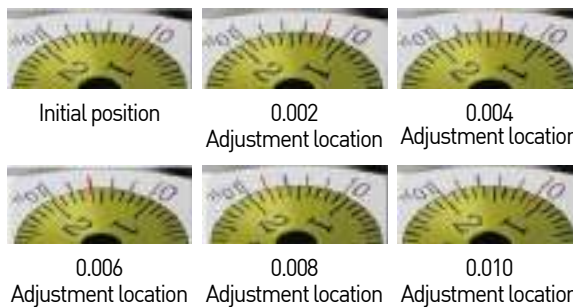
Model No.	Min. diameter for pass(\emptyset)'C'
FBH1920B	$\geq \emptyset 24$
FBH2526B	$\geq \emptyset 30.5$
FBH3233B	$\geq \emptyset 35$
FBH4042B	$\geq \emptyset 44$
FBH5053B	$\geq \emptyset 54$
FBH6368B	$\geq \emptyset 71.5$
FBH6398B	$\geq \emptyset 100$
FBH8098B	$\geq \emptyset 100$

A	Max. range of back boring (\emptyset)	A Max. value = (2xC)-B
B	Max. FBH body size (\emptyset)	B Max. value = (2xC)-A
C	Min. diameter for pass (\emptyset)	C Min. value = (A+B)/2

Dial adjustment

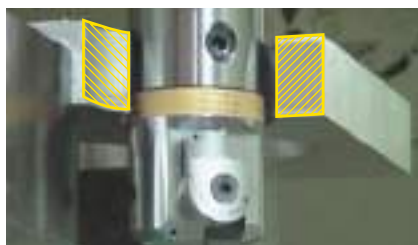
Fine adjustment : 2 μ m boring range

Can be adjusted at a rate of 2 μ m by using the main scale and vernier scale

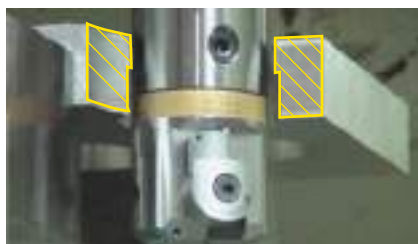


Back boring machining

Before machining



After machining



Convertible for machining direction

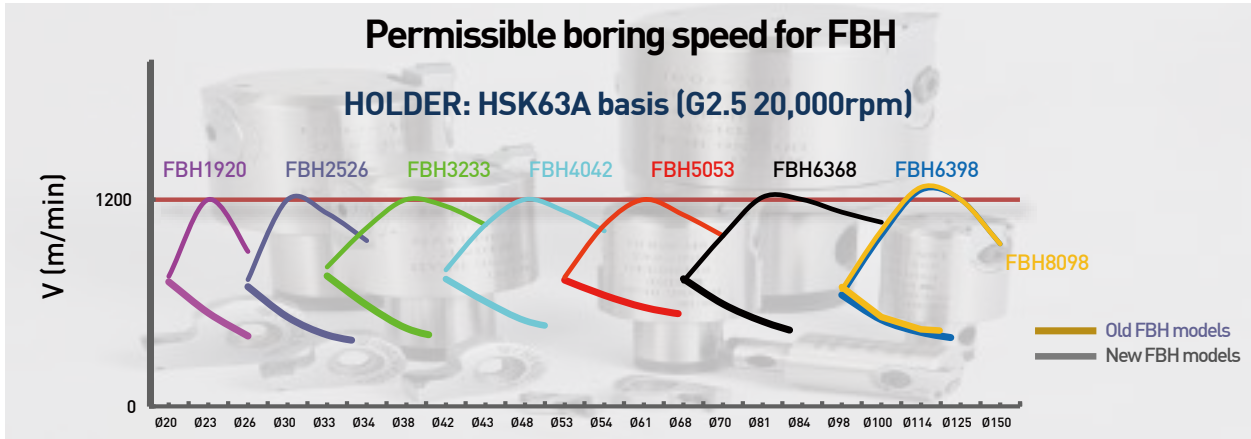


In case of boring machining

In case of back boring machining

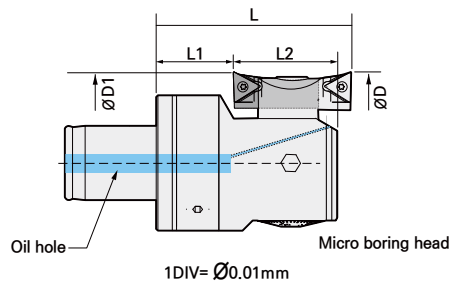
* Boring direction can be easily shifted simply by changing the bite direction

Test Results



Chuck	Model No. V(m/min)	FBH2526B	FBH2526N
HSK63A-MD25F-60	Difference in surface roughness	732 (6,861rpm)	
		- Constant and regular cycles are shown on the graph - Indicates stable boring work at high cutting speed	- Irregular cycles shown on the graph - Indicates unstable boring work at high cutting speed

Boring range



Model No.	Boring Range(Ø)			Backboring Range(Ø)			
	Min.	Max.	L	Min.	Max.	L1	L2
FBH1920B	20	26(30)	35.3	29	30	13.1	18.6
FBH2526B	26	34(40)	40.9	36	40	15.1	21.9
FBH3233B	33	43(50)	40.9	38	43(50)	13.1	24.9
FBH4042B	42	54(62)	50.4	48	54(62)	15.2	31.4
FBH5053B	53	70(82)	58.4	58	70(82)	15.7	38.4
FBH6368B	68	100(122)	80.6	78	100(122)	27.4	48.6
FBH6398B	98	150(172)	100.6	106	150(172)	47.4	48.6
FBH8098B	98	150(172)	100.6	106	150(172)	47.4	48.6



BT-FBH/B

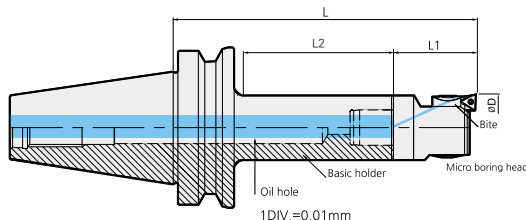
Micro boring bar (balanced type)



MAS 403-BT
G6.3
C
20
172

Shank G value Coolant System MIN Range MAX Range Boring

Fig.1



Head.1

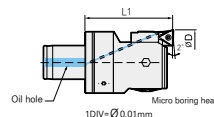
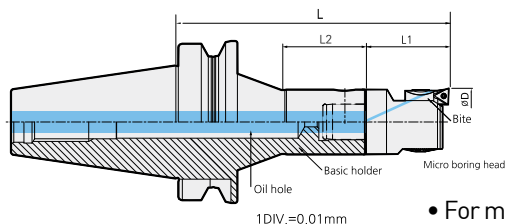


Fig.2



C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

- For more information on the product features, see **134p**.
- For more information on MD arbor, see **126p**.
- For more information on FBB bite, see **143p**.
- For more information on the related parts, see **142p**.

	Model No.			Boring range(ØD)		L	L1	L2	ØD	ØD1	kg (Head weight)	kg (Head package weight)	Fig
	Head model no.	Bite model no.	Arbor Model No.	Min.	Max.								
BT30	FBH1920B	FBB20N-□-□□	BT30-MD19F-70	20(24)	26(30)	105.2	35.2	45	19	11	0.2	0.2	1
	FBH2526B	FBB26N-□-□□	BT30-MD25F-90	26(32)	34(40)	131	41	63	25	14	0.2	0.2	1
	FBH3233B	FBB33N-□-□□	BT30-MD32F-80	33(40)	43(50)	121	41	55	32	18	0.3	0.3	1
	FBH4042B	FBB42N-□-□□	BT30-MD40F-45	42(50)	54(62)	95.5	50.5	22	40	22	0.5	0.5	1
	FBH4042B	FBB42N-□-□□	BT30-MD40F-60	42(50)	54(62)	110.5	50.5	36	40	22	0.5	0.5	1
	FBH4042B	FBB42N-□-□□	BT30-MD40F-80	42(50)	54(62)	130.5	50.5	56	40	22	0.5	0.5	1
	FBH5053B	FBB53N-□-□□	BT30-MD50F-70	53(65)	70(82)	128.4	58.5	48	50	28	0.8	0.9	1
BT40	FBH1920B	FBB20N-□-□□	BT40-MD19F-70	20(24)	26(30)	105.4	35.2	40	19	11	0.2	0.2	1
	FBH2526B	FBB26N-□-□□	BT40-MD25F-95	26(32)	34(40)	135.9	41	63	25	14	0.2	0.2	1
	FBH2526B	FBB26N-□-□□	BT40-MD25F-105R	26(32)	34(40)	146	41	40	25	14	0.2	0.2	2
	FBH3233B	FBB33N-□-□□	BT40-MD32F-100	33(40)	43(50)	140.9	41	70	32	18	0.3	0.3	1
	FBH3233B	FBB33N-□-□□	BT40-MD32F-115R	33(40)	43(50)	156	41	45	32	18	0.3	0.3	2
	FBH4042B	FBB42N-□-□□	BT40-MD40F-60	42(50)	54(62)	165.5	50.5	31	40	22	0.5	0.5	1
	FBH4042B	FBB42N-□-□□	BT40-MD40F-110R	42(50)	54(62)	160.5	50.5	60	40	22	0.5	0.5	2
	FBH4042B	FBB42N-□-□□	BT40-MD40F-115	42(50)	54(62)	165.5	50.5	83	40	22	0.5	0.5	1
	FBH5053B	FBB53N-□-□□	BT40-MD50F-105	53(65)	70(82)	163.4	58.5	73	50	28	0.8	0.9	1
	FBH5053B	FBB53N-□-□□	BT40-MD63F-64	53(65)	70(82)	122.5	58.5	37	50	28	0.8	0.9	1
	FBH6368B	FBB68N-□-□□	BT40-MD63F-110	68(90)	100(122)	190.6	80.6	83	63	36	2.1	2.3	1
	FBH6398B	FBB68N-□-□□	BT40-MD63F-135	98(120)	150(172)	235.6	100.6	108	63	36	3.6	3.8	1
	FBH8098B	FBB68N-□-□□	BT40-MD80F-100	98(120)	150(172)	200.6	100.6	73	80	45	4.8	5.1	1

- In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.
- FBB bite is largely divided into general-type FBB□□N and extended-type (back boring) FBB□□N-1 and is available as FBB□□N-□-C09, FBB□□N-□-T11 depending on the insert.

Bite	Applicable insert
FBB□□N, FBB□□N-1	TPGT TPGW0802□□L
FBB□□N-□-C	CCMT, CCGT0602□□L
FBB□□N-□-C09	CCMT, CCGT09T3□□L
FBB□□N-□-T11	TPGT1103□□L



BT-FBH/B

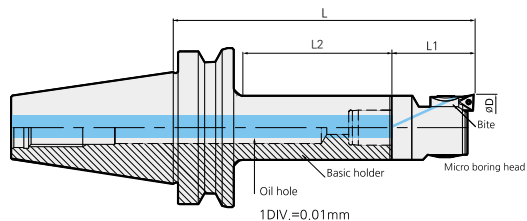
Micro boring bar (balanced type)



MAS 403-BT
G6.3
C
20
172

Shank G value Coolant System MIN Range MAX Range Boring

Fig.1



Head.1

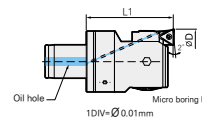
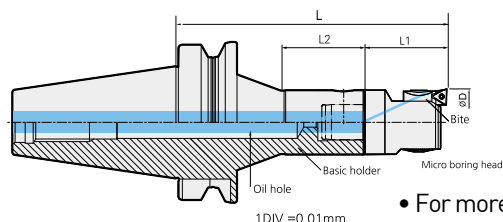


Fig.2



- For more information on the product features, see **134p**
- For more information on MD arbor, see **126p**
- For more information on FBB bite, see **143p**
- For more information on the related parts, see **142p**

C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

	Model No.			Boring range(ØD)		L	L1	L2	ØD	ØD1	kg (Head weight)	kg (Head package weight)	Fig
	Head model no.	Bite model no.	Arbor Model No.	Min.	Max.								
BT50	FBH1920B	FBB20N-□-□□	BT50-MD19F-85	20(24)	26(30)	120.2	35.2	44	19	11	0.2	0.2	1
	FBH2526B	FBB26N-□-□□	BT50-MD25F-105	26(32)	34(40)	146	41	62	25	14	0.2	0.2	1
	FBH2526B	FBB26N-□-□□	BT50-MD25F-120R	26(32)	34(40)	161	41	40	25	14	0.2	0.2	2
	FBH3233B	FBB33N-□-□□	BT50-MD32F-110	33(40)	43(50)	151	41	67	32	18	0.3	0.3	1
	FBH3233B	FBB33N-□-□□	BT50-MD32F-115R	33(40)	43(50)	156	41	45	32	18	0.3	0.3	2
	FBH3233B	FBB33N-□-□□	BT50-MD32F-235R	33(40)	43(50)	276	41	115	32	18	0.3	0.3	2
	FBH4042B	FBB42N-□-□□	BT50-MD40F-60	42(50)	54(62)	110.5	50.5	22	32	18	0.5	0.5	1
	FBH4042B	FBB42N-□-□□	BT50-MD40F-195	42(50)	54(62)	245.5	50.5	152	40	22	0.5	0.5	1
	FBH4042B	FBB42N-□-□□	BT50-MD40F-230R	42(50)	54(62)	280.5	50.5	180	40	22	0.5	0.5	2
	FBH5053B	FBB53N-□-□□	BT50-MD50F-125	53(65)	70(82)	183.5	58.5	82	40	22	0.8	0.9	1
	FBH5053B	FBB53N-□-□□	BT50-MD50F-225	53(65)	70(82)	283.5	58.5	182	50	28	0.8	0.9	1
	FBH5053B	FBB53N-□-□□	BT50-MD50F-205R	53(65)	70(82)	263.5	58.5	81	50	28	0.8	0.9	2
	FBH6368B	FBB68N-□-□□	BT50-MD63F-75	68(90)	100(122)	145.6	80.6	35	63	36	2.1	2.3	1
	FBH6368B	FBB68N-□-□□	BT50-MD63F-130	68(90)	100(122)	200.6	80.6	87	63	36	2.1	2.3	1
	FBH6368B	FBB68N-□-□□	BT50-MD63F-195	68(90)	100(122)	310.6	80.6	152	63	36	2.1	2.3	1
	FBH6368B	FBB68N-□-□□	BT50-MD63F-230	68(90)	100(122)	265.6	265.6	187	63	36	2.1	2.3	1
	FBH6398B	FBB68N-□-□□	BT50-MD63F-75	98(120)	150(172)	175.6	100.6	35	63	36	3.6	3.8	1
	FBH6398B	FBB68N-□-□□	BT50-MD63F-130	98(120)	150(172)	230.6	100.6	87	63	36	3.6	3.8	1
	FBH6398B	FBB68N-□-□□	BT50-MD63F-195	98(120)	150(172)	295.6	100.6	152	63	36	3.6	3.8	1
	FBH6398B	FBB68N-□-□□	BT50-MD63F-230	98(120)	150(172)	330.6	100.6	187	63	36	3.6	3.8	1
FBH8098B	FBB68N-□-□□	BT50-MD80F-75	98(120)	150(172)	175.6	100.6	36	80	45	4.8	5.1	1	
FBH8098B	FBB68N-□-□□	BT50-MD80F-110	98(120)	150(172)	215.6	100.6	69	80	45	4.8	5.1	1	
FBH8098B	FBB68N-□-□□	BT50-MD80F-175	98(120)	150(172)	275.6	100.6	134	80	45	4.8	5.1	1	

- In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.
- FBB bite is largely divided into general-type FBB□□N and extended-type (back boring) FBB□□N-1 and is available as FBB□□N-□-C09, FBB□□N-□-T11 depending on the insert.

Bite	Applicable insert
FBB□□N, FBB□□N-1	TPGT TPGW0802□□L
FBB□□N-□-C	CCMT, CCGT0602□□L
FBB□□N-□-C09	CCMT, CCGT09T3□□L
FBB□□N-□-T11	TPGT1103□□L

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

TAUMAX

OTHER

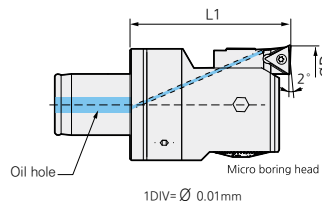
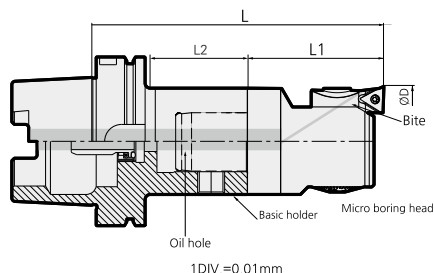


HSK-FBH/B

Micro boring bar (balanced type)



DIN 69893-1	G6.3	C	20	172	
Shank	G value	Coolant System	MIN Range	MAX Range	Boring



- For more information on the product features, see **134p**
- For more information on MD arbor, see **126p**
- For more information on FBB bite, see **143p**
- For more information on the related parts, see **142p**

C Internal coolant system is optional.

※ **Red** : Main component **Blue** : For separate purchase

HSK63	Model No.			Boring range(ØD)		L	L1	L2	ØD	ØD1	kg (Head weight)	kg (Head package weight)	Fig
	Head model no.	Bite model no.	Arbor Model No.	Min.	Max.								
	FBH1920B	FBB20N-□-□□	HSK63A-MD19F-60	20(24)	26(30)								
FBH2526B	FBB26N-□-□□	HSK63A-MD25F-60	26(32)	34(40)	101	41	31	25	14	0.2	0.2	1	
FBH3233B	FBB33N-□-□□	HSK63A-MD32F-65	33(40)	43(50)	106	41	36	32	18	0.3	0.3	1	
FBH4042B	FBB42N-□-□□	HSK63A-MD40F-70	42(50)	54(62)	120.5	50.5	41	40	22	0.5	0.5	1	
FBH5053B	FBB53N-□-□□	HSK63A-MD50F-85	53(65)	70(82)	143.5	58.5	58	50	28	0.8	0.9	1	
FBH6368B	FBB68N-□-□□	HSK63A-MD63F-95	68(90)	100(122)	175.6	80.6	69	63	36	2.1	2.3	1	
FBH6398B	FBB68N-□-□□	HSK63A-MD63F-95	98(120)	150(172)	195.6	100.6	69	63	36	3.6	3.8	1	

- In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.
- FBB bite is largely divided into general-type FBB□□N and extended-type (back boring) FBB□□N-1 and is available as FBB□□N-□-C09, FBB□□N-□-T11 depending on the insert.

Bite	Applicable insert
FBB□□N, FBB□□N-1	TPGT TPGW0802□□L
FBB□□N-□-C	CCMT, CCGT0602□□L
FBB□□N-□-C09	CCMT, CCGT09T3□□L
FBB□□N-□-T11	TPGT1103□□L

For separate purchase

Internal coolant system	
-------------------------	--

Classification by shank	
HSK50	HSK50A-CNS
HSK63	HSK63A-CNS
HSK100	HSK100A-CNS



SK-FBH/B

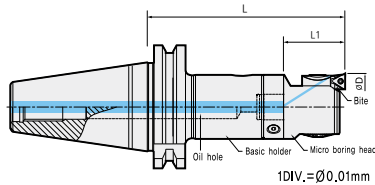
Micro boring bar (balanced type)



DIN69871
-1A/B
G6.3
C
26
172
Boring

Shank G value Coolant System MIN Range MAX Range Boring

Fig.1



Head.1

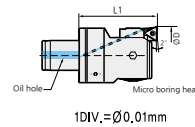


Fig.2

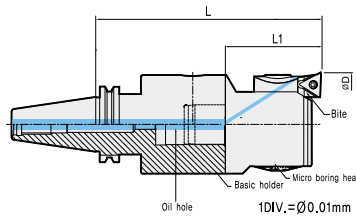
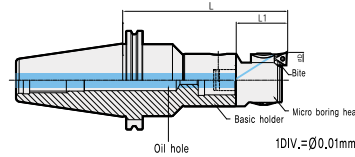


Fig.3



C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

- For more information on the product features, see 134p
- For more information on MD arbor, see 126p
- For more information on FBB bite, see 143p
- For more information on the related parts, see 142p

	Model No.			Boring range(ØD)		L	L1	L2	ØD	ØD1	kg (Head weight)	kg (Head package weight)	Fig
	Head model no.	Bite model no.	Arbor Model No.	Min.	Max.								
SK40	FBH2526B	FBB26N-□-□□	SK40-MD25F-80R	26(32)	34(40)	121	41	22	25	14	0.2	0.2	3
	FBH3233B	FBB33N-□-□□	SK40-MD32F-115R	33(40)	43(50)	156	41	36	32	18	0.3	0.3	3
	FBH4042B	FBB42N-□-□□	SK40-MD40F-100	42(50)	54(62)	150.5	50.5	80	40	22	0.5	0.5	1
	FBH5053B	FBB53N-□-□□	SK40-MD50F-100	53(65)	70(82)	158.5	58.5	80	50	28	0.8	0.9	1
	FBH6368B	FBB68N-□-□□	SK40-MD63F-70	68(90)	100(122)	150.6	80.6	50	63	36	2.1	2.3	2
	FBH6398B	FBB68N-□-□□	SK40-MD63F-70	98(120)	150(172)	170.6	100.6	50	63	36	3.6	3.8	2
SK50	FBH2526B	FBB26N-□-□□	SK50-MD25F-105R	26(32)	34(40)	146	41	22	25	14	0.2	0.2	3
	FBH3233B	FBB33N-□-□□	SK50-MD32F-110	33(40)	43(50)	151	41	87	32	18	0.3	0.3	1
	FBH4042B	FBB42N-□-□□	SK50-MD40F-145	42(50)	54(62)	195.5	50.5	120	40	22	0.5	0.5	1
	FBH5053B	FBB53N-□-□□	SK50-MD50F-240R	53(65)	70(82)	298.5	58.5	125	50	28	0.8	0.9	3
	FBH6368B	FBB68N-□-□□	SK50-MD63F-130	68(90)	100(122)	210.6	80.6	107	63	36	2.1	2.3	1
	FBH6398B	FBB68N-□-□□	SK50-MD63F-130	98(120)	150(172)	230.6	100.6	107	63	36	3.6	3.8	1
	FBH8098B	FBB68N-□-□□	SK50-MD80F-150	98(120)	150(172)	250.6	100.6	130	80	45	4.8	5.1	1

- In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.
- FBB bite is largely divided into general-type FBB□□N and extended-type (back boring) FBB□□N-1 and is available as FBB□□N-□-C09, FBB□□N-□-T11 depending on the insert.

Bite	Applicable insert
FBB□□N, FBB□□N-1	TPGT TPGW0802□□L
FBB□□N-□-C	CCMT, CCGT0602□□L
FBB□□N-□-C09	CCMT, CCGT09T3□□L
FBB□□N-□-T11	TPGT1103□□L



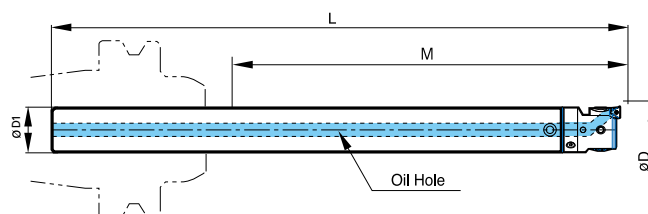
S-FBH/B

Micro boring bar (balanced type)



CARBIDE
C
20
43

Shank Coolant System MIN Range MAX Range Boring



C Internal coolant system installed.

*S□□W : Cemented carbide shank

*S□□ : Steel shank

• For more information on the product features, see **134p**

• For more information on FBB bite, see **143p**

• For more information on the related parts, see **142p**

Model No.	Boring range		L	ØD1	M	Main component			kg (Head weight)	kg (Head package weight)
	Min.	Max.				Shank	Boring head	Bite		
S19W-FBH20B-120	20	26	192.35	19	120	S19W-MD19F-157	FBH1920B	FBB20N	0.6	0.7
S19W-FBH20B-140	20	26	212.35	19	140	S19W-MD19F-177	FBH1920B	FBB20N	0.7	0.8
S19W-FBH20B-160	20	26	232.35	19	160	S19W-MD19F-197	FBH1920B	FBB20N	0.8	0.9
S25W-FBH26B-150	26	34	238.35	25	150	S25W-MD25F-197.5	FBH2526B	FBB26N	1.4	1.5
S25W-FBH26B-175	26	34	263.35	25	175	S25W-MD25F-222.5	FBH2526B	FBB26N	1.6	1.7
S25W-FBH26B-200	26	34	288.35	25	200	S25W-MD25F-247.5	FBH2526B	FBB26N	1.8	1.9
S32W-FBH33B-180	33	43	279.9	32	180	S32W-MD32F-239	FBH3233B	FBB33N	2.7	2.8
S32W-FBH33B-240	33	43	339.9	32	240	S32W-MD32F-299	FBH3233B	FBB33N	3.4	3.5
S19-FBH20B-40	20	26	112.35	19	40	S19-MD19F-77	FBH1920B	FBB20N	0.2	0.3
S19-FBH20B-80	20	26	152.35	19	80	S19-MD19F-117	FBH1920B	FBB20N	0.2	0.3
S25-FBH26B-50	26	34	138.35	25	50	S25-MD25F-97.5	FBH2526B	FBB26N	0.4	0.5
S25-FBH26B-100	26	34	188.35	25	100	S25-MD25F-147.5	FBH2526B	FBB26N	0.6	0.7
S32-FBH33B-90	33	43	189.9	32	90	S32-MD32F-149	FBH3233B	FBB33N	1.1	1.2
S32-FBH33B-120	33	43	219.9	32	120	S32-MD32F-179	FBH3233B	FBB33N	1.2	1.3

• FBB bite is largely divided into general-type FBB□□N and extended-type (back boring) FBB□□N-1 and is available as FBB□□N-□-C09, FBB□□N-□-T11 depending on the insert.

Bite	Applicable insert
FBB□□N, FBB□□N-1	TPGT TPGW0802□□L
FBB□□N-□-C	CCMT, CCGT0602□□L
FBB□□N-□-C09	CCMT, CCGT09T3□□L
FBB□□N-□-T11	TPGT1103□□L

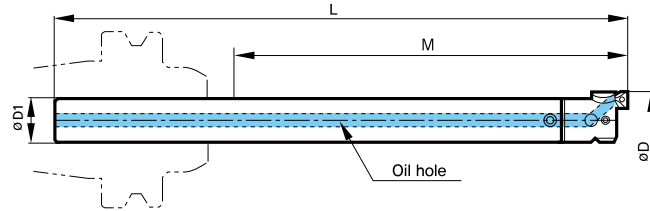


S-FBH

Small micro boring bar with carbide/steel

CARBIDE
C
15
22

Shank Coolant System MIN Range MAX Range Boring



C Internal coolant system installed.

* $\square\square W$: Cemented carbide shank

* $\square\square$: Steel shank

• For more information on the product features, see **134p**

• For more information on FBB bite, see **143p**

• For more information on the related parts, see **142p**

CEMENTED CARBIDE	Model No.	Boring range		L	$\phi D1$	M	Detailed model no. (Main component)			kg (Head weight)	kg (Head package weight)
		Min.	Max.				Shank	Boring head	Bite		
	S14W-FBH15-85	15	18	155	14	85	S14W-M6-123	FBH15	FBB15-C	0.3	0.4
	S14W-FBH15-110	15	18	180	14	110	S14W-M6-148	FBH15	FBB15-C	0.3	0.4
	S16W-FBH18-95	18	22	165	16	95	S16W-M8-128	FBH18	FBB15-C	0.4	0.5
	S16W-FBH18-125	18	22	195	16	125	S16W-M8-158	FBH18	FBB15-C	0.5	0.6
	S14-FBH15-40	15	18	110	14	40	S14-M6-78	FBH15	FBB15-C	0.1	0.2
	S16-FBH18-45	18	22	115	16	45	S16-M8-78	FBH18	FBB15-C	0.1	0.2

• FBB bite is largely divided into general-type FBB $\square\square$ N and extended-type (back boring) FBB $\square\square$ N-1 and is available as FBB $\square\square$ N- \square -C09 and FBB $\square\square$ N- \square -T11 depending on the insert.

Bite	Applicable insert
FBB $\square\square$ N, FBB $\square\square$ N-1	TPGT TPGW0802 $\square\square$ L
FBB $\square\square$ N- \square -C	CCMT, CCGT0602 $\square\square$ L
FBB $\square\square$ N- \square -C09	CCMT, CCGT09T3 $\square\square$ L
FBB $\square\square$ N- \square -T11	TPGT1103 $\square\square$ L



FBH SPARE PART

Micro boring related parts

Spare Part

Main components			
TYPE(FBH)	LOCK SEREW	FBB	CLAMP SCREW
			
FBH15	BT02503	FBB15-C	BFTX02505N
FBH18	BT02503	FBB15-C	BFTX02505N



FBH/B SPARE PART

Micro boring balanced type related parts



Main components

Spare Part	Main components		
TYPE(FBH/B)	LOCK SCREW	CLAMP SCREW	Wrench
			
FBH1920B	BTF0404	BXC0304	LW-2
FBH2526B	BTF0505	BXC0405	LW-2.5
FBH3233B	BTF0606	BXC0506	LW-3
FBH4042B	BTF0808	BXC0610	LW-4
FBH5053B	BTF0812	BXC0610	LW-4
FBH6368B	BTF1016	BXC0810	LW-5
FBH6398B	BTF1012	BXC0810	LW-5
FBH8098B	BTF1014	BXC0810	LW-5

1:1 Chat



FBB BITE

Boring bite



NAMING

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

Spare Part

Model No.	Boring range	Insert	Insert screw	Clamp bolt
FBB15-C	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	CCMT0602□□,CCGT0602□□	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

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

TAUMAX

OTHER



DBCA NEW

New balance cut tool



C 28 136

Coolant System MIN Range MAX Range Boring



Features

- Applied adjustment function simultaneously in Bi/Uni-direction of Cartridge
- Improves the rigidity of cutting by applying Cover for rotating type
- Increased machining area versus conventional own products
- Improved capacity to evacuate chips by unique design of Helical Type Head
- Boring range : $\varnothing 28 - \varnothing 136$

NAMING	DBCA	32	33	S	32
	New balance cut tool	MD Arbor Size	Min. boring dia.	Straight type	H: Helical type, Non: Straight type

Main features

Helical Type



- Improved capacity to discharge chips from clogged and deep holes
- Minimized damage to tools and insert due to chip clogging

Extended head length	Deep hole machining implemented
Helical Type	Improved capacity to discharge chips from holes

Boring area optimization

Direction of spraying cutting oil

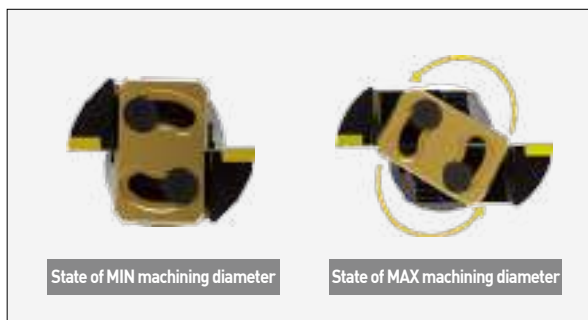


- Max. diameter expanded owing to reinforced rigidity
- Boring range expanded per model no. versus conventional boring range of DINE

Coolant Hole (Direct spray to cutting edge)	<ul style="list-style-type: none"> • Improved capacity to discharge chips • Improved capacity of machining
---	--

Effect of improved rigidity for Cartridge by Cover

Clamps the top of the cartridge stably, minimizing the vibration of tools and improving the roughness of the working surface





DBCA NEW

New balance cut tool



Comparison with competitors

Verifying of less vibration due to improved rigidity and smooth chip discharge

→ Superior performance compared to competitors

MANUFACTURER	L/D	SURFACE ROUGHNESS (RA)	SPECIAL NOTES	MACHINED SURFACE
Company A	5D	3.82	Vibration occurred	
Company B	5D	2.46	Vibration occurred Chips tangled	
DINE took over	5D	2.19	Well-machined surface No chip tangled	

New machining range versus old machining range of DINE

OLD TYPE



NEW TYPE



Designation	Boring Range ØD	
	min	max
DBC2528S	28	35
DBC3235S	35	46
DBC4046S	46	58
DBC5058S	58	74
DBC6347S	74	94
DBC8094S	94	120

Designation	Boring Range ØD	
	min	max
DBCA2528S-H	28	38
DBCA3238S-H	38	54
DBCA5054S-H	54	74
DBCA6374S-H	74	100
DBCA80100S-H	100	136

Detailed Specifications

	Designation	Cartridge (Standard)	Step Cartridge	Step Cartridge Bite	
				CC Type	WC Type
	DBCA2528S-□	BCC28-EC	BCC28SB	SBB28-CC	SBB28-WC
	DBCA3238S-□	BCC38-EC	BCC38SB		
	DBCA5054S-□	BCC54-EC	BCC54SB	SBB54-CC	SBB54-WC
	DBCA6374S-□	BCC74-EC	BCC74SB		
	DBCA80100S-□	BCC100-EC	BCC100SB	SBB74-CC	SBB74-WC

Comparison with competitors

MACHINING CONDITIONS	Vc(m/min)	f(mm/rev)	ap(mm)	MATERIAL	ITEM	DEPTH OF HALL
	200	0.08	2	S45C	Penetration hall	30

MANUFACTURER	Insert	GAUGE LINE (HEAD+SHANK)	BORING DIAMETER	L/D	SURFACE ROUGHNESS (RA)	SPECIAL NOTES	MACHINED SURFACE	TOOL TOP	TOOL SIDE
Competitor A	SCMT09T0304	164	Ø35	4.68	3.82	Vibration occurred			
Competitor B	CCMT080204	180	Ø35	5.14	2.46	Vibration occurred Chips tangled			
DINE	CCMT060204	175	Ø35	5	2.19	Well-machined surface No chip tangled			



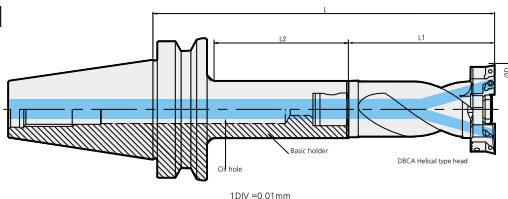
BT-DBC/A (Helical Type)

New balance cut tool(Helical Type)



MAS 403-BT	C	28	136	
Shank	Coolant System	MIN Range	MAX Range	Boring

Fig.1



Head.1

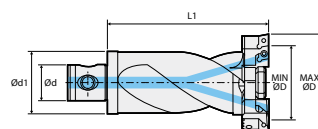
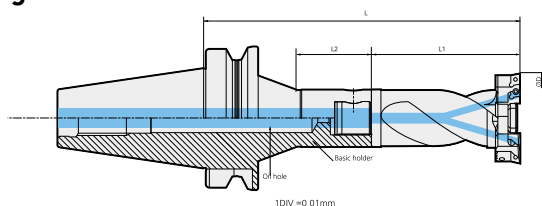


Fig.2



- For more information on the product features, see **144p**
- For more information on MD arbor, see **126p**
- For more information on the applicable insert, see **159p**
- For more information on the related parts, see **158p**

C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	fig	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.								
BT30	DBCA2528S-H	BT30-MD25F-90	28	38	193	103	63	14	25	1	0.3	0.3
	DBCA3238S-H	BT30-MD32F-80	38	54	190	110	55	18	32	1	0.5	0.6
	DBCA5054S-H	BT30-MD50F-70	54	74	215	145	48	28	50	1	1.8	1.9
BT40	DBCA2528S-H	BT40-MD25F-95	28	38	198	103	63	14	25	1	0.3	0.3
	DBCA2528S-H	BT40-MD25F-105R	28	38	208	103	40	14	25	2	0.3	0.3
	DBCA3238S-H	BT40-MD32F-100	38	54	210	110	70	18	32	1	0.5	0.6
	DBCA3238S-H	BT40-MD32F-115R	38	54	225	110	45	18	32	2	0.5	0.6
	DBCA5054S-H	BT40-MD50F-105	54	74	250	145	73	28	50	1	1.8	1.9
	DBCA6374S-H	BT40-MD63F-64	74	100	244	180	37	36	63	1	3.3	3.5
	DBCA6374S-H	BT40-MD63F-110	74	100	290	180	83	36	63	1	3.3	3.5
	DBCA6374S-H	BT40-MD63F-135	74	100	315	180	108	36	63	1	3.3	3.5
	DBCA80100S-H	BT40-MD80F-100	100	136	315	215	73	45	80	1	7.3	7.6

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBCA2528S-H: CCMT0602□□
- DBCA3238S-H: CCMT0602□□
- DBCA5054S-H: CCMT09T3□□
- DBCA6374S-H: CCMT1204□□
- DBCA80100S-H: CCMT1204□□



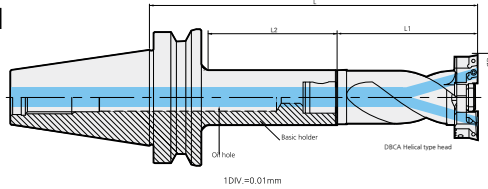
BT-DBC/A (Helical Type)

New balance cut tool(Helical Type)



MAS 403-BT
C
28
136
Boring

Fig.1



Head.1

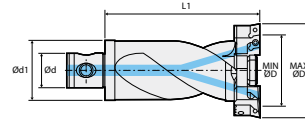
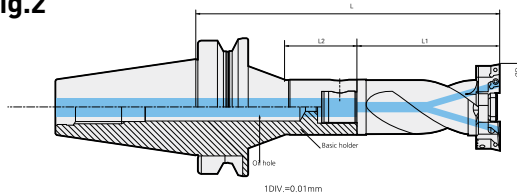


Fig.2



- For more information on the product features, see **144p**
- For more information on MD arbor, see **126p**
- For more information on the applicable insert, see **159p**
- For more information on the related parts, see **158p**

C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	fig	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.								
BT50	DBCA2528S-H	BT50-MD25F-105	28	38	208	103	62	14	25	1	0.3	0.3
	DBCA2528S-H	BT50-MD25F-120R	28	38	223	103	40	14	25	2	0.3	0.3
	DBCA3238S-H	BT50-MD32F-110	38	54	220	110	67	18	32	1	0.5	0.6
	DBCA3238S-H	BT50-MD32F-115R	38	54	225	110	45	18	32	2	0.5	0.6
	DBCA3238S-H	BT50-MD32F-235R	38	54	345	110	115	18	32	2	0.5	0.6
	DBCA5054S-H	BT50-MD50F-125	54	74	270	145	82	28	50	1	1.8	1.9
	DBCA5054S-H	BT50-MD50F-225	54	74	370	145	182	28	50	1	1.8	1.9
	DBCA5054S-H	BT50-MD50F-250R	54	74	395	145	81	28	50	2	1.8	1.9
	DBCA6374S-H	BT50-MD63F-75	74	100	255	180	35	36	63	1	3.3	3.5
	DBCA6374S-H	BT50-MD63F-130	74	100	280	180	87	36	63	1	3.3	3.5
	DBCA6374S-H	BT50-MD63F-195	74	100	375	180	152	36	63	1	3.3	3.5
	DBCA6374S-H	BT50-MD63F-230	74	100	410	180	187	36	63	1	3.3	3.5
	DBCA80100S-H	BT50-MD80F-75	100	136	290	215	36	45	80	1	7.3	7.6
	DBCA80100S-H	BT50-MD80F-110	100	136	325	215	69	45	80	1	7.3	7.6
	DBCA80100S-H	BT50-MD80F-175	100	136	390	215	134	45	80	1	7.3	7.6

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBCA2528S-H: CCMT0602□□
- DBCA3238S-H: CCMT0602□□
- DBCA5054S-H: CCMT09T3□□
- DBCA6374S-H: CCMT1204□□
- DBCA80100S-H: CCMT1204□□



HSK-DBC/A (Helical Type)

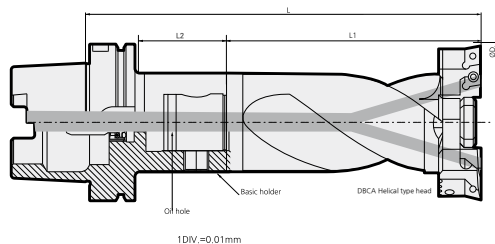
New balance cut tool(Helical Type)



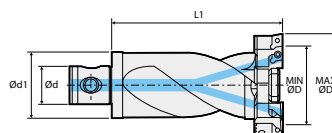
DIN 69893-1
C
38
100
Boring

Shank Coolant System MIN Range MAX Range Boring

Fig.1



Head.1



- For more information on the product features, see [144p](#)
 - For more information on MD arbor, see [126p](#)
- For more information on the applicable insert, see [159p](#)
 - For more information on the related parts, see [158p](#)

C Internal coolant system is optional.

※ Red : Main component Blue : For separate purchase

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.							
HSK63A	DBCA2528S-H	HSK63A-MD25F-60	38	54	163	103	31	14	25	0.3	0.3
	DBCA3238S-H	HSK63A-MD32F-65	38	54	175	110	36	18	32	0.5	0.6
	DBCA5054S-H	HSK63A-MD50F-85	54	74	230	145	58	28	50	1.8	1.9
	DBCA6374S-H	HSK63A-MD63F-95	74	100	275	180	69	45	80	3.3	3.5

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBCA2528S-H: CCMT0602□□
- DBCA3238S-H: CCMT0602□□
- DBCA5054S-H: CCMT09T3□□
- DBCA6374S-H: CCMT1204□□
- DBCA80100S-H: CCMT1204□□

For separate purchase

Internal coolant system

Classification by shank	
HSK50	HSK50A-CNS
HSK63	HSK63A-CNS
HSK100	HSK100A-CNS



SK-DBC/A (Helical Type)

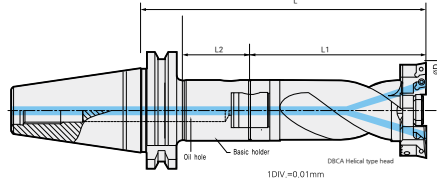
New balance cut tool(Helical Type)



DIN69871
-1A/B
C
Boring
38
136

Shank Coolant System Boring MIN Range MAX Range

Fig.1



Head.1

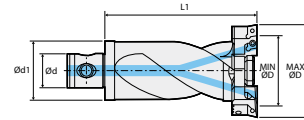


Fig.2

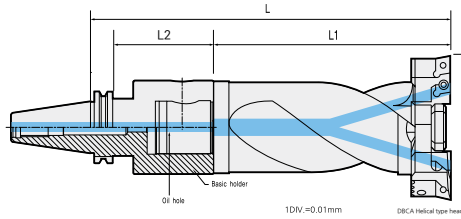
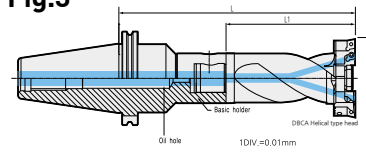


Fig.3



C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

- For more information on the product features, see **144p**
- For more information on MD arbor, see **126p**
- For more information on the applicable insert, see **159p**
- For more information on the related parts, see **158p**

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	Fig	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.								
SK40	DBCA2528S-H	SK40-MD25F-80R	38	54	183	103	22	14	25	3	0.3	0.3
	DBCA3238S-H	SK40-MD32F-115R	38	54	225	110	36	18	32	3	0.5	0.6
	DBCA5054S-H	SK40-MD50F-75	54	74	220	145	55	28	50	1	1.8	1.9
	DBCA5054S-H	SK40-MD50F-100	54	74	145	145	80	28	50	1	1.8	1.9
	DBCA6374S-H	SK40-MD63F-70	74	100	250	180	50	36	63	2	3.3	3.5
SK50	DBCA2528S-H	SK50-MD25F-80R	28	38	183	103	22	14	25	3	0.3	0.3
	DBCA2528S-H	SK50-MD25F-105R	28	38	208	103	22	14	25	3	0.3	0.3
	DBCA3238S-H	SK50-MD32F-110	38	54	220	110	87	18	32	1	0.5	0.6
	DBCA3238S-H	SK50-MD32F-110R	38	54	220	110	36	18	32	3	0.5	0.6
	DBCA5054S-H	SK50-MD50F-125R	54	74	270	145	60	28	50	3	1.8	1.9
	DBCA5054S-H	SK50-MD50F-240R	54	74	385	145	125	28	50	3	1.8	1.9
	DBCA6374S-H	SK50-MD63F-75	74	100	255	180	52	36	63	1	3.3	3.5
	DBCA6374S-H	SK50-MD63F-130	74	100	310	180	107	36	63	1	3.3	3.5
	DBCA6374S-H	SK50-MD63F-230R	74	100	410	180	149	36	63	3	3.3	3.5
	DBCA80100S-H	SK50-MD80F-95	100	136	310	215	75	45	80	1	7.3	7.6
	DBCA80100S-H	SK50-MD80F-150	100	136	365	215	130	45	80	1	7.3	7.6

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBCA2528S-H: CCMT0602□□
- DBCA3238S-H: CCMT0602□□
- DBCA5054S-H: CCMT09T3□□
- DBCA6374S-H: CCMT1204□□
- DBCA80100S-H: CCMT1204□□

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

TAUMAX

OTHER



BT-DBC/A (Straight Type)

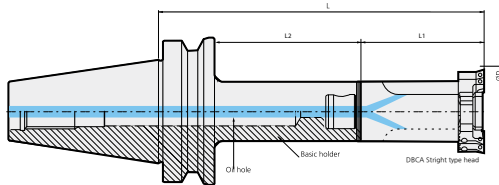
New balance cut tool (straight Type)



MAS 403-BT
C
28
136
Boring

Shank Coolant System MIN Range MAX Range Boring

Fig.1



Head

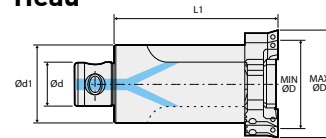
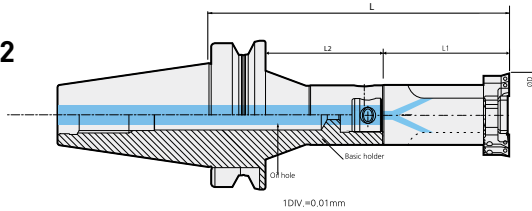


Fig.2



- For more information on the product features, see [144p](#)
- For more information on MD arbor, see [126p](#)
- For more information on the applicable insert, see [159p](#)
- For more information on the related parts, see [158p](#)

C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	fig	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.								
BT30	DBCA2528S	BT30-MD25F-90	28	38	193	103	63	14	25	1	0.2	0.2
	DBCA3238S	BT30-MD32F-80	38	54	190	110	55	18	32	1	0.4	0.4
	DBCA5054S	BT30-MD50F-70	54	74	215	145	48	28	50	1	1.1	1.1
BT40	DBCA2528S	BT40-MD25F-95	28	38	198	103	63	14	25	1	0.2	0.2
	DBCA2528S	BT40-MD25F-105R	28	38	208	103	40	14	25	2	0.2	0.2
	DBCA3238S	BT40-MD32F-100	38	54	210	110	70	18	32	1	0.4	0.4
	DBCA3238S	BT40-MD32F-115R	38	54	225	110	45	18	32	2	0.4	0.4
	DBCA5054S	BT40-MD50F-105	54	74	205	145	73	28	50	1	1.1	1.1
	DBCA6374S	BT40-MD63F-64	74	100	244	180	37	36	63	1	1.9	2.1
	DBCA6374S	BT40-MD63F-135	74	100	315	180	83	36	63	1	1.9	2.1
	DBCA6374S	BT40-MD80F-100	74	100	280	180	108	36	63	1	1.9	2.1
	DBCA80100S	BT40-MD80F-100	100	136	315	215	73	45	80	1	3.7	3.9

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBCA2528S: CCMT0602□□
- DBCA3238S: CCMT0602□□
- DBCA5054S: CCMT09T3□□
- DBCA6374S: CCMT1204□□
- DBCA80100S: CCMT1204□□



BT-DBC/A (Straight Type)

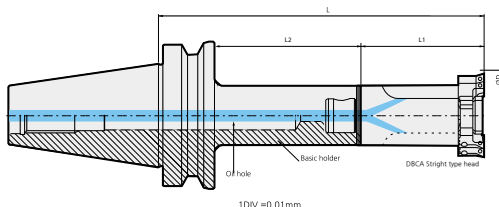
New balance cut tool(straight Type)



MAS 403-BT
C
28
136
Boring

Shank Coolant System MIN Range MAX Range Boring

Fig.1



Head

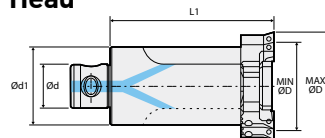
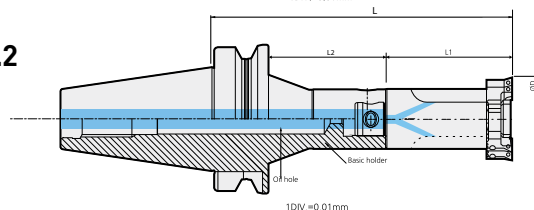


Fig.2



- For more information on the product features, see **144p**
- For more information on MD arbor, see **126p**
- For more information on the applicable insert, see **159p**
- For more information on the related parts, see **158p**

C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	fig	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.								
BT50	DBCA2528S	BT50-MD25F-105	28	38	208	103	62	14	25	1	0.2	0.2
	DBCA2528S	BT50-MD25F-120R	28	38	223	103	40	14	25	2	0.2	0.2
	DBCA3238S	BT50-MD32F-110	38	54	220	110	67	18	32	1	0.4	0.4
	DBCA3238S	BT50-MD32F-115R	38	54	225	110	45	18	32	2	0.4	0.4
	DBCA3238S	BT50-MD32F-235R	38	54	345	110	115	18	32	2	0.4	0.4
	DBCA5054S	BT50-MD50F-125	54	74	270	145	82	28	50	1	1.1	1.1
	DBCA5054S	BT50-MD50F-225	54	74	370	145	182	28	50	1	1.1	1.1
	DBCA5054S	BT50-MD50F-250R	54	74	395	145	81	28	50	2	1.1	1.1
	DBCA6374S	BT50-MD63F-75	74	100	255	180	35	36	63	1	1.9	2.1
	DBCA6374S	BT50-MD63F-130	74	100	310	180	87	36	63	1	1.9	2.1
	DBCA6374S	BT50-MD63F-195	74	100	375	180	152	36	63	1	1.9	2.1
	DBCA6374S	BT50-MD63F-230	74	100	410	180	187	36	63	1	1.9	2.1
	DBCA80100S	BT50-MD80F-75	100	136	290	215	36	45	80	1	3.7	3.9
	DBCA80100S	BT50-MD80F-110	100	136	325	215	69	45	80	1	3.7	3.9
DBCA80100S	BT50-MD80F-175	100	136	390	215	134	45	80	1	3.7	3.9	

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBCA2528S: CCMT0602□□
- DBCA3238S: CCMT0602□□
- DBCA5054S: CCMT09T3□□
- DBCA6374S: CCMT1204□□
- DBCA80100S: CCMT1204□□



HSK-DBC/A (Straight Type)

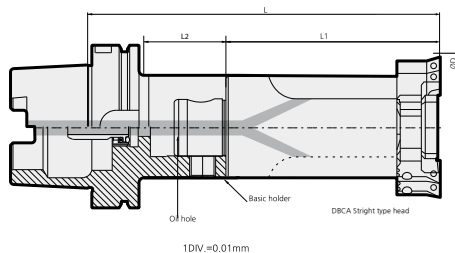
New balance cut tool (straight Type)



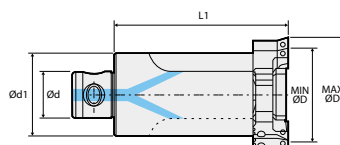
DIN 69893-1
C
38
100

Shank Coolant System MIN Range MAX Range Boring

Fig.1



Head.1



- For more information on the product features, see **144p**.
 - For more information on MD arbor, see **126p**.
- For more information on the applicable insert, see **159p**.
 - For more information on the related parts, see **158p**.

C Internal coolant system is optional.

※ **Red** : Main component **Blue** : For separate purchase

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.							
HSK63A	DBCA2528S	HSK63A-MD25F-60	38	54	122	62	31	14	25	0.3	0.3
	DBCA3238S	HSK63A-MD32F-65	38	54	134.5	69.5	36	18	32	0.5	0.6
	DBCA5054S	HSK63A-MD50F-85	54	74	179	94	58	28	50	1.8	1.9
	DBCA6374S	HSK63A-MD63F-95	74	100	206.5	106.5	69	45	80	3.3	3.5

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBCA2528S: CCMT0602□□
- DBCA3238S: CCMT0602□□
- DBCA5054S: CCMT09T3□□
- DBCA6374S: CCMT1204□□
- DBCA80100S: CCMT1204□□

For separate purchase

Internal coolant system



Classification by shank	
HSK50	HSK50A-CNS
HSK63	HSK63A-CNS
HSK100	HSK100A-CNS



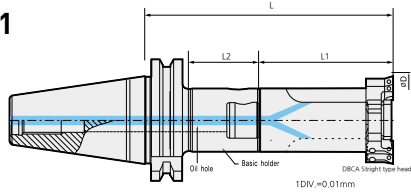
SK-DBC/A (Straight Type)

New balance cut tool(straight Type)



DIN69871 -1A/B
C
38
136
Boring

Fig.1



Head

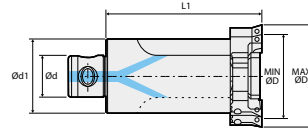


Fig.2

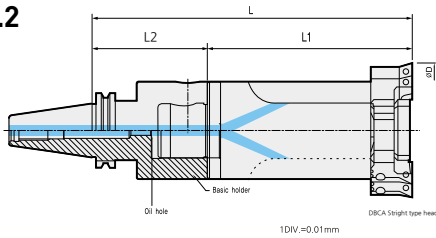
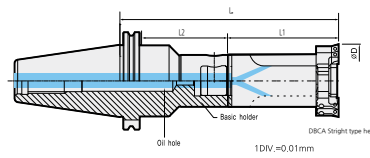


Fig.3



C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

- For more information on the product features, see **144p**
- For more information on MD arbor, see **126p**
- For more information on the applicable insert, see **159p**
- For more information on the related parts, see **158p**

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	Fig	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.								
SK40	DBCA2528S	SK40-MD25F-80R	38	54	183	103	22	14	25	3	0.3	0.3
	DBCA3238S	SK40-MD32F-115R	38	54	225	110	36	18	32	3	0.5	0.6
	DBCA5054S	SK40-MD50F-75	54	74	220	145	55	28	50	1	1.8	1.9
	DBCA5054S	SK40-MD50F-100	54	74	245	145	80	28	50	1	1.8	1.9
	DBCA6374S	SK40-MD63F-70	74	100	250	180	50	36	63	2	3.3	3.5
SK50	DBCA2528S	BT50-MD25F-80R	28	38	183	103	22	14	25	3	0.3	0.3
	DBCA2528S	BT50-MD25F-105R	28	38	208	103	22	14	25	3	0.3	0.3
	DBCA3238S	BT50-MD32F-110	38	54	220	110	87	18	32	1	0.5	0.6
	DBCA3238S	BT50-MD32F-110R	38	54	220	110	36	18	32	3	0.5	0.6
	DBCA5054S	BT50-MD50F-125R	54	74	270	145	60	28	50	3	1.1	1.1
	DBCA5054S	BT50-MD50F-240R	54	74	385	145	125	28	50	3	1.1	1.1
	DBCA6374S	BT50-MD63F-75	74	100	255	180	52	36	63	1	3.3	3.5
	DBCA6374S	BT50-MD63F-130	74	100	310	180	107	36	63	1	3.3	3.5
	DBCA6374S	BT50-MD63F-230R	74	100	410	180	149	36	63	3	3.3	3.5
	DBCA80100S	BT50-MD80F-95	100	136	310	215	75	45	80	1	7.3	7.6
	DBCA80100S	BT50-MD80F-150	100	136	365	215	130	45	80	1	7.3	7.6

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBCA2528S: CCMT0602□□
- DBCA3238S: CCMT0602□□
- DBCA5054S: CCMT09T3□□
- DBCA6374S: CCMT1204□□
- DBCA80100S: CCMT1204□□



BT-DBC

Balance cut tool(Rough Boring)



MAS 403-BT
C
28
120

Shank Coolant System MIN Range MAX Range Boring

Fig.1

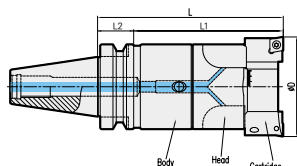
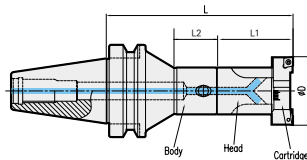
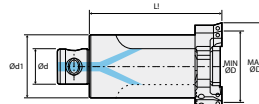


Fig.2



Head



C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

- For more information on MD arbor, see **126p**.
- For more information on the applicable insert, see **159p**.
- For more information on the related parts, see **158p**.

Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	fig	kg (Head weight)	kg (Head package weight)	
Head model no.	Arbor Model No.	Min.	Max.									
BT30	DBC2528S	BT30-MD25F-90	28	35	150	60	63	14	25	1	0.3	0.3
	DBC3235S	BT30-MD32F-80	35	46	145	65	55	18	32	1	0.4	0.4
	DBC4046S	BT30-MD40F-45	46	58	115	70	22	22	40	1	0.6	0.7
	DBC4046S	BT30-MD40F-60	46	58	130	70	36	22	40	1	0.6	0.7
	DBC4046S	BT30-MD40F-80	46	58	140	70	56	22	40	1	0.6	0.7
	DBC5058S	BT30-MD50F-70	58	74	150	80	48	28	50	1	1.1	1.2
BT40	DBC2528S	BT40-MD25F-95	28	35	155	60	63	14	25	1	0.3	0.3
	DBC2528S	BT40-MD25F-105R	28	35	165	60	40	14	25	2	0.3	0.3
	DBC3235S	BT40-MD32F-100	35	46	165	65	70	18	32	1	0.4	0.4
	DBC3235S	BT40-MD32F-115R	35	46	180	65	45	18	32	2	0.4	0.4
	DBC4046S	BT40-MD40F-60	46	58	130	70	31	22	40	1	0.6	0.7
	DBC4046S	BT40-MD40F-110R	46	58	180	70	60	22	40	2	0.6	0.7
	DBC4046S	BT40-MD40F-115	46	58	185	70	83	22	40	1	0.6	0.7
	DBC5058S	BT40-MD50F-105	58	74	185	80	73	28	50	1	1.1	1.2
	DBC6374S	BT40-MD63F-64	74	94	154	90	37	36	63	1	2.0	2.2
	DBC6374S	BT40-MD63F-110	74	94	200	90	83	36	63	1	2.0	2.2
	DBC6374S	BT40-MD63F-135	74	94	225	90	108	36	63	1	2.0	2.2
	DBC8094S	BT40-MD80F-100	94	120	200	100	73	45	80	1	3.5	3.7

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBC2528S : CCMT0602□□
- DBC3235S : CCMT0602□□
- DBC4046S : CCMT09T3□□
- DBC5058S : CCMT09T3□□
- DBC6374S : CCMT1204□□
- DBC8094S : CCMT1204□□



BT-DBC

Balance cut tool(Rough Boring)



MAS 403-BT C 28 175 Boring

Shank Coolant System MIN Range MAX Range Boring

Fig.1

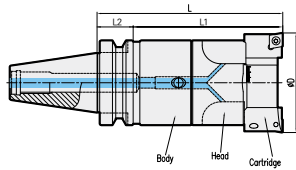
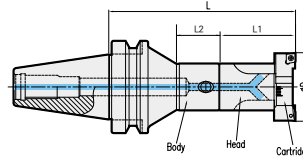
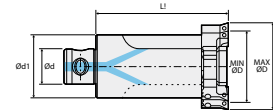


Fig.2



Head



C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

• For more information on MD arbor, see **126p**

• For more information on the applicable insert, see **159p**

• For more information on the related parts, see **158p**

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	fig	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.								
BT50	DBC2528S	BT50-MD25F-105	28	35	165	60	62	14	25	1	0.3	0.3
	DBC2528S	BT50-MD25F-120R	28	35	185	60	40	14	25	2	0.3	0.3
	DBC3235S	BT50-MD32F-110	35	46	175	65	67	18	32	1	0.4	0.4
	DBC3235S	BT50-MD32F-115R	35	46	180	65	45	18	32	2	0.4	0.4
	DBC3235S	BT50-MD32F-235R	35	46	300	65	115	18	32	2	0.4	0.4
	DBC4046S	BT50-MD40F-60	46	58	130	70	22	22	40	1	0.6	0.7
	DBC4046S	BT50-MD40F-195	46	58	265	70	152	22	40	1	0.6	0.7
	DBC4046S	BT50-MD40F-230R	46	58	300	70	180	22	40	2	0.6	0.7
	DBC5058S	BT50-MD50F-125	58	74	205	80	82	28	50	1	1.1	1.2
	DBC5058S	BT50-MD50F-225	58	74	305	80	182	28	50	1	1.1	1.2
	DBC5058S	BT50-MD50F-250R	58	74	330	80	81	28	50	2	1.1	1.2
	DBC6374S	BT50-MD63F-75	74	94	165	90	35	36	63	1	2.0	2.2
	DBC6374S	BT50-MD63F-130	74	94	220	90	87	36	63	1	2.0	2.2
	DBC6374S	BT50-MD63F-195	74	94	285	90	152	36	63	1	2.0	2.2
	DBC6374S	BT50-MD63F-230	74	94	320	90	187	36	80	1	2.0	2.2
	DBC8094S	BT50-MD80F-75	94	120	175	100	36	36	80	1	3.5	3.7
DBC8094S	BT50-MD80F-110	94	120	210	100	69	45	80	1	3.5	3.7	
DBC8094S	BT50-MD80F-175	94	120	275	100	134	45	80	1	3.5	3.7	
DBC120S	BT50-MD80F-175	120	175	275	100	134	45	80	1	4.1	4.4	

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBC2528S : CCMT0602□□
- DBC3235S : CCMT0602□□
- DBC4046S : CCMT09T3□□
- DBC5058S : CCMT09T3□□
- DBC6374S : CCMT1204□□
- DBC8094S : CCMT1204□□



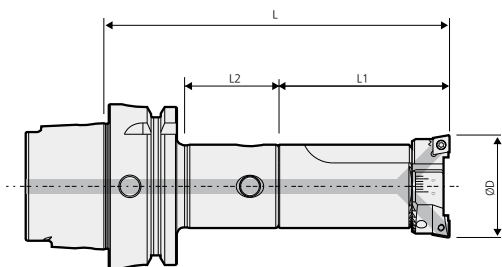
HSK-DBC

Balance cut tool (Modular type)

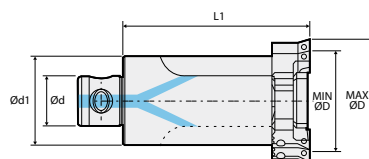


DIN 69893-1	C	28	94	
Shank	Coolant System	MIN Range	MAX Range	Boring

Fig.1



Head.1



C Internal coolant system is optional.

※ Red : Main component Blue : For separate purchase

- For more information on MD arbor, see **126p**.
- For more information on the applicable insert, see **159p**.
- For more information on the related parts, see **158p**.

Model No.	Boring range(ØD)		L	L1	L2	Ød	Ød1	kg (Head weight)	kg (Head package weight)		
	Head model no.	Arbor Model No.								Min.	Max.
HSK63A	DBC2528S	HSK63A-MD25F-60	28	35	120	60	31	14	25	0.3	0.3
	DBC3235S	HSK63A-MD32F-65	35	46	130	65	36	18	32	0.4	0.4
	DBC4046S	HSK63A-MD40F-70	46	58	140	70	41	22	40	0.6	0.7
	DBC5058S	HSK63A-MD50F-85	58	74	165	80	58	28	50	1.1	1.2
	DBC6374S	HSK63A-MD63F-95	74	94	185	90	69	36	63	2.0	2.2

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBC2528S : CCMT0602□□
- DBC3235S : CCMT0602□□
- DBC4046S : CCMT09T3□□
- DBC5058S : CCMT09T3□□
- DBC6374S : CCMT1204□□
- DBC8094S : CCMT1204□□

For separate purchase

Internal coolant system	
-------------------------	--

Classification by shank	
HSK50	HSK50A-CNS
HSK63	HSK63A-CNS
HSK100	HSK100A-CNS



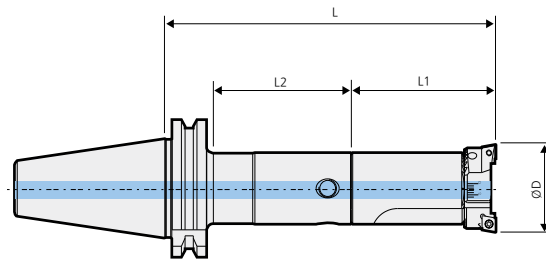
SK-DBC

Balance cut tool (Modular type)

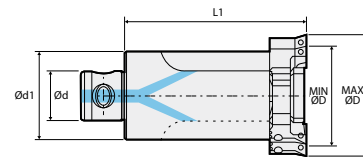
DIN69871
-1A/B
C
28
94
 Boring

Shank Coolant System MIN Range MAX Range Boring

Fig.1



Head.1



C Internal coolant system installed.

※ Red : Main component Blue : For separate purchase

- For more information on MD arbor, see [126p](#)
- For more information on the applicable insert, see [159p](#)
- For more information on the related parts, see [158p](#)

	Model No.		Boring range(ØD)		L	L1	L2	Ød	Ød1	Fig	kg (Head weight)	kg (Head package weight)
	Head model no.	Arbor Model No.	Min.	Max.								
SK40	DBC2528S	SK40-MD25F-80R	28	35	140	60	22	14	25	2	0.3	0.3
	DBC3235S	SK40-MD32F-115R	35	46	180	65	36	18	32	2	0.4	0.4
	DBC4046S	SK40-MD50F-75	46	58	145	70	55	28	50	1	0.6	0.7
	DBC5058S	SK40-MD50F-100	58	74	180	80	80	28	50	1	1.1	1.2
	DBC6374S	SK40-MD63F-70	74	94	160	90	70	36	63	1	2.0	2.2
SK50	DBC2528S	BT50-MD25F-80R	28	35	140	60	22	14	25	2	0.3	0.3
	DBC2528S	BT50-MD25F-105R	28	35	165	60	22	14	25	2	0.3	0.3
	DBC3235S	BT50-MD32F-110	35	46	175	65	87	18	32	1	0.4	0.4
	DBC3235S	BT50-MD32F-110R	35	46	175	65	36	18	32	2	0.4	0.4
	DBC4046S	SK50-MD40F-100	46	58	170	70	75	22	40	1	0.6	0.7
	DBC4046S	SK50-MD40F-145	46	58	215	70	120	22	40	1	0.6	0.7
	DBC4046S	SK50-MD40F-220R	46	58	290	70	83	22	40	2	0.6	0.7
	DBC5054S	BT50-MD50F-125R	58	74	205	80	60	28	50	2	1.1	1.2
	DBC5054S	BT50-MD50F-240R	58	74	320	80	125	28	50	2	1.1	1.2
	DBC6374S	BT50-MD63F-75	74	94	165	90	52	36	63	1	2.0	2.2
	DBC6374S	BT50-MD63F-130	74	94	220	90	107	36	63	1	2.0	2.2
	DBC6374S	BT50-MD63F-230R	74	94	320	90	149	36	63	2	2.0	2.2
	DBC8094S	BT50-MD80F-95	94	120	195	100	75	45	80	1	3.5	3.7
	DBC8094S	BT50-MD80F-150	94	120	250	100	130	45	80	1	3.5	3.7
	DBC120S	BT50-MD80F-150	120	175	250	100	95	45	80	1	4.1	4.4

• In the above table, the Arbor Model No. is an example model no. and able to adjust the depth of boring with a combination of MD arbors and extension bars. For more details, see the MD arbor page.

- DBC2528S : CCMT0602□□
- DBC3235S : CCMT0602□□
- DBC4046S : CCMT09T3□□
- DBC5058S : CCMT09T3□□
- DBC6374S : CCMT1204□□
- DBC8094S : CCMT1204□□



DBCA/DBC SPARE PART

Balance cut tool related parts



Main components

DBCA

Spare Part

TYPE	Main components								
	Head	Spring pin	Wrench bolt	Wrench	Cartridge	Set screw	Wrench	Clamp screw	Torx wrench
Head Set									
DBCA3238S	DBCA2528	SP0308	BX0420	LW-3	BCC28-EC	BT0308	LW-1.5	BFTX02506N	TRX8
DBCA3238S	DBCA3238	SP0410	BX0525	LW-4	BCC38-EC	BT0310	LW-1.5	BFTX02506M	TRX8
DBCA5054S	DBCA5054	SP0616	BX0630	LW-5	BCC54-EC	BT0414	LW-2	BFTX0407N	TRX15
DBCA6374S	DBCA6374	SP0818	BX0635	LW-5	BCC74-EC	BT0520	LW-2.5	BFTX0511N	TRX20
DBCA80100S	DBCA80100	SP1020	BX0840	LW-6	BCC100-EC	BT0625	LW-3	BFTX0511N	TRX20

DBC

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



DBCA/DBC SPARE PART

Balance cut tool related parts

For separate purchase

Insert Part		GRADE	Workpiece	CUTTING	Maker
 CCMT0602□□	Coated : AC8010P	Steel, Alloy Steel, Cast iron	general	SEI(SUMITOMO)	
	Coated : AC8025P	Steel, Alloy Steel			
	Coated : AC6030M	Stainless Steel			
	Cermet : T1500A	Steel, Cast iron	finishing ~ general		
	Coated : NC3015, NC3020	Steel, Alloy Steel	general		KORLOY
	Coated : NC315K	Cast iron			
Coated : PC9030	Stainless Steel				
 CCGT0602□□	Coated : AC5025S	Stainless Steel	general	SEI(SUMITOMO)	
	Cermet : T1500A, T3000Z	Steel, Cast iron	finishing ~ general		
	Coated : NC3020	Steel, Alloy Steel	general	KORLOY	
	W.C : H01	Aluminium	finishing ~ general		
 CCMT09T3□□	Coated : AC8015P	Steel, Alloy Steel, Cast iron	general	SEI(SUMITOMO)	
	Coated : AC8025P	Steel, Alloy Steel			
	Coated : AC4015K	Cast iron			
	Coated : AC6030M	Stainless Steel	finishing ~ general		
	Cermet : T1500A	Steel, Cast iron			
	Coated : NC3015, NC3020	Steel, Alloy Steel			
	Coated : NC315K	Cast iron			general
Coated : PC9030	Stainless Steel				
 CCGT09T3□□	Coated : AC5015S	Stainless Steel	general	SEI(SUMITOMO)	
	Cermet : T1500A	Steel, Cast iron	finishing ~ general		
	W.C : H01	Aluminium	general	KORLOY	
	Coated : PC9030	Stainless Steel			
	W.C : H01	Aluminium			finishing ~ general
 CCMT1204□□	Coated : AC8025P	Steel, Alloy Steel	general		SEI(SUMITOMO)
	Cermet : T1500A	Steel, Cast iron	finishing ~ general		
	Coated : NC3015, NC3020	Steel, Alloy Steel	general	KORLOY	
	Coated : NC315K	Cast iron			
Coated : PC9030	Stainless Steel	finishing ~ general			
CCGT1204□□	W.C : H01		Aluminium		

- There are a range of grades and chip breakers to choose from according to usage.
- The cartridge for CNMG1204□□ is different from the cartridge for CCMT1204□□ in terms of Model No.



TBCA NEW

Wide Diameter Boring system



C	AL	0	631	
Coolant System	Material	MIN Range	MAX Range	Boring



Features

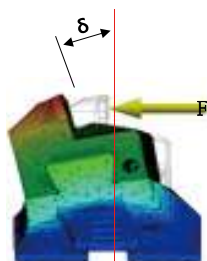
- Convenience in use simultaneously (available both inside and outside)
- Broad boring diameter and range
- Rough / Finishing boring with replaceable cartridge and common rail
- Boring range for outer diameter: Ø0-Ø395
- Boring range for inner diameter: Ø130-Ø631

NAMING	BODY			HEAD SET		
	BT50	FMC40	85	TBC	130	A
	Spindle	Facemill arbor	length	Balance cut tool	Minimum Boring Range	Advance

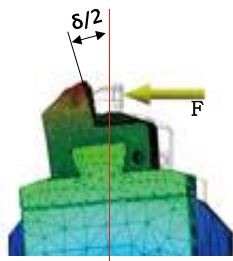
Main Features

Reinforced rigidity

- 50% less moment strain (versus the conventional product of DINE)



TBC460 (old type)



TBC460A (new type)

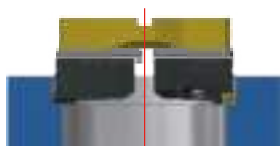
Lightweight design (HEADSET)

- BCC(Cartridge)+DBR(Bridge)+DBB(Rail)



TBC130A	TBC175A	TBC220A	TBC265A
4.2Kg	5.6Kg	6.6Kg	7.5Kg
TBC310A	TBC385A	TBC460A	TBC535A
9.5Kg	11.6Kg	14Kg	16Kg

APPLICATION



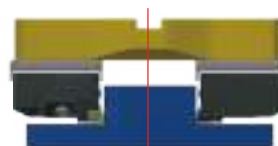
Twin edge boring



Single edge boring



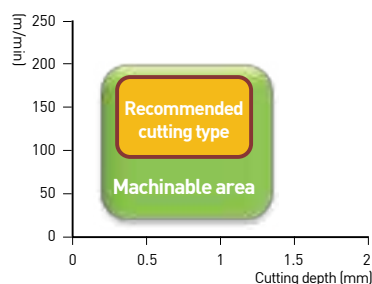
Step boring



Outside boring

Performance test

Product	Workpiece		Boring diameter (Depth of cutting)	Results
	Product name	Material	mm	Machining
Conventional tool of DINE	Housing	Cast iron	Ø465 (Rd=7)	<ul style="list-style-type: none"> · Vibration occurred · Insert damaged in the machining process · Scratched surface of workpieces
TBC460A Applicable insert CNMG19	Housing	QT400	Ø508-527 (Rd=10)	<ul style="list-style-type: none"> · No chattering · No vibration found · Goal of accuracy achieved · Normal chip discharged





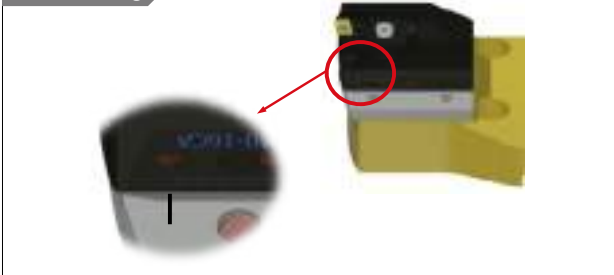
TBCA NEW

Wide Diameter Boring system

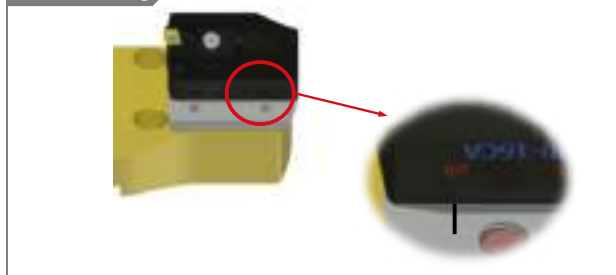


Convenience

Inner boring

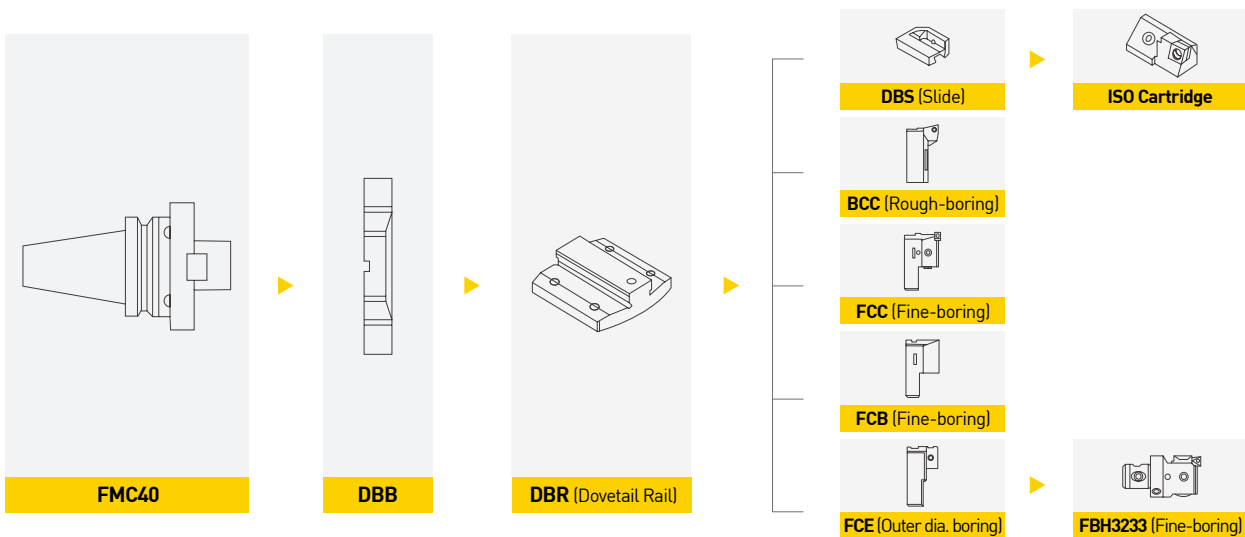


Outer boring

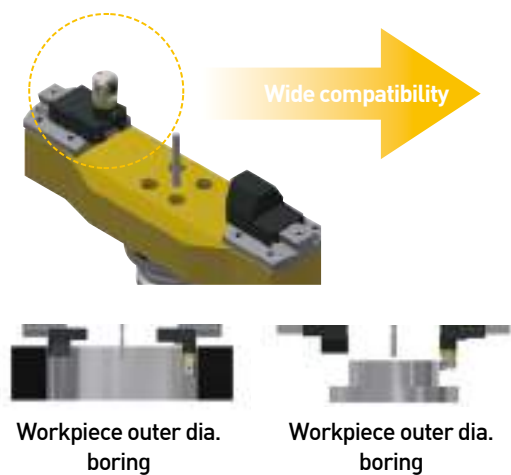


- Inner boring and outer boring can be performed by easily changing the cartridge direction
- With the scale marking on the rail, the boring diameter can be set easily.

Boring system map



Wide compatibility



	IMAGES	List of clamping parts	Cutting type
Outer dia. boring		FBH3233B+FCE310+FCB310	Finishing boring
		DBCA3235S + FCE310 + FCB310	Rough boring
Inner dia. boring		DBS□□ - □□CA+SCGCL16C-1A2	Rough boring
		FCC310	Finishing boring
		BCC1354	Rough boring

※ TBC310A in case

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

TAUMAX

OTHER



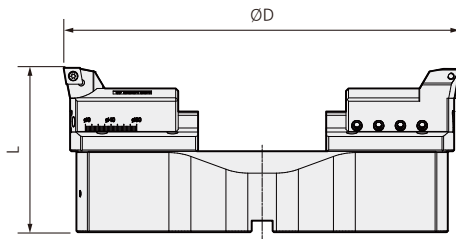
TBCA NEW

Wide Diameter Boring system

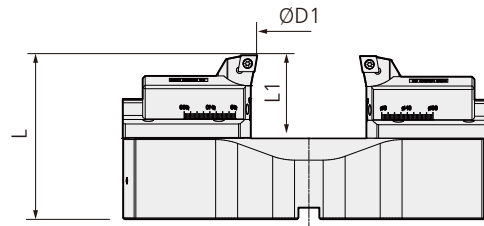


MAS 403-BT	C	AL	130	615	
Shank	Coolant System	Material	MIN Range	MAX Range	Boring

Inside Boring



Outside Boring



C Internal coolant system is optional.

※ Red : Main component Blue : For separate purchase

※ The FMC Arbor are sold individually.

• For more information on the product features, see 160p.

• For more information on FMC arbor, see 122p.

FMC Arbor (Individual order)	Kg	Twin Edge Boring for Roughing							Kg
		TBC Head set (Rail+Cartridge (Main))	L	Boring range					
				Inside Boring		Outside Boring		L1	
Min.	Max.	Min.	Max.						
BT50-FMC40-50	4.6	TBC130A(DBR130+BCC1348+BCC1348)	108	130	180	0	35	65	3.8
BT50-FMC40-50	4.6	TBC175A(DBR175+BCC1348+BCC1348)	113	175	225	0	75	65	5.2
BT50-FMC40-50	4.6	TBC220A(DBR07015+BCC1348+BCC1348)	118	220	270	60	124	65	7.3
BT50-FMC40-50	4.6	TBC265A(DBR07015+BCC1348+BCC1348)	123	265	315	64	174	65	7.3
BT50-FMC40-50	4.6	TBC310A(DBR10015+BCC1345+BCC1345)	128	310	390	79	159	65	9.7
BT50-FMC40-50	4.6	TBC385A(DBR10015+BCC1354+BCC1345)	133	385	465	153	233	65	11.8
BT50-FMC40-50	4.6	TBC460A(DBR10015+BCC1354+BCC1345)	138	460	540	229	309	65	14.3
BT50-FMC40-50	4.6	TBC535A(DBR10015+BCC1354+BCC1345)	143	535	615	303	383	65	16.4

Head set	Bridge	Rail	For separate purchase		
			Cartridge	Arbor	Pin
TBC130A	DBB130	DBR130	BCC1348S	BT50-FMC40-50	PN1080
TBC175A	DBB175	DBR175	BCC1348S	BT50-FMC40-50	PN1080
TBC220A	DBB220	DBR07015	BCC1348S	BT50-FMC40-50	PN1080
TBC265A	DBB265	DBR07015	BCC1348S	BT50-FMC40-50	PN1080
TBC310A	DBB310	DBR10015	BCC1354S	BT50-FMC40-50	PN1080
TBC385A	DBB385	DBR10015	BCC1354S	BT50-FMC40-50	PN1080
TBC460A	DBB460	DBR10015	BCC1354S	BT50-FMC40-50	PN1080
TBC535A	DBB535	DBR10015	BCC1354S	BT50-FMC40-50	PN1080



TBCA NEW

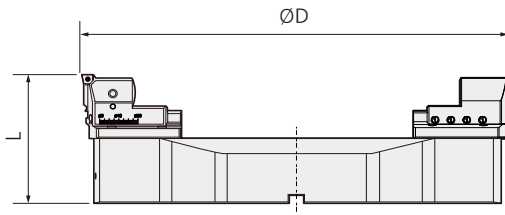
Wide Diameter Boring system



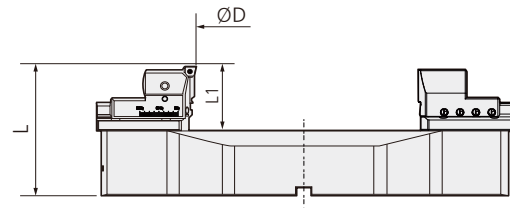
MAS 403-BT
C
AL
130
615
Boring

Shank Coolant System Material MIN Range MAX Range Boring

Inside Boring



Outside Boring



C Internal coolant system is optional.

- ※ Red, Green : Main component Blue : For separate purchase
- ※ The FMC Arbor and head set are products for an individual order.

• For more information on the product features, see 160p

• For more information on FMC arbor, see 122p

FMC Arbor (Individual order)	Kg	Single Edge Boring for Roughing							Kg
		TBC Head set (Rail+Cartridge (Separate sale))	L	Boring range					
				Inside Boring		Outside Boring			
Min.	Max.	Min.	Max.	L1					
BT50-FMC40-50	4.6	TBC130A(DBR130+FCC130+FCB130+FBB33N)	101	130	180	37	37	72	4.4
BT50-FMC40-50	4.6	TBC175A(DBR175+FCC130+FCB130+FBB33N)	106	175	225	80	80	72	5.7
BT50-FMC40-50	4.6	TBC220A(DBR07015+FCC130+FCB130+FBB33N)	111	220	270	173	173	72	7.8
BT50-FMC40-50	4.6	TBC265A(DBR07015+FCC130+FCB130+FBB33N)	116	265	315	176	176	72	7.9
BT50-FMC40-50	4.6	TBC310A(DBR10015+FCC310+FCB310+BB33N)	121	310	390	155.5	155.5	72	10.1
BT50-FMC40-50	4.6	TBC385A(DBR10015+FCC310+FCB310+FBB33N)	126	385	465	229.5	229.5	72	12.2
BT50-FMC40-50	4.6	TBC460A(DBR10015+FCC310+FCB310+FBB33N)	131	460	540	305.5	305.5	72	14.7
BT50-FMC40-50	4.6	TBC535A(DBR10015+FCC310+FCB310+FBB33N)	136	535	615	379.5	379.5	72	16.7

Head set	Bridge	Rail	For separate purchase					Pin
			Cartridge	Bite	Balance block	Arbor		
TBC130A	DBB130	DBR130	FCC130	FBB130△□□	FCB130	BT50-FMC40-50	PN1080	
TBC175A	DBB175	DBR175	FCC130	FBB130△□□	FCB130	BT50-FMC40-50	PN1080	
TBC220A	DBB220	DBR07015	FCC130	FBB130△□□	FCB130	BT50-FMC40-50	PN1080	
TBC265A	DBB265	DBR07015	FCC130	FBB130△□□	FCB130	BT50-FMC40-50	PN1080	
TBC310A	DBB310	DBR10015	FCC310	FBB130△□□	FCB310	BT50-FMC40-50	PN1080	
TBC385A	DBB385	DBR10015	FCC310	FBB130△□□	FCB310	BT50-FMC40-50	PN1080	
TBC460A	DBB460	DBR10015	FCC310	FBB130△□□	FCB310	BT50-FMC40-50	PN1080	
TBC535A	DBB535	DBR10015	FCC310	FBB130△□□	FCB310	BT50-FMC40-50	PN1080	



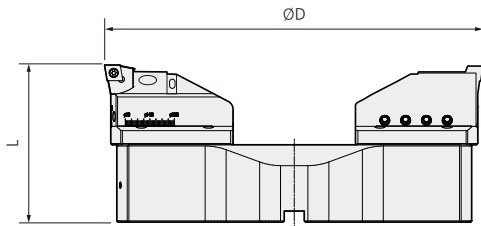
TBCA NEW

Wide Diameter Boring system

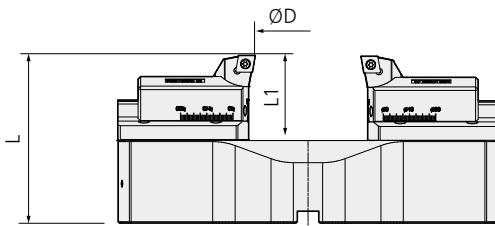


MAS 403-BT	C	AL	130	615	
Shank	Coolant System	Material	MIN Range	MAX Range	Boring

Inside Boring



Outside Boring



C Internal coolant system is optional.

※ Red, Green : Main component Blue : For separate purchase

※ The FMC Arbor and head set are products for an individual order.

• For more information on the product features, see **160p**.

• For more information on FMC arbor, see **122p**.

FMC Arbor (Individual order)	Kg	Step Boring for Roughing							Kg
		TBC Head set (Rail+Cartridge (Separate sale))	L	Boring range					
				Inside Boring		Outside Boring		L1	
Min.	Max.	Min.	Max.	L1					
BT50-FMC40-50	4.6	TBC130A(DBR130+DBS25-□□CA+SCGCL16CA-12)	108	130	180	0	13.5	65	4.3
BT50-FMC40-50	4.6	TBC175A(DBR175+DBS25-□□CA+SCGCL16CA-12)	113	175	225	0	55	65	5.7
BT50-FMC40-50	4.6	TBC220A(DBR07015+DBS25-□□CA+SCGCL16CA-12)	118	220	270	64	128	65	7.8
BT50-FMC40-50	4.6	TBC265A(DBR07015+DBS25-□□CA+SCGCL16CA-12)	123	265	315	68	118	65	7.9
BT50-FMC40-50	4.6	TBC310A(DBR10015+DBS40-□□CA+SCGCL16CA-12)	128	310	390	109	159	65	10.2
BT50-FMC40-50	4.6	TBC385A(DBR10015+DBS40-□□CA+SCGCL16CA-12)	133	385	465	183	233	65	12.3
BT50-FMC40-50	4.6	TBC460A(DBR10015+DBS40-□□CA+SCGCL16CA-12)	138	460	540	259	309	65	14.8
BT50-FMC40-50	4.6	TBC535A(DBR10015+DBS40-□□CA+SCGCL16CA-12)	143	535	615	33	383	65	16.9

Head set	Bridge	Rail	Cartridge	For separate purchase				
				Arbor	Slide	Cartridge	Plate	Pin
TBC130A	DBB130	DBR130	BCC1348S	BT50-FMC40-50	DBS25-16CA DBS25-20CA DBS25-25CA	ISO Cartridge	ISO Cartridge Plates	PN1080
TBC175A	DBB175	DBR175	BCC1348S					
TBC220A	DBB220	DBR07015	BCC1348S					
TBC265A	DBB265	DBR07015	BCC1348S					
TBC310A	DBB310	DBR10015	BCC1354S					
TBC385A	DBB385	DBR10015	BCC1354S					
TBC460A	DBB460	DBR10015	BCC1354S					
TBC535A	DBB535	DBR10015	BCC1354S					



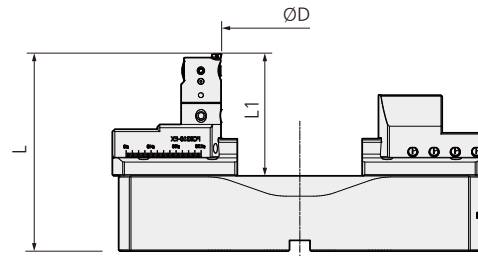
TBCA NEW

Wide Diameter Boring system



MAS 403-BT	C	AL	130	535	Boring
Shank	Coolant System	Material	MIN Range	MAX Range	Boring

Outside Boring



C Internal coolant system is optional.

- ※ Red, Green : Main component Blue : For separate purchase
- ※ The FMC Arbor and head set are products for an individual order.

- For more information on the product features, see **160p**
- For more information on FMC arbor, see **122p**

FMC Arbor (Individual order)	Kg	Outside Boring for Finishing					Kg
		TBC Head set (Rail+Cartridge (Separate sale))	L	Boring range Outside Boring			
				Min.	Max.	L1	
BT50-FMC40-50	4.6	TBC130A(DBR130+FCB130+FCE130+FBH3233B+FBB33N)	145	0	39	102	5.2
BT50-FMC40-50	4.6	TBC175A(DBR175+FCB130+FCE130+FBH3233B+FBB33N)	150	0	84	102	6.5
BT50-FMC40-50	4.6	TBC220A(DBR07015+FCB130+FCE130+FBH3233B+FBB33N)	155	26	180	102	8.7
BT50-FMC40-50	4.6	TBC265A(DBR07015+FCB130+FCE130+FBH3233B+FBB33N)	160	26	180	102	8.7
BT50-FMC40-50	4.6	TBC310A(DBR10015+FCB310+FCE310+FBH3233B+FBB33N)	165	16	170	102	11
BT50-FMC40-50	4.6	TBC385A(DBR10015+FCB310+FCE310+FBH3233B+FBB33N)	170	90	244	102	13.1
BT50-FMC40-50	4.6	TBC460A(DBR10015+FCB310+FCE310+FBH3233B+FBB33N)	175	166	318	102	15.6
BT50-FMC40-50	4.6	TBC535A(DBR10015+FCB310+FCE310+FBH3233B+FBB33N)	180	240	394	102	17.7

Head set	Bridge	Rail	For separate purchase				
			Arbor	Slide	B/B	Head	Pin
TBC130A	DBB130	DBR130	BT50-FMC40-50	FCE130	FCB130	FBH3233B	PN1080
TBC175A	DBB175	DBR175					
TBC220A	DBB220	DBR07015					
TBC265A	DBB265	DBR07015					
TBC310A	DBB310	DBR10015					
TBC385A	DBB385	DBR10015					
TBC460A	DBB460	DBR10015					
TBC535A	DBB535	DBR10015	FCE310	FCB310			

※ B/B : Balance Block



TBC

Balance cut tool for Rough boring



C
130
540

Coolant System MIN Range MAX Range Boring



Features

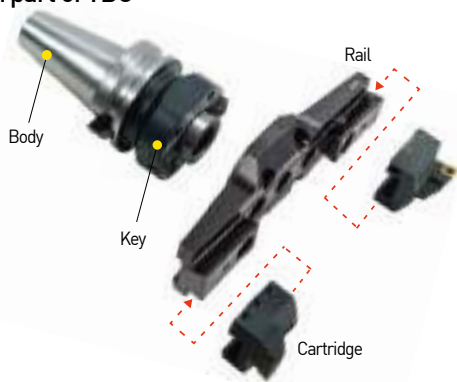
- Broad boring diameter and range
 - Wide Boring Range : Ø130 ~ Ø540mm
- Structurally stable enough to resist cutting load
 - Provides strong cutting performance based on the precision grinding dovetail method
- Can perform fine boring operation by changing boring head cartridges
 - Compatible boring head and rail as they are in the same structure
- Various cartridge tip angles - cartridge fore end angles 15° and 45° selectable
- Internal coolant pin installation - easy to install/remove and 6-way injection coolant pin part available

NAMING

BT50	-	FMD50	-	85	+	TBC	130S
Spindle		Wide dia. holder		Depth		Wide dia.(Rough boring) Min. boring dia.	Head set
		Holder(option)					

Structure and main features of TBC Boring Tool

Names of each part of TBC



Cartridge : BCC1348
 Insert : CCMT1204□□
 CNMG1204□□



Rail : TBR□□
 Weight reduced and space for chip discharge secured by removing the side part

Boring Range of TBC Boring Tool

Model No.	Dia(Ø) Boring diameter		Head set	Insert
	min	max		
TBC130	130	180	TBC130S(TBR130+BCC1348+BCC1348)	CCMT1204□□
TBC175	175	225	TBC175S(TBR175+BCC1348+BCC1348)	CCMT1204□□
TBC220	220	270	TBC220S(TBR220+BCC1348+BCC1348)	CCMT1204□□
TBC265	265	315	TBC265S(TBR265+BCC1348+BCC1348)	CCMT1204□□
TBC310	310	390	TBC310S(TBR310+BCC1348+BCC1348)	CCMT1204□□
TBC385	385	465	TBC385S(TBR310+BCC1348+BCC1348)	CCMT1204□□
TBC460	460	540	TBC460S(TBR460+BCC1348+BCC1348)	CCMT1204□□



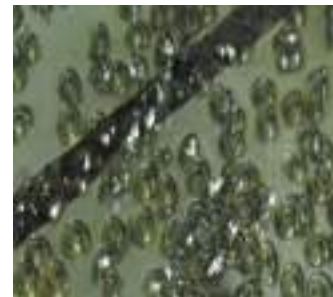
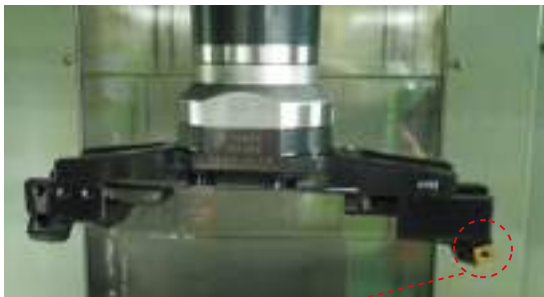
TBC

Balance cut tool for Rough boring



Application example 1 of TBC Boring Tool

Chip shapes by cartridge tip angle diversification



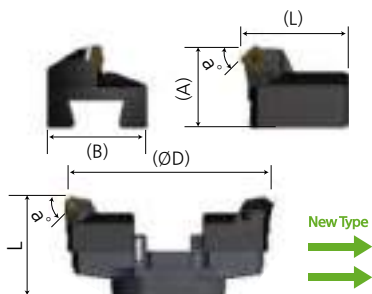
Conventional type

Angle adjustment type



- In the case of conventional type products : thick chips and change by heat
- In the case of "angle adjustment cartridge" : thin chips and no color change

Various cartridges selectable(15°, 45°)



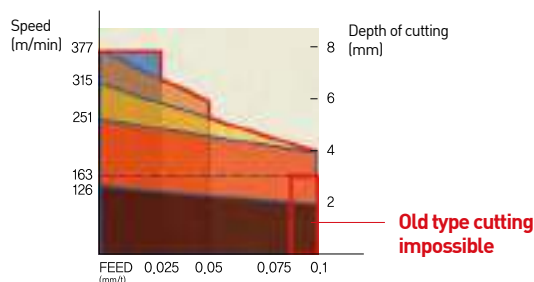
CARTRIDGE	(A)	(B)	(L)	(α°)	Applicable insert
BCC1348	50	60	64.5	1°	CCMT0602□□
BCC1348-SN15				15°	SNMG1204□□
BCC1348-SN45				45°	SNMG1204□□
BCC1354	50	60	89.5	0°	CCMT0602□□
BCC1354-SN15				15°	SNMG1204□□
BCC1354-SN45				45°	SNMG1204□□

Application example 2 of Boring Tool

- **Equipment** : straight type machining center
- **Workpiece material** : S45C
- **Tool used** : BT50-FMD50-155 + TBC310S
- **Insert** : CCMT120408
- **Cutting conditions** : V=200m/min, RPM=163, F=0.1/per knife, d=2mm



Surface roughness effect





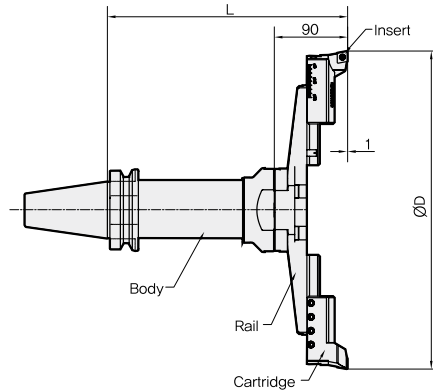
BT-TBC

Balance cut tool for Rough boring



MAS
403-BT
C
130
540
Boring

Shank Coolant System MIN Range MAX Range Boring



C This product does not support the internal coolant system.

※ FMD Arbor and head set are products for an individual order.

※ Red : Main component Blue : For separate purchase

- For more information on the product features, see **166p**
- For more information on FMD arbor, see **175p**
- For more information on the applicable insert, see **166p**
- For more information on the related parts, see **170p**

	FMD Arbor (Individual order)	Kg (Holder weight)	Rough boring(TBC)				
			TBC Head set (Rail+Cartridge)	L	Boring range(ØD)		Kg (Head weight)
					Min.	Max.	
BT50	BT50-FMD50-85	5.9	TBC130S(TBR130+BCC1348)	175	130	180	3.2
	BT50-FMD50-155	7.9	TBC130S(TBR130+BCC1348)	245	130	180	3.2
	BT50-FMD50-205	9.7	TBC130S(TBR130+BCC1348)	295	130	180	3.2
	BT50-FMD50-255	13.4	TBC130S(TBR130+BCC1348)	345	130	180	3.2
	BT50-FMD50-85	5.9	TBC175S(TBR175+BCC1348)	175	175	225	3.6
	BT50-FMD50-155	7.9	TBC175S(TBR175+BCC1348)	245	175	225	3.6
	BT50-FMD50-205	9.7	TBC175S(TBR175+BCC1349)	295	175	225	3.6
	BT50-FMD50-255	13.4	TBC175S(TBR175+BCC1350)	345	175	225	3.6
	BT50-FMD50-85	5.9	TBC220S(TBR220+BCC1348)	175	220	270	4
	BT50-FMD50-155	7.9	TBC220S(TBR220+BCC1348)	245	220	270	4
	BT50-FMD50-205	9.7	TBC220S(TBR220+BCC1348)	295	220	270	4
	BT50-FMD50-255	13.4	TBC220S(TBR220+BCC1348)	345	220	270	4
	BT50-FMD50-85	5.9	TBC265S(TBR265+BCC1348)	175	265	315	4.2
	BT50-FMD50-155	7.9	TBC265S(TBR265+BCC1348)	245	265	315	4.2
	BT50-FMD50-205	9.7	TBC265S(TBR265+BCC1348)	295	265	315	4.2
	BT50-FMD50-255	13.4	TBC265S(TBR265+BCC1348)	345	265	315	4.2
	BT50-FMD50-85	5.9	TBC310S(TBR310+BCC1345)	175	310	390	5.2
	BT50-FMD50-155	7.9	TBC310S(TBR310+BCC1345)	245	310	390	5.2
	BT50-FMD50-205	9.7	TBC310S(TBR310+BCC1345)	295	310	390	5.2
	BT50-FMD50-255	13.4	TBC310S(TBR310+BCC1345)	345	310	390	5.2
	BT50-FMD50-85	5.9	TBC385S(TBR385+BCC1354)	175	385	465	5.5
	BT50-FMD50-155	7.9	TBC385S(TBR385+BCC1354)	245	385	465	5.5
	BT50-FMD50-205	9.7	TBC385S(TBR385+BCC1354)	295	385	465	5.5
	BT50-FMD50-255	13.4	TBC385S(TBR385+BCC1354)	345	385	465	5.5
	BT50-FMD50-85	5.9	TBC460S(TBR460+BCC1354)	175	460	540	12.5
	BT50-FMD50-155	7.9	TBC460S(TBR460+BCC1354)	245	460	540	12.5
	BT50-FMD50-205	9.7	TBC460S(TBR460+BCC1354)	295	460	540	12.5
	BT50-FMD50-255	13.4	TBC460S(TBR460+BCC1354)	345	460	540	12.5



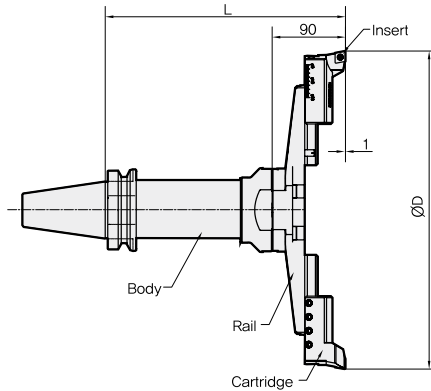
SK-TBC

Balance cut tool for Rough boring



MAS 403-BT
C
130
540

Shank Coolant System MIN Range MAX Range Boring



C This product does not support the internal coolant system.
 ※ FMD Arbor and head set are products for an individual order.
 ※ Red : Main component Blue : For separate purchase

- For more information on the product features, see **166p**
- For more information on FMD arbor, see **175p**
- For more information on the applicable insert, see **166p**
- For more information on the related parts, see **170p**

	FMD Arbor (Individual order)	Kg	Boring range(ØD)			Boring range(ØD)	
			TBC Head set(Rail+Cartridge)	L	Kg	Min.	Max.
SK50	SK50-FMD50-155	7.9	TBC130S(TBR130+BCC1348)	252	3.2	130	180
	SK50-FMD50-255	13.4	TBC130S(TBR130+BCC1348)	352	3.2	130	180
	SK50-FMD50-155	7.9	TBC175S(TBR175+BCC1348)	252	3.6	175	225
	SK50-FMD50-255	13.4	TBC175S(TBR175+BCC1350)	352	3.6	175	225
	SK50-FMD50-155	7.9	TBC220S(TBR220+BCC1348)	252	4	220	270
	SK50-FMD50-255	13.4	TBC220S(TBR220+BCC1348)	352	4	220	270
	SK50-FMD50-155	7.9	TBC265S(TBR265+BCC1348)	252	4.2	265	315
	SK50-FMD50-255	13.4	TBC265S(TBR265+BCC1348)	352	4.2	265	315
	SK50-FMD50-155	7.9	TBC310S(TBR310+BCC1345)	252	5.2	310	390
	SK50-FMD50-255	13.4	TBC310S(TBR310+BCC1345)	352	5.2	310	390
	SK50-FMD50-155	7.9	TBC385S(TBR385+BCC1354)	252	5.5	385	465
	SK50-FMD50-255	13.4	TBC385S(TBR385+BCC1354)	352	5.5	385	465
	SK50-FMD50-155	7.9	TBC460S(TBR460+BCC1354)	252	12.5	460	540
	SK50-FMD50-255	13.4	TBC460S(TBR460+BCC1354)	352	12.5	460	540

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

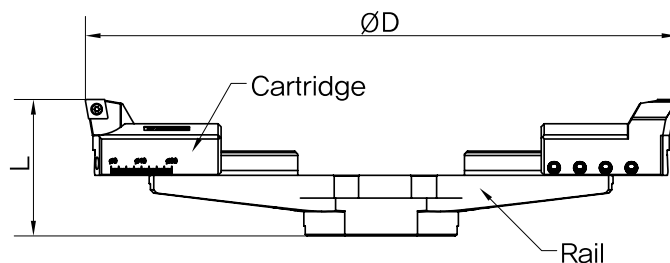
TAUMAX

OTHER



TBC HEAD SET

Balance cut tool for Rough boring



Head set(Main component)			Boring range(ØD)		L	Kg	For separate purchase Insert
Model No.	Rail	Cartridge	Min.	Max.			
TBC130S	TBR130	BCC1348	130	180	90	3.5	CCMT1204□□
TBC175S	TBR175	BCC1348	175	225	90	3.9	CCMT1204□□
TBC220S	TBR220	BCC1348	220	270	90	4.3	CCMT1204□□
TBC265S	TBR265	BCC1348	265	315	90	4.5	CCMT1204□□
TBC310S	TBR310	BCC1345	310	390	90	5.5	CCMT1204□□
TBC385S	TBR385	BCC1345	385	465	90	5.8	CCMT1204□□
TBC460S	TBR460	BCC1345	460	540	90	12.8	CCMT1204□□

※ If CNMG1204○○ insert is used, BCN1348, BCN1354 cartridges can be ordered.



TBC SPARE PART

Balance cut tool for rough boring related parts

Spare Part

TYPE	Main component						
	Rail	Cartridge	Clamp bolt	Clamp bolt	Hexagonal wrench	Clamp screw	Torx wrench
Head Set							
TBC130S	TBR130	BCC1348 (BCN1348)	BX0820	BT0645	LW-3 LW-4 LW-6	BFTX0511N	TRX20
TBC175S	TBR175						
TBC220S	TBR220						
TBC265S	TBR265	BCC1354 (BCN1354)		BT0660			
TBC310S	TBR310						
TBC385S	TBR385						
TBC460S	TBR460						



FBC

Balance cut tool for fine boring



C
130
540
Boring

Coolant System MIN Range MAX Range Boring



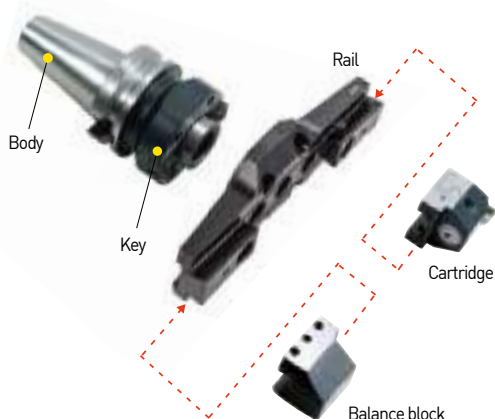
Features

- Broad boring diameter and range
 - Wide Boring Range : $\varnothing 130 \sim \varnothing 540\text{mm}$
- Structurally stable enough to resist cutting load
 - Provides strong cutting performance based on the precision grinding dovetail method
- Can perform fine boring operation by changing boring head cartridges
 - Compatible boring head and rail as they are in the same structure
- Various cartridge tip angles
 - cartridge fore end angles 15° and 45° selectable

NAMING	BT50	-	FMD50	-	85	+	FBC	130S
	Spindle		Wide dia. holder		Depth		Wide dia.(fine-boring)	Min. boring dia.
			Holder(option)					Head set

Structure and main features of FBC Boring Tool

Names of each part of FBC



Cartridge : FCC130
 Insert : CCGT09T3□□
 CCMT1204□□
 TPGT1103□□

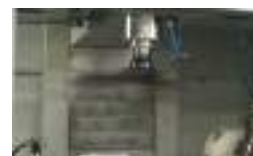
Balance block :
 FCB130

Boring range of FBC Boring Tool

Model No.	Dia(∅) boring diameter		Head set	Insert
	min	max		
FBC130	130	180	FBC130S(TBR130+FCC130+FCB130)	FBB130-C09(CCMT09T3□□, CCGT09T3□□) FBB130-C12(CCMT1204□□) FBB130-T11(TPMT1103□□, TPGT1103□□□)
FBC175	175	225	FBC175S(TBR175+FCC130+FCB130)	
FBC220	220	270	FBC220S(TBR220+FCC130+FCB130)	
FBC265	265	315	FBC265S(TBR265+FCC130+FCB130)	
FBC310	310	390	FBC310S(TBR310+FCC310+FCB310)	
FBC385	385	465	FBC385S(TBR385+FCC310+FCB310)	
FBC460	460	540	FBC460S(TBR460+FCC310+FCB310)	

Application example of Special FBC Boring Tool

Material	Cutting speed V	RPM	FEED		Cutting depth ∅ (mm)	Boring diameter ∅ (mm)
			(mm/min)	(mm/rev)		
Aluminium	200	48	5	0.1	0.5	$\varnothing 1300$
	200	48	10	0.1	2	$\varnothing 1300$
	500	120	12	0.1	2	$\varnothing 1300$



Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

TAUMAX

OTHER



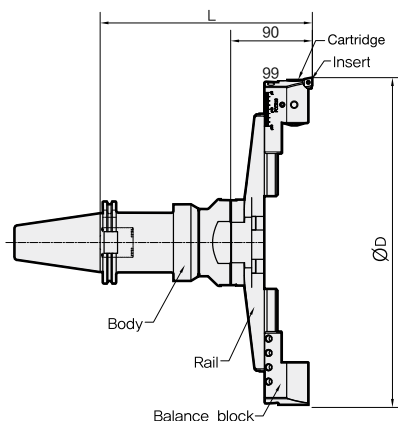
BT-FBC

Balance cut tool for fine boring



MAS 403-BT
C
130
540
Boring

Shank Coolant System MIN Range MAX Range Boring



C This product does not support the internal coolant system.

※ Red : Main component Blue : For separate purchase

※ FMD Arbor and head set are products for an individual order.

※ If BB130-C12bite is used, the minimum boring diameter increases by $\phi 6.7$ mm.

• For more information on the product features, see **171p**

• For more information on FMD arbor, see **175p**

• For more information on FBB bite, see **175p**

• For more information on the related parts, see **174p**

	FMD Arbor (Individual order)	Kg (Holder weight)	Rough boring(TBC)					
			TBC Head set (Rail+Cartridge+Balance block)		L	Kg	Boring range(ØD)	
							Min.	Max.
BT50	BT50-FMD50-85	5.9	FBC130S(TBR130+FCC130+FCB130)		182	3.7	130	180
	BT50-FMD50-155	7.9	FBC130S(TBR130+FCC130+FCB130)		252	3.7	130	180
	BT50-FMD50-205	9.7	FBC130S(TBR130+FCC130+FCB130)		302	3.7	130	180
	BT50-FMD50-255	13.4	FBC130S(TBR130+FCC130+FCB130)		352	3.7	130	180
	BT50-FMD50-85	5.9	FBC175S(TBR175+FCC130+FCB130)		182	4.1	175	225
	BT50-FMD50-155	7.9	FBC175S(TBR175+FCC130+FCB130)		252	4.1	175	225
	BT50-FMD50-205	9.7	FBC175S(TBR175+FCC130+FCB130)		302	4.1	175	225
	BT50-FMD50-255	13.4	FBC175S(TBR175+FCC130+FCB130)		352	4.1	175	225
	BT50-FMD50-85	5.9	FBC220S(TBR220+FCC130+FCB130)		182	4.5	220	270
	BT50-FMD50-155	7.9	FBC220S(TBR220+FCC130+FCB130)		252	4.5	220	270
	BT50-FMD50-205	9.7	FBC220S(TBR220+FCC130+FCB130)		302	4.5	220	270
	BT50-FMD50-255	13.4	FBC220S(TBR220+FCC130+FCB130)		352	4.5	220	270
	BT50-FMD50-85	5.9	FBC265S(TBR265+FCC130+FCB130)		182	4.7	265	315
	BT50-FMD50-155	7.9	FBC265S(TBR265+FCC130+FCB130)		252	4.7	265	315
	BT50-FMD50-205	9.7	FBC265S(TBR265+FCC130+FCB130)		302	4.7	265	315
	BT50-FMD50-255	13.4	FBC265S(TBR265+FCC130+FCB130)		352	4.7	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	13.4	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	13.4	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	13.4	FBC460S(TBR460+FCC310+FCB310)		352	12.8	460	540

※ Bite (Insert)

FBB130-CC09 (CCMT09T3□□, CCGT09T3□□) / FBB130-C12 (CCMT1204□□) / FBB130-T11 (TPMT1103□□, TPGT1103□□L)



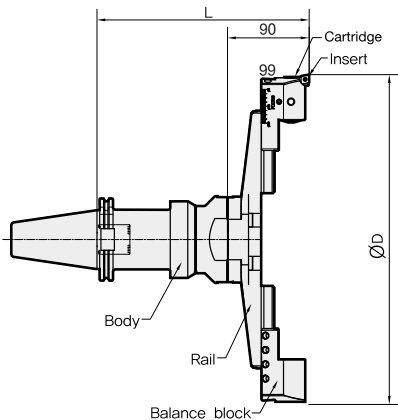
SK-FBC

Balance cut tool for fine boring



DIN69871
-1A/B
C
130
540

Shank Coolant System MIN Range MAX Range Boring



C This product does not support the internal coolant system.

- ※ Red : Main component Blue : For separate purchase
- ※ FMD Arbor and head set are products for an individual order.
- ※ If BB130-C12bite is used, the minimum boring diameter increases by $\varnothing 6.7$ mm.

- For more information on the product features, see **171p**
- For more information on FMD arbor, see **175p**
- For more information on FBB bite, see **175p**
- For more information on the related parts, see **174p**

	FMD Arbor (Individual order)	Holder(Kg)	Boring range($\varnothing D$)			Boring range($\varnothing D$)	
			TBC Head set(Rail+Cartridge+Balance block)	L	Kg	Min.	Max.
SK50	BT50-FMD50-155	8	FBC130S(TBR130+FCC130+FCB130)	252	3.8	130	180
	BT50-FMD50-255	11.2	FBC130S(TBR130+FCC130+FCB130)	352	3.8	130	180
	BT50-FMD50-155	8	FBC175S(TBR175+FCC130+FCB130)	252	4.1	175	225
	BT50-FMD50-255	11.2	FBC175S(TBR175+FCC130+FCB130)	352	4.1	175	225
	BT50-FMD50-155	8	FBC220S(TBR220+FCC130+FCB130)	252	4.5	220	270
	BT50-FMD50-255	11.2	FBC220S(TBR220+FCC130+FCB130)	352	4.5	220	270
	BT50-FMD50-155	8	FBC265S(TBR265+FCC130+FCB130)	252	4.7	265	315
	BT50-FMD50-255	11.2	FBC265S(TBR265+FCC130+FCB130)	352	4.7	265	315
	BT50-FMD50-155	8	FBC310S(TBR310+FCC310+FCB310)	252	5.5	310	390
	BT50-FMD50-255	11.2	FBC310S(TBR310+FCC310+FCB310)	352	5.5	310	390
	BT50-FMD50-155	8	FBC385S(TBR385+FCC310+FCB310)	252	5.8	385	465
	BT50-FMD50-255	11.2	FBC385S(TBR385+FCC310+FCB310)	352	5.8	385	465
	BT50-FMD50-155	8	FBC460S(TBR460+FCC310+FCB310)	252	12.8	460	540
	BT50-FMD50-255	11.2	FBC460S(TBR460+FCC310+FCB310)	352	12.8	460	540

※ Bite (Insert)

FBB130-CC09 (CCMT09T3□□, CCGT09T3□□) / FBB130-C12 (CCMT1204□□) / FBB130-T11 (TPMT1103□□, TPGT1103□□L)

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

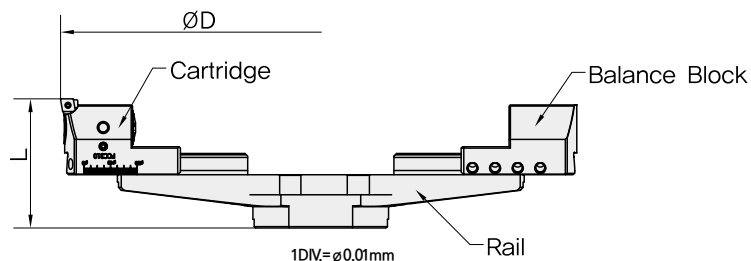
TAUMAX

OTHER



FBC HEAD SET

Balance cut tool for fine boring



Head set(Main component)				Boring range(ØD)		L	Kg	For separate purchase Bite
Model No.	Rail	Cartridge	Balance block	Min.	Max.			
FBC130S	TBR130	FCC130	FCB130	130	180	97	3.8	FBB130-C09 FBB130-C12 FBB130-T11
FBC175S	TBR175	FCC130	FCB130	175	225	97	4.1	
FBC220S	TBR220	FCC130	FCB130	220	270	97	4.5	
FBC265S	TBR26	FCC130	FCB130	265	315	97	4.6	
FBC310S	TBR310	FCC310	FCB310	310	390	97	5.5	
FBC385S	TBR385	FCC310	FCB310	385	465	97	5.8	
FBC460S	TBR460	FCC310	FCB310	460	540	97	12.8	



FBC SPARE PART

Balance cut tool for fine boring related parts

Spare Part							
TYPE	Main component						For separate purchase
	Rail	Cartridge	Clamp bolt	Clamp bolt	Clamp bolt	Hexagonal wrench	Bite
Head Set							
FBC130S	TBR130	FCC130	FCB130	BTF0810 BTF0814	BT0645	LW-3 LW-4	FBB130-C09 FBB130-C12 FBB130-T11
FBC175S	TBR175						
FBC220S	TBR220						
FBC265S	TBR265	FCC310	FCB310		BT0660		
FBC310S	TBR310						
FBC385S	TBR385						
FBC460S	TBR460						



FBB BITE

Balance cut tool for fine boring



Model No.	Insert
FBB130-C09	CCMT09T3□□, CCGT09T3□□
FBB130-C12	CCMT1204□□
FBB130-T11	TPMT1103□□, TPGT1103□□

Chuck

Arbor / Modular

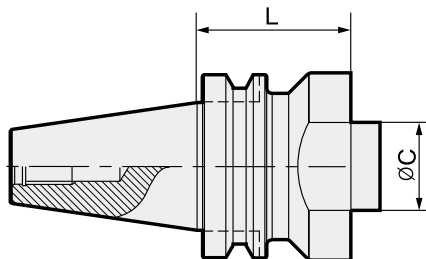
Boring tool

Angular head



BT - FMD

Arbor(Basic Holder)



SK50, BT50	Model No.	L	ØC	Kg
	BT50-FMD50-85	85	50	5.9
	BT50-FMD50-155	155	50	7.9
	BT50-FMD50-205	205	50	9.7
	BT50-FMD50-255	255	50	10.4
	SK50-FMD50-155	155	50	7.9
	SK50-FMD50-255	255	50	10.4

cBN/PCD

Smart factory

TAUMAX

OTHER



BT-SMB

Small micro boring bar



MAS 403-BT
C
Ø6
Ø34
Boring

Shank Coolant System MIN Range MAX Range Boring

Fig.1

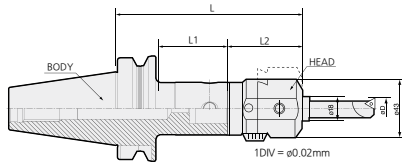
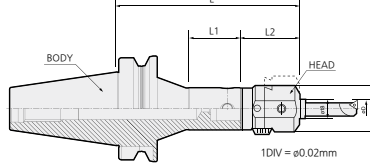
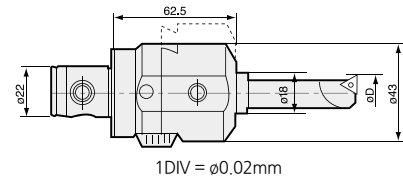


Fig.2



Head



- Adjustment length: 7mm

C This product does not support the internal coolant system.

✘ Red : Main component Blue : For separate purchase

- For more information on MD arbor, see 126p.

- For more information on BB bite, see 184p.

- For more information on the related parts, see 183p.

	Model No.			Boring range(ØD)	L	L1	L2	Fig.	Head weight
	Head model no.	Arbor Model No.	BB bite						
BT30	SMB4022	BT30-MD40F-45	BB18-□(S)	Ø6.0~Ø34.0	107.5	22	62.5	1	0.6
	SMB4022	BT30-MD40F-60	BB18-□(S)	Ø6.0~Ø34.0	122.5	36	62.5	1	0.6
	SMB4022	BT30-MD40F-80	BB18-□(S)	Ø6.0~Ø34.0	142.5	56	62.5	1	0.6
BT40	SMB4022	BT40-MD40F-60	BB18-□(S)	Ø6.0~Ø34.0	122.5	31	62.5	1	0.6
	SMB4022	BT40-MD40F-110R	BB18-□(S)	Ø6.0~Ø34.0	172.5	60	62.5	2	0.6
	SMB4022	BT40-MD40F-115	BB18-□(S)	Ø6.0~Ø34.0	177.5	83	62.5	1	0.6
BT50	SMB4022	BT50-MD40F-60	BB18-□(S)	Ø6.0~Ø34.0	122.5	22	62.5	1	0.6
	SMB4022	BT50-MD40F-195	BB18-□(S)	Ø6.0~Ø34.0	257.5	152	62.5	1	0.6
	SMB4022	BT50-MD40F-230R	BB18-□(S)	Ø6.0~Ø34.0	292.5	180	62.5	2	0.6

BB Bite(For SMB)

Model No.	Boring range(ØD)		Insert	Screw	Kg
	Min	Max			
BB18-7(S)	8	28	TBGT0601□□L	BFTX0204A	0.1
BB18-9(S)	10	30	TBGT0802□□L	BFTX0204A	0.1
BB18-11(S)	12	32	TBGT1103□□L	BFTX0307A	0.1
BB18-13(S)	14	34	TBGT1103□□L	BFTX0307A	0.1
BB18-15(S)	16	36	TBGT1103□□L	BFTX0307A	0.2
BB18-17(S)	18	38	TBGT1103□□L	BFTX0307A	0.2



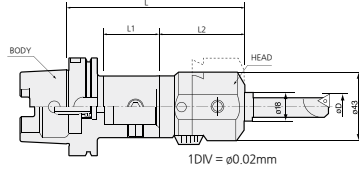
HSK/SK-SMB

Small micro boring bar



DIN 69893-1	DIN69871 -1A/B	C	Ø6	Ø34	
Shank	Shank	Coolant System	MIN Range	MAX Range	Boring

Fig.1



Head

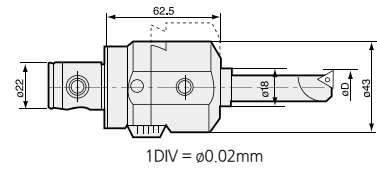


Fig.2

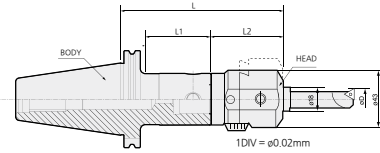
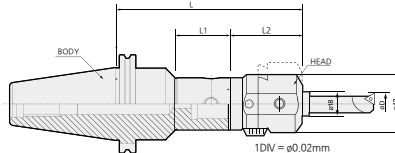


Fig.3



• Adjustment length : 17mm

C This product does not support the internal coolant system.

※ **Red** : Main component **Blue** : For separate purchase

• For more information on MD arbor, see **126p**

• For more information on BB bite, see **184p**

• For more information on the related parts, see **183p**

	Model No.			Boring range (ØD)	L	L1	L2	Fig.	Head weight
	Head model no.	Arbor Model No.	BB bite						
HSK63	SMB4022	HSK63A-MD40F-70	BB18-□(S)	Ø6.0-Ø34.0	132.5	41	62.5	1	0.6
SK40	SMB4022	SK40-MD40F-60	BB18-□(S)	Ø6.0-Ø34.0	122.5	40	62.5	2	0.6
	SMB4022	SK40-MD40F-100	BB18-□(S)	Ø6.0-Ø34.0	162.5	80	62.5	2	0.6
SK50	SMB4022	SK50-MD40F-145	BB18-□(S)	Ø6.0-Ø34.0	207.5	120	62.5	2	0.6
	SMB4022	SK50-MD40F-220R	BB18-□(S)	Ø6.0-Ø34.0	282.5	83	62.5	3	0.6

BB Bite(For SMB)

Model No.	Boring range(ØD)		Insert	Screw	Kg
	Min	Max			
BB18-7(S)	8	28	TBGT0601□□L	BFTX0204A	0.1
BB18-9(S)	10	30	TBGT0802□□L	BFTX0204A	0.1
BB18-11(S)	12	32	TBGT1103□□L	BFTX0307A	0.1
BB18-13(S)	14	34	TBGT1103□□L	BFTX0307A	0.1
BB18-15(S)	16	36	TBGT1103□□L	BFTX0307A	0.2
BB18-17(S)	18	38	TBGT1103□□L	BFTX0307A	0.2



BT-KMB

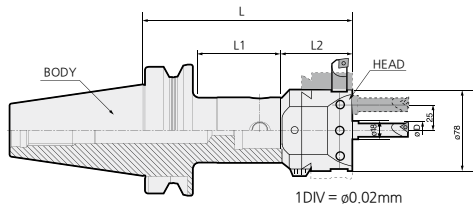
Micro boring



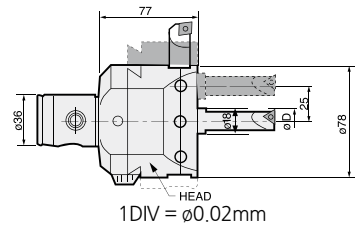
MAS 403-BT
C
Ø8
Ø165
Boring

Shank Coolant System MIN Range MAX Range Boring

Fig.1



Head



- Adjustment length: 7mm

C This product does not support the internal coolant system.

※ Red : Main component Blue : For separate purchase

- For more information on MD arbor, see **126p**

- For more information on BB bite, see **184p**

- For more information on the related parts, see **183p**

Model No.			Boring range(ØD)		L	L1	L2	Fig.	Head weight
Head model no.	Arbor Model No.	BB Bite	Bite position	Ø D					
BT40	KMB6336	BT40-MD63F-64	Center Hole	Ø8.0~Ø38.0	141	37	77	1	2.2
	KMB6336	BT40-MD63F-110			187	83	77	1	2.2
	KMB6336	BT40-MD63F-135	Eccentric Hole	Ø41.0~101.0	212	108	77	1	2.2
KMB6336	BT50-MD63F-75	152			35	77	1	2.2	
BT50	KMB6336	BT50-MD63F-130	Side Hole	Max.Ø165.0	207	87	77	1	2.2
	KMB6336	BT50-MD63F-195			272	152	77	1	2.2

※ The bite position has no bearing on the body model no.

BB Bite(For KMB)

Model No.	Boring range(ØD)		Insert(ISO)	Screw	Kg
	Min	Max			
BB18-7(S)	8	28	TBGT0601□□L	BFTX0204A	0.1
BB18-9(S)	10	30	TBGT0802□□L	BFTX0204A	0.1
BB18-11(S)	12	32	TBGT1103□□L	BFTX0307A	0.1
BB18-13(S)	14	34	TBGT1103□□L	BFTX0307A	0.1
BB18-15(S)	16	36	TBGT1103□□L	BFTX0307A	0.2
BB18-17(S)	18	38	TBGT1103□□L	BFTX0307A	0.2



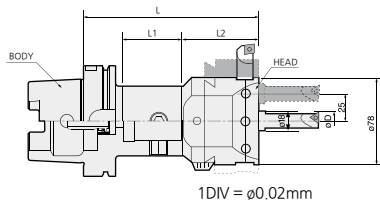
HSK/SK-KMB

Micro boring



DIN 69893-1	DIN69871 -1A/B	C	Ø8	Ø165	
Shank	Shank	Coolant System	MIN Range	MAX Range	Boring

Fig.1



Head

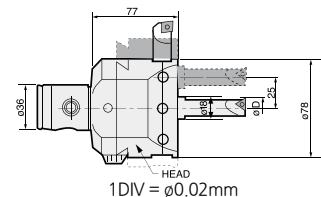


Fig.2

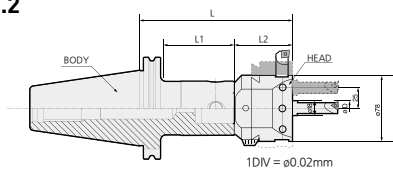
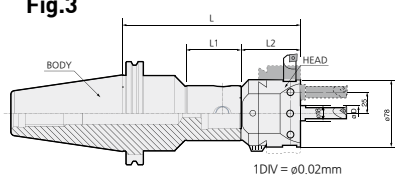


Fig.3



- Adjustment length: 7mm
- Ⓢ This product does not support the internal coolant system.
- ⊗ Red : Main component Blue : For separate purchase

- For more information on MD arbor, see **126p**
- For more information on BB bite, see **184p**
- For more information on the related parts, see **183p**

Model No.			Boring range(ØD)		L	L1	L2	Fig.	Head weight	
Head model no.	Arbor Model No.	BB Bite	Bite position	Ø D						
HSK63	KMB6336	HSK63A-MD63F-95	BB18-□(S)	Center Hole	Ø8.0~Ø38.0	172	69	77	1	2.2
SK40	KMB6336	SK40-MD63F-70	BB18-□(S)	Eccentric Hole	Ø41.0~101.0	147	50	77	2	2.2
SK50	KMB6336	SK50-MD63F-130	BB18-□(S)	Side Hole	Max.165.0	207	107	77	2	2.2
	KMB6336	SK50-MD63F-230R	BB18-□(S)			307	149	77	3	2.2

⊗ The bite position has no bearing on the body model no.

BB Bite(For KMB)

Model No.	Boring range(ØD)		Insert(ISO)	Screw	Kg
	Min	Max			
BB18-7(S)	8	28	TBGT0601□□L	BFTX0204A	0.1
BB18-9(S)	10	30	TBGT0802□□L	BFTX0204A	0.1
BB18-11(S)	12	32	TBGT1103□□L	BFTX0307A	0.1
BB18-13(S)	14	34	TBGT1103□□L	BFTX0307A	0.1
BB18-15(S)	16	36	TBGT1103□□L	BFTX0307A	0.2
BB18-17(S)	18	38	TBGT1103□□L	BFTX0307A	0.2

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

TAUMAX

OTHER



BT-SMH

Small micro boring bar



MAS 403-BT
C
Ø8
Ø38
Boring

Shank Coolant System MIN Range MAX Range Boring

Fig.1

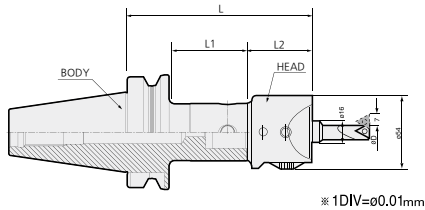
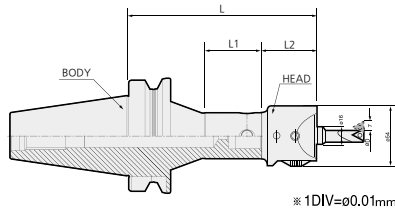
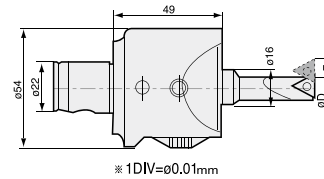


Fig.2



Head



- Adjustment length: 7mm

C This product does not support the internal coolant system.

※ Red : Main component Blue : For separate purchase

- For more information on MD arbor, see **126p**

- For more information on BB bite, see **184p**

- For more information on the related parts, see **183p**

	Model No.			Boring range (ØD)	L	L1	L2	Fig.	Head weight
	Head model no.	Arbor Model No.	BB Bite						
BT30	SMH4022	BT30-MD40F-45	BB16-□(S)	Ø6.0~Ø34.0	94	22	49	1	0.6
	SMH4022	BT30-MD40F-60	BB16-□(S)	Ø6.0~Ø34.0	109	36	49	1	0.6
	SMH4022	BT30-MD40F-80	BB16-□(S)	Ø6.0~Ø34.0	129	56	49	1	0.6
BT40	SMH4022	BT40-MD40F-60	BB16-□(S)	Ø6.0~Ø34.0	109	31	49	1	0.6
	SMH4022	BT40-MD40F-110R	BB16-□(S)	Ø6.0~Ø34.0	159	60	49	2	0.6
	SMH4022	BT40-MD40F-115	BB16-□(S)	Ø6.0~Ø34.0	164	83	49	1	0.6
BT50	SMH4022	BT50-MD40F-60	BB16-□(S)	Ø6.0~Ø34.0	109	22	49	1	0.6
	SMH4022	BT50-MD40F-195	BB16-□(S)	Ø6.0~Ø34.0	244	152	49	1	0.6
	SMH4022	BT50-MD40F-230R	BB16-□(S)	Ø6.0~Ø34.0	279	180	49	2	0.6

BB Bite(For SMH) For separate purchase

Model No.	Boring range(center)		S	ød	L1	L2	Insert(ISO)	Insert Screw	Wrench
	Min.	Max.							
BB16 - 5(S)	5	19	2.75	16	34	20	WBG0601□□L	BFTX0203A	TRX06
BB16 - 7(S)	7	21	3.5			30	TBGT0601□□L	BFTX0204A	
BB16 - 9(S)	9	23	4.5			40	TPGT0802□□L	BFTX0307A	
BB16 - 11(S)	11	25	5.5			45	TPGT1103□□L	BFTX0410A	TRX10
BB16 - 15(S)	15	29	7.5			50	TPGT1604□□L		
BB16 - 19(S)	19	33	9.5			60	TPGT1604□□L	TRX15	



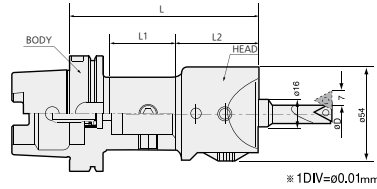
HSK/SK-SMH

Small micro boring bar



DIN 69893-1	DIN69871 -1A/B	C	Ø8	Ø38	
Shank	Shank	Coolant System	MIN Range	MAX Range	Boring

Fig.1



Head

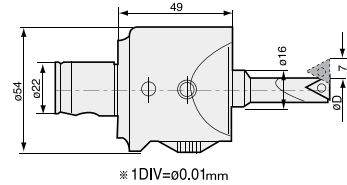


Fig.2

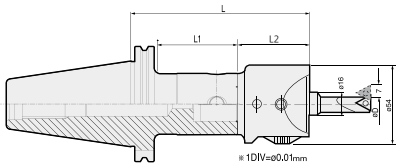
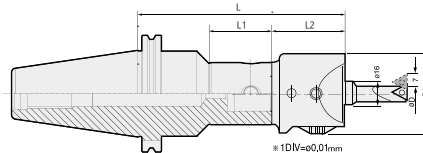


Fig.3



• Adjustment length : 17mm

C This product does not support the internal coolant system.

※ Red : Main component Blue : For separate purchase

• For more information on MD arbor, see **126p**

• For more information on BB bite, see **184p**

• For more information on the related parts, see **183p**

	Model No.			Boring range (ØD)	L	L1	L2	Fig.	Head weight
	Head model no.	Arbor Model No.	BB Bite						
HSK63	SMH4022	HSK63A-MD40F-70	BB16-□(S)	Ø6.0~Ø34.0	132.5	41	49	1	0.6
SK40	SMH4022	SK40-MD40F-60	BB16-□(S)	Ø6.0~Ø34.0	122.5	40	49	2	0.6
	SMH4022	SK40-MD40F-100	BB16-□(S)	Ø6.0~Ø34.0	162.5	80	49	2	0.6
SK50	SMH4022	SK50-MD40F-145	BB16-□(S)	Ø6.0~Ø34.0	207.5	120	49	2	0.6
	SMH4022	SK50-MD40F-220R	BB16-□(S)	Ø6.0~Ø34.0	282.5	83	49	3	0.6

BB Bite(For SMH) For separate purchase

Model No.	Boring range(ØD)		Insert(ISO)	Screw	Kg
	Min	Max			
BB16-7(S)	8	28	TBGT0601□□L	BFTX0204A	0.1
BB16-9(S)	10	30	TBGT0802□□L	BFTX0204A	0.1
BB16-11(S)	12	32	TBGT1103□□L	BFTX0307A	0.1
BB16-13(S)	14	34	TBGT1103□□L	BFTX0307A	0.1
BB16-15(S)	16	36	TPGT1604□□L	BFTX0307A	0.2
BB16-17(S)	18	38	TBGT1604□□L	BFTX0307A	0.2



SMH SET

Small micro boring Set



SMH(SET1)



SMH(SET2)



SMH(SET4)



SET NUMBER






TYPE	Model No.	SMH (SET1)	SMH (SET2)	SMH (SET4)	Applicable insert
Boring head	SMH4022	1	1	1	
Arbor	BT40-MD40F-60	1			
Arbor	BT50-MD40F-60		1		
BB Bite (STEEL)	BB16-0624(S)	1	1	1	WBG060102L
BB Bite (STEEL)	BB16-0832(S)	1	1	1	WBG060102L
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
Screw	BFTX0203A	2	2	2	
Screw	BFTX0204A	2	2	2	
Screw	BFTX0307A	2	2	2	
Wrench	LW-3	1	1	1	
Wrench	LW-5	1	1	1	
Wrench	TRX06	1	1	1	
Wrench	TRX10	1	1	1	



SMB SPARE PART

Small micro boring bar related parts

Spare Part

Type	Main purchased item			Item for separate purchase	
	Boring head	Taper screw	Wrench	Boring bite	MD arbor
Images					
Model No.					
SMB	SMB4022	BTT1013F	LW-2.5	BB18	MD40F






- The taper screw is built in the arbor by default.
- For more information on MD arbor, see **126p**.



KMB SPARE PART

Micro boring related parts

Spare Part

Type	Main purchased item			Item for separate purchase	
	Boring head	Taper screw	Wrench	Boring bite	MD arbor
Images					
Model No.					
KMB	KMB6336	BTT1620F	LW-4.0	BB18	MD63F






- The taper screw is built in the arbor by default.
- For more information on MD arbor, see **126p**.



SMH SPARE PART

Small micro boring bar (precision type) related parts

Spare Part

Type	Main purchased item			Item for separate purchase	
	Boring head	Taper screw	Wrench	Boring bite	MD arbor
Images					
Model No.					
SMH	SMH4022	BTT1013F	LW-3.0	BB16	MD40F

- The taper screw is built in the arbor by default.
- For more information on MD arbor, see **126p**.

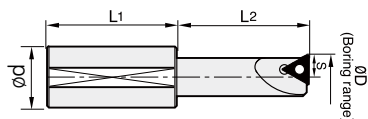


BB BITE

BB Bite(for SMB, SMH, KMB)

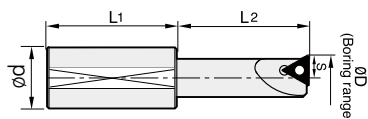


Boring bite : BB type(for SMB)



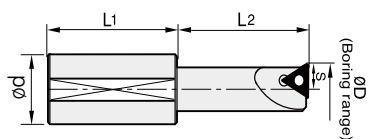
Designation	Boring range (center)		S	ød	L1	L2	Insert	Insert screw
	Min.	Max.						
BB18 - 7(S)	7	27	3.5	18	30	30	TBGT0601□□L	BFTX0204A
BB18 - 9(S)	9	29	4.5	18	30	40	TPGT0802□□L	
BB18 - 11(S)	11	31	5.5	18	30	45	TPGT1103□□L	BFTX0307A
BB18 - 13(S)	13	33	6.5	18	40	45		
BB18 - 15(S)	15	35	7.5	18	40	50		
BB18 - 17(S)	17	37	8.5	18	40	50		

Boring bite : BB type(for SMH)



Designation	Boring range (center)		S	ød	L1	L2	Insert	Insert screw	Wrench
	Min.	Max.							
BB16 - 5(S)	5	19	2.75	16	34	20	WBG0601□□L	BFTX0203A	TRX06
BB16 - 7(S)	7	21	3.5	16	34	30	TBGT0601□□L	BFTX0204A	
BB16 - 9(S)	9	23	4.5	16	34	40	TPGT0802□□L	BFTX0307A	TRX10
BB16 - 11(S)	11	25	5.5	16	34	45	TPGT1103□□L		
BB16 - 15(S)	15	29	7.5	16	34	50	TPGT1604□□L		
BB16 - 19(S)	19	33	9.5	16	34	60	TPGT1604□□L	BFTX0410A	TRX15

Boring bite : BB type(for KMB)



Designation	Boring range(center)		S	ød	L1	L2	Insert	Insert screw		
	Center	Eccentric								
BB18 - 7(S)	7	40	27	91	3.5	18	30	30	TBGT0601□□L	BFTX0204A
BB18 - 9(S)	9	42	29	93	4.5	18	30	40	TPGT0802□□L	
BB18 - 11(S)	11	44	31	95	5.5	18	30	45	TPGT1103□□L	BFTX0307A
BB18 - 13(S)	13	46	33	97	6.5	18	40	45		
BB18 - 15(S)	15	48	35	99	7.5	18	40	50		
BB18 - 17(S)	17	50	37	101	8.5	18	40	50		

Standard Boring Bite(Insert type)

Maker	Designation	Purpose of use	Boring Ø	Insert
Sumitomo SEI	BBPT (WBPT: Carbide Shank)	For through hole boring (for Through hole boring) for blind hole and through hole	Ø8,10,12,16	TBGT0601□□L, TPGT0802□□L, TPGT1103□□L
	BBPW (WBPW: Carbide Shank)		Ø5.5,8,10	WBG0601□□L, WBMT0601□□L, WBG0802□□L
	S-SCLCR [C-SCLCR: Carbide Shank]		Ø8,10,12,16	CCGT0602□□, CCMT0602□□, CCGT09T3□□, CCMT09T3□□
	S-STFPR [C-STFPR: Carbide Shank]	For through hole boring (for Through hole boring)	Ø12,16	TPGT1103□□L
S-STUPR	Ø8		TBGT0601□□L, TPGT0802□□L	
S-SWUBR (E-SWUBR: Carbide Shank)	Ø5.5,8,10		WBG0601□□L, WBG0802□□L, CCMT0602□□, CCGT0602□□	
S-SCLCR [C-SCLCR: Carbide Shank]	For blind hole and through hole		Ø10,12,16	CCMT09T3□□, CCGT09T3□□
S-SCLPR [C-SCLPR: Carbide Shank]	(for Stop and through hole boring)		Ø8,10,12,16	CPGT0802□□, CPGT0903□□



BH

Square boring bite for BSA



Boring

Fig.1

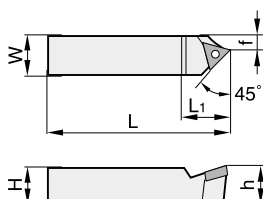
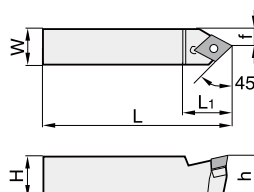


Fig.2



Model No.	Fig.	W=H	h	L	L1	f	Usable 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

Insert for Square Boring Bite

Maker	Insert	Grade	Workpiece	Cutting
KORLOY	CCGT0602□□-AK	H01	Aluminium	General
	CCGT09T3□□-AK			
	CCGT1204□□-AK			

Maker	Insert	Grade	Workpiece	Cutting
SUMITOMO	TPGT0802□□	Cermet : T1500A	Steel, Cast iron, Stainless Steel	finishing
	CPMT0602□□	Coated : AC6030M	Steel	general
	CPMT0803□□	Coated : AC6030M	Steel	general
	CPMT0903□□	Coated: AC8015P	Steel, Alloy Steel, Cast iron	general
		Coated: AC6030M	Stainless Steel	general
		Cermet : T3000Z	Steel, Cast iron, Stainless Steel	finishing-general
	CPMH1204□□	Coated: AC6030M	Steel, Stainless Steel	general
CPMH1604□□	Coated: AC6030M	Steel, Stainless Steel	general	

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

TAUMAX

OTHER



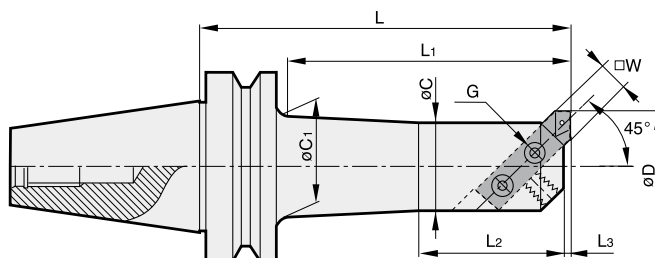
BSA

Square boring bar



MAS 403-BT
C
25
125

Shank Coolant System MIN Range MAX Range Boring



• For more information on BB bite, see **185p**.


C This product does not support the internal coolant system.

• For more information on the related parts, see **187p**.



Model No.	ØD		L	ØC	L1	L2	L3	ØC1	W	G	Kg	Package weight (Kg)
	MIN	MAX										
BT50-BSA25-135	25	38	135	20	92	35	1.0	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	2.0	37	10	M8	4.9	5.3
BT50-BSA50-180	50	65	180	40	137	65	3.0	46	13	M10	5.1	5.5
BT50-BSA50-240	50	65	240	40	197	65	3.0	44	13	M10	5.8	6.2
BT50-BSA62-195	62	90	195	50	152	80	2.0	56	16	M10	5.9	6.3
BT50-BSA62-270	62	90	270	50	227	80	2.0	56	16.0	M10	7.4	7.8
BT50-BSA72-195	72	110	195	60	152	95	2.4	66	19.0	M12	6.8	7.2
BT50-BSA72-285	72	110	285	60	242	95	2.4	66	19.0	M12	9.1	9.5
BT50-BSA90-210	90	125	210	75	167	110	4.0	80	19.0	M12	9.1	9.5



Main components

Spare Part		Main components	
Type		Set screw	
Model No.	Images		
	BSA25		BTF0606
BSA30		BTF0606	
BSA38		BTF0808	
BSA42		BTF0810	
BSA50		BTF1012	
BSA62		BTF1016	
BSA72		BTF1216	
BSA90		BTF1220	
BSA105		BTF1225	

For separate purchase

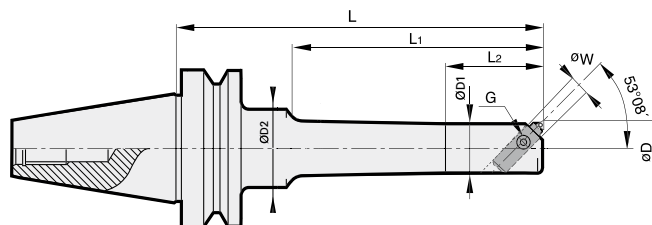
Spare Part		For separate purchase	
Type		Bite	Wrench
Model No.	Images		
	BSA25		BH408
BSA30		BH408	LW-4
BSA38		BH410	LW-4
BSA42		BH410	LW-5
BSA50		BH413	LW-5
BSA62		BH416	LW-5
BSA72		BH419	LW-5
BSA90		BH419	LW-6
BSA105		BH425	LW-6

- For more information on BH boring bite, see **185p**.



BT-BKA

FZ Micro boring bar



C This product does not support the internal coolant system.

※ Red : Main component Blue : For separate purchase

※ For more information on the boring range and insert used, see the FZ unit table.

• The boring unit is an item for separate purchase.

• For more information on the FZ unit, see **190p**

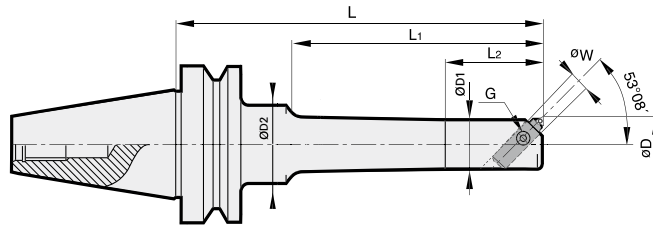
• For more information on the related parts, see **191p**

	Model No.	FZ unit	L	L1	L2	ØD1	ØD2	W	G	Kg	Package weight (Kg)
BT30	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	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



C This product does not support the internal coolant system.

※ Red : Main component Blue : For separate purchase

※ For more information on the boring range and insert used, see the FZ unit table.

• The boring unit is an item for separate purchase.

• For more information on the FZ unit, see **190p**.

• For more information on the related parts, see **191p**.

Model No.	FZ unit	L	L1	L2	ØD1	ØD2	W	G	Kg	Package 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

BT50

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

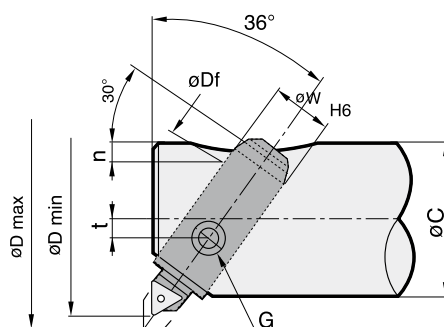
TAUMAX

OTHER



FZ UNIT

FZ Unit Inclined mounting type



C This product does not support the internal coolant system.

• For more information on the insert, see **191p**.

※ In case of one gradation adjustment, $\pm 0.02\text{mm}$

• For more information on the related parts, see **191p**.

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

Model No.	ØD		Insert holder (ISO)	Insert (ISO)	øC	n	øDf	t	G	W	Kg	Package weight (Kg)
	MIN	MAX										
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

FZ unit related parts



Spare Part

TYPE	Main components					For separate purchase
	Housing	Spindle	Insert screw	Torx Wrench	L-Wrench	Torx Wrench
Images						
Model No.						
FZ8-23, 26-3, P10	8-23, 26-3	8Z3(P10)	-	-	LW-1.5	R0/N0
FZ8-23, 26-3, K10	8-23, 26-3	8Z3(P10)	-	-	LW-1.5	R0/N0
FZ10-28, 32-3(S)	10-28, 32-3	U10Z3-TB06	BFTX0204A	TRX6	LW-2.0	R2/N1
FZ12-36, 40-3(S)	12-36, 40-3	U12Z3-TB06	BFTX0204A	TRX6	LW-2.5	R2A/N2
FZ16-45, 50-3(S)	16-45, 50-3	U16Z3-TP08	BFTX0204A	TRX6	LW-3.0	N3
FZ20-56, 64-3(S)	20-56, 64-3	U20Z3-TP08	BFTX0204A	TRX6	LW-4.0	R4/N4
FZ25-72, 80-3(S)	25-72, 80-3	U25Z3-TP11	BFTX0307A	TRX10	LW-4.0	ZV25
FZ32-90, 100, 110, 125-3(S)	32-90, 100-3	UZ32Z3-TP11	BFTX0307A	TRX10	LW-5.0	R5/N5



INSERT

FZ Unit, FF Unit

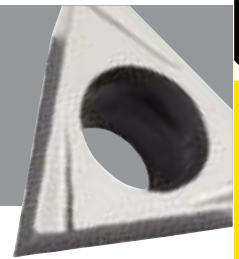


Fig. 1
(With Chip Breaker)

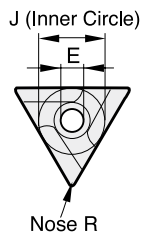


Fig. 2
(Without Chip Breaker)

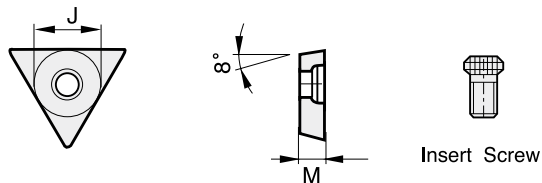


Fig.	Grade of Insert	Workpiece
1	K10(W.C)	Cast Iron, Aluminium
1	P10(W.C)	Steel, Stainless Steel
1	CN1000 or CN2000(Cermet)	Steel
2	K10(W.C)	Exclusive for Cast Iron

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

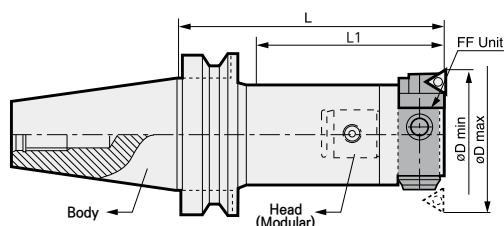


BT-BCF

Micro boring bar



MAS 403-BT	C	29.5	141	
Shank	Coolant System	MIN Range	MAX Range	Boring



C This product does not support the internal coolant system.

※ Red : Main component Blue : For separate purchase

※ The bodies, boring units, and head sets are sold individually.

- For more information on FF boring unit, see **194p**
- For more information on the applicable insert, see **195p**
- For more information on the related parts, see **194p**

	Model No.			ØD		L	L1	Kg	Kg (Package weight)
	Arbor Model No.	Head	Boring unit	MIN	MAX				
BT30	BT30-MD25F-90	BCF2530	FF10-30(S)	29.5	42	140	93	0.3	0.6
	BT30-MD32F-80	BCF3239	FF12-39(S)	39	50	140	99	0.4	0.7
	BT30-MD40F-80	BCF4047	FF16-47(S)	47	66	170	109	0.6	0.9
	BT30-MD50F-70	BCF5058	FF20-58(S)	58	83	125	98	1	0.9
BT40	BT40-MD25F-95	BCF2530	FF10-30(S)	29.5	42	145	72	0.3	1.1
	BT40-MD32F-100	BCF3239	FF12-39(S)	39	50	160	96	0.4	1.1
	BT40-MD40F-115	BCF4047	FF16-47(S)	47	66	175	120	0.6	1.6
	BT40-MD50F-105	BCF5058	FF20-58(S)	58	83	175	143	1	1.8
	BT40-MD63F-110	BCF6379	FF25-79(S)	79	108	180	148	1.7	2.4
	BT40-MD80F-100	BCF100	FF32-100(S)	100	141	200	168	3.8	2.9
BT50	BT50-MD25F-105	BCF2530	FF10-30(S)	29.5	42	155	72	0.3	3.8
	BT50-MD32F-110	BCF3239	FF12-39(S)	39	50	170	96	0.4	4
	BT50-MD40F-195	BCF4047	FF16-47(S)	47	66	255	143	0.6	4.8
	BT50-MD50F-225	BCF5058	FF20-58(S)	58	83	295	195	1	6
	BT50-MD63F-195	BCF6379	FF25-79(S)	79	108	265	222	1.6	6.8
	BT50-MD80F-175	BCF100	FF32-100(S)	100	141	275	232	3.8	8

※ Right-angled type micro boring bar

※ Boring unit (Insert)

- FF10-30(S) / FF12-39(S) (TBGT0601□□□)
- FF16-47(S) / FF20-58(S) (TBGT0802□□□)
- FF25-79(S) / FF32-100(S) (TBGT1103□□□)



BT-BCF

Micro boring bar



Fig.1

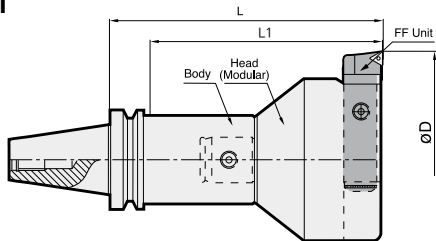
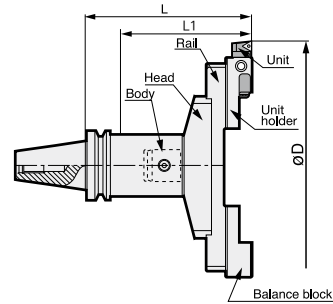


Fig.2



1DIV. = $\varnothing 0.02\text{mm}$

C This product does not support the internal coolant system.

※ Red : Main component Blue : For separate purchase

※ The bodies, boring units, and head sets are sold individually.

- For more information on MD arbor, see **126p**
- For more information on FF boring unit, see **194p**
- For more information on the applicable insert, see **195p**
- For more information on the related parts, see **194p**

	Model No.			$\varnothing D$		L	L1	Fig	Kg (Package weight)
	Arbor Model No.	Head set	FF Unit	MIN	MAX				
BT50	BT50-MD90F-75	BCF138	FF32-138(S)	138	159	175	120	1	8
	BT50-MD90F-145	BCF138	FF32-138(S)	150	159	245	190	1	9
	BT50-MD90F-75	BCF150	FF32-138(S)	170	171	175	120	1	9.6
	BT50-MD90F-145	BCF150	FF32-138(S)	190	171	245	190	1	12.4
	BT50-MD90F-195	BCF150	FF32-138(S)	210	171	295	240	1	15.4
	BT50-MD90F-75	BCF170	FF32-138(S)	230	191	175	120	1	9.8
	BT50-MD90F-145	BCF170	FF32-138(S)	250	191	245	190	1	12.6
	BT50-MD90F-195	BCF170	FF32-138(S)	355	191	295	240	1	15.8
	BT50-MD90F-75	BCF190	FF32-138(S)	138	211	175	120	1	10.2
	BT50-MD90F-145	BCF190	FF32-138(S)	150	211	245	190	1	13
	BT50-MD90F-195	BCF190	FF32-138(S)	170	211	295	240	1	16.1
	BT50-MD90F-75	BCF210	FF32-138(S)	190	231	175	120	1	10.5
	BT50-MD90F-145	BCF210	FF32-138(S)	210	231	245	190	1	13.4
	BT50-MD90F-195	BCF210	FF32-138(S)	230	231	295	240	1	16.5
	BT50-MD90F-75	BCF230	FF32-138(S)	250	251	175	120	1	13.1
	BT50-MD90F-145	BCF230	FF32-138(S)	355	251	245	190	1	15.6
	BT50-MD90F-195	BCF230	FF32-138(S)	170	251	295	240	1	18.2
	BT50-MD90F-75	BCF250FS	FF25-79(S)	190	355	182	182	2	14.3
	BT50-MD90F-145	BCF250FS	FF25-80(S)	210	355	252	252	2	17.2
	BT50-MD90F-195	BCF250FS	FF25-81(S)	230	355	302	302	2	21.2
BT50-MD90F-75	BCF350FS	FF25-82(S)	250	450	182	182	2	16.4	
BT50-MD90F-145	BCF350FS	FF25-83(S)	355	450	252	252	2	19	
BT50-MD90F-195	BCF350FS	FF25-84(S)	250	450	302	302	2	20.8	

※ Modular type micro boring bar

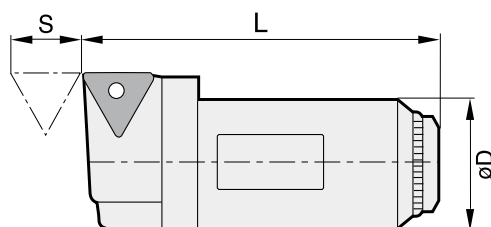
※ Boring unit (Insert)

- FF10-30(S) / FF12-39(S) (TBGT0601□□□L)
- FF16-47(S) / FF20-58(S) (TBGT0802□□□L)
- FF25-79(S) / FF32-100(S) (TBGT1103□□□L)



FF

FF Unit_micro boring unit



Model No.	ØD	L	S	Usable 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

C This product does not support the internal coolant system.



FF UNIT SPARE PART

FF Unit related parts

Spare Part

Type	Main components		
	Clamp screw	Torx Wrench	Wrench
Images			
Model No.			
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



INSERT

Boring Insert

INSERT	Applicable item (boring head)
CCET0301□□L	FBB15C(FBH15,FBH18)
CCET0401□□L	FBB20N-C, FBB20N-1-C(FBH1920B) FBB26N-C, FBB26N-1-C(FBH2526B)
CCMT0602□□L	BCC28(DBC2528S),BCC35(DBC3235S), FBB33N-C, FBB33N-1-C(FBH3233B), FBH42N-C, FBH42N-1-C(FBH4042B), FBH53N-1-C(FBH5053B)
CCGT0602□□L	
CPMT0602□□L	BH410(BSA38,BSA42)
CPMT0803□□L	BH413(BSA50)
CCMT09T3□□L	
CCGT09T3□□L	BCC46(DBC4046S),BCC58(DBC5058S), FBB53N-C, FBH53N-1-C09(FBH5053B), FBB68N-C, FBB68N-C09, FBB68N-1-C09(FBH6368B, FBH6398B, FBH8098B), FBB130-C09(FBC130,FBC175,FBC220,FBC265,FBC310,FBC385,FBC460)
CPMT0909□□	BH416(BSA62)
CCMT1204□□L	BCC74(DBC6374S),BCC94(DBC8094),BCC120(DBC120S), BCC1348(TBC130,TBC175,TBC220,TBC265), BCC1354(TBC310,TBC385,TBC460) FBB130-C12(FBC130,FBC175,FBC220,FBC265,FBC310,FBC385,FBC460)
CCGT1204□□L	
CPMH1204□□	BH419(BSA72,BSA90)
WBG0601□□L	BB16-5(S)(SMH4022)
TBGT0601□□L	BB16-7(S), BB18-7(S)(KMB6336,SMB4022) FZ10-28-3(S),FZ10-32-3(S)(BSA30) FZ12-36-3(S),FZ12-40-3(S)(BSA38) FF10-30(S)(BCF2530),FF12-39(S)(BCF3239)
TPGT0802□□L	
TPGW0802□□	BB16-9(S)(SMH4022),BB18-9(S)(KMB6336,SMB4022) BH408(BSA25, BSA28), FBB20N,FBB20N-1(FBH1920B), FBB26N,FBB26N-1(FBH2526B), FBB33N,FBB33N-1(FBH3233B), FBB42N, FBB42N-1(FBH4042B) FZ16-45-3(S),FZ16-50-3(S)(BSA42) FZ20-56-3(S),FZ20-64-3(S)(BSA50) FF16-47(S)(BCF4047), FF20-58(S)(BCF5058)
TPGT1103□□L	FBB42N-T11,FBB42N-1-T11(FBH4042B), FBB53N-11, FBB53N-1-T11(FBH5053B) FBB68N-11,FBB68N-1-T11(FBH6368B, FBH6398B, FBH8098B) FBB130-T11(FBC130,FBC175,FBC220,FBC265, FBC310,FBC385,FBC460) BB16-11(S),15(S),19(S)(SMH4022) BB18-11(S),13(S),15(S),17(S)(KMB6336,SMB4022) FZ25-72-3(S),FZ25-80-3(S)(BSA62) FZ32-90-3(S), FZ32-100-3(S)(BSA72) FZ32-110-3(S),FZ32-125-3(S)(BSA90) FF25-79(S)(BCF6379,BCF250FS,BCF350FS), FF32-100(S)(BCF100), FF32-138(S)(BCF138,BCF170,BCF190,BCF210,BCF230)
TPGT1604□□L	BB16-19(S)(SMH4022)
CPMH1604□□	BH425(BSA105)

Chuck

Arbor / Modular

Boring tool

Angular head

cBN/PCD

Smart factory

TAUMAX

OTHER

