

Pull collet type collet chuck

DETa-1 Collet Holder



DTA
DTB
DTE

➔ P. 22

Retension knob

➔ P. 64

Taper collet chuck

COLLET HOLDER



CTH
CTA

➔ P. 32

Needle-roller type chuck

Hi-ART MILLING CHUCK



ART

➔ P. 40

End-mill holder for ultra-heavy duty application

SUMMIT

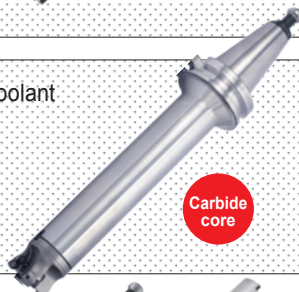


SLZ

➔ P. 43

The face mill arbor for through-spindle coolant

FMH RIGID type



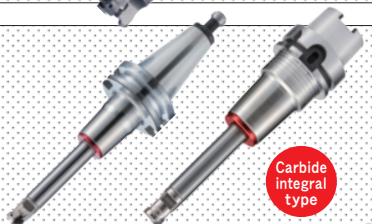
Carbide
core

FMH-H

➔ P. 46

The arbor for screw-in End Mill

RED SCREW arbor



Carbide
integral
type

RSG

➔ P. 48

Cutter arbor with spindle-through coolant



FMH

➔ P. 53

Fine adjustment boring holder

MICRO HEAD



MFA
MBH
MBJ

➔ P. 55

DETa-1 Collet Holder

Pull collet type collet chuck

2mm collapsibility with just one collet !!

- ▶ Just 6 collets is all it takes to chuck 106 sizes of drills.
- ▶ Slim design due to no tightening nut at the tip of holder.
- ▶ Compatible with synchronized tapping. Provides simple tooling lay-out.



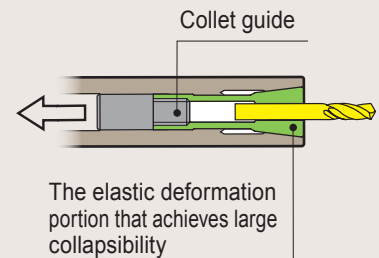
Drill Endmill Tap

DETa-1



12 segments
precise chucking

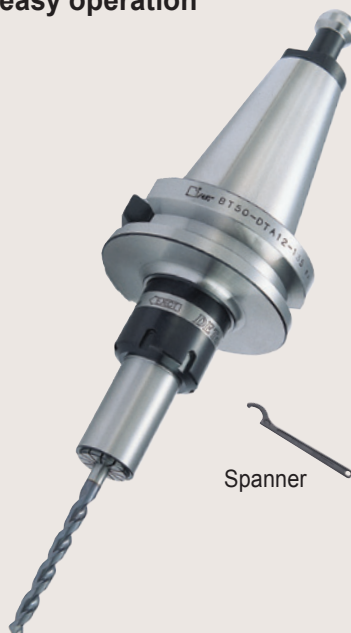
Pull collet design



The elastic deformation
portion that achieves large
collapsibility

DTA

Nut-tightening type of
easy operation



Spanner

DTB

For high-speed cutting,
High cost performance



Wrench

Coolant-through



DTE

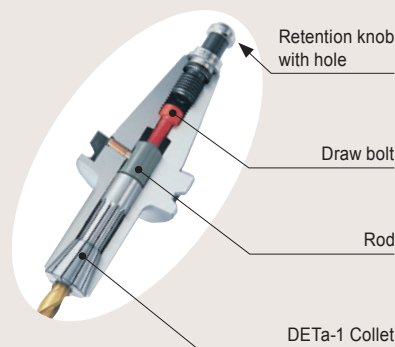
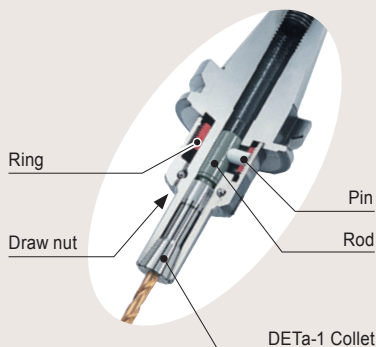
Fully applicable
for coolant-through



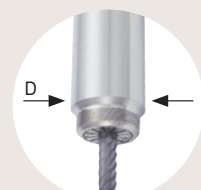
Wrench

3 types of coolant-
through systems
available using coolant
cap & spacer → P. 30

Coolant-through



	ϕD
DTE 7	29
DTE12	40



DETa-1 Collet

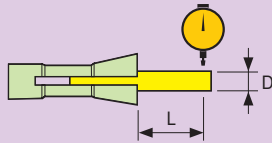
Using a high-precision collet will increase the life of your tools.
→ P. 117

Highest guaranteed accuracies throughout entire chucking range (100% inspection).

Both large collapsibility and precise chucking achieved by the pull collet design.

Collet	Run-out accuracy (μm)	
	D3	D7/D12
Precision Collet	3 (6)	5 (10)
Standard Collet	5 (10)	10 (15)

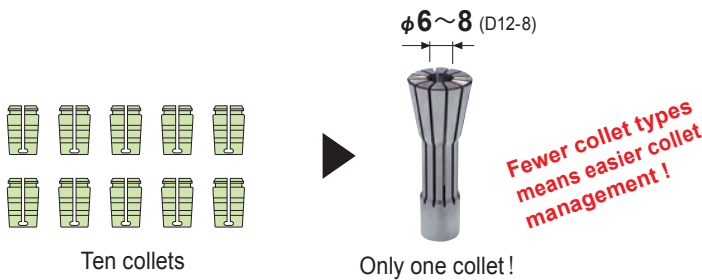
※Accuracy of collet alone,
() means collapsibility usable.



D	L
~10	4×D
10~13	40



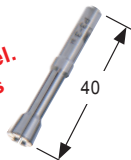
Reduces the number of conventional collets needed by 90% (in-house comparison)



D3 Collet

DTA3
DTB3

Uses a maraging steel. Initial accuracy lasts for a long period of time.

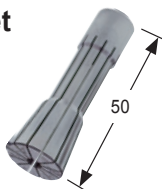


φ0.5~3.175

8 pcs.

D7 Collet

DTA7
DTB7
DTE7



φ1~7

8 pcs.

D12 Collet

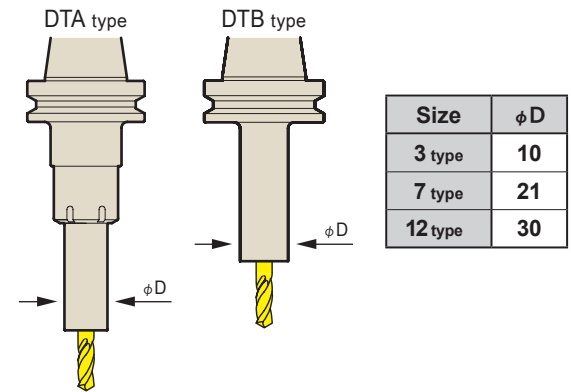
DTA12
DTB12
DTE12



φ2.5~13

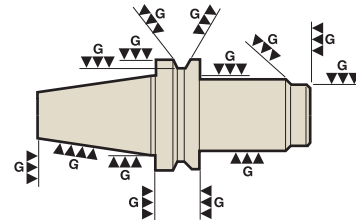
6 pcs.

Slim and compact without the nut at the tip.



Pre-balanced design (DTE type)

The collet holder is pre-balanced by previously designing the holder to be as axisymmetrical as possible. When used with the precision collet, it enables stable machining during high-speed machining.

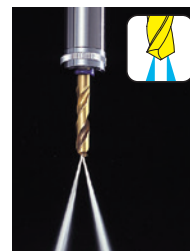


Longer cutter life using through-spindle capability
→ P. 117

Coolant-through system

Pressure
7 Mpa

Multiple coolant supply systems. The best methods can be chosen from three options.



Coolant-through cutter

For a cutting tool with oil holes. The shank of the cutting tool is sealed with an O-ring, enabling reliable coolant supply. Compatible with small-diameter cutting tools starting from 3 mm.

DTE type



“SUKIMA-through” coolant-around tool

High-pressure coolant performance can be obtained even when using a cutting tool without oil holes.

DTE type

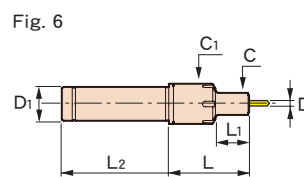
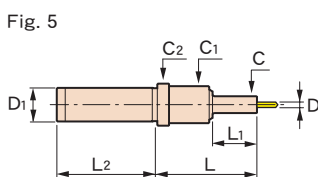
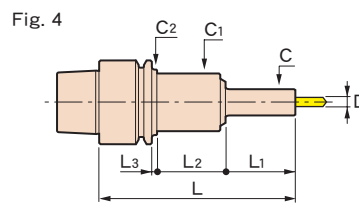
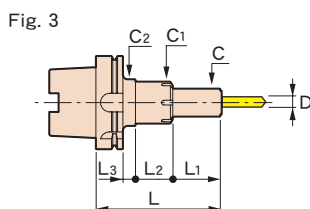
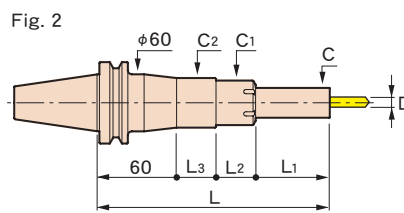
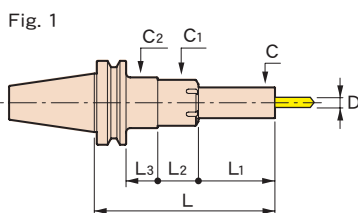


Coolant-through collet

Coolant is supplied through the slits in the collet. No dedicated optional parts are required.

DTB type
DTE type

DETa-1 Collet Holder A type (DTA)



CODE	Fig.	φD	L	φC	L1	L2	L3	φC1	φC2	φD1	KG	N
BT30-DTA 3- 90	1	0.5~ 3.175	90	10	27	26	15	22	25	—	0.5	2.4
-DTA 7- 90		1 ~ 7	120	21	30	37	1	38	42	—	0.7	6.7
-120					60						0.8	7.9
-DTA12-120		2.5 ~13		30	52.5	42	3.5	45	45		1.0	10.4
BT40-DTA 3- 95	1	0.5~ 3.175	95	10	27	26	15	22	25	—	1.1	3.9
-125			125				45				1.2	4.3
-DTA 7-105		1 ~ 7	105	21	38	37	3	38	60		1.3	8.5
-135			135		60		11		43		1.4	9.5
-165			165				41				1.7	10.8
-195			195				71				2.1	12.1
-DTA12-120		2.5~13	120	30	52.5	40	0.5	45	58		1.5	11.6
-150			150		75		8		50		1.7	13.8
-180			180				38				2.1	15.5
-210			210				68				2.6	17.1
BT50-DTA 7-105	1	1 ~ 7	105	21	30	37	—	38	—	—	3.8	15.5
-135			135		60						3.9	16.6
-165			165				30		43		4.0	18.0
-195			195				60				4.4	19.5
-255			255				120				5.0	18.2
-315			315								5.9	19.1
-DTA12-135	1	2.5~13	135	30	52.5	40	4.5	45	50	—	4.1	19.4
-165			165		75		12				4.3	21.6
-195			195				42				4.7	23.4
-255			255				102				5.5	22.3
-315			315								6.6	23.3
	2											
A63 -DTA 3- 90	3	0.5~ 3.175	90	10	27	26	11	22	25	—	0.8	3.0
-120			120				41				1.0	3.4
-DTA 7-105		1 ~ 7	105	21	30	37	12	38	50		1.1	17.3
-120			120		38		19				1.3	18.3
-150			150		60		27				1.7	20.3
-DTA12-120		2.5~13	120	30	52.5	40	1.5	45			1.2	21.9
-150			150		75		9				1.4	25.2
-180			180				39				1.8	27.7

CODE	Fig.	φD	L	φC	L ₁	L ₂	L ₃	φC ₁	φC ₂	φD ₁	 Kg (lbs)	 N				
A100 -DTA 7-135	3	1 ~ 7	135	21	30	37	39	38	50	—	2.7	33.8				
-165			165		60						2.8	35.5				
-225			225				99					3.7	33.6			
-DTA12-135		2.5~13	135	30	52.5	40	13.5	45			2.7	37.1				
-165			165		75		21				2.9	40.4				
-225			225				81				3.8	39.7				
E32 -DTA 3- 75	4	0.5~ 3.175	75	10	27	26	2	22	25	—	0.2	1.8				
E40 -DTA 3- 75	4	0.5~ 3.175	75	10	27	26	2	22	25	—	0.3	1.7				
E50 -DTA 3- 80	4	0.5~ 3.175	80	10	27	26	1	22	25	—	0.5	2.1				
F63 -DTA 3- 90	4	0.5~ 3.175	90	10	27	26	11	22	25	—	0.8	2.3				
-120			120				41	27	26		0.9	2.7				
DN40A -DTA 3- 95	1	0.5~ 3.175	95	10	27	26	10.8	22	25	—	1.1	4.6				
-125			125				40.8				1.2	5.0				
 -DTA 7-105		1 ~ 7	105	21	30	43.8	12.1	38	45		1.2	11.9				
-135			135		60	37	18.9				1.3	14.4				
-DTA12-130		2.5~13	130	30	52.5	56.9	—	45	—		1.5	18.0				
-160			160		75	66.4					1.7	20.0				
DN50A -DTA 7-135	1	1 ~ 7	135	21	60	37	3	38	50	—	3.4	20.1				
-165			165				33		43		3.6	20.0				
-195			195				63				3.9	20.6				
-DTA12-135		2.5~13	135	30	52.5	40	7.5	45	50		3.6	21.5				
-165			165		75		15				3.8	25.8				
-195			195				45				4.2	26.4				
CT40 -DTA 3- 95	1	.02~.13	3.74	0.39	1.06	1.02	.28	.87	.98	—	2.4	4.4				
-125			4.92				1.46				2.7	4.8				
-DTA 7-102		.04~.28	4.01	0.83	1.18	1.46	.63	1.49	1.75		2.8	8.1				
-132			5.19		2.36						2.9	9.3				
-DTA12-130		.10~.51	5.11	1.18	2.08	1.57		1.77	3.3		11.7					
-152			5.98		2.95		.61		3.8		13.5					
CT50 -DTA 7-102	1	.04~.28	4.01	0.83	1.18	1.46	.63	1.49	2.75	—	7.1	11.8				
-132			5.19				2.36					7.3	13.0			
-152			5.98								.71	1.69	7.7	13.9		
-203			7.87								2.71		8.6	14.0		
-DTA12-130		.10~.51	5.11	1.18	2.08	1.57	.73	1.77	—	7.7	15.6					
-152			5.98		2.95		.71			7.9	17.5					
-203			7.87				2.09			1.97	9.3	18.3				
ST16 -DTA 3	5	0.5~ 3.175	60	10	27	60	—	22	25	16	—	—				
ST20 -DTA 3	5	0.5~ 3.175	60	10	27	60	—	22	—	20	—	—				
ST32T -DTA 7- 75	6	1 ~ 7	75	21	31.5	100	—	38	—	32	—	—				
-105			105		61.5											
-DTA12-105		2.5~13		30	52.5			45								
-135			135		75											
S32 -DTA 7- 75	6	1 ~ 7	75	21	31.5	70	—	38	—	32	—	—				
-DTA12-100		2.5~13	100	30	52.5			45								

Option

- DETa-1 collet→P.31 • Spanner→P.31 • Retention knob (BT)→P.64
- Cleaning tool→P.31

Std. Access.

- Coolant duct(Fixed)(HSK-A)→P.104 • Rod(DTA3)

Note

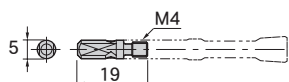
- Swing type coolant ducts are available upon request(HSK-A). For details, please contact us.

Caution

- HSK-E and F shank don't come with a coolant duct and cannot be attached.
- ATC may not be possible for some machining centers with BT30-DTA12-120.
- For precautions and maintenance, refer to page 115.

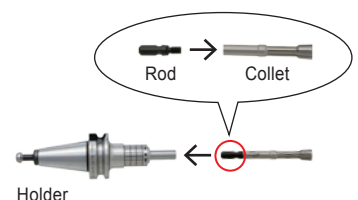
Rod (DTA3 type)

These are necessary when attaching a collet to the holder (DTA3).

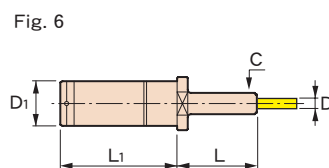
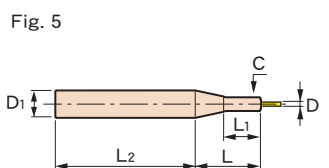
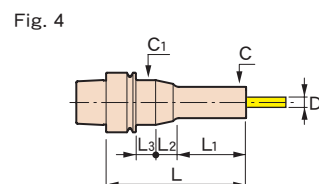
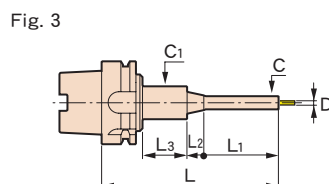
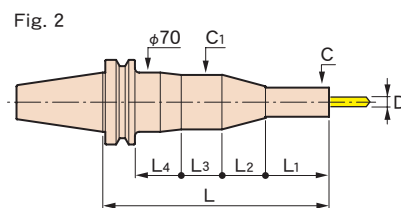
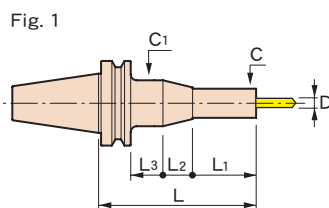
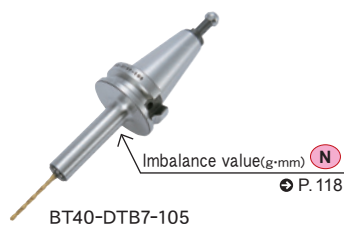


CODE	Holder type	Q'ty
PR-DTA3	DTA3	2pcs.

Cutting data
P.29



DETa-1 Collet Holder B type (DTB)



CODE	Fig.	φD	L	φC	L1	L2	L3	L4	φC1	φD1	KG	N
BT30-DTB 3- 90	1	0.5 ~ 3.175	90	10	27	13	28	—	25	—	0.6	1.7
-DTB 7- 75		1 ~ 7	75	21	53	—	—	—	—	—	0.5	2.4
-105			105		83							3.4
-DTB12- 75		2.5 ~ 13	75	30	53							
-105			105		83						0.7	5.6
BT40-DTB 3- 80	1	0.5 ~ 3.175	80	10	27	13	13	—	25	—	1.3	2.8
-110			110				43				1.4	3.2
-110L					57		13				1.3	2.8
-DTB 7- 60		1 ~ 7	60	21	33	—	—	—	—	—	1.0	3.7
-105			105		78						1.1	4.8
-135			135		75	11.8	21.2		30		1.3	5.2
-165			165		75.5	35.3	27.2		40		1.6	5.4
-195			195				57.2				1.9	5.6
-DTB12- 90		2.5 ~ 13	90	30	63	—	—	—	—	—	1.2	5.3
-120			120		93						1.3	7.6
-150			150		105	11.8	6.2		40		1.5	8.4
-180			180				36.2				1.8	8.7
-210			210				66.2				2.1	8.9
BT50-DTB 7- 75	1	1 ~ 7	75	21	37	—	—	—	—	—	3.5	11.7
-105			105		67						3.7	12.3
-135			135		75	11.8	10.2		30		3.8	18.6
-195			195			58.8	23.2		50		4.6	25.0
-255			255		75.5	82.3	59.2		60		6.1	27.6
-315			315		75	58.8	43.7	99.5	50		7.4	33.9
-DTB12- 75	1	2.5 ~ 13	75	30	37	—	—	—	—	—	3.7	12.5
-105			105		67						3.9	14.8
-135			135		97						4.0	15.3
-195			195		105	35.3	16.7		50		4.7	24.3
-255			255			58.8	53.2		60		5.9	28.4
-315			315				50.2	63			7.5	34.1
A63 -DTB 3- 75	3	0.5 ~ 3.175	75	10	27	13	4	—	25	—	0.8	6.9
-105			105				34				0.9	7.5
-105L					57		4				0.8	7.0

CODE	Fig.	φD	L	φC	L1	L2	L3	L4	φC1	φD1	Kg (lbs)	N
E25 -DTB 3- 58	3	0.5~ 3.175	58	10	27	16	4.6	—	18	—	0.1	0.4
E32 -DTB 3- 65	3	0.5~ 3.175	65	10	27	16	4.5	—	20	—	0.2	0.6
-DTB 7- 65K	4	1 ~ 7		21	30	14.2	10.8		26			0.9
E40 -DTB 3- 70	3	0.5~ 3.175	70	10	27	13	—	—	20	—	0.3	0.9
-DTB 7- 95	4	1 ~ 7	95	21	50	11.8	13.2		30		0.4	1.6
-DTB12-110		2.5~13	110	30	90	—	—		—		0.5	2.8
E50 -DTB 3- 75	3	0.5~ 3.175	75	10	27	16	1.5	—	20	—	0.5	1.7
-DTB 7-100	4	1 ~ 7	100	21	50	11.8	12.2		30		0.6	3.2
-DTB12-115		2.5~13	115	30	89	—	—		—		0.8	4.2
F63 -DTB 3- 75	3	0.5~ 3.175	75	10	27	13	4	—	25	—	0.8	2.1
-105			105				34				0.9	2.5
-105L					57		4				0.8	2.1
F63M -DTB 7-100	4	1 ~ 7	100	21	50	11.8	12.2	—	30	—	0.9	3.3
-DTB12-120		2.5~13	120	30	70				40		1.1	4.8
DN40AD -DTB 3- 80	1	0.5~ 3.175	80	10	27	13	18.8	25	—	—	1.2	3.5
-110			110				38.8				1.3	3.6
-110L					57		18.8				1.2	3.9
-DTB 7-105		1 ~ 7	105	21	74	—	12.1	—	44.45		1.1	4.8
-135			135		75	11.8	17		30		1.2	5.0
-DTB12-105		2.5~13	105	30	74	—	12.1		44.45		1.2	5.7
-135			135		104						1.3	8.0
DN50AD -DTB 7-135	1	1 ~ 7	135	21	75	11.8	13.2	15.9	30	—	3.3	14.9
-195			195			58.8	26.2		50		4.1	21.5
-DTB12-135		2.5~13	135	30	100	—	—		—		3.5	11.7
-195			195		105	35.3	19.7		50		4.2	20.8
CT40 -DTB 3- 80	1	.02~.13	3.15	.39	1.06	.51	.20	.98	—	—	2.4	3.3
-110			4.33				1.38				2.7	3.7
-110L					2.24		.20				2.4	3.3
-DTB 7-105		.04~.28	4.13	.83	2.76	—	.63	—	1.75		2.4	4.6
-135			5.31		2.95	.46	.52		1.18		2.9	5.2
-DTB12-120		.10~.51	4.72	1.18	3.34	—	.63		1.75		1.3	7.5
-150			5.91		3.66	.88	.62				3.5	8.5
CT50 -DTB 7-135	1	.04~.28	5.31	.83	2.91	.46	.52	—	1.18	—	7.3	14.8
-195			7.68			2.31	1.03		1.97		9.0	21.4
-DTB12-135		.10~.51	5.31	1.18	3.94	—	.63		2.75		7.7	11.6
-195			7.68		4.13	1.39	.78		1.97		9.0	20.8
ST12 -DTB 3	5	0.5~ 3.175	29	10	25	61	—	—	—	12	—	—
ST16 -DTB 3	5	0.5~ 3.175	38.5	10	27	81.5	—	—	—	16	—	—
ST20 -DTB 3	5	0.5~ 3.175	48	10	27	102	—	—	—	20	—	—
ST25T -DTB 7- 15	6	1 ~ 7	15	21	110	—	—	—	—	25	—	—
- 45			45									
- 75			75									
ST32T -DTB 7- 15	6	1 ~ 7	15	21	92	—	—	—	—	32	—	—
- 45			45									
- 75			75									
-DTB12- 15		2.5~13	15	30								
- 45			45									
- 75			75									
S32 -DTB 7- 15	6	1 ~ 7	15	21	70	—	—	—	—	32	—	—
-DTB12- 40		2.5~13	40	30								

Option

- DETa-1 collet→P.31 • Wrench→P.31 • Retention knob (BT)→P.64
- Cleaning tool→P.31

Std. Access.

- Coolant duct(Fixed)(HSK-A)→P.104

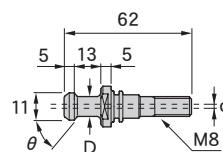
Note

- Swing type coolant ducts are available upon request(HSK-A). For details, please contact us.
- BT30-DTB12 requires the dedicated retention knob, which has the feature of draw bolt. Please choose P-538 or P-535.

Caution

- For the E32-DTB7-65K, collet collapsibility is not available. The clamping diameter applies only to nominal end-mill shank size.
- HSK-E shank doesn't come with a coolant duct and cannot be attached.
- For precautions and maintenance, refer to page 115.

Retention knob for BT30-DTB12

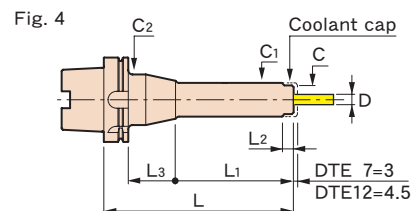
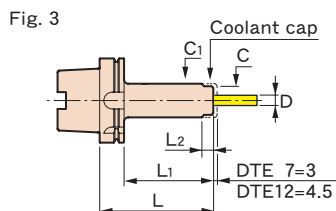
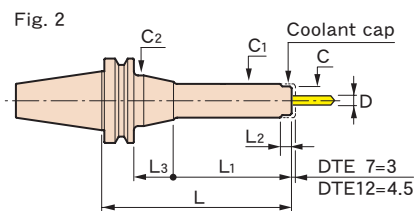
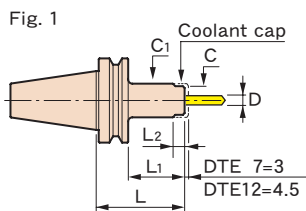


CODE	φD	φd	θ	Note
P-538	8	4	45	In accordance with MAS-1
-535	7.5	2.5	60	In accordance with MAS-2

Cutting data

➔ P. 29

DETa-1 Collet Holder E type (DTE)



CODE	Fig.	φD	L	φC	L1	L2	L3	φC1	φC2	kg	N
BT30-DTE 7- 60-MAS1	1	1 ~ 7	60	24	38	11.5	—	29	—	0.6	3.2
-MAS2											
-DTE12- 75-MAS1		2.5 ~ 13	75	34	53	14		40		0.9	4.9
-MAS2											
BT40-DTE 7- 90	1	1 ~ 7	90	24	63	11.5	—	29	—	1.3	4.9
-120	2		120		70		23		40	1.5	6.2
-150			150				53		50	1.9	7.2
-180			180				83			2.4	8.9
-210			210				113			2.9	9.8
-DTE12- 90	1	2.5 ~ 13	90	34	63	14	—	40	—	1.5	6.1
-120			120		93					1.8	7.4
-150			150		123					2.1	9.4
-180	2		180		140		13		50	2.5	9.6
-210			210				43			2.9	11.7
BT50-DTE 7-105	1	1 ~ 7	105	24	67	11.5	—	29	—	3.9	15.6
-135	2		135		70		27		40	4.2	16.5
-165			165				57		50	4.6	18.7
-225			225				117		60	6.0	24.4
-285			285				177			7.3	30.1
-DTE12-105	1	2.5 ~ 13	105	34	67	14	—	40	—	4.2	16.6
-135			135		97					4.5	18.9
-165			165		127					4.8	21.0
-225	2		225		140		47		60	5.7	24.5
-285			285				107		70	7.6	27.1
A40 -DTE 7- 95	3	1 ~ 7	95	24	75	11.5	—	29	—	0.6	4.4
-DTE12-105		2.5 ~ 13	105	34	85	14		40		0.9	14.4
A50 -DTE 7-105	3	1 ~ 7	105	24	79	11.5	—	29	—	0.7	9.8
-DTE12-120		2.5 ~ 13	120	34	94	14		40		1.1	12.5
A63 -DTE 7-105	4	1 ~ 7	105	24	70	11.5	9	29	40	1.1	12.3
-120			120				24			1.2	12.8
-150			150				54		50	1.7	14.3
-180			180				84			2.1	15.7
-DTE12-120	3	2.5 ~ 13	120	34	94	14	—	40	—	1.5	14.9
-150			150		124					1.8	16.0
-180	4		180		140		14		50	2.3	19.1
A100-DTE 7-135	4	1 ~ 7	135	24	70	11.5	36	29	40	2.7	31.0
-165			165				66		50	3.2	32.4
-225			225				126		60	4.7	35.7
-DTE12-135	3	2.5 ~ 13	135	34	106	14	—	40	—	3.0	33.1
-165			165		136					3.3	36.2
-225	4		225		140		56		60	4.4	40.3

CODE	Fig.	φD	L	φC	L1	L2	L3	φC1	φC2	Kg (lbs)	N
DN40AD-DTE 7- 90	2	1 ~ 7	90	24	58	11.5	12.9	29	45	1.2	5.4
-120			120		70		30.9			1.4	6.4
-DTE12- 90		2.5~13	90	34	58.8	14	12.1	40		1.3	6.1
-150			150		118.8					1.9	9.3
DN50AD-DTE 7-105	2	1 ~ 7	105	24	70	11.5	15.9	29	70	3.4	12.0
-165			165				60		50	4.2	15.1
-DTE12-105		2.5~13	105	34		14	15.9	40	70	3.6	12.6
-165			165		130					4.2	17.0
CT40-DTE 7- 90	2	.04~.28	3.54	.94	2.17	.45	.63	1.14	1.75	2.7	5.2
-120			4.72		2.75		1.22			3.3	6.2
-DTE12- 90		.10~.51	3.54	1.34	2.17	.55	.63	1.57		3.1	6.1
-150			5.91		4.53					4.2	9.6
CT50-DTE 7-105	2	.04~.28	4.13	.94	2.75	.45	.63	1.14	2.75	7.5	11.8
-165			6.5				2.36		1.97	9.0	15.0
-DTE12-105		.10~.51	4.13	1.34		.55	.63	1.57	2.75	7.9	12.9
-165			6.5		5.12					9.3	17.3

Option

- DETa-1 collet→P.31 • Wrench→P.31 • Retention knob (BT40/50)→P.64
- Tap rod (DTE12)→P.30 • Spacer • Coolant cap
- Spacer set • Coolant-through system

Std. Access.

- Coolant duct (Fixed)(HSK-A)→P.104 • Retention knob (BT30)

Note

- Swing type coolant ducts are available upon request (HSK-A). For details, please contact us.

Caution

- A dedicated retention knob is supplied with the BT30-DTE as a standard accessory. When ordering, specify whether a MAS-1 or MAS-2 retention knob is required. To replace the retention knob, please contact us.
- For precautions and maintenance, refer to page 115.

Cutting data

DTA type

S50C φ3 Carbide drill 3 flutes n 9000 min ⁻¹ Vf 900 mm/min Vc 85 m/min f 0.1 mm/rev E32-DTA3-75	S50C φ3 Carbide Square endmill 3 flutes n 6000 min ⁻¹ Vf 150 mm/min Vc 60 m/min fz 0.013 mm/t E32-DTA3-75	Aluminum φ8.5 Carbide drill n 10000 min ⁻¹ Vf 5000 mm/min Vc 267 m/min f 0.5 mm/rev BT40-DTA12-165
--	---	--

DTB type

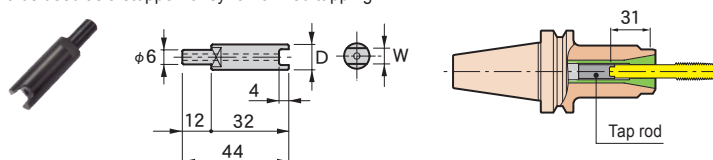
A6061 φ0.8 Straight drill n 6000 min ⁻¹ Vf 60 mm/min Vc 15 m/min BT40-DTB3-110L	A5052 φ0.8 Straight drill n 10000 min ⁻¹ Vf 400 mm/min Vc 25 m/min ※234 pcs. A63-DTB3-75	S50C R1.5 Carbide ball endmill n 12500 min ⁻¹ Vf 1560 mm/min Vc 120 m/min f 0.125 mm/rev E32-DTB3-65	S50C φ3 Carbide Square endmill 2 flutes n 6000 min ⁻¹ Vf 150 mm/min Vc 60 m/min fz 0.013 mm/t E32-DTB3-65
S50C R1.5 Carbide ball endmill n 12500 min ⁻¹ Vf 1560 mm/min Vc 120 m/min f 0.125 mm/rev E32-DTB3-65	STAVAX(42HRC) φ0.6 Carbide straight drill n 3715 min ⁻¹ Vf 30 mm/min Vc 7 m/min f 0.01 mm/rev F63-DTB3-75	SKD61(46HRC) R3 Carbide ball endmill 2 flutes n 5000 min ⁻¹ Vf 1500 mm/min Vc 94 m/min fz 0.15 mm/t BT40-DTB7-105	SKD61(46HRC) φ10 Carbide endmill 2 flutes n 4500 min ⁻¹ Vf 1500 mm/min Vc 141 m/min fz 0.17 mm/t BT40-DTB12-90

DTE type

S50C φ6 Carbide drill n 6369 min ⁻¹ Vf 1592 mm/min Vc 120 m/min f 0.25 mm/rev A63-DTE7-105	SKD61(53HRC) R5 Carbide ball endmill 2 flutes n 20000 min ⁻¹ Vf 6000 mm/min Vc 628 m/min fz 0.15 mm/t A63-DTE12-120
--	--

Tap rod (DTE12type)

To be used as a stopper for synchronized tapping.

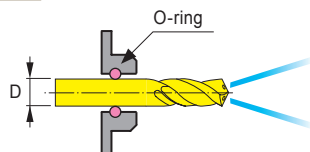


CODE	Applicable taps	φD	W	Collet
TR-5	JIS M 8	10.5	5	D12-12
-5.5	JIS M10		5.5	
-6	OSG M 8 M10		6	
-6.5	JIS M12	12	6.5	-13
-8	OSG M12		8	

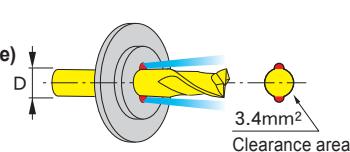
COOLANT-THROUGH SYSTEM (OPTION)

Spacer

EA type



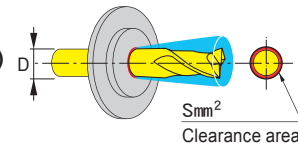
EBM type (Groove-type)



CODE	Holder type	φD	Q'ty
7EA- 3.5-3	DTE 7	3 ~ 3.5	3pcs. 1set
- 4 -3		3.5 ~ 4	
- 4.5-3		4 ~ 4.5	
- 5 -3		4.5 ~ 5	
- 5.5-3		5 ~ 5.5	
- 6 -3		5.5 ~ 6	
- 6.5-3		6 ~ 6.5	
- 7 -3		6.5 ~ 7	
12EA- 3.5-3	DTE12	3 ~ 3.5	3pcs. 1set
- 4 -3		3.5 ~ 4	
- 4.5-3		4 ~ 4.5	
- 5 -3		4.5 ~ 5	
- 5.5-3		5 ~ 5.5	
- 6 -3		5.5 ~ 6	
- 6.5-3		6 ~ 6.5	
- 7 -3		6.5 ~ 7	
- 8 -3		7 ~ 8	
- 9 -3		8 ~ 9	
-10 -3		9 ~ 10	
-11 -3		10 ~ 11	
-12 -3		11 ~ 12	
-13 -3		12 ~ 13	

CODE	Holder type	φD	Q'ty
7EBM- 3-3	DTE 7	3	3pcs. 1set
- 4-3		4	
- 6-3		6	
12EBM- 3-3	DTE12	3	3pcs. 1set
- 4-3		4	
- 6-3		6	
- 8-3		8	
-10-3		10	
-12-3		12	

EBS type (Round-type)



CODE	Holder type	φD	S	Q'ty
7EBS- 3.6-3	DTE 7	3	3.1	3pcs. 1set
- 4.5-3		4	3.3	
- 6.4-3		6	3.9	
12EBS- 3.6-3	DTE12	3	3.1	3pcs. 1set
- 4.5-3		4	3.3	
- 6.4-3		6	3.9	
- 8.4-3		8	4.6	
-10.3-3		10	4.8	
-12.3-3		12		

Spacer blank type

Depend on cutter or application, please modify.



CODE	Holder type	Q'ty
7EBF-BL-5	DTE 7	5pcs.
12EBF-BL-5	DTE12	1set

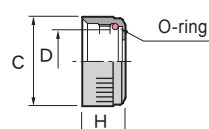
Spacer set

CODE	Holder type	Contents of set			
7ES-A	DTE 7	7EA -3.5~7	(1ea.)	CLP- 7E	1pc.
		7EBM-3, 4, 6	total		
		7EBS-3.6, 4.5, 6.4	14pcs.		
12ES-A	DTE12	12EA -3.5~13	(1ea.)	CLP-12E	1pc.
		12EBM-3~12	total		
		12EBS-3.6~12.3	26pcs.		

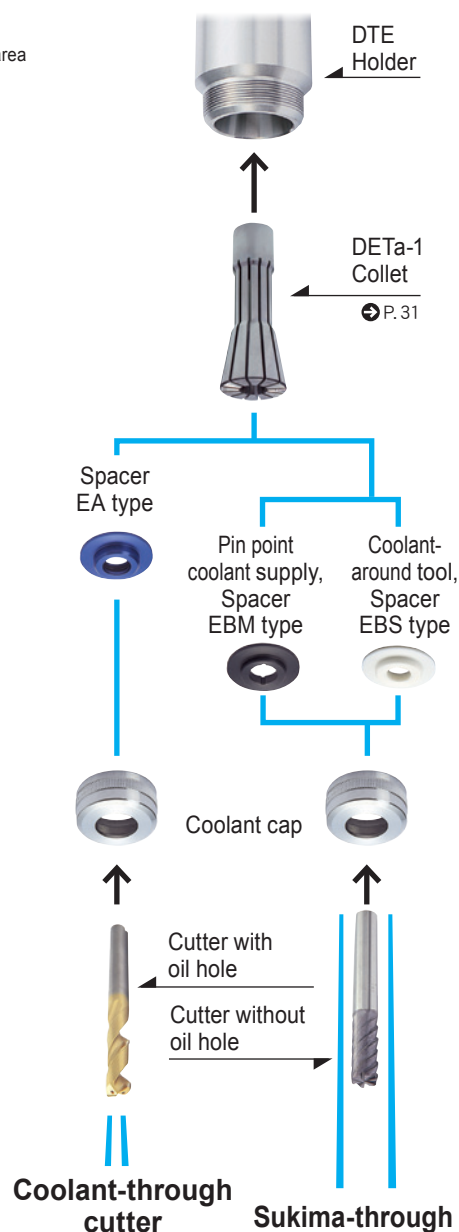


■ Std. Access.
● Collet driver

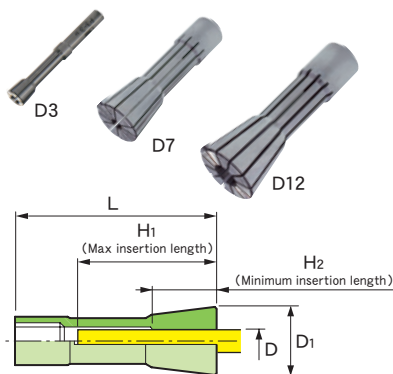
Coolant cap



CODE	Holder type	φD	φC	H
CLP- 7E	DTE 7	21	29	14
-12E	DTE12	30	40	18



DETa-1 COLLET

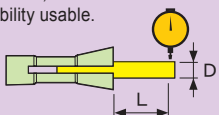


Highest guaranteed accuracies throughout entire chucking range(100% inspection)

Collet	Run-out accuracy(μm)	
	D3	D7/D12
Precision Collet	3 ⁽⁶⁾	5 ⁽¹⁰⁾
Standard Collet	5 ⁽¹⁰⁾	10 ⁽¹⁵⁾

※Accuracy of collet alone,
() means collapsibility usable.

D	L
~10	4×D
10~13	40



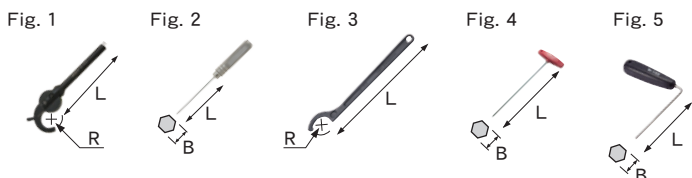
CODE		φD	Holder type	Collap-sibility	φ D ₁	L	H ₁	H ₂				
Standard Collet	Precision Collet											
D 3- 0.6	Add “-P” after the standard type item code. 〈 Example 〉 D12 - 6 - P	0.5 ~ 0.6	DTA 3 DTB 3	0.1	7	40	30	6.9				
- 0.8		0.6 ~ 0.8		0.2								
- 1		0.8 ~ 1		0.5				7				
- 1.5		1 ~ 1.5						7.2				
- 2		1.5 ~ 2						7.3				
- 2.5		2 ~ 2.5						7.4				
- 3		2.5 ~ 3						7.5				
- 3.175		2.7 ~ 3.175						7.6				
D 7- 1.5		1 ~ 1.5	DTA 7 DTB 7 DTE 7	0.5	17	50	36	7				
- 2		1.5 ~ 2						10				
- 2.5		2 ~ 2.5						12				
- 3		2.5 ~ 3						1				14
- 4		3 ~ 4										16
- 5		4 ~ 5										
- 6		5 ~ 6										
- 7	6 ~ 7											
D12- 4	2.5 ~ 4	DTA12 DTB12 DTE12	1.5	26	70	50	16					
- 6	4 ~ 6		2				20					
- 8	6 ~ 8		22									
-10	8 ~ 10											
-12	10 ~ 12											
-13	11 ~ 13											

Spanner · Wrench

CODE	Holder type	Fig.	B	R	L	Tightening torque (N·m)
F- 22	DTA 3	1	-	22	110	2~ 3
DW-2.5-110	DTB 3	2	2.5	-		
F- 38	DTA 7	3	-	19	148.5	20~40
- 45	DTA12			22.5	225	70
TW-4	E32 - DTB 7	4	4	-	77	14
-5	DTB 7		5		153	
-6	DTB12		6		173	34
W-135DR	DTE 7	5	5		110	14
	DTE12					18
	E40 - DTB12					
	E50 - DTB12					
	F63 - DTB 7					14
	F63 - DTB12					18

■Std. Access.

- Collet driver (F-38, F-45, TW-5, TW-6, W135-DR)



Adjustable torque wrench

The nut-tightening torque can be adjusted more properly.

Spanner for torque wrench	Adjustable torque wrench	Holder type
F-38AW	AW-1	DTA 7
-45AW		DTA12

Attaching a cutting tool (DTB, DTE)

If a retention knob with a hole is used, direct tightening of cutting tools is possible.

Required hole dia of retention knob

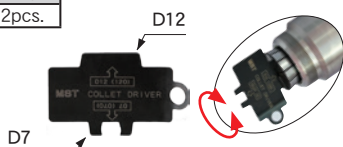
DTB 3	: φ4 ~
DTB 7, DTE	: φ6 ~
DTB12	: φ7 ~



Collet driver

The DETA-1 collet can be attached/detached with ease.

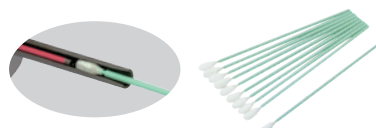
CODE	Q'ty
DR-1	2pcs.



Cleaning tool felt type

Apply this tool to clean the hard-to-clean inside portion of DTA3 and DTB3 holders. The initial accuracy of tool holders can be made to last a long time by keeping the internal bore clean.

CODE	Q'ty
PCT01-10	10 pcs.
-25	25 pcs.



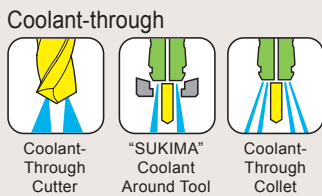
COLLET HOLDER

Taper collet chuck

The optimum holder choices for a variety of applications!!

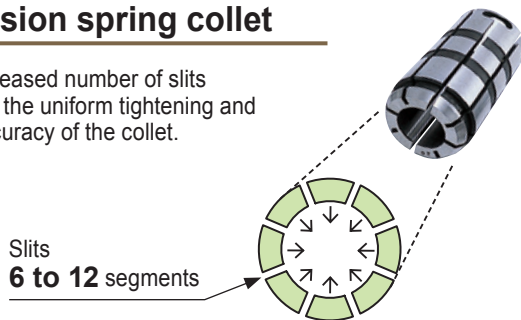


CTA



Precision spring collet

The increased number of slits ensures the uniform tightening and high accuracy of the collet.

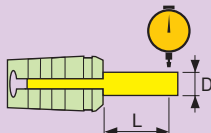


Using a high-precision collet will increase the life of your tools. P. 117

Highest guaranteed accuracies throughout entire chucking range (100% inspection)

Collet	Run-out accuracy(μm)
Precision Collet	5
Standard Collet	10

※Accuracy of collet alone

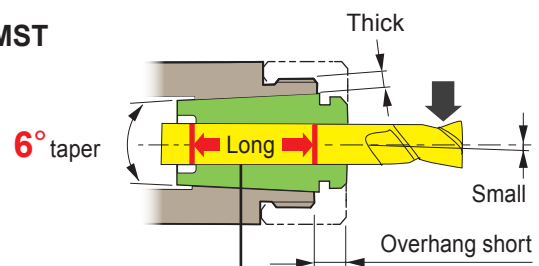


D	L
~10	4×D
10 ~20	40
20.5~42	60

Ideal taper angle

Since the collet angle is smaller than that of typical collets, the collapsibility is also small. However, because the collet can be inserted deeper into the main body, the gripping area increases, it provides stable run-out accuracy and high gripping force and rigidity for end milling. This collet as a taper angle of 6°, the ideal angle for run-out accuracy, gripping force and rigidity.

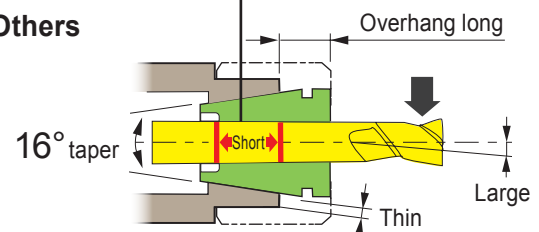
MST



True clamping length

When the taper angle decreases, the collapsibility decreases; however, the true clamping length increases.

Others



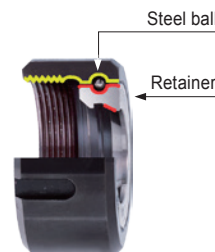
Thick and highly rigid body

- Thick body.
- The nut part is compact and has less interference.
- Short holder length.

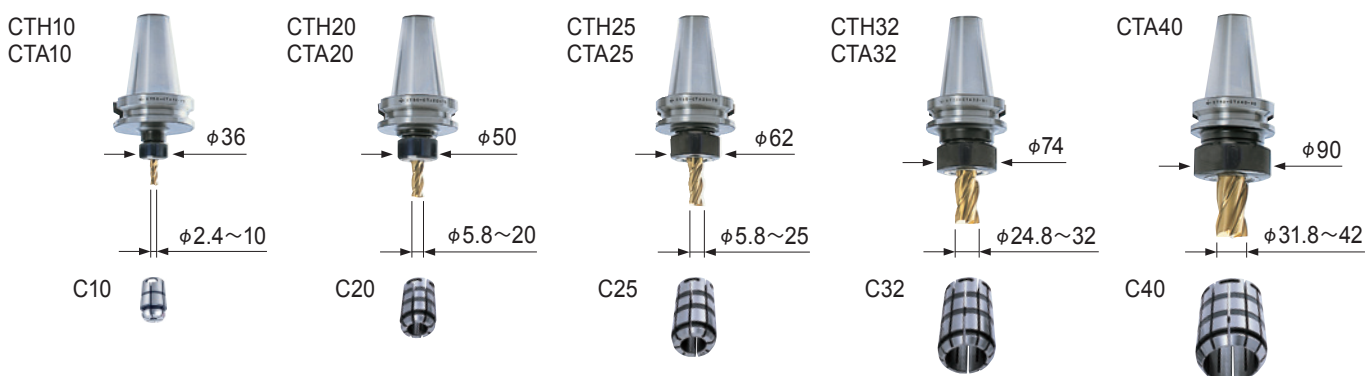


Nut for high accuracy

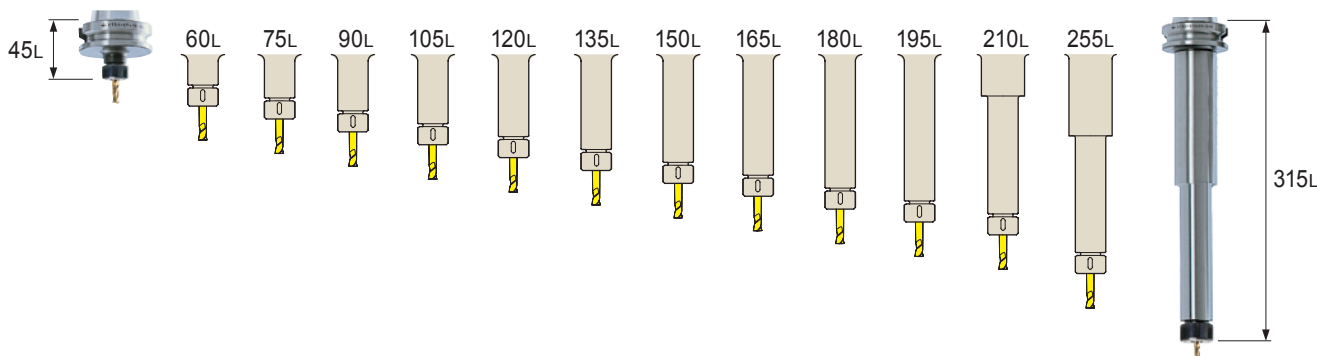
- Because steel ball bearings are built into the nut, the collet does not get twisted when tightened.
- The threaded area and the ball bearing grooves for steel bearings are finished using the same process after heat treatment, thus providing high accuracy with no distortion.
- Stable tightening force and smoothly rotation achieve high accuracy.



Five main body types based on cutting tool size

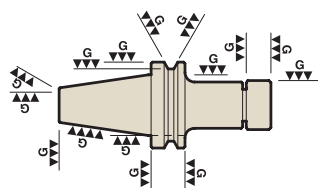


A variety of holder lengths 45L~315L



Pre-balanced by previously designing (CTH_{type})

The collet holder (CTH type) is pre-balanced by previously designing the holder to be as axisymmetrical as possible. When used with the precision collet, it enables stable machining during high-speed machining.



Comparison in imbalance value

Holder code	Spring collet used	Cutter used		Imbalance value (g·mm)
		Diameter	Overhang	
BT30-CTH10-75	Precision collet C10-10-P	φ10	40	3.3
-CTA10-75	Standard collet C10-10			13.1

Longer cutter life using through-spindle capability
➔ P. 117

Coolant-through system

The spindle-through feature can be used whether the cutting tool has oil holes or not. ➔ P. 39

Pressure
7 Mpa

Coolant-Through Cutter



"SUKIMA" Coolant Around Tool



Coolant-Through Collet



COLLET HOLDER for high-speed (CTH)

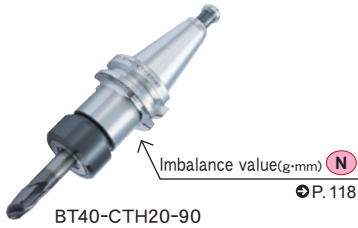


Fig. 1

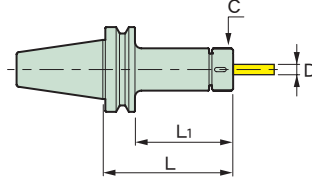


Fig. 2

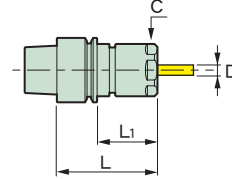


Fig. 3

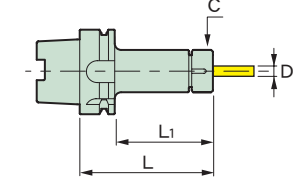


Fig. 4

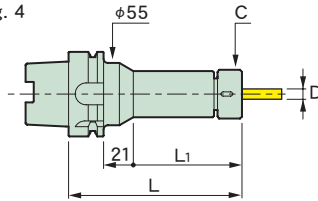
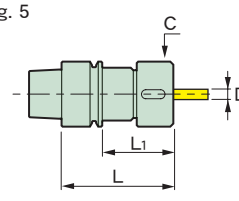


Fig. 5



CODE	Fig.	φD	L	φC	L ₁	Kg	N
BT30-CTH10- 45	1	2.4~10	45	36	23	0.5	2.6
- 75			75		53	0.6	2.7
-CTH20- 60		5.8~20	60	50	38	0.9	4.3
- 90			90		68		4.7
BT40-CTH10- 60	1	2.4~10	60	36	33	1.1	3.8
- 90			90		63	1.3	4.0
-120			120		93	1.4	4.4
-150			150		123	1.6	4.6
-CTH20- 60		5.8~20	60	50	33	1.2	6.4
- 90			90		63	1.4	7.0
-120			120		93	1.7	7.3
-150			150		123	2.0	7.6
-CTH25- 75		5.8~25	75	62	48	1.5	8.9
-105			105		78	2.0	9.8
BT50-CTH10-105	1	2.4~10	105	36	67	3.8	5.3
-135			135		97	4.0	5.7
-165			165		127	4.1	6.1
-CTH20-105		5.8~20	105	50	67	4.2	8.3
-135			135		97	4.6	9.0
-165			165		127	4.9	9.4
-CTH25- 75		5.8~25	75	62	37	3.8	10.3
-105			105		67	4.4	11.0
-CTH32- 90		24.8~32	90	74	52	4.1	14.4
A40 -CTH10- 55	3	2.4~10	55	32	35	0.4	3.6
- 75			75		55	0.5	3.9
- 90			90		70	0.6	4.0
-CTH20- 75		5.8~20	75	50	55	0.7	7.3
- 90			90		70	0.8	7.0
-CTH25- 95		5.8~25	95	55	75	0.9	10.7
A50 -CTH10- 55	3	2.4~10	55	36	29	0.6	6.6
- 75			75		49	0.7	6.9
A50M-CTH20- 80※		5.8~20	80	50	54	0.9	10.2
-105※			105		79	1.2	11.1
-CTH25-105※		5.8~25		62		1.3	14.7

CODE	Fig.	φD	L	φC	L ₁		N
A63 -CTH10- 75	3	2.4~10	75	36	49	0.9	10.2
- 90			90		64	1.0	10.4
-120			120		94	1.2	10.7
-150			150		124	1.4	11.0
-CTH20- 90		5.8~20	90	50	64	1.2	14.1
-120			120		94	1.5	14.0
-150			150		124	1.9	14.9
-CTH25-105		5.8~25	105	62	79	1.6	17.1
A100-CTH10-135	3	2.4~10	135	36	106	2.7	25.1
-165			165		136	2.9	25.4
-225			225		175	3.4	26.0
-CTH20-135	3	5.8~20	135	50	106	3.2	28.5
-165			165		136	3.6	29.5
-225			225		196	4.3	31.1
-CTH25-135		5.8~25	135	62	106	3.7	31.4
-165			165		136	4.3	32.7
-195			195		166	4.8	34.1
E32 -CTH10- 55	5	2.4~10	55	32	35	0.2	1.2
-CTS10- 50※	2		50	26	30		0.9
E40 -CTH10- 55	5	2.4~10	55	32	34	0.4	1.4
E50 -CTH10- 60	5	2.4~10	60	36	34	0.7	2.1
- 90			90		64	0.9	2.3
-CTH20- 75		5.8~20	75	50	49		3.8
F63 -CTH10- 60	5	2.4~10	60	36	34	0.9	2.2
- 90			90		64	1.1	2.4
-CTH20- 75		5.8~20	75	50	49		3.9
DN40AD-CTH20- 75	1	5.8~20	75	50	56	1.1	5.4
-135			135		116	1.7	5.9
-CTH25- 75※		5.8~25	75	62	56	1.4	7.2
DN50AD-CTH20-105	1	5.8~20	105	50	70	3.6	9.1
-165			165		130	4.4	9.9
-CTH25-105		5.8~25	105	62	70	3.8	10.9

■Option

- Spring collet(Precision collet)→P.38 • Spanner→P.38 • Adjust screw→P.37
- Retention knob (BT)→P.64 • Adjustable torque wrench→P.38
- Coolant screw→P.39 • Sukima nut→P.39 • Collet remover→P.38

■Std. Access.

- Nut (NUA-CTH)→P.37 • Coolant duct(Fixed) (HSK-A)→P.104

■Note

- Swing type coolant ducts are available upon request (HSK-A). For details, please contact us.
- Applicable for coolant-through methods →P.39
- Be sure to use precision-type spring collet.

■Caution

- ※The undercut area of the A50M and DN40AD-CTH25 are different from the standards. Please be careful to check for interference with the ATC arm.
- ※CTS10 = Collapsibility cannot be used. The collet can only chuck a tool of the reference diameter.
- HSK-E and F shank don't come with a coolant duct and cannot be attached.
- For precautions and maintenance, refer to page 116.

COLLET HOLDER(CTA)



BT50-CTA20-135



ST32T-CTA20-90

Fig. 1

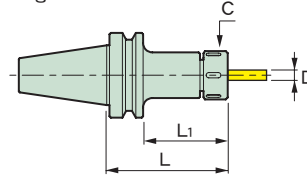


Fig. 2

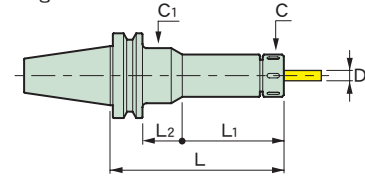


Fig. 3

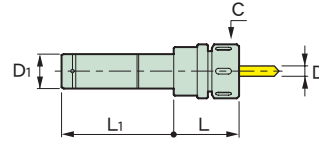
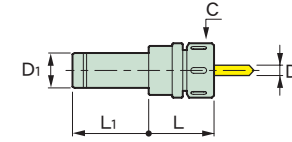


Fig. 4



CODE	Fig.	φD	L	φC	L ₁	L ₂	φC ₁	 Kg
BT30-CTA10- 45	1	2.4~10	45	36	23	—	—	0.5
- 75			75		53			0.7
-105			105		83			0.9
-CTA20- 60		5.8~20	60	50	38			0.6
- 90			90		68			0.9
BT40-CTA10- 60	1	2.4~10	60	36	33	—	—	1.1
- 90			90		63			1.3
-120			120		93			1.5
-150			150		123			1.7
-180			180		153			1.9
-210			210		155			2.1
-CTA20- 60	1	5.8~20	60	50	33	—	—	1.1
- 90			90		63			1.4
-120			120		93			1.7
-150			150		123			2.1
-180			180		153			2.5
-210			210		183			2.9
-CTA25- 75		5.8~25	75	62	48			1.2
-105			105		78			1.6
-135			135		108			2.0
-CTA32-105		24.8~32	105	74	78			1.8
BT50-CTA10-105	1	2.4~10	105	36	67	—	—	3.8
-135			135		97			3.9
-165			165		127			4.0
-195			195		157			4.2
-255			2		255			155
-315	315	155		122	5.8			
-CTA20-105	1	5.8~20	105	50	67	—	—	4.0
-135			135		97			4.4
-165			165		127			4.8
-195			195		157			5.2
-255	2	255	180	37	65	6.3		
-315						315	97	7.7
-CTA25- 75	1	5.8~25	75	62	37	—	—	3.6
-105			105		67			4.2
-135			135		97			4.8
-165			165		127			5.4
-195			195		157			6.0
-255			255		217			7.2
-315			315		225			8.7
-CTA32- 90	1	24.8~32	90	74	52	—	—	4.0
-120			120		82			4.7
-150			150		112			5.4
-180			180		142			6.1
-CTA40- 90	1	31.8~42	90	90	52			4.0
-120			120		82			5.0

CODE	Fig.	φD	L	φC	L ₁	φD ₁	G	 Kg (lbs)
DN40AD-CTA20- 75	1	5.8~20	75	50	56	—	—	1.1
-135			135		116			1.9
-CTA25- 75		5.8~25	75	62	56			1.7
DN50AD-CTA20-105	2	5.8~20	105	50	70	—	—	2.3
-165			165		130			3.0
-CTA25-105		5.8~25	105	62	70			2.9
CT40 -CTA20- 75	1	.23~.79	2.95	1.97	2.20	—	—	2.65
-135			5.31		4.57			3.75
-CTA25- 75		.23~.98	2.95	2.44	2.20			3.09
CT50 -CTA20-105	1	.23~.79	4.13	1.97	2.68			7.94
-165			6.50		5.12			9.70
-CTA25-105		.23~.98	4.13	2.44	2.68			8.60
ST20T-CTA10	3	2.4~10	35	36	110	20	—	—
ST25T-CTA10	3	2.4~10	35	36	110	25	—	—
-CTA20		5.8~20	60	50				
ST32T-CTA10- 30	3	2.4~10	30	36	100	32	—	—
- 60			60					
- 90			90					
-120			120					
-CTA20- 60		5.8~20	60	50				
- 90			90					
-120			120					
ST42T-CTA25- 90	3	5.8~25	90	62	110	42	—	—
-120			120					
S 32 -CTA10	4	2.4~10	30	36	70	32	—	—
-CTA20		5.8~20	60	50				
S 42 -CTA10	4	2.4~10	30	36	80	42	—	—
-CTA20		5.8~20	35	50				
-CTA25		5.8~25	80	62				

Option

- Spring collet→P.38 • Spanner→P.38 • Retention knob(BT)→P.64
- Adjustable torque wrench→P.38

Std. Access.

- Nut(NUA-CTA)

Note

- Applicable for coolant-through methods. Please contact us for more information.

Caution

- The undercut area of the DN40AD-CTA25 and CT40-CTA25 are different from the standard. Please be careful to check for interference with the ATC arm.
- For precautions and maintenance, refer to page 116.

Nut



Fig. 1

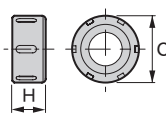


Fig. 2

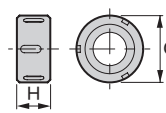
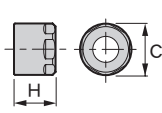


Fig. 3



CODE	Fig.	φC	H	Holder type
NUA-CTA10	1	36	18	CTA10
-CTA20		50	25	CTA20
-CTA25		62	28.5	CTA25
-CTA32		74	32	CTA32
-CTA40	2	90	36	CTA40
-CTH10		36	18	CTH10
-CTH20		50	25	CTH20
-CTH25		62	28.5	CTH25
-CTH25-55		55		CTH25(A40)
-CTH32		74	32	CTH32
-CTH10-32		32	18	CTH10(A40, E32, E40)
-CTS10	3	26	21	CTS10

Adjust screw

Fig. 1

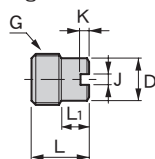
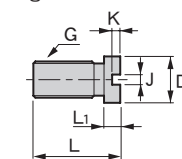
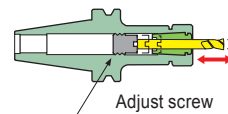


Fig. 2



The overhang of the cutting tool can be adjusted.

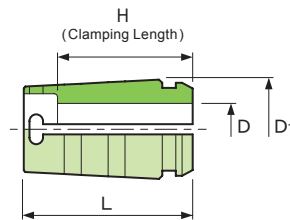


CODE	Fig.	L	φD	L ₁	J	K	G	Holder type
AJC-M14	1	22	10	8	1.5	3	M14×1.5	CTA10 ST25T-CTA20
-M24		27	20	13	5	4	M24×1.5	CTA20 (※1) BT40-CTA25- 75 BT40-CTA32-105
-M28								25
-M18		24	15	8		M18×1.5	BT30-CTA20 , ST32T-CTA20	
-M18L		2	43		23			BT50-CTA32 , CTA40

※1: Except BT30, SE30M, ST25T and ST32T

※2: Except BT40-CTA25-75

SPRING COLLET



CODE		ϕD	Holder type	Collapsibility	L	ϕD_1	H
Standard Collet	Precision Collet						
C10-D	Add "-P" after the standard type item code. 〈 Example 〉 C10 - 6 - P	2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10	CTH10 CTA10 CTS10*	0.2	26	17.2	D=2.6~5(Except 3,4) → 16 3, 4, 5.2 ~ 5.8 → 18 6 ~ 10 → 20
C20-D		6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10 10.2 10.4 10.6 10.8 11 11.2 11.4 11.6 11.8 12 12.2 12.4 12.6 12.8 13 13.2 13.4 13.6 13.8 14 14.2 14.4 14.6 14.8 15 15.2 15.4 15.6 15.8 16 16.2 16.4 16.6 16.8 17 17.2 17.4 17.6 17.8 18 18.2 18.4 18.6 18.8 19 19.2 19.4 19.6 19.8 20	CTH20 CTA20	0.2	50	29.5	D= 6 ~ 9.8 → 32 10 ~ 15.8 → 35 16 ~ 20 → 40
C25-D		6 8 10 10.5 11 11.5 12 12.5 13 13.5 14 14.5 15 15.5 16 16.5 17 17.5 18 18.5 19 19.5 20 20.5 21 21.5 22 22.5 23 23.5 24 24.5 25	CTH25 CTA25	0.2	68	36.5	D= 6 ~ 8 → 38 10 ~ 15 → 48 15.5~20 → 54 20.5~25 → 57
C32-D		25 28 30 32	CTH32 CTA32	0.2	80	46	D=25 ~28 → 66 30 ~32 → 68
C40-D		32 40 42	CTA40	0.2	80	56	D=32 ~40 → 65 42 ~ 70

CODE	ϕD	Holder type	Collapsibility	L	ϕD_1	H
Standard Collet						
C20-D	1/4 5/16 3/8	CTA20	.008	1.97	1.16	1.14
	7/16 1/2					1.30
	5/8 3/4					1.57
C25-D	1/4 5/16 3/8	CTA25	.008	2.67	1.44	1.38
	7/16 1/2					1.81
	5/8 3/4					2.12
	1IN					2.24

Ex. ϕD
C10 - 6 - P

Option

- Collet remover

Note

- Please contact us if you need a size that is not mentioned above, and we will manufacture it for you (standard accuracy collets only).

Caution

- ※CTS10 = Collapsibility cannot be used. The collet can only chuck a tool of the reference diameter.

Spanner · Wrench

Fig. 1



Fig. 2



CODE	Fig.	Holder type	R	L	Tightening torque(N · m)
FC-32	1	CTH10 (A40, E32, E40)	16	120	40~60
-36		CTA10, CTH10	18	208	
-50		CTA20, CTH20	25	281	120
-55		CTH25(A40)	27.5	284	150
-62		CTA25, CTH25	31	312	
-74		CTA32, CTH32	37	364	
-90	2	CTA40	45		
RC-26		CTS10	-	240	-

Adjustable torque wrench

The nut-tightening torque can be adjusted more properly.

Spanner for torque wrench	Adjustable torque wrench	Holder type
FC-36AW	AW-1	CTA10, CTH10
-50AW	-2	CTA20, CTH20

Spring collet standard set



C10-A set

CODE	Collet inner diameter	Q'ty	Holder type
C10-Aset	3, 4, 5, 6, 8, 10	6pcs. (1ea.)	CTA10
C20-Aset	6, 8, 10, 12, 16, 20		CTA20
C25-Aset	6, 8, 10, 12, 16, 20, 25	7pcs. (1ea.)	CTA25

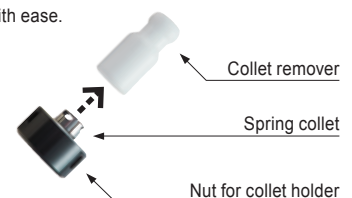
Std. Access.

- Collet remover (C10-A set)

Collet remover

The collet can be attached/detached with ease.

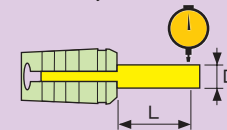
CODE	Holder type
C10-RM	C10
C20-RM	C20
CE-CTS10	CTS10



Highest guaranteed accuracies throughout entire chucking range(100% inspection)

Collet	Run-out accuracy (μm)
Precision Collet	5
Standard Collet	10

※Accuracy of collet alone



D	L
~ 10	4 × D
10 ~ 20	40
20.5 ~ 42	60

Hi-ART MILLING CHUCK

Needle-roller type chuck

The Hi-ART milling chuck achieves the accuracy, rigidity and torque required of a milling chuck. Ideal for use as the end-milling base holder!!



Shrinker

Thanks to the shrinker, the cutter shank is chucked evenly from the bottom to the top of the gripping range, ensuring high rigidity and gripping force.

coolant-through



Nozzle-through

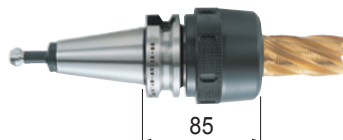


Coolant-Through Cutter



The shortest holder length is 85mm (BT40).

The shorter holder length means increased rigidity. The rigidity of the tool holder is inversely proportional to the cube of the length, meaning the deflection of this holder is about half that of a 105mm holder.



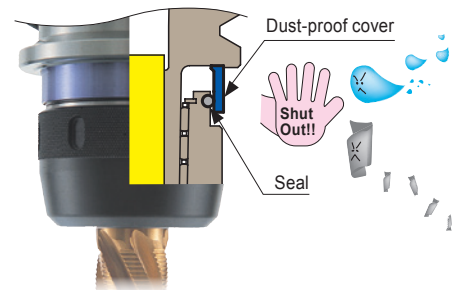
Memory line clearly confirms tightness of the nut.

You can check the recommended degree of tightening at a glance. Also, it only takes about one and half turns for tightening operation.



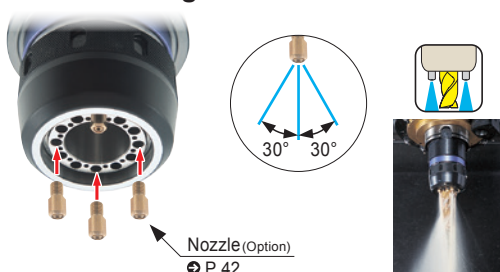
Keeps chips and coolant out completely

Dust-proof cover keeps chips and coolant out completely.

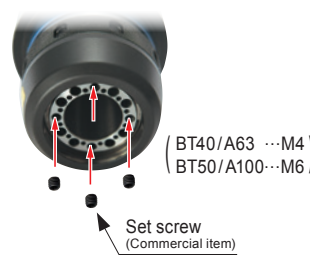


Applicable for coolant-through version

Nozzle-through

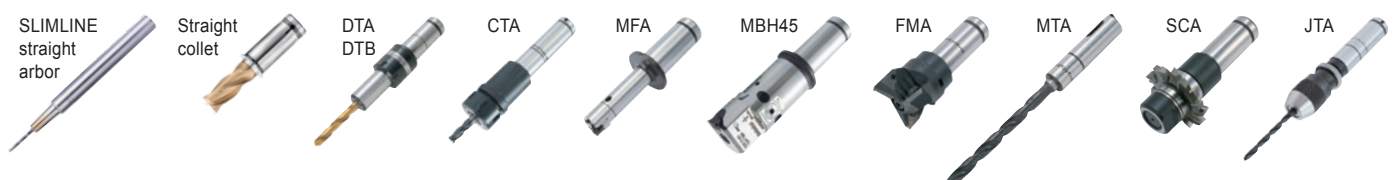


Coolant-Through Cutter

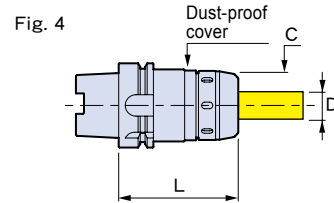
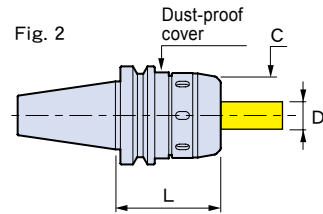
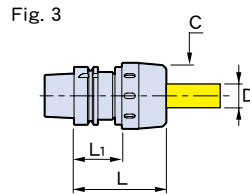
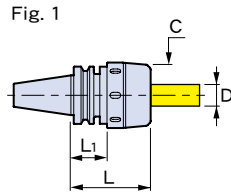


Longer cutter life using through-spindle capability → P.117

Applicable as a base holder for various applications



Hi-ART MILLING CHUCK (ART)



CODE	Fig.	ϕD	L	ϕC	L1	Cutter insertion length	Kg	MAX. min-1
BT40-ART32- 85	1	32	85	72	37	66~ 88	1.9	6,000
- 95			95		47		2.1	
-105			105		57		2.3	
-135			135		87		3.0	
BT50-ART32-105	2	32	105	82	—	66~ 98	5.1	5,000
-135			135				6.4	
-165			165				7.7	
-180			180				8.4	
-ART42-105		42	105	97	—	76~108	5.4	3,000
-135			135				7.1	
A50M-ART32-100	3	32	100	72	44	66~ 71	1.7	6,000
A63 -ART32-100	3	32	100	72	44	66~ 71	2.0	6,000
A100-ART32-135	4	32	135	82	—	66~ 98	5.3	5,000
-ART42-135		42		97		76~ 98	6.1	3,000

Option

- Straight collet→P.42
- Nozzle→P.42
- Spanner with ejection hook→P.42
- Adjust screw→P.42
- Retention knob(BT)→P.64

Std. Access.

- Coolant duct(Fixed)(HSK-A)→P.104

Note

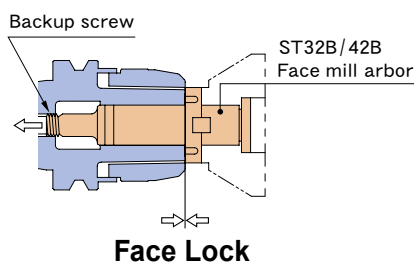
- To utilize the coolant-through nozzle capability, the retention knob with hole and nozzle are required.
- Swing type coolant ducts are available upon request(HSK-A). For details, please contact us.

Caution

- For BT40 type, the outer diameter of the nut is larger than that of the V-flange. Therefore, pay close attention to possible interference with the ATC arm.
- When using the straight arbor in BT40, use the S type (ex.S32-CTA10).
- For A50M and A63, the coolant-through system is not available for straight collets.
- Cutter-through coolant is not available for straight collets.
- For precautions and maintenance, refer to page 116.

Increased rigidity with the Face Lock system (BT)

For face milling applications, combining a holder and a face mill arbor, with backup screw (ST32B, ST42B-FMA), will achieve strong gripping (Face Lock) and improve the rigidity during transverse feed milling.

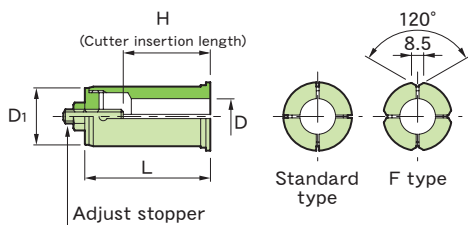


Straight collet

Standard type



F type



CODE		φD	L	φD1	H	Holder type
Standard type	F type					
S32- 6	S32- 6F	6	75	32	30~68	ART32
- 8	- 8F	8			40~68	
-10	-10F	10			50~68	
-12	-12F	12			55~68	
-16	-16F	16			55~68	
-20	-20F	20			55~68	
-25	-25F	25			55~68	
S42- 6	S42- 6F	6	80	42	30~73	ART42
- 8	- 8F	8			45~73	
-10	-10F	10			50~73	
-12	-12F	12			55~73	
-16	-16F	16			55~73	
-20	-20F	20			55~73	
-25	-25F	25			55~73	
-32	-32F	32			60~73	

■ Caution

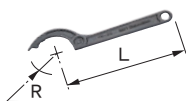
- Remove the adjust stopper when using a straight collet with A50M/ A63.
- When a straight collet with nozzles is used, use the F type.

■ Std. Access.

- Adjust stopper

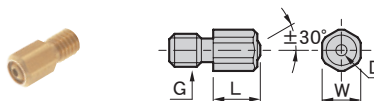
Spanner with ejection hook

This spanner can be used to both tighten a nut and remove a straight collet.



CODE	R	L	Holder type	Clamping torque(N·m)
FM-72	36	204	ART32 (BT40, A50M, A63)	60
-82	41	234	ART32 (BT50, A100)	70
-97	48.5	239	ART42 (BT50, A100)	

Nozzle



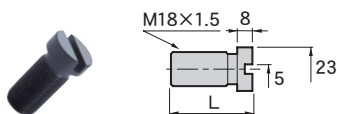
CODE	L	G	W	φD	Holder type	Q'ty
NOZ-M4-12	6.3	M4	4.5	1.2	BT40, A50M, A63	12pcs.
-60						60pcs.
-M6-12	8.5	M6	7	1.8	BT50, A100	12pcs.
-60						60pcs.

■ Std. Access.

- Wrench for attachment

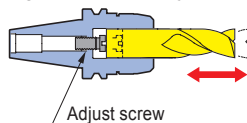
Adjust screw

The overhang of the cutting tool can be adjusted.



CODE	L	Shank type	Q'ty
AJN-M18L	38	BT40	5pcs.
-M18	63	BT50	

The overhang of the cutting tool can be adjusted.



Cutting data

S55C
φ32 roughing end mill 4 flutes

n 350 min⁻¹
Vf 154 mm/min
Vc 35 m/min
fz 0.11 mm/t

BT40-ART32-85

S55C
φ32 roughing end mill 4 flutes

n 350 min⁻¹
Vf 181 mm/min
Vc 35 m/min
fz 0.13 mm/t

BT50-ART32-105

The ace for heavy-duty cutting!! The set screw holder that doesn't need a whistle notch.

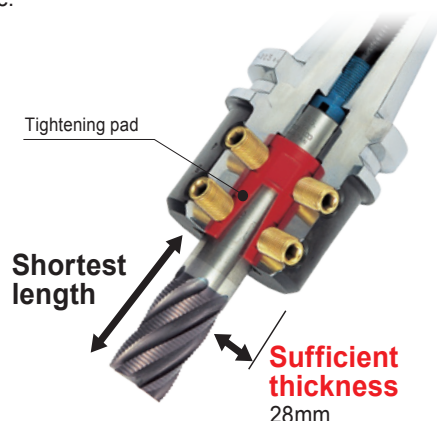
▷ Accuracy → Less than $20\mu\text{m} / 100\text{L}$

▷ Gripping force → $4000\text{N} \cdot \text{m} (\phi 42)$



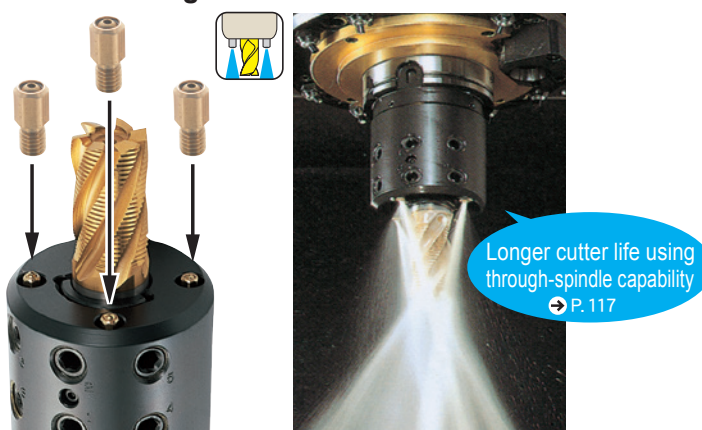
Adjustable projection of cutting tool

Our original tightening pad system allows a round shank, as well as a whistle notch shank end mill, to be used. The projection of the cutting tool, which is critical for heavy-duty cutting, can be made as short as possible.



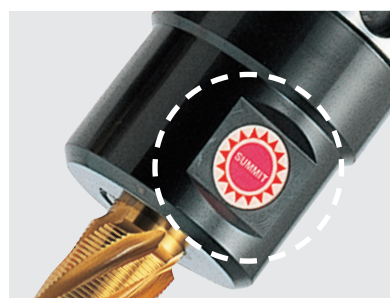
Applicable for coolant-through version (A100)

Nozzle-through

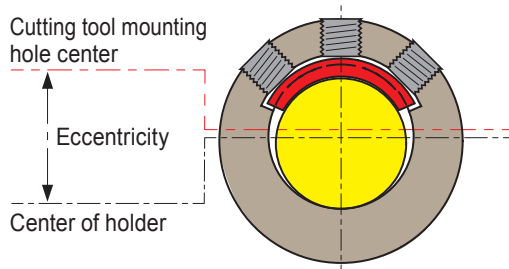


Applicable to high-speed cutting

Pre-balanced design



High accuracy thanks to its eccentric bore design



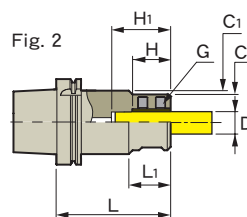
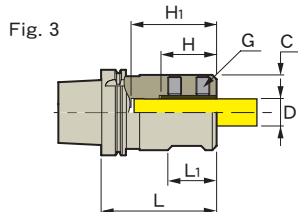
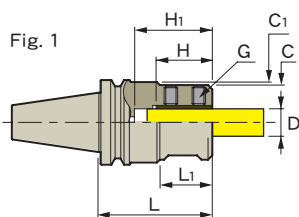
SUMMIT (SLZ)



BT50-SLZ32-105



A100-SLZ32-135



CODE	Fig.	φD	L	L ₁	φC	φC ₁	H	H ₁	G	 Kg
BT50-SLZ25- 90	1	25	90	—	66	—	45	70	4-M12	4.6
-120			120	45		75				5.6
-150			150							6.5
-SLZ32-105		32	105	—	88	—	65	100	6-M16	5.9
-135			135	62		95				7.5
-165			165							9.1
-SLZ42-105		42	105	—	98	—	70	110		6.1
-135			135							7.8
-165			165							9.5
A100-SLZ25-135	2	25	135	66	66	75	45	70	4-M12	4.9
-SLZ32-135	3	32		88	88	—	65	100	6-M16	6.1
-SLZ42-135		42		98	98		70			6.6

Option

- Wrench • Adjust screw (BT50) • Nozzle (HSK-A100) • Retention knob(BT50)→P.64

Std. Access.

- Coolant duct(Fixed) (HSK-A100)→P.104

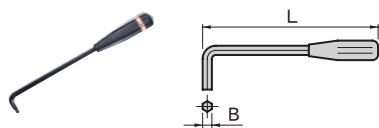
Note

- Swing type coolant ducts are available upon request (HSK-A). For details, please contact us.

Caution

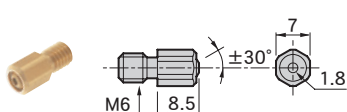
- If the dedicated wrench is not used, use a wrench with a minimum handle length of 30 cm for the M16 or 20 cm for the M12.
- For precautions and maintenance, refer to page 117.

Wrench



CODE	Holder type	B	L	Tightening torque(N·m)
W-206	SLZ25	6	200	40
-308	SLZ32 SLZ42	8	300	100

Nozzle



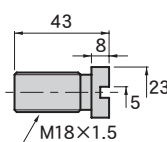
CODE	Q'ty
NOZ-M6-12	12pcs.
-60	60pcs.

Std. Access.

- Wrench for attachment

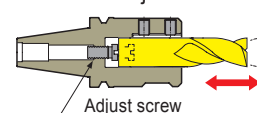
Adjust screw

The overhang of the cutting tool can be adjusted.



CODE	Shank type	Q'ty
AJC-M18L	BT50	5pcs.

The overhang of the cutting tool can be adjusted.



Cutting data

A2017	
	φ38 end mill 4 flutes
n	5000 min ⁻¹
Vf	5000 mm/min
Vc	597 m/min
fz	0.25 mm/t
	BT50-SLZ32-105

S50C	
	φ40 roughing end mill 6 flutes
n	280 min ⁻¹
Vf	168 mm/min
Vc	35 m/min
fz	0.1 mm/t
	BT50-SLZ32-105

S50C	
	φ45 roughing end mill 6 flutes
n	190 min ⁻¹
Vf	114 mm/min
Vc	25 m/min
fz	0.1 mm/t
	BT50-SLZ42-105

The solution for high-efficient machining of deep cavity application.

1

Roughing

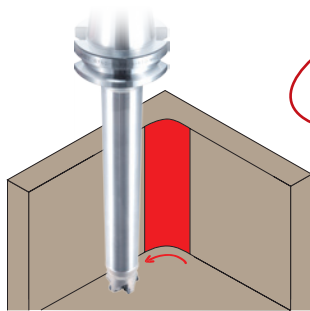
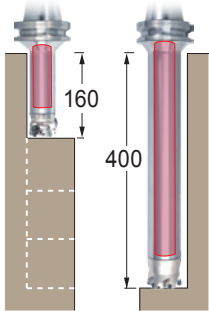
With a solid carbide core

PAT.

FMH RIGID type

⊕ P. 46

Ideal for heavy duty roughing application at shallow and deep machining using a face milling arbor with a large size solid carbide core.



Heavy duty roughing application

MAX. 400

Large size solid carbide

φ40~100 (FMH standard)

2

Semi-finishing

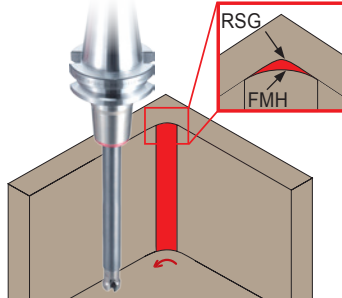
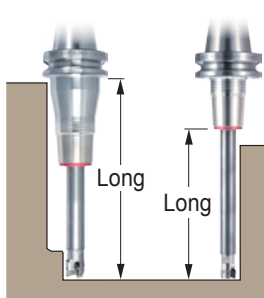
For screw-in end-mills

PAT.

RED SCREW ARBOR

⊕ P. 48

Less vibration at a corner and pocket machining thanks to a solid design using a carbide shaft.



No chattering

MAX. 400

MAX. 340

Carbide

φ16~40 (Screw-in cutter)

3

Finishing

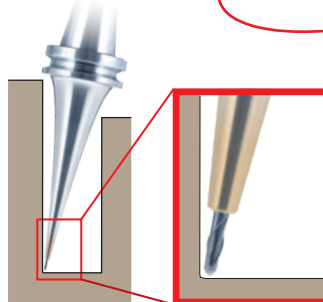
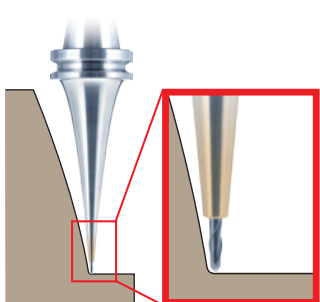
SHRINK-FIT HOLDER

PAT.

SLIMLINE MONO CURVE

Superior Accessibility.

Slim tip design of Curve minimizes cutter projection.



Superior finishing surface.

MAX. 295

Thick

Curve

Slim

φ4~20 (Carbide cutter)

If you would like more detailed information, please contact MST and ask for a SLIMLINE catalog.

FMH RIGID type

PAT.
with a solid carbide core

Achieves higher efficiency during long gauge length machining. Achieves stable machining during long, continuous operation.

▷ Machining efficiency **2 times**
(Compared to conventional holders)



coolant-through

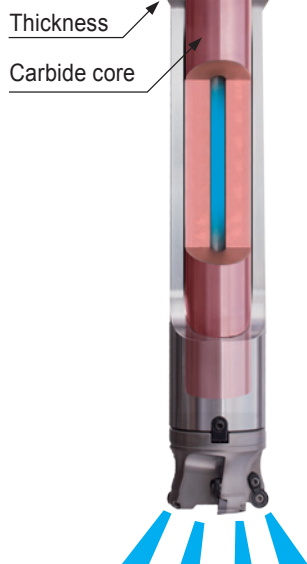
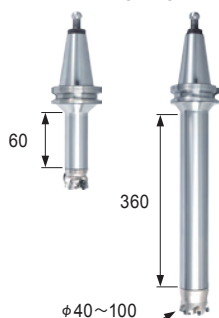


Large dia. Carbide core

The large-diameter carbide core is integrated into the thick body by shrink-fitting. Achieves less deflection and higher efficiency during long-gauge machining. Vibration-free machining leads to longer insert life and achieves stable machining during long and continuous operation.

Even greater efficiency!

Effective length of our line up is from 110mm to 360mm and cutter dia of our line up is from $\phi 40$ to $\phi 100$. Shorter and longer gauge length models added to our current line up. Ideal for deep cavity mold applications. Makes more efficient roughing possible.



FMH standard

Available for FMH standard cutting tools that supplies coolant to the cutting edge properly.

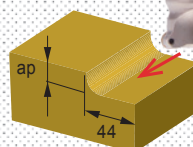
Works with these manufacturers' cutting tools

OSG KYOCERA DIJET INDUSTRIAL Tungaloy
MITSUBISHI MATERIALS Mitsubishi Hitachi Tool Engineering

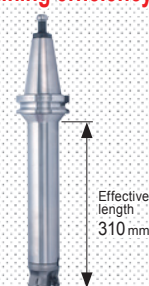
Comparison test

Cutting depth a_p (mm)	0.5	1.0	1.5	2.0
FMH RIGID type BT50-FMH22-60-315H	○	○	○	○
Conventional BT50-FMH22-60-300	○	×	×	×

- Application: Shouldering
- Material: S50C (Mild steel)
- Cutting speed: 220 m/min (S1,112 min⁻¹)
- Feed rate: 1,112 mm/min

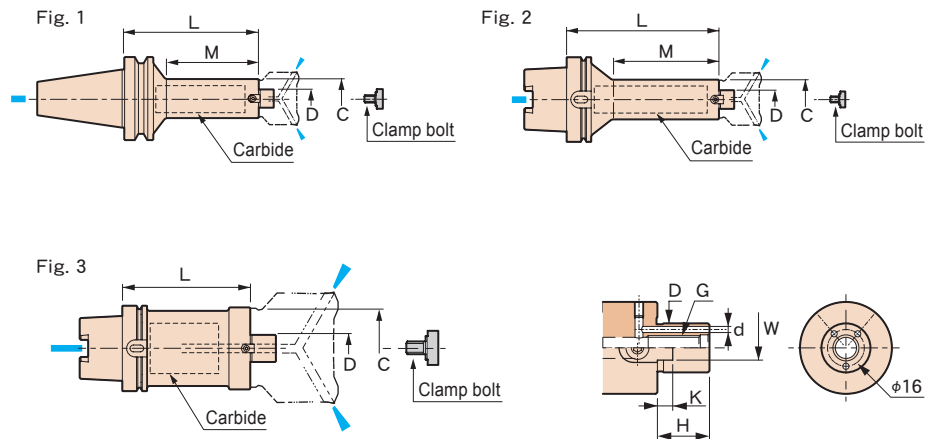


Cutter dia. $\phi 63$
4-flutes
Round insert



Double the Machining efficiency

FMH RIGID type with a solid carbide core (FMH-H)



CODE	Fig.	L	M	Kg	Moment kgf·m
BT50-FMH16 -37-125H	1	125	60	5.2	—
NEW -175H		175	110	5.8	
-225H		225	160	6.5	
-275H		275	210	7.1	
-325H		325	260	7.8	
BT50-FMH22 -47-165H	1	165	110	5.7	0.1
-215H		215	160	6.5	0.2
-265H		265	210	7.3	0.3
-315H		315	260	8.2	0.6
-365H		365	310	9.0	0.8
BT50-FMH22 -60-165H	1	165	110	6.9	0.2
-215H		215	160	8.1	0.3
-265H		265	210	9.3	0.6
-315H		315	260	10.7	1.0
-365H		365	310	11.9	1.3
-415H		415	360	13.1	1.7
BT50-FMH31.75-76-215H	1	215	160	10.6	0.6
-265H		265	210	12.7	1.0
-315H		315	260	15.3	1.5
-365H		365	310	17.6	2.3
A100-FMH16 -37-125H	1	125	60	3.9	—
NEW -175H		175	110	4.5	
-225H		225	160	5.2	
-275H		275	210	5.8	
-325H		325	260	6.4	
A100-FMH22 -47-165H	2	165	110	4.2	0.1
-215H		215	160	5.1	0.3
-265H		265	210	5.9	
-315H		315	260	6.8	0.6
-365H		365	310	7.6	0.8
A100-FMH22 -60-165H	2	165	110	5.9	0.2
-215H		215	160	7.2	0.5
-265H		265	210	8.4	0.7
-315H		315	260	9.8	1.1
-365H		365	310	11.1	1.4
-415H		415	360	12.4	1.8
A100-FMH31.75-76-215H	2	215	160	9.7	0.7
-265H		265	210	11.8	1.2
-315H		315	260	14.0	1.7
-365H		365	310	16.3	2.4
A100-FMH31.75-96-250H	3	250	—	13.6	1.3
-300H		300		16.3	2.0
-350H		350		17.4	2.6

Common dimensions

CODE	Cutter dia.	φD	H	φC	W	K	φd	G	Clamp bolt
FMH16 -37	40	16	17	37	8	5	2	M 8	M 8※
FMH22 -47	50/52	22	18	47	10	5	3	M10	M10※
FMH22 -60	63/66	22	18	60	10	5	3	M10	M10※
FMH31.75-76	80	31.75	30	76	12.7	7	4	M16	MBF-M16
-96	100	31.75	30	96	12.7	7	4	M16	MBF-M16

Option

- Retention knob (BT50) → P.64

Std. Access.

- Coolant duct(Fixed)(HSK-A100) → P.104
- Clamp bolt (unless marked with in the list) • Stopper key

Note

- Swing type coolant ducts are available upon request (HSK-A). For details, please contact us.
- The clamp bolt marked with ※ in the list is a hexagonal socket bolt. Use a market standard bolt.
- Contact us to find out what manufacturers' cutters can be used with this product.

Caution

- The required clamp bolt design depends on the cutter manufacturer and the type of cutter.

Available for
DIN/ CAT.

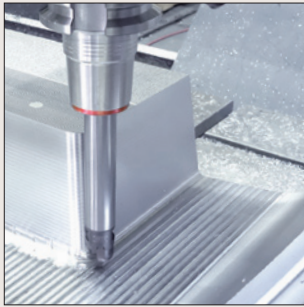
RED SCREW arbor

PAT.

The arbor for screw-in End Mill

Displaying the highest cutting performance of any screw-in end mill!!

- ▷ Highly rigid design makes the best use of carbide properties (high Young's modulus).
- ▷ Ideal for deep standing-wall machining.



coolant-through



RSG

Carbide integral type

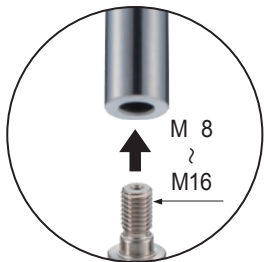
Carbide

NEW

φ16~40
Screw-in tool

Under-cut design

Works with these manufacturers' tools



DIJET



Mitsubishi Hitachi Tool Engineering



TUNGALOY



OSG



Mitsubishi Materials



KYOCERA



SUMITOMO ELECTRIC



ISCAR



Sandvik



Seco Tools

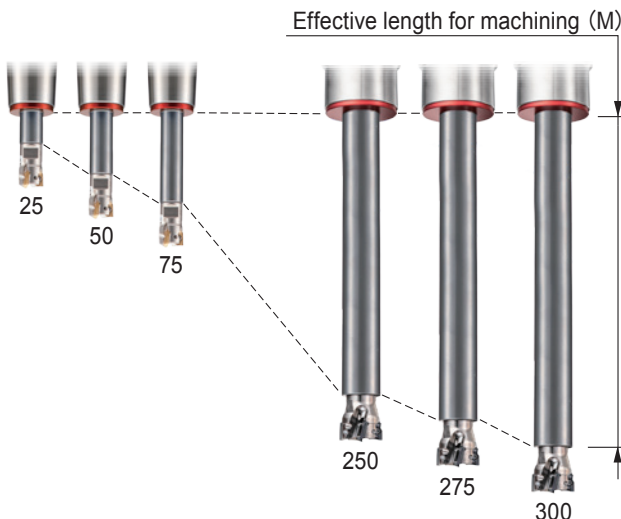


Nine 9



TaeguTec

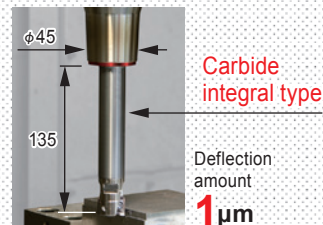
Many effective lengths for machining



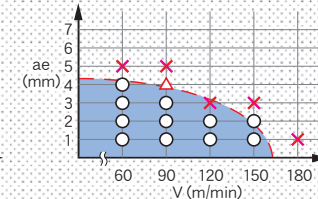
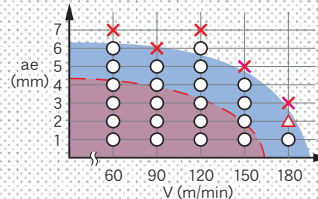
Heavy cutting ↔ Deep standing-wall machining

Machining example

RED screw arbor
BT50-RSG12-215-M100

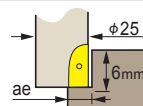


A general holder +
A steel shank



○ Excellent
✗ Chattering

Cutting condition



2-flutes end-mill
Climb milling
Feed : 0.1mm/tooth
Material : S50C

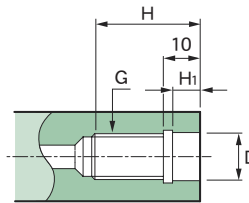
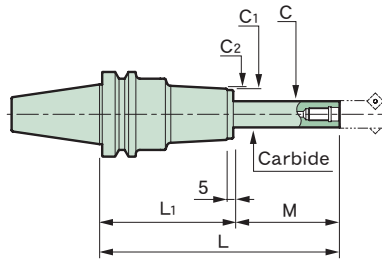
RED SCREW arbor (RSG)

BT



Rigidity value ($\mu\text{m} / \text{kgf}$)

BT50-RSG16-400-M225



Dimensions for the screw-in end mill mounting.

Available for
DIN/ CAT.

Option

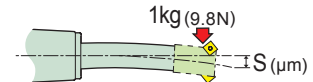
- Retention knob → P.64

Caution

- Some of the screw-in end mills cannot be attached to the RED screw arbor. Please check your screw-in end mills for conformance to the dimensions, or please contact MST.
- Because cutting resistance is greater than the tool holder connection force associated with the machine spindle, please reduce the recommended cutting conditions by 50% for the RED screw arbors marked with ※. Otherwise, the tool holder shank may experience fretting corrosion or fall out of the machine spindle.

S The rigidity value

A rigidity value represents the amount of deflection for the entire holder and tool when a bending load of 1 kgf (9.8 N) is applied to the tip of the tool. The smaller the numerical value is, the higher the rigidity and the more accurate the machining.



CODE	L	M	L ₁	Kg	S
BT40-RSG 8-105-M 25	105	25	80	1.4	0.6
-135-M 25	135		110	1.8	0.7
-165-M 25	165		140	2.1	0.8
-130-M 50	130	50	80	1.4	1.5
-160-M 50	160		110	1.8	1.7
-190-M 50	190		140	2.1	1.8
-155-M 75	155	75	80	1.5	3.1
-185-M 75	185		110	1.9	3.4
-215-M 75	215		140	2.2	3.5
-170-M 90	170	90	80	1.5	4.5
-200-M 90	200		110	1.9	4.8
-230-M 90	230		140	2.2	4.9
-185-M105	185	105	80	1.6	6.2
-215-M105	215		110	2.0	6.7
-245-M105	245		140	2.3	6.8
BT40-RSG10-125-M 25	125	25	100	1.8	0.4
-155-M 25	155		130	2.2	0.5
-185-M 25	185		160	2.4	0.7
-150-M 50	150	50	100	1.9	0.8
-180-M 50	180		130	2.3	1.0
-210-M 50	210		160	2.5	1.2
-175-M 75	175	75	100	2.0	1.6
-205-M 75	205		130	2.4	1.8
-235-M 75	235		160	2.6	2.0
-200-M100	200	100	100	2.0	2.7
-230-M100	230		130	2.4	3.0
-260-M100	260		160	2.6	3.3
-220-M120	220	120	100	2.1	4.0
-250-M120	250		130	2.5	4.3
-280-M120	280		160	2.7	4.6
BT40-RSG12-125-M 25	125	25	100	2.0	0.3
-155-M 25	155		130	2.4	0.4
-185-M 25	185		160	2.7	0.5
-150-M 50	150	50	100	2.1	
-180-M 50	180		130	2.5	0.7
-210-M 50	210		160	2.8	0.9
-175-M 75	175	75	100	2.3	
-205-M 75	205		130	2.7	1.1
-235-M 75	235		160	3.0	1.3

CODE	L	M	L ₁	Kg	S
BT40-RSG12-200-M100	200	100	100	2.4	1.4
-230-M100	230		130	2.8	1.6
-260-M100	260		160	3.1	1.9
-225-M125	225	125	100	2.6	2.1
-255-M125	255		130	3.0	2.4
-285-M125	285		160	3.3	2.8
BT40-RSG16-125-M 25	125	25	100	2.6	0.2
-150-M 50	150	50		2.8	0.3
-175-M 75	175	75		3.0	0.5
-200-M100	200	100		3.2	0.8
-225-M125※	225	125		3.4	1.2
BT50-RSG 8-120-M 25	120	25	95	4.0	0.6
-150-M 25	150		125	4.3	0.7
-180-M 25	180		155	4.8	
-145-M 50	145	50	95	4.0	1.5
-175-M 50	175		125	4.3	1.7
-205-M 50	205		155	4.8	
-170-M 75	170	75	95	4.1	3.1
-200-M 75	200		125	4.4	3.4
-230-M 75	230		155	4.9	
-185-M 90	185	90	95	4.1	4.4
-215-M 90	215		125	4.4	4.8
-245-M 90	245		155	4.9	
-200-M105	200	105	95	4.2	6.2
-230-M105	230		125	4.5	6.6
-260-M105	260		155	5.0	
BT50-RSG10-140-M 25	140	25	115	4.3	0.4
-170-M 25	170		145	4.6	0.5
-200-M 25	200		175	5.6	
-165-M 50	165	50	115	4.4	0.8
-195-M 50	195		145	4.7	0.9
-225-M 50	225		175	5.7	1.0
-190-M 75	190	75	115	4.5	1.6
-220-M 75	220		145	4.8	1.7
-250-M 75	250		175	5.8	1.8
-215-M100	215	100	115	4.5	2.7
-245-M100	245		145	4.8	2.9
-275-M100	275		175	5.8	

Common dimensions

CODE	Cutter dia.	G	φD	H	H ₁	φC	φC ₁	φC ₂
RSG 8	16	M 8	8.5	18	6.5	15	30	32
RSG10	20	M10	10.5	22	6.5	19	36	38
RSG12	25	M12	12.5	22	6	24	43	45
RSG16	32/40	M16	17	25	6	29	52	54
RSG16-37	40	M16	17	25	6	37	71	73



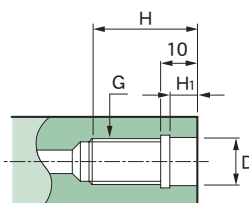
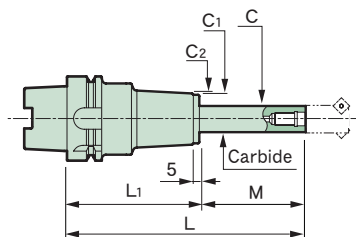
BT50-RSG16-37-265-M150

CODE	L	M	L ₁	 Kg	 S
BT50-RSG10-235-M120	235	120	115	4.6	3.9
-265-M120	265		145	4.9	4.2
-295-M120	295		175	5.9	
-255-M140	255	140	115	4.7	5.5
-285-M140	285		145	5.0	5.8
-315-M140	315		175	6.0	
BT50-RSG12-140-M 25	140	25	115	4.6	0.2
-170-M 25	170		145	5.0	0.3
-200-M 25	200		175	5.8	0.4
-165-M 50	165	50	115	4.7	0.5
-195-M 50	195		145	5.1	0.6
-225-M 50	225		175	5.9	
-190-M 75	190	75	115	4.9	0.8
-220-M 75	220		145	5.3	1.0
-250-M 75	250		175	6.1	
-215-M100	215	100	115	5.0	1.3
-245-M100	245		145	5.4	1.5
-275-M100	275		175	6.2	1.6
-240-M125	240	125	115	5.2	2.1
-270-M125	270		145	5.6	2.3
-300-M125	300		175	6.4	2.4
-265-M150	265	150	115	5.3	3.0
-295-M150	295		145	5.7	3.3
-325-M150	325		175	6.5	3.4
-290-M175	290	175	115	5.5	4.2
-320-M175	320		145	5.9	4.6
-350-M175	350		175	6.7	
BT50-RSG16-140-M 25	140	25	115	4.8	0.2
-170-M 25	170		145	5.4	
-200-M 25	200		175	6.6	
-165-M 50	165	50	115	5.0	0.3
-195-M 50	195		145	5.6	0.4
-225-M 50	225		175	6.8	
-190-M 75	190	75	115	5.3	0.5
-220-M 75	220		145	5.9	0.6
-250-M 75	250		175	7.0	
-215-M100	215	100	115	5.5	0.7
-245-M100	245		145	6.1	0.9
-275-M100	275		175	7.2	
-240-M125	240	125	115	5.7	1.1
-270-M125	270		145	6.3	1.3

CODE	L	M	L ₁	 Kg	 S
BT50-RSG16-300-M125	300	125	175	7.4	1.3
-265-M150	265	150	115	5.9	1.6
-295-M150	295		145	6.5	1.8
-325-M150	325		175	7.7	
-290-M175	290	175	115	6.1	2.2
-320-M175	320		145	6.7	2.4
-350-M175	350		175	7.9	2.5
-315-M200	315	200	115	6.3	3.0
-345-M200	345		145	6.9	3.2
-375-M200	375		175	8.1	3.3
-340-M225	340	225	115	6.5	3.9
-370-M225	370		145	7.1	4.1
-400-M225	400		175	8.3	4.2
BT50-RSG16- 37-190-M 75	190	75	115	6.8	0.2
-215-M100	215	100			0.3
NEW -240-M125	240	125		7.6	0.4
-265-M150	265	175			0.6
-290-M175	290	200		8.3	0.9
-315-M200	315	225			1.1
-340-M225	340	250		9.0	1.5
-365-M250	365	250			1.9
-390-M275	390	275		9.7	2.4
-415-M300	415	300			2.9

RED SCREW arbor (RSG)

HSK-A



Dimensions for the screw-in end mill mounting.

Std. Access.

- Coolant duct(Fixed type)→P.64

Note

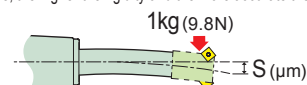
- Swing type coolant ducts are available upon request. For details, please contact us.

Caution

- Some of the screw-in end mills cannot be attached to the RED screw arbor. Please check your screw-in end mills for conformance to the dimensions, or please contact MST.
- Because cutting resistance is greater than the tool holder connection force associated with the machine spindle, please reduce the recommended cutting conditions by 50% for the RED screw arbors marked with ※. Otherwise, the tool holder shank may experience fretting corrosion or fall out of the machine spindle.

S The rigidity value

A rigidity value represents the amount of deflection for the entire holder and tool when a bending load of 1 kgf (9.8 N) is applied to the tip of the tool. The smaller the numerical value is, the higher the rigidity and the more accurate the machining.



CODE	L	M	L ₁	Kg	S
A63-RSG 8-105-M 25	105	25	80	1.3	0.6
-135-M 25	135		110	1.4	0.7
-165-M 25	165		140	1.9	0.8
-130-M 50	130	50	80	1.3	1.5
-160-M 50	160		110	1.4	1.7
-190-M 50	190		140	1.9	
-155-M 75	155	75	80	1.4	3.1
-185-M 75	185		110	1.5	3.4
-215-M 75	215		140	2.0	
-170-M 90	170	90	80	1.4	4.4
-200-M 90	200		110	1.5	4.8
-230-M 90	230		140	2.0	4.9
-185-M105	185	105	80	1.5	6.2
-215-M105	215		110	1.6	6.6
-245-M105	245		140	2.1	6.7
A63-RSG10-125-M 25	125	25	100	1.6	0.4
-155-M 25	155		130	1.9	0.5
-185-M 25	185		160	2.3	0.6
-150-M 50	150	50	100	1.7	0.8
-180-M 50	180		130	2.0	1.0
-210-M 50	210		160	2.4	1.2
-175-M 75	175	75	100	1.8	1.6
-205-M 75	205		130	2.1	1.8
-235-M 75	235		160	2.5	2.0
-200-M100	200	100	100	1.8	2.7
-230-M100	230		130	2.1	2.9
-260-M100	260		160	2.5	3.2
-220-M120	220	120	100	1.9	4.0
-250-M120	250		130	2.2	4.2
-280-M120	280		160	2.6	4.5
-240-M140	240	140	100	2.0	5.6
-270-M140	270		130	2.3	5.9
-300-M140	300		160	2.7	6.2
A63 -RSG12-125-M 25	125	25	100	1.9	0.3
-155-M 25	155		130	2.3	0.4
-185-M 25	185		160	2.7	0.5
-150-M 50	150	50	100	2.0	
-180-M 50	180		130	2.4	0.6
-210-M 50	210		160	2.8	0.8
-175-M 75	175	75	100	2.2	0.9
-205-M 75	205		130	2.6	1.0
-235-M 75	235		160	3.0	1.3
-200-M100	200	100	100	2.3	1.4
-230-M100	230		130	2.7	1.6
-260-M100	260		160	3.1	1.9
-225-M125	225	125	100	2.5	2.1
-255-M125	255		130	2.9	2.4
-285-M125	285		160	3.3	2.7
-250-M150	250	150	100	2.6	3.1
-280-M150	280		130	3.0	3.4
-310-M150	310		160	3.4	3.8
A63 -RSG16-140-M 25	140	25	115	2.6	0.2
-165-M 50	165	50		2.8	0.4
-190-M 75	190	75		3.0	0.6
-215-M100	215	100		3.2	0.9
-240-M125※	240	125		3.4	1.3
-265-M150※	265	150		3.7	1.9
-290-M175※	290	175		3.9	2.5
A100-RSG 8-120-M 25	120	25	95	2.6	0.6
-150-M 25	150		125	2.9	0.8
-180-M 25	180		155	3.4	
-145-M 50	145	50	95	2.6	1.5
-175-M 50	175		125	2.9	1.7
-205-M 50	205		155	3.4	
-170-M 75	170	75	95	2.7	3.1
-200-M 75	200		125	3.0	3.4

Common dimensions

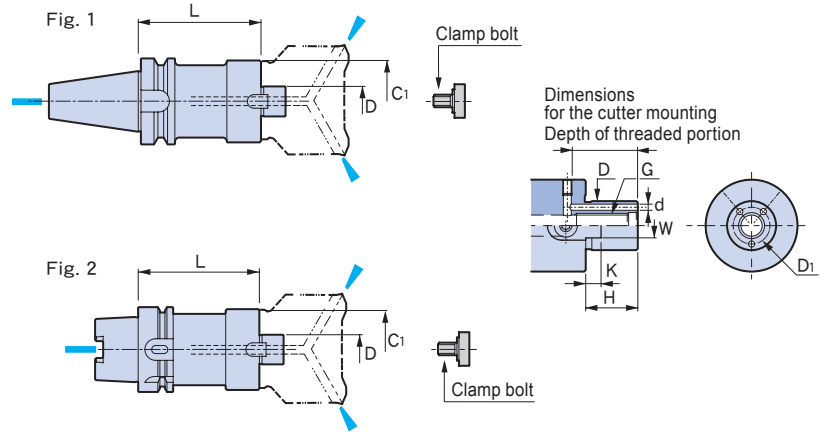
CODE	Cutter dia.	G	φD	H	H ₁	φC	φC ₁	φC ₂
RSG 8	16	M 8	8.5	18	6.5	15	30	32
RSG10	20	M10	10.5	22	6.5	19	36	38
RSG12	25	M12	12.5	22	6	24	43	45
RSG16	32/40	M16	17	25	6	29	52	54
RSG16-37	40	M16	17	25	6	37	71	73

CODE	L	M	L ₁		
A100-RSG 8-230-M 75	230	75	155	3.5	3.4
-185-M 90	185	90	95	2.7	4.5
-215-M 90	215		125	3.0	4.9
-245-M 90	245		155	3.5	4.8
-200-M105	200	105	95	2.8	6.3
-230-M105	230		125	3.1	6.7
-260-M105	260		155	3.6	6.6
A100-RSG10-140-M 25	140	25	115	3.1	0.4
-170-M 25	170		145	3.5	0.5
-200-M 25	200		175	4.4	
-165-M 50	165	50	115	3.2	0.8
-195-M 50	195		145	3.6	1.0
-225-M 50	225		175	4.5	
-190-M 75	190	75	115	3.3	1.6
-220-M 75	220		145	3.7	1.8
-250-M 75	250		175	4.6	
-215-M100	215	100	115	3.3	2.7
-245-M100	245		145	3.7	2.9
-275-M100	275		175	4.6	
-235-M120	235	120	115	3.4	4.0
-265-M120	265		145	3.8	4.2
-295-M120	295		175	4.7	
-255-M140	255	140	115	3.5	5.6
-285-M140	285		145	3.9	5.8
-315-M140	315		175	4.8	
A100-RSG12-140-M 25	140	25	115	3.4	0.3
-170-M 25	170		145	3.7	0.4
-200-M 25	200		175	4.7	
-165-M 50	165	50	115	3.5	0.5
-195-M 50	195		145	3.8	0.6
-225-M 50	225		175	4.8	
-190-M 75	190	75	115	3.7	0.8
-220-M 75	220		145	4.0	1.0
-250-M 75	250		175	5.0	
-215-M100	215	100	115	3.8	1.4
-245-M100	245		145	4.1	1.6
-275-M100	275		175	5.1	
-240-M125	240	125	115	4.0	2.1
-270-M125	270		145	4.3	2.4
-300-M125	300		175	5.3	
-265-M150	265	150	115	4.1	3.0
-295-M150	295		145	4.4	3.4
-325-M150	325		175	5.4	
-290-M175	290	175	115	4.3	4.3
-320-M175	320		145	4.6	4.6
-350-M175	350		175	5.6	

CODE	L	M	L ₁		
A100-RSG16-140-M 25	140	25	115	4.0	0.2
-170-M 25	170		145	4.5	
-200-M 25	200		175	5.7	
-165-M 50	165	50	115	4.2	0.3
-195-M 50	195		145	4.7	0.4
-225-M 50	225		175	5.9	
-190-M 75	190	75	115	4.5	0.5
-220-M 75	220		145	5.0	0.6
-250-M 75	250		175	6.1	
-215-M100	215	100	115	4.7	0.8
-245-M100	245		145	5.2	0.9
-275-M100	275		175	6.3	
-240-M125	240	125	115	4.9	1.1
-270-M125	270		145	5.4	1.3
-300-M125	300		175	6.5	
-265-M150	265	150	115	5.1	1.6
-295-M150	295		145	5.6	1.8
-325-M150	325		175	6.7	
-290-M175	290	175	115	5.3	2.2
-320-M175	320		145	5.8	2.4
-350-M175	350		175	7.0	2.5
-315-M200	315	200	115	5.5	3.0
-345-M200	345		145	6.0	3.2
-375-M200	375		175	7.2	3.3
-340-M225	340	225	115	5.7	3.9
-370-M225	370		145	6.3	4.2
-400-M225	400		175	7.4	
A100-RSG16- 37-190-M 75	190	75	115	6.3	0.2
-215-M100	215	100			0.3
-240-M125	240	125		7.1	0.4
-265-M150	265	150			0.6
-290-M175	290	175		7.8	0.9
-315-M200	315	200			1.1
-340-M225	340	225		8.5	1.5
-365-M250	365	250			1.9
-390-M275	390	275		9.2	2.4
-415-M300	415	300			2.9

Cutter arbor with spindle-through coolant (FMH)

- ▷ Standard design has through-coolant holes that allow superior chip evacuation, cutting edge cooling and lubrication.
- ▷ Achieves amazing high-feed machining
- ▷ We also have a variety of ultra-long type arbors.



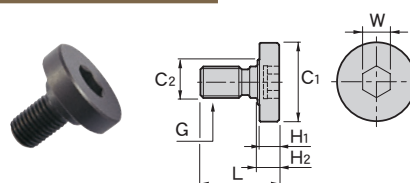
CODE	Fig.	Cutter dia.	L	φC1	kg
BT40-FMH16 -29- 45	1	32	45	29	1.1
- 90			90		1.4
-120			120		1.5
-37- 45		40	45	37	1.2
- 90			90		1.6
-120			120		1.9
BT40-FMH22 -47- 45	1	50/52	45	47	1.3
- 90			90		1.9
-150			150		2.7
-200			200		3.3
-60- 45		63/66	45	60	1.4
- 90			90		2.2
-150			150		3.2
-200			200		4.1
BT40-FMH22.225-47- 45	1	50/52	45	47	1.3
- 90			90		1.9
-150			150		2.7
-200			200		3.3
-60- 45		63/66	45	60	1.4
- 90			90		2.2
-150			150		3.2
-200			200		4.1
BT40-FMH25.4 -70- 60	1	80	60	70	1.9
- 90			90		2.4
-150			150		3.4
BT40-FMH31.75 -76- 60	1	80	60	76	2.1
- 90			90		2.6
-150			150		3.6
-200			200		4.4
-96- 60		100	60	96	2.4
- 90			90		3.1
-150			150		4.1
-200			200		4.9
BT50-FMH16 -29- 90	1	32	90	29	3.9
-150			150		4.3
-37- 90		40	90	37	4.1
-150			150		4.7
-200			200		5.3

CODE	Fig.	Cutter dia.	L	φC1	kg
BT50-FMH22 -47- 90	1	50/52	90	47	4.4
-150			150		5.4
-200			200		6.2
-250			250		7.2
-300			300		8.3
-60- 90	1	63/66	90	60	4.8
-150			150		6.4
-200			200		7.8
-250			250		9.2
-300			300		10.8
BT50-FMH22.225-47- 90	1	50/52	90	47	4.4
-150			150		5.4
-200			200		6.2
-250			250		7.2
-300			300		8.3
-60- 90		63/66	90	60	4.8
-150			150		6.4
-200			200		7.7
-250			250		9.2
-300			300		10.8
BT50-FMH25.4 -70- 60	1	80	60	70	4.4
- 90			90		5.3
-150			150		7.0
BT50-FMH31.75 -76- 60	1	80	60	76	4.5
- 90			90		5.6
-150			150		7.6
-200			200		9.3
-250			250		11.0
-300			300		12.8
-96- 60		100	60	96	5.0
- 90			90		6.4
-150			150		9.2
-200			200		11.5
-250			250		13.8
-300			300		16.2
BT50-FMH38.1 -100- 60	1	125	60	100	5.2
- 90			90		6.6
-150			150		9.4
-200			200		11.7
-250			250		13.9
BT50-FMH50.8 -100- 60	1	160	60	100	5.4
- 90			90		6.9
-150			150		9.6
-200			200		11.8
-250			250		14.1

Common dimensions

CODE	φD	H	W	K	G	Clamp bolt
FMH16	16	17	8	5	M 8	M 8 ※
FMH22	22	18	10	5	M10	M10 ※
FMH22.225	22.225	17	8	3.5	M10	M10 ※
FMH25.4	25.4	22	9.5	5	M12	MBF-M12
FMH31.75	31.75	30	12.7	7	M16	MBF-M16
FMH38.1	38.1	34	15.9	9	M20	MBF-M20
FMH50.8	50.8	36	19.05	10	M24	MBF-M24

Clamp bolt



CODE	L	φC1	φC2	H1	H2	W	G	FMH model
MBF-M12	30	33	23	10	11	10	M12	FMH25.4
-M16	40	40				14	M16	FMH31.75
-M20	50	50	27	14	16	17	M20	FMH38.1
-M24	59	65	37			19	M24	FMH50.8

CODE	Fig.	Cutter dia.	L	φC1	kg
A63 -FMH16 -29- 45	2	32	45	29	0.8
- 90			90		1.1
-120			120		1.3
-37- 45		40	45	37	0.9
- 90			90		1.3
-120			120		1.6
A63 -FMH22 -47- 45	2	50/52	45	47	1.0
- 90			90		1.6
-150			150		2.6
-200			200		3.5
-60- 60		63/66	60	60	1.4
- 90			90		1.9
-150			150		2.9
-200			200		3.8
A63 -FMH22.225-47- 45	2	50/52	45	47	1.0
- 90			90		1.6
-150			150		2.6
-200			200		3.4
-60- 60		63/66	60	60	1.4
- 90			90		1.9
-150			150		2.9
-200			200		3.8
A63 -FMH25.4 -70- 60	2	80	60	70	1.6
- 90			90		2.1
-150			150		3.1
A63 -FMH31.75 -76- 60	2	80	60	76	1.7
- 90			90		2.3
-150			150		3.3
-200			200		4.1
-96- 60		100	60	96	2.1
- 90			90		2.9
-150			150		3.8
-200			200		4.6
A100-FMH16 -29- 90	2	32	90	29	2.4
-150			150		2.8
-37- 90		40	90	37	2.6
-150			150		3.3
-200			200		3.9
A100-FMH22 -47- 90	2	50/52	90	47	2.9
-150			150		3.9
-200			200		4.8
-250			250		5.8
-300			300		6.9

CODE	Fig.	Cutter dia.	L	φC1	kg
A100-FMH22 - 60- 90	2	63/66	90	60	3.5
-150			150		5.1
-200			200		6.4
-250			250		7.9
-300			300		9.5
A100-FMH22.225- 47- 90	2	50/52	90	47	2.9
-150			150		3.9
-200			200		4.8
-250			250		5.8
-300			300		6.9
- 60- 90		63/66	90	60	3.4
-150			150		5.0
-200			200		6.4
-250			250		7.9
-300			300		9.5
A100-FMH25.4 - 70- 60	2	80	60	70	3.1
- 90			90		4.0
-150			150		5.7
A100-FMH31.75 - 76- 60	2	80	60	76	3.3
- 90			90		4.3
-150			150		6.4
-200			200		8.1
-250			250		9.8
-300			300		11.5
- 96- 90		100	90	96	5.3
-150			150		8.1
-200			200		10.4
-250			250		12.7
-300			300		15.1
A100-FMH38.1 -100- 90	2	125	90	100	5.5
-150			150		8.2
-200			200		10.5
-250			250		12.8
A100-FMH50.8 -100- 90	2	160	90	100	5.7
-150			150		8.4
-200			200		10.7
-250			250		12.9

Option

- Retention knob→P.64

Std. Access.

- Coolant duct(Fixed) (HSK-A)→P.104
- Clamp bolt(unless marked with ※ in the list) • Stopper key

Note

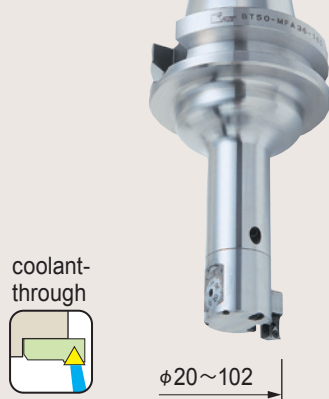
- The clamp bolt marked with ※ in the list is a hexagonal socket bolt. Use a market standard bolt.
- Swing type coolant ducts are available upon request. For details, please contact us.

Caution

- The required clamp bolt design depends on the cutter manufacturer and the type of cutter.

Applicable for all applications, from finishing to roughing.

MFA



**Super precision
finishing boring holder**

MBH



**Finishing and heavy duty
boring holder**

MBJ



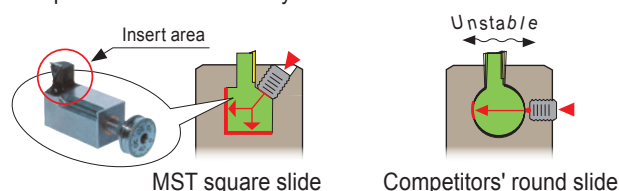
**Wide range and multi-
purpose boring holder**

Super precision finishing boring holder

MFA P. 57

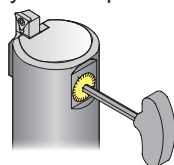
Rigid design thanks to the square sliding head

The square slide system can achieve greater rigidity against cutting force compared to a round slide system since it has 2-face contact.



Guaranteed fine adjustment

It allows 0.01mm dia. fine adjustment easily and precisely. The setting diameter doesn't change when you clamp the head.



System

MODEL	Boring dia.
MFA20	φ20 ~ 24.5
MFA24	φ24 ~ 30
MFA29	φ29 ~ 38
MFA36	φ36 ~ 52
MFA50	φ50 ~ 77
MFA75	φ75 ~ 102

Available for spindle-through coolant as standard.



Adjustable effective length

Using the extension allows for increased effective length

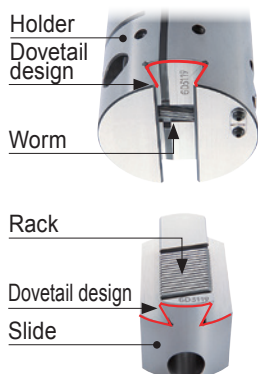
MODEL	Length (mm)
MFA20	30 · 35 · 40 · 45
MFA24	30 · 40 · 50 · 60
MFA29	40 · 50 · 60 · 70
MFA36	40 · 50 · 60 · 70
MFA50	45 · 60 · 75 · 90
MFA75	



Finishing and heavy duty boring holder MBH P.59

Sliding rack design ... Wide adjusting range

The micro head, MBH provides a wide adjusting range and secure clamping by making use of the sliding rack design for fine adjustment in combination with dovetail clamping capability.

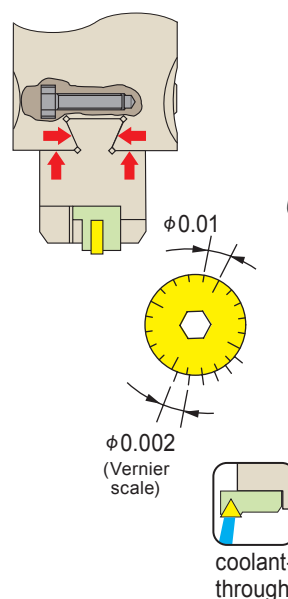


Dovetail clamping ... High rigidity and accuracy

The dovetail clamping capability holds the slide portion firmly without needing to change the setting diameter when clamping the slide. It is ideal for high-rigidity, high-accuracy boring applications.

System

MODEL	Boring dia.
MBH 50	φ 50 ~ 80
MBH 75	φ 75 ~ 120
MBH115	φ 115 ~ 185
MBH180	φ 180 ~ 250
MBH245	φ 245 ~ 315
MBH310	φ 310 ~ 380

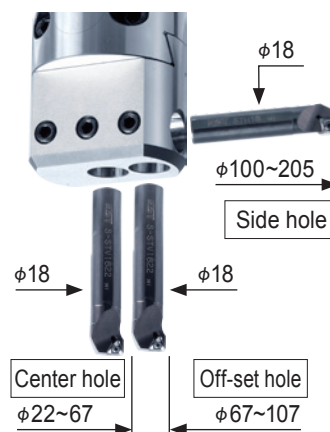
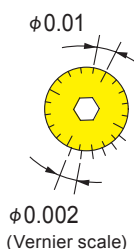
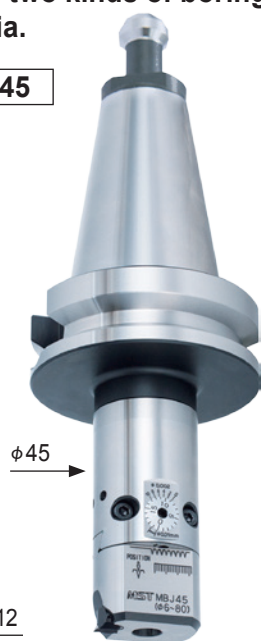


Wide range and multi-purpose boring holder MBJ P.61

The combination of two kinds of boring bars allows for a wide range of boring applications from 5.5mm to 205mm dia.

MBJ45

MBJ70



Micro Head for engraving

If you would like more detailed information, please contact MST and ask for a catalog.



MICRO HEAD MFA type (MFA)



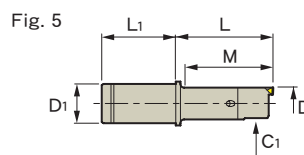
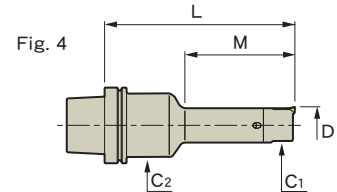
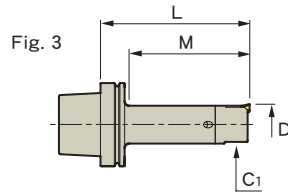
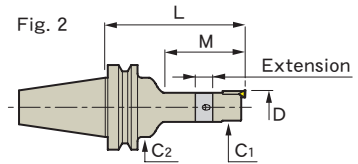
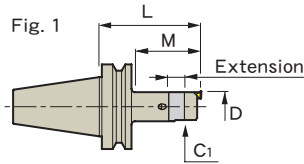
BT50-MFA36-165



A100-MFA29-165

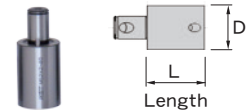


S32-MFA24-90



CODE	Fig.	Boring dia. (ϕ D)	L	M	ϕ C1	ϕ C2	Extension	Kg
BT30-MFA20- 90	1	20~ 24.5	90	63	19	—	—	0.6
-MFA24- 90		24~ 30			22			
-MFA29-105		29~ 38	105	78	27.6			0.7
-MFA36-105		36~ 52			34.4			0.9
BT40-MFA20-120	2	20~ 24.5	120	65	19	46	—	1.4
-150			150	81				1.5
-MFA24-150		24~ 30		62	22		30	1.7
-180			180	92				1.8
-MFA29-150		29~ 38	150	82	27.6		—	1.7
-180			180	112			30	1.8
-MFA36-150		36~ 52	150	97	34.4		—	1.9
-195			195	142			45	2.2
-MFA50-150		50~ 77	150	102	46		—	2.4
-195			195	147			45	3.0
-MFA75-150		75~ 102	150	102	51		—	2.5
-195			195	147			45	3.1
BT50-MFA20-165	2	20~ 24.5	165	54	19	62	—	4.9
-195			195	84			30	5.0
-240			240	64			—	6.3
-MFA24-165		24~ 30	165	52	22		—	4.9
-195			195	82			30	5.0
-240			240	62			—	6.3
-270			270	92			30	6.4
-MFA29-165		29~ 38	165	82	27.6		—	4.7
-195			195	112			30	4.8
-240			240	82			—	6.7
-270			270	112			30	6.9
-MFA36-165		36~ 52	165	97	34.4		—	4.6
-210			210	142			45	4.9
-255			255	97			80	7.9
-300			300	142			45	8.2
-MFA50-165	1	50~ 77	165	122	46	—	—	4.9
-210	2		210	167			45	5.5
-255			255	147			—	7.6
-300			300	192			45	8.2
-MFA75-165	1	75~ 102	165	122	51	—	—	5.0
-210	2		210	167			45	5.6
-255			255	147			—	7.7
-300			300	192			45	8.3

Extension



CODE	Applicable head	ϕ D	L	Kg
MS0-30	MFA20	19	30	0.1
-35			35	0.1
-40			40	0.1
-45			45	0.1
MS1-30	MFA24	22	30	0.1
-35			35	0.1
-40			40	0.1
-45			45	0.1
MS2-30	MFA29	27.6	30	0.1
-40			40	0.2
-50			50	0.2
-60			60	0.3
MS3-40	MFA36	34.4	40	0.3
-45			45	0.3
-50			50	0.3
-70			70	0.5
MS4-45	MFA50 MFA75	46	45	0.6
-60			60	0.7
-75			75	0.9
-90			90	1.1

Caution

- Longer projection length causes chattering and reduced rigidity

Insert



CODE	R	Insert material	Q'ty	Work material
TPA082-PA	0.2	Cermet	10pcs.	Steel
TPA084-PA	0.4			
TPA082-MA	0.2	Carbide		Stainless
TPA084-MA	0.4			
TPA082-KA	0.2			Cast iron
TPA084-KA	0.4			
TPA082-NA	0.2			Aluminum
TPA084-NA	0.4			
TPA082-ND	0.2	Polycrystalline diamond	1pc.	
TPA084-ND	0.4			

CODE	Fig.	Boring dia. (ϕ D)	L	M	ϕ C1	ϕ C2	Extension	D1	L1	 Kg
A40 -MFA20- 90	3	20~ 24.5	90	65	19	—	—	—	—	0.4
-MFA24- 90		24~ 30			22					
-MFA29-105		29~ 38	105	82	27.6					0.6
-MFA36-105		36~ 52			34.4					0.8
-MFA50-105		50~ 77			46					1.2
A50 -MFA20-120	4	20~ 24.5	120	69	19	41	—	—	—	0.8
-MFA24-120		24~ 30			22					0.9
-MFA29-120		29~ 38		82	27.6					
-MFA36-120	3	36~ 52		91	34.4	—				1.1
-MFA50-120		50~ 77			46					1.6
-MFA75-120		75~102			51					1.7
A63 -MFA20-150	4	20~ 24.5	150	81	19	46	—	—	—	1.3
-MFA24-150		24~ 30		62	22					1.5
-180			180	92			30			1.6
-MFA29-150		29~ 38	150	82	27.6		—			1.5
-180			180	112			30			1.6
-MFA36-150		36~ 52	150	97	34.4		52			1.7
-195			195	142			45			2.0
-MFA50-150		50~ 77	150	102	46		—			2.2
-195			195	147			45			2.7
-MFA75-150		75~102	150	102	51		—			2.3
-195			195	147			45			2.8
A100 -MFA20-165	4	20~ 24.5	165	54	19	62	—	—	—	3.8
-195			195	84			30			3.9
-240			240	64			—			5.3
-MFA24-165		24~ 30	165	52	22		—			3.8
-195			195	82			30			3.9
-240			240	62			—			5.4
-270			270	92			30			5.5
-MFA29-165		29~ 38	165	82	27.6		70			3.7
-195			195	112			30			3.8
-240			240	82			—			5.8
-270			270	112			30			6.0
-MFA36-165		36~ 52	165	97	34.4		80			3.7
-210			210	142			45			4.0
-255			255	97			—			7.2
-300			300	142			45			7.5
-MFA50-165	3	50~ 77	165	131	46	—	—	—	—	3.6
-210	4		210	176			45			4.2
-255			255	147			85			6.7
-300			300	192			45			7.3
-MFA75-165	3	75~102	165	131	51		—			3.7
-210	4		210	176			45			4.3
-255			255	147			85			6.8
-300			300	192			45			7.4
F63 -MFA20-150	4	20~ 24.5	150	81	19	46	—	—	—	1.3
-MFA24-150		24~ 30		62	22					1.5
-180			180	92			30			1.6
-MFA29-150		29~ 38	150	82	27.6		—			1.5
-180			180	112			30			1.6
-MFA36-150		36~ 52	150	97	34.4		52			1.7
-195			195	142			45			2.0
-MFA50-150		50~ 77	150	102	46		—			2.2
-195			195	147			45			2.7
ST25T -MFA20- 75	5	20~ 24.5	75	75	19	—	—	25	70	—
-MFA24- 90		24~ 30	90	85	22					
-MFA29-105		29~ 38	105	105	27.6					
S 32 -MFA20- 90	5	20~ 24.5	90	75	19	—	—	32	70	—
-MFA24- 90		24~ 30		80	22					
-MFA29-105		29~ 38	105	95	27.6					
-MFA36-105		36~ 52			34.4					
-MFA50-105		50~ 77			46					

■Option

- Insert •Retention knob (BT)→P.64

■Std. Access.

- T wrench •Insert clamping screw •Coolant duct(Fixed)(HSK-A)→P.104
- Torx wrench

■Note

- Swing type coolant ducts are available upon request. For details, please contact us.
- Drive key slot and cutting direction are in alignment.
- The extension mentioned in the list is set between shank and head. The number refers to the extension length.



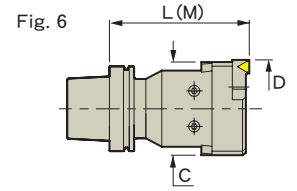
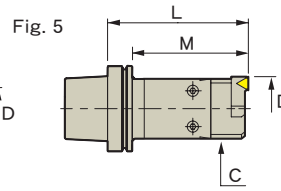
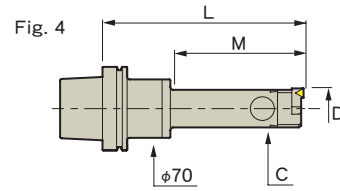
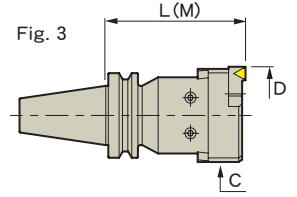
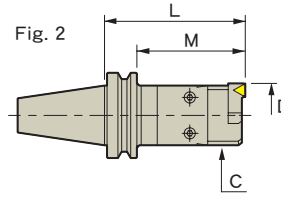
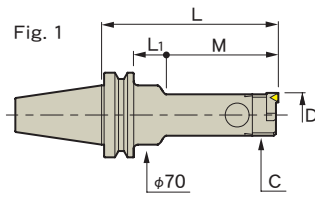
MICRO HEAD MBH type (MBH)



BT50-MBH180-225



A100-MBH75-165



CODE	Fig.	Boring dia. (φD)	L	M	φC	L ₁	Cartridge	Kg
BT40-MBH 50-150	2	50~ 80	150	118	45	—	PTC 10 STGP10	2.1
-210	1		210	155		28		3.0
-MBH 75-165	3	75~120	165	165	70	—	PTC 12 STGP12	4.0
-MBH115-165		115~185			110			5.9
-MBH180-165		180~250			153			6.6
BT50-MBH 50-150	2	50~ 80	150	107	45	—	PTC 10 STGP10	4.5
-180			180	137				5.6
-240	1		240	155		47		6.3
-300			300			107		7.0
-MBH 75-165	3	75~120	165	127	70	—	PTC 12 STGP12	6.7
-225			225	187				8.5
-285			285	247				10.3
-315			315	277				11.2
-MBH115-165		115~185	165	165	110			8.6
-225			225	225				10.4
-285			285	285				12.2
-315			315	315				13.1
-MBH180-165		180~250	165	165	153			9.3
-225			225	225				11.1
-285			285	285				12.9
-MBH245-165		245~315	165	165	200			10.0
-225			225	225				11.8
-285			285	285				13.6
-MBH310-165		310~380	165	165	255			11.0
-225			225	225				12.8
A50M-MBH 50-135	5	50~ 80	135	109	45	—	PTC10/STGP10	1.6
-MBH 75-175		75~120	175	149	70		PTC12/STGP12	3.4
A63 -MBH 50-150	5	50~ 80	150	119	45	—	PTC 10 STGP10	1.9
-210			210	179				2.6
-MBH 75-195	6	75~120	195	195	70		PTC 12 STGP12	4.5
-MBH115-195		115~185			110			6.5
-MBH180-195		180~250			153			7.2
A100-MBH 50-150	5	50~ 80	150	116	45	—	PTC 10 STGP10	3.3
-180			180	146				3.6
-240	4		240	155		56		5.2
-300			300			116		6.8
-MBH 75-165	6	75~120	165	131	70	—	PTC 12 STGP12	5.3
-225			225	191				6.9
-285			285	251				8.6
-315			315	281				9.4

CODE	Fig.	Boring dia. (φD)	L	M	φC	L ₁	Cartridge	
A100-MBH115-165	4	115~185	165	165	110	—	PTC 12 STGP12	7.2
-225			225	225				8.9
-285			285	285				10.5
-315			315	315				11.4
-MBH180-165		180~250	165	165	153			7.9
-225			225	225				9.6
-285			285	285				11.2
-MBH245-165		245~315	165	165	200			8.7
-225			225	225				10.3
-285			285	285				12.0
-MBH310-165		310~380	165	165	255			9.6
-225			225	225				11.2



Option

- Insert • Cartridge • Coolant-through • Retention knob(BT)→P.64

Std. Access.

- T wrench • Coolant duct(Fixed) (HSK-A)→P.104

Note

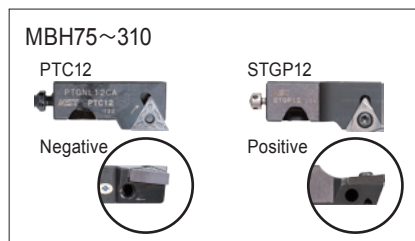
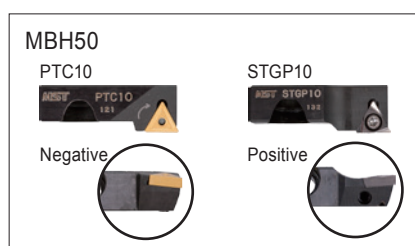
- Swing type coolant ducts are available upon request. For details, please contact us.
- Drive key slot and cutting direction are in alignment.
- Add "C" after the MBH model no. for through-spindle coolant when you order.
(Example: BT50-MBH75C-165)

Caution

- Each slide part is produced to match precisely with its corresponding slide, so such parts are not interchangeable with each other.
- The undercut area of the A50M is different from the standards. Please be careful to check for interference with the ATC arm.



Cartridge

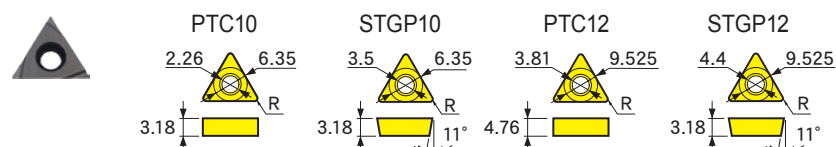


CODE	Work-piece material	Holder type
PTC10	Steel·Cast Iron·Stainless	MBH50
STGP10	Steel·Cast Iron Stainless·Aluminum	
PTC12	Steel·Cast Iron	MBH75 ~310
STGP12	Steel·Cast Iron Stainless·Aluminum	

Note

- PTC : Pin lock type
- STGP : Clamp-on type

Insert



CODE	R	Insert material	Work-piece material	Application	Q'ty	Cartridge
TNB114-PB	0.4	Carbide coating	Steel	Semi-finishing	10pcs.	PTC 10
-MB		Carbide	Stainless			
-KB			Cast iron			
-PMA		Cermet	Steel·stainless	Finishing		
-KA		Carbide	Cast iron			
TPC112-PA	0.2	Carbide	Steel	Finishing	10pcs.	STGP10
TPC114-PA	0.4					
TPC112-MA	0.2		Stainless			
TPC114-MA	0.4					
TPC112-KA	0.2		Cast iron			
TPC114-KA	0.4					
TPC112-NA	0.2		Aluminum			
TPC114-NA	0.4					
TPC112-ND	0.2	Polycrystalline diamond			1pc.	
TPC114-ND	0.4					
TNB168-PB	0.8	Carbide coating	Steel	Semi-finishing	10pcs.	PTC 12
-MB			Stainless			
-KB		Carbide	Cast iron			
TNB164-PMA	0.4	Cermet	Steel·stainless	Finishing		
-KA		Carbide	Cast iron			
TPC164-PA	0.4	Cermet	Steel	Finishing	10pcs.	STGP12
-MA		Carbide coating	Stainless			
-KA		Carbide	Cast iron			
-NA			Aluminum			
-ND		Polycrystalline diamond			1pc.	

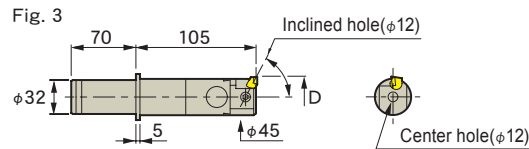
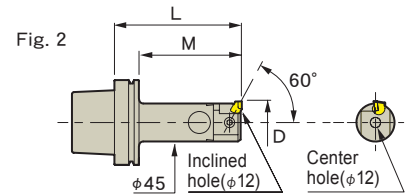
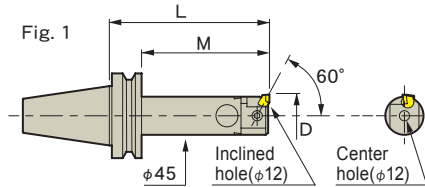
MICRO HEAD MBJ45 type(MBJ45)



A100-MBJ45-150



S32-MBJ45-105



CODE	Fig.	Boring dia. (φD)	L	M	Kg
BT30-MBJ45-120	1	5.5~80	120	98	1.3
BT40-MBJ45-150	1	5.5~80	150	123	2.2
BT50-MBJ45-150	1	5.5~80	150	112	4.6
-180			180	142	5.6
A63 -MBJ45-150	2	5.5~80	150	124	2.0
A100-MBJ45-150	2	5.5~80	150	121	3.3
-180			180	151	3.7
S32 -MBJ45-105	3	5.5~80	—	—	—

Option

- Insert • Insert holder
- Insert and insert holder set • Retention knob (BT)→P.64

Std. Access.

- Wrench set
- Coolant duct(Fixed) (HSK-A)→P.104

Note

- Swing type coolant ducts are available upon request. For details, please contact us.
- Drive key slot and cutting direction are in alignment.

Insert holder, Insert

For center hole



STV-C1208

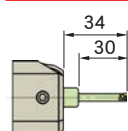
STV1216

Boring diameter φ5.5~8

Insert holder

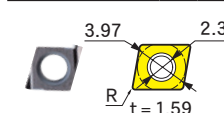
CODE
STV-C12055

Carbide shank



Insert

CODE	R	Insert material	Q'ty	Work material
TPE042-PA	0.2	Cermet	10pcs.	Steel
-MKA		Carbide coating		Stainless
-NA		Carbide		Cast iron
				Aluminum

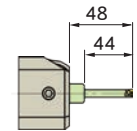


Boring diameter φ8~10

Insert holder

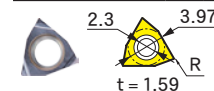
CODE
STV-C1208

Carbide shank



Insert

CODE	R	Insert material	Q'ty	Work material
TPE032-PA	0.2	Cermet	10pcs.	Steel
TPE034-PA	0.4			
TPE032-MKA	0.2	Carbide coating		Stainless
TPE034-MKA	0.4			Cast iron
TPE032-NA	0.2	Carbide		Aluminum
TPE034-NA	0.4			

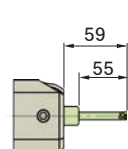


Boring diameter φ10~12

Insert holder

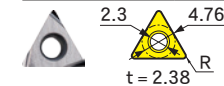
CODE
STV-C1210

Carbide shank



Insert

CODE	R	Insert material	Q'ty	Work material
TPE082-PA	0.2	Cermet	10pcs.	Steel
TPE084-PA	0.4			
TPE082-MA	0.2	Carbide coating		Stainless
TPE084-MA	0.4			
TPE082-KNA	0.2	Carbide		Cast iron
TPE084-KNA	0.4			Aluminum

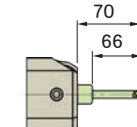


Boring diameter φ12~14

Insert holder

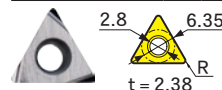
CODE
STV-C1212

Carbide shank



Insert

CODE	R	Insert material	Q'ty	Work material
TPE112-PA	0.2	Cermet	10pcs.	Steel
TPE114-PA	0.4			
TPE112-MA	0.2	Carbide coating		Stainless
TPE114-MA	0.4			
TPE112-KNA	0.2	Carbide		Cast iron
TPE114-KNA	0.4			Aluminum

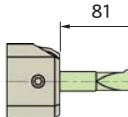


Boring diameter φ14~46

Insert holder

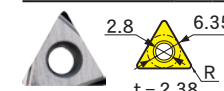
CODE
STV-C1214

Carbide shank



Insert

CODE	R	Insert material	Q'ty	Work material
TPE112-PA	0.2	Cermet	10pcs.	Steel
TPE114-PA	0.4			
TPE112-MA	0.2	Carbide coating		Stainless
TPE114-MA	0.4			
TPE112-KNA	0.2	Carbide		Cast iron
TPE114-KNA	0.4			Aluminum

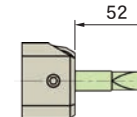


Boring diameter φ16~48

Insert holder

CODE
STV1216

Steel shank



Insert

CODE	R	Insert material	Q'ty	Work material
TPC092-PA	0.2	Cermet	10pcs.	Steel
TPC094-PA	0.4			
TPC092-MA	0.2	Carbide		Stainless
TPC094-MA	0.4			
TPC092-KNA	0.2			Cast iron
TPC094-KNA	0.4			Aluminum
TPC092-ND	0.2	Polycrystalline diamond	1pc.	Aluminum
TPC094-ND	0.4			



For inclined hole

Boring diameter $\phi 48 \sim 80$

S-STA12

Insert holder	Insert				
CODE	CODE	R	Insert material	Q'ty	Work material
S-STA12	TPC112-PA	0.2	Cermet	10pcs.	Steel
	TPC114-PA	0.4			
	TPC112-MA	0.2	Carbide		Stainless
	TPC114-MA	0.4			
	TPC112-KA	0.2			Cast iron
	TPC114-KA	0.4			
	TPC112-NA	0.2			Aluminum
	TPC114-NA	0.4			
	TPC112-ND	0.2	Polycrystalline diamond	1pc.	
	TPC114-ND	0.4			



Insert and insert holder set

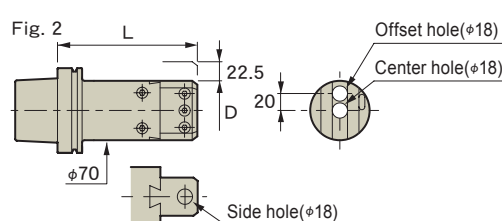
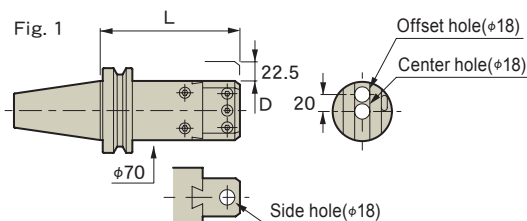
CODE	Insert holder	Q'ty	Insert	Q'ty	Work material
PJ-45	STV1216	1pc.	TPC094-PA	10pcs.	Steel
	S-STA12		TPC114-PA		
KJ-45	STV1216	1pc.	TPC094-KNA	10pcs.	Cast iron
	S-STA12		TPC114-KA		Aluminum



MICRO HEAD MBJ70 type (MBJ70)



BT50-MBJ70-165



CODE	Fig.	Chuck range(φD)	L	Kg
BT40-MBJ70-165	1	22~205	165	4.2
BT50-MBJ70-165	1	22~205	165	6.5
A63 -MBJ70-195	2	22~205	195	4.6
A100-MBJ70-165	2	22~205	165	5.4

Option

- Insert • Insert holder • Insert and insert holder set
- Clamping sleeve • Retention knob (BT) → P.64

Std. Access.

- Wrench set • Coolant duct (Fixed) (HSK-A) → P.104

Note

- Swing type coolant ducts are available upon request. For details, please contact us.
- Drive key slot and insertion direction are in alignment.
- The throw-away insert for aluminum is a diamond insert. Sales unit is per 1 piece.

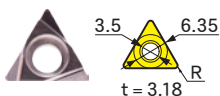
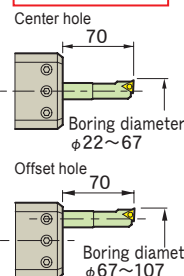
Insert holder, Insert

For center hole · inclined hole

S-STV1822

Boring diameter $\phi 22 \sim 107$

Insert holder	Insert				
CODE	CODE	R	Insert material	Q'ty	Work material
S-STV1822	TPC112-PA	0.2	Cermet	10pcs.	Steel
	TPC114-PA	0.4			
	TPC112-MA	0.2	Carbide		Stainless
	TPC114-MA	0.4			
	TPC112-KA	0.2			Cast iron
	TPC114-KA	0.4			
	TPC112-NA	0.2			Aluminum
	TPC114-NA	0.4			
	TPC112-ND	0.2	Polycrystalline diamond	1pc.	
	TPC114-ND	0.4			

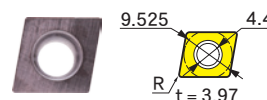
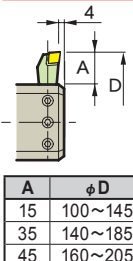


For side hole

Boring diameter $\phi 100 \sim 205$

STH18

Insert holder	Insert				
CODE	CODE	R	Insert material	Q'ty	Work material
STH18	CCD094-PA	0.4	Carbide coating	10pcs.	Steel
	CCD094-MA				
	CCD094-KA		Carbide		Stainless
	CCD094-NA				Cast iron
	CCD094-ND		Polycrystalline diamond	1pc.	Aluminum



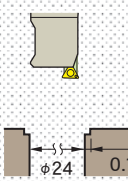
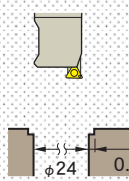
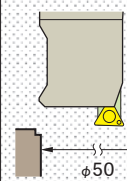
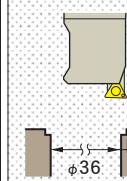
Insert and insert holder set

CODE	Insert holder	Q'ty	Insert	Q'ty	Work material
PJ-70	S-STV1822	1pc.	TPC114-PA	10pcs.	Steel
	STH18		CCD094-PA		
KJ-70	S-STV1822	1pc.	TPC114-KA	10pcs.	Cast iron
	STH18		CCD094-KA		

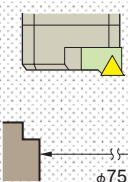
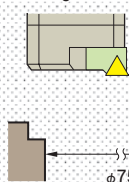
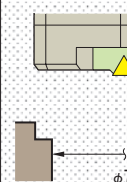
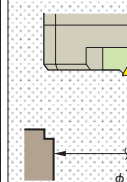
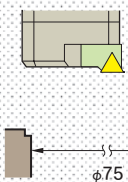
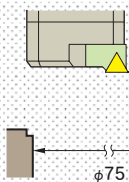
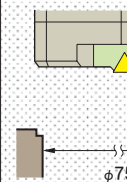
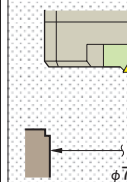


Cutting data

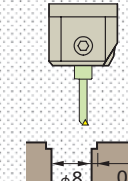
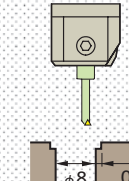
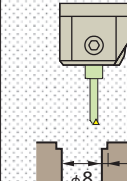
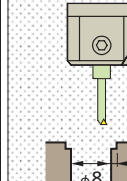
MFA type

S45C - Finishing - Insert : TPA084-PA (Nose R0.4)  n 3317 min ⁻¹ V_f 331 mm/min V_c 250 m/min f 0.1 mm/rev BT50-MFA24-270	SUS304 - Finishing - Insert : TPA084-MA (Nose R0.4)  n 1326 min ⁻¹ V_f 132 mm/min V_c 100 m/min f 0.1 mm/rev BT50-MFA24-240	FC250 - Finishing - Insert : TPA084-KA (Nose R0.4)  n 636 min ⁻¹ V_f 63 mm/min V_c 100 m/min f 0.1 mm/rev BT50-MFA50-300	A5056 - Finishing - Insert : TPA084-NA (Nose R0.4)  n 3538 min ⁻¹ V_f 353 mm/min V_c 400 m/min f 0.1 mm/rev BT50-MFA36-300
---	---	--	--

MBH type

S45C - Semi-finishing - Insert : TNB168-PB (Nose R0.8) Cartridge : PTC12  n 575 min ⁻¹ V_f 86 mm/min V_c 150 m/min f 0.15 mm/rev BT50-MBH75-315	SUS304 - Semi-finishing - Insert : TNB168-MB (Nose R0.8) Cartridge : PTC12  n 383 min ⁻¹ V_f 57 mm/min V_c 100 m/min f 0.15 mm/rev BT50-MBH75-315	FC250 - Semi-finishing - Insert : TNB168-KB (Nose R0.8) Cartridge : PTC12  n 383 min ⁻¹ V_f 57 mm/min V_c 100 m/min f 0.15 mm/rev BT50-MBH75-315	A5056 - Semi-finishing - Insert : TPC164-NA (Nose R0.4) Cartridge : STGP12  n 806 min ⁻¹ V_f 120 mm/min V_c 200 m/min f 0.15 mm/rev BT50-MBH75-315
S45C - Finishing - Insert : TPC164-PA (Nose R0.4) Cartridge : STGP12  n 1057 min ⁻¹ V_f 105 mm/min V_c 250 m/min f 0.1 mm/rev BT50-MBH75-315	SUS304 - Finishing - Insert : TPC164-MA (Nose R0.4) Cartridge : STGP12  n 507 min ⁻¹ V_f 50 mm/min V_c 120 m/min f 0.1 mm/rev BT50-MBH75-315	FC250 - Finishing - Insert : TPC164-KA (Nose R0.4) Cartridge : STGP12  n 507 min ⁻¹ V_f 50 mm/min V_c 120 m/min f 0.1 mm/rev BT50-MBH75-315	A5056 - Finishing - Insert : TPC164-NA (Nose R0.4) Cartridge : STGP12  n 1693 min ⁻¹ V_f 169 mm/min V_c 400 m/min f 0.1 mm/rev BT50-MBH75-315

MBJ type

S45C - Finishing - Insert : TPE032-PA (Nose R0.2) Insert holder : STV-C1208  n 3107 min ⁻¹ V_f 186 mm/min V_c 80 m/min f 0.06 mm/rev BT40-MBJ45-150	SUS304 - Finishing - Insert : TPE032-MKA (Nose R0.2) Insert holder : STV-C1208  n 1165 min ⁻¹ V_f 69 mm/min V_c 30 m/min f 0.06 mm/rev BT40-MBJ45-150	FC250 - Finishing - Insert : TPE032-MKA (Nose R0.2) Insert holder : STV-C1208  n 3107 min ⁻¹ V_f 186 mm/min V_c 80 m/min f 0.06 mm/rev BT40-MBJ45-150	A5056 - Finishing - Insert : TPE032-NA (Nose R0.2) Insert holder : STV-C1208  n 6602 min ⁻¹ V_f 396 mm/min V_c 170 m/min f 0.06 mm/rev BT40-MBJ45-150
--	--	--	--

Retention knob

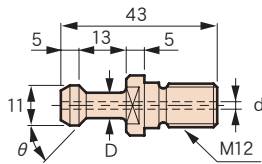


Caution

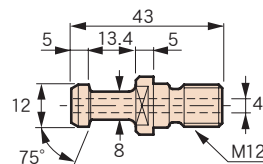
- Retention knobs in this catalog are typical models for various machine tool companies. Confirm the correct retention knob design refer to the machine specification sheet.
- We manufacture other kinds of retention knobs. Please contact us for the details.

Machine manufacturers	Standard type						For through spindle coolant type		
	BT30		BT40		BT50		BT30	BT40	BT50
	Standard	Standard type with a through hole	Standard	Standard type with a through hole	Standard	Standard type with a through hole			
OKUMA	—		P40T-2 (MB series)	P-339	P50T-2	P-419	—	P-499	P-419
			P40T-1 (MILLAC series)	P-297					
OKK	—		P40T-1	—	P-143	—	—	—	—
OHTORI	—		P40T-1	P-297	P50T-1	P-299	—	—	—
KITAMURA	P30T-1	P-445	P-348	P-323-1	P-400		—	P-323-1	P-400
	P-399(Mycenter-1Xi)								
KIRA	P30T-1	P-445	P40T-1	P-297	—		—	P-323-1	—
KIWA	P30T-1	P-445	P-348	P-323-1	P-400		—	P-323-1	P-400
KURASHIKI	—		P40T-1	P-297	P50T-1	P-299	—	—	—
KOMATSU NTC	P30T-1	P-445	P40T-1	P-297	P50T-1	P-299	P-522	P-505	P-384
JTEKT	—		P40T-1	P-297	P50T-1	P-299	—	P-297	P-299
SHIZUOKA	P30T-1	P-445	P-141	P-498	P-143	P-402	—	—	—
SNK	—		P40T-2	P-339	P50T-2	P-419	—	—	—
SUGINO	P30T-2	P-497	—		—		—	—	—
DMG MORI	P30T-1	P-445	P-141	—	P-143	—	—	P-435	P-513
TOSHIBA MACHINE	—		—		P50T-1	P-299	—	—	—
NIIGATA MACHINE TECHNO	—		—		P50T-2	P-419	—	—	—
FANUC	P30T-1	P-522	—		—		P-522	—	—
BROTHER	P30T-2	P-511	—		—		P-511	—	—
HOWA	P30T-1	P-445	P40T-1	P-297	P50T-1	P-299	—	—	—
MAKINO	—		P40T-1	P-297 (V-series)	P50T-1	P-299 (A, MCC, V-series)	—	P-323-1	P-299
			P-348	P-323-1 (a-series, D-series)	P-400 (A-series, a-series)				
MATSUURA	P30T-2	P-511	P-348	P-323-1	P50T-2	P-419	—	P-323-1	—
	P-399				P-400				
MITSUI SEIKI	—		P-007	—	P-008	P-250	—	—	—
MITSUBISHI	—		P40T-1	—	P50T-2	—	—	—	—
YASDA	—		P-348	P-438	P50T-1	P-299	—	P-509	P-459
					P-400 (YBM1218V)			—	P-288-1 (YBM1218V)
YAMAZAKI GIKEN	—		P40T-1	P-297	P50T-2	P-419	—	—	—
MAZAK	—		P-227		P-514		—	P-227	P-514

BT30

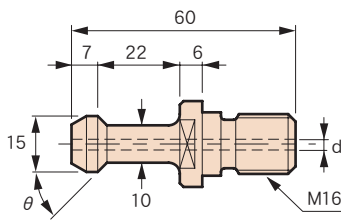


CODE	ϕD	ϕd	θ	Note
P30T-1	7	-	45	MAS-1
P-445		3		P30T-1 through hole
P30T-2		-	60	MAS-2
P-497		2		P30T-2 through hole
-522	8	4	45	FANUC center-through
-511	7.5	2.5	60	BROTHER center-through

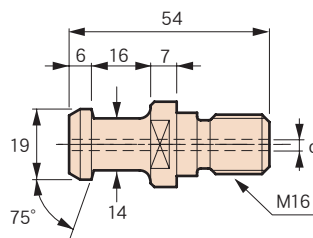


CODE	Note
P-399	JIS30P

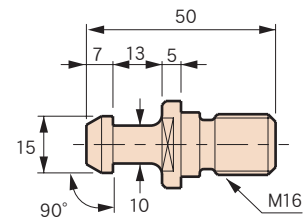
BT40



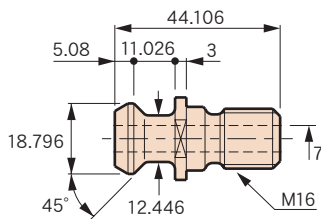
CODE	ϕd	θ	Note
P40T-1	-	45	MAS-1
P-297	4		P40T-1 through hole
P40T-2	-	60	MAS-2
P-339	4		P40T-2 through hole
-141	-	90	-
-498	4		P-141 through hole
-505	3	45	KOMATSU NTC center-through



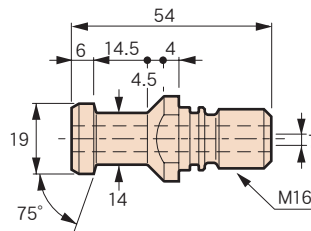
CODE	ϕd	Note
P-348	-	JIS40P
-323-1	7	P-348 through hole
-499	4	OKUMA center-through
-438	7	YASDA through hole
-509		YASDA center-through



CODE	Note
P-007	MITSUI SEIKI



CODE	Note
P-227	MAZAK



CODE	Note
P-435	DMG MORI center-through

