

HALF 90°type

Drill · Endmill

Fig. 1

HFD7

()...HFD7L

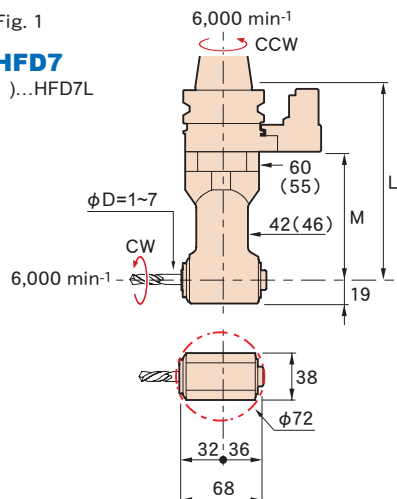


Fig. 3

HFA10

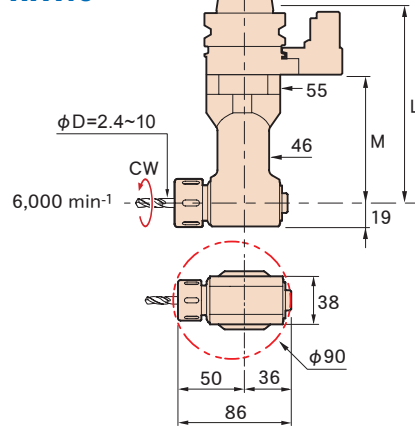


Fig. 2

HFD12

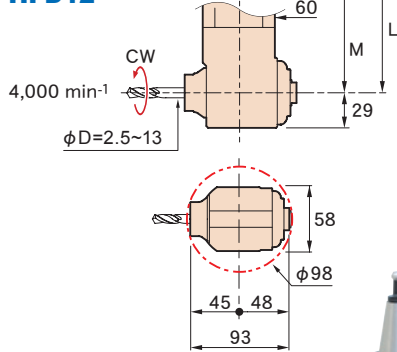
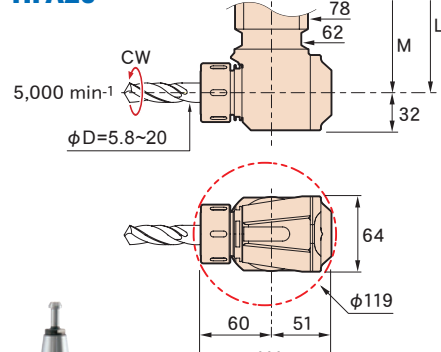


Fig. 4

HFA20



Tap

Fig. 5

HFT4

()...HFT4L

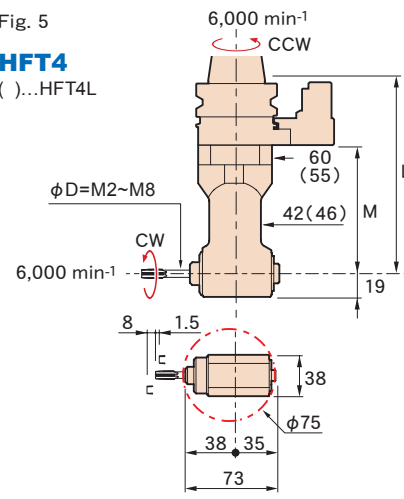


Fig. 6

HFT6

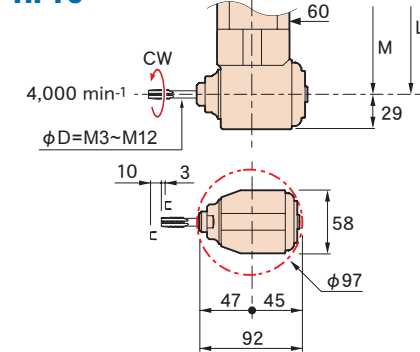
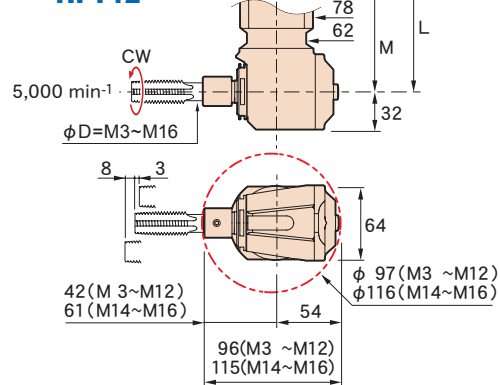


Fig. 7

HFT12



Cutting data
P. 13

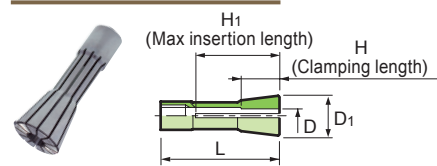
Parts list
P. 111

BT40-HFA20-135

BT40-HFD12-120

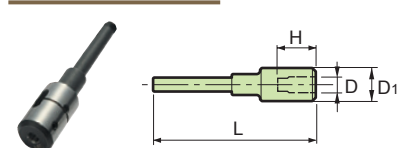
BT30-HFD7-122

DETa-1 Collet



CODE	φD	φD ₁	L	H	H ₁	Holder type
D 7- 1.5	1 ~ 1.5	17	50	7	36	HFD 7
- 2	1.5 ~ 2			10		HUD 7
- 2.5	2 ~ 2.5			12		
- 3	2.5 ~ 3			14		
- 4	3 ~ 4			16		
- 5	4 ~ 5					
- 6	5 ~ 6					
- 7	6 ~ 7					
D12- 4	2.5 ~ 4	26	70	16	50	HFD12
- 6	4 ~ 6			20		
- 8	6 ~ 8			22		
-10	8 ~ 10					
-12	10 ~ 12					
-13	11 ~ 13					

Tap sleeve

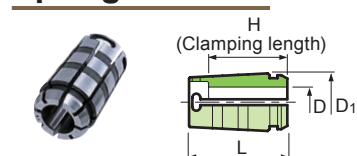


CODE	φD	L	φD ₁	H	Holder type
TA 4-M 2	M 2	67.5	16	19	HFT 4
-M 3	M 3			20	HUT 4
-M 4	M 4			21	
-M 5	M 5				
-M 6	M 6				
-M 8	M 8				
TA 6-M 3	M 3	92	19	21	HFT 6
-M 4	M 4			22	HUT 6
-M 5	M 5			23	
-M 6	M 6			24	
-M 8	M 8				
-M10	M10				
-M12	M12				
TA12-M14	M14	111.5	25	33	HFT12
-M16	M16			35	

■ Note

●Above products meet JIS standards. We can produce other standard Tap sleeves, such as ANSI, ISO, DIN and others. For more information, please contact us.

Spring collet



CODE	φD	φD ₁	L	H	Holder type
C10-D	2.6 2.8 3 ... (0.2Steps) ... 9.6 9.8 10	17.2	26	16 (φD=2.6~5) Except for ※3, 4 (φD=3, 4, 5.2~5.8) (φD=6~10)	HFA10 HUA10
C20-D	6 6.2 6.4 ... (0.2Steps) ... 19.8 20	29.5	50	32 (φD=6~9.8) 35 (φD=10~15.8) 40 (φD=16~20)	HFA20 HUA20

Ex. φD
C10-6

CODE	Fig.	φD	L	M	Kg
BT30-HFD 7 -122	1	1 ~ 7	122	70	2.3
-182			182	130	3.0
-HFD 7L-120			120	57	1.8
-HFD12 -122	2	2.5 ~ 13	122	70	2.9
-HFA10 -120	3	2.4 ~ 10	120	65	1.8
-HFT 4 -122	5	M2 ~ M 8	122	70	2.3
-182			182	130	3.0
-HFT 4L-120			120	57	1.8
-HFT 6 -122	6	M3 ~ M12	122	70	2.9
BT40-HFD 7 -120	1	1 ~ 7	120	70	3.0
-180			180	130	3.3
-HFD12 -120	2	2.5 ~ 13	120	70	3.6
-180			180	130	4.9
-HFA20 -135	4	5.8 ~ 20	135	77	4.4
-195			195	137	5.6
-HFT 4 -120	5	M2 ~ M 8	120	70	3.0
-180			180	130	3.3
-HFT 6 -120	6	M3 ~ M12	120	70	3.6
-180			180	130	4.9
-HFT12 -135	7	M3 ~ M16	135	77	4.4
-195			195	137	5.6
BT50-HFD 7 -195	1	1 ~ 7	195	130	6.4
-255			255	190	6.8
-HFD12 -135	2	2.5 ~ 13	135	70	6.3
-195			195	130	7.6
-255			255	190	8.9
-HFA20 -150	4	5.8 ~ 20	150	77	7.1
-210			210	137	8.3
-270			270	197	9.4
-HFT 4 -195	5	M2 ~ M 8	195	130	6.4
-255			255	190	6.8
-HFT 6 -135	6	M3 ~ M12	135	70	6.3
-195			195	130	7.6
-255			255	190	8.9
-HFT12 -150	7	M3 ~ M16	150	77	7.1
-210			210	137	8.3
-270			270	197	9.4
A63 -HFD 7 -183	1	1 ~ 7	183	130	3.5
-243			243	190	3.9
-HFD12 -123	2	2.5 ~ 13	123	70	3.3
-183			183	130	4.7
-243			243	190	6.0
-HFA20 -198	4	5.8 ~ 20	198	137	5.4
-258			258	197	6.5
-HFT 4 -183	5	M2 ~ M 8	183	130	3.5
-243			243	190	3.9
-HFT 6 -123	6	M3 ~ M12	123	70	3.3
-183			183	130	4.7
-243			243	190	6.0
-HFT12 -198	7	M3 ~ M16	198	137	5.4
-258			258	197	6.5

■ A product code example when ordering.

BT40-HFD7-120 - S 65

Positioning pin type

S :Straight pin
W :Expansion pin
T :Taper pin

Dimension S

50, 60, 65,
80, 85, 110 ...

CODE	Fig.	φD	L	M	Kg
DN40A-HFD 7-135	1	1 ~ 7	135	70	3.1
-195			195	130	3.4
-HFD12-135	2	2.5 ~ 13	135	70	3.7
-195			195	130	5.0
-HFA20-150	4	5.8 ~ 20	150	77	4.7
-210			210	137	5.8
-HFT 4-135	5	M2 ~ M 8	135	70	3.1
-195			195	130	3.4
-HFT 6-135	6	M3 ~ M12	135	70	3.7
-195			195	130	5.0
-HFT12-150	7	M3 ~ M16	150	77	4.7
-210			210	137	5.8
DN50A-HFD 7-195	1	1 ~ 7	195	130	5.9
-255			255	190	6.3
-HFD12-135	2	2.5 ~ 13	135	70	5.8
-195			195	130	7.1
-255			255	190	8.4
-HFA20-150	4	5.8 ~ 20	150	77	6.6
-210			210	137	7.8
-270			270	197	8.9
-HFT 4-195	5	M2 ~ M 8	195	130	5.9
-255			255	190	6.3
-HFT 6-135	6	M3 ~ M12	135	70	5.8
-195			195	130	7.1
-255			255	190	8.4
-HFT12-150	7	M3 ~ M16	150	77	6.6
-210			210	137	7.8
-270			270	197	8.9
CT40 -HFD 7-135	1	0.4" ~ .28"	5.31"	2.75"	6.8
-195			7.68"	5.11"	7.5
-HFD 2-135	2	2.5 ~ 13	5.31"	2.75"	8.2
-195			7.68"	5.11"	11.0
-HFA20-150	4	.23" ~ .79"	5.91"	3.03"	10.4
-210			8.27"	5.39"	12.9
-HFT 4-135	5	M2 ~ M 8	5.31"	2.75"	6.8
-195			7.68"	5.11"	7.5
-HFT 6-135	6	M3 ~ M12	5.31"	2.75"	8.2
-195			7.68"	5.11"	11.0
-HFT12-150	7	#4" ~ 5/8"	5.91"	3.03"	10.4
-210			8.27"	5.39"	12.9
CT50 -HFD 7-195	1	0.4" ~ .28"	7.68"	5.11"	13.0
-255			10.04"	7.47"	13.8
-HFD12-135	2	.10" ~ .51"	5.31"	2.75"	12.8
-195			7.68"	5.11"	15.6
-255			10.04"	7.47"	18.5
-HFA20-150	4	.23" ~ .79"	5.91"	3.03"	14.7
-210			8.27"	5.39"	17.3
-270			10.63"	7.76"	19.8
-HFT 4-195	5	M2 ~ M8	7.68"	5.11"	13.0
-255			10.04"	7.47"	13.8
-HFT 6-135	6	M3 ~ M12	5.31"	2.75"	12.8
-195			7.68"	5.39"	15.6
-255			10.04"	7.47"	18.5
-HFT12-150	7	#4" ~ 5/8"	5.91"	3.03"	14.7
-210			8.27"	5.39"	17.3
-270			10.63"	7.76"	19.8

■Option

- DETa-1 Collet (HFD) •Spring collet (HFA) •Tap sleeve (HFT)
- Retention knob→P.67 •Tools for assembly

■Std. Access.

- Coolant duct (HSK-A) •Fixing spanner(Except for HFA10/HFT4L) •Hexagonal wrench set
- Spanner(HFA) •Single-ended wrench (HFD7L/HFA10) •Spanner(HFA)

■Note

- Other shanks are also available upon request.

HALF UNIVERSAL type

Drill · Endmill

Tap

Fig. 1

HUD7
()...BT30

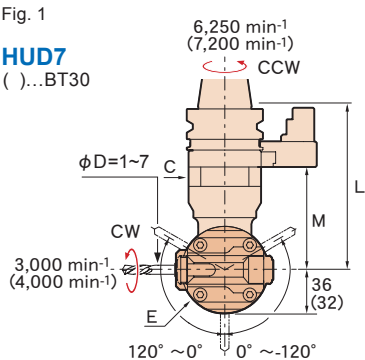


Fig. 2

HUA10

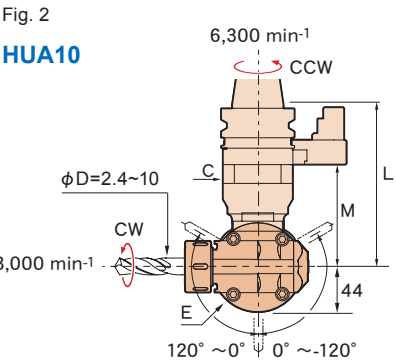


Fig. 4

HUT4
()...BT30

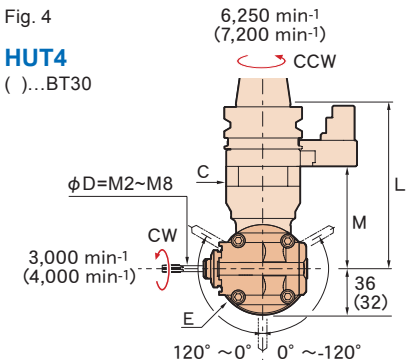


Fig. 3

HUA20

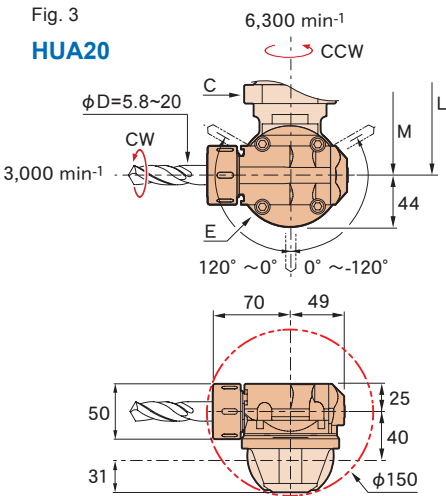
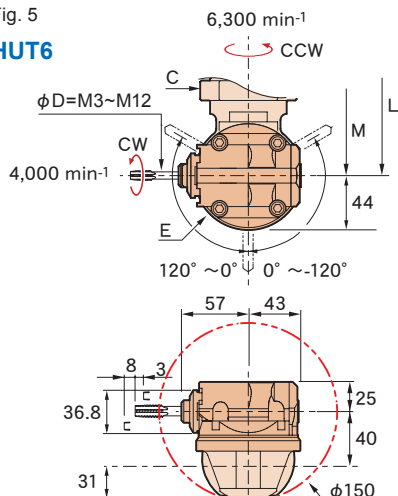
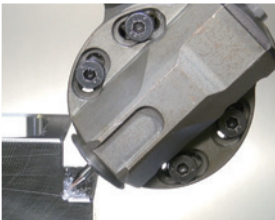


Fig. 5

HUT6



BT40-HUA20-135



CODE	Fig.	φD	L	M	φC	φE	Kg lbs	Moment [※] kgf·mm
BT30 -HUD 7-102	1	1 ~ 7	102	39	46	64	1.8	116
-HUT 4-102	4	M2 ~ M 8						
BT40 -HUD 7-135	1	1 ~ 7	135	85	60	72	3.8	251
-HUA10-135	2	2.4 ~ 10						
-HUA20-135	3	5.8 ~ 20					4.8	392
-HUT 4-135	4	M2 ~ M 8					3.8	251
-HUT 6-135	5	M3 ~ M12					4.8	392
BT50 -HUD 7-150	1	1 ~ 7	150	85	60	72	6.6	277
-HUA10-150	2	2.4 ~ 10					6.7	295
-HUA20-150	3	5.8 ~ 20					7.5	440
-HUT 4-150	4	M2 ~ M 8					6.6	277
-HUT 6-150	5	M3 ~ M12					7.5	440
DN40A -HUD 7-150	1	1 ~ 7	150	85	60	72	3.8	251
-HUA10-150	2	2.4 ~ 10						
DIN -HUA20-150	3	5.8 ~ 20					5.0	392
-HUT 4-150	4	M2 ~ M 8						
-HUT 6-150	5	M3 ~ M12						
DN50A -HUD 7-150	1	1 ~ 7	150	85	60	72	6.6	277
-HUA10-150	2	2.4 ~ 10					6.7	295
DIN -HUA20-150	3	5.8 ~ 20					7.0	440
-HUT 4-150	4	M2 ~ M 8						
-HUT 6-150	5	M3 ~ M12						
CT40 -HUD 7-150	1	.04 ~ .28	5.91"	3.3"	2.4"	2.8"	8.4	251
-HUA10-150	2	.09 ~ .39					8.6	268
CAT. -HUA20-150	3	.23 ~ .79					11.0	392
-HUT 4-150	4	M2 ~ M 8					8.4	251
-HUT 6-150	5	#4 ~ 1/2					11.0	392
CT50 -HUD 7-150	1	.04 ~ .28	5.91"	3.3"	2.4"	2.8"	14.6	277
-HUA10-150	2	.09 ~ .39					14.8	295
CAT. -HUA20-150	3	.23 ~ .79					15.4	440
-HUT 4-150	4	M2 ~ M 8					14.6	277
-HUT 6-150	5	#4 ~ 1/2					15.4	440

※Distance from a gage line to center of gravity × weight (kg · mm)

■Option

- DETa-1 Collet (HUD)→P.8 •Spring collet (HUA)→P.8
- Tap sleeve (HUT)→P.8 •Retention knob→P.67 •Tools for assembly

■Std. Access.

- Fixing spanner •Hexagonal wrench set •Spanner (HUA)

■Note

- Other shanks such as HSK are also available upon request.

■A product code example when ordering.

BT50-HUA20-150 - S 65

Positioning pin type

S : Straight pin
W : Expansion pin
T : Taper pin

Dimension S

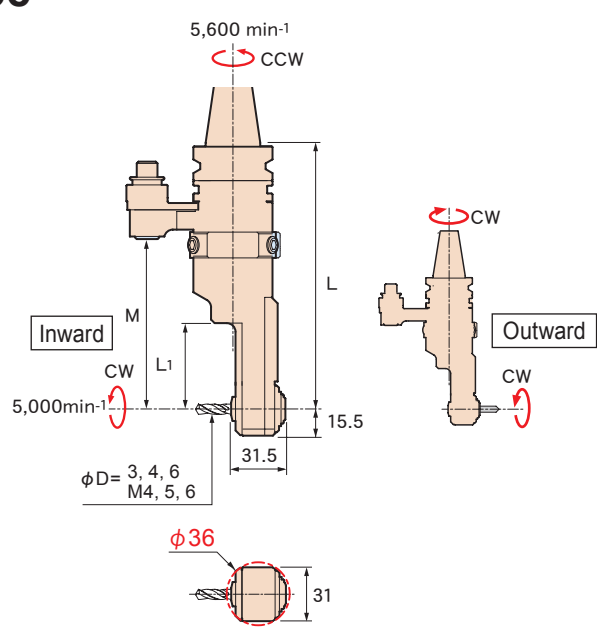
50, 60, 65,
80, 85, 110 ...

HALF mini type

M/C Tool

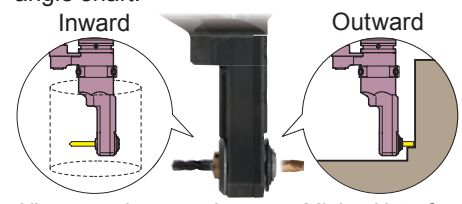


BT40-HFCS6-205



Cutter mounts in two directions

A cutting tool can be mounted both ways, inward or outward, by reassembling the angle shaft.



Allows maximum tool holder diameter limitation even when using a long cutting tool.

Minimal interference with face of workpiece.

Collet exchange system

Shaft exchange system for Shrink-fit collet for carbide cutter (end-mill, drill) or Tap collet for Tap.



HSK-T Tooling Systems for Turning Mill

General Purpose Tool

JIG

Measuring Equipment

CODE	φD	L	L ₁	M	Kg lbs
BT30 -HFCS6-155	Drill Endmill φ 3, 4, 6	155	50	100	1.8
BT40 -HFCS6-160		160	50	110	2.8
-205		205	95	155	3.0
BT50 -HFCS6-175	Tap M4, 5, 6	175	50	110	5.6
-220		220	95	155	5.8
DN40A-HFCS6-175	Drill Endmill φ 3, 4, 6	175	50	110	3.0
-220		220	95	155	3.2
DN50A-HFCS6-175	Tap M4, 5, 6	175	50	110	5.1
-220		220	95	155	5.3
CT40 -HFCS6-175	Drill Endmill φ 3, 4, 6	6.89"	1.97"	4.33"	6.61
-220		8.66"	3.74"	6.10"	7.28
CT50 -HFCS6-175	Tap M4, 5, 6	6.89"	1.97"	4.33"	11.24
-220		8.66"	3.74"	6.10"	11.68

- **Option**
 - Shrink-fit collet ● Tap collet
 - Retention knob → P.67 ● Tools for assembly
- **Std. Access.**
 - Fixing spanner ● Hexagonal wrench set
- **Note**
 - When shipping, the head direction is inward. The tool for assembly (pliers for retaining ring) is required to reassemble the collet to allow for outward positioning of the cutting tool.
 - Other shanks such as HSK are also available upon request.
- **Caution**
 - The angle axis rotating direction is different due to its mounting direction, inward and outward.

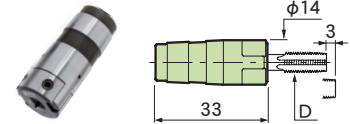
Shrink-Fit Collet



CODE	φD	Holding length
FCS6- 3	3	11~13
- 4	4	
- 6	6	12~13

- **Caution**
 - The dedicated shrink-fit collet for the Angle Head Half, Mini.
 - A shrink-fit heating device is required to insert and remove cutting tools.

Tap collet



CODE	φD	Holding length
FCS6-M4	M4	16
-M5	M5	
-M6	M6	

- **Note**
 - Tap collets meet JIS standards. We can produce ANSI standard tap collet. For more information, please contact us.

■ A product code example when ordering.

BT30-HFCS6-155 - S 65

Positioning pin type

- S : Straight pin
- W : Expansion pin
- T : Taper pin

Dimension S

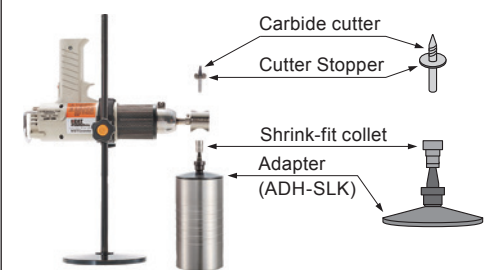
- 50, 60, 65, 80, 85, 110 ...

Maintenance Tool

Wire EDM fixture JIG Tool

Technical Information

■ Procedure of cutter insertion to shrink-fit collet



Shrink-fit Heater (HRB-01)

1. Attach the shrink-fit collet to the adapter (ADH-SLK).
2. Heat the shrink-fit collet with the shrink-fit heater.
3. Attach a stopper to the carbide cutter. After finishing heating, insert the cutter to the shrink-fit collet.
4. Cool the shrink-fit collet with the shrink-fit heater.