

# M/C Tool

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**



**FMH-H**

➔ P. 46

Carbide core

The arbor for screw-in End Mill  
**RED SCREW arbor**



**RSG**

➔ P. 48

Carbide integral type


**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

ANGLE HEAD

DETa-1 COLLET HOLDER

M/C Tool

HSK-T Tooling Systems for Turning Mill

General Purpose Tool

JIG

Measuring Equipment

Maintenance Tool

Wire EDM fixture

Technical Information

## 2mm collapsibility with just one collet !!

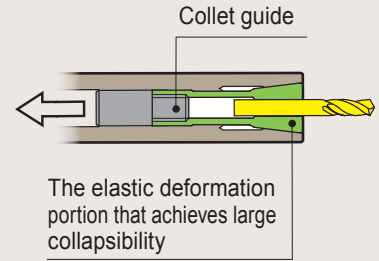
- ▶ Just 6 collets is all it takes to chuck 106 sizes of drills.
- ▶ Slim design due to no tightening nut at the tip of holder.
- ▶ Compatible with synchronized tapping. Provides simple tooling lay-out.



▶ **DETa-1**

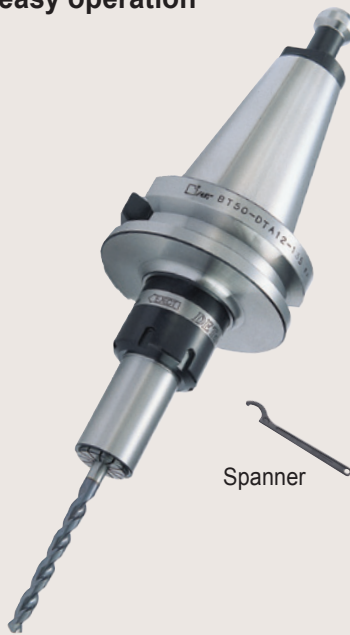


### Pull collet design



### DTA

Nut-tightening type of easy operation



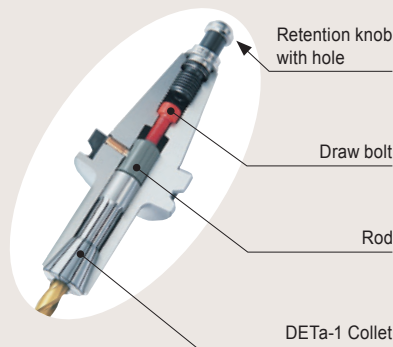
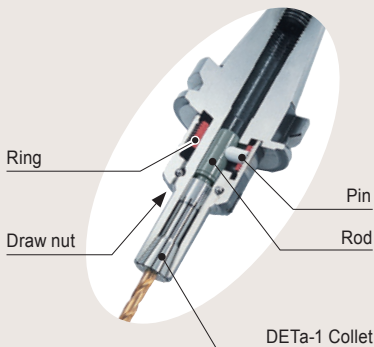
### DTB

For high-speed cutting, High cost performance

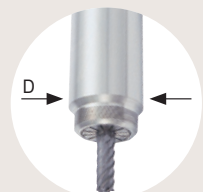


### DTE

Fully applicable for coolant-through



	φD
DTE 7	29
DTE12	40



# DETa-1 Collet

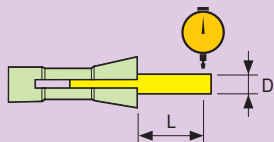
Using a high-precision collet will increase the life of your tools. → P. 117

**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)

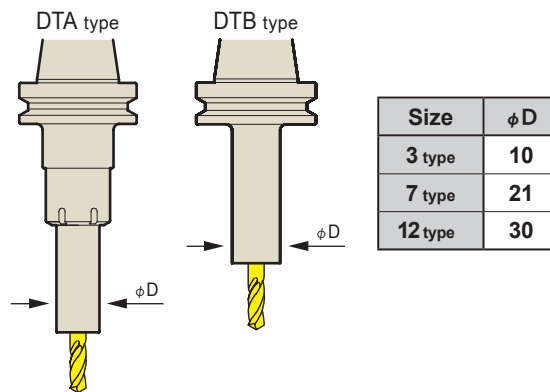
※Accuracy of collet alone, ( ) means collapsibility usable.



D	L
~10	4×D
10~13	40

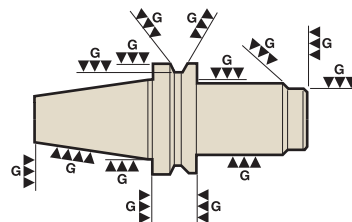


## Slim and compact without the nut at the tip.

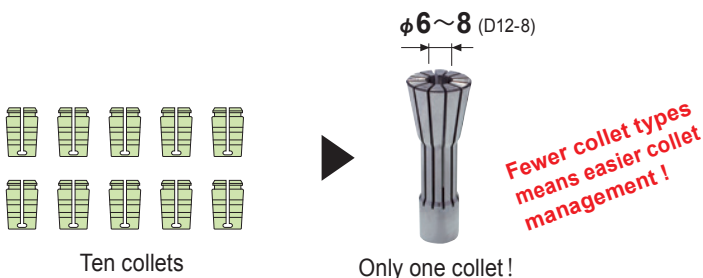


## Pre-balanced design (DTE type)

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.



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



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

### D3 Collet

DTA3  
DTB3

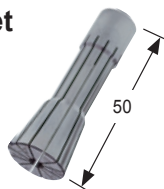
**Uses a maraging steel. Initial accuracy lasts for a long period of time.**



φ0.5~3.175 **8 pcs.**

### D7 Collet

DTA7  
DTB7  
DTE7



φ1~7 **8 pcs.**

### D12 Collet

DTA12  
DTB12  
DTE12

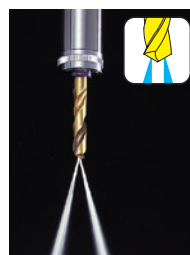


φ2.5~13 **6 pcs.**

## Coolant-through system

Pressure **7 Mpa**

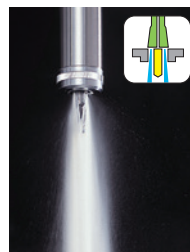
Multiple coolant supply systems. The best methods can be chosen from three options.



### 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

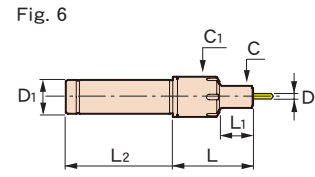
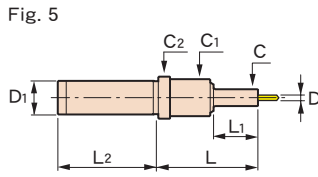
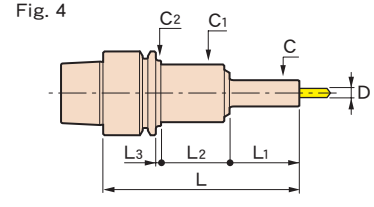
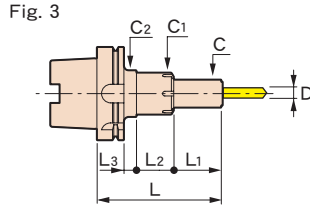
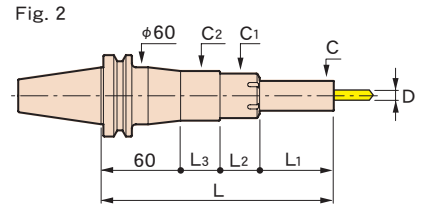
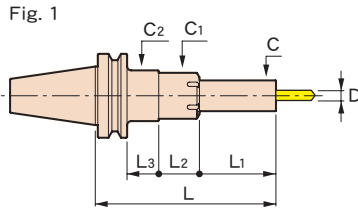
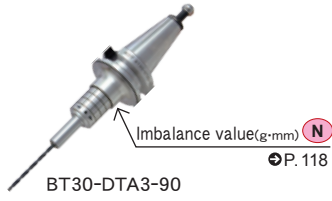


### Coolant-through collet

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
<b>BT30-DA 3- 90</b>	1	0.5 ~ 3.175	90	10	27	26	15	22	25	—	0.5	2.4
-DA 7- 90		1 ~ 7		21	30	37	1	38	42	—	0.7	6.7
-120			120		60						0.8	7.9
-DA12-120		2.5 ~ 13	30	52.5	42	3.5	45	45			1.0	10.4
<b>BT40-DA 3- 95</b>	1	0.5 ~ 3.175	95	10	27	26	15	22	25	—	1.1	3.9
-125			125				45				1.2	4.3
-DA 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
-DA12-120		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
<b>BT50-DA 7-105</b>	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
<b>-DA12-135</b>	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
<b>A63 -DA 3- 90</b>	3	0.5 ~ 3.175	90	10	27	26	11	22	25	—	0.8	3.0
-120			120				41				1.0	3.4
-DA 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
-DA12-120		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	L1	L2	L3	φC1	φC2	φD1	Kg (lbs)	N	
<b>A100</b> -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		81		3.8		39.7		
<b>E32</b> -DTA 3- 75	4	0.5~ 3.175	75	10	27	26	2	22	25	—	0.2	1.8	
<b>E40</b> -DTA 3- 75	4	0.5~ 3.175	75	10	27	26	2	22	25	—	0.3	1.7	
<b>E50</b> -DTA 3- 80	4	0.5~ 3.175	80	10	27	26	1	22	25	—	0.5	2.1	
<b>F63</b> -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
<b>DN40A</b> -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	
<b>DIN</b> -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	
<b>DN50A</b> -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		
<b>CT40</b> -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		
<b>CT50</b> -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
-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			
<b>ST16</b> -DTA 3	5	0.5~ 3.175	60	10	27	60	—	22	25	16	—	—	
<b>ST20</b> -DTA 3	5	0.5~ 3.175	60	10	27	60	—	22	—	20	—	—	
<b>ST32T</b> -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								
<b>S32</b> -DTA 7- 75	6	1 ~ 7	75	21	31.5	70	—	38	—	32	—	—	
-DTA12-100		2.5~13	100		30								52.5

- Option  
 ●DETA-1 collet→P.31 ●Spanner→P.31 ●Retention knob (BT)→P.64  
 ●Cleaning tool→P.31

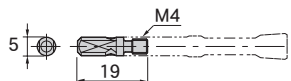
- Std. Access.  
 ●Coolant duct(Fixed)(HSK-A)→P.104 ●Rod(DTA3)

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

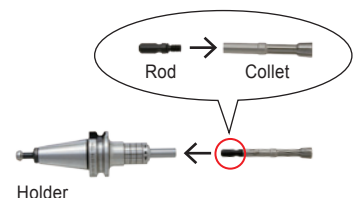
- Caution  
 ●HSK-E and F shank don't come with a coolant duct and cannot be attached.  
 ●ATC may not be possible for some machining centers with BT30-DTA12-120.  
 ●For precautions and maintenance, refer to page 115.

### Rod (DTA3 type)

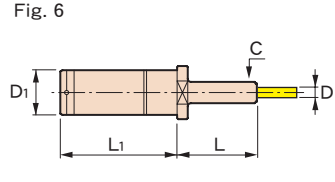
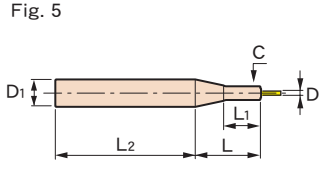
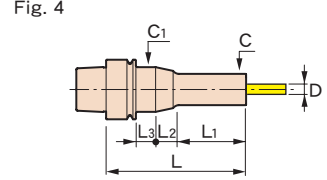
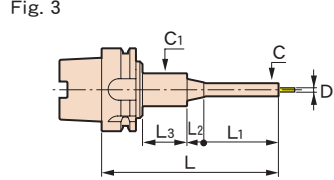
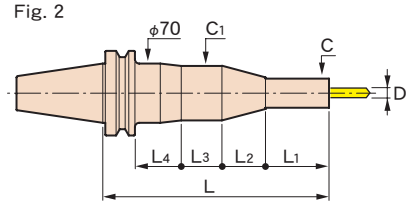
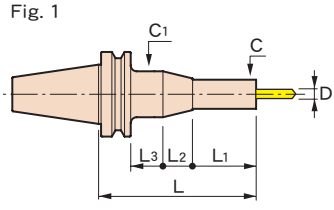
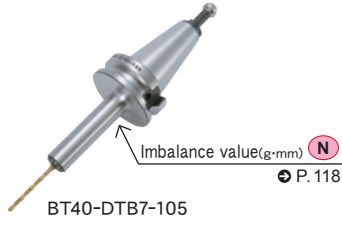
These are necessary when attaching a collet to the holder (DTA3).



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



# DETa-1 Collet Holder B type (DTB)

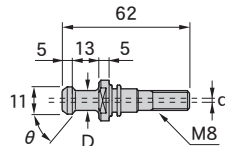


CODE	Fig.	φD	L	φC	L1	L2	L3	L4	φC1	φD1	kg	(N)	
<b>BT30-DTB 3- 90</b>	1	0.5 ~ 3.175	90	10	27	13	28	—	25	—	0.6	1.7	
-DTB 7- 75		1 ~ 7	75	21	53	—	—	—	—	—	0.5	2.4	
-105			105		83							3.4	
-DTB12- 75		2.5 ~ 13	75	30	53								
-105			105		83						0.7	5.6	
<b>BT40-DTB 3- 80</b>	1	0.5 ~ 3.175	80	10	27	13	13	—	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	
<b>BT50-DTB 7- 75</b>		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	
<b>A63 -DTB 3- 75</b>			3	0.5 ~ 3.175	75	10	27	13	4	—	25	—	0.8
-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							
<b>E25</b> -DTB 3- 58	3	0.5~ 3.175	58	10	27	16	4.6	—	18	—	0.1	0.4							
<b>E32</b> -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								
<b>E40</b> -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							
<b>E50</b> -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							
<b>F63</b> -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							
<b>F63M</b> -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							
<b>DN40AD</b> -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									
<b>DN50AD</b> -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									
<b>CT40</b> -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									
<b>CT50</b> -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									
<b>ST12</b> -DTB 3	5	0.5~ 3.175	29	10	25	61	—	—	—	12	—	—							
<b>ST16</b> -DTB 3	5	0.5~ 3.175	38.5	10	27	81.5	—	—	—	16	—	—							
<b>ST20</b> -DTB 3	5	0.5~ 3.175	48	10	27	102	—	—	—	20	—	—							
<b>ST25T</b> -DTB 7- 15	6	1 ~ 7	15	21	110	—	—	—	—	25	—	—							
- 45			45										—	—	—	—	—	—	
- 75			75										—	—	—	—	—	—	
<b>ST32T</b> -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											—	—	—	—	—	—
<b>S32</b> -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



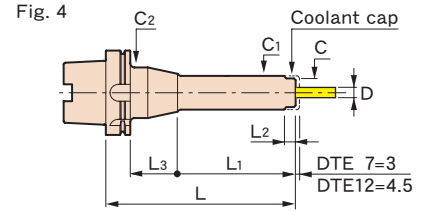
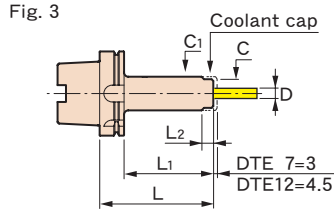
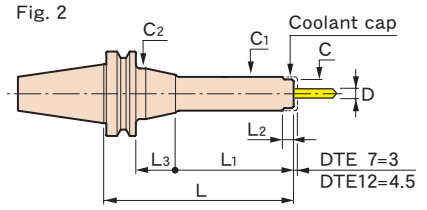
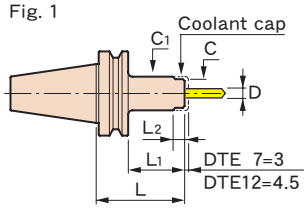
CODE	φD	φd	θ	Note
<b>P-538</b>	8	4	45	In accordance with MAS-1
<b>-535</b>	7.5	2.5	60	In accordance with MAS-2



# DETa-1 Collet Holder E type (DTE)



Imbalance value(g·mm) **N**  
 P.118



CODE	Fig.	φD	L	φC	L1	L2	L3	φC1	φC2	kg	N
<b>BT30-DTE 7- 60-MAS1</b>	1	1 ~ 7	60	24	38	11.5	—	29	—	0.6	3.2
<b>-MAS2</b>											
<b>-DTE12- 75-MAS1</b>											
<b>-MAS2</b>	2	2.5~ 13	75	34	53	14	—	40	—	0.9	4.9
<b>-DTE12- 90</b>											
<b>-120</b>											
<b>-150</b>	1	2.5~ 13	90	34	63	14	—	40	—	1.5	6.1
<b>-180</b>											
<b>-210</b>											
<b>-DTE12- 90</b>	2	2.5~ 13	120	34	93	14	—	40	—	1.8	7.4
<b>-120</b>											
<b>-150</b>											
<b>-180</b>	1	2.5~ 13	150	34	123	14	—	40	—	2.1	9.4
<b>-210</b>											
<b>-DTE12- 105</b>											
<b>-120</b>	2	2.5~ 13	180	34	140	14	13	50	—	2.5	9.6
<b>-150</b>											
<b>-180</b>											
<b>-210</b>	1	2.5~ 13	210	34	140	14	43	50	—	2.9	11.7
<b>-DTE12- 105</b>											
<b>-135</b>											
<b>-165</b>	2	2.5~ 13	105	24	67	11.5	—	29	—	3.9	15.6
<b>-225</b>											
<b>-285</b>											
<b>-DTE12- 105</b>	1	2.5~ 13	135	34	97	14	—	40	—	4.2	16.6
<b>-165</b>											
<b>-225</b>											
<b>-285</b>	2	2.5~ 13	225	34	140	14	47	60	—	5.7	24.5
<b>-DTE12- 105</b>											
<b>-135</b>											
<b>-165</b>	1	2.5~ 13	105	24	75	11.5	—	29	—	0.6	4.4
<b>-DTE12- 105</b>											
<b>-285</b>											
<b>A40 -DTE 7- 95</b>	3	2.5~ 13	105	34	85	14	—	40	—	0.9	14.4
<b>-DTE12- 105</b>											
<b>A50 -DTE 7-105</b>	3	2.5~ 13	105	24	79	11.5	—	29	—	0.7	9.8
<b>-DTE12- 120</b>											
<b>A63 -DTE 7-105</b>	4	2.5~ 13	120	34	94	14	—	40	—	1.1	12.5
<b>-120</b>											
<b>-150</b>	3	2.5~ 13	150	34	124	14	—	40	—	1.5	14.9
<b>-180</b>											
<b>-DTE12- 120</b>	4	2.5~ 13	180	34	140	14	14	50	—	2.3	19.1
<b>-150</b>											
<b>-180</b>	4	2.5~ 13	120	24	70	11.5	36	29	40	2.7	31.0
<b>A100-DTE 7-135</b>											
<b>-165</b>											
<b>-225</b>	3	2.5~ 13	135	34	106	14	—	40	—	3.0	33.1
<b>-DTE12- 135</b>											
<b>-165</b>											
<b>-225</b>	4	2.5~ 13	165	34	136	14	—	40	—	3.3	36.2
<b>-DTE12- 135</b>											
<b>-225</b>	3	2.5~ 13	225	34	140	14	56	60	—	4.4	40.3
<b>-DTE12- 135</b>											



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

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

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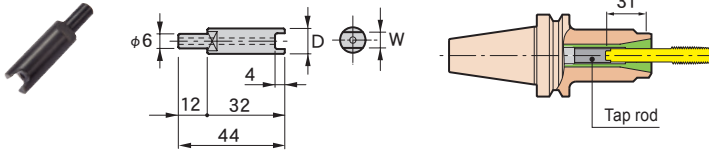
<p><b>S50C</b></p> <p>R1.5 Carbide ball endmill</p> <p>n 12500 min<sup>-1</sup> Vf 1560 mm/min Vc 120 m/min f 0.125 mm/rev</p> <p>E32-DTB3-65</p>	<p><b>STAVAX(42HRC)</b></p> <p>φ0.6 Carbide straight drill</p> <p>n 3715 min<sup>-1</sup> Vf 30 mm/min Vc 7 m/min f 0.01 mm/rev</p> <p>F63-DTB3-75</p>	<p>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

<p><b>S50C</b></p> <p>φ6 Carbide drill</p> <p>n 6369 min<sup>-1</sup> Vf 1592 mm/min Vc 120 m/min f 0.25 mm/rev</p> <p>A63-DTE7-105</p>	<p><b>SKD61(53HRC)</b></p> <p>R5 Carbide ball endmill 2 flutes</p> <p>n 20000 min<sup>-1</sup> Vf 6000 mm/min Vc 628 m/min fz 0.15 mm/t</p> <p>A63-DTE12-120</p>
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## Tap rod ( DTE12type)

To be used as a stopper for synchronized tapping.

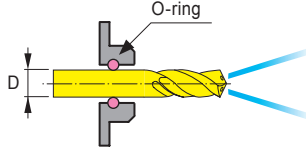


CODE	Applicable taps	φD	W	Collet
TR-5	JIS M 8	10.5	5	D12-12
-5.5	JIS M10		5.5	
-6	OSG M 8 M10	12	6	-13
-6.5	JIS M12		6.5	
-8	OSG M12	12	8	

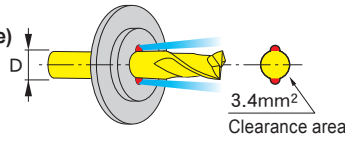
## COOLANT-THROUGH SYSTEM (OPTION)

### Spacer

#### EA type



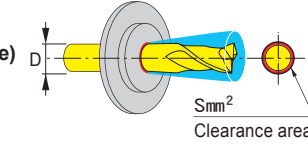
#### EBM type (Groove-type)



CODE	Holder type	φD	Q'ty
7EA- 3.5-3	DTE 7	3 ~ 3.5	3pcs.
- 4 -3		3.5 ~ 4	1set
- 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.
- 4 -3		3.5 ~ 4	1set
- 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.
- 4-3		4	1set
- 6-3		6	
12EBM- 3-3	DTE12	3	3pcs.
- 4-3		4	1set
- 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.
- 4.5-3		4	3.3	1set
- 6.4-3		6	3.9	
12EBS- 3.6-3	DTE12	3	3.1	3pcs.
- 4.5-3		4	3.3	1set
- 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

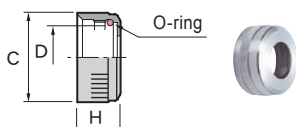
### Spacer set

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

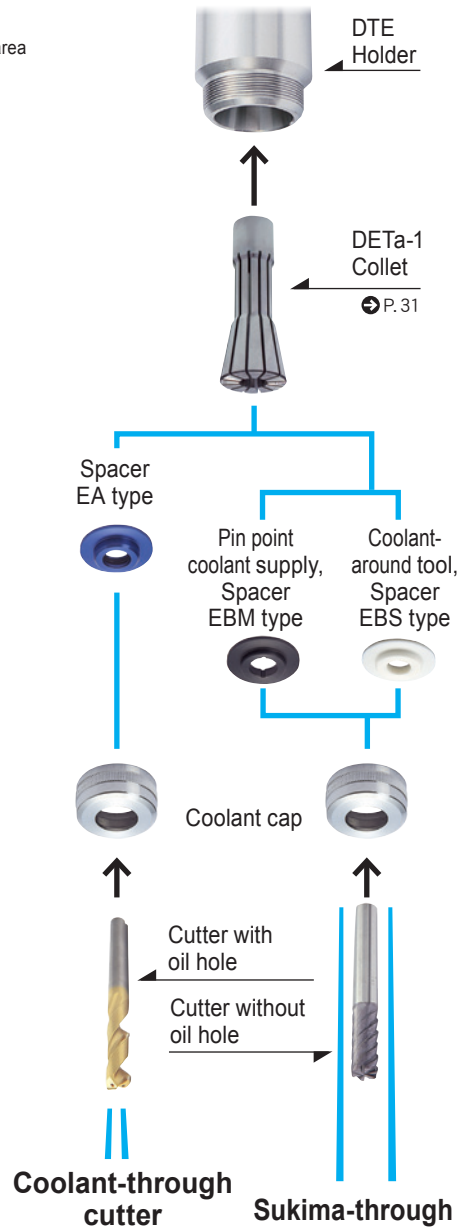


■ Std. Access.  
● Collet driver

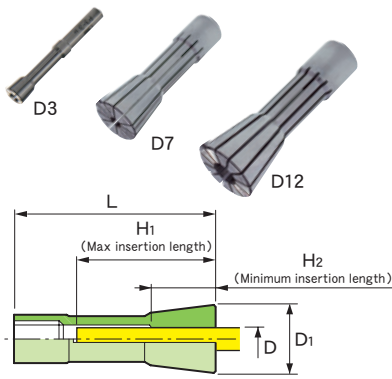
### Coolant cap



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



# DETa-1 COLLET

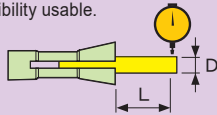


Highest guaranteed accuracies throughout entire chucking range(100% inspection)

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



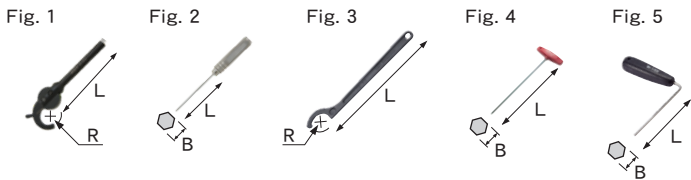
CODE		φD	Holder type	Collap-sibility	φD1	L	H1	H2						
Standard Collet	Precision Collet													
D 3- 0.6 - 0.8 - 1 - 1.5 - 2 - 2.5 - 3 - 3.175	Add "-P" after the standard type item code.  < Example > D12 - 6 - P	0.5 ~ 0.6	DTA 3 DTB 3	0.1	7	40	30	6.9						
		0.6 ~ 0.8												
		0.8 ~ 1												
		1 ~ 1.5												
		1.5 ~ 2												
		2 ~ 2.5												
		2.5 ~ 3												
		2.7 ~ 3.175												
		1 ~ 1.5												
		1.5 ~ 2												
2 ~ 2.5														
2.5 ~ 3														
3 ~ 4														
4 ~ 5														
5 ~ 6														
6 ~ 7														
D12- 4 - 6 - 8 -10 -12 -13		2.5 ~ 4	DTA12 DTB12 DTE12	1.5	26	70	50	16						
		4 ~ 6												
		6 ~ 8												
		8 ~ 10												
		10 ~ 12												
		11 ~ 13												
		1 ~ 1.5							DTA 7 DTB 7 DTE 7	0.5	17	50	36	7
		1.5 ~ 2												
		2 ~ 2.5												
		2.5 ~ 3												
3 ~ 4														
4 ~ 5														
5 ~ 6														
6 ~ 7														
1		1				10								
2 ~ 2.5														
2.5 ~ 3														
3 ~ 4														
4 ~ 5														
5 ~ 6														
6 ~ 7														
2								2				20		
2.5 ~ 3														
3 ~ 4														
4 ~ 5														
5 ~ 6														
6 ~ 7														
7 ~ 8														
8 ~ 10														
10 ~ 12														
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	-	103		
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
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

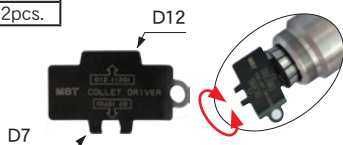
- DTB 3 : φ4 ~
- DTB 7, DTE : φ6 ~
- DTB12 : φ7 ~



## Collet driver

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

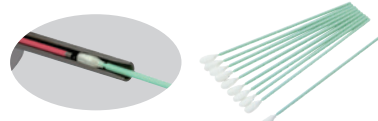
CODE	Q'ty
DR-1	2pcs.



## 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.



## The optimum holder choices for a variety of applications!!



**CTA**



**CTH**  
For high-speed

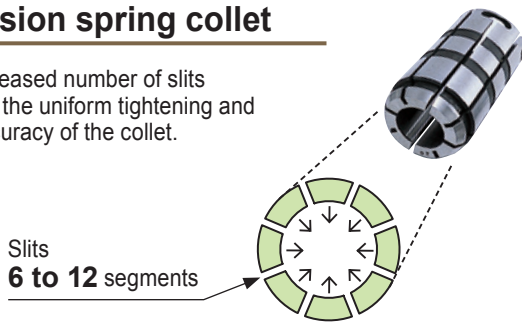
Coolant-through



Coolant-Through Cutter  
"SUKIMA" Coolant Around Tool  
Coolant-Through Collet

### Precision spring collet

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

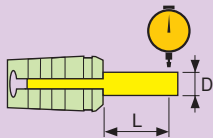


Using a high-precision collet will increase the life of your tools. P. 117

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

Collet	Run-out accuracy ( $\mu\text{m}$ )
Precision Collet	5
Standard Collet	10

※Accuracy of collet alone

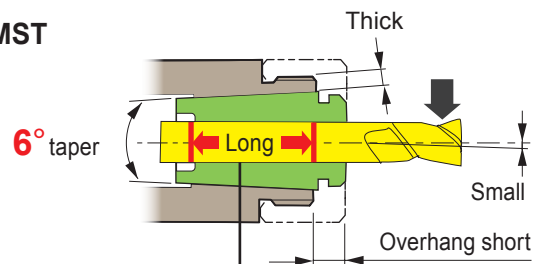


D	L
~10	4×D
10 ~20	40
20.5~42	60

### 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.

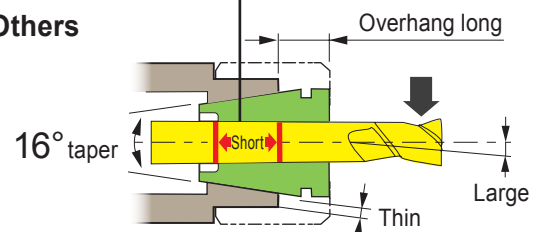
**MST**



#### True clamping length

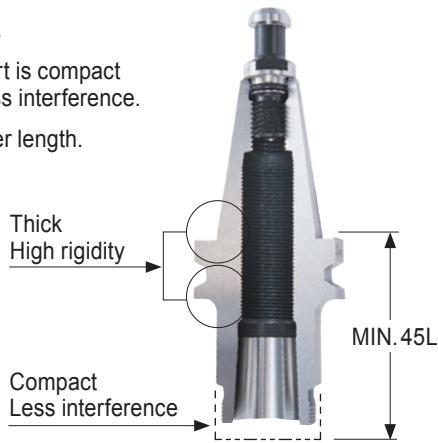
When the taper angle decreases, the collapsibility decreases; however, the true clamping length increases.

**Others**



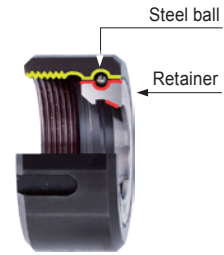
## Thick and highly rigid body

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

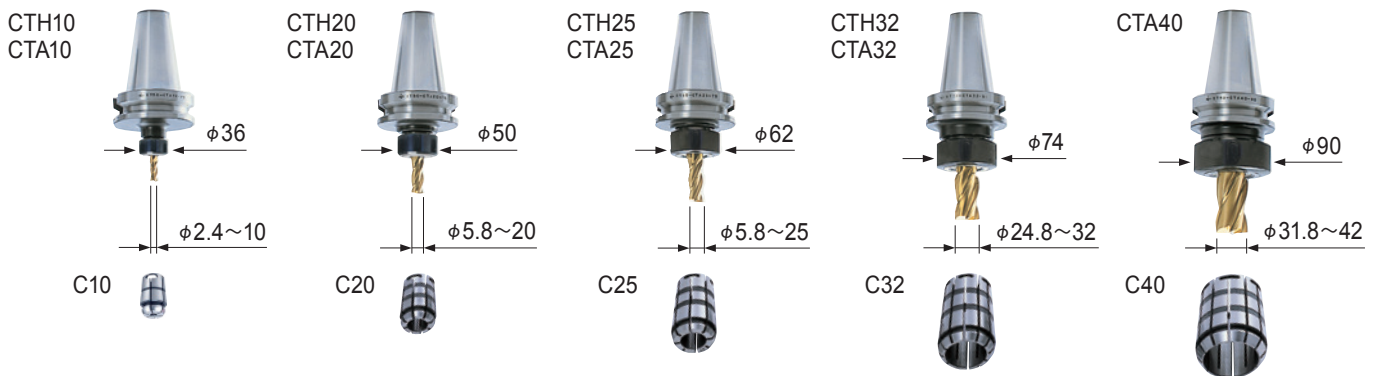


## Nut for high accuracy

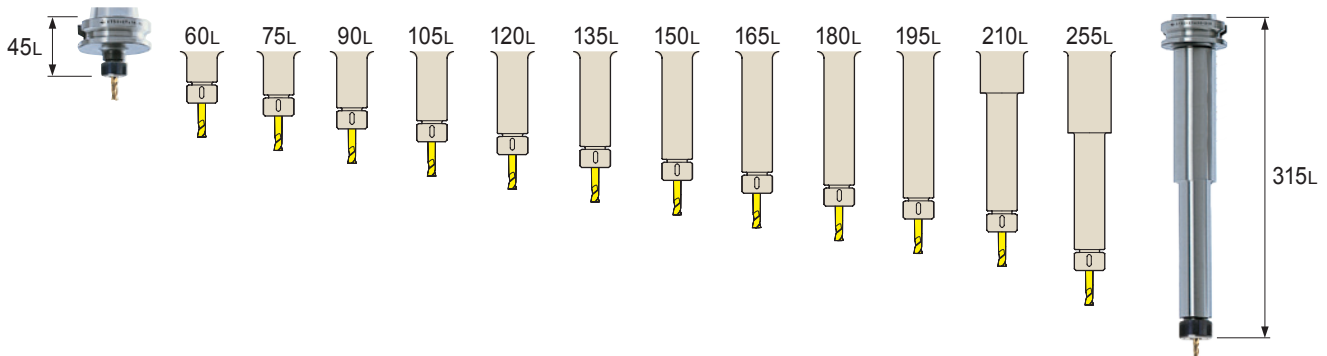
- Because steel ball bearings are built into the nut, the collet does not get twisted when tightened.
- The threaded area and the ball bearing grooves for steel bearings are finished using the same process after heat treatment, thus providing high accuracy with no distortion.
- Stable tightening force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



## Five main body types based on cutting tool size

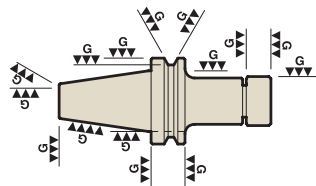


## A variety of holder lengths 45L~315L



## Pre-balanced by previously designing (CTH<sub>type</sub>)

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



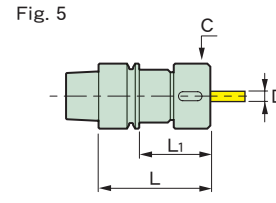
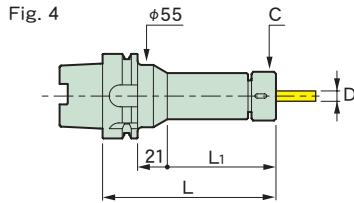
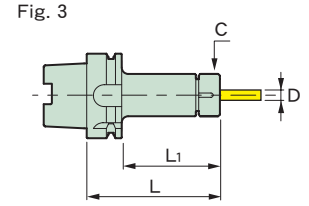
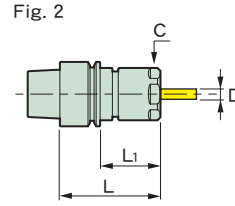
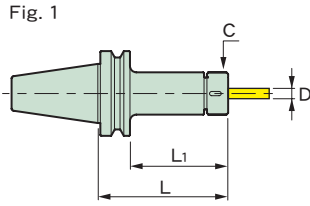
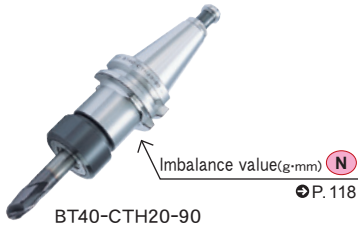
“SUKIMA”  
Coolant Around Tool





Coolant-Through  
Collet



# COLLET HOLDER for high-speed (CTH)



CODE	Fig.	φD	L	φC	L <sub>1</sub>	kg	N
<b>BT30-CTH10- 45</b>	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
<b>BT40-CTH10- 60</b>	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
<b>BT50-CTH10-105</b>	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
<b>A40 -CTH10- 55</b>		3	2.4~10	55	32	35	0.4
- 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
<b>A50 -CTH10- 55</b>	3	2.4~10	55	36	29	0.6	6.6
- 75			75		49	0.7	6.9
<b>A50M-CTH20- 80*</b>		5.8~20	80	50	54	0.9	10.2
-105*			105		79	1.2	11.1
-CTH25-105*			5.8~25		62	79	1.3

CODE	Fig.	φD	L	φC	L <sub>1</sub>		
<b>A63</b> -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
<b>A100</b> -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	5.8~25	135	62	106	3.7	31.4
-165			165		136	4.3	32.7
-195			195		166	4.8	34.1
<b>E32</b> -CTH10- 55	5	2.4~10	55	32	35	0.2	1.2
-CTS10- 50※	2		50				26
<b>E40</b> -CTH10- 55	5	2.4~10	55	32	34	0.4	1.4
<b>E50</b> -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
<b>F63</b> -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
<b>DN40AD</b> -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
<b>DN50AD</b> -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(Precison 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.

DIN

DIN

ANGLE HEAD

COLLET HOLDER

M/C Tool

HSK-T Tooling Systems for Turning Mill

General Purpose Tool

JIG

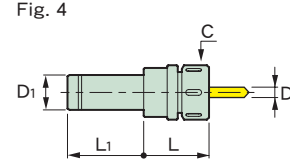
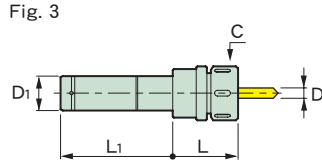
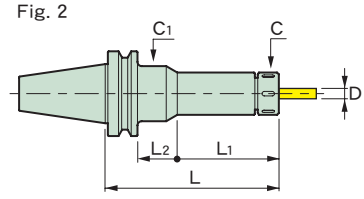
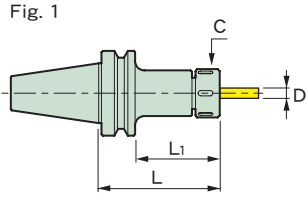
Measuring Equipment

Maintenance Tool

Wire EDM fixture

Technical Information

# COLLET HOLDER(CTA)



CODE	Fig.	$\phi D$	L	$\phi C$	L <sub>1</sub>	L <sub>2</sub>	$\phi C_1$	Kg					
<b>BT30-CTA10- 45</b>	1	2.4~10	45	36	23	—	—	0.5					
- 75			75		53			0.7					
-105			105		83			0.9					
<b>-CTA20- 60</b>	1	5.8~20	60	50	38	—	—	0.6					
- 90			90		68			0.9					
<b>BT40-CTA10- 60</b>			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									
<b>-CTA20- 60</b>	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								
<b>-CTA25- 75</b>			1	5.8~25	75		62		48		—	—	1.2
-105	105	78			1.6								
-135	135	108			2.0								
<b>-CTA32-105</b>	1	24.8~32	105	74	78	—	—	1.8					
<b>BT50-CTA10-105</b>	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			255		155			4.9					
<b>-CTA20-105</b>	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			255		180			6.3					
<b>-CTA25- 75</b>	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					
<b>-CTA32- 90</b>	1	24.8~32	90	74	52	—	—	4.0					
-120			120		82			4.7					
-150			150		112			5.4					
-180			180		142			6.1					
<b>-CTA40- 90</b>	1	31.8~42	90	90	52	—	—	4.0					
-120			120		82			5.0					

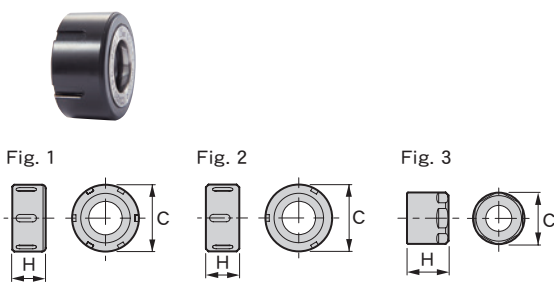


CODE	Fig.	φD	L	φC	L <sub>1</sub>	φD <sub>1</sub>	G	Kg (lbs)
<b>DN40AD-CTA20- 75</b>	1	5.8~20	75	50	56	—	—	1.1
<b>-135</b>			135		116			1.9
<b>-CTA25- 75</b>		5.8~25	75	62	56			1.7
<b>DN50AD-CTA20-105</b>	2	5.8~20	105	50	70	—	—	2.3
<b>-165</b>			165		130			3.0
<b>-CTA25-105</b>		5.8~25	105	62	70			2.9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

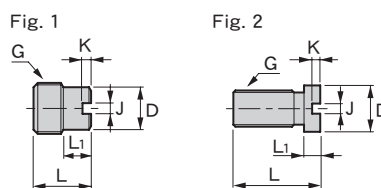
- **Note**
- Applicable for coolant-through methods. Please contact us for more information.
- **Caution**
- The undercut area of the DN40AD-CTA25 and CT40-CTA25 are different from the standard. Please be careful to check for interference with the ATC arm.
  - For precautions and maintenance, refer to page 116.

## Nut

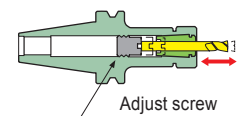


CODE	Fig.	φC	H	Holder type
<b>NUA-CTA10</b>	1	36	18	CTA10
<b>-CTA20</b>		50	25	CTA20
<b>-CTA25</b>		62	28.5	CTA25
<b>-CTA32</b>		74	32	CTA32
<b>-CTA40</b>		90	36	CTA40
<b>-CTH10</b>	2	36	18	CTH10
<b>-CTH20</b>		50	25	CTH20
<b>-CTH25</b>		62	28.5	CTH25
<b>-CTH25-55</b>		55		CTH25(A40)
<b>-CTH32</b>		74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

## Adjust screw



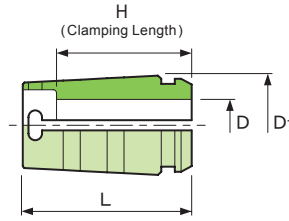
The overhang of the cutting tool can be adjusted.



CODE	Fig.	L	φD	L <sub>1</sub>	J	K	G	Holder type
<b>AJC-M14</b>	1	22	10	8	1.5	3	M14×1.5	CTA10
ST25T-CTA20								
<b>-M24</b>		27	20	13	5	4	M24×1.5	CTA20 (※1)
								BT40-CTA25- 75
<b>-M28</b>	24	15	8			M18×1.5	CTA25 (※2)	
<b>-M18</b>							BT30-CTA20 ,	
<b>-M18L</b>	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	φD1	H						
Standard Collet	Precision Collet												
C10-D		2.6 2.8 <b>3</b> 3.2 3.4 3.6 3.8 <b>4</b> 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 <b>6</b> 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 <b>8</b> 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 <b>10</b>	CTH10 CTA10 CTS10 ※	0.2	26	17.2	2.6 ~ 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 <b>8</b> 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8	CTH20 CTA20	0.2	50	29.5	6 ~ 9.8 → 32 10 ~ 15.8 → 35 16 ~ 20 → 40
								C25-D					
C32-D		25 28 30 32	CTH32 CTA32	0.2	80	46	25 ~ 28 → 66 30 ~ 32 → 68						
		C40-D						32 40 42	CTA40	0.2	80	56	32 ~ 40 → 65 42 → 70

Add "-P" after the standard type item code.

( Example )  
C10 - 6 - P

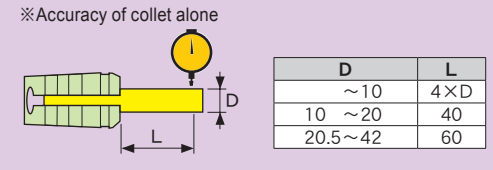
CODE	φD	Holder type	Collapsibility	L	φD1	H				
C20-D	1/4 5/16 3/8	CTA20	.008	1.97	1.16	1.14 1.30 1.57				
	7/16 1/2					C25-D	.008	2.67	1.44	1.38 1.81 2.12 2.24
	5/8 3/4									1/4 5/16 3/8
7/16 1/2	7/16 1/2									
	5/8 3/4									
	1IN									

Ex. 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.

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

Collet	Run-out accuracy (μm)
Precision Collet	<b>5</b>
Standard Collet	<b>10</b>



## Spanner · Wrench

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		CTA40	45		
RC-26	2	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 -50AW	AW-1 -2	CTA10, CTH10 CTA20, CTH20

## Spring collet standard set

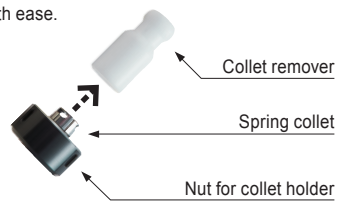
CODE	Collet inner diameter	Q'ty	Holder type
C10-Aset	3, 4, 5, 6, 8, 10	6pcs. (1ea.)	CTA10
C20-Aset	6, 8, 10, 12, 16, 20		CTA20
C25-Aset	6, 8, 10, 12, 16, 20, 25	7pcs. (1ea.)	CTA25

- 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



# COOLANT-THROUGH SYSTEM

CODE
BT30 -CTH10- 45
- 75
-CTH20- 60
- 90
BT40 -CTH10- 60
- 90
-120
-150
-CTH20- 60
- 90
-120
-150
-CTH25- 75
-105
BT50 -CTH10-105
-135
-165
-CTH20-105
-135
-165
-CTH25- 75
-105
-CTH32- 90
DN40AD-CTH20- 75
-135
-CTH25- 75
DN50AD-CTH20-105
-165
-CTH25-105

Retention knob with hole

Model no. of retention knob depends on the machine model.

## Coolant-through cutter SUKIMA through

Coolant screw	H
CSA-M14	22~38
22~68	
※1	-
CSA-M14	22~54
22~67	
-M24S	44~54
-M24L	36~46
-M24S	44~79
-M24L	36~71
-M24S	44~83
-M24L	36~75
-M24S	44~89
-M24L	36~81
-M24S	61~73
-M24L	53~65
-M28	61~80
CSA-M14	22~49
22~67	
-M24S	44~81
-M24L	36~73
-M24S	44~89
-M24L	36~81
-M24S	44~89
-M24L	36~81
-M28	61~79
61~89	
※1	-
CSA-M24S	44~ 69
-M24L	36~ 61
-M24S	44~ 89
-M24L	36~ 81
-M24S	61~ 73
-M24L	53~ 65
CSA-M24S	44~ 89
-M24L	36~ 81
-M24S	44~ 89
-M24L	36~ 81
-M28	61~ 90

SUKIMA nut
NUB-CTH10
-CTH20
NUB-CTH10
-CTH20
-CTH25
NUB-CTH10
-CTH20
-CTH25
-CTH32
NUB-CTH20
-CTH25
NUB-CTH20
-CTH20
-CTH25

CODE
A40 -CTH10- 55
- 75
- 90
-CTH20- 75
- 90
-CTH25- 95
A50 -CTH10- 55
- 75
A50M-CTH20- 80
-105
-CTH25-105
-03
-04※2
A63 -CTH10- 75
- 90
-120
-150
-CTH20- 90
-120
-150
-CTH25-105
-03
-04※2
A100 -CTH10-135
-165
-225
-CTH20-135
-165
-225
-CTH25-135
-165
-195

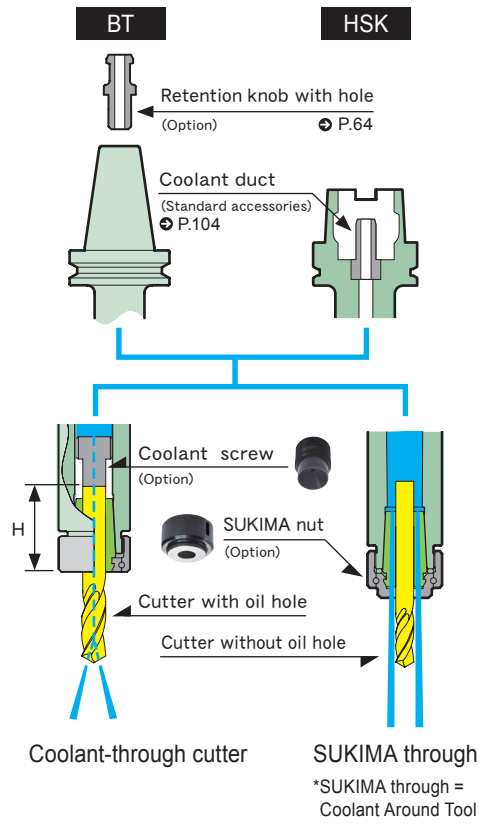
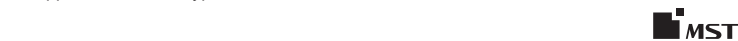
Coolant duct
CD 40-01
-03
-01
-04
CD 50-01
Unnecessary
-03
-04※2
CD 63-02
-01
-03
-04※2
-01
-03
-04※2
CD100-01
-02
-01

Coolant screw	H
CSR- 14	21.7
CSA-M14	22~ 24
21~ 44	
Unnecessary	53
CSA-M24S	41.9
Unnecessary	72
Unnecessary	-
CSA-M14	21~ 22
Unnecessary	-
CSA-M24S	42~ 47
Unnecessary	80
60	
CP - 14M	21~ 28
CSA-M14	22~ 31
22~ 52	
Unnecessary	65
44	
CSA-M24S	44~ 54
-M24L	36~ 46
-M24S	44~ 77
-M24L	36~ 69
Unnecessary	80
59	
CSA-M14	22~ 67
-M24S	44~ 65
-M24L	36~ 57
-M24S	44~ 89
-M24L	36~ 81
-M24S	44~ 89
-M24L	36~ 81
※1	-
CSA-M28	61~ 75
61~105	

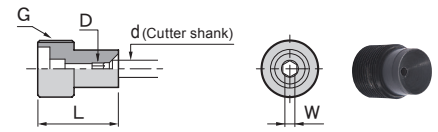
SUKIMA nut
NUB-CTH10
-CTH20
-CTH25
NUB-CTH10
-CTH20
-CTH25
NUB-CTH10
-CTH20
-CTH25
NUB-CTH10
-CTH20
-CTH25
-CTH32-25.2

### Note

- For information on the asterisked (※1) coolant screw for the coolant-through cutter capability, please contact MST.
- A coolant duct is built into every tooling holder. However, the coolant ducts marked with ※2 are optional.
- Applicable for CTA type too. Please contact us for more information.

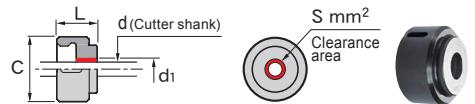


## Coolant screw



CODE	φD	φd	L	G	W
CSR-14	3.2	4~10	14	-	-
CP -14M	3	7~10	53	M14×1.5	3
CSA-M14	2.4	4~10	26		2
-M24S	7	10~20	30	M24×1.5	6
-M24L	3.4	6~12	38		3
-M28	6	10~25	40	M28×1.5	5

## SUKIMA nut



CODE	φC	L	φd	φd1	S
NUB-CTH10- 3.6	36	23	3	3.6	3.1
- 4.5			4	4.5	3.3
- 5.5			5	5.5	3.7
- 6.4			6	6.4	3.9
- 8.4			8	8.4	4.6
-10.3			10	10.3	4.8
-CTH20- 6.4	50	30	6	6.4	3.9
- 8.4			8	8.4	4.6
-10.3			10	10.3	4.8
-12.3			12	12.3	
-16.2			16	16.2	5.1
-20.2			20	20.2	5.7
-CTH25-20.2	62	34.5			
-25.2			25	25.2	5.9
-CTH32-25.2	74	38			
-32.1			32	32.1	6.0

### Caution

- Only the reference cutter size can be used.

# 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



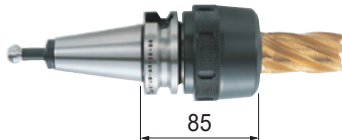
Nozzle-through



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.



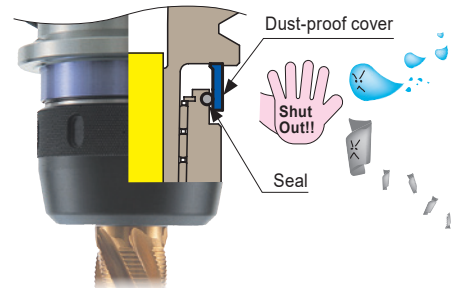
### Memory line clearly confirms tightness of the nut.

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



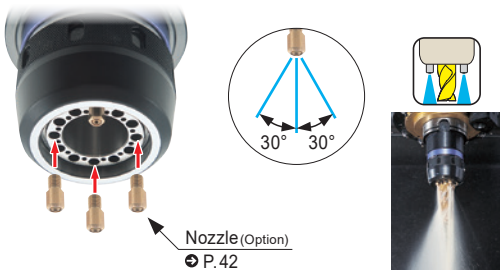
### Keeps chips and coolant out completely

Dust-proof cover keeps chips and coolant out completely.

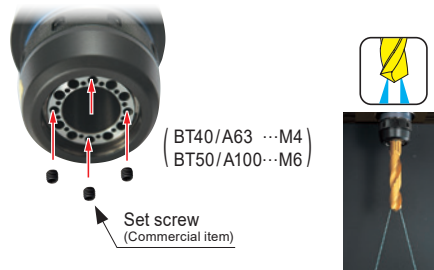


### Applicable for coolant-through version

#### 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)



Fig. 1

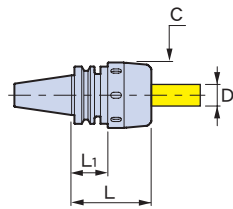


Fig. 2

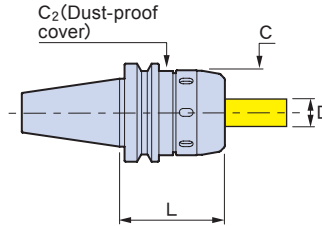


Fig. 3

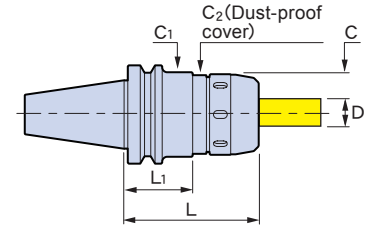


Fig. 4

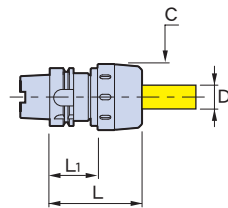
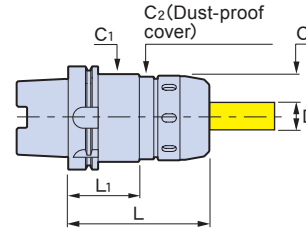


Fig. 5



CODE	Fig.	$\phi D$	L	$\phi C$	$\phi C_1$	$\phi C_2$	L <sub>1</sub>	Cutter insertion length	Kg	MAX. min <sup>-1</sup>		
<b>BT40-ART32- 85</b>	1	32	85	72	—	—	37	66~ 88	1.9	6,000		
<b>- 95</b>			95									
<b>-105</b>			105									
<b>-135</b>			135									
<b>BT50-ART32-105</b>	2	32	105	82	—	80	—	66~ 98	5.1	5,000		
<b>-135</b>	3		135								86	69
<b>-165</b>	165		99								7.7	
<b>-180</b>	180		114								8.4	
<b>-ART42-105</b>	2	42	105	97	—	95	—	76~ 108	5.4	3,000		
<b>-135</b>	3		135								99	67
<b>A50M-ART32-100</b>	4	32	100	72	—	—	44	66~ 71	1.7	6,000		
<b>A63 -ART32-100</b>	4	32	100	72	—	—	44	66~ 71	2.0	6,000		
<b>A100-ART32-135</b>	5	32	135	82	85	80	69	66~ 98	5.3	5,000		
<b>-ART42-135</b>			42	97	99	95	67	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**

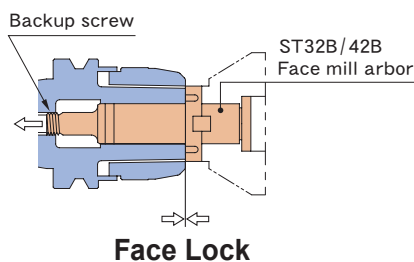
- To utilize the coolant-through nozzle capability, the retention knob with hole and nozzle are required.
- Swing type coolant ducts are available upon request(HSK-A). For details, please contact us.

**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.

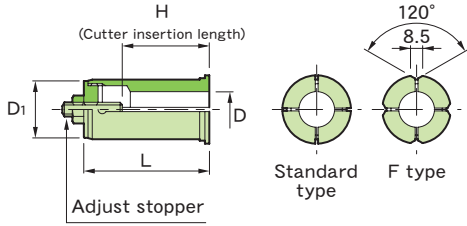


# Straight collet

## 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				
-20	-20F	20				
-25	-25F	25				
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			60~73	
-20	-20F	20				
-25	-25F	25				
-32	-32F	32				

**Caution**

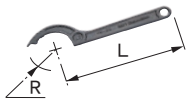
- Remove the adjust stopper when using a straight collet with A50M/ A63.
- When a straight collet with nozzles is used, use the F type.

**Std. Access.**

- Adjust stopper

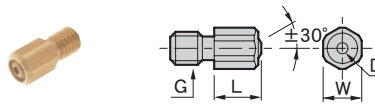
## Spanner with ejection hook

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



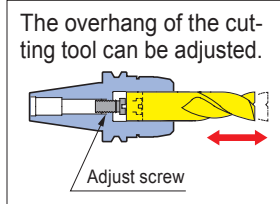
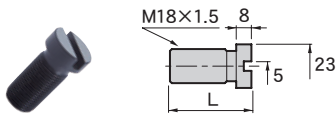
CODE	L	G	W	φD	Holder type	Q'ty
NOZ-M4-12	6.3	M4	4.5	1.2	BT40, A50M, A63	12pcs.
-60						60pcs.
-M6-12	8.5	M6	7	1.8	BT50, A100	12pcs.
-60						60pcs.

**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	

## Cutting data

**S55C**  
φ32 roughing end mill 4 flutes

**n** 350 min<sup>-1</sup>  
**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<sup>-1</sup>  
**Vf** 181 mm/min  
**Vc** 35 m/min  
**fz** 0.13 mm/t

BT50-ART32-105

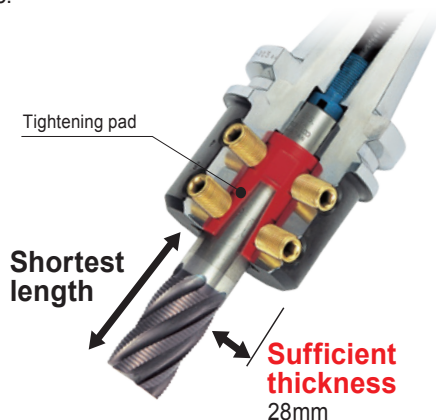
## The ace for heavy-duty cutting!! The set screw holder that doesn't need a whistle notch.

- ▷ Accuracy → Less than 20 μm / 100L
- ▷ Gripping force → 4000N · m (φ 42)



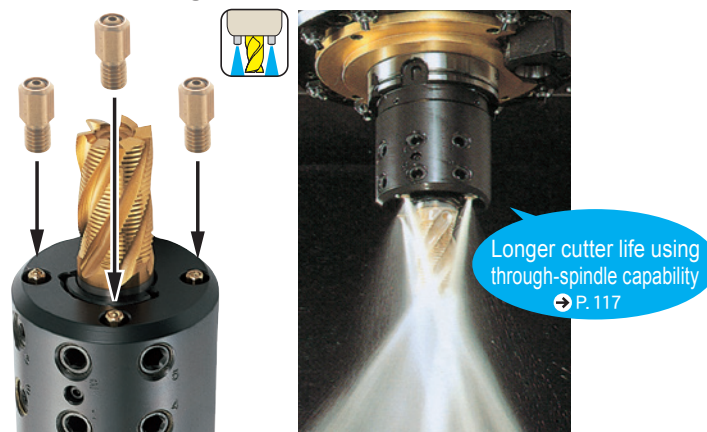
### Adjustable projection of cutting tool

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.



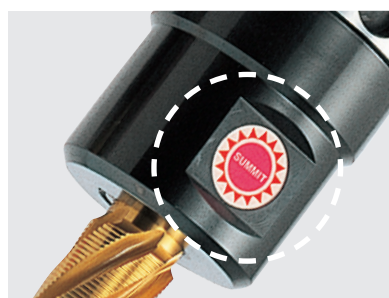
### Applicable for coolant-through version (A100)

#### Nozzle-through

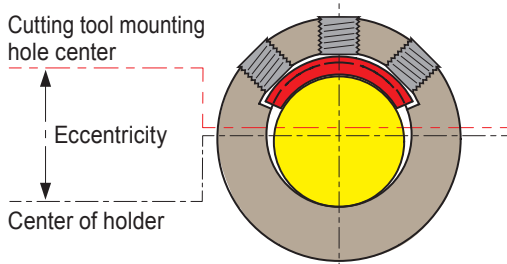


### Applicable to high-speed cutting

#### Pre-balanced design



#### High accuracy thanks to its eccentric bore design



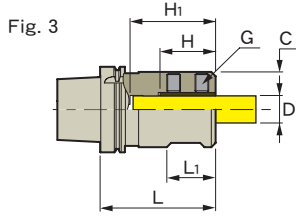
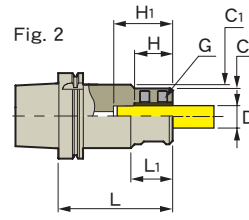
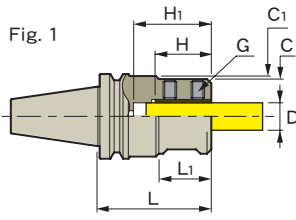
# SUMMIT (SLZ)



BT50-SLZ32-105



A100-SLZ32-135

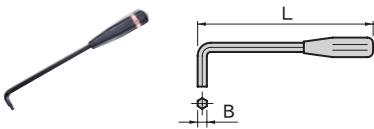


CODE	Fig.	φD	L	L <sub>1</sub>	φC	φC <sub>1</sub>	H	H <sub>1</sub>	G	Kg
<b>BT50-SLZ25- 90</b>	1	25	90	—	66	—	45	70	4-M12	4.6
<b>-120</b>			120	45		75				5.6
<b>-150</b>			150	—		—				6.5
<b>-SLZ32-105</b>	1	32	105	—	88	—	65	100	6-M16	5.9
<b>-135</b>			135	62		95				7.5
<b>-165</b>			165	—		—				9.1
<b>-SLZ42-105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

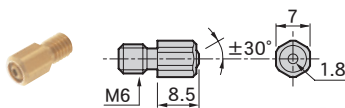
- **Caution**
  - If the dedicated wrench is not used, use a wrench with a minimum handle length of 30 cm for the M16 or 20 cm for the M12.
  - For precautions and maintenance, refer to page 117.

## Wrench



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

## Nozzle

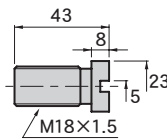


CODE	Q'ty
<b>NOZ-M6-12</b>	12pcs.
<b>-60</b>	60pcs.

- **Std. Access.**
  - Wrench for attachment

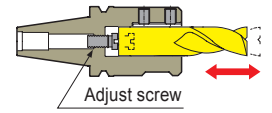
## Adjust screw

The overhang of the cutting tool can be adjusted.



CODE	Shank type	Q'ty
<b>AJC-M18L</b>	BT50	5pcs.

The overhang of the cutting tool can be adjusted.



## Cutting data

**A2017**

φ38 end mill  
4 flutes

n 5000 min<sup>-1</sup>  
Vf 5000 mm/min  
Vc 597 m/min  
fz 0.25 mm/t

55  
4

BT50-SLZ32-105

**S50C**

φ40 roughing end mill 6 flutes

n 280 min<sup>-1</sup>  
Vf 168 mm/min  
Vc 35 m/min  
fz 0.1 mm/t

50  
40

BT50-SLZ32-105

**S50C**

φ45 roughing end mill 6 flutes

n 190 min<sup>-1</sup>  
Vf 114 mm/min  
Vc 25 m/min  
fz 0.1 mm/t

55  
45

BT50-SLZ42-105



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

1

Roughing

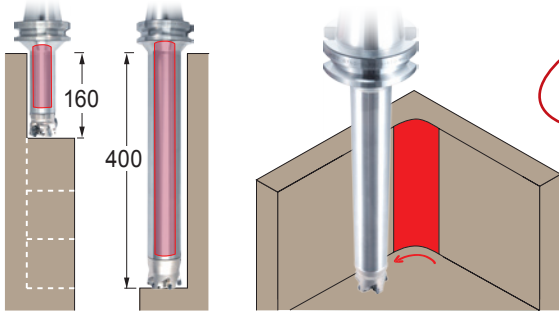
With a solid carbide core

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.



2

Semi-finishing

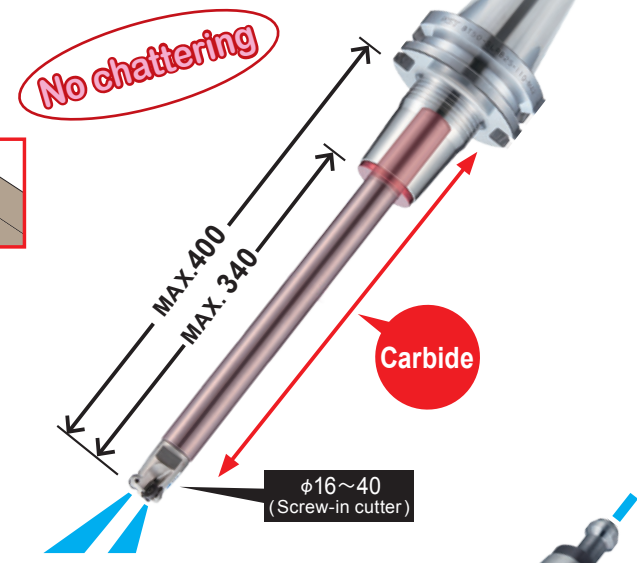
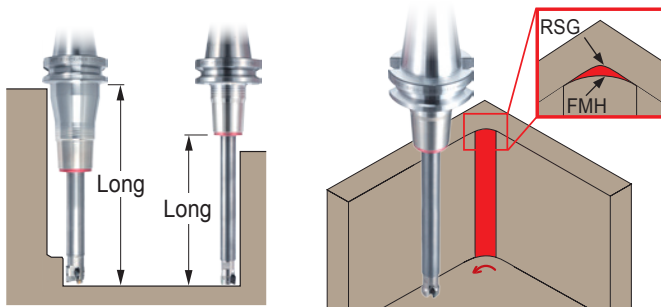
For screw-in end-mills

PAT

## RED SCREW ARBOR

☞ P. 48

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



3

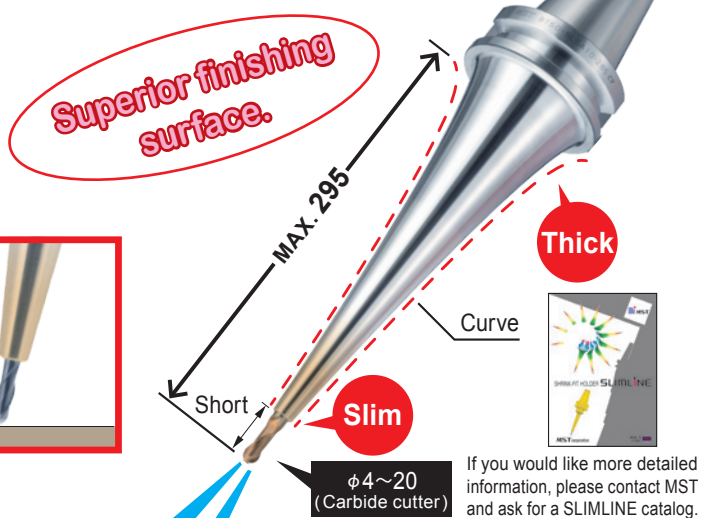
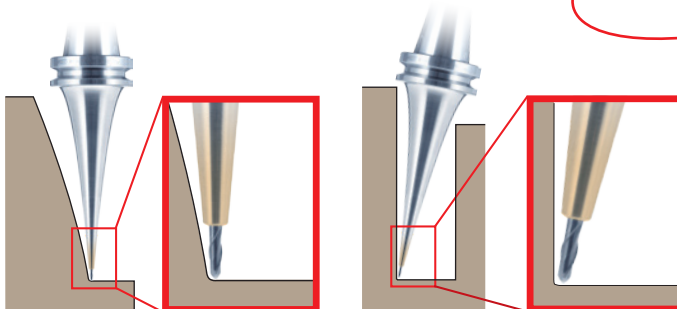
Finishing

SHRINK-FIT HOLDER

PAT

## SLIMLINE MONO CURVE

Superior Accessibility.  
Slim tip design of Curve minimizes cutter projection.



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

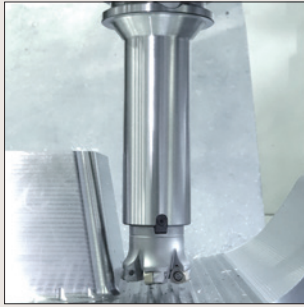
# FMH RIGID type

PAT.  
with a solid carbide core

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

**FMH-H**

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



coolant-through



L/D=3~6

Large dia. Carbide core

Thick body shrinks strongly around the carbide core

**RIGID**

Under-cut design makes it ideal for vertical wall cutting

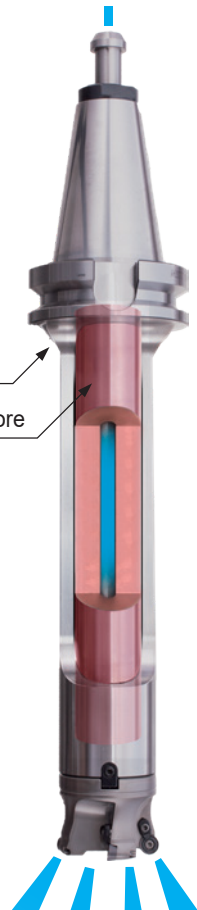
**NEW**

φ40~100(FMH standard)



## Large dia. Carbide core

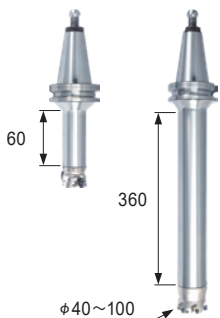
The large-diameter carbide core is integrated into the thick body by shrink-fitting. Achieves less deflection and higher efficiency during long-gauge machining. Vibration-free machining leads to longer insert life and achieves stable machining during long and continuous operation.



Thickness  
Carbide core

## Even greater efficiency!

Effective length of our line up is from 110mm to 360mm and cutter dia of our line up is from φ40 to φ100. 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

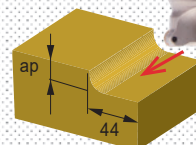
OSG KYOCERA Sumitomo Electric Hardmetal  
DIJET INDUSTRIAL Tungaloy MITSUBISHI MATERIALS  
MOLDINO

## Comparison test

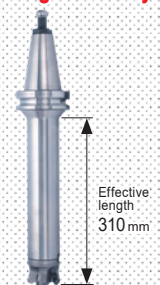
Cutting depth $a_p$ (mm)	0.5	1.0	1.5	2.0
<b>FMH RIGID type</b> BT50-FMH22-60-315H	○	○	○	○
<b>Conventional</b> BT50-FMH22-60-300	○	✗ Chattering		○

**Double the Machining efficiency**

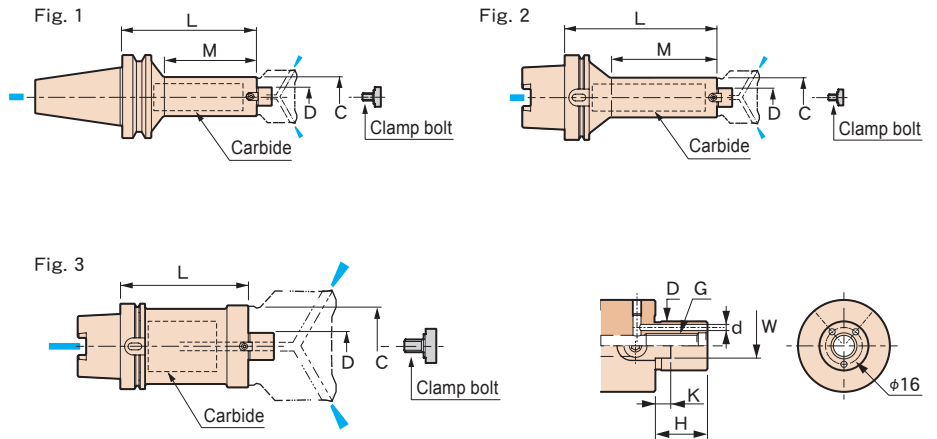
- Application: Shouldering
- Material: S50C (Mild steel)
- Cutting speed: 220 m/min (S1,112 min<sup>-1</sup>)
- Feed rate: 1,112 mm/min



Cutter dia. φ63  
4-flutes  
Round insert



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



CODE	Fig.	L	M	Kg	Moment kgf·m
<b>BT50-FMH16 -37-125H</b>	1	125	60	5.2	—
<b>NEW</b> -175H		175	110	5.8	
-225H		225	160	6.5	
-275H		275	210	7.1	
-325H		325	260	7.8	
<b>BT50-FMH22 -47-165H</b>	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
<b>BT50-FMH22 -60-165H</b>	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
<b>BT50-FMH31.75-76-215H</b>	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
<b>A100-FMH16 -37-125H</b>	1	125	60	3.9	—
<b>NEW</b> -175H		175	110	4.5	
-225H		225	160	5.2	
-275H		275	210	5.8	
-325H		325	260	6.4	
<b>A100-FMH22 -47-165H</b>	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
<b>A100-FMH22 -60-165H</b>	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
<b>A100-FMH31.75-76-215H</b>	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
<b>A100-FMH31.75-96-250H</b>	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
<b>FMH16 -37</b>	40	16	17	37	8	5	2	M 8	M 8※
<b>FMH22 -47</b>	50/52	22	18	47	10	5	3	M10	M10※
<b>FMH22 -60</b>	63/66	22	18	60	10	5	3	M10	M10※
<b>FMH31.75-76</b>	80	31.75	30	76	12.7	7	4	M16	MBF-M16
<b>-96</b>	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.

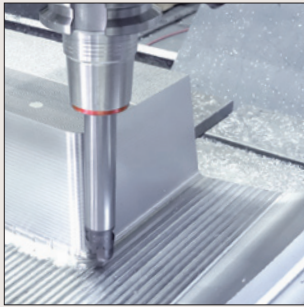
# RED SCREW arbor

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

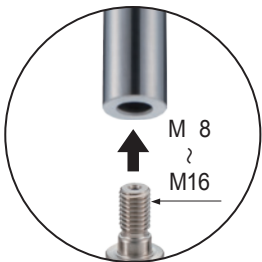
Carbide

NEW

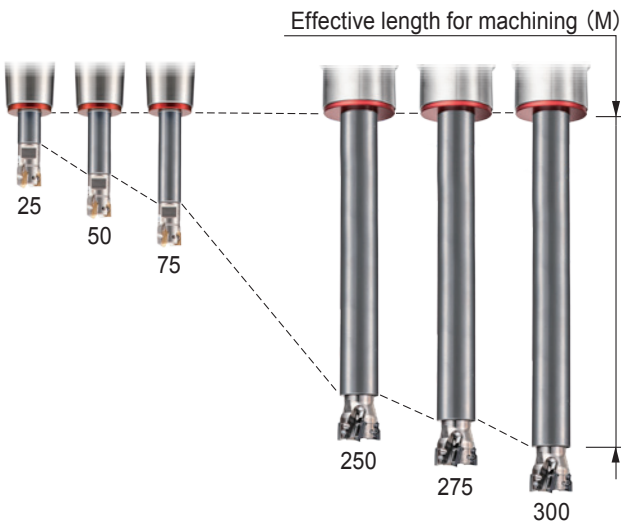
φ16~40  
Screw-in tool

Under-cut design

## Works with these manufacturers' tools



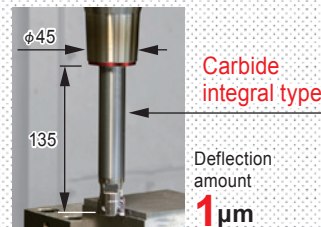
## Many effective lengths for machining



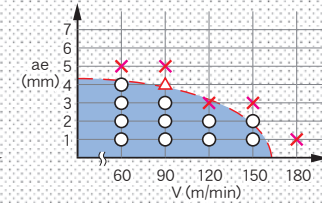
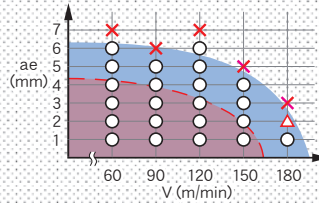
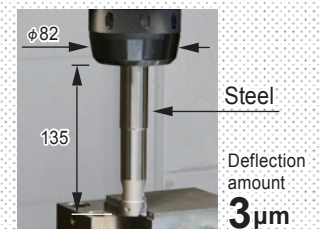
Heavy cutting ↔ Deep standing-wall machining

## Machining example

RED screw arbor  
BT50-RSG12-215-M100

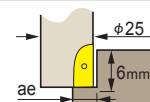


A general holder +  
A steel shank



○ Excellent  
✗ Chattering

Cutting condition



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

# RED SCREW arbor (RSG)

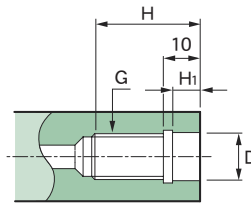
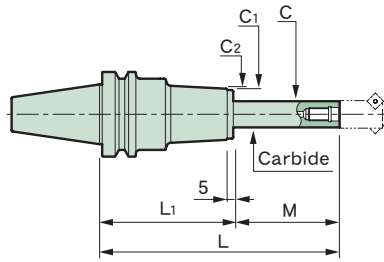
BT



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

S

BT50-RSG16-400-M225



Dimensions for the screw-in end mill mounting.

Available for  
DIN/ CAT.

■ Option

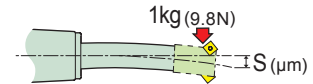
- Retention knob → P.64

■ 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	L1	Kg	S
<b>BT40-RSG 8-105-M 25</b>	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
<b>BT40-RSG10-125-M 25</b>	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
<b>BT40-RSG12-125-M 25</b>	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	L1	Kg	S
<b>BT40-RSG12-200-M100</b>	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
<b>BT40-RSG16-125-M 25</b>	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
<b>BT50-RSG 8-120-M 25</b>	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	
<b>BT50-RSG10-140-M 25</b>	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 <sub>1</sub>	φC	φC <sub>1</sub>	φC <sub>2</sub>
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



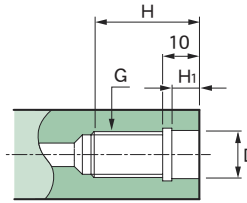
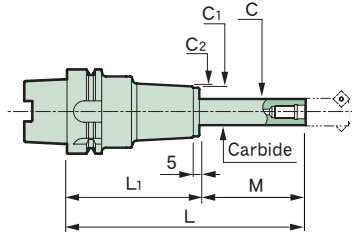
BT50-RSG16-37-265-M150

CODE	L	M	L <sub>1</sub>	Kg	S
<b>BT50-RSG10-235-M120</b>	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	
<b>BT50-RSG12-140-M 25</b>	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	
<b>BT50-RSG16-140-M 25</b>	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 <sub>1</sub>	Kg	S
<b>BT50-RSG16-300-M125</b>	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
<b>BT50-RSG16- 37-190-M 75</b>	190	75	115	6.8	0.2
-215-M100	215	100			0.3
<b>NEW</b> -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**

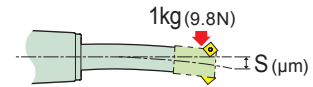
- Swing type coolant ducts are available upon request. For details, please contact us.

■ **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 of 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 <sub>1</sub>	Kg	S
<b>A63-RSG 8-105-M 25</b>	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
<b>A63-RSG10-125-M 25</b>	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

CODE	L	M	L <sub>1</sub>	Kg	S
<b>A63 -RSG12-125-M 25</b>	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
<b>A63 -RSG16-140-M 25</b>	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
<b>A100-RSG 8-120-M 25</b>	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 <sub>1</sub>	φC	φC <sub>1</sub>	φC <sub>2</sub>
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 <sub>1</sub>	 Kg	 S
<b>A100-RSG 8-230-M 75</b>	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
<b>A100-RSG10-140-M 25</b>	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	
<b>A100-RSG12-140-M 25</b>	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	

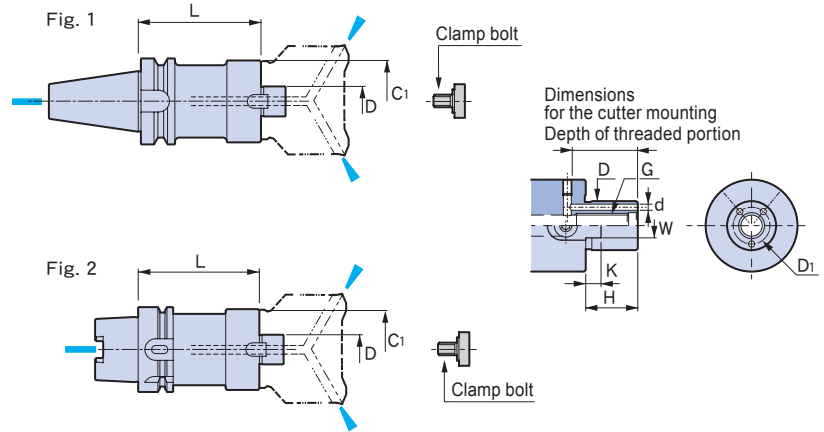
CODE	L	M	L <sub>1</sub>	 Kg	 S
<b>A100-RSG16-140-M 25</b>	140	25	115	4.0	0.2
-170-M 25	170		145	4.5	
-200-M 25	200		175	5.7	
-165-M 50	165	50	115	4.2	0.3
-195-M 50	195		145	4.7	0.4
-225-M 50	225		175	5.9	
-190-M 75	190	75	115	4.5	0.5
-220-M 75	220		145	5.0	0.6
-250-M 75	250		175	6.1	
-215-M100	215	100	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	
<b>A100-RSG16- 37-190-M 75</b>	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

**NEW**



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

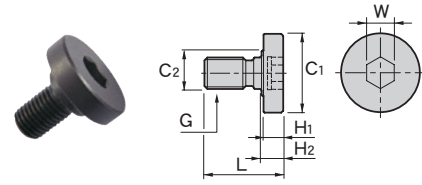
CODE	Fig.	Cutter dia.	L	φC1	kg	
<b>BT50-FMH22 -47- 90</b>	1	50/52	90	47	4.4	
			150		5.4	
			200		6.2	
			250		7.2	
			300		8.3	
<b>BT50-FMH22 -60- 90</b>	1	63/66	90	60	4.8	
			150		6.4	
			200		7.8	
			250		9.2	
			300		10.8	
<b>BT50-FMH22.225-47- 90</b>	1	50/52	90	47	4.4	
			150		5.4	
			200		6.2	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

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

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



φ20~102

Super precision finishing boring holder

### MBH



φ50~380

Finishing and heavy duty boring holder

### MBJ



φ5.5~205

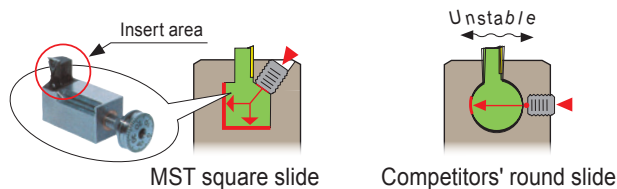
Wide range and multi-purpose boring holder

## Super precision finishing boring holder

**MFA** P.57

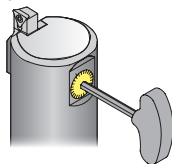
### Rigid design thanks to the square sliding head

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

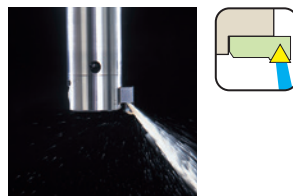
It allows 0.01mm dia. fine adjustment easily and precisely. The setting diameter doesn't change when you clamp the head.



### System

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

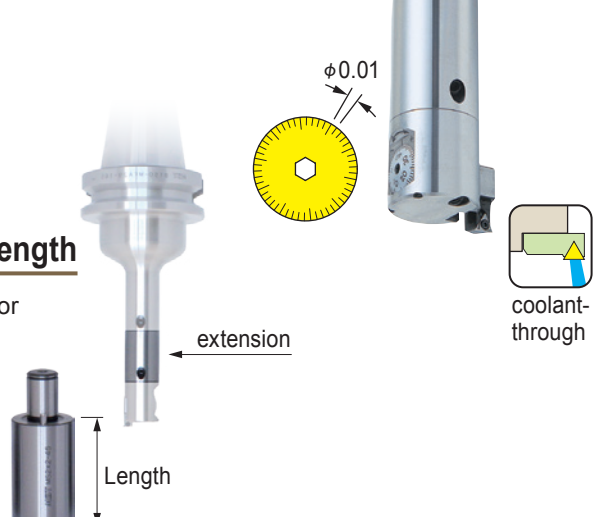
### Available for spindle-through coolant as standard.



### Adjustable effective length

Using the extension allows for increased effective length

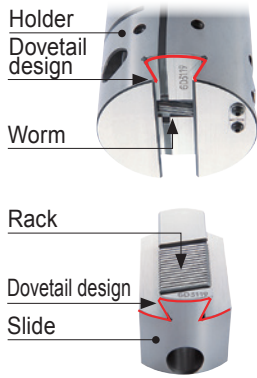
MODEL	Length (mm)
MFA20	30 · 35 · 40 · 45
MFA24	
MFA29	30 · 40 · 50 · 60
MFA36	40 · 50 · 60 · 70
MFA50	45 · 60 · 75 · 90
MFA75	



# Finishing and heavy duty boring holder **MBH**

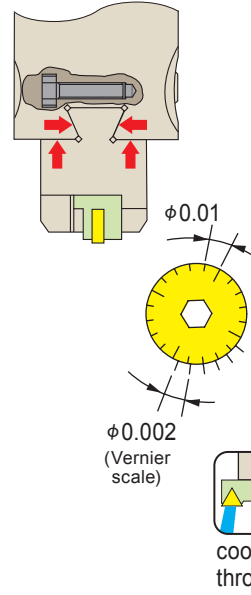
## Sliding rack design ... Wide adjusting range

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

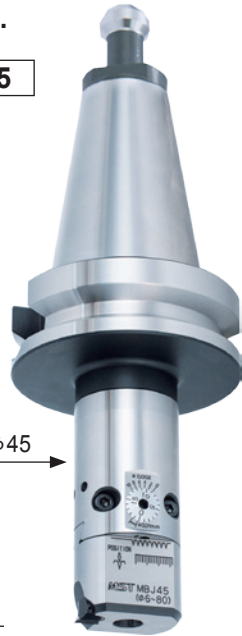
MODEL	Boring dia.
MBH 50	φ 50 ~ 80
MBH 75	φ 75 ~ 120
MBH115	φ 115 ~ 185
MBH180	φ 180 ~ 250
MBH245	φ 245 ~ 315
MBH310	φ 310 ~ 380



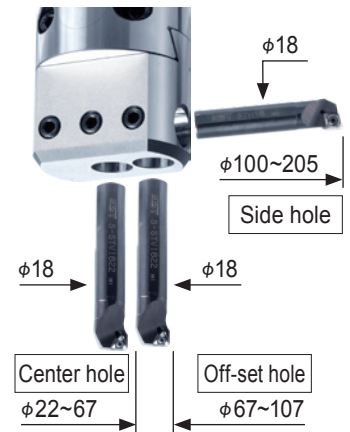
# Wide range and multi-purpose boring holder **MBJ**

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

**MBJ45**



**MBJ70**



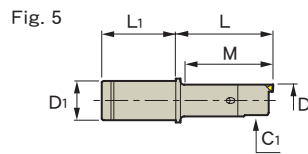
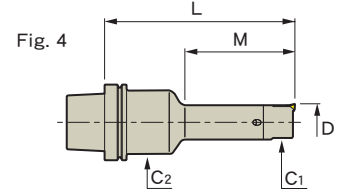
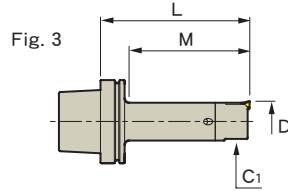
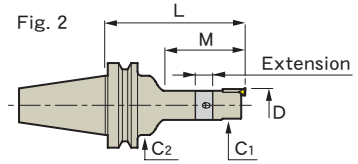
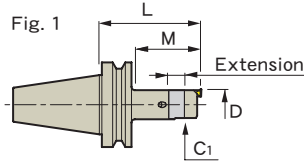
Cutting data  


**Micro Head for engraving**

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

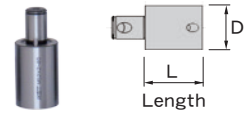


# MICRO HEAD MFA type (MFA)



CODE	Fig.	Boring dia. (φD)	L	M	φC1	φC2	Extension	Kg				
<b>BT30-MFA20- 90</b>	1	20~ 24.5	90	63	19	—	—	0.6				
<b>-MFA24- 90</b>		24~ 30			22							
<b>-MFA29-105</b>		29~ 38	105	78	27.6	—	0.7					
<b>-MFA36-105</b>					36~ 52		34.4		0.9			
<b>BT40-MFA20-120</b>	2	20~ 24.5	120	65	19	46	—	1.4				
<b>-150</b>			150	81	—			1.5				
<b>-MFA24-150</b>		24~ 30	—	—	62	22	30	1.7				
<b>-180</b>					180			92	1.8			
<b>-MFA29-150</b>		29~ 38	150	82	27.6	—	—	1.7				
<b>-180</b>								180	112	1.8		
<b>-MFA36-150</b>		36~ 52	150	97	34.4	62	—	1.9				
<b>-195</b>								195	142	2.2		
<b>-MFA50-150</b>		50~ 77	150	102	46	—	—	2.4				
<b>-195</b>								195	147	3.0		
<b>-MFA75-150</b>		75~ 102	150	102	51	—	—	2.5				
<b>-195</b>								195	147	3.1		
<b>BT50-MFA20-165</b>		2	20~ 24.5	165	54	19	62	—	4.9			
<b>-195</b>				195	84	—			5.0			
<b>-240</b>	240			64	—	6.3						
<b>-MFA24-165</b>	24~ 30			165	52	22			—	—	4.9	
<b>-195</b>			195				82	30			5.0	
<b>-240</b>	240		62	—	—	—	—	6.3				
<b>-270</b>								270	92	30	6.4	
<b>-MFA29-165</b>	29~ 38		165	82	27.6	70	—	4.7				
<b>-195</b>								195	112	30	4.8	
<b>-240</b>								240	82	—	6.7	
<b>-270</b>								270	112	30	6.9	
<b>-MFA36-165</b>	36~ 52		165	97	34.4	—	—	4.6				
<b>-210</b>								210	142	45	4.9	
<b>-255</b>								255	97	80	—	7.9
<b>-300</b>		300						142	45	8.2		
<b>-MFA50-165</b>	1	50~ 77	165	122	46	—	4.9					
<b>-210</b>							210	167	45	5.5		
<b>-255</b>							2	255	147	86	—	7.6
<b>-300</b>								300	192	45	8.2	
<b>-MFA75-165</b>	1	75~ 102	165	122	51	—	5.0					
<b>-210</b>							210	167	45	5.6		
<b>-255</b>							2	255	147	86	—	7.7
<b>-300</b>								300	192	45	8.3	

## Extension



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


### Caution

- Longer projection length causes chattering and reduced rigidity

## Insert



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

CODE	Fig.	Boring dia. ( $\phi$ D)	L	M	$\phi$ C1	$\phi$ C2	Extension	D1	L1	 Kg								
<b>A40</b> -MFA20- 90 -MFA24- 90 -MFA29-105 -MFA36-105 -MFA50-105	3	20~ 24.5	90	65	19	—	—	—	—	0.4								
		24~ 30			22													
		29~ 38	105	82	27.6						—	—	—	—	0.6			
		36~ 52			34.4													
		50~ 77			46													
<b>A50</b> -MFA20-120 -MFA24-120 -MFA29-120 -MFA36-120 -MFA50-120 -MFA75-120	4	20~ 24.5	120	69	19	41	—	—	—	0.8								
		24~ 30			22													
		29~ 38			82													
	3	36~ 52	91	34.4	—					—	—	—	—	1.1				
		50~ 77		46														
		75~102		51														
		—		—														
<b>A63</b> -MFA20-150 -MFA24-150 -180 -MFA29-150 -180 -MFA36-150 -195 -MFA50-150 -195 -MFA75-150 -195	4	20~ 24.5	150	81	19	46	—	—	—	1.3								
		24~ 30		62							22							
		-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							
		<b>A100</b> -MFA20-165 -195 -240 -MFA24-165 -195 -240 -270 -MFA29-165 -195 -240 -270 -MFA36-165 -210 -255 -300 -MFA50-165 -210 -255 -300 -MFA75-165 -210 -255 -300	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				210	176	—	45	4.2										
-255				255	147	85	—	6.7										
-300	4		300	192	—	45	7.3											
-MFA75-165	3		75~102	165	131	51	—	—	3.7									
-210				210	176	—	45	4.3										
-255	4	255	147	—	85	—	6.8											
-300	300	192	—	45	7.4													
<b>F63</b> -MFA20-150 -MFA24-150 -180 -MFA29-150 -180 -MFA36-150 -195 -MFA50-150 -195	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						
		<b>ST25T</b> -MFA20- 75 -MFA24- 90 -MFA29-105	5	20~ 24.5						75	75	19	—	—	25	70	—	
-MFA24- 90	24~ 30			90	85	22												
-MFA29-105	29~ 38			105	105	27.6												
<b>S 32</b> -MFA20- 90 -MFA24- 90 -MFA29-105 -MFA36-105 -MFA50-105	5			20~ 24.5	90	75	19	—	—	32	70	—						
				-MFA24- 90			24~ 30											80
				-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.



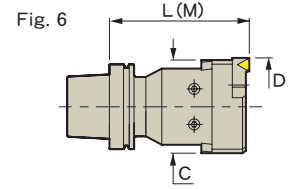
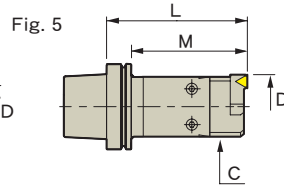
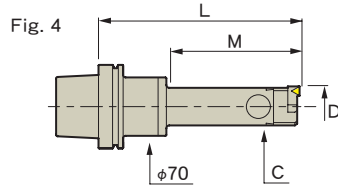
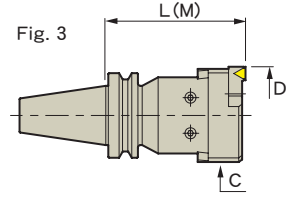
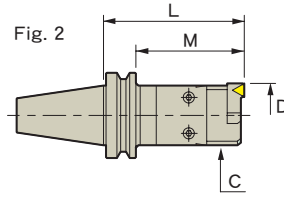
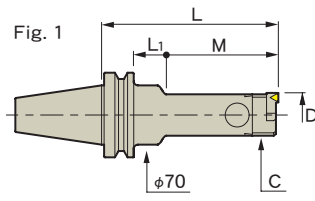
# MICRO HEAD MBH type (MBH)



BT50-MBH180-225



A100-MBH75-165



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

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

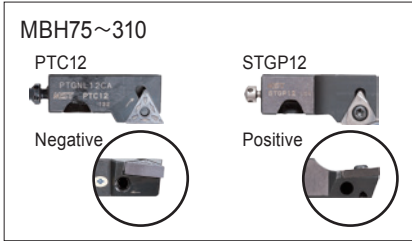
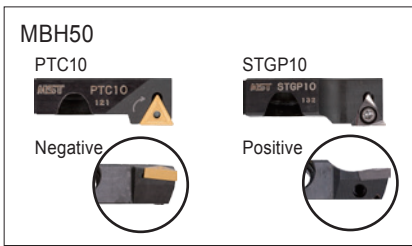
- Swing type coolant ducts are available upon request. For details, please contact us.
- Drive key slot and cutting direction are in alignment.
- Add "C" after the MBH model no. for through-spindle coolant when you order. (Example: BT50-MBH75C-165)

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

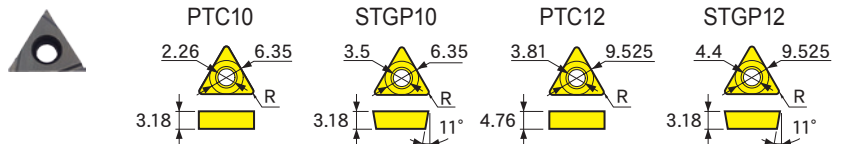


CODE	Work-piece material	Holder type
PTC10	Steel·Cast Iron·Stainless	MBH50
STGP10	Steel·Cast Iron Stainless·Aluminum	
PTC12	Steel·Cast Iron	MBH75 ~310
STGP12	Steel·Cast Iron Stainless·Aluminum	

Note

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

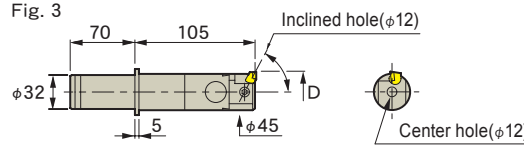
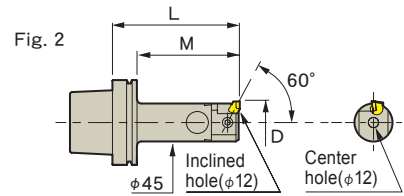
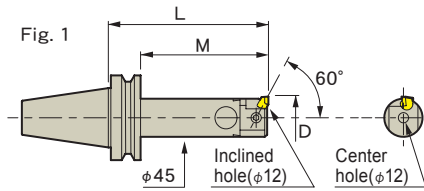
Insert



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	Cermet	Steel	Finishing	10pcs.	STGP10
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					
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)



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



Boring diameter φ5.5~8		Boring diameter φ8~10																																																														
<p>Insert holder</p> <table border="1"> <tr><th>CODE</th><td>STV-C12055</td></tr> <tr><td>Carbide shank</td></tr> </table>	CODE	STV-C12055	Carbide shank	<p>Insert</p> <table border="1"> <tr><th>CODE</th><th>R</th><th>Insert material</th><th>Q'ty</th><th>Work material</th></tr> <tr><td>TPE042-PA</td><td>0.2</td><td>Cermet</td><td rowspan="3">10pcs.</td><td>Steel</td></tr> <tr><td>-MKA</td><td></td><td>Carbide coating</td><td>Stainless</td></tr> <tr><td>-NA</td><td></td><td>Carbide</td><td>Cast iron</td></tr> <tr><td></td><td></td><td></td><td></td><td>Aluminum</td></tr> </table>	CODE	R	Insert material	Q'ty	Work material	TPE042-PA	0.2	Cermet	10pcs.	Steel	-MKA		Carbide coating	Stainless	-NA		Carbide	Cast iron					Aluminum	<p>Insert holder</p> <table border="1"> <tr><th>CODE</th><td>STV-C1208</td></tr> <tr><td>Carbide shank</td></tr> </table>	CODE	STV-C1208	Carbide shank	<p>Insert</p> <table border="1"> <tr><th>CODE</th><th>R</th><th>Insert material</th><th>Q'ty</th><th>Work material</th></tr> <tr><td>TPE032-PA</td><td>0.2</td><td>Cermet</td><td rowspan="3">10pcs.</td><td>Steel</td></tr> <tr><td>TPE034-PA</td><td>0.4</td><td rowspan="2">Carbide coating</td><td rowspan="2">Stainless</td></tr> <tr><td>TPE032-MKA</td><td>0.2</td><td>Cast iron</td></tr> <tr><td>TPE034-MKA</td><td>0.4</td><td rowspan="2">Carbide</td><td rowspan="2">Aluminum</td></tr> <tr><td>TPE032-NA</td><td>0.2</td></tr> <tr><td>TPE034-NA</td><td>0.4</td></tr> </table>	CODE	R	Insert material	Q'ty	Work material	TPE032-PA	0.2	Cermet	10pcs.	Steel	TPE034-PA	0.4	Carbide coating	Stainless	TPE032-MKA	0.2	Cast iron	TPE034-MKA	0.4	Carbide	Aluminum	TPE032-NA	0.2	TPE034-NA	0.4							
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CODE	STV-C1214																																																															
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### For inclined hole

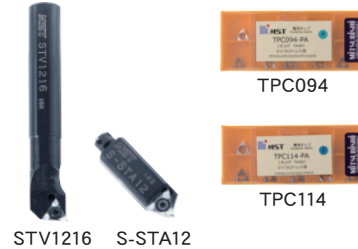
S-STA12

Boring diameter $\phi 48 \sim 80$					
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			

**Steel shank**

### Insert and insert holder set

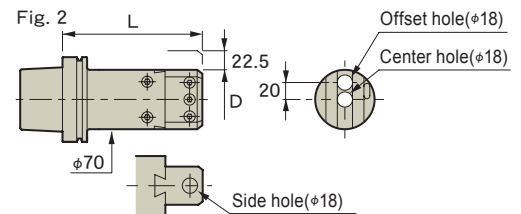
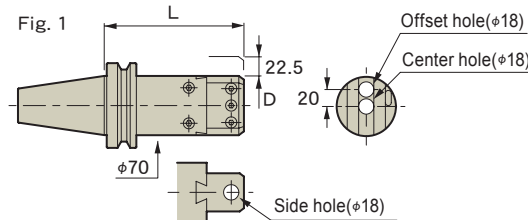
CODE	Insert holder	Q'ty	Insert	Q'ty	Work material
PJ-45	STV1216	1pc.	TPC094-PA	10pcs.	Steel
	S-STA12		TPC114-PA		
KJ-45	STV1216	1pc.	TPC094-KNA	10pcs.	Cast iron Aluminum
	S-STA12		TPC114-KA		



## MICRO HEAD MBJ70 type (MBJ70)



BT50-MBJ70-165



CODE	Fig.	Chucking range ( $\phi D$ )	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			

**Steel shank**

#### 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	Cast iron		
	CCD094-NA				
	CCD094-ND	Polycrystalline diamond	1pc.		Aluminum

A	$\phi D$
15	100~145
35	140~185
45	160~205

### 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

<p><b>S45C</b> - Finishing - Insert : TPA084-PA (Nose R0.4)</p> <p><b>n</b> 3317 min<sup>-1</sup> <b>Vf</b> 331 mm/min <b>Vc</b> 250 m/min <b>f</b> 0.1 mm/rev</p> <p>BT50-MFA24-270</p>	<p><b>SUS304</b> - Finishing - Insert : TPA084-MA (Nose R0.4)</p> <p><b>n</b> 1326 min<sup>-1</sup> <b>Vf</b> 132 mm/min <b>Vc</b> 100 m/min <b>f</b> 0.1 mm/rev</p> <p>BT50-MFA24-240</p>	<p><b>FC250</b> - Finishing - Insert : TPA084-KA (Nose R0.4)</p> <p><b>n</b> 636 min<sup>-1</sup> <b>Vf</b> 63 mm/min <b>Vc</b> 100 m/min <b>f</b> 0.1 mm/rev</p> <p>BT50-MFA50-300</p>	<p><b>A5056</b> - Finishing - Insert : TPA084-NA (Nose R0.4)</p> <p><b>n</b> 3538 min<sup>-1</sup> <b>Vf</b> 353 mm/min <b>Vc</b> 400 m/min <b>f</b> 0.1 mm/rev</p> <p>BT50-MFA36-300</p>
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## MBH type

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

## MBJ type

<p><b>S45C</b> - Finishing - Insert : TPE032-PA (Nose R0.2) Insert holder : STV-C1208</p> <p><b>n</b> 3107 min<sup>-1</sup> <b>Vf</b> 186 mm/min <b>Vc</b> 80 m/min <b>f</b> 0.06 mm/rev</p> <p>BT40-MBJ45-150</p>	<p><b>SUS304</b> - Finishing - Insert : TPE032-MKA (Nose R0.2) Insert holder : STV-C1208</p> <p><b>n</b> 1165 min<sup>-1</sup> <b>Vf</b> 69 mm/min <b>Vc</b> 30 m/min <b>f</b> 0.06 mm/rev</p> <p>BT40-MBJ45-150</p>	<p><b>FC250</b> - Finishing - Insert : TPE032-MKA (Nose R0.2) Insert holder : STV-C1208</p> <p><b>n</b> 3107 min<sup>-1</sup> <b>Vf</b> 186 mm/min <b>Vc</b> 80 m/min <b>f</b> 0.06 mm/rev</p> <p>BT40-MBJ45-150</p>	<p><b>A5056</b> - Finishing - Insert : TPE032-NA (Nose R0.2) Insert holder : STV-C1208</p> <p><b>n</b> 6602 min<sup>-1</sup> <b>Vf</b> 396 mm/min <b>Vc</b> 170 m/min <b>f</b> 0.06 mm/rev</p> <p>BT40-MBJ45-150</p>
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# Retention knob

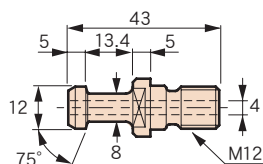
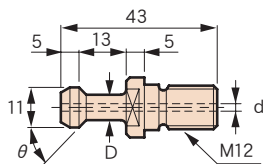


## Caution

- 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

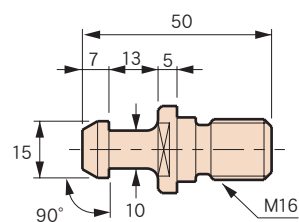
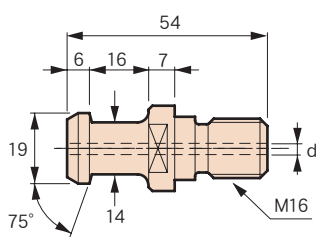
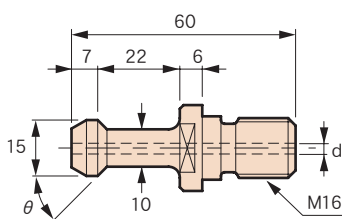
## BT30



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

CODE	Note
<b>P-399</b>	JIS30P

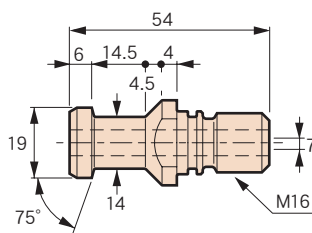
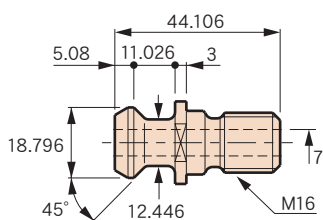
## BT40



CODE	φd	θ	Note
<b>P40T-1</b>	-	45	MAS-1
<b>P-297</b>	4		P40T-1 through hole
<b>P40T-2</b>	-	60	MAS-2
<b>P-339</b>	4		P40T-2 through hole
<b>-141</b>	-	90	-
<b>-498</b>	4		P-141 through hole
<b>-505</b>	3	45	KOMATSU NTCcenter-through

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

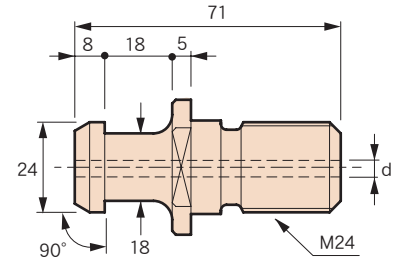
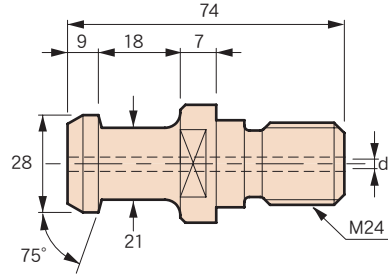
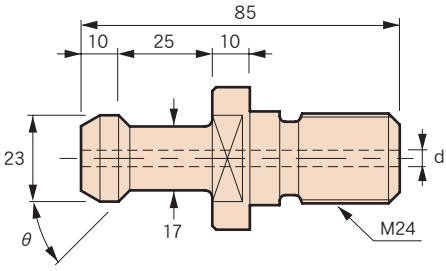
CODE	Note
<b>P-007</b>	MITSUI SEIKI



CODE	Note
<b>P-227</b>	MAZAK

CODE	Note
<b>P-435</b>	DMG MORI center-through

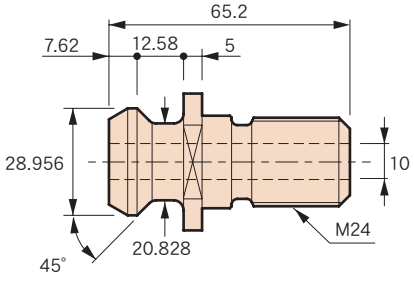
# BT50



CODE	$\phi d$	$\theta$	Note
<b>P50T-1</b>	-	45	MAS-1
<b>P-299</b>	6		P50T-1 through hole
<b>P50T-2</b>	-	60	MAS-2
<b>P-419</b>	6		P50T-2 through hole
<b>-143</b>	-	90	-
<b>-402</b>	7		P-143 through hole
<b>-459</b>		45	YASDA center-through
<b>-513</b>	8	90	DMG MORI center-through
<b>-384</b>	5.5	45	KOMATSU NTC center-through

CODE	$\phi d$	Note
<b>P-400</b>	10	JIS50P
<b>-288-1</b>	6	P-400 through hole

CODE	$\phi d$	Note
<b>P-008</b>	-	MITSUMI SEIKI
<b>-250</b>	8	P-008 through hole



CODE	Note
<b>P-514</b>	MAZAK