



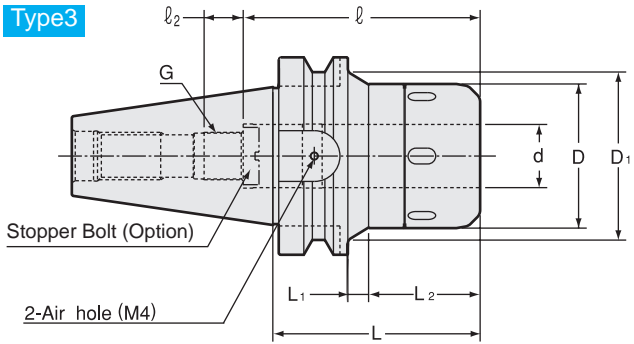
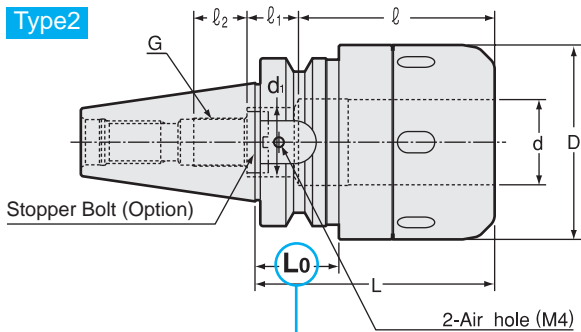
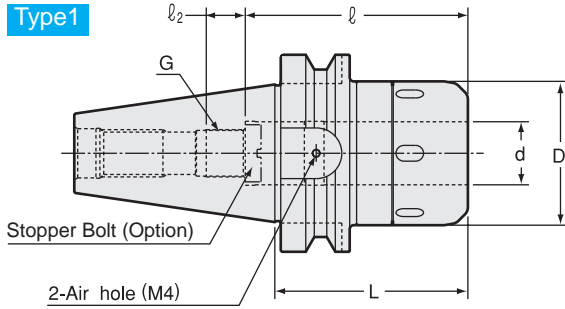
**BT**

**BT (MAS 403-1982)  
TOOLING SYSTEM**

# CT·S

## Super tite-lock Milling Chuck

- Slim design milling chuck. Specially designed slits enable heavy endmilling.



### Caution

- ★ Take caution against A.T.C. arm and tool magazine interference.

### Caution

- Please rotate the clamping ring counterclockwise more than 360 degrees after a cutting tool is removed.

## Inch Sizes

Unit : Inch

Code	Model	Type	d	D	D1	L	L1	L2	$\ell$	$\ell_1$	$\ell_2$	d1	L0	$G_{P=1.0}$	kg	Spanner
3140 10124075	BT30 -CT0750S -75	2	0.750	2.047	—	2.953	—	—	2.559	—	0.591	—	1.063	M12	1.0	HS-2-20
3140 10124090	-90	2	0.750	2.047	—	3.543	—	—	3.150	—	0.591	—	1.654	M12	1.4	
3140 10124105	-105	2	0.750	2.047	—	4.134	—	—	3.150	—	0.591	—	2.244	M12	1.4	
3140 10132090	BT30 -CT1000S -90	2	1.000	2.402	—	3.543	—	—	3.150	—	0.591	—	1.142	M12	1.4	HS-2.5-25
3140 10132105	-105	2	1.000	2.402	—	4.134	—	—	3.150	—	0.591	—	1.732	M12	1.6	
3140 10324075	BT40 -CT0750S -75	1	0.750	2.047	—	2.953	—	—	2.953	—	0.591	—	—	M12	1.6	HS-2-20
3140 10324090	-90	3	0.750	2.047	2.283	3.543	0.709	1.772	3.150	—	0.591	—	—	M12	1.8	
3140 10324105	-105	3	0.750	2.047	2.283	4.134	1.299	1.772	3.150	—	0.591	—	—	M12	2.0	
3140 10324120	-120	3	0.750	2.047	2.283	4.724	1.890	1.772	3.150	—	0.591	—	—	M12	2.2	
3140 10332090	BT40 -CT1000S -90	1	1.000	2.402	—	3.543	—	—	3.150	—	0.591	—	—	M12	2.0	HS-2.5-25
3140 10332105	-105	1	1.000	2.402	—	4.134	—	—	3.150	—	0.591	—	—	M12	2.3	
3140 10332120	-120	1	1.000	2.402	—	4.724	—	—	3.150	—	0.591	—	—	M12	—	
3140 10332135	-135	1	1.000	2.402	—	5.315	—	—	3.150	—	0.591	—	—	M12	—	
3140 10340090	BT40 -CT1250S -90	2	1.250	2.874	—	3.543	—	—	2.992	1.260	0.669	1.024	1.220	M18	2.3	HS-3-32
3140 10340105	-105	2	1.250	2.874	—	4.134	—	—	3.346	0.906	0.669	1.024	1.811	M18	2.6	
3140 10340120	-120	2	1.250	2.874	—	4.724	—	—	3.346	0.906	0.669	1.024	2.402	M18	2.9	
3140 10340135	-135	2	1.250	2.874	—	5.315	—	—	4.724	—	0.669	1.024	2.992	M18	3.1	
3140 10524090	BT50 -CT0750S -90	3	0.750	2.047	2.559	3.543	0.276	1.772	3.150	—	0.591	—	—	M12	—	HS-2-20
3140 10524105	-105	3	0.750	2.047	2.677	4.134	0.866	1.772	3.150	—	0.591	—	—	M12	4.5	
3140 10524135	-135	3	0.750	2.047	3.150	5.315	2.047	1.772	3.150	—	0.591	—	—	M12	—	
3140 10532105	BT50 -CT1000S -105	3	1.000	2.402	3.228	4.134	0.433	2.205	3.150	—	0.591	—	—	M12	4.7	HS-2.5-25
3140 10532135	-135	3	1.000	2.402	3.268	5.315	1.614	2.205	3.150	—	0.591	—	—	M12	—	
3140 10532165	-165	3	1.000	2.402	3.386	6.496	2.795	2.205	3.150	—	0.591	—	—	M12	—	

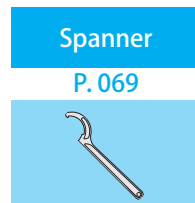
**Inch Sizes** Unit : Inch

Code	Model	Type	d	D	D1	L	L1	L2	ℓ	ℓ 1	ℓ 2	d1	L0	G P=1.0	kg	Spanner
3140 10540095	<b>BT50 -CT1250S -95</b>	1	1.250	2.874	—	3.740	—	—	4.724	—	0.787	—	—	M18		HS-3-32
3140 10540105	<b>-105</b>	3	1.250	2.874	3.386	4.134	0.433	2.205	4.724	—	0.787	—	—	M18	5.0	
3140 10540120	<b>-120</b>	3	1.250	2.874	3.425	4.724	1.024	2.205	4.724	—	0.787	—	—	M18		
3140 10540135	<b>-135</b>	3	1.250	2.874	3.386	5.315	1.614	2.205	4.724	—	0.787	—	—	M18	6.1	
3140 10540150	<b>-150</b>	3	1.250	2.874	3.465	5.906	2.205	2.205	4.724	—	0.787	—	—	M18		
3140 10540165	<b>-165</b>	3	1.250	2.874	3.465	6.496	2.795	2.205	4.724	—	0.787	—	—	M18	7.1	
3140 10564105	<b>BT50 -CT2000S -105</b>	2	2.000	4.134	—	4.134	—	—	3.937	—	0.787	—	1.654	M18		HS-4V
3140 10564120	<b>-120</b>	2	2.000	4.134	—	4.724	—	—	3.937	—	0.787	—	2.244	M18	7.1	
3140 10564135	<b>-135</b>	2	2.000	4.134	—	5.315	—	—	3.937	—	0.787	—	2.835	M18		
3140 10564150	<b>-150</b>	2	2.000	4.134	—	5.906	—	—	3.937	—	0.787	—	3.425	M18		
3140 10564165	<b>-165</b>	2	2.000	4.134	—	6.496	—	—	3.937	—	0.787	—	4.016	M18		

1. Use 2 pcs. of M4 x 5 (S) hex. screw (included) to close air holes on the holder when internal coolant is used.
2. When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
3. Tolerance of cutting tool shank must be h7.

**Ordering Example**

**BT30 - CT 0750 S - 75**  
 Shank size                      I.D. (d)                      Projection length (L)



**Accessories**

Stopper Bolt  BL (P.068)	Straight Collet  MC (P.066)   MCA (P.067)	Morse Taper Adapter  MA (P.068)   MAB (P.068)	Jacobs Adapter  JA (P.069)   JAB (P.069)
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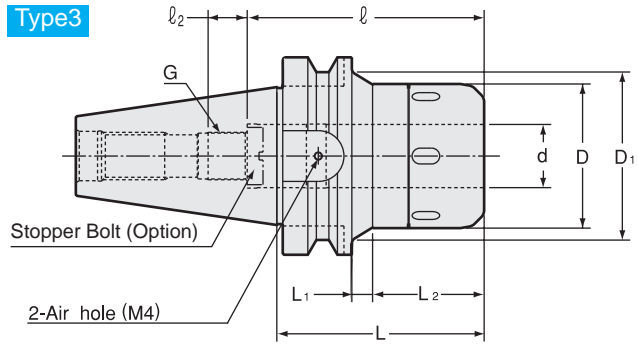
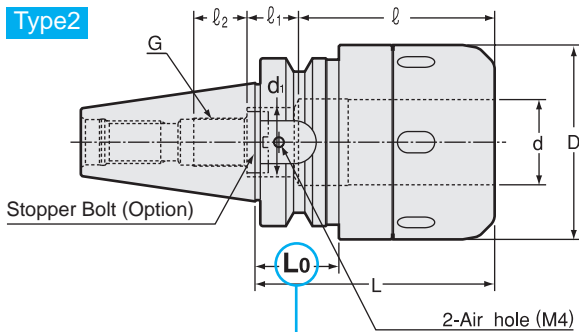
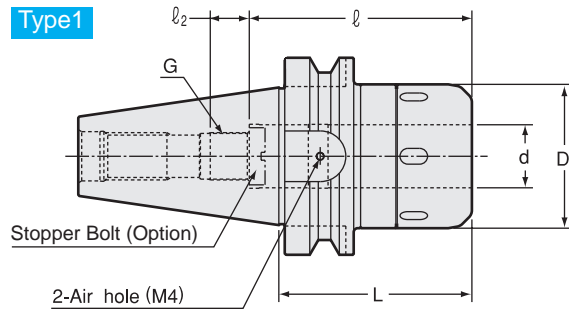
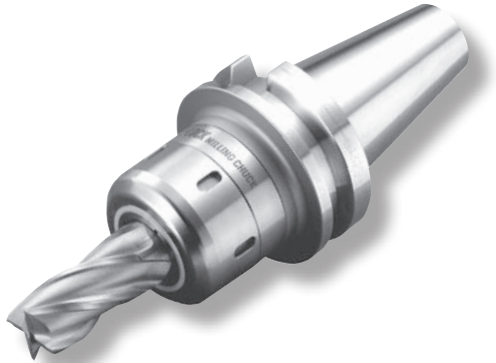
**Min. chucking length**

Without MC collet		With MC collet		
I.D. of Milling Chuck	Min. chucking length	Collet I.D.	Min. chucking length	
			MC	MC-C, MC-OH
16, 20	40	6, 8	30	30
25, 32, 42	50	10, 12	40	40
		16, 20	45	45
		25	50	50
		32	50	60

# CT·S

## Super tite-lock Milling Chuck

- Slim design milling chuck. Specially designed slits enable heavy endmilling.



### Caution

- ★ Take caution against A.T.C. arm and tool magazine interference.

### Caution

- Please rotate the clamping ring counterclockwise more than 360 degrees after a cutting tool is removed.

## Metric Sizes

Unit : Metric


Code	Model	Type	d	D	D1	L	L1	L2	l	l1	l2	d1	L0	G P=1.0	kg	Spanner	
3140 00116075	<b>BT30 -CT16S -75</b>	1	16	45	—	75	—	—	65	—	15	—	—	10	0.9	HS-1-16	
3140 00116090	<b>-90</b>	1	16	45	—	90	—	—	65	—	15	—	—	10	1.1		
3140 00120075	<b>BT30 -CT20S -75 * 1</b>	2	20	52	—	75	—	—	65	—	15	—	★ 27	12	1.0	HS-2-20	
3140 00120090	<b>-90</b>	2	20	52	—	90	—	—	80	—	15	—	—	42	12		1.2
3140 00120105	<b>-105</b>	2	20	52	—	105	—	—	80	—	15	—	—	57	12		1.3
3140 00125090	<b>BT30 -CT25S -90</b>	2	25	61	—	90	—	—	80	—	15	—	★ 31	12	1.4	HS-2.5-25	
3140 00125105	<b>-105</b>	2	25	61	—	105	—	—	80	—	15	—	—	44	12		1.6
3140 00132090	<b>BT30 -CT32S -90</b>	2	32	68	—	90	—	—	68	—	20	—	★ 30	18	1.6	HS-3-32	
3140 00316075	<b>BT40 -CT16S -75</b>	1	16	45	—	75	—	—	65	—	15	—	—	10	1.4	HS-1-16	
3140 00316090	<b>-90</b>	1	16	45	—	90	—	—	65	—	15	—	—	10	1.6		
3140 00320075	<b>BT40 -CT20S -75</b>	1	20	52	—	75	—	—	75	—	15	—	—	12	1.5	HS-2-20	
3140 00320090	<b>-90</b>	1	20	52	—	90	—	—	80	—	15	—	—	12	1.8		
3140 00320105	<b>-105</b>	1	20	52	—	105	—	—	80	—	15	—	—	12	2.1		
3140 00320120	<b>-120</b>	1	20	52	—	120	—	—	80	—	15	—	—	12	2.3	HS-2.5-25	
3140 00325090	<b>BT40 -CT25S -90</b>	1	25	61	—	90	—	—	80	—	15	—	—	12	2.0		
3140 00325105	<b>-105</b>	1	25	61	—	105	—	—	80	—	15	—	—	12	2.3		
3140 00325120	<b>-120</b>	1	25	61	—	120	—	—	80	—	15	—	—	12	2.7	HS-3-32	
3140 00325135	<b>-135</b>	1	25	61	—	135	—	—	80	—	15	—	—	12	3.0		
3140 00332090	<b>BT40 -CT32S -90 * 2</b>	2	32	73	—	90	—	—	76	32	17	26	★ 31	18	2.3		
3140 00332105	<b>-105 * 3</b>	2	32	73	—	105	—	—	85	23	17	26	46	18	2.5	HS-3-32	
3140 00332120	<b>-120 * 3</b>	2	32	73	—	120	—	—	85	23	17	26	61	18	2.9		
3140 00332135	<b>-135</b>	2	32	73	—	135	—	—	120	—	17	26	76	18	3.2		

**Metric Sizes** Unit : Metric





Code	Model	Type	d	D	D1	L	L1	L2	ℓ	ℓ1	ℓ2	d1	L0	G P=1.0	kg	Spanner
3140 00516090	<b>BT50 -CT16S -90</b>	3	16	45	58	90	7	45	65	—	20	—	—	10	4.1	HS-1-16
3140 00516105	<b>-105</b>	3	16	45	70	105	22	45	65	—	20	—	—	10	4.4	
3140 00516135	<b>-135</b>	3	16	45	70	135	37	45	65	—	20	—	—	10	5.0	
3140 00520090	<b>BT50 -CT20S -90</b>	3	20	52	65	90	7	45	80	—	15	—	—	12	4.2	HS-2-20
3140 00520105	<b>-105</b>	3	20	52	70	105	9	58	80	—	15	—	—	12	4.5	
3140 00520120	<b>-120</b>	3	20	52	70	120	24	58	80	—	15	—	—	12	4.9	
3140 00520135	<b>-135</b>	3	20	52	73	135	39	58	80	—	15	—	—	12	5.4	
3140 00520165	<b>-165</b>	3	20	52	73	165	69	58	80	—	15	—	—	12	6.1	
3140 00520200	<b>-200</b>	3	20	52	73	200	104	58	80	—	15	—	—	12	6.8	
3140 00520250	<b>-250</b>	3	20	52	73	250	154	58	80	—	15	—	—	12	7.9	
3140 00520300	<b>-300</b>	3	20	52	73	300	204	58	80	—	15	—	—	12	9.3	
3140 00525105	<b>BT50 -CT25S -105</b>	3	25	61	82	105	11	56	80	—	15	—	—	12	4.8	
3140 00525120	<b>-120</b>	3	25	61	82	120	26	56	80	—	15	—	—	12	5.2	
3140 00525135	<b>-135</b>	3	25	61	83	135	41	56	80	—	15	—	—	12	5.7	
3140 00525165	<b>-165</b>	3	25	61	86	165	71	56	80	—	15	—	—	12	6.6	
3140 00525200	<b>-200</b>	3	25	61	86	200	106	56	80	—	15	—	—	12	7.7	
3140 00525250	<b>-250</b>	3	25	61	86	250	156	56	80	—	15	—	—	12	9.2	
3140 00525300	<b>-300</b>	3	25	61	86	300	206	56	80	—	15	—	—	12	10.8	
3140 00532095	<b>BT50 -CT32S -95</b>	1	32	73	—	95	—	—	120	—	20	—	—	18	4.6	HS-3-32
3140 00532105	<b>-105</b>	1	32	73	—	105	—	—	120	—	20	—	—	18	4.9	
3140 00532120	<b>-120</b>	3	32	73	87	120	26	56	120	—	20	—	—	18	5.6	
3140 00532135	<b>-135</b>	3	32	73	88	135	41	56	120	—	20	—	—	18	6.2	
3140 00532150	<b>-150</b>	3	32	73	87	150	56	56	120	—	20	—	—	18	6.7	
3140 00532165	<b>-165</b>	3	32	73	86	165	71	56	120	—	20	—	—	18	7.2	
3140 00532200	<b>-200</b>	3	32	73	88	200	106	56	120	—	20	—	—	18	8.6	
3140 00532250	<b>-250</b>	3	32	73	88	250	156	56	120	—	20	—	—	18	10.5	
3140 00532300	<b>-300</b>	3	32	73	88	300	206	56	120	—	20	—	—	18	12.4	
3140 00542095	<b>BT50 -CT42S -95 * 4</b>	1	42	88	—	95	—	—	120	—	20	—	—	18	5.0	HS-4-42
3140 00542105	<b>-105 * 4</b>	1	42	88	—	105	—	—	120	—	20	—	—	18	5.4	
3140 00542120	<b>-120</b>	1	42	88	—	120	—	—	120	—	20	—	—	18	6.1	
3140 00542135	<b>-135</b>	1	42	88	—	135	—	—	120	—	20	—	—	18	6.8	
3140 00542150	<b>-150</b>	1	42	88	—	150	—	—	120	—	20	—	—	18	7.4	
3140 00542165	<b>-165</b>	1	42	88	—	165	—	—	120	—	20	—	—	18	8.1	
3140 00542200	<b>-200</b>	1	42	88	—	200	—	—	120	—	20	—	—	18	9.7	
3140 00542250	<b>-250</b>	1	42	88	—	250	—	—	120	—	20	—	—	18	12.0	
3140 00542300	<b>-300</b>	1	42	88	—	300	—	—	120	—	20	—	—	18	14.2	

1. Use 2pcs. of M4 x 5 (S) hex. screw (included) to close air holes on the holder when internal coolant is used.
2. When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
3. Tolerance of cutting tool shank must be h7.

**Ordering Example**  
**BT30 - CT 16 S - 75**  
 Shank size      I.D. (d)      Projection length (L)

**Spanner**  
**P. 069**  


**Accessories**      Models with \* 1 - \* 4 cannot be used with some accessories due to short ℓ length.

	Stopper Bolt 	Straight Collet 		Morse Taper Adapter 		Jacobs Adapter 	
	BL (P.068)	MC (P.066)	MCA (P.067)	MA (P.068)	MAB (P.068)	JA (P.069)	JAB (P.069)
* 1	Yes	Yes	No	No	No	No	No
* 2	Yes	Yes	No	No	Yes	No	Yes
* 3	Yes	Yes	Yes	No	Yes	No	Yes
* 4	Yes	Yes	No	Yes	Yes	Yes	Yes

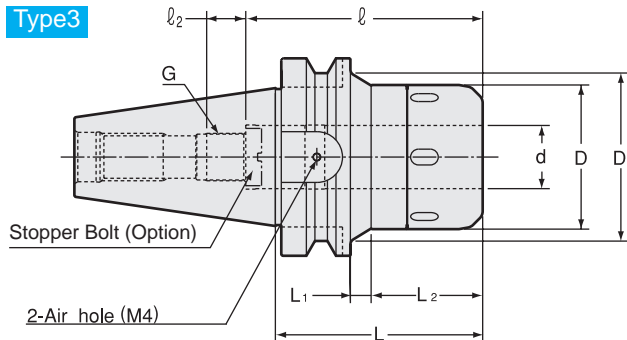
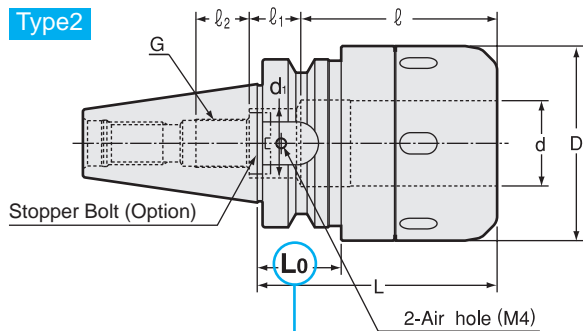
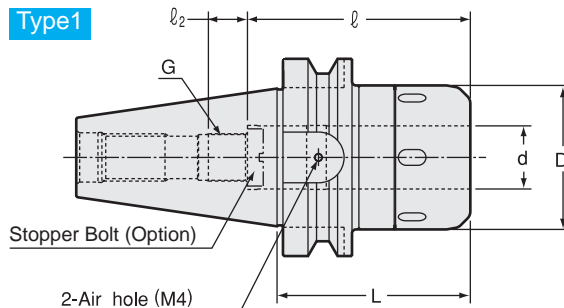
**Min. chucking length**

Without MC collet		Unit : Metric	With MC collet		Unit : Metric
I.D. of Milling Chuck	Min. chucking length		Collet I.D.	Min. chucking length	
				MC	MC-C, MC-OH
16, 20	40		6, 8	30	30
25, 32, 42	50		10, 12	40	40
			16, 20	45	45
			25	50	50
			32	50	60

# CT·S-E

## Super Tite-Lock Milling Chuck (High-Balanced Type)

- Slim design milling chuck. Specially designed slits enables heavy end milling. (High balanced type for higher RPM)



### Caution

- ★ Take caution against A.T.C. arm and tool magazine interference.

### Caution

Please rotate the clamping ring counterclockwise more than 360 degrees after a cutting tool is removed.

## Metric Sizes

Unit : Metric

Code	Model	Type	d	D	D1	L	L1	L2	ℓ	ℓ1	ℓ2	d1	L0	$P = 1.0$	kg	Spanner
3140 20116075	BT30 -CT16S -75E	1	16	45	—	75	—	—	65	—	15	—	—	10	0.9	HS-1-16
3140 20116090	-90E	1	16	45	—	90	—	—	65	—	15	—	—	10	1.1	
3140 20120075	BT30 -CT20S -75E * 1	2	20	52	—	75	—	—	65	—	15	—	★ 27	12	1.0	HS-2-20
3140 20120090	-90E	2	20	52	—	90	—	—	80	—	15	—	42	12	1.2	
3140 20120105	-105E	2	20	52	—	105	—	—	80	—	15	—	57	12	1.3	HS-2.5-25
3140 20125090	BT30 -CT25S -90E	2	25	61	—	90	—	—	80	—	15	—	★ 31	12	1.4	
3140 20125105	-105E	2	25	61	—	105	—	—	80	—	15	—	44	12	1.6	
3140 20316075	BT40 -CT16S -75E	1	16	45	—	75	—	—	65	—	15	—	—	10	1.4	HS-1-16
3140 20316090	-90E	1	16	45	—	90	—	—	65	—	15	—	—	10	1.6	
3140 20320075	BT40 -CT20S -75E	1	20	52	—	75	—	—	75	—	15	—	—	15	1.5	HS-2-20
3140 20320090	-90E	1	20	52	—	90	—	—	80	—	15	—	—	15	1.8	
3140 20320105	-105E	1	20	52	—	105	—	—	80	—	15	—	—	15	2.1	HS-2.5-25
3140 20320120	-120E	1	20	52	—	120	—	—	80	—	15	—	—	15	2.2	
3140 20325090	BT40 -CT25S -90E	1	25	61	—	90	—	—	80	—	15	—	—	15	2.0	HS-2.5-25
3140 20325105	-105E	1	25	61	—	105	—	—	80	—	15	—	—	15	2.3	
3140 20325120	-120E	1	25	61	—	120	—	—	80	—	15	—	—	15	2.7	HS-3-32
3140 20325135	-135E	1	25	61	—	135	—	—	80	—	15	—	—	15	3.0	
3140 20332090	BT40 -CT32S -90E * 2	2	32	73	—	90	—	—	76	32	17	26	★ 31	18	2.3	HS-3-32
3140 20332105	-105E * 3	2	32	73	—	105	—	—	85	23	17	26	46	18	2.6	
3140 20332120	-120E * 3	2	32	73	—	120	—	—	85	23	17	26	61	18	2.9	
3140 20332135	-135E	2	32	73	—	135	—	—	120	—	17	26	76	18	3.1	

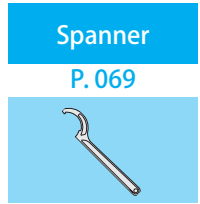
**Metric Sizes** Unit : Metric

Code	Model	Type	d	D	D1	L	L1	L2	ℓ	ℓ1	ℓ2	d1	L0	$\frac{G}{P=1.0}$	kg	Spanner
3140 20516090	<b>BT50 -CT16S -90E</b>	3	16	45	58	90	7	45	65	—	20	—	—	10	4.1	HS-1-16
3140 20516105	<b>-105E</b>	3	16	45	70	105	22	45	65	—	20	—	—	10	4.4	
3140 20520090	<b>BT50 -CT20S -90E</b>	3	20	52	65	90	7	45	80	—	15	—	—	12	4.2	HS-2-20
3140 20520105	<b>-105E</b>	3	20	52	70	105	9	58	80	—	15	—	—	12	4.5	
3140 20520120	<b>-120E</b>	3	20	52	70	120	24	58	80	—	15	—	—	12	4.7	
3140 20520135	<b>-135E</b>	3	20	52	73	135	39	58	80	—	15	—	—	12	5.3	
3140 20525105	<b>BT50 -CT25S -105E</b>	3	25	61	82	105	11	56	80	—	15	—	—	12	4.8	HS-2.5-25
3140 20525120	<b>-120E</b>	3	25	61	82	120	26	56	80	—	15	—	—	12	5.2	
3140 20525135	<b>-135E</b>	3	25	61	83	135	41	56	80	—	15	—	—	12	5.6	
3140 20525165	<b>-165E</b>	3	25	61	86	165	71	56	80	—	15	—	—	12	6.6	
3140 20532095	<b>BT50 -CT32S -95E</b>	1	32	73	—	95	—	—	120	—	20	—	—	18	4.6	HS-3-32
3140 20532105	<b>-105E</b>	1	32	73	—	105	—	—	120	—	20	—	—	18	4.9	
3140 20532120	<b>-120E</b>	3	32	73	87	120	26	56	120	—	20	—	—	18	5.6	
3140 20532135	<b>-135E</b>	3	32	73	88	135	41	56	120	—	20	—	—	18	6.1	
3140 20532150	<b>-150E</b>	3	32	73	87	150	56	56	120	—	20	—	—	18	6.7	
3140 20532165	<b>-165E</b>	3	32	73	86	165	71	56	120	—	20	—	—	18	7.1	
3140 20542095	<b>BT50 -CT42S -95E * 4</b>	1	42	88	—	95	—	—	120	—	20	—	—	18	4.9	HS-4-42
3140 20542105	<b>-105E * 4</b>	1	42	88	—	105	—	—	120	—	20	—	—	18	5.4	
3140 20542120	<b>-120E</b>	1	42	88	—	120	—	—	120	—	20	—	—	18	6.0	
3140 20542135	<b>-135E</b>	1	42	88	—	135	—	—	120	—	20	—	—	18	6.7	
3140 20542150	<b>-150E</b>	1	42	88	—	150	—	—	120	—	20	—	—	18	7.4	
3140 20542165	<b>-165E</b>	1	42	88	—	165	—	—	120	—	20	—	—	18	8.0	

1. Use 2pcs. of M4 x 5 (S) hex. screw (included) to close air holes on the holder when internal coolant is used.
2. When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
3. Tolerance of cutting tool shank must be h7.





**Ordering Example**

**BT30 - CT 16 S - 75 E**  
 Shank size                      I.D. (d)                      Projection length (L)



**Accessories**

Models with \* 1 - \* 4 cannot be used with some accessories due to short ℓ length.

	Stopper Bolt 	Straight Collet 		Morse Taper Adapter 		Jacobs Adapter 	
	BL (P.068)	MC (P.066)	MCA (P.067)	MA (P.068)	MAB (P.068)	JA (P.069)	JAB (P.069)
* 1	Yes	Yes	No	No	No	No	No
* 2	Yes	Yes	No	No	Yes	No	Yes
* 3	Yes	Yes	Yes	No	Yes	No	Yes
* 4	Yes	Yes	No	Yes	Yes	Yes	Yes

**Min. chucking length**

Without MC collet

I.D. of Milling Chuck	Min. chucking length
<b>16, 20</b>	40
<b>25, 32, 42</b>	50

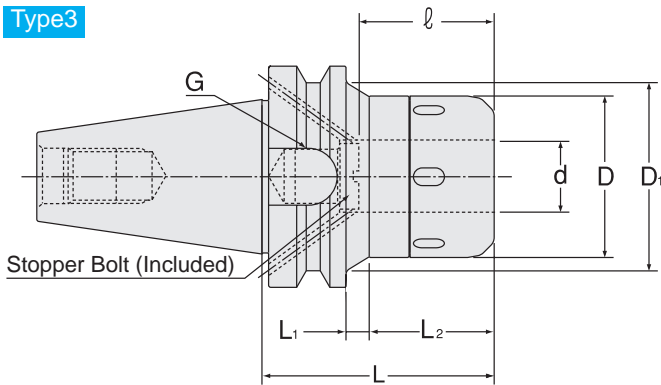
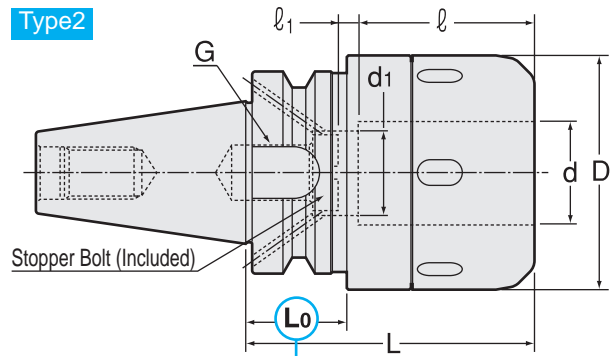
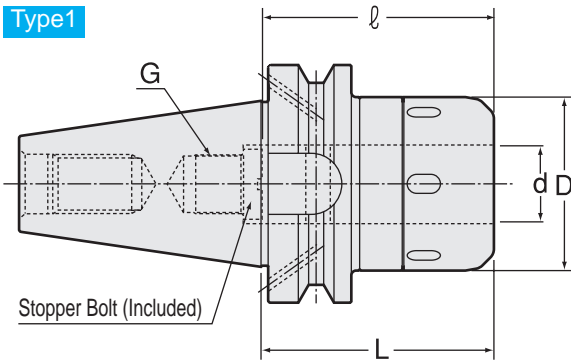
With MC collet

Collet I.D.	Min. chucking length	
	MC	MC-C, MC-OH
<b>6, 8</b>	30	30
<b>10, 12</b>	40	40
<b>16, 20</b>	45	45
<b>25</b>	50	50
<b>32</b>	50	60

# CT·S-CF

Super Tite-Lock Milling Chuck ( Flange Through Type )

- Flange through coolant type milling chuck. DIN69871 Form B compliance.



### ⚠ Caution

- ★ Take caution against A.T.C. arm and tool magazine interference.

### Caution

Please rotate the clamping ring counterclockwise more than 360 degrees after a cutting tool is removed.

- DIN69871 Form B
- Max. Coolant pressure : 7MPa

## Metric Sizes

Unit : Metric

Code	Model	Type	d	D	D1	L	L1	L2	ℓ	ℓ1	d1	L0	$\frac{G}{P=1.0}$	Spanner
3146 00316075	<b>BT40 -CT16S -75CF</b>	1	16	45	—	75	—	—	60	—	—	—	10	HS-1-16
3146 00316090	<b>-90CF</b>	1	16	45	—	90	—	—	60	—	—	—	10	
3146 00320075	<b>BT40 -CT20S -75CF</b>	1	20	52	—	75	—	—	65	—	—	—	12	HS-2-20
3146 00320090	<b>-90CF</b>	1	20	52	—	90	—	—	75	—	—	—	12	
3146 00320105	<b>-105CF</b>	1	20	52	—	105	—	—	75	—	—	—	12	HS-2.5-25
3146 00320120	<b>-120CF</b>	1	20	52	—	120	—	—	75	—	—	—	12	
3146 00325090	<b>BT40 -CT25S -90CF</b>	1	25	61	—	90	—	—	75	—	—	—	12	
3146 00325105	<b>-105CF</b>	1	25	61	—	105	—	—	75	—	—	—	12	
3146 00325120	<b>-120CF</b>	1	25	61	—	120	—	—	75	—	—	—	12	HS-3-32
3146 00325135	<b>-135CF</b>	1	25	61	—	135	—	—	75	—	—	—	12	
3146 00332090	<b>BT40 -CT32S -90CF</b>	2	32	73	—	90	—	—	70	—	—	★ 31	18	
3146 00332105	<b>-105CF</b>	2	32	73	—	105	—	—	75	—	—	46	18	
3146 00332120	<b>-120CF</b>	2	32	73	—	120	—	—	85	5	26	61	18	HS-3-32
3146 00332135	<b>-135CF</b>	2	32	73	—	135	—	—	90	13	26	76	18	
3146 00516090	<b>BT50 -CT16S -90CF</b>	3	16	45	58	90	7	45	65	—	—	—	10	HS-1-16
3146 00516105	<b>-105CF</b>	3	16	45	70	105	22	45	60	—	—	—	10	
3146 00520090	<b>BT50 -CT20S -90CF</b>	3	20	52	65	90	7	45	80	—	—	—	12	HS-2-20
3146 00520105	<b>-105CF</b>	3	20	52	70	105	9	58	80	—	—	—	12	
3146 00520120	<b>-120CF</b>	3	20	52	70	120	24	58	80	—	—	—	12	
3146 00520135	<b>-135CF</b>	3	20	52	73	135	39	58	80	—	—	—	12	
3146 00525105	<b>BT50 -CT25S -105CF</b>	3	25	61	82	105	11	56	80	—	—	—	12	HS-2.5-25
3146 00525120	<b>-120CF</b>	3	25	61	82	120	26	56	80	—	—	—	12	
3146 00525135	<b>-135CF</b>	3	25	61	83	135	41	56	80	—	—	—	12	
3146 00525165	<b>-165CF</b>	3	25	61	86	165	71	56	80	—	—	—	12	



**Metric Sizes** Unit : Metric

Code	Model	Type	d	D	D1	L	L1	L2	ℓ	ℓ1	d1	L0	$\frac{G}{P=1.0}$	Spanner
3146 00532095	<b>BT50 -CT32S -95CF</b>	1	32	73	—	95	—	—	90	—	—	—	18	HS-3-32
3146 00532105	<b>-105CF</b>	1	32	73	—	105	—	—	90	—	—	—	18	
3146 00532120	<b>-120CF</b>	3	32	73	87	120	26	56	90	—	—	—	18	
3146 00532135	<b>-135CF</b>	3	32	73	88	135	41	56	90	—	—	—	18	
3146 00532150	<b>-150CF</b>	3	32	73	87	150	56	56	90	—	—	—	18	
3146 00532165	<b>-165CF</b>	3	32	73	86	165	71	56	90	—	—	—	18	
3146 00542095	<b>BT50 -CT42S -95CF</b>	1	42	88	—	95	—	—	90	—	—	—	18	HS-4-42
3146 00542105	<b>-105CF</b>	1	42	88	—	105	—	—	90	—	—	—	18	
3146 00542120	<b>-120CF</b>	1	42	88	—	120	—	—	90	—	—	—	18	
3146 00542135	<b>-135CF</b>	1	42	88	—	135	—	—	90	—	—	—	18	
3146 00542150	<b>-150CF</b>	1	42	88	—	150	—	—	90	—	—	—	18	
3146 00542165	<b>-165CF</b>	1	42	88	—	165	—	—	90	—	—	—	18	

1. When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
2. Tolerance of cutting tool shank must be h7.
3. Stopper bolt (type BL) is included.
4. Only MC-C or MC-OH collet can be used.

**Min. chucking length**


Without MC collet

I.D. of Milling Chuck	Min. chucking length
16, 20	40
25, 32, 42	50


With MC collet

Collet I.D.	Min. chucking length	
	MC	MC-C, MC-OH
6, 8	30	30
10, 12	40	40
16, 20	45	45
25	50	50
32	50	60

**MC-OH, MC-C Collet**  
P. 066-067



**Spanner**  
P. 069



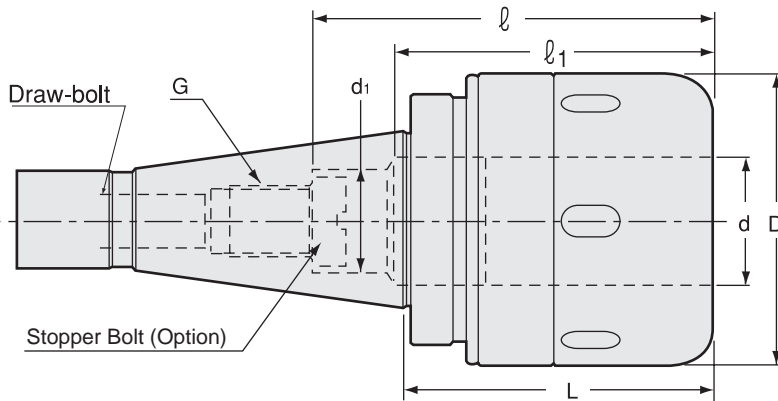
**Ordering Example**

**BT30 - CT 16 S - 75 CF**  
 Shank size      I.D. (d)      Projection length (L)

# NT-CT·S

## Super Tite-Lock Milling Chuck

- Slim design milling chuck. Specially designed slits enable heavy endmilling.



### Caution

Please rotate the clamping ring counterclockwise more than 360 degrees after a cutting tool is removed.

## Metric Sizes

Unit : Metric

Code	Model	d	D	L	l	l <sub>1</sub>	d <sub>1</sub>	G P=1.0	Draw-bolt	Spanner
3140 01120070	<b>NT30 -CT20S -70 (U)</b>	20	52	70	80	—	—	M12	U1/2-13	HS-2-20
3140 02120070	<b>-70 (M)</b>	20	52	70	80	—	—	M12	M12 P=1.75	
3140 03120070	<b>-70 (W)</b>	20	52	70	80	—	—	M12	W1/2-12	
3140 01320070	<b>NT40 -CT20S -70 (U)</b>	20	52	70	80	—	—	M12	U5/8-11	HS-2-20
3140 02320070	<b>-70 (M)</b>	20	52	70	80	—	—	M12	M16 P=2	
3140 01332075	<b>NT40 -CT32S -75 (U) * 1</b>	32	73	75	108	76	26	M18	U5/8-11	HS-3-32
3140 02332075	<b>-75 (M) * 1</b>	32	73	75	108	76	26	M18	M16 P=2	
3140 01532085	<b>NT50 -CT32S -85 (U)</b>	32	73	85	120	—	—	M18	U1-8	HS-3-32
3140 02532085	<b>-85 (M)</b>	32	73	85	120	—	—	M18	M24 P=3	
3140 01542085	<b>NT50 -CT42S -85 (U)</b>	42	88	85	120	—	—	M18	U1-8	HS-4-42
3140 02542085	<b>-85 (M)</b>	42	88	85	120	—	—	M18	M24 P=3	

1. When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
2. Tolerance of cutting tool shank must be h7.

### Ordering Example

**NT40 - CT 32 S - 75 (U)**  
 Shank size I.D. (d) Projection length (L) Draw-bolt





### Spanner

P. 069



### Accessories

Models with \* 1 cannot be used with some accessories due to short l length.

	Stopper Bolt 	Straight Collet 		Morse Taper Adapter 		Jacobs Adapter 	
	BL (P.068)	MC (P.066)	MCA (P.067)	MA (P.068)	MAB (P.068)	JA (P.069)	JAB (P.069)
* 1	Yes	Yes	Yes	No	Yes	No	Yes

### Min. chucking length

#### Without MC collet

I.D. of Milling Chuck	Min. chucking length
20	40
25, 32, 42	50

#### With MC collet

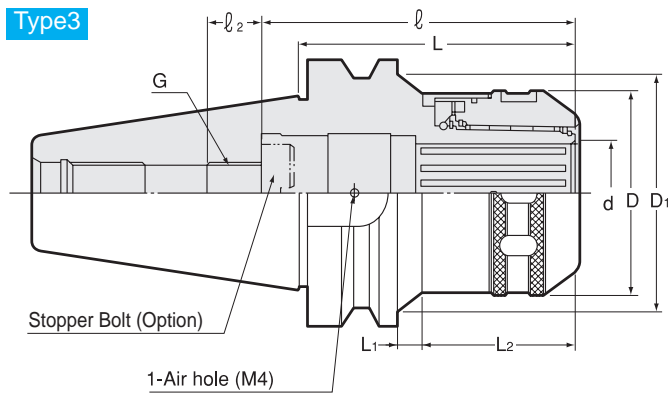
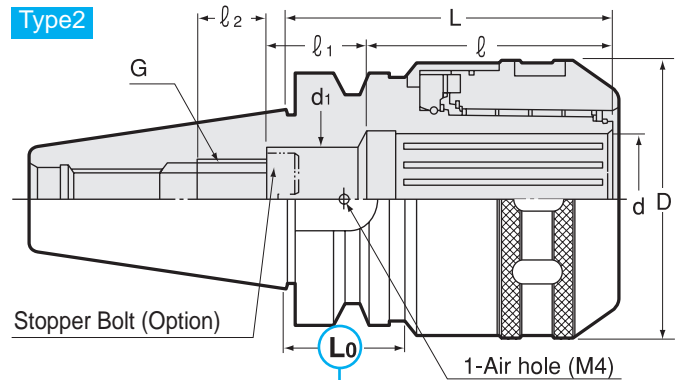
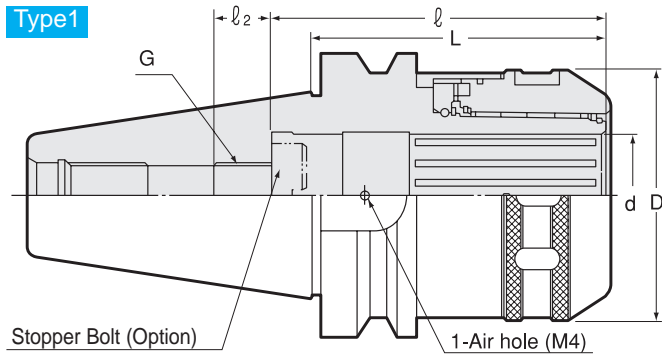
Collet I.D.	Min. chucking length	
	MC	MC-C, MC-OH
6, 8	30	30
10, 12	40	40
16, 20	45	45
25	50	50
32	50	60

# MEMO

# CT·A

## Tite-Lock Milling Chuck

- Slim design milling chuck. Clicking sound tells completion of clamping.



### Caution

- ★ Take caution against A.T.C. arm and tool magazine interference.

### Caution

Please rotate the clamping ring counterclockwise more than 360 degrees after a cutting tool is removed.

## Metric Sizes

Unit : Metric

Code	Model	Type	d	D	D1	L	$\ell$	$\ell_1$	d1	L0	$P = \frac{G}{1.0}$	$\ell_2$	L1	L2	kg	Spanner
0710 00116075	<b>BT30 -CT16A -75</b>	1	16	45	—	75	65	—	—	—	10	15	—	—	0.9	HS-1-16
0710 00116090	<b>-90</b>	1	16	45	—	90	65	—	—	—	10	15	—	—	1.1	
0710 00120090	<b>BT30 -CT20A -90</b>	2	20	52	—	90	80	—	—	★ 32	12	15	—	—	1.1	HS-2-20
0710 00120105	<b>-105</b>	2	20	52	—	105	80	—	—	★ 47	12	15	—	—	1.3	
0710 00125090	<b>BT30 -CT25A -90</b>	2	25	61	—	90	80	—	—	★ 32	12	15	—	—	1.3	HS-2.5-25
0710 00125105	<b>-105</b>	2	25	61	—	105	80	—	—	★ 37	12	15	—	—	1.6	
0710 00316075	<b>BT40 -CT16A -75</b>	3	16	45	48	75	65	—	—	—	10	15	2	46	1.4	HS-1-16
0710 00320090	<b>BT40 -CT20A -90</b>	3	20	52	55	90	80	—	—	—	12	15	6	57	1.7	
0710 00320105	<b>-105</b>	3	20	52	55	105	80	—	—	—	12	15	21	57	1.9	HS-2-20
0710 00320120	<b>-120</b>	3	20	52	58	120	80	—	—	—	12	15	36	57	2.2	
0710 00325090	<b>BT40 -CT25A -90</b>	1	25	61	—	90	80	—	—	—	12	15	—	—	1.9	HS-2.5-25
0710 00325105	<b>-105</b>	1	25	61	—	105	80	—	—	—	12	15	—	—	2.2	
0710 00325135	<b>-135</b>	1	25	61	—	135	80	—	—	—	12	15	—	—	2.9	
0710 00332090	<b>BT40 -CT32A -90 * 1</b>	2	32	73	—	90	76	32	26	★ 27	18	17	—	—	2.2	HS-3-32
0710 00332105	<b>-105 * 2</b>	2	32	73	—	105	85	23	26	42	18	17	—	—	2.5	
0710 00332120	<b>-120 * 2</b>	2	32	73	—	120	85	23	26	57	18	17	—	—	2.9	
0710 00332135	<b>-135</b>	2	32	73	—	135	120	—	—	72	18	17	—	—	3.1	
0710 00516090	<b>BT50 -CT16A -90</b>	3	16	45	56	90	65	—	—	—	10	20	6	46	4.0	HS-1-16
0710 00516105	<b>-105</b>	3	16	45	69	105	65	—	—	—	10	20	21	46	4.3	
0710 00520105	<b>BT50 -CT20A -105</b>	3	20	52	71	105	80	—	—	—	12	15	10	57	4.4	HS-2-20
0710 00520135	<b>-135</b>	3	20	52	73	135	80	—	—	—	12	15	40	57	5.0	
0710 00525105	<b>BT50 -CT25A -105</b>	3	25	61	79	105	80	—	—	—	12	15	9	58	4.7	HS-2.5-25
0710 00525135	<b>-135</b>	3	25	61	85	135	80	—	—	—	12	15	39	58	5.6	
0710 00525165	<b>-165</b>	3	25	61	83	165	80	—	—	—	12	15	69	58	6.4	

**Metric Sizes** Unit : Metric


Code	Model	Type	d	D	D1	L	ℓ	ℓ1	d1	L0	$P = \frac{G}{1.0}$	ℓ2	L1	L2	kg	Spanner
0710 00532105	<b>BT50 -CT32A -105</b>	3	32	73	75	105	120	—	—	—	18	20	2	65	4.8	HS-3-32
0710 00532120	<b>-120</b>	3	32	73	85	120	120	—	—	—	18	20	17	65	5.4	
0710 00532135	<b>-135</b>	3	32	73	84	135	120	—	—	—	18	20	32	65	5.9	
0710 00532150	<b>-150</b>	3	32	73	89	150	120	—	—	—	18	20	47	65	6.5	
0710 00532165	<b>-165</b>	3	32	73	88	165	120	—	—	—	18	20	62	65	7.0	
0710 00542105	<b>BT50 -CT42A -105 * 3</b>	1	42	88	—	105	120	—	—	—	18	20	—	—	5.2	HS-4-42
0710 00542120	<b>-120</b>	1	42	88	—	120	120	—	—	—	18	20	—	—	5.8	
0710 00542135	<b>-135</b>	1	42	88	—	135	120	—	—	—	18	20	—	—	6.5	
0710 00542150	<b>-150</b>	1	42	88	—	150	120	—	—	—	18	20	—	—	7.1	
0710 00542165	<b>-165</b>	1	42	88	—	165	120	—	—	—	18	20	—	—	7.8	

1. Use 1 pcs. of M4 x 5 (S) hex. screw (included) to close air hole on the holder when internal coolant is used.
2. When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
3. Tolerance of cutting tool shank must be h7.

**Ordering Example**





**BT30 - CT 16 A - 75**  
 Shank size                      I.D. (d)                      Projection length (L)

**Spanner**  
P. 069



**Accessories**

Models with \* 1 - \* 3 cannot be used with some accessories due to short ℓ length.

	Stopper Bolt 	Straight Collet 		Morse Taper Adapter 		Jacobs Adapter 	
	BL (P.068)	MC (P.066)	MCA (P.067)	MA (P.068)	MAB (P.068)	JA (P.069)	JAB (P.069)
* 1	Yes	Yes	No	No	Yes	No	Yes
* 2	Yes	Yes	Yes	No	Yes	No	Yes
* 3	Yes	Yes	No	Yes	Yes	Yes	Yes

**Min. chucking length**

Without MC collet

I.D. of Milling Chuck	Min. chucking length
<b>16</b>	40
<b>20, 25</b>	45
<b>32, 42</b>	60

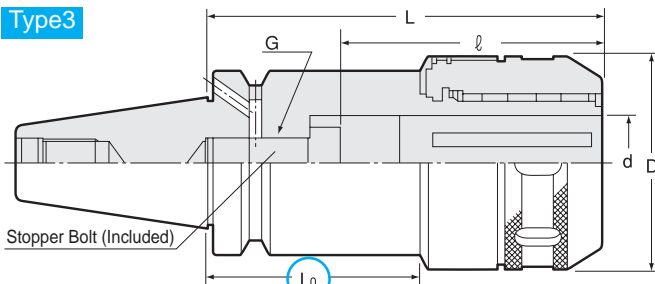
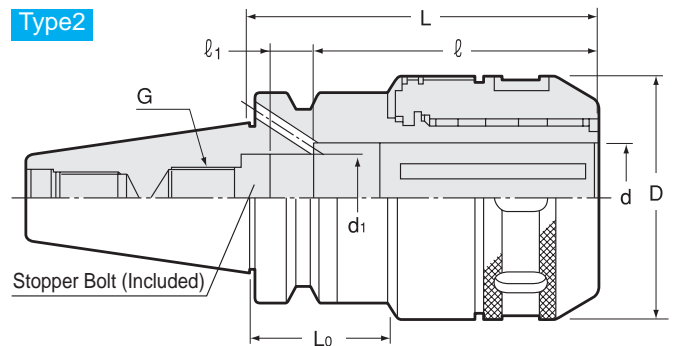
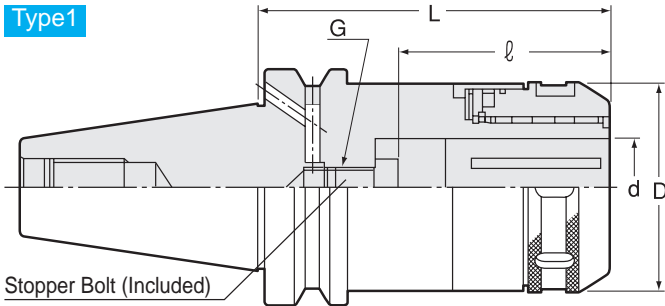
With MC collet

Collet I.D.	Min. chucking length
<b>6, 8</b>	30
<b>10, 12</b>	40
<b>16, 20</b>	45
<b>25</b>	55
<b>32</b>	60

# CT·A-CF

## Tite-Lock Milling Chuck ( Flange Through Type )

- Flange through coolant type milling chuck. DIN69871 Form B compliance.



### Caution

Please rotate the clamping ring counterclockwise more than 360 degrees after a cutting tool is removed.

- DIN69871 Form B
- Max. Coolant pressure : 7MPa

### Caution

- ★ Take caution against A.T.C. arm and tool magazine interference.

## Metric Sizes

Unit : Metric

Code	Model	Type	d	D	L	l	l1	d1	L0	$\frac{G}{P=1.0}$	kg	Spanner
0716 00316075	<b>BT40 -CT16A -75CF</b>	1	16	45	75	60	—	—	—	M10	1.4	HS-1-16
0716 00320090	<b>BT40 -CT20A -90CF</b>	1	20	52	90	75	—	—	—	M12	1.7	HS-2-20
0716 00320105	<b>-105CF</b>	1	20	52	105	75	—	—	—	M12	2.0	
0716 00320120	<b>-120CF</b>	1	20	52	120	75	—	—	—	M12	2.3	HS-2.5-25
0716 00325090	<b>BT40 -CT25A -90CF</b>	1	25	61	90	75	—	—	—	M12	2.0	
0716 00325105	<b>-105CF</b>	1	25	61	105	75	—	—	—	M12	2.3	
0716 00325135	<b>-135CF</b>	1	25	61	135	75	—	—	—	M12	3.0	HS-3-32
0716 00332090	<b>BT40 -CT32A -90CF</b>	3	32	73	90	70	—	—	★ 27	M18	2.4	
0716 00332105	<b>-105CF</b>	3	32	73	105	75	—	—	42	M18	2.7	
0716 00332120	<b>-120CF</b>	2	32	73	120	85	5	26	57	M18	3.0	
0716 00332135	<b>-135CF</b>	2	32	73	135	90	13	26	72	M18	3.3	HS-1-16
0716 00516090	<b>BT50 -CT16A -90CF</b>	1	16	45	90	65	—	—	—	M10	4.0	
0716 00516105	<b>-105CF</b>	1	16	45	105	60	—	—	—	M10	4.5	HS-2-20
0716 00520105	<b>BT50 -CT20A -105CF</b>	1	20	52	105	80	—	—	—	M12	4.5	
0716 00520135	<b>-135CF</b>	1	20	52	135	75	—	—	—	M12	5.1	HS-2.5-25
0716 00525105	<b>BT50 -CT25A -105CF</b>	1	25	61	105	80	—	—	—	M12	4.8	
0716 00525135	<b>-135CF</b>	1	25	61	135	75	—	—	—	M12	5.8	
0716 00525165	<b>-165CF</b>	1	25	61	165	75	—	—	—	M12	6.0	HS-3-32
0716 00532105	<b>BT50 -CT32A -105CF</b>	1	32	73	105	90	—	—	—	M18	5.0	
0716 00532120	<b>-120CF</b>	1	32	73	120	90	—	—	—	M18	5.2	
0716 00532135	<b>-135CF</b>	1	32	73	135	90	—	—	—	M18	6.1	
0716 00532150	<b>-150CF</b>	1	32	73	150	90	—	—	—	M18	6.4	
0716 00532165	<b>-165CF</b>	1	32	73	165	90	—	—	—	M18	7.4	

## Metric Sizes

Unit : Metric

Code	Model	Type	d	D	L	ℓ	ℓ1	d1	L0	$\frac{G}{P=1.0}$	kg	Spanner
0716 00542105	<b>BT50 -CT42A -105CF</b>	1	42	88	105	90	—	—	—	M18	5.5	HS-4-42
0716 00542120	<b>-120CF</b>	1	42	88	120	90	—	—	—	M18	5.8	
0716 00542135	<b>-135CF</b>	1	42	88	135	90	—	—	—	M18	6.9	
0716 00542150	<b>-150CF</b>	1	42	88	150	90	—	—	—	M18	7.5	
0716 00542165	<b>-165CF</b>	1	42	88	165	90	—	—	—	M18	7.9	

1. When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
2. Tolerance of cutting tool shank must be h7.
3. Stopper bolt (type BL) is included.
4. Accessories cannot be used except for MC-C and MC-OH.

### Min. chucking length

#### Without MC collet

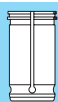
I.D. of Milling Chuck	Min. chucking length
16	40
20, 25	45
32	60

#### With MC collet

Collet I.D.	Min. chucking length
6, 8	30
10, 12	40
16, 20	45
25	55

#### MC-OH, MC-C Collet

P. 066-067



#### Spanner

P. 069



#### Ordering Example

**BT40 - CT 32 A - 105 CF**

Shank size

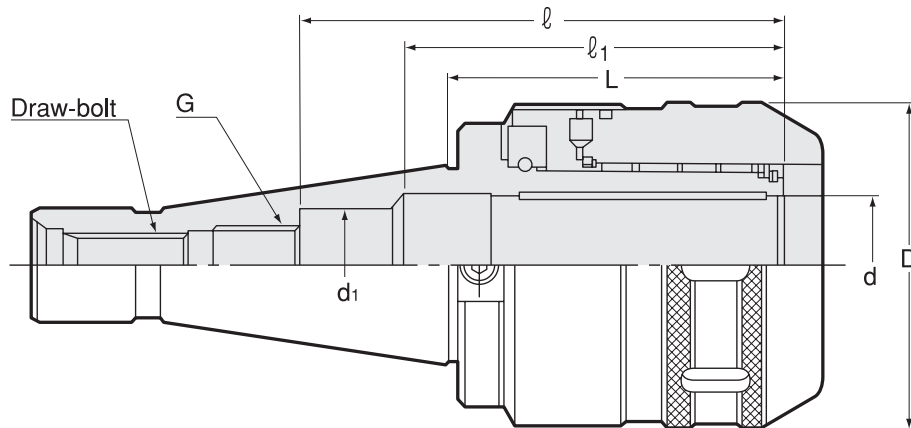
I.D. (d)

Projection length (L)

# NT-CT·A

## Tite-Lock Milling Chuck

- Slim design milling chuck. Clicking sound tells completion of clamping.



### Caution

Please rotate the clamping ring counterclockwise more than 360 degrees after a cutting tool is removed.

## Metric Sizes

Unit : Metric

Code	Model	d	D	L	l	l1	d1	G P=1.0	Draw-bolt	kg	Spanner
0710 01120070	<b>NT30 -CT20A -70 (W)</b>	20	52	70	80	—	—	M12	W1/2-12	1.0	HS-2-20
0710 02120070	<b>-70 (U)</b>	20	52	70	80	—	—	M12	U1/2-13	1.0	
0710 01320070	<b>NT40 -CT20A -70 (U)</b>	20	52	70	80	—	—	M12	U5/8-11	1.4	HS-2-20
0710 02320070	<b>-70 (M)</b>	20	52	70	80	—	—	M12	M16 P=2	1.4	
0710 01332075	<b>NT40 -CT32A -75 (U) * 1</b>	32	73	75	108	76	26	M18	U5/8-11	2.0	HS-3-32
0710 02332075	<b>-75 (M) * 1</b>	32	73	75	108	76	26	M18	M16 P=2	2.0	
0710 01532085	<b>NT50 -CT32A -85 (U)</b>	32	73	85	120	—	—	M18	U1-8	4.0	HS-3-32
0710 02532085	<b>-85 (M)</b>	32	73	85	120	—	—	M18	M24 P=3	4.0	
0710 01542085	<b>NT50 -CT42A -85 (U)</b>	42	88	85	120	—	—	M18	U1-8	4.4	HS-4-42
0710 02542085	<b>-85 (M)</b>	42	88	85	120	—	—	M18	M24 P=3	4.4	

1. When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
2. Tolerance of cutting tool shank must be h7.

### Ordering Example

**NT40 - CT 32 A - 75 (U)**  
 Shank size I.D. (d) Projection length (L) Draw-bolt length (L)

Spanner

P. 069



### Accessories

Models with \* 1 cannot be used with some accessories due to short l length.

	Stopper Bolt 	Straight Collet 		Morse Taper Adapter 		Jacobs Adapter 	
	BL (P.068)	MC (P.066)	MCA (P.067)	MA (P.068)	MAB (P.068)	JA (P.069)	JAB (P.069)
* 1	Yes	Yes	Yes	No	Yes	No	Yes

### Min. chucking length

Without MC collet

I.D. of Milling Chuck	Min. chucking length
20, 25	45
32, 42	60

With MC collet

Collet I.D.	Min. chucking length
6, 8	30
10, 12	40
16, 20	45
25	55
32	60



Set of Milling Chuck (NT-CT·A)

Code	Model	Milling chuck	Draw-bolt	Straight collet	Jacobs adapter
0710 05003020	<b>NT30 -CT20A (W)</b>	NT30-CT20A-70 (W)	W1/2-12	MC20-6, 8, 10, 12, 16 (1pc each)	JA20-JT6 (1pc)
0710 06003020	<b>NT30 -CT20A (U)</b>	NT30-CT20A-70 (U)	U1/2-13	MC20-6, 8, 10, 12, 16 (1pc each)	JA20-JT6 (1pc)
0710 05004020	<b>NT40 -CT20A (U)</b>	NT40-CT20A-70 (U)	U5/8-11	MC20-6, 8, 10, 12, 16 (1pc each)	JA20-JT6 (1pc)
0710 06004020	<b>NT40 -CT20A (M)</b>	NT40-CT20A-70 (M)	M16 P=2	MC20-6, 8, 10, 12, 16 (1pc each)	JA20-JT6 (1pc)
0710 05004032	<b>NT40 -CT32A (U)</b>	NT40-CT32A-75 (U)	U5/8-11	MC32-6, 8, 10, 12, 16, 20, 25 (1pc each)	—
0710 06004032	<b>NT40 -CT32A (M)</b>	NT40-CT32A-75 (M)	M16 P=2	MC32-6, 8, 10, 12, 16, 20, 25 (1pc each)	—
0710 05005032	<b>NT50 -CT32A (U)</b>	NT50-CT32A-85 (U)	U1-8	MC32-6, 8, 10, 12, 16, 20, 25 (1pc each)	JA32-JT6 (1pc)
0710 06005032	<b>NT50 -CT32A (M)</b>	NT50-CT32A-85 (M)	M24 P=3	MC32-6, 8, 10, 12, 16, 20, 25 (1pc each)	JA32-JT6 (1pc)
0710 05005042	<b>NT50 -CT42A (U)</b>	NT50-CT42A-85 (U)	U1-8	MC42-6, 8, 10, 12, 16, 20, 25, 32 (1pc each)	JA42-JT6 (1pc)
0710 06005042	<b>NT50 -CT42A (M)</b>	NT50-CT42A-85 (M)	M24 P=3	MC42-6, 8, 10, 12, 16, 20, 25, 32 (1pc each)	JA42-JT6 (1pc)

Ordering Example

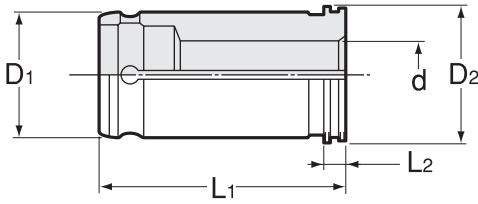
**NT40 - CT 32 A (U)**

Shank size

I.D. (d)

Draw-bolt

# Milling Chuck Accessories



Inch Sizes		Unit : Inch			
Type	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	
MC 0750	0.750	0.945	2.362	0.157	
1000	1.000	1.142	2.362	0.157	
1250	1.250	1.417	2.835	0.157	
2000	2.000	2.244	3.346	0.157	

Metric Sizes		Unit : Metric			
Type	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	
MC 16	16	19	50	4	
20	20	24	60	4	
25	25	29	60	4	
32	32	36	72	4	
42	42	47	85	4	

## Standard Collet MC

Collet capacity d	Collet outside diameter D <sub>1</sub>								
	0.750	1.000	1.250	2.000	16mm	20mm	25mm	32mm	42mm
1/4	MC0750-0250	MC1000-0250	MC1250-0250						
5/16	MC0750-0312	MC1000-0312	MC1250-0312						
3/8	MC0750-0375	MC1000-0375	MC1250-0375						
1/2	MC0750-0500	MC1000-0500	MC1250-0500						
5/8	MC0750-0625	MC1000-0625	MC1250-0625						
3/4		MC1000-0750	MC1250-0750						
7/8		MC1000-0875	MC1250-0875						
1			MC1250-1000	MC2000-1000					
1-1/4				MC2000-1250					
1-1/2				MC2000-1500					
6mm	MC0750-6	MC1000-6	MC1250-6		MC16-6	MC20-6	MC25-6	MC32-6	MC42-6
8mm	MC0750-8	MC1000-8	MC1250-8		MC16-8	MC20-8	MC25-8	MC32-8	MC42-8
10mm	MC0750-10	MC1000-10	MC1250-10		MC16-10	MC20-10	MC25-10	MC32-10	MC42-10
12mm	MC0750-12	MC1000-12	MC1250-12		MC16-12	MC20-12	MC25-12	MC32-12	MC42-12
16mm	MC0750-16	MC1000-16	MC1250-16			MC20-16	MC25-16	MC32-16	MC42-16
20mm		MC1000-20	MC1250-20				MC25-20	MC32-20	MC42-20
25mm			MC1250-25					MC32-25	MC42-25
32mm									MC42-32

1. Not applicable for some holder sizes. Please see milling chuck pages.

**Ordering Example**  
**MC 42 - 32**  
size (D<sub>1</sub>)      d

## Coolant Collet MC-OH (for cutters with coolant hole)

Collet capacity d	Collet outside diameter D <sub>1</sub>								
	0.750	1.000	1.250	2.000	16mm	20mm	25mm	32mm	42mm
1/4	MC0750-0250-OH	MC1000-0250-OH	MC1250-0250-OH						
5/16	MC0750-0312-OH	MC1000-0312-OH	MC1250-0312-OH						
3/8	MC0750-0375-OH	MC1000-0375-OH	MC1250-0375-OH						
1/2	MC0750-0500-OH	MC1000-0500-OH	MC1250-0500-OH						
5/8	MC0750-0625-OH	MC1000-0625-OH	MC1250-0625-OH						
3/4		MC1000-0750-OH	MC1250-0750-OH						
7/8		MC1000-0875-OH	MC1250-0875-OH						
1			MC1250-1000-OH	MC2000-1000-OH					
1-1/4				MC2000-1250-OH					
1-1/2				MC2000-1500-OH					
6mm	MC0750-6-OH	MC1000-6-OH	MC1250-6-OH		MC16-6-OH	MC20-6-OH	MC25-6-OH	MC32-6-OH	MC42-6-OH
8mm	MC0750-8-OH	MC1000-8-OH	MC1250-8-OH		MC16-8-OH	MC20-8-OH	MC25-8-OH	MC32-8-OH	MC42-8-OH
10mm	MC0750-10-OH	MC1000-10-OH	MC1250-10-OH		MC16-10-OH	MC20-10-OH	MC25-10-OH	MC32-10-OH	MC42-10-OH
12mm	MC0750-12-OH	MC1000-12-OH	MC1250-12-OH		MC16-12-OH	MC20-12-OH	MC25-12-OH	MC32-12-OH	MC42-12-OH
16mm	MC0750-16-OH	MC1000-16-OH	MC1250-16-OH			MC20-16-OH	MC25-16-OH	MC32-16-OH	MC42-16-OH
20mm		MC1000-20-OH	MC1250-20-OH				MC25-20-OH	MC32-20-OH	MC42-20-OH
25mm			MC1250-25-OH					MC32-25-OH	MC42-25-OH
32mm									MC42-32-OH

1. Not applicable for some holder sizes. Please see milling chuck pages.

**Ordering Example**  
**MC 42 - 32 - OH**  
size (D<sub>1</sub>)      d



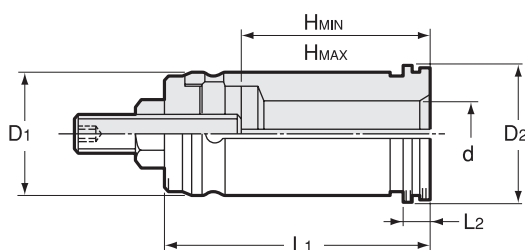
## Coolant Collet MC-C (for cutters without coolant hole)

Collet capacity d	Collet outside diameter D <sub>1</sub>								
	0.750	1.000	1.250	2.000	16mm	20mm	25mm	32mm	42mm
1/4	MC0750-0250-C	MC1000-0250-C	MC1250-0250-C						
5/16	MC0750-0312-C	MC1000-0312-C	MC1250-0312-C						
3/8	MC0750-0375-C	MC1000-0375-C	MC1250-0375-C						
1/2	MC0750-0500-C	MC1000-0500-C	MC1250-0500-C						
5/8	MC0750-0625-C	MC1000-0625-C	MC1250-0625-C						
3/4		MC1000-0750-C	MC1250-0750-C						
7/8		MC1000-0875-C	MC1250-0875-C						
1			MC1250-1000-C	MC2000-1000-C					
1-1/4				MC2000-1250-C					
1-1/2				MC2000-1500-C					
6mm	MC0750-6-C	MC1000-6-C	MC1250-6-C		MC16-6-C	MC20-6-C	MC25-6-C	MC32-6-C	MC42-6-C
8mm	MC0750-8-C	MC1000-8-C	MC1250-8-C		MC16-8-C	MC20-8-C	MC25-8-C	MC32-8-C	MC42-8-C
10mm	MC0750-10-C	MC1000-10-C	MC1250-10-C		MC16-10-C	MC20-10-C	MC25-10-C	MC32-10-C	MC42-10-C
12mm	MC0750-12-C	MC1000-12-C	MC1250-12-C		MC16-12-C	MC20-12-C	MC25-12-C	MC32-12-C	MC42-12-C
16mm	MC0750-16-C	MC1000-16-C	MC1250-16-C			MC20-16-C	MC25-16-C	MC32-16-C	MC42-16-C
20mm		MC1000-20-C	MC1250-20-C				MC25-20-C	MC32-20-C	MC42-20-C
25mm			MC1250-25-C					MC32-25-C	MC42-25-C
32mm									MC42-32-C

1. Not applicable for some holder sizes. Please see milling chuck pages.

### Ordering Example

**MC 42 - 32 - C**  
size (D<sub>1</sub>)      d



### Inch Sizes

Unit : Inch

Type	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	H <sub>MAX</sub>
MCA 0750	0.750	0.945	2.559	0.157	2.165
1000	1.000	1.142	2.559	0.157	2.165
1250	1.250	1.417	3.110	0.157	2.598
2000	2.000	2.244	3.622	0.157	3.110

### Metric Sizes

Unit : Metric

Type	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	H <sub>MAX</sub>
MCA 16	16	19	55	4	45
20	20	24	65	4	55
25	25	29	65	4	55
32	32	36	79	4	66
42	42	47	92	4	79

## Straight Collet MCA (with depth adjustment stop screw)

Collet capacity d	Collet outside diameter D <sub>1</sub>								
	0.750	1.000	1.250	2.000	16mm	20mm	25mm	32mm	42mm
1/4	MCA0750-0250	MCA1000-0250	MCA1250-0250						
5/16	MCA0750-0312	MCA1000-0312	MCA1250-0312						
3/8	MCA0750-0375	MCA1000-0375	MCA1250-0375						
1/2	MCA0750-0500	MCA1000-0500	MCA1250-0500						
5/8		MCA1000-0625	MCA1250-0625						
3/4		MCA1000-0750	MCA1250-0750						
7/8			MCA1250-0875						
1				MCA2000-1000					
1-1/4				MCA2000-1250					
1-1/2				MCA2000-1500					
6mm	MCA0750-6	MCA1000-6	MCA1250-6		MCA16-6	MCA20-6	MCA25-6	MCA32-6	MCA42-6
8mm	MCA0750-8	MCA1000-8	MCA1250-8		MCA16-8	MCA20-8	MCA25-8	MCA32-8	MCA42-8
10mm	MCA0750-10	MCA1000-10	MCA1250-10		MCA16-10	MCA20-10	MCA25-10	MCA32-10	MCA42-10
12mm	MCA0750-12	MCA1000-12	MCA1250-12		MCA16-12	MCA20-12	MCA25-12	MCA32-12	MCA42-12
16mm		MCA1000-16	MCA1250-16			MCA20-16	MCA25-16	MCA32-16	MCA42-16
20mm		MCA1000-20	MCA1250-20				MCA25-20	MCA32-20	MCA42-20
25mm			MCA1250-25					MCA32-25	MCA42-25
32mm									MCA42-32

1. Not applicable for some holder sizes. Please see milling chuck pages.

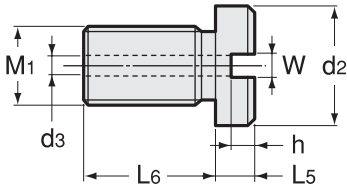
### Ordering Example

**MCA 42 - 32**  
size (D<sub>1</sub>)      d

# Milling Chuck Accessories

## Stopper Bolt BL

Metric Sizes Unit : Metric



Code	Model	M1 P=1,0	L5	L6	W	h	d2	d3	Chucks
0711 040016 ※※	<b>BL 16 -L5</b>	10	5, 15, 25	14	5	3.5	15	4.5	CT16
0711 040020 ※※	<b>BL 20 -L5</b>	12	5, 15, 25	14	5	3.5	18	4.5	CT20, CT25
0711 040032 ※※	<b>BL 32 -L5</b>	18	10, 20, 35	17	5	5	25	4.5	CT32, CT42

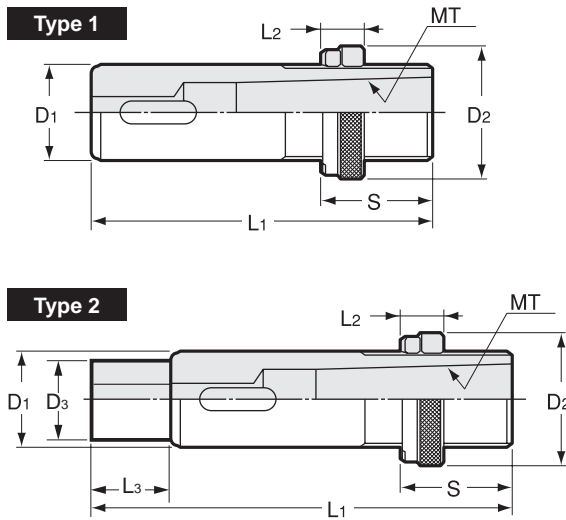
Choose right L5 dimension by checking minimum insertion length and shank I.D. depth.

Ordering Example

**BL 16 - 15**  
size L5

## Morse Taper Adapter MA (with Tr. nut)

Metric Sizes Unit : Metric



Code	Model	Type	D1	MT	D2	D3	L1	L2	L3	S
0714 02000161	<b>MA 16 -MT1</b>	1	16	1	24.6	—	76	16	—	16 ~ 32
0714 02000201	<b>20 -MT1</b>	1	20	1	31.6	—	85	16	—	16 ~ 37
0714 02000251	<b>25 -MT1</b>	1	25	1	35.6	—	89	16	—	16 ~ 37
0714 02000252	<b>-MT2</b>	1	25	2	35.6	—	89	16	—	16 ~ 37
0714 02000321	<b>32 -MT1</b>	2	32	1	44.6	25	119	19	30	19 ~ 39
0714 02000322	<b>-MT2</b>	2	32	2	44.6	25	119	19	30	19 ~ 39
0714 02000323	<b>-MT3</b>	2	32	3	44.6	25	119	19	30	19 ~ 39
0714 02000421	<b>42 -MT1</b>	1	42	1	55.6	—	135	19	—	19 ~ 48
0714 02000422	<b>-MT2</b>	1	42	2	55.6	—	135	19	—	19 ~ 48
0714 02000423	<b>-MT3</b>	1	42	3	55.6	—	135	19	—	19 ~ 48
0714 02000424	<b>-MT4</b>	1	42	4	55.6	—	135	19	—	19 ~ 48

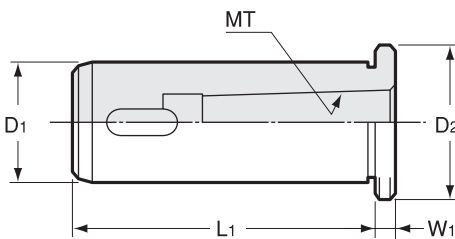
Not applicable for some holder sizes. Please see milling chuck pages.

Ordering Example

**MA 16 - MT1**  
size MT No.

## Morse Taper Adapter MAB

Metric Sizes Unit : Metric



Code	Model	D1	MT	L1	D2	W1
0711 02100161	<b>MAB 16 -MT1</b>	16	1	60	19	15
0711 02100201	<b>20 -MT1</b>	20	1	75	24	5
0711 02100251	<b>25 -MT1</b>	25	1	75	29	5
0711 02100252	<b>-MT2</b>	25	2	75	29	20
0711 02100321	<b>32 -MT1</b>	32	1	75	36	5
0711 02100322	<b>-MT2</b>	32	2	75	36	20
0711 02100323	<b>-MT3</b>	32	3	75	36	35
0711 02100421	<b>42 -MT1</b>	42	1	115	47	5
0711 02100422	<b>-MT2</b>	42	2	115	47	5
0711 02100423	<b>-MT3</b>	42	3	115	47	5
0711 02100424	<b>-MT4</b>	42	4	115	47	20

Not applicable for some holder sizes. Please see milling chuck pages.

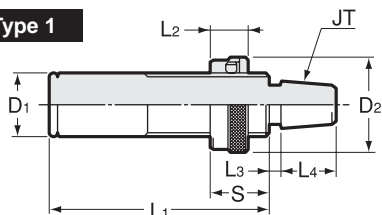
Ordering Example

**MAB 16 - MT1**  
size MT No.

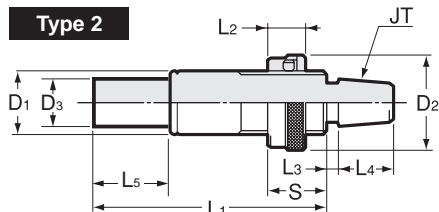
## Jacobs Adapter JA (with Tr. nut)

Metric Sizes Unit : Metric

Type 1



Type 2



Ordering Example

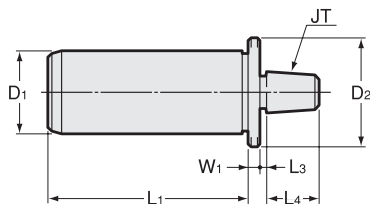
**JA 16 - JT2S**  
size JT No.

Code	Model	Type	D1	JT	D2	D3	L1	L2	S	L3	L4	L5
0714 03000162	<b>JA 16 -JT2S</b>	1	16	2S	24.6	—	76	16	16 ~ 32	3	18	—
0714 03000202	<b>20 -JT2S</b>	1	20	2S	31.6	—	85	16	16 ~ 37	3	18	—
0714 03000206	<b>-JT6</b>	1	20	6	31.6	—	85	16	16 ~ 37	4	24	—
0714 03000252	<b>25 -JT2S</b>	1	25	2S	35.6	—	85	16	16 ~ 37	3	18	—
0714 03000256	<b>-JT6</b>	1	25	6	35.6	—	85	16	16 ~ 37	4	24	—
0714 03000322	<b>32 -JT2S</b>	2	32	2S	44.6	25	119	19	19 ~ 39	3	18	30
0714 03000326	<b>-JT6</b>	2	32	6	44.6	25	119	19	19 ~ 39	4	24	30
0714 03000422	<b>42 -JT2S</b>	1	42	2S	55.6	—	135	19	19 ~ 48	3	18	—
0714 03000426	<b>-JT6</b>	1	42	6	55.6	—	135	19	19 ~ 48	4	24	—

Not applicable for some holder sizes. Please see milling chuck pages.

## Jacobs Adapter JAB

Metric Sizes Unit : Metric



Ordering Example

**JAB 16 - JT2S**  
size JT No.

Code	Model	D1	JT	L1	D2	W1	L3	L4
0711 03100162	<b>JAB 16 -JT2S</b>	16	2S	60	19	3	3	18
0711 03100202	<b>20 -JT2S</b>	20	2S	75	24	3	3	18
0711 03100206	<b>-JT6</b>	20	6	75	24	3	4	24
0711 03100252	<b>25 -JT2S</b>	25	2S	75	29	3	3	18
0711 03100256	<b>-JT6</b>	25	6	75	29	3	4	24
0711 03100322	<b>32 -JT2S</b>	32	2S	75	36	3	3	18
0711 03100326	<b>-JT6</b>	32	6	75	36	3	4	24
0711 03100422	<b>42 -JT2S</b>	42	2S	115	47	3	3	18
0711 03100426	<b>-JT6</b>	42	6	115	47	3	4	24

Not applicable for some holder sizes. Please see milling chuck pages.

## Spanner



Ordering Example

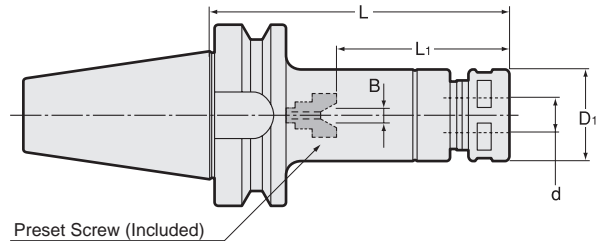
**HS - 1 - 16**

Code	Spanner	Chuck	Chuck size	
			mm	inch
0711 00001016	<b>HS-1-16</b>	CT-S, CT-A	16	—
0711 00002020	<b>HS-2-20</b>	CT-S, CT-A	20	0750
0711 00002525	<b>HS-2.5-25</b>	CT-S, CT-A, CTZ	25	1000
0711 00003032	<b>HS-3-32</b>	CT-S, CT-A, CTZ	32	1250
0711 00004042	<b>HS-4-42</b>	CT-S, CT-A, CTZ	42	—
0711 00005042	<b>HS-4V</b>	CT-S	—	2000

# HDC·A

## High-Precision Collet Holder

- Suitable for drilling, reaming and finish endmilling.






Unit : Metric

Code	Model	d	L	B	L1	D1	Nut	kg	Collet	Spanner
2540 10107045	<b>BT30 -HDC07A -45</b>	0.5 ~ 7.0	45	0 ~ 4	22 ~ 43	23	HDP-07A	0.5	FDC-07	S-0
2540 10107060	<b>-60</b>	0.5 ~ 7.0	60	0 ~ 4	22 ~ 45	23	HDP-07A	0.5		
2540 10107075	<b>-75</b>	0.5 ~ 7.0	75	0 ~ 4	22 ~ 45	23	HDP-07A	0.5		
2540 10107090	<b>-90</b>	0.5 ~ 7.0	90	0 ~ 4	22 ~ 45	23	HDP-07A	0.6		
2540 10107105	<b>-105</b>	0.5 ~ 7.0	105	0 ~ 4	22 ~ 45	23	HDP-07A	0.6		
2540 10107120	<b>-120</b>	0.5 ~ 7.0	120	0 ~ 4	22 ~ 45	23	HDP-07A	0.7		
2540 10107135	<b>-135</b>	0.5 ~ 7.0	135	0 ~ 4	22 ~ 45	23	HDP-07A	0.7	FDC-09	S-1L
2540 10109045	<b>BT30 -HDC09A -45</b>	2.5 ~ 9.0	45	0 ~ 4	27 ~ 44	26	HDP-09	0.5		
2540 10109060	<b>-60</b>	2.5 ~ 9.0	60	0 ~ 4	27 ~ 54	26	HDP-09	0.5		
2540 10109075	<b>-75</b>	2.5 ~ 9.0	75	0 ~ 4	27 ~ 57	26	HDP-09	0.6		
2540 10109090	<b>-90</b>	2.5 ~ 9.0	90	0 ~ 4	27 ~ 57	26	HDP-09	0.6		
2540 10109105	<b>-105</b>	2.5 ~ 9.0	105	0 ~ 4	27 ~ 57	26	HDP-09	0.7		
2540 10109120	<b>-120</b>	2.5 ~ 9.0	120	0 ~ 4	27 ~ 57	26	HDP-09	0.7	FDC-12	S-3L
2540 10109135	<b>-135</b>	2.5 ~ 9.0	135	0 ~ 4	27 ~ 57	26	HDP-09	0.8		
2540 10112045	<b>BT30 -HDC12A -45</b>	2.5 ~ 12.0	45	0 ~ 5	33 ~ 51	32	HDP-12	0.5		
2540 10112060	<b>-60</b>	2.5 ~ 12.0	60	0 ~ 5	33 ~ 54	32	HDP-12	0.6		
2540 10112075	<b>-75</b>	2.5 ~ 12.0	75	0 ~ 5	33 ~ 69	32	HDP-12	0.6		
2540 10112090	<b>-90</b>	2.5 ~ 12.0	90	0 ~ 5	33 ~ 69	32	HDP-12	0.7		
2540 10112105	<b>-105</b>	2.5 ~ 12.0	105	0 ~ 5	33 ~ 69	32	HDP-12	0.8	FDC-16	S-4L
2540 10112120	<b>-120</b>	2.5 ~ 12.0	120	0 ~ 5	33 ~ 69	32	HDP-12	0.9		
2540 10112135	<b>-135</b>	2.5 ~ 12.0	135	0 ~ 5	33 ~ 69	32	HDP-12	1.0		
2540 10116045	<b>BT30 -HDC16A -45</b>	3.5 ~ 16.0	45	0 ~ 6	38 ~ 51	36	HDP-16	0.4		
2540 10116060	<b>-60</b>	3.5 ~ 16.0	60	0 ~ 6	38 ~ 54	36	HDP-16	0.6		
2540 10116075	<b>-75</b>	3.5 ~ 16.0	75	0 ~ 6	38 ~ 69	36	HDP-16	0.6		
2540 10116090	<b>-90</b>	3.5 ~ 16.0	90	0 ~ 6	38 ~ 82	36	HDP-16	0.7	FDC-22	S-5L
2540 10116105	<b>-105</b>	3.5 ~ 16.0	105	0 ~ 6	38 ~ 82	36	HDP-16	0.9		
2540 10116120	<b>-120</b>	3.5 ~ 16.0	120	0 ~ 6	38 ~ 82	36	HDP-16	1.0		
2540 10116135	<b>-135</b>	3.5 ~ 16.0	135	0 ~ 6	38 ~ 82	36	HDP-16	1.1		
2540 10122045	<b>BT30 -HDC22A -45</b>	3.5 ~ 22.0	45	—	52	46	HDP-22	0.4		
2540 10122060	<b>-60</b>	3.5 ~ 22.0	60	0 ~ 8	47 ~ 49	46	HDP-22	0.6		
2540 10122075	<b>-75</b>	3.5 ~ 22.0	75	0 ~ 8	47 ~ 64	46	HDP-22	0.7	FDC-07	S-0
2540 10122090	<b>-90</b>	3.5 ~ 22.0	90	0 ~ 8	47 ~ 79	46	HDP-22	0.9		
2540 10122105	<b>-105</b>	3.5 ~ 22.0	105	0 ~ 8	47 ~ 94	46	HDP-22	1.0		
2540 10122120	<b>-120</b>	3.5 ~ 22.0	120	0 ~ 8	47 ~ 103	46	HDP-22	1.2		
2540 10122135	<b>-135</b>	3.5 ~ 22.0	135	0 ~ 8	47 ~ 103	46	HDP-22	1.3		
2540 10307060	<b>BT40 -HDC07A -60</b>	0.5 ~ 7.0	60	0 ~ 4	22 ~ 45	23	HDP-07A	1.1		
2540 10307075	<b>-75</b>	0.5 ~ 7.0	75	0 ~ 4	22 ~ 45	23	HDP-07A	1.1		
2540 10307090	<b>-90</b>	0.5 ~ 7.0	90	0 ~ 4	22 ~ 45	23	HDP-07A	1.1		
2540 10307105	<b>-105</b>	0.5 ~ 7.0	105	0 ~ 4	22 ~ 45	23	HDP-07A	1.2		
2540 10307120	<b>-120</b>	0.5 ~ 7.0	120	0 ~ 4	22 ~ 45	23	HDP-07A	1.3		
2540 10309060	<b>BT40 -HDC09A -60</b>	2.5 ~ 9.0	60	0 ~ 4	27 ~ 57	26	HDP-09	1.1		
2540 10309090	<b>-90</b>	2.5 ~ 9.0	90	0 ~ 4	27 ~ 57	26	HDP-09	1.2	FDC-09	S-1L
2540 10309105	<b>-105</b>	2.5 ~ 9.0	105	0 ~ 4	27 ~ 57	26	HDP-09	1.2		
2540 10309120	<b>-120</b>	2.5 ~ 9.0	120	0 ~ 4	27 ~ 57	26	HDP-09	1.3		
2540 10309135	<b>-135</b>	2.5 ~ 9.0	135	0 ~ 4	27 ~ 57	26	HDP-09	1.3		
2540 10309165	<b>-165</b>	2.5 ~ 9.0	165	0 ~ 4	27 ~ 57	26	HDP-09	1.4		

Unit : Metric

Code	Model	d	L	B	L1	D1	Nut	kg	Collet	Spanner
2540 10312060	<b>BT40 -HDC12A -60</b>	2.5 ~ 12.0	60	0 ~ 5	33 ~ 61	32	HDP-12	1.2	FDC-12	S-3L
2540 10312090	<b>-90</b>	2.5 ~ 12.0	90	0 ~ 5	33 ~ 69	32	HDP-12	1.3		
2540 10312105	<b>-105</b>	2.5 ~ 12.0	105	0 ~ 5	33 ~ 69	32	HDP-12	1.3		
2540 10312120	<b>-120</b>	2.5 ~ 12.0	120	0 ~ 5	33 ~ 69	32	HDP-12	1.4		
2540 10312135	<b>-135</b>	2.5 ~ 12.0	135	0 ~ 5	33 ~ 69	32	HDP-12	1.5		
2540 10312165	<b>-165</b>	2.5 ~ 12.0	165	0 ~ 5	33 ~ 69	32	HDP-12	1.6		
2540 10312195	<b>-195</b>	2.5 ~ 12.0	195	0 ~ 5	33 ~ 69	32	HDP-12	1.8		
2540 10316060	<b>BT40 -HDC16A -60</b>	3.5 ~ 16.0	60	0 ~ 6	38 ~ 64	36	HDP-16	1.1	FDC-16	S-4L
2540 10316090	<b>-90</b>	3.5 ~ 16.0	90	0 ~ 6	38 ~ 82	36	HDP-16	1.3		
2540 10316105	<b>-105</b>	3.5 ~ 16.0	105	0 ~ 6	38 ~ 82	36	HDP-16	1.4		
2540 10316120	<b>-120</b>	3.5 ~ 16.0	120	0 ~ 6	38 ~ 82	36	HDP-16	1.5		
2540 10316135	<b>-135</b>	3.5 ~ 16.0	135	0 ~ 6	38 ~ 82	36	HDP-16	1.6		
2540 10316165	<b>-165</b>	3.5 ~ 16.0	165	0 ~ 6	38 ~ 82	36	HDP-16	1.8		
2540 10316195	<b>-195</b>	3.5 ~ 16.0	195	0 ~ 6	38 ~ 82	36	HDP-16	2.0		
2540 10322060	<b>BT40 -HDC22A -60</b>	3.5 ~ 22.0	60	0 ~ 8	47 ~ 66	46	HDP-22	1.1	FDC-22	S-5L
2540 10322075	<b>-75</b>	3.5 ~ 22.0	75	0 ~ 8	47 ~ 81	46	HDP-22	1.2		
2540 10322090	<b>-90</b>	3.5 ~ 22.0	90	0 ~ 8	47 ~ 96	46	HDP-22	1.4		
2540 10322105	<b>-105</b>	3.5 ~ 22.0	105	0 ~ 8	47 ~ 103	46	HDP-22	1.5		
2540 10322120	<b>-120</b>	3.5 ~ 22.0	120	0 ~ 8	47 ~ 103	46	HDP-22	1.7		
2540 10322135	<b>-135</b>	3.5 ~ 22.0	135	0 ~ 8	47 ~ 103	46	HDP-22	1.9		
2540 10322165	<b>-165</b>	3.5 ~ 22.0	165	0 ~ 8	47 ~ 103	46	HDP-22	2.2		
2540 10322195	<b>-195</b>	3.5 ~ 22.0	195	0 ~ 8	47 ~ 103	46	HDP-22	2.6		
2540 10507090	<b>BT50 -HDC07A -90</b>	0.5 ~ 7.0	90	0 ~ 4	22 ~ 45	23	HDP-07A	3.6	FDC-07	S-0
2540 10507105	<b>-105</b>	0.5 ~ 7.0	105	0 ~ 4	22 ~ 45	23	HDP-07A	3.6		
2540 10507120	<b>-120</b>	0.5 ~ 7.0	120	0 ~ 4	22 ~ 45	23	HDP-07A	3.7		
2540 10507135	<b>-135</b>	0.5 ~ 7.0	135	0 ~ 4	22 ~ 45	23	HDP-07A	3.7		
2540 10507165	<b>-165</b>	0.5 ~ 7.0	165	0 ~ 4	22 ~ 45	23	HDP-07A	3.9		
2540 10507195	<b>-195</b>	0.5 ~ 7.0	195	0 ~ 4	22 ~ 45	23	HDP-07A	4.0		
2540 10509090	<b>BT50 -HDC09A -90</b>	2.5 ~ 9.0	90	0 ~ 4	27 ~ 57	26	HDP-09	3.7	FDC-09	S-1L
2540 10509105	<b>-105</b>	2.5 ~ 9.0	105	0 ~ 4	27 ~ 57	26	HDP-09	3.8		
2540 10509120	<b>-120</b>	2.5 ~ 9.0	120	0 ~ 4	27 ~ 57	26	HDP-09	3.8		
2540 10509135	<b>-135</b>	2.5 ~ 9.0	135	0 ~ 4	27 ~ 57	26	HDP-09	3.8		
2540 10509165	<b>-165</b>	2.5 ~ 9.0	165	0 ~ 4	27 ~ 57	26	HDP-09	3.9		
2540 10509195	<b>-195</b>	2.5 ~ 9.0	195	0 ~ 4	27 ~ 57	26	HDP-09	4.0		
2540 10509225	<b>-225</b>	2.5 ~ 9.0	225	0 ~ 4	27 ~ 57	26	HDP-09	4.1		
2540 10509255	<b>-255</b>	2.5 ~ 9.0	255	0 ~ 4	27 ~ 57	26	HDP-09	4.3		
2540 10512090	<b>BT50 -HDC12A -90</b>	2.5 ~ 12.0	90	0 ~ 5	33 ~ 69	32	HDP-12	3.8	FDC-12	S-3L
2540 10512105	<b>-105</b>	2.5 ~ 12.0	105	0 ~ 5	33 ~ 69	32	HDP-12	3.8		
2540 10512120	<b>-120</b>	2.5 ~ 12.0	120	0 ~ 5	33 ~ 69	32	HDP-12	3.9		
2540 10512135	<b>-135</b>	2.5 ~ 12.0	135	0 ~ 5	33 ~ 69	32	HDP-12	4.0		
2540 10512165	<b>-165</b>	2.5 ~ 12.0	165	0 ~ 5	33 ~ 69	32	HDP-12	4.1		
2540 10512195	<b>-195</b>	2.5 ~ 12.0	195	0 ~ 5	33 ~ 69	32	HDP-12	4.3		
2540 10512225	<b>-225</b>	2.5 ~ 12.0	225	0 ~ 5	33 ~ 69	32	HDP-12	4.4		
2540 10512255	<b>-255</b>	2.5 ~ 12.0	255	0 ~ 5	33 ~ 69	32	HDP-12	4.6		
2540 10516090	<b>BT50 -HDC16A -90</b>	3.5 ~ 16.0	90	0 ~ 6	38 ~ 82	36	HDP-16	3.8	FDC-16	S-4L
2540 10516105	<b>-105</b>	3.5 ~ 16.0	105	0 ~ 6	38 ~ 82	36	HDP-16	3.9		
2540 10516120	<b>-120</b>	3.5 ~ 16.0	120	0 ~ 6	38 ~ 82	36	HDP-16	4.0		
2540 10516135	<b>-135</b>	3.5 ~ 16.0	135	0 ~ 6	38 ~ 82	36	HDP-16	4.1		
2540 10516165	<b>-165</b>	3.5 ~ 16.0	165	0 ~ 6	38 ~ 82	36	HDP-16	4.2		
2540 10516195	<b>-195</b>	3.5 ~ 16.0	195	0 ~ 6	38 ~ 82	36	HDP-16	4.5		
2540 10516225	<b>-225</b>	3.5 ~ 16.0	225	0 ~ 6	38 ~ 82	36	HDP-16	4.6		
2540 10516255	<b>-255</b>	3.5 ~ 16.0	255	0 ~ 6	38 ~ 82	36	HDP-16	4.8		
2540 10522105	<b>BT50 -HDC22A -105</b>	3.5 ~ 22.0	105	0 ~ 8	47 ~ 103	46	HDP-22	4.0	FDC-22	S-5L
2540 10522120	<b>-120</b>	3.5 ~ 22.0	120	0 ~ 8	47 ~ 103	46	HDP-22	4.2		
2540 10522135	<b>-135</b>	3.5 ~ 22.0	135	0 ~ 8	47 ~ 103	46	HDP-22	4.3		
2540 10522150	<b>-150</b>	3.5 ~ 22.0	150	0 ~ 8	47 ~ 103	46	HDP-22	4.5		
2540 10522165	<b>-165</b>	3.5 ~ 22.0	165	0 ~ 8	47 ~ 103	46	HDP-22	4.7		
2540 10522195	<b>-195</b>	3.5 ~ 22.0	195	0 ~ 8	47 ~ 103	46	HDP-22	5.0		
2540 10522225	<b>-225</b>	3.5 ~ 22.0	225	0 ~ 8	47 ~ 103	46	HDP-22	5.3		
2540 10522255	<b>-255</b>	3.5 ~ 22.0	255	0 ~ 8	47 ~ 103	46	HDP-22	5.6		

1. Collet, spanner, hexagon head preset screw, preset screw for semi-dry processing are sold separately. Standard preset screw is included.
2. Refer to P.092 for minimum tool insertion length in case of using our coolant collets (OH,C or MS).
3. L1 indicates dimension when using with a preset screw.
4. See P.499 for standard Tightening Torque.

<b>Collet</b> P. 086 - 089 	<b>Spanner</b> P. 095 	<b>Preset screw</b> P. 094 
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**Ordering Example**  
**BT30 - HDC 16 A - 105**  
 Shank size      Max. collet I.D.      Projection length (L)

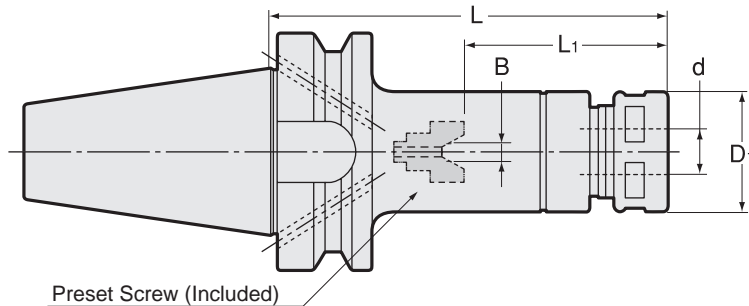




# HDC·A-CF

High-Precision Collet Holder ( Flange Through Type )

- Flange through coolant type collet holder. DIN69871 Form B compliance.



- DIN69871 Form B
- Max. Coolant pressure  
6MPa (HDC22A-CF)  
7MPa (Other sizes)

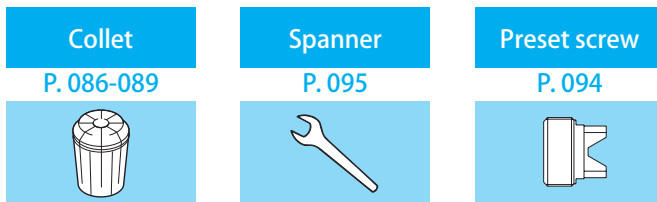
Unit : Metric

Code	Model	d	L	B	L1	D1	Nut	kg	Collet	Spanner
2546 10307075	<b>BT40 -HDC07A -75CF</b>	0.5 ~ 7.0	75	0 ~ 4	22 ~ 40	23	HDP-07A	1.1	FDC-07	S-0
2546 10307090	<b>-90CF</b>	0.5 ~ 7.0	90	0 ~ 4	22 ~ 45	23	HDP-07A	1.1		
2546 10307105	<b>-105CF</b>	0.5 ~ 7.0	105	0 ~ 4	22 ~ 45	23	HDP-07A	1.2		
2546 10309090	<b>BT40 -HDC09A -90CF</b>	2.5 ~ 9.0	90	0 ~ 4	27 ~ 56	26	HDP-09	1.2	FDC-09	S-1L
2546 10309105	<b>-105CF</b>	2.5 ~ 9.0	105	0 ~ 4	27 ~ 57	26	HDP-09	1.3		
2546 10309120	<b>-120CF</b>	2.5 ~ 9.0	120	0 ~ 4	27 ~ 57	26	HDP-09	1.3		
2546 10309135	<b>-135CF</b>	2.5 ~ 9.0	135	0 ~ 4	27 ~ 57	26	HDP-09	1.4		
2546 10309165	<b>-165CF</b>	2.5 ~ 9.0	165	0 ~ 4	27 ~ 57	26	HDP-09	1.5		
2546 10312090	<b>BT40 -HDC12A -90CF</b>	2.5 ~ 12.0	90	0 ~ 5	33 ~ 54	32	HDP-12	1.3	FDC-12	S-3L
2546 10312105	<b>-105CF</b>	2.5 ~ 12.0	105	0 ~ 5	33 ~ 69	32	HDP-12	1.4		
2546 10312120	<b>-120CF</b>	2.5 ~ 12.0	120	0 ~ 5	33 ~ 69	32	HDP-12	1.5		
2546 10312135	<b>-135CF</b>	2.5 ~ 12.0	135	0 ~ 5	33 ~ 69	32	HDP-12	1.5		
2546 10312165	<b>-165CF</b>	2.5 ~ 12.0	165	0 ~ 5	33 ~ 69	32	HDP-12	1.7		
2546 10312195	<b>-195CF</b>	2.5 ~ 12.0	195	0 ~ 5	33 ~ 69	32	HDP-12	1.9		
2546 10316090	<b>BT40 -HDC16A -90CF</b>	3.5 ~ 16.0	90	0 ~ 6	38 ~ 56	36	HDP-16	1.3	FDC-16	S-4L
2546 10316105	<b>-105CF</b>	3.5 ~ 16.0	105	0 ~ 6	38 ~ 71	36	HDP-16	1.4		
2546 10316120	<b>-120CF</b>	3.5 ~ 16.0	120	0 ~ 6	38 ~ 82	36	HDP-16	1.5		
2546 10316135	<b>-135CF</b>	3.5 ~ 16.0	135	0 ~ 6	38 ~ 82	36	HDP-16	1.7		
2546 10316165	<b>-165CF</b>	3.5 ~ 16.0	165	0 ~ 6	38 ~ 82	36	HDP-16	1.8		
2546 10316195	<b>-195CF</b>	3.5 ~ 16.0	195	0 ~ 6	38 ~ 82	36	HDP-16	2.0		
2546 10322105	<b>BT40 -HDC22A -105CF</b>	3.5 ~ 22.0	105	0 ~ 8	47 ~ 69	46	HDP-22	1.6	FDC-22	S-5L
2546 10322120	<b>-120CF</b>	3.5 ~ 22.0	120	0 ~ 8	47 ~ 84	46	HDP-22	1.8		
2546 10322135	<b>-135CF</b>	3.5 ~ 22.0	135	0 ~ 8	47 ~ 99	46	HDP-22	1.9		
2546 10322165	<b>-165CF</b>	3.5 ~ 22.0	165	0 ~ 8	47 ~ 103	46	HDP-22	2.3		
2546 10322195	<b>-195CF</b>	3.5 ~ 22.0	195	0 ~ 8	47 ~ 103	46	HDP-22	2.6		
2546 10507090	<b>BT50 -HDC07A -90CF</b>	0.5 ~ 7.0	90	0 ~ 4	22 ~ 45	23	HDP-07A	3.5	FDC-07	S-0
2546 10507105	<b>-105CF</b>	0.5 ~ 7.0	105	0 ~ 4	22 ~ 45	23	HDP-07A	3.6		
2546 10507120	<b>-120CF</b>	0.5 ~ 7.0	120	0 ~ 4	22 ~ 45	23	HDP-07A	3.7		
2546 10507135	<b>-135CF</b>	0.5 ~ 7.0	135	0 ~ 4	22 ~ 45	23	HDP-07A	3.8		
2546 10507165	<b>-165CF</b>	0.5 ~ 7.0	165	0 ~ 4	22 ~ 45	23	HDP-07A	3.9		
2546 10507195	<b>-195CF</b>	0.5 ~ 7.0	195	0 ~ 4	22 ~ 45	23	HDP-07A	4.0		
2546 10509090	<b>BT50 -HDC09A -90CF</b>	2.5 ~ 9.0	90	0 ~ 4	27 ~ 48	26	HDP-09	3.6	FDC-09	S-1L
2546 10509105	<b>-105CF</b>	2.5 ~ 9.0	105	0 ~ 4	27 ~ 57	26	HDP-09	3.7		
2546 10509120	<b>-120CF</b>	2.5 ~ 9.0	120	0 ~ 4	27 ~ 57	26	HDP-09	3.8		
2546 10509135	<b>-135CF</b>	2.5 ~ 9.0	135	0 ~ 4	27 ~ 57	26	HDP-09	3.9		
2546 10509165	<b>-165CF</b>	2.5 ~ 9.0	165	0 ~ 4	27 ~ 57	26	HDP-09	4.0		
2546 10509195	<b>-195CF</b>	2.5 ~ 9.0	195	0 ~ 4	27 ~ 57	26	HDP-09	4.1		
2546 10509225	<b>-225CF</b>	2.5 ~ 9.0	225	0 ~ 4	27 ~ 57	26	HDP-09	4.2		
2546 10509255	<b>-255CF</b>	2.5 ~ 9.0	255	0 ~ 4	27 ~ 57	26	HDP-09	4.3		



Code	Model	d	L	B	L1	D1	Nut	kg	Collet	Spanner
2546 10512090	<b>BT50 -HDC12A -90CF</b>	2.5 ~ 12.0	90	0 ~ 5	33 ~ 47	32	HDP-12	3.7	FDC-12	S-3L
2546 10512105	<b>-105CF</b>	2.5 ~ 12.0	105	0 ~ 5	33 ~ 62	32	HDP-12	3.8		
2546 10512120	<b>-120CF</b>	2.5 ~ 12.0	120	0 ~ 5	33 ~ 69	32	HDP-12	3.9		
2546 10512135	<b>-135CF</b>	2.5 ~ 12.0	135	0 ~ 5	33 ~ 69	32	HDP-12	4.0		
2546 10512165	<b>-165CF</b>	2.5 ~ 12.0	165	0 ~ 5	33 ~ 69	32	HDP-12	4.1		
2546 10512195	<b>-195CF</b>	2.5 ~ 12.0	195	0 ~ 5	33 ~ 69	32	HDP-12	4.2		
2546 10512225	<b>-225CF</b>	2.5 ~ 12.0	225	0 ~ 5	33 ~ 69	32	HDP-12	4.3		
2546 10512255	<b>-255CF</b>	2.5 ~ 12.0	255	0 ~ 5	33 ~ 69	32	HDP-12	4.4		
2546 10516090	<b>BT50 -HDC16A -90CF</b>	3.5 ~ 16.0	90	0 ~ 6	38 ~ 47	36	HDP-16	3.7		
2546 10516105	<b>-105CF</b>	3.5 ~ 16.0	105	0 ~ 6	38 ~ 62	36	HDP-16	3.8		
2546 10516120	<b>-120CF</b>	3.5 ~ 16.0	120	0 ~ 6	38 ~ 77	36	HDP-16	3.9		
2546 10516135	<b>-135CF</b>	3.5 ~ 16.0	135	0 ~ 6	38 ~ 82	36	HDP-16	4.0		
2546 10516165	<b>-165CF</b>	3.5 ~ 16.0	165	0 ~ 6	38 ~ 82	36	HDP-16	4.2		
2546 10516195	<b>-195CF</b>	3.5 ~ 16.0	195	0 ~ 6	38 ~ 82	36	HDP-16	4.4		
2546 10516225	<b>-225CF</b>	3.5 ~ 16.0	225	0 ~ 6	38 ~ 82	36	HDP-16	4.6		
2546 10516255	<b>-255CF</b>	3.5 ~ 16.0	255	0 ~ 6	38 ~ 82	36	HDP-16	4.8		
2546 10522105	<b>BT50 -HDC22A -105CF</b>	3.5 ~ 22.0	105	0 ~ 8	47 ~ 60	46	HDP-22	4.0	FDC-22	S-5L
2546 10522120	<b>-120CF</b>	3.5 ~ 22.0	120	0 ~ 8	47 ~ 75	46	HDP-22	4.2		
2546 10522135	<b>-135CF</b>	3.5 ~ 22.0	135	0 ~ 8	47 ~ 90	46	HDP-22	4.3		
2546 10522150	<b>-150CF</b>	3.5 ~ 22.0	150	0 ~ 8	47 ~ 103	46	HDP-22	4.4		
2546 10522165	<b>-165CF</b>	3.5 ~ 22.0	165	0 ~ 8	47 ~ 103	46	HDP-22	4.6		
2546 10522195	<b>-195CF</b>	3.5 ~ 22.0	195	0 ~ 8	47 ~ 103	46	HDP-22	4.8		
2546 10522225	<b>-225CF</b>	3.5 ~ 22.0	225	0 ~ 8	47 ~ 103	46	HDP-22	5.0		
2546 10522255	<b>-255CF</b>	3.5 ~ 22.0	255	0 ~ 8	47 ~ 103	46	HDP-22	5.2		

1. Collet, spanner, hexagon head preset screw and preset screw for semi-dry processing are sold separately. Standard preset screw is included.
2. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets (OH,C or MS).
3. L1 indicates dimension when using with a preset screw.
4. See P.499 for standard Tightening Torque.



#### Ordering Example

**BT30 - HDC 16 A - 105 CF**

Shank size

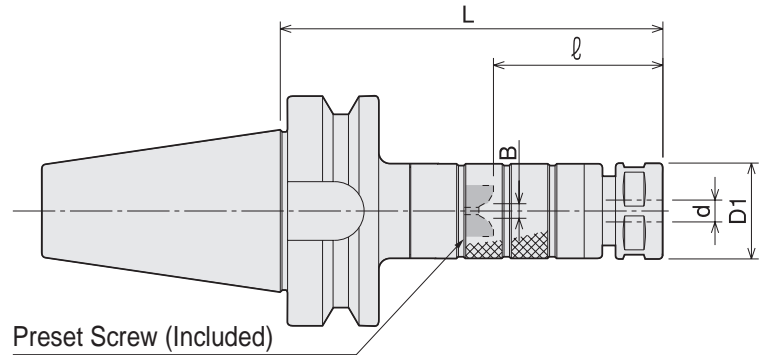
Max. collet I.D.

Projection length (L)

# SDM

## Drill Holder With Easy Tool Length Adjustment

- Projection length of the cutting tool can be adjusted by simply turning circumference of the holder.



Unit : Metric

Code	Model	d	L	l	B	D1	Nut	Collet	Spanner
3920 00107075	<b>BT30 -SDM07 -75</b>	0.5 ~ 7.0	75	29 ~ 39	0 ~ 4	23	HDP-07A	FDC-07	S-0
3920 00107090	<b>-90</b>	0.5 ~ 7.0	90	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00107105	<b>-105</b>	0.5 ~ 7.0	105	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00107120	<b>-120</b>	0.5 ~ 7.0	120	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00107135	<b>-135</b>	0.5 ~ 7.0	135	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00107150	<b>-150</b>	0.5 ~ 7.0	150	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00109090	<b>BT30 -SDM09 -90</b>	2.5 ~ 9.0	90	28 ~ 38	0 ~ 4	26	HDP-09	FDC-09	S-1L
3920 00109105	<b>-105</b>	2.5 ~ 9.0	105	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00109120	<b>-120</b>	2.5 ~ 9.0	120	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00109135	<b>-135</b>	2.5 ~ 9.0	135	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00109150	<b>-150</b>	2.5 ~ 9.0	150	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00109165	<b>-165</b>	2.5 ~ 9.0	165	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00112090	<b>BT30 -SDM12 -90</b>	2.5 ~ 12.0	90	34 ~ 44	0 ~ 5	32	HDP-12	FDC-12	S-3L
3920 00112105	<b>-105</b>	2.5 ~ 12.0	105	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00112120	<b>-120</b>	2.5 ~ 12.0	120	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00112135	<b>-135</b>	2.5 ~ 12.0	135	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00112150	<b>-150</b>	2.5 ~ 12.0	150	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00112165	<b>-165</b>	2.5 ~ 12.0	165	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00116105	<b>BT30 -SDM16 -105</b>	3.5 ~ 16.0	105	40 ~ 50	0 ~ 6	36	HDP-16	FDC-16	S-4L
3920 00116120	<b>-120</b>	3.5 ~ 16.0	120	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00116135	<b>-135</b>	3.5 ~ 16.0	135	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00116150	<b>-150</b>	3.5 ~ 16.0	150	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00116165	<b>-165</b>	3.5 ~ 16.0	165	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00122105	<b>BT30 -SDM22 -105</b>	3.5 ~ 22.0	105	48 ~ 58	0 ~ 8	46	HDP-22		
3920 00122120	<b>-120</b>	3.5 ~ 22.0	120	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00122135	<b>-135</b>	3.5 ~ 22.0	135	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00122150	<b>-150</b>	3.5 ~ 22.0	150	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00122165	<b>-165</b>	3.5 ~ 22.0	165	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00307090	<b>BT40 -SDM07 -90</b>	0.5 ~ 7.0	90	29 ~ 39	0 ~ 4	23	HDP-07A	FDC-07	S-0
3920 00307105	<b>-105</b>	0.5 ~ 7.0	105	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00307120	<b>-120</b>	0.5 ~ 7.0	120	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00307135	<b>-135</b>	0.5 ~ 7.0	135	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00307150	<b>-150</b>	0.5 ~ 7.0	150	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00309090	<b>BT40 -SDM09 -90</b>	2.5 ~ 9.0	90	28 ~ 38	0 ~ 4	26	HDP-09		
3920 00309105	<b>-105</b>	2.5 ~ 9.0	105	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00309120	<b>-120</b>	2.5 ~ 9.0	120	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00309135	<b>-135</b>	2.5 ~ 9.0	135	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00309150	<b>-150</b>	2.5 ~ 9.0	150	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00309180	<b>-180</b>	2.5 ~ 9.0	180	28 ~ 53	0 ~ 4	26	HDP-09		

Code	Model	d	L	ℓ	B	D1	Nut	Collet	Spanner
3920 00312090	<b>BT40 -SDM12 -90</b>	2.5 ~ 12.0	90	34 ~ 44	0 ~ 5	32	HDP-12	FDC-12	S-3L
3920 00312105	<b>-105</b>	2.5 ~ 12.0	105	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00312120	<b>-120</b>	2.5 ~ 12.0	120	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00312135	<b>-135</b>	2.5 ~ 12.0	135	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00312150	<b>-150</b>	2.5 ~ 12.0	150	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00312180	<b>-180</b>	2.5 ~ 12.0	180	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00316105	<b>BT40 -SDM16 -105</b>	3.5 ~ 16.0	105	40 ~ 50	0 ~ 6	36	HDP-16	FDC-16	S-4L
3920 00316120	<b>-120</b>	3.5 ~ 16.0	120	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00316135	<b>-135</b>	3.5 ~ 16.0	135	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00316150	<b>-150</b>	3.5 ~ 16.0	150	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00316180	<b>-180</b>	3.5 ~ 16.0	180	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00322120	<b>BT40 -SDM22 -120</b>	3.5 ~ 22.0	120	48 ~ 58	0 ~ 8	46	HDP-22		
3920 00322135	<b>-135</b>	3.5 ~ 22.0	135	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00322150	<b>-150</b>	3.5 ~ 22.0	150	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00322180	<b>-180</b>	3.5 ~ 22.0	180	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00507090	<b>BT50 -SDM07 -90</b>	0.5 ~ 7.0	90	29 ~ 39	0 ~ 4	23	HDP-07A	FDC-07	S-0
3920 00507105	<b>-105</b>	0.5 ~ 7.0	105	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00507120	<b>-120</b>	0.5 ~ 7.0	120	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00507135	<b>-135</b>	0.5 ~ 7.0	135	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00507150	<b>-150</b>	0.5 ~ 7.0	150	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00507165	<b>-165</b>	0.5 ~ 7.0	165	29 ~ 54	0 ~ 4	23	HDP-07A		
3920 00509090	<b>BT50 -SDM09 -90</b>	2.5 ~ 9.0	90	28 ~ 38	0 ~ 4	26	HDP-09	FDC-09	S-1L
3920 00509105	<b>-105</b>	2.5 ~ 9.0	105	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00509120	<b>-120</b>	2.5 ~ 9.0	120	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00509135	<b>-135</b>	2.5 ~ 9.0	135	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00509150	<b>-150</b>	2.5 ~ 9.0	150	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00509180	<b>-180</b>	2.5 ~ 9.0	180	28 ~ 53	0 ~ 4	26	HDP-09		
3920 00512105	<b>BT50 -SDM12 -105</b>	2.5 ~ 12.0	105	34 ~ 44	0 ~ 5	32	HDP-12	FDC-12	S-3L
3920 00512120	<b>-120</b>	2.5 ~ 12.0	120	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00512135	<b>-135</b>	2.5 ~ 12.0	135	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00512150	<b>-150</b>	2.5 ~ 12.0	150	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00512180	<b>-180</b>	2.5 ~ 12.0	180	34 ~ 59	0 ~ 5	32	HDP-12		
3920 00516105	<b>BT50 -SDM16 -105</b>	3.5 ~ 16.0	105	40 ~ 50	0 ~ 6	36	HDP-16		
3920 00516120	<b>-120</b>	3.5 ~ 16.0	120	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00516135	<b>-135</b>	3.5 ~ 16.0	135	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00516150	<b>-150</b>	3.5 ~ 16.0	150	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00516180	<b>-180</b>	3.5 ~ 16.0	180	40 ~ 65	0 ~ 6	36	HDP-16		
3920 00522120	<b>BT50 -SDM22 -120</b>	3.5 ~ 22.0	120	48 ~ 58	0 ~ 8	46	HDP-22	FDC-22	S-5L
3920 00522135	<b>-135</b>	3.5 ~ 22.0	135	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00522150	<b>-150</b>	3.5 ~ 22.0	150	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00522180	<b>-180</b>	3.5 ~ 22.0	180	48 ~ 73	0 ~ 8	46	HDP-22		
3920 00522210	<b>-210</b>	3.5 ~ 22.0	210	48 ~ 73	0 ~ 8	46	HDP-22		

Collet

P. 086 - 089



Spanner

P. 095



1. Collet and spanner are sold separately.
2. ℓ is the dimension between the cap end and the preset screw top end.
3. See P.499 for standard Tightening Torque.

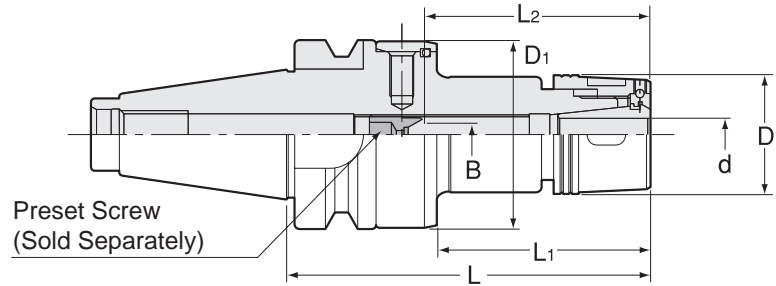
## Ordering Example

**BT40 - SDM 12 - 90**  
 Shank size                      Max.                      Projection  
    collet I.D.                      length (L)

# GDC·A

## High-Precision Collet Holder ( High-Balanced Type )

- Suitable for high speed rotation drilling, reaming, and finish endmilling.



Unit : Metric

Code	Model	L	d	L1	L2	D	D1	kg	Nut	Collet	Spanner
2446 03007090	<b>BT30 -GDC07A -90</b>	90	0.5 ~ 7.0	53	22 ~ 45	23	46	0.6	HDP-07A	FDC-07AA	S-0
2446 03007105	<b>-105</b>	105	0.5 ~ 7.0	68	22 ~ 45	23	46	0.7	HDP-07A		
2446 03009090	<b>BT30 -GDC09A -90</b>	90	2.5 ~ 9.0	53	27 ~ 57	29	46	0.7	GDP-09	FDC-09AA	FK-0025
2446 03009105	<b>-105</b>	105	2.5 ~ 9.0	68	27 ~ 57	29	46	0.8	GDP-09		
2446 03012090	<b>BT30 -GDC12A -90</b>	90	2.5 ~ 12.0	53	33 ~ 69	34	46	0.8	GDP-12	FDC-12AA	FK-0034
2446 03012105	<b>-105</b>	105	2.5 ~ 12.0	68	33 ~ 69	34	46	0.9	GDP-12		
2446 03016090	<b>BT30 -GDC16A -90</b>	90	3.5 ~ 16.0	53	38 ~ 82	38	46	0.8	GDP-16	FDC-16AA	FK-0034
2446 03016120	<b>-120</b>	120	3.5 ~ 16.0	83	38 ~ 82	38	46	1.1	GDP-16		
2446 04007090	<b>BT40 -GDC07A -90</b>	90	0.5 ~ 7.0	48	22 ~ 45	23	62	1.4	HDP-07A	FDC-07AA	S-0
2446 04007120	<b>-120</b>	120	0.5 ~ 7.0	78	22 ~ 45	23	62	1.5	HDP-07A		
2446 04009090	<b>BT40 -GDC09A -90</b>	90	2.5 ~ 9.0	48	27 ~ 57	29	62	1.4	GDP-09	FDC-09AA	FK-0025
2446 04009120	<b>-120</b>	120	2.5 ~ 9.0	78	27 ~ 57	29	62	1.6	GDP-09		
2446 04012090	<b>BT40 -GDC12A -90</b>	90	2.5 ~ 12.0	48	33 ~ 69	34	62	1.5	GDP-12	FDC-12AA	FK-0034
2446 04012120	<b>-120</b>	120	2.5 ~ 12.0	78	33 ~ 69	34	62	1.7	GDP-12		
2446 04016090	<b>BT40 -GDC16A -90</b>	90	3.5 ~ 16.0	48	38 ~ 82	38	62	1.5	GDP-16	FDC-16AA	FK-0034
2446 04016120	<b>-120</b>	120	3.5 ~ 16.0	78	38 ~ 82	38	62	1.7	GDP-16		
2446 04022090	<b>BT40 -GDC22A -90</b>	90	3.5 ~ 22.0	48	47 ~ 103	49	62	1.5	GDP-22	FDC-22AA	FK-0045
2446 04022105	<b>-105</b>	105	3.5 ~ 22.0	63	47 ~ 103	49	62	1.7	GDP-22		
2446 04022135	<b>-135</b>	135	3.5 ~ 22.0	93	47 ~ 103	49	62	2.1	GDP-22		
2446 05007105	<b>BT50 -GDC07A -105</b>	105	0.5 ~ 7.0	52	22 ~ 45	23	84	4.1	HDP-07A	FDC-07AA	S-0
2446 05007135	<b>-135</b>	135	0.5 ~ 7.0	82	22 ~ 45	23	84	4.3	HDP-07A		
2446 05009105	<b>BT50 -GDC09A -105</b>	105	2.5 ~ 9.0	52	27 ~ 57	29	84	4.2	GDP-09	FDC-09AA	FK-0025
2446 05009135	<b>-135</b>	135	2.5 ~ 9.0	82	27 ~ 57	29	84	4.4	GDP-09		
2446 05012105	<b>BT50 -GDC12A -105</b>	105	2.5 ~ 12.0	52	33 ~ 69	34	84	4.3	GDP-12	FDC-12AA	FK-0034
2446 05012135	<b>-135</b>	135	2.5 ~ 12.0	82	33 ~ 69	34	84	4.5	GDP-12		
2446 05016105	<b>BT50 -GDC16A -105</b>	105	3.5 ~ 16.0	52	38 ~ 82	38	84	4.4	GDP-16	FDC-16AA	FK-0034
2446 05016135	<b>-135</b>	135	3.5 ~ 16.0	82	38 ~ 82	38	84	4.7	GDP-16		
2446 05022105	<b>BT50 -GDC22A -105</b>	105	3.5 ~ 22.0	52	47 ~ 103	49	84	4.4	GDP-22	FDC-22AA	FK-0045
2446 05022135	<b>-135</b>	135	3.5 ~ 22.0	82	47 ~ 103	49	84	4.8	GDP-22		

1. Collet, preset screw and spanner are sold separately.
2. Always use "AA" class collet.
3. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets (OH,C or MS).
4. L2 indicates dimension when using with a preset screw.
5. See P.499 for standard Tightening Torque.

Collet

P. 086 - 089



Spanner

P. 095



Preset screw

P. 094



### Ordering Example

**BT40 - GDC 09 A - 90**

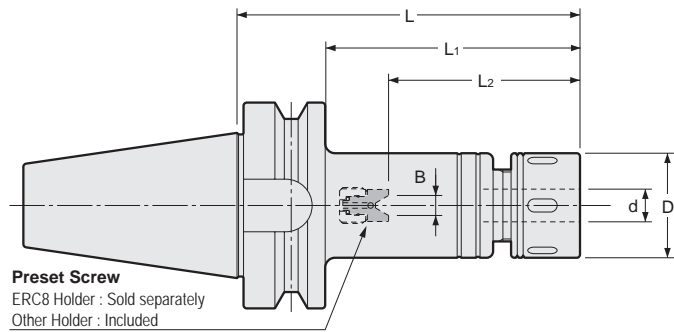
Shank size

Max. collet I.D.

Projection length (L)

## Collet Holder For Small Diameters



- For drilling in tight space.



Unit : Inch

Code	Model	d	L	L1	B	L2	D1	kg	Preset Screw	Nut	Collet	Spanner
2550 000108045	<b>BT30 -ERC8* -45</b>	0.020-0.197	1.772	0.906	— (0-0.094)	1.299 (0.748-1.220)	0.472	0.40	ER8 (sold separately)	ERP-8	ER8	S-8E
2550 000108060	<b>-60</b>	0.020-0.197	2.362	1.496	— (0-0.094)	1.299 (0.748-1.220)	0.472	0.40				
2550 000108075	<b>-75</b>	0.020-0.197	2.953	2.087	— (0-0.094)	1.299 (0.748-1.220)	0.472	0.41				
2550 000108090	<b>-90</b>	0.020-0.197	3.543	2.677	— (0-0.094)	1.299 (0.748-1.220)	0.472	0.41				
2550 000108105	<b>-105</b>	0.020-0.197	4.134	3.268	— (0-0.094)	1.299 (0.748-1.220)	0.472	0.42				
2550 000108135	<b>-135</b>	0.020-0.197	5.315	4.449	— (0-0.094)	1.299 (0.748-1.220)	0.472	0.45				
2550 000110045	<b>BT30 -ERC11S -45</b>	0.020-0.276	1.772	0.906	0.0 ~ 0.157	0.866-1.457	0.630	0.40	HDS-07A-ES11	ERP-11S	ER11	S-11E
2550 000110060	<b>-60</b>	0.020-0.276	2.362	1.496	0.0 ~ 0.157	0.866-1.654	0.630	0.41				
2550 000110075	<b>-75</b>	0.020-0.276	2.953	2.087	0.0 ~ 0.157	0.866-1.654	0.630	0.43				
2550 000110090	<b>-90</b>	0.020-0.276	3.543	2.677	0.0 ~ 0.157	0.866-1.654	0.630	0.45				
2550 000110105	<b>-105</b>	0.020-0.276	4.134	3.268	0.0 ~ 0.157	0.866-1.654	0.630	0.46				
2550 000110135	<b>-135</b>	0.020-0.276	5.315	4.449	0.0 ~ 0.157	0.866-1.654	0.630	0.50				
2550 000111045	<b>BT30 -ERC11 -45</b>	0.020-0.276	1.772	0.906	0.0 ~ 0.157	0.866-1.457	0.906	0.43	HDP-07A			S-0
2550 000111060	<b>-60</b>	0.020-0.276	2.362	1.496	0.0 ~ 0.157	0.866-1.654	0.906	0.47				
2550 000111075	<b>-75</b>	0.020-0.276	2.953	2.087	0.0 ~ 0.157	0.866-1.654	0.906	0.50				
2550 000111090	<b>-90</b>	0.020-0.276	3.543	2.677	0.0 ~ 0.157	0.866-1.654	0.906	0.55				
2550 000111105	<b>-105</b>	0.020-0.276	4.134	3.268	0.0 ~ 0.157	0.866-1.654	0.906	0.55				
2550 000116060	<b>BT30 -ERC16 -60</b>	0.020-0.394	2.362	1.496	0.0 ~ 0.197	1.299-1.929	1.260	0.53				
2550 000116075	<b>-75</b>	0.020-0.394	2.953	2.087	0.0 ~ 0.197	1.299-2.126	1.260	0.61				
2550 000116090	<b>-90</b>	0.020-0.394	3.543	2.677	0.0 ~ 0.197	1.299-2.126	1.260	0.70				
2550 000116105	<b>-105</b>	0.020-0.394	4.134	3.268	0.0 ~ 0.197	1.299-2.126	1.260	0.78				
2550 000120060	<b>BT30 -ERC20 -60</b>	0.020-0.512	2.362	1.496	0.0 ~ 0.236	1.496-2.047	1.378	0.53	HDS12A-ES20	ERP-20	ER20	FK-0034
2550 000120075	<b>-75</b>	0.020-0.512	2.953	2.087	0.0 ~ 0.236	1.496-2.638	1.378	0.73				
2550 000120090	<b>-90</b>	0.020-0.512	3.543	2.677	0.0 ~ 0.236	1.496-2.638	1.378	0.73				
2550 000120105	<b>-105</b>	0.020-0.512	4.134	3.268	0.0 ~ 0.236	1.496-2.638	1.378	0.73				

1. Collet and spanner are sold separately.
2. \*ES8, a preset screw for ERC8, is sold separately. Other holder includes a standard preset screw.
3. " B " and " I " dimensions in brackets are for using ES8 preset screw.
4. Refer to P.092 for minimum tool insertion length in case of using our coolant collets.
5. See P.499 for standard Tightening Torque.

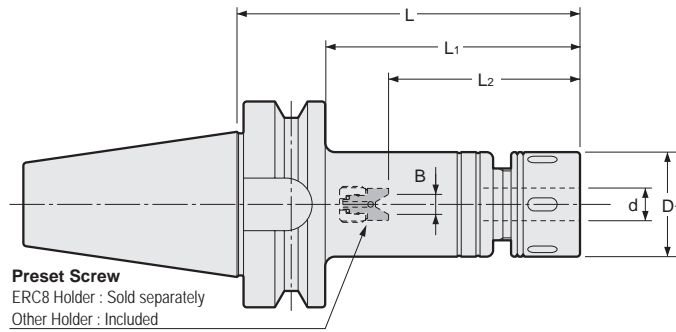
<b>Collet</b> P. 090-091 	<b>Spanner</b> P. 095 	<b>Preset screw</b> P. 094 
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### Ordering Example

**BT30 - ERC 8 - 105**  
Shank size      Max. collet I.D.      Projection length (L)

## Collet Holder For Small Diameters

- For drilling in tight space.



Unit : Inch

Code	Model	d	L	L1	B	L2	D1	kg	Preset Screw	Nut	Collet	Spanner
2550 000125060	<b>BT30 -ERC25 -60</b>	0.020~0.630	2.362	1.496	0.0 ~ 0.315	1.693~2.165	1.654	0.57	HDS16A-ES25	ERP-25	ER25	HS-1-16
2550 000125090	<b>-90</b>	0.020~0.630	3.543	2.677	0.0 ~ 0.315	1.693~3.150	1.654	0.85				
2550 000125105	<b>-105</b>	0.020~0.630	4.134	3.268	0.0 ~ 0.315	1.693~3.150	1.654	1.00				
2550 000125120	<b>-120</b>	0.020~0.630	4.724	3.858	0.0 ~ 0.315	1.693~3.150	1.654					
2550 000132060	<b>BT30 -ERC32 -60</b>	0.098~0.787	2.362	1.496	-	2.323	1.969		HDS22A-ER32	ERP-32	ER32	HS-2-20
2550 000132075	<b>-75</b>	0.098~0.787	2.953	2.087	-	2.913	1.969					
2550 000132090	<b>-90</b>	0.098~0.787	3.543	2.677	0.0 ~ 0.394	1.969~2.598	1.969					
2550 000132105	<b>-105</b>	0.098~0.787	4.134	3.268	0.0 ~ 0.394	1.969~3.189	1.969					
2550 000308060	<b>BT40 -ERC8* -60</b>	0.020~0.197	2.362	1.299	— (0~0.094)	1.299 (0.748~1.220)	0.472	0.98	ER8 (sold separately)	ERP-8	ER8	S-8E
2550 000308075	<b>-75</b>	0.020~0.197	2.953	1.890	— (0~0.094)	1.299 (0.748~1.220)	0.472	0.98				
2550 000308090	<b>-90</b>	0.020~0.197	3.543	2.480	— (0~0.094)	1.299 (0.748~1.220)	0.472	0.98				
2550 000308105	<b>-105</b>	0.020~0.197	4.134	3.071	— (0~0.094)	1.299 (0.748~1.220)	0.472	0.99				
2550 000308135	<b>-135</b>	0.020~0.197	5.315	4.252	— (0~0.094)	1.299 (0.748~1.220)	0.472	1.01				
2550 000310060	<b>BT40 -ERC11S -60</b>	0.020~0.276	2.362	1.299	0.0 ~ 0.157	0.866~1.654	0.630	0.99	HDS-07A-ES11	ERP-11S	ER11	S-11E
2550 000310075	<b>-75</b>	0.020~0.276	2.953	1.890	0.0 ~ 0.157	0.866~1.654	0.630	1.00				
2550 000310090	<b>-90</b>	0.020~0.276	3.543	2.480	0.0 ~ 0.157	0.866~1.654	0.630	1.00				
2550 000310105	<b>-105</b>	0.020~0.276	4.134	3.071	0.0 ~ 0.157	0.866~1.654	0.630	1.02				
2550 000310135	<b>-135</b>	0.020~0.276	5.315	4.252	0.0 ~ 0.157	0.866~1.654	0.630	1.06				
2550 000311075	<b>BT40 -ERC11 -75</b>	0.020~0.276	2.953	1.890	0.0 ~ 0.157	0.866~1.654	0.906	1.07	HDP-07A			S-0
2550 000311090	<b>-90</b>	0.020~0.276	3.543	2.480	0.0 ~ 0.157	0.866~1.654	0.906	1.10				
2550 000311105	<b>-105</b>	0.020~0.276	4.134	3.071	0.0 ~ 0.157	0.866~1.654	0.906	1.14				
2550 000316060	<b>BT40 -ERC16 -60</b>	0.020~0.394	2.362	1.299	0.0~0.197	1.299~2.126	1.260	1.09	ES16	ERP-16	ER16	FK-0030
2550 000316090	<b>-90</b>	0.020~0.394	3.543	2.480	0.0~0.197	1.299~2.126	1.260	1.24				
2550 000316105	<b>-105</b>	0.020~0.394	4.134	3.071	0.0~0.197	1.299~2.126	1.260	1.31				
2550 000316120	<b>-120</b>	0.020~0.394	4.724	3.661	0.0~0.197	1.299~2.126	1.260					
2550 000316135	<b>-135</b>	0.020~0.394	5.315	4.252	0.0~0.197	1.299~2.126	1.260	1.46				
2550 000316165	<b>-165</b>	0.020~0.394	6.496	5.433	0.0~0.197	1.299~2.126	1.260					
2550 000320060	<b>BT40 -ERC20 -60</b>	0.020~0.512	2.362	1.299	0.0~0.236	1.496~2.244	1.378		HDS12A-ES20	ERP-20	ER20	FK-0034
2550 000320090	<b>-90</b>	0.020~0.512	3.543	2.480	0.0~0.236	1.496~2.638	1.378					
2550 000320105	<b>-105</b>	0.020~0.512	4.134	3.071	0.0~0.236	1.496~2.638	1.378	1.37				
2550 000320120	<b>-120</b>	0.020~0.512	4.724	3.661	0.0~0.236	1.496~2.638	1.378					
2550 000320135	<b>-135</b>	0.020~0.512	5.315	4.252	0.0~0.236	1.496~2.638	1.378	1.55				
2550 000320165	<b>-165</b>	0.020~0.512	6.496	5.433	0.0~0.236	1.496~2.638	1.378					
2550 000320195	<b>-195</b>	0.020~0.512	7.677	6.614	0.0~0.236	1.496~2.638	1.378					
2550 000325090	<b>BT40 -ERC25 -90</b>	0.020~0.630	3.543	2.480	0.0~0.315	1.693~3.150	1.654	1.39	HDS16A-ES25	ERP-25	ER25	HS-1-16
2550 000325105	<b>-105</b>	0.020~0.630	4.134	3.071	0.0~0.315	1.693~3.150	1.654					
2550 000325120	<b>-120</b>	0.020~0.630	4.724	3.661	0.0~0.315	1.693~3.150	1.654					
2550 000325135	<b>-135</b>	0.020~0.630	5.315	4.252	0.0~0.315	1.693~3.150	1.654					
2550 000325165	<b>-165</b>	0.020~0.630	6.496	5.433	0.0~0.315	1.693~3.150	1.654					
2550 000325195	<b>-195</b>	0.020~0.630	7.677	6.614	0.0~0.315	1.693~3.150	1.654					



Code	Model	d	L	L1	B	L2	D1	kg	Preset Screw	Nut	Collet	Spanner				
2550 000332075	<b>BT40 -ERC32 -75</b>	0.098-0.787	2.953	1.890	0.0-0.394	1.969-2.795	1.969	1.28	HDS22A-ES32	ERP-32	ER32	HS-2-20				
2550 000332105	<b>-105</b>	0.098-0.787	4.134	3.071	0.0-0.394	1.969-3.976	1.969	1.63								
2550 000332120	<b>-120</b>	0.098-0.787	4.724	3.661	0.0-0.394	1.969-3.976	1.969	1.84								
2550 000332135	<b>-135</b>	0.098-0.787	5.315	4.252	0.0-0.394	1.969-3.976	1.969									
2550 000332165	<b>-165</b>	0.098-0.787	6.496	5.433	0.0-0.394	1.969-3.976	1.969									
2550 000332195	<b>-195</b>	0.098-0.787	7.677	6.614	0.0-0.394	1.969-3.976	1.969									
2550 000340075	<b>BT40 -ERC40 -75</b>	0.118-1.024	2.953	1.890	-	3.386	2.480	1.26	ES40	ERP40	ER40	HS-2.5-25				
2550 000340105	<b>-105</b>	0.118-1.024	4.134	3.071	0.0-0.551	2.632-3.504	2.480	1.92								
2550 000340150	<b>-150</b>	0.118-1.024	5.906	4.843	0.0-0.551	2.632-3.898	2.480									
2550 000511090	<b>BT50 -ERC11 -90</b>	0.020-0.276	3.543	2.047	0.0-0.157	0.866-1.654	0.906		HDS07A-ES11	HDP-07A	ER11	S-0				
2550 000511105	<b>-105</b>	0.020-0.276	4.134	2.638	0.0-0.157	0.866-1.654	0.906									
2550 000511120	<b>-120</b>	0.020-0.276	4.724	3.228	0.0-0.157	0.866-1.654	0.906									
2550 000511135	<b>-135</b>	0.020-0.276	5.315	3.819	0.0-0.157	0.866-1.654	0.906									
2550 000511165	<b>-165</b>	0.020-0.276	6.496	5.000	0.0-0.157	0.866-1.654	0.906									
2550 000511195	<b>-195</b>	0.020-0.276	7.677	6.181	0.0-0.157	0.866-1.654	0.906									
2550 000516090	<b>BT50 -ERC16 -90</b>	0.020-0.394	3.543	2.047	0.0-0.197	1.299-2.126	1.260		ES16	ERP-16	ER16	FK-0030				
2550 000516105	<b>-105</b>	0.020-0.394	4.134	2.638	0.0-0.197	1.299-2.126	1.260									
2550 000516120	<b>-120</b>	0.020-0.394	4.724	3.228	0.0-0.197	1.299-2.126	1.260									
2550 000516135	<b>-135</b>	0.020-0.394	5.315	3.819	0.0-0.197	1.299-2.126	1.260									
2550 000516165	<b>-165</b>	0.020-0.394	6.496	5.000	0.0-0.197	1.299-2.126	1.260									
2550 000516195	<b>-195</b>	0.020-0.394	7.677	6.181	0.0-0.197	1.299-2.126	1.260									
2550 000516225	<b>-225</b>	0.020-0.394	8.858	7.362	0.0-0.197	1.299-2.126	1.260									
2550 000516255	<b>-255</b>	0.020-0.394	10.039	8.543	0.0-0.197	1.299-2.126	1.260									
2550 000520090	<b>BT50 -ERC20 -90</b>	0.020-0.512	3.543	2.047	0.0-0.236	1.496-2.638	1.378	3.80					HDS12A-ES20	ERP-20	ER20	FK-0034
2550 000520105	<b>-105</b>	0.020-0.512	4.134	2.638	0.0-0.236	1.496-2.638	1.378									
2550 000520120	<b>-120</b>	0.020-0.512	4.724	3.228	0.0-0.236	1.496-2.638	1.378									
2550 000520135	<b>-135</b>	0.020-0.512	5.315	3.819	0.0-0.236	1.496-2.638	1.378	4.04								
2550 000520165	<b>-165</b>	0.020-0.512	6.496	5.000	0.0-0.236	1.496-2.638	1.378									
2550 000520195	<b>-195</b>	0.020-0.512	7.677	6.181	0.0-0.236	1.496-2.638	1.378									
2550 000520225	<b>-225</b>	0.020-0.512	8.858	7.362	0.0-0.236	1.496-2.638	1.378									
2550 000520255	<b>-255</b>	0.020-0.512	10.039	8.543	0.0-0.236	1.496-2.638	1.378	4.79								
2550 000525090	<b>BT50 -ERC25 -90</b>	0.020-0.630	3.543	2.047	0.0-0.315	1.693-3.150	1.654		HDS16A-ES25	ERP-25	ER25	HS-1-16				
2550 000525105	<b>-105</b>	0.020-0.630	4.134	2.638	0.0-0.315	1.693-3.150	1.654									
2550 000525120	<b>-120</b>	0.020-0.630	4.724	3.228	0.0-0.315	1.693-3.150	1.654									
2550 000525135	<b>-135</b>	0.020-0.630	5.315	3.819	0.0-0.315	1.693-3.150	1.654									
2550 000525165	<b>-165</b>	0.020-0.630	6.496	5.000	0.0-0.315	1.693-3.150	1.654									
2550 000525195	<b>-195</b>	0.020-0.630	7.677	6.181	0.0-0.315	1.693-3.150	1.654									
2550 000525225	<b>-225</b>	0.020-0.630	8.858	7.362	0.0-0.315	1.693-3.150	1.654									
2550 000525255	<b>-255</b>	0.020-0.630	10.039	8.543	0.0-0.315	1.693-3.150	1.654									
2550 000532105	<b>BT50 -ERC32 -105</b>	0.098-0.787	4.134	2.638	0.0-0.394	1.969-3.976	1.969	4.11	HDS22A-ES32	ERP-32	ER32	HS-2-20				
2550 000532120	<b>-120</b>	0.098-0.787	4.724	3.228	0.0-0.394	1.969-3.976	1.969									
2550 000532135	<b>-135</b>	0.098-0.787	5.315	3.819	0.0-0.394	1.969-3.976	1.969									
2550 000532165	<b>-165</b>	0.098-0.787	6.496	5.000	0.0-0.394	1.969-3.976	1.969	4.87								
2550 000532195	<b>-195</b>	0.098-0.787	7.677	6.181	0.0-0.394	1.969-3.976	1.969									
2550 000532225	<b>-225</b>	0.098-0.787	8.858	7.362	0.0-0.394	1.969-3.976	1.969									
2550 000532255	<b>-255</b>	0.098-0.787	10.039	8.543	0.0-0.394	1.969-3.976	1.969	5.99								
2550 000540105	<b>BT50 -ERC40 -105</b>	0.118-1.024	4.134	2.638	0.0-0.551	2.362-3.898	2.480	4.29	ES40	ERP-40	ER40	HS-2.5-25				
2550 000540165	<b>-165</b>	0.118-1.024	6.496	5.000	0.0-0.551	2.362-3.898	2.480	5.58								
2550 000550105	<b>BT50 -ERC50 -105</b>	0.394-1.339	4.134	2.638	0.0-0.630	2.913-3.937	3.071		ES50	ERP-50	ER50	HS-4-42				

- Collet and spanner are sold separately.
- \*ES8, a preset screw for ERC8, is sold separately. Other holder includes a standard preset screw.
- " B " and " I " dimensions in brackets are for using ES8 preset screw.
- Refer to P.092 for minimum tool insertion length in case of using our coolant collets.
- See P.499 for standard Tightening Torque.



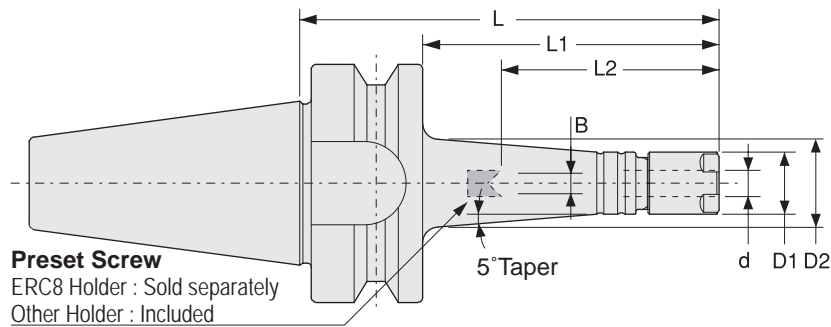
## Ordering Example

**BT40 - ERC 8 - 105**  
 Shank size                      Max. collet I.D.                      Projection length (L)

# ERC-T

## Collet Holder For Small Diameters ( Taper Type )

- For drilling in tight space.



Unit : Metric

Code	Model	d	L	L1	B	L2	D1	D2	Nut	Collet	Spanner
2550 10108060	<b>BT30 -ERC8* -60T</b>	0.5 ~ 5.0	60	38	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	14.5	ERP-8	ER8	S-8E
2550 10108075	<b>-75T</b>	0.5 ~ 5.0	75	53	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	17.5	ERP-8		
2550 10108090	<b>-90T</b>	0.5 ~ 5.0	90	68	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	20	ERP-8		
2550 10108105	<b>-105T</b>	0.5 ~ 5.0	105	83	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	22.5	ERP-8		
2550 10108135	<b>-135T</b>	0.5 ~ 5.0	135	113	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	28	ERP-8		
2550 10110060	<b>BT30 -ERC11S -60T</b>	0.5 ~ 7.0	60	38	0 ~ 4	22 ~ 45	16	18.5	ERP-11S	ER11	S-11E
2550 10110075	<b>-75T</b>	0.5 ~ 7.0	75	53	0 ~ 4	22 ~ 45	16	21	ERP-11S		
2550 10110090	<b>-90T</b>	0.5 ~ 7.0	90	68	0 ~ 4	22 ~ 45	16	24	ERP-11S		
2550 10110105	<b>-105T</b>	0.5 ~ 7.0	105	83	0 ~ 4	22 ~ 45	16	26.5	ERP-11S		
2550 10110135	<b>-135T</b>	0.5 ~ 7.0	135	113	0 ~ 4	22 ~ 45	16	31.5	ERP-11S		
2550 10308060	<b>BT40 -ERC8 -60T</b>	0.5 ~ 5.0	60	33	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	14	ERP-8	ER8	S-8E
2550 10308075	<b>-75T</b>	0.5 ~ 5.0	75	48	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	16.5	ERP-8		
2550 10308090	<b>-90T</b>	0.5 ~ 5.0	90	63	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	19	ERP-8		
2550 10308105	<b>-105T</b>	0.5 ~ 5.0	105	78	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	21.5	ERP-8		
2550 10308135	<b>-135T</b>	0.5 ~ 5.0	135	108	— (0 ~ 2.4)	<sup>34</sup> (19 ~ 31)	12	27	ERP-8		
2550 10310060	<b>BT40 -ERC11S -60T</b>	0.5 ~ 7.0	60	33	0 ~ 4	22 ~ 45	16	17.5	ERP-11S	ER11	S-11E
2550 10310075	<b>-75T</b>	0.5 ~ 7.0	75	48	0 ~ 4	22 ~ 45	16	20.5	ERP-11S		
2550 10310090	<b>-90T</b>	0.5 ~ 7.0	90	63	0 ~ 4	22 ~ 45	16	23	ERP-11S		
2550 10310105	<b>-105T</b>	0.5 ~ 7.0	105	78	0 ~ 4	22 ~ 45	16	25.5	ERP-11S		
2550 10310135	<b>-135T</b>	0.5 ~ 7.0	135	108	0 ~ 4	22 ~ 45	16	31	ERP-11S		

1. Collet and spanner are sold separately.
2. \*ES8, a preset screw for ERC8, is sold separately. ERC11S includes a standard preset screw HDS-07A-ES11.
3. " B " and " L2 " dimensions in brackets are for using ES8 preset screw.
4. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets.
5. See P.499 for standard Tightening Torque.

Collet

P. 090-091



Spanner

P. 095



Preset screw

P. 094



Ordering Example

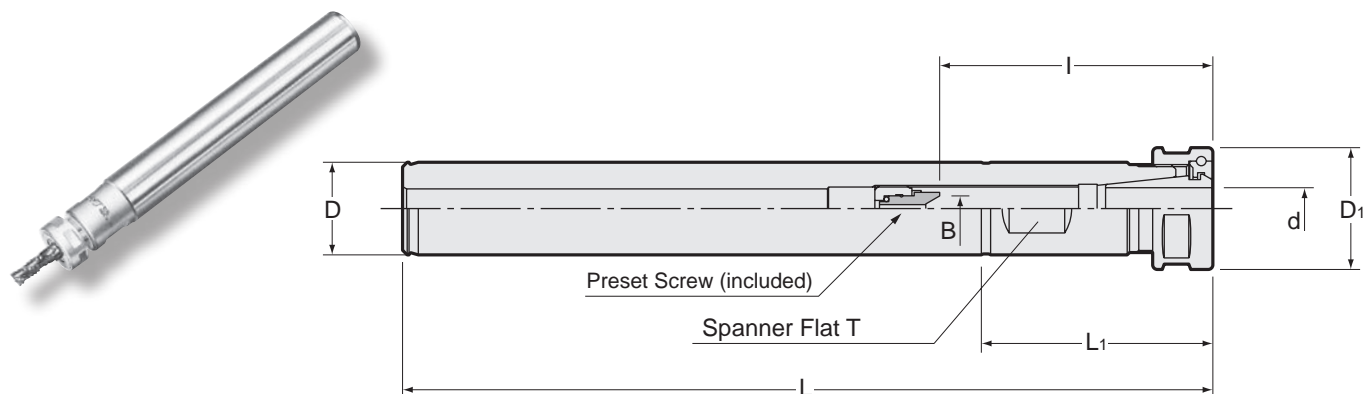
**BT40 - ERC 8 - 105 T**  
 Shank size      Max. collet I.D.      Projection length (L)



# ST-HDC·A

## Flex Chuck

- For drilling in tight space. Also suitable as sub-holder of milling chuck.



### Metric Sizes (Shank)

Unit : Metric

Code	Model	d	D <sub>0.012</sub> <sup>0</sup>	D1	L	L1	B	I	T	kg	Preset Screw	Nut	Collet	Spanner
0400 12009175	<b>ST20 -HDC09A -175</b>	2.5~9.0	20	26	175	50	0~4	27~56	17	0.4	HDS-09	HDP-09	FDC-09	S-1L
0400 13212185	<b>ST32 -HDC12A -185</b>	2.5~12.0	32	32	185	51	0~6	34~70	29	1.0	HDS-12	HDP-12	FDC-12	S-3L
0400 13212235	<b>-235</b>	2.5~12.0	32	32	235	51	0~6	34~70	29	1.2	HDS-12	HDP-12		

1. Collet, spanner, hexagon head preset screw, preset screw for semi-dry processing are sold separately. Standard preset screw is included.
2. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets (OH,C or MS) and tool with tang.
3. See P.499 for standard Tightening Torque.

#### Ordering Example

**ST20 - HDC 09 A - 175**

Shank size

Max. collet I.D.

Projection length (L)

### Inch Sizes (Shank)

Unit : Inch

Code	Model	d	D <sub>0.0005</sub> <sup>0</sup>	D1	L	L1	B	I	T	kg	Preset Screw	Nut	Collet	Spanner
0400 22409175	<b>ST0750 -HDC09A -175</b>	0.098~0.354	0.750	1.024	6.890	1.969	0.0~0.157	1.063~2.126	0.669 (17mm)	0.4	HDS-09	HDP-09	FDC-09	S-1L
0400 24012185	<b>ST1250 -HDC12A -185</b>	0.098~0.472	1.250	1.260	7.283	2.008	0.0~0.236	1.338~2.598	1.142 (29mm)	1.0	HDS-12	HDP-12	FDC-12	S-3L
0400 24012235	<b>-235</b>	0.098~0.472	1.250	1.260	9.252	2.008	0.0~0.236	1.338~2.598	1.142 (29mm)		HDS-12	HDP-12		

1. Collet, spanner, hexagon head preset screw, preset screw for semi-dry processing are sold separately. Standard preset screw is included.
2. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets (OH,C or MS) and tool with tang.
3. See P.499 for standard Tightening Torque.

#### Ordering Example

**ST0750 - HDC 09 A - 175**

Shank size

Max. collet I.D.

Projection length (L)

Collet

P. 086 - 089



Spanner

P. 095



Preset screw

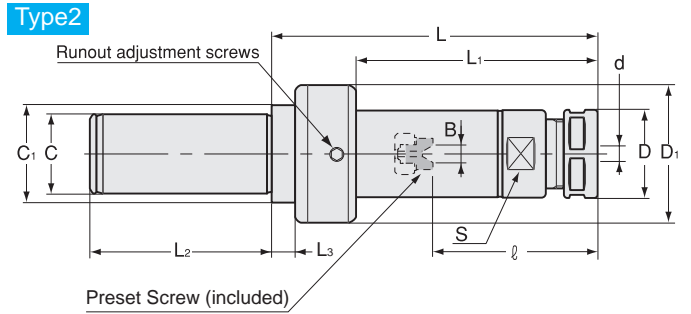
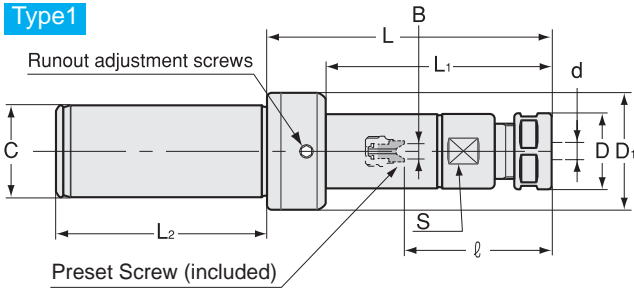
P. 094



# ST-HDZ

## "R"Zero Holder





● Collet holder with a runout adjustment function. Suitable for drilling in tight space as well as use for sub-holder of milling chuck.



### Metric Sizes (Shank) Unit : Metric

Code	Model	Type	d	C <sub>0.012</sub>	C1	L	L1	L2	L3	B	ℓ	D	D1	S	kg	Preset Screw	Nut	Collet	Spanner	Wrench
3100 02007075	<b>ST20 -HDZ07 -75</b>	2	0.5-7.0	20	28	75	44	57	10	0-4	22-45	23	41	19		HDS-07	HDP-07A			
3100 02007120	<b>-120</b>	2	0.5-7.0	20	28	120	89	57	10	0-4	22-45	23	41	19		HDS-07	HDP-07A	FDC-07	S-0	L-3T
3100 02007165	<b>-165</b>	2	0.5-7.0	20	28	165	134	57	10	0-4	22-45	23	41	19		HDS-07	HDP-07A			
3100 02009075	<b>ST20 -HDZ09 -75</b>	2	2.5-9.0	20	28	75	44	57	10	0-4	27-60	26	41	24	0.5	HDS-09	HDP-09			
3100 02009120	<b>-120</b>	2	2.5-9.0	20	28	120	89	57	10	0-4	27-60	26	41	24	0.6	HDS-09	HDP-09	FDC-09	S-1L	L-3T
3100 02009165	<b>-165</b>	2	2.5-9.0	20	28	165	134	57	10	0-4	27-60	26	41	24		HDS-09	HDP-09			
3100 03207060	<b>ST32 -HDZ07 -60</b>	1	0.5-7.0	32	—	60	39	70	—	0-4	22-45	23	41	19	0.7	HDS-07	HDP-07A			
3100 03207105	<b>-105</b>	1	0.5-7.0	32	—	105	84	70	—	0-4	22-45	23	41	19		HDS-07	HDP-07A	FDC-07	S-0	L-3T
3100 03207150	<b>-150</b>	1	0.5-7.0	32	—	150	129	70	—	0-4	22-45	23	41	19		HDS-07	HDP-07A			
3100 03209075	<b>ST32 -HDZ09 -75</b>	1	2.5-9.0	32	—	75	54	70	—	0-4	27-60	26	41	24		HDS-09	HDP-09			
3100 03209120	<b>-120</b>	1	2.5-9.0	32	—	120	99	70	—	0-4	27-60	26	41	24		HDS-09	HDP-09	FDC-09	S-1L	L-3T
3100 03209165	<b>-165</b>	1	2.5-9.0	32	—	165	144	70	—	0-4	27-60	26	41	24		HDS-09	HDP-09			
3100 03212090	<b>ST32 -HDZ12 -90</b>	2	2.5-12.0	32	40	90	55	70	10	0-5	33-69	32	52	30	1.0	HDS-12	HDP-12			
3100 03212135	<b>-135</b>	2	2.5-12.0	32	40	135	100	70	10	0-5	33-69	32	52	30	1.3	HDS-12	HDP-12	FDC-12	S-3L	L-4T
3100 03212180	<b>-180</b>	2	2.5-12.0	32	40	180	145	70	10	0-5	33-69	32	52	30		HDS-12	HDP-12			
3100 03216090	<b>ST32 -HDZ16 -90</b>	2	3.5-16.0	32	40	90	55	70	10	0-6	38-82	36	56	30	1.1	HDS-16	HDP-16			
3100 03216135	<b>-135</b>	2	3.5-16.0	32	40	135	100	70	10	0-6	38-82	36	56	30		HDS-16	HDP-16	FDC-16	S-4L	L-4T
3100 03216180	<b>-180</b>	2	3.5-16.0	32	40	180	145	70	10	0-6	38-82	36	56	30		HDS-16	HDP-16			
3100 03222105	<b>ST32 -HDZ22 -105</b>	2	3.5-22.0	32	40	105	64	70	7	0-8	47-73	46	69	42	1.6	HDS-22	HDP-22			
3100 03222150	<b>-150</b>	2	3.5-22.0	32	40	150	109	70	7	0-8	47-103	46	69	42	2.1	HDS-22	HDP-22	FDC-22	S-5L	L-5T
3100 03222195	<b>-195</b>	2	3.5-22.0	32	40	195	154	70	7	0-8	47-103	46	69	42		HDS-22	HDP-22			
3100 04212090	<b>ST42 -HDZ12 -90</b>	1	2.5-12.0	42	—	90	65	75	—	0-5	33-69	32	52	30		HDS-12	HDP-12			
3100 04212135	<b>-135</b>	1	2.5-12.0	42	—	135	110	75	—	0-5	33-69	32	52	30		HDS-12	HDP-12	FDC-12	S-3L	L-4T
3100 04212180	<b>-180</b>	1	2.5-12.0	42	—	180	155	75	—	0-5	33-69	32	52	30		HDS-12	HDP-12			
3100 04216090	<b>ST42 -HDZ16 -90</b>	1	3.5-16.0	42	—	90	65	75	—	0-6	38-82	36	56	30		HDS-16	HDP-16			
3100 04216135	<b>-135</b>	1	3.5-16.0	42	—	135	110	75	—	0-6	38-82	36	56	30		HDS-16	HDP-16	FDC-16	S-4L	L-4T
3100 04216180	<b>-180</b>	1	3.5-16.0	42	—	180	155	75	—	0-6	38-82	36	56	30		HDS-16	HDP-16			
3100 04222105	<b>ST42 -HDZ22 -105</b>	2	3.5-22.0	42	52	105	64	75	7	0-8	47-103	46	69	42		HDS-22	HDP-22			
3100 04222150	<b>-150</b>	2	3.5-22.0	42	52	150	109	75	7	0-8	47-103	46	69	42		HDS-22	HDP-22	FDC-22	S-5L	L-5T
3100 04222195	<b>-195</b>	2	3.5-22.0	42	52	195	154	75	7	0-8	47-103	46	69	42		HDS-22	HDP-22			

1. Collet, spanner, hexagon head preset screw, preset screw for semi-dry processing, and adjustment wrench are sold separately. Standard preset screw is included.
2. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets (OH,C or MS).
3. ℓ indicates dimension when using with a preset screw.
4. See P.499 for standard Tightening Torque.





<p><b>Collet</b></p> <p>P. 086 - 089</p> 	<p><b>Spanner</b></p> <p>P. 095</p> 	<p><b>Preset screw</b></p> <p>P. 094</p> 	<p><b>Adjustment wrench</b></p> <p>P. 095</p> 	<p><b>Ordering Example</b></p> <p><b>ST32 - HDZ 12 - 90</b></p> <p>Shank size                      Max. collet I.D.                      Projection length (L)</p>
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# Inch Sizes (Shank)

Unit : Inch

Code	Model	Type	d	C <sub>d</sub> <sup>0</sup> <sub>-0.0005</sub>	C1	L	ℓ	L1	L2	L3	B	D	D1	S	kg	Preset Screw	Nut	Collet	Spanner	Wrench
3100 12407075	<b>ST0750 -HDZ07 -75</b>	2	0.020~0.276	0.750	1.102	2.953	0.866~1.772	1.732	2.24	0.39	0.0~0.157	0.906	1.614	0.748 (19mm)		HDS-07	HDP-07A			
3100 12407120	<b>-120</b>	2	0.020~0.276	0.750	1.102	4.724	0.866~1.772	3.504	2.24	0.39	0.0~0.157	0.906	1.614	0.748 (19mm)	0.6	HDS-07	HDP-07A	FDC-07	S-0	
3100 12407165	<b>-165</b>	2	0.020~0.276	0.750	1.102	6.496	0.866~1.772	5.276	2.24	0.39	0.0~0.157	0.906	1.614	0.748 (19mm)		HDS-07	HDP-07A			L-3T (3mm)
3100 12409075	<b>ST0750 -HDZ09 -75</b>	2	0.098~0.354	0.750	1.102	2.953	1.063~2.244	1.732	2.24	0.39	0.0~0.157	1.024	1.614	0.945 (24mm)		HDS-09	HDP-09			
3100 12409120	<b>-120</b>	2	0.098~0.354	0.750	1.102	4.724	1.063~2.244	3.504	2.24	0.39	0.0~0.157	1.024	1.614	0.945 (24mm)		HDS-09	HDP-09	FDC-09	S-1L	
3100 12409165	<b>-165</b>	2	0.098~0.354	0.750	1.102	6.496	1.063~2.244	5.276	2.24	0.39	0.0~0.157	1.024	1.614	0.945 (24mm)		HDS-09	HDP-09			
3100 14007060	<b>ST1250 -HDZ07 -60</b>	1	0.020~0.276	1.250	—	2.362	0.866~1.772	1.535	2.76	—	0.0~0.157	0.906	1.614	0.748 (19mm)		HDS-07	HDP-07A			
3100 14007105	<b>-105</b>	1	0.020~0.276	1.250	—	4.134	0.866~1.772	3.307	2.76	—	0.0~0.157	0.906	1.614	0.748 (19mm)		HDS-07	HDP-07A	FDC-07	S-0	
3100 14007150	<b>-150</b>	1	0.020~0.276	1.250	—	5.906	0.866~1.772	5.079	2.76	—	0.0~0.157	0.906	1.614	0.748 (19mm)		HDS-07	HDP-07A			L-3T (3mm)
3100 14009075	<b>ST1250 -HDZ09 -75</b>	1	0.098~0.354	1.250	—	2.953	1.063~2.244	2.126	2.76	—	0.0~0.157	1.024	1.614	0.945 (24mm)		HDS-09	HDP-09			
3100 14009120	<b>-120</b>	1	0.098~0.354	1.250	—	4.724	1.063~2.244	3.898	2.76	—	0.0~0.157	1.024	1.614	0.945 (24mm)		HDS-09	HDP-09	FDC-09	S-1L	
3100 14009165	<b>-165</b>	1	0.098~0.354	1.250	—	6.496	1.063~2.244	5.669	2.76	—	0.0~0.157	1.024	1.614	0.945 (24mm)		HDS-09	HDP-09			
3100 14012090	<b>ST1250 -HDZ12 -90</b>	2	0.098~0.472	1.250	1.575	3.543	1.299~2.677	2.165	2.76	0.39	0.0~0.197	1.260	2.047	1.811 (30mm)		HDS-12	HDP-12			
3100 14012135	<b>-135</b>	2	0.098~0.472	1.250	1.575	5.315	1.299~2.677	3.937	2.76	0.39	0.0~0.197	1.260	2.047	1.811 (30mm)		HDS-12	HDP-12	FDC-12	S-3L	
3100 14012180	<b>-180</b>	2	0.098~0.472	1.250	1.575	7.087	1.299~2.677	5.709	2.76	0.39	0.0~0.197	1.260	2.047	1.811 (30mm)		HDS-12	HDP-12			L-4T (4mm)
3100 14016090	<b>ST1250 -HDZ16 -90</b>	2	0.138~0.630	1.250	1.575	3.543	1.496~3.189	2.165	2.76	0.39	0.0~0.236	1.417	2.205	1.811 (30mm)	1.1	HDS-16	HDP-16			
3100 14016135	<b>-135</b>	2	0.138~0.630	1.250	1.575	5.315	1.496~3.189	3.937	2.76	0.39	0.0~0.236	1.417	2.205	1.811 (30mm)	1.4	HDS-16	HDP-16	FDC-16	S-4L	
3100 14016180	<b>-180</b>	2	0.138~0.630	1.250	1.575	7.087	1.496~3.189	5.709	2.76	0.39	0.0~0.236	1.417	2.205	1.811 (30mm)	1.7	HDS-16	HDP-16			
3100 14022105	<b>ST1250 HDZ22 -105</b>	2	0.318~0.866	1.250	1.575	4.134	1.850~4.055	2.520	2.76	0.28	0.0~0.315	1.811	2.717	1.654 (42mm)		HDS-22	HDP-22			
3100 14022150	<b>-150</b>	2	0.318~0.866	1.250	1.575	5.906	1.850~4.055	4.291	2.76	0.28	0.0~0.315	1.811	2.717	1.654 (42mm)		HDS-22	HDP-22	FDC-22	S-5L	L-5T (5mm)
3100 14022195	<b>-195</b>	2	0.318~0.866	1.250	1.575	7.677	1.850~4.055	6.063	2.76	0.28	0.0~0.315	1.811	2.717	1.654 (42mm)		HDS-22	HDP-22			

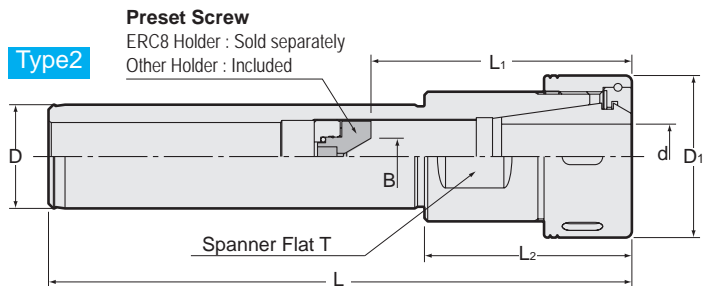
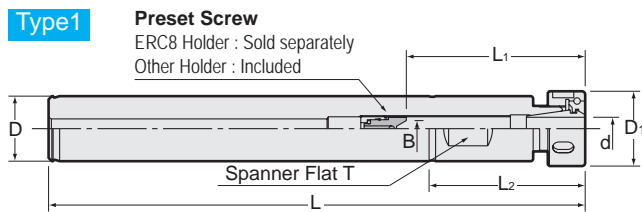
1. Collet, spanner, hexagon head preset screw, preset screw for semi-dry processing, and adjustment wrench are sold separately. Standard preset screw is included.
2. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets (OH, C or MS).
3. ℓ indicates dimension when using with a preset screw.
4. See P. 499 for standard tightening torque.

<b>Collet</b> P. 086 - 089 	<b>Spanner</b> P. 095 	<b>Preset screw</b> P. 094 	<b>Adjustment wrench</b> P. 095 	<b>Ordering Example</b> <b>ST1250 - HDZ 12 - 90</b> Shank size                      Max. collet I.D.                      Projection length (L)
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# ST-ERC

## Collet Holder For Small Diameters

- Suitable for machining in tight space.



### Metric Sizes (Shank)

Unit : Metric

Code	Model	Type	d	L	B	L1	L2	D <sub>0</sub> <sup>-0.012</sup>	D1	T	Preset Screw	Nut	kg	Collet	Spanner
0410 01208075	<b>ST12 -ERC8* -75</b>	1	0.5~5.0	75	— (0~2.4)	34 (19~31)	32	12	12	10	—	ERP-8	0.05		
0410 01208105	<b>-105</b>	1	0.5~5.0	105	— (0~2.4)	34 (19~31)	32	12	12	10	—	ERP-8	0.07	ER8	S-8E
0410 01208135	<b>-135</b>	1	0.5~5.0	135	— (0~2.4)	34 (19~31)	32	12	12	10	—	ERP-8	0.1		
0410 01610105	<b>ST16 -ERC11S -105</b>	1	0.5~7.0	105	0~4.0	22~45	35	16	16	14	HDS07A-ES11	ERP-11S	0.2		
0410 01610135	<b>-135</b>	1	0.5~7.0	135	0~4.0	22~45	35	16	16	14	HDS07A-ES11	ERP-11S	0.2	ER11	S-11E
0410 01610165	<b>-165</b>	1	0.5~7.0	165	0~4.0	22~45	35	16	16	14	HDS07A-ES11	ERP-11S	0.2		
0410 02011165	<b>ST20 ERC11 -165</b>	1	0.5~7.0	165	0~4.0	22~42	48	20	23	17	HDS07A-ES11	HDP-07A	0.4	ER11	S-0
0410 02016165	<b>ST20 ERC16 -165</b>	2	0.5~10.0	165	0~5.0	33~54	51	20	32	19	ES16	ERP-16	0.4	ER16	FK-0030
0410 03225180	<b>ST32 ERC25 -180</b>	1	0.5~16.0	180	0~8.0	43~80	59	32	42	29	HDS16A-ES25	ERP-25		ER25	HS-1-16
0410 03232180	<b>ST32 ERC32 -180</b>	2	2.0~20.0	180	0~10.0	50~101	64	32	50	36	HDS22A-ES32	ERP-32		ER32	HS-2-20

1. Collet and spanner are sold separately.
2. \*ES8, a preset screw for ERC8, is sold separately. ERC11S includes a standard preset screw HDS-07A-ES11.
3. " B " and " L1 " dimensions in brackets are for using ES8 preset screw.
4. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets.
5. See P.499 for standard Tightening Torque.

### Ordering Example

**ST12 - ERC 8 - 105**  
Shank size                      Max.                      Projection  
   collet I.D.                      length (L)

### Inch Sizes (Shank)

Unit : Inch

Code	Model	Type	d	L	B	L1	L2	D <sub>0</sub> <sup>-0.0005</sup>	D1	T	Preset Screw	Nut	kg	Collet	Spanner
0410 12411165	<b>ST0750 ERC11 -165</b>	1	0.020~0.276	6.496	0.0~0.157	0.866~1.654	1.890	0.750	0.906	0.669 (17mm)	HDS07A-ES11	HDP-07A	0.3	ER11	S-0
0410 12416165	<b>ST0750 ERC16 -165</b>	2	0.020~0.394	6.496	0.0~0.197	1.299~2.126	2.008	0.750	1.260	0.748 (19mm)	ES16	ERP-16		ER16	FK-0030
0410 14025180	<b>ST1250 ERC25 -180</b>	1	0.020~0.630	7.087	0.0~0.315	1.693~3.150	2.323	1.250	1.654	1.142 (29mm)	HDS16A-ES25	ERP-25		ER25	HS-1-16
0410 14032180	<b>ST1250 ERC32 -180</b>	2	0.079~0.787	7.087	0.0~0.394	1.969~3.976	2.520	1.250	1.969	1.417 (36mm)	HDS22A-ES32	ERP-32		ER32	HS-2-20

1. Collet and spanner are sold separately.
2. \*ES8, a preset screw for ERC8, is sold separately. ERC11S includes a standard preset screw HDS-07A-ES11.
3. " B " and " L1 " indicates dimension when using with a preset screw.
4. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets.
5. See P.499 for standard Tightening Torque.

### Ordering Example

**ST0750 - ERC 11 - 105**  
Shank size                      Max.                      Projection  
   collet I.D.                      length (L)

Collet

P. 090-091



Spanner

P. 095



Preset screw

P. 094



# MEMO

BT CAT AHO HSK-A/E/F/C HSK-T UTS Specialized Machine Related Equipment Bush & Chamfering Drill Milling Chuck Collet Holder "R"-Zero Holder Hydraulic Chuck Shrink Fit Tapping Chuck Arbors Function Holder Turning Tool Retention Stud Tool Shank Dimensions	Tool shank dia.		Model				
	mm (inch)	inch	FDC-07	FDC-09	FDC-12	FDC-16	FDC-22
	φ 1.0 ~ 0.5	φ 0.039 ~ 0.020	FDC-01007	—	—	—	—
	φ 1.5 ~ 1.0	φ 0.059 ~ 0.039	FDC-01507	—	—	—	—
	φ 2.0 ~ 1.5	φ 0.079 ~ 0.059	FDC-02007	—	—	—	—
	φ 2.5 ~ 2.0	φ 0.098 ~ 0.079	FDC-02507	—	—	—	—
	φ 3.0 ~ 2.5	φ 0.118 ~ 0.098	FDC-03007	FDC-03009	FDC-03012	—	—
	φ 3.5 ~ 3.0 (1/8")	φ 0.138 ~ 0.118	FDC-03507	FDC-03509	FDC-03512	—	—
	φ 4.0 ~ 3.5	φ 0.157 ~ 0.138	FDC-04007	FDC-04009	FDC-04012	FDC-04016	FDC-04022
	φ 4.5 ~ 4.0	φ 0.177 ~ 0.157	FDC-04507	FDC-04509	FDC-04512	FDC-04516	FDC-04522
	φ 5.0 ~ 4.5 (3/16")	φ 0.197 ~ 0.177	FDC-05007	FDC-05009	FDC-05012	FDC-05016	FDC-05022
	φ 5.5 ~ 5.0	φ 0.217 ~ 0.197	FDC-05507	FDC-05509	FDC-05512	FDC-05516	FDC-05522
	φ 6.0 ~ 5.5	φ 0.236 ~ 0.217	FDC-06007	FDC-06009	FDC-06012	FDC-06016	FDC-06022
	φ 6.5 ~ 6.0 (1/4")	φ 0.256 ~ 0.236	FDC-06507	FDC-06509	FDC-06512	FDC-06516	FDC-06522
	φ 7.0 ~ 6.5	φ 0.276 ~ 0.256	FDC-07007	FDC-07009	FDC-07012	FDC-07016	FDC-07022
	φ 7.5 ~ 7.0	φ 0.295 ~ 0.276	—	FDC-07509	FDC-07512	FDC-07516	FDC-07522
	φ 8.0 ~ 7.5 (5/16")	φ 0.315 ~ 0.295	—	FDC-08009	FDC-08012	FDC-08016	FDC-08022
	φ 8.5 ~ 8.0	φ 0.335 ~ 0.315	—	FDC-08509	FDC-08512	FDC-08516	FDC-08522
	φ 9.0 ~ 8.5	φ 0.354 ~ 0.335	—	FDC-09009	FDC-09012	FDC-09016	FDC-09022
	φ 9.5 ~ 9.0	φ 0.374 ~ 0.354	—	—	FDC-09512	FDC-09516	FDC-09522
	φ 10.0 ~ 9.5 (3/8")	φ 0.394 ~ 0.374	—	—	FDC-10012	FDC-10016	FDC-10022
	φ 10.5 ~ 10.0	φ 0.413 ~ 0.394	—	—	FDC-10512	FDC-10516	FDC-10522
	φ 11.0 ~ 10.5	φ 0.433 ~ 0.413	—	—	FDC-11012	FDC-11016	FDC-11022
	φ 11.5 ~ 11.0 (7/16")	φ 0.453 ~ 0.433	—	—	FDC-11512	FDC-11516	FDC-11522
	φ 12.0 ~ 11.5	φ 0.472 ~ 0.453	—	—	FDC-12012	FDC-12016	FDC-12022
	φ 12.5 ~ 12.0	φ 0.492 ~ 0.472	—	—	—	FDC-12516	FDC-12522
	φ 13.0 ~ 12.5 (1/2")	φ 0.512 ~ 0.492	—	—	—	FDC-13016	FDC-13022
	φ 13.5 ~ 13.0	φ 0.531 ~ 0.512	—	—	—	FDC-13016	FDC-13022
	φ 14.0 ~ 13.5	φ 0.551 ~ 0.531	—	—	—	FDC-14016	FDC-14022
	φ 14.5 ~ 14.0	φ 0.571 ~ 0.551	—	—	—	FDC-14016	FDC-14022
	φ 15.0 ~ 14.5	φ 0.591 ~ 0.571	—	—	—	FDC-15016	FDC-15022
	φ 15.5 ~ 15.0	φ 0.610 ~ 0.591	—	—	—	FDC-15516	FDC-15522
	φ 16.0 ~ 15.5 (5/8")	φ 0.630 ~ 0.610	—	—	—	FDC-16016	FDC-16022
	φ 16.5 ~ 16.0	φ 0.650 ~ 0.630	—	—	—	—	FDC-16522
	φ 17.0 ~ 16.5	φ 0.669 ~ 0.650	—	—	—	—	FDC-17022
	φ 17.5 ~ 17.0	φ 0.689 ~ 0.669	—	—	—	—	FDC-17522
	φ 18.0 ~ 17.5	φ 0.709 ~ 0.689	—	—	—	—	FDC-18022
	φ 18.5 ~ 18.0	φ 0.728 ~ 0.709	—	—	—	—	FDC-18522
	φ 19.0 ~ 18.5	φ 0.748 ~ 0.728	—	—	—	—	FDC-19022
	φ 19.5 ~ 19.0 (3/4")	φ 0.768 ~ 0.748	—	—	—	—	FDC-19522
	φ 20.0 ~ 19.5	φ 0.787 ~ 0.768	—	—	—	—	FDC-20022
	φ 20.5 ~ 20.0	φ 0.807 ~ 0.787	—	—	—	—	FDC-20522
	φ 21.0 ~ 20.5	φ 0.827 ~ 0.807	—	—	—	—	FDC-21022
	φ 21.5 ~ 21.0	φ 0.846 ~ 0.827	—	—	—	—	FDC-21522
	φ 22.0 ~ 21.5	φ 0.866 ~ 0.846	—	—	—	—	FDC-22022

### Selection example of collet

To clamp φ10.0 tool shank, there are 2 collets, φ10.0 and φ10.5 collets. We suggest you select φ10.0 collet for higher accuracy. AA Collets collapse by 0.5mm.

Accuracy  
(4 × d)

AA  
(5μm)

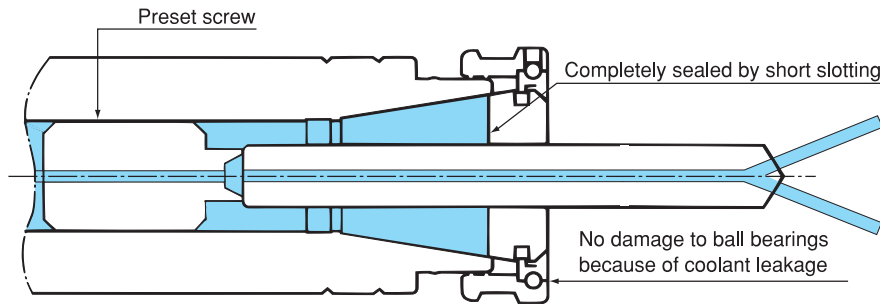
A  
(10μm)

### Ordering Example

**FDC - 060**    **12**    **AA**  
 Max.    12 Series    Accuracy  
 chucking dia.

# FDC-OH

High-Precision Collet ( For Tool With Coolant Hole )



Tool shank dia.		Model				
mm (inch)	inch	FDC-07-OHAA	FDC-09-OHAA	FDC-12-OHAA	FDC-16-OHAA	FDC-22-OHAA
φ 3.0	φ 0.118	FDC-03007-OHAA	FDC-03009-OHAA	FDC-03012-OHAA	-	-
φ 3.2 (1/8")	φ 0.125	FDC-03207-OHAA	FDC-03209-OHAA	FDC-03212-OHAA	-	-
φ 3.5	φ 0.138	FDC-03507-OHAA	FDC-03509-OHAA	FDC-03512-OHAA	-	-
φ 4.0	φ 0.157	FDC-04007-OHAA	FDC-04009-OHAA	FDC-04012-OHAA	-	-
φ 4.2	φ 0.165	FDC-04207-OHAA	FDC-04209-OHAA	FDC-04212-OHAA	-	-
φ 4.5	φ 0.177	FDC-04507-OHAA	FDC-04509-OHAA	FDC-04512-OHAA	-	-
φ 4.8 (3/16")	φ 0.187	FDC-04807-OHAA	FDC-04809-OHAA	FDC-04812-OHAA	-	-
φ 5.0	φ 0.197	FDC-05007-OHAA	FDC-05009-OHAA	FDC-05012-OHAA	-	-
φ 5.5	φ 0.217	FDC-05507-OHAA	FDC-05509-OHAA	FDC-05512-OHAA	-	-
φ 6.0	φ 0.236	FDC-06007-OHAA	FDC-06009-OHAA	FDC-06012-OHAA	FDC-06016-OHAA	FDC-06022-OHAA
φ 6.4 (1/4")	φ 0.250	FDC-06407-OHAA	FDC-06409-OHAA	FDC-06412-OHAA	FDC-06416-OHAA	FDC-06422-OHAA
φ 6.5	φ 0.256	FDC-06507-OHAA	FDC-06509-OHAA	FDC-06512-OHAA	FDC-06516-OHAA	FDC-06522-OHAA
φ 6.8	φ 0.268	FDC-06807-OHAA	FDC-06809-OHAA	FDC-06812-OHAA	FDC-06816-OHAA	FDC-06822-OHAA
φ 7.0	φ 0.276	FDC-07007-OHAA	FDC-07009-OHAA	FDC-07012-OHAA	FDC-07016-OHAA	FDC-07022-OHAA
φ 7.5	φ 0.295	-	FDC-07509-OHAA	FDC-07512-OHAA	FDC-07516-OHAA	FDC-07522-OHAA
φ 8.0 (5/16")	φ 0.315	-	FDC-08009-OHAA	FDC-08012-OHAA	FDC-08016-OHAA	FDC-08022-OHAA
φ 8.5	φ 0.335	-	FDC-08509-OHAA	FDC-08512-OHAA	FDC-08516-OHAA	FDC-08522-OHAA
φ 9.0	φ 0.354	-	FDC-09009-OHAA	FDC-09012-OHAA	FDC-09016-OHAA	FDC-09022-OHAA
φ 9.5	φ 0.374	-	-	FDC-09512-OHAA	FDC-09516-OHAA	FDC-09522-OHAA
φ 9.6 (3/8")	φ 0.375	-	-	FDC-09612-OHAA	FDC-09616-OHAA	FDC-09622-OHAA
φ 10.0	φ 0.394	-	-	FDC-10012-OHAA	FDC-10016-OHAA	FDC-10022-OHAA
φ 10.2	φ 0.402	-	-	FDC-10212-OHAA	FDC-10216-OHAA	FDC-10222-OHAA
φ 10.5	φ 0.413	-	-	FDC-10512-OHAA	FDC-10516-OHAA	FDC-10522-OHAA
φ 11.0	φ 0.433	-	-	FDC-11012-OHAA	FDC-11016-OHAA	FDC-11022-OHAA
φ 11.2 (7/16")	φ 0.437	-	-	FDC-11212-OHAA	FDC-11216-OHAA	FDC-11222-OHAA
φ 11.5	φ 0.453	-	-	FDC-11512-OHAA	FDC-11516-OHAA	FDC-11522-OHAA
φ 12.0	φ 0.472	-	-	FDC-12012-OHAA	FDC-12016-OHAA	FDC-12022-OHAA
φ 12.5	-	-	-	-	FDC-12516-OHAA	FDC-12522-OHAA
φ 12.7 (1/2")	φ 0.500	-	-	-	FDC-12516-OHAA	FDC-12522-OHAA
φ 13.0	φ 0.512	-	-	-	FDC-13016-OHAA	FDC-13022-OHAA
φ 13.5	-	-	-	-	FDC-13516-OHAA	FDC-13522-OHAA
φ 14.0	-	-	-	-	FDC-14016-OHAA	FDC-14022-OHAA
φ 14.5	-	-	-	-	FDC-14516-OHAA	FDC-14522-OHAA
φ 15.0	-	-	-	-	FDC-15016-OHAA	FDC-15022-OHAA
φ 15.5	-	-	-	-	FDC-15516-OHAA	FDC-15522-OHAA
φ 16.0 (5/8")	φ 0.630	-	-	-	FDC-16016-OHAA	FDC-16022-OHAA
φ 16.5	-	-	-	-	-	FDC-16522-OHAA
φ 17.0	-	-	-	-	-	FDC-17022-OHAA
φ 17.5	-	-	-	-	-	FDC-17522-OHAA
φ 18.0	φ 0.709	-	-	-	-	FDC-18022-OHAA
φ 18.5	-	-	-	-	-	FDC-18522-OHAA
φ 19.0	-	-	-	-	-	FDC-19022-OHAA
φ 19.1 (3/4")	φ 0.750	-	-	-	-	FDC-19122-OHAA
φ 19.5	-	-	-	-	-	FDC-19522-OHAA
φ 20.0	φ 0.787	-	-	-	-	FDC-20022-OHAA
φ 20.5	-	-	-	-	-	FDC-20522-OHAA
φ 21.0	-	-	-	-	-	FDC-21022-OHAA
φ 21.5	-	-	-	-	-	FDC-21522-OHAA
φ 22.0	φ 0.866	-	-	-	-	FDC-22022-OHAA

- 1.OHAA Coolant collets collapse by 0.1mm.
- 2.Collet sizes not listed above are available upon request.

Accuracy (4 × d)	AA (5µm)
	A (10µm)

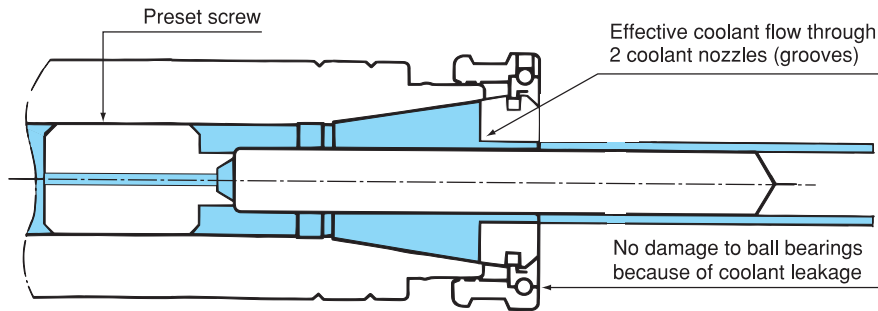
### Ordering Example

**FDC - 060 12 - OH AA**  
 Max. chucking dia. 12 Series Accuracy



# FDC-C

High-Precision Collet ( For Collet Through )



	Tool shank dia.	Model			
		FDC-07-C φ 3 ~ φ 7 (mm) φ 0.118 ~ φ 0.276 (inch)	FDC-09-C φ 3 ~ φ 9 (mm) φ 0.118 ~ φ 0.354 (inch)	FDC-12-C φ 3 ~ φ 12 (mm) φ 0.118 ~ φ 0.472 (inch)	FDC-16-C φ 6 ~ φ 16 (mm) φ 0.236 ~ φ 0.630 (inch)
Collet Holder	φ 3.0 (mm) φ 0.118 (inch)	FDC-03007-C	FDC-03009-C	FDC-03012-C	
"R" Zero Holder		In 0.1mm increments	In 0.1mm increments	In 0.1mm increments	
Hydraulic Chuck		FDC-07007-C	FDC-09009-C		
Shrink Fit			FDC-12012-C		
Tapping Chuck				FDC-16016-C	
Arbors	φ 22.0 (mm) φ 0.866 (inch)				FDC-22022-C

CAA Coolant collets collapse by 0.1mm.

Accuracy (4 × d)	AA (5μm)
	A (10μm)

### Ordering Example

**FDC - 060 12 - C AA**  
 Max. 12 Series Accuracy  
 chucking dia.

Milling Chuck

Collet Holder

"R" Zero Holder

Hydraulic Chuck

Shrink Fit

Tapping Chuck

Arbors

Function Holder

Turning Tool

Retention Stud

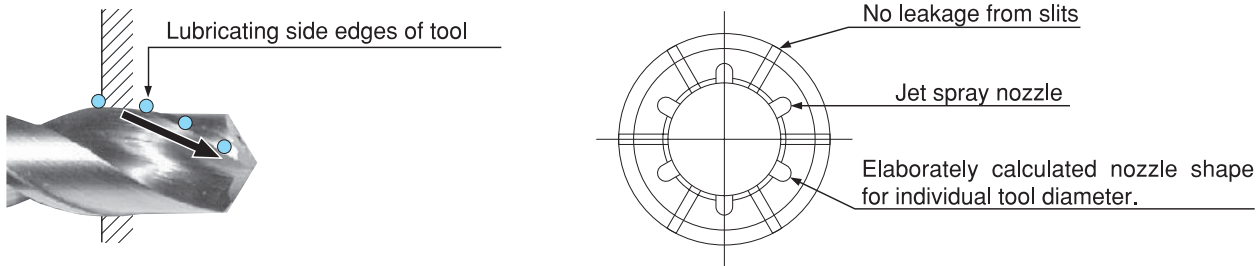
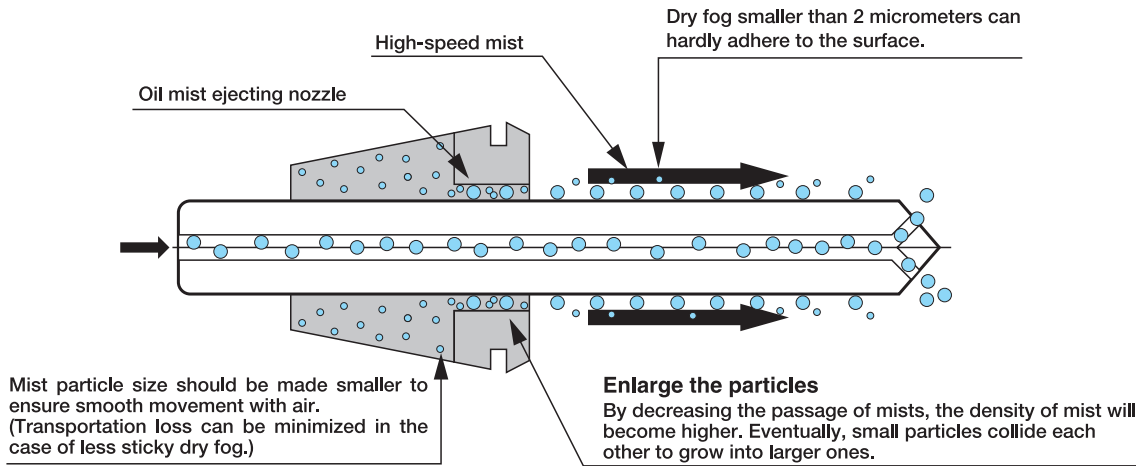
Tool Shank Dimensions



# FDC-MS

High-Precision Collet ( For Semidry Machining /MQL )

- Making lubricant adhere to the surface of workpiece and tool by spraying comparatively large particles alongside the tool.



Tool shank dia.	Model				
	FDC-07-MS	FDC-09-MS	FDC-12-MS	FDC-16-MS	FDC-22-MS
φ 3.0	FDC-03007-MS	FDC-03009-MS	FDC-03012-MS	—	—
φ 4.0	FDC-04007-MS	FDC-04009-MS	FDC-04012-MS	—	—
φ 5.0	FDC-05007-MS	FDC-05009-MS	FDC-05012-MS	—	—
φ 6.0	—	FDC-06009-MS	FDC-06012-MS	FDC-06016-MS	FDC-06022-MS
φ 7.0	—	FDC-07009-MS	FDC-07012-MS	FDC-07016-MS	FDC-07022-MS
φ 8.0	—	FDC-08009-MS	FDC-08012-MS	FDC-08016-MS	FDC-08022-MS
φ 9.0	—	—	FDC-09012-MS	FDC-09016-MS	FDC-09022-MS
φ 10.0	—	—	FDC-10012-MS	FDC-10016-MS	FDC-10022-MS
φ 11.0	—	—	FDC-11012-MS	FDC-11016-MS	FDC-11022-MS
φ 12.0	—	—	FDC-12012-MS	FDC-12016-MS	FDC-12022-MS
φ 13.0	—	—	—	FDC-13016-MS	FDC-13022-MS
φ 14.0	—	—	—	FDC-14016-MS	FDC-14022-MS
φ 16.0	—	—	—	—	FDC-16022-MS
φ 20.0	—	—	—	—	FDC-20022-MS

- 1.MSAA Collets collapse by 0.1mm.
- 2.Sizes not listed above are available upon request.
- 3.Tools with or without coolant holes can be used.
- 4.Inch sizes are available.

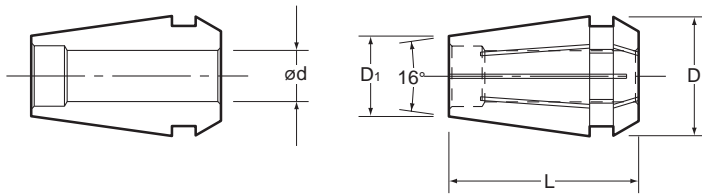
Accuracy (4 × d)	AA (5μm)
	A (10μm)

### Ordering Example

**FDC - 060 12 MS AA**  
 Max. chucking dia.    12 Series    Accuracy

# ER

## Collet For Small Diameters



### Selection example of ER8

To clamp  $\phi 3.0$  tool shank, there are 2 collets,  $\phi 3.0$  and  $\phi 3.5$  collets. We suggest you select  $\phi 3.0$  collet for higher accuracy.

### Ordering Example

**ER8 - 2.0 AA**  
 Max. Accuracy  
 chucking dia.

## ER collet dimensional data

Type	D	D1	L	I.D.	
				inch	mm
ER8	0.331	0.217	0.535	$\phi$ 0.020-0.197	$\phi$ 0.5-5.0
ER11	0.406	0.307	0.709	$\phi$ 0.020-0.276	$\phi$ 0.5-7.0
ER16	0.677	0.445	1.063	$\phi$ 0.020-0.394	$\phi$ 0.5-10.0
ER20	0.835	0.571	1.220	$\phi$ 0.020-0.512	$\phi$ 0.5-13.0
ER25	1.031	0.728	1.378	$\phi$ 0.020-0.630	$\phi$ 0.5-16.0
ER32	1.307	0.961	1.575	$\phi$ 0.098-0.787	$\phi$ 2.5-20.0
ER40	1.622	1.228	1.811	$\phi$ 0.118-1.024	$\phi$ 3.0-26.0
ER50	2.067	1.539	2.362	$\phi$ 0.394-1.339	$\phi$ 10.0-34.0

AA is available.

I.D.	Type		ER8 AA	ER11 AA	ER16 A	ER20 A	ER25 A	ER32 A	ER40 A	ER50 A
	mm	inch								
$\phi$ 1.0 - 0.5	$\phi$ 0.039 - 0.020		ER8-1.0	ER11-1.0	ER16-1.0	ER20-1.0	ER25-1.0			
$\phi$ 1.5 - 1.0	$\phi$ 0.059 - 0.039		ER8-1.5	ER11-1.5	ER16-1.5	ER20-1.5	ER25-1.5			
$\phi$ 2.0 - 1.5	$\phi$ 0.079 - 0.059		ER8-2.0	ER11-2.0	ER16-2.0	ER20-2.0	ER25-2.0			
$\phi$ 2.5 - 2.0	$\phi$ 0.098 - 0.079		ER8-2.5	ER11-2.5	ER16-2.5	ER20-2.5	ER25-2.5			
$\phi$ 3.0 - 2.5	$\phi$ 0.118 - 0.098		ER8-3.0	ER11-3.0	ER16-3.0	ER20-3.0	ER25-3.0	ER32-3.0		
$\phi$ 3.5 - 3.0 (1/8")	$\phi$ 0.138 - 0.118		ER8-3.5	ER11-3.5	ER16-3.5	ER20-3.5	ER25-3.5	ER32-3.5		
$\phi$ 4.0 - 3.5	$\phi$ 0.157 - 0.138		ER8-4.0	ER11-4.0	ER16-4.0					
$\phi$ 4.5 - 4.0	$\phi$ 0.177 - 0.157		ER8-4.5	ER11-4.5	ER16-4.5					
$\phi$ 5.0 - 4.5 (3/16")	$\phi$ 0.197 - 0.177		ER8-5.0	ER11-5.0	ER16-5.0					
$\phi$ 5.5 - 5.0	$\phi$ 0.217 - 0.197			ER11-5.5	ER16-5.5					
$\phi$ 6.0 - 5.5	$\phi$ 0.236 - 0.217			ER11-6.0	ER16-6.0					
$\phi$ 6.5 - 6.0 (1/4")	$\phi$ 0.256 - 0.236			ER11-6.5	ER16-6.5					
$\phi$ 7.0 - 6.5	$\phi$ 0.276 - 0.256			ER11-7.0	ER16-7.0					
$\phi$ 7.5 - 7.0	$\phi$ 0.295 - 0.276				ER16-7.5					
$\phi$ 8.0 - 7.5 (5/16")	$\phi$ 0.315 - 0.295				ER16-8.0					
$\phi$ 8.5 - 8.0	$\phi$ 0.335 - 0.315				ER16-8.5					
$\phi$ 9.0 - 8.5	$\phi$ 0.354 - 0.335				ER16-9.0					
$\phi$ 9.5 - 9.0	$\phi$ 0.374 - 0.354				ER16-9.5					
$\phi$ 10.0 - 9.5 (3/8")	$\phi$ 0.394 - 0.374				ER16-10.0					
$\phi$ 4.0 - 3.0 (1/4")	$\phi$ 0.157 - 0.118				ER20-4.0	ER25-4.0	ER32-4.0	ER40-4.0		
$\phi$ 5.0 - 4.0 (3/16")	$\phi$ 0.197 - 0.157				ER20-5.0	ER25-5.0	ER32-5.0	ER40-5.0		
$\phi$ 6.0 - 5.0	$\phi$ 0.236 - 0.197				ER20-6.0	ER25-6.0	ER32-6.0	ER40-6.0		
$\phi$ 7.0 - 6.0 (1/4")	$\phi$ 0.276 - 0.236				ER20-7.0	ER25-7.0	ER32-7.0	ER40-7.0		
$\phi$ 8.0 - 7.0 (5/16")	$\phi$ 0.315 - 0.276				ER20-8.0	ER25-8.0	ER32-8.0	ER40-8.0		
$\phi$ 9.0 - 8.0	$\phi$ 0.354 - 0.315				ER20-9.0	ER25-9.0	ER32-9.0	ER40-9.0		
$\phi$ 10.0 - 9.0 (3/8")	$\phi$ 0.394 - 0.354				ER20-10.0	ER25-10.0	ER32-10.0	ER40-10.0		
$\phi$ 11.0 - 10.0	$\phi$ 0.433 - 0.394				ER20-11.0	ER25-11.0	ER32-11.0	ER40-11.0		ER50-12.0
$\phi$ 12.0 - 11.0	$\phi$ 0.472 - 0.433				ER20-12.0	ER25-12.0	ER32-12.0	ER40-12.0		
$\phi$ 13.0 - 12.0 (1/2")	$\phi$ 0.512 - 0.472				ER20-13.0	ER25-13.0	ER32-13.0	ER40-13.0		
$\phi$ 14.0 - 13.0	$\phi$ 0.551 - 0.512					ER25-14.0	ER32-14.0	ER40-14.0		ER50-14.0
$\phi$ 15.0 - 14.0	$\phi$ 0.591 - 0.551					ER25-15.0	ER32-15.0	ER40-15.0		ER50-16.0
$\phi$ 16.0 - 15.0 (5/8")	$\phi$ 0.630 - 0.591					ER25-16.0	ER32-16.0	ER40-16.0		
$\phi$ 17.0 - 16.0	$\phi$ 0.669 - 0.630						ER32-17.0	ER40-17.0		ER50-18.0
$\phi$ 18.0 - 17.0	$\phi$ 0.709 - 0.669						ER32-18.0	ER40-18.0		
$\phi$ 19.0 - 18.0	$\phi$ 0.748 - 0.709						ER32-19.0	ER40-19.0		ER50-20.0
$\phi$ 20.0 - 19.0 (3/4")	$\phi$ 0.787 - 0.748						ER32-20.0	ER40-20.0		
$\phi$ 21.0 - 20.0	$\phi$ 0.827 - 0.787							ER40-21.0		ER50-22.0
$\phi$ 22.0 - 21.0	$\phi$ 0.866 - 0.827							ER40-22.0		
$\phi$ 23.0 - 22.0 (7/8")	$\phi$ 0.906 - 0.866							ER40-23.0		ER50-24.0
$\phi$ 24.0 - 23.0	$\phi$ 0.945 - 0.906							ER40-24.0		
$\phi$ 25.0 - 24.0	$\phi$ 0.984 - 0.945							ER40-25.0		ER50-26.0
$\phi$ 26.0 - 25.0 (1")	$\phi$ 1.024 - 0.984							ER40-26.0		
$\phi$ 27.0 - 26.0	$\phi$ 1.063 - 1.024									ER50-28.0
$\phi$ 28.0 - 27.0	$\phi$ 1.102 - 1.063									
$\phi$ 29.0 - 28.0	$\phi$ 1.142 - 1.102									ER50-30.0
$\phi$ 30.0 - 29.0	$\phi$ 1.181 - 1.142									
$\phi$ 31.0 - 30.0	$\phi$ 1.220 - 1.181									ER50-32.0
$\phi$ 32.0 - 31.0 (1-1/4")	$\phi$ 1.260 - 1.220									
$\phi$ 33.0 - 32.0	$\phi$ 1.299 - 1.260									ER50-34.0
$\phi$ 34.0 - 33.0	$\phi$ 1.339 - 1.299									

## ER collet collapse range

Type	I.D.	Collapse Range		Type	I.D.	Collapse Range		Type	I.D.	Collapse Range	
ER8	1.0 - 5.0mm	0.020"	0.5mm	ER20	1.0 - 3.5mm	0.020"	0.5mm	ER32	3.0 - 3.5mm	0.020"	0.5mm
ER11	1.0 - 7.0mm	0.020"	0.5mm		4.0 - 13.0mm	0.039"	1.0mm		4.0 - 20.0mm	0.039"	1.0mm
ER16	1.0 - 10.0mm	0.020"	0.5mm	ER25	1.0 - 3.5mm	0.020"	0.5mm	ER40	4.0 - 26.0mm	0.039"	1.0mm
					4.0 - 16.0mm	0.039"	1.0mm				

## ER-OH

For tool with coolant hole

Tool Shank Dia.		Model
		ER8-OH
mm	inch	Size
φ 1.8	φ 0.071	ER8-1.8-OH
φ 1.9	φ 0.075	ER8-1.9-OH
φ 2.0	φ 0.079	ER8-2.0-OH
φ 2.1	φ 0.083	ER8-2.1-OH
φ 2.2	φ 0.087	ER8-2.2-OH
φ 2.3	φ 0.091	ER8-2.3-OH
φ 2.4	φ 0.094	ER8-2.4-OH
φ 2.5	φ 0.098	ER8-2.5-OH
φ 2.6	φ 0.102	ER8-2.6-OH
φ 2.7	φ 0.106	ER8-2.7-OH
φ 2.8	φ 0.110	ER8-2.8-OH
φ 2.9	φ 0.114	ER8-2.9-OH
φ 3.0	φ 0.118	ER8-3.0-OH
φ 3.1	φ 0.122	ER8-3.1-OH
φ 3.2	φ 0.126	ER8-3.2-OH
φ 3.3	φ 0.130	ER8-3.3-OH
φ 3.4	φ 0.134	ER8-3.4-OH
φ 3.5	φ 0.138	ER8-3.5-OH
φ 3.6	φ 0.142	ER8-3.6-OH
φ 3.7	φ 0.146	ER8-3.7-OH
φ 3.8	φ 0.150	ER8-3.8-OH
φ 3.9	φ 0.154	ER8-3.9-OH
φ 4.0	φ 0.157	ER8-4.0-OH
φ 4.1	φ 0.161	ER8-4.1-OH
φ 4.2	φ 0.165	ER8-4.2-OH
φ 4.3	φ 0.169	ER8-4.3-OH
φ 4.4	φ 0.173	ER8-4.4-OH
φ 4.5	φ 0.177	ER8-4.5-OH
φ 4.6	φ 0.181	ER8-4.6-OH
φ 4.7	φ 0.185	ER8-4.7-OH
φ 4.8	φ 0.189	ER8-4.8-OH
φ 4.9	φ 0.193	ER8-4.9-OH
φ 5.0	φ 0.197	ER8-5.0-OH

Shrinkage allowance for coolant collet ER8-OH : 0.1mm

Tool Shank Dia.		Model
		ER11-OH
mm	inch	Size
φ 3.0	φ 0.118	ER11-3.0-OH
φ 3.2 (1/8")	φ 0.125	ER11-3.2-OH
φ 3.5	φ 0.138	ER11-3.5-OH
φ 4.0	φ 0.157	ER11-4.0-OH
φ 4.2	φ 0.165	ER11-4.2-OH
φ 4.5	φ 0.177	ER11-4.5-OH
φ 4.8 (3/16")	φ 0.187	ER11-4.8-OH
φ 5.0	φ 0.197	ER11-5.0-OH
φ 5.5	φ 0.217	ER11-5.5-OH
φ 6.0	φ 0.236	ER11-6.0-OH
φ 6.4 (1/4")	φ 0.250	ER11-6.4-OH
φ 6.5	φ 0.256	ER11-6.5-OH
φ 6.8	φ 0.268	ER11-6.8-OH
φ 7.0	φ 0.276	ER11-7.0-OH

Please contact NT USA for ER16 – ER50 coolant type.

### Ordering Example

**ER8 - 2.0 -OH AA**  
 Max. chucking dia. Accuracy

## ER-C

For Collet through

Tool Shank Dia.		Model
		ER8-C
mm	inch	Size
φ 1.8	φ 0.071	ER8-1.8-C
φ 1.9	φ 0.075	ER8-1.9-C
φ 2.0	φ 0.079	ER8-2.0-C
φ 2.1	φ 0.083	ER8-2.1-C
φ 2.2	φ 0.087	ER8-2.2-C
φ 2.3	φ 0.091	ER8-2.3-C
φ 2.4	φ 0.094	ER8-2.4-C
φ 2.5	φ 0.098	ER8-2.5-C
φ 2.6	φ 0.102	ER8-2.6-C
φ 2.7	φ 0.106	ER8-2.7-C
φ 2.8	φ 0.110	ER8-2.8-C
φ 2.9	φ 0.114	ER8-2.9-C
φ 3.0	φ 0.118	ER8-3.0-C
φ 3.1	φ 0.122	ER8-3.1-C
φ 3.2	φ 0.126	ER8-3.2-C
φ 3.3	φ 0.130	ER8-3.3-C
φ 3.4	φ 0.134	ER8-3.4-C
φ 3.5	φ 0.138	ER8-3.5-C
φ 3.6	φ 0.142	ER8-3.6-C
φ 3.7	φ 0.146	ER8-3.7-C
φ 3.8	φ 0.150	ER8-3.8-C
φ 3.9	φ 0.154	ER8-3.9-C
φ 4.0	φ 0.157	ER8-4.0-C
φ 4.1	φ 0.161	ER8-4.1-C
φ 4.2	φ 0.165	ER8-4.2-C
φ 4.3	φ 0.169	ER8-4.3-C
φ 4.4	φ 0.173	ER8-4.4-C
φ 4.5	φ 0.177	ER8-4.5-C
φ 4.6	φ 0.181	ER8-4.6-C
φ 4.7	φ 0.185	ER8-4.7-C
φ 4.8	φ 0.189	ER8-4.8-C
φ 4.9	φ 0.193	ER8-4.9-C
φ 5.0	φ 0.197	ER8-5.0-C

Shrinkage allowance for coolant collet ER8-C : 0.1mm

Tool Shank Dia.		Model
		ER11-C
mm	inch	Size
φ 3.0	φ 0.118	ER11-3.0-C
φ 3.2 (1/8")	φ 0.125	ER11-3.2-C
φ 3.5	φ 0.138	ER11-3.5-C
φ 4.0	φ 0.157	ER11-4.0-C
φ 4.2	φ 0.165	ER11-4.2-C
φ 4.5	φ 0.177	ER11-4.5-C
φ 4.8 (3/16")	φ 0.187	ER11-4.8-C
φ 5.0	φ 0.197	ER11-5.0-C
φ 5.5	φ 0.217	ER11-5.5-C
φ 6.0	φ 0.236	ER11-6.0-C
φ 6.4 (1/4")	φ 0.250	ER11-6.4-C
φ 6.5	φ 0.256	ER11-6.5-C
φ 6.8	φ 0.268	ER11-6.8-C
φ 7.0	φ 0.276	ER11-7.0-C

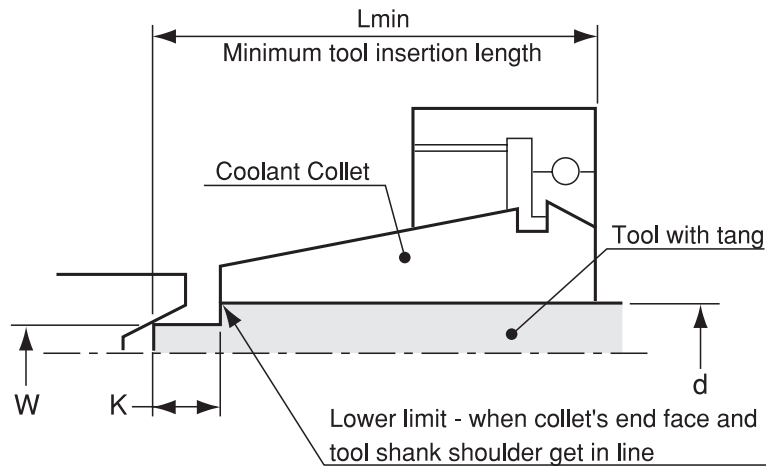
Please contact NT USA for ER16 – ER50 coolant type.

### Ordering Example

**ER8 - 2.0 -C AA**  
 Max. chucking dia. Accuracy

Minimum tool insertion length when coolant collet and tool with tang are used.

# HDC-A, GDC-A, ERC, ERC-T, HDZ, GDZ, ERZ



Unit : Metric

Collet size (OH,C,MS)	Chucking diameter	Geometry of cutting tool												
		Tool shank diameter	ø3.1~5.0		ø5.1~6.0		ø6.1~9.0		ø9.1~12.0		ø12.1~16.0		ø16.1~22.0	
		Tang width	2.4		3		4		5		6		8	
		Tang length	5	3	6	3	8	5	8	5	10	5	12	5
<b>ER8</b>	<b>ø1.8~5.0</b>	L min value when using tool with tang	20.5	19	-	-	-	-	-	-	-	-	-	-
<b>ER11</b>	<b>ø3.0~7.0</b>		23	22	24	22	26	23	-	-	-	-	-	-
<b>FDC07</b>	<b>ø3.0~7.0</b>		23	22	24	22	26	23	-	-	-	-	-	-
<b>FDC09</b>	<b>ø3.0~9.0</b>		28	27	29	27	31	28	-	-	-	-	-	-
<b>FDC12</b>	<b>ø3.0~12.0</b>		33	33	33.5	33	35.5	33	35.5	33	-	-	-	-
<b>FDC16</b>	<b>ø6.0~16.0</b>		-	-	38.5	38	40.5	38	40.5	38	42.5	38	-	-
<b>FDC22</b>	<b>ø6.0~22.0</b>		-	-	47	47	47.5	47	47.5	47	49.5	47	51.5	47

1. Chamfer at tool tang is NOT taken into account at all.
2. Coolant leakage will happen if minimum insertion length is not kept.
3. Minimum insertion length will vary according to tang length(K).

BT  
CAT  
AHO  
HSK-A/E/F/C  
HSK-T  
UTS  
Specialized Machine  
Related Equipment  
Bush & Chamfering Drill  
Milling Chuck

Collet Holder

"R" Zero Holder

Hydraulic Chuck

Shrink Fit

Tapping Chuck

Arbors

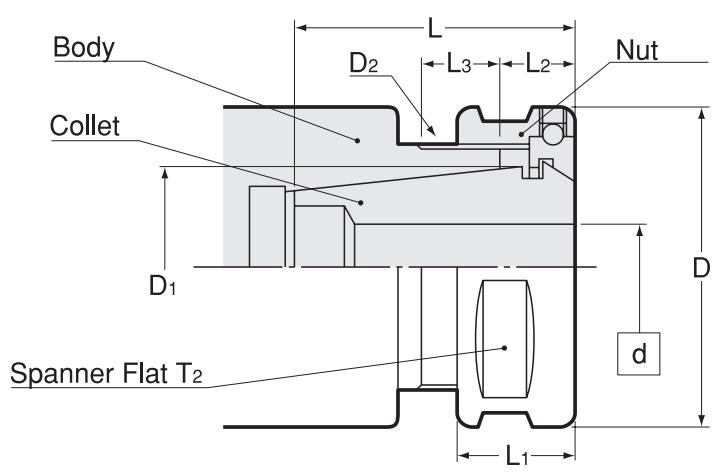
Function Holder

Turning Tool

Retention Stud

Tool Shank Dimensions

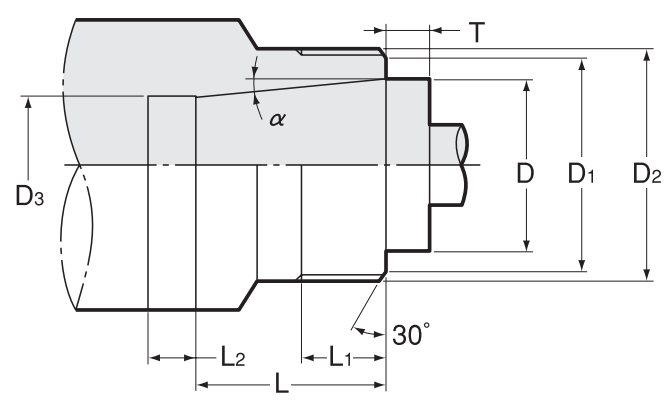
### Dimension for Collet and Nut



Unit : Metric

Model	Nut	Spanner	d	D	D1	D2	L	L1	L2	L3 MIN	T2
FDC - d 07	HDP-07A	S-0	0.5~7.0	23	10.9	M14 P=0.75	18.0	11.5	6.5	9	-
FDC - d 09	HDP-09	S-1L	2.5~9.0	26	13.57	M19 P=1	23.0	13.0	8.0	9	24
FDC - d 12	HDP-12	S-3L	2.5~12.0	32	18.42	M24 P=1	27.5	14.0	8.5	9	30
FDC - d 16	HDP-16	S-4L	3.5~16.0	36	22.2	M28 P=1	32.5	14.0	9.0	9	33
FDC - d 22	HDP-22	S-5L	3.5~22.0	46	30.6	M36 P=1	39.5	16.0	10.0	9	42

### Dimension for body



Unit : Metric

Model	Nut	D	T±0.1	D1	D2	(D3)	L	L1 MIN	(L2)	α
FDC - d 07	HDP-07A	10.9	4	13	M14 P=0.75	8.5	10	9.0	6	8°
FDC - d 09	HDP-09	13.57	5	17	M19 P=1	10.5	17	9.0	4	5°59'
FDC - d 12	HDP-12	18.42	5	22	M24 P=1	14.5	21	9.0	4	5°59'
FDC - d 16	HDP-16	22.2	5	26	M28 P=1	17.5	25	9.0	4	5°59'
FDC - d 22	HDP-22	30.6	5	34	M36 P=1	24.0	35	10	4	5°59'

D3 and L2 are for reference only and can be changed to your design. Contact us for taper gauge.

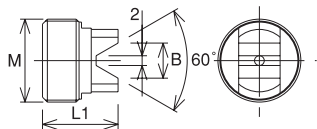
# HDS, ES

Preset Screw

## HDC-A, GDC-A, HDZ, GDZ

Unit : Metric

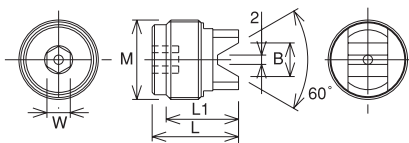
### Standard



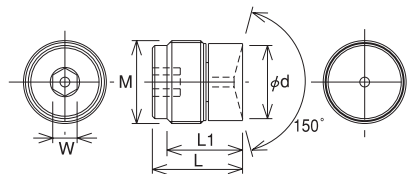
Code	Model	B	M	L1	Holder size
2545 00000007	<b>HDS-07</b>	5.5	M8 P=1	14	07
2545 00000009	<b>HDS-09</b>	5.5	M10 P=1	14	09
2545 00000012	<b>HDS-12</b>	7.2	M14 P=1	15.5	12
2545 00000016	<b>HDS-16</b>	7.2	M17 P=1	15.5	16
2545 00000022	<b>HDS-22</b>	9.5	M23 P=1	17.5	22

### With hex. hole

#### Type1



#### Type2



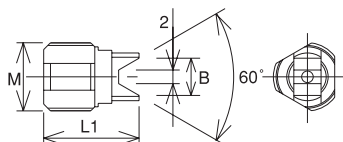
- In case using drill less than  $\phi 2$  for models with \*, length adjustment function does not work since drill goes into coolant hole.
- Max. adjustment range can be different from standard preset screw.

Unit : Metric

Code	Model	Type	W	B	$\phi d$	M	L	L1	Holder size
2545 30000007	<b>HDS-07-3</b>	1	3	5.5	-	M8 P=1	17	14	07
2545 40000007	<b>HDS-07-4</b>	1	4	5.5	-	M8 P=1	17	14	07
2545 30000009	<b>HDS-09-3</b>	1	3	5.5	-	M10 P=1	17	14	09
2545 40000009	<b>HDS-09-4</b>	1	4	5.5	-	M10 P=1	17	14	09
2545 50000009	<b>HDS-09-5</b>	1	5	5.5	-	M10 P=1	17	14	09
2545 30000012	<b>HDS-12-3</b>	1	3	7.2	-	M14 P=1	18.5	15.5	12
2545 40000012	<b>HDS-12-4</b>	1	4	7.2	-	M14 P=1	18.5	15.5	12
2545 50000012	<b>HDS-12-5</b>	1	5	7.2	-	M14 P=1	18.5	15.5	12
2545 30000016	<b>HDS-16-3</b>	1	3	7.2	-	M17 P=1	18.5	15.5	16
2545 40000016	<b>HDS-16-4</b>	1	4	7.2	-	M17 P=1	18.5	15.5	16
2545 50000016	<b>HDS-16-5</b>	1	5	7.2	-	M17 P=1	18.5	15.5	16
2545 30000022	<b>HDS-22-3</b>	1	3	9.5	-	M23 P=1	20.5	17.5	22
2545 40000022	<b>HDS-22-4</b>	1	4	9.5	-	M23 P=1	20.5	17.5	22
2545 50000022	<b>HDS-22-5</b>	1	5	9.5	-	M23 P=1	20.5	17.5	22
2545 31000007	<b>HDS-07-3C *</b>	2	3	-	6	M8 P=1	17	14	07
2545 41000007	<b>HDS-07-4C *</b>	2	4	-	6	M8 P=1	17	14	07
2545 31000009	<b>HDS-09-3C</b>	2	3	-	8	M10 P=1	17	14	09
2545 41000009	<b>HDS-09-4C</b>	2	4	-	8	M10 P=1	17	14	09
2545 51000009	<b>HDS-09-5C</b>	2	5	-	8	M10 P=1	17	14	09
2545 31000012	<b>HDS-12-3C</b>	2	3	-	12	M14 P=1	18.5	15.5	12
2545 41000012	<b>HDS-12-4C</b>	2	4	-	12	M14 P=1	18.5	15.5	12
2545 51000012	<b>HDS-12-5C</b>	2	5	-	12	M14 P=1	18.5	15.5	12
2545 31000016	<b>HDS-16-3C</b>	2	3	-	15	M17 P=1	18.5	15.5	16
2545 41000016	<b>HDS-16-4C</b>	2	4	-	15	M17 P=1	18.5	15.5	16
2545 51000016	<b>HDS-16-5C</b>	2	5	-	15	M17 P=1	18.5	15.5	16
2545 31000022	<b>HDS-22-3C</b>	2	3	-	21	M23 P=1	20.5	17.5	22
2545 41000022	<b>HDS-22-4C</b>	2	4	-	21	M23 P=1	20.5	17.5	22
2545 51000022	<b>HDS-22-5C</b>	2	5	-	21	M23 P=1	20.5	17.5	22

Unit : Metric

### For semi-dry machining

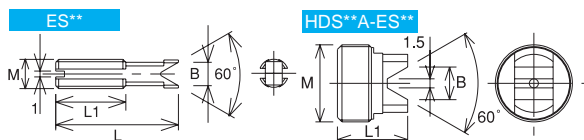


Code	Model	L	B	D	M	Holder size
3164 00000007	<b>HDS-07-MS</b>	14	5.5	7	M8 P=1	7
3164 00000009	<b>HDS-09-MS</b>	14	5.5	7	M10 P=1	9
3164 00000012	<b>HDS-12-MS</b>	15.5	7.2	12.8	M14 P=1	12
3164 00000016	<b>HDS-16-MS</b>	15.5	7.2	12.8	M17 P=1	16
3164 00000022	<b>HDS-22-MS</b>	17.5	9.5	18	M23 P=1	22

- For cutting tool with or without oil hole.
- Not applicable for cutting tools with less than  $\phi 3$  shank diameter.

## ERC, ERC-T, ERZ

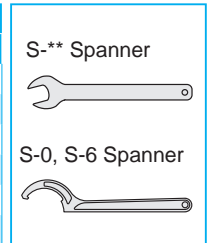
Unit : Metric



Code	Model	B	M	L	L1	Holder size
2555 00000008	<b>ES8</b>	4	M5 P=0.8	21	12	ERC8
2555 00070011	<b>HDS-07A-ES11</b>	5.5	M8 P=1	-	14.5	ERC11S, ERC11
2555 00000016	<b>ES16</b>	9.8	M11 P=1	-	14.5	ERC16
2555 00120020	<b>HDS12A-ES20</b>	12.8	M14 P=1	-	16	ERC20
2555 00160025	<b>HDS16A-ES25</b>	15.8	M17 P=1	-	16	ERC25
2555 00220032	<b>HDS22A-ES32</b>	20	M23 P=1	-	18	ERC32
2555 00000040	<b>ES40</b>	24	M31 P=1	-	21.5	ERC40
2555 00000050	<b>ES50</b>	26	M36 P=1	-	23	ERC50

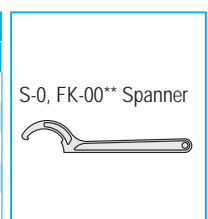
# HDC-A, HDZ, SDM, KH-E

Collet		Nut		Spanner	
Model	Code	Model	Code	Model	Code
FDC-07	—	HDP-07A	0070 03001407	S-0	0803 00000000
FDC-09	—	HDP-09	2544 00000009	S-1L	0803 00000011
FDC-12	—	HDP-12	2544 00000012	S-3L	0803 00000013
FDC-16	—	HDP-16	2544 00000016	S-4L	0803 00000014
FDC-22	—	HDP-22	2544 00000022	S-5L	0803 00000015
FDC-32	—	HDP-32	0070 00105648	S-6	0803 00000006



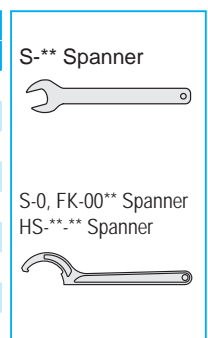
# GDC-A, GDZ

Collet		Nut		Spanner	
Model	Code	Model	Code	Model	Code
FDC-07AA	—	HDP-07A	0070 03001407	S-0	0803 00000000
FDC-09AA	—	GDP-09	2444 00000009	FK-0025	2445 00000025
FDC-12AA	—	GDP-12	2444 00000012	FK-0034	2445 00000034
FDC-16AA	—	GDP-16	2444 00000016	FK-0034	2445 00000034
FDC-22AA	—	GDP-22	2444 00000022	FK-0045	2445 00000045

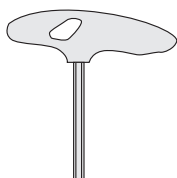


# ERC, ERC-T, ERZ

Collet		Nut		Spanner	
Model	Code	Model	Code	Model	Code
ER8	—	ERP-8	2554 00000008	S-8E	0803 00000007
ER11	—	ERP-11S	2554 00000010	S-11E	0803 00000008
ER11	—	HDP-07A	0070 03001407	S-0	0803 00000000
ER16	—	ERP-16	2554 00000016	FK-0034	2445 00000034
ER20	—	ERP-20	2554 00000020	FK-0034	2445 00000034
ER25	—	ERP-25	2554 00000025	HS-1-16	0711 00001016
ER32	—	ERP-32	2554 00000032	HS-2-20	0711 00002020
ER40	—	ERP-40	2554 00000040	HS-2.5-25	0711 00002525
ER50	—	ERP-50	2554 00000050	HS-4-42	0711 00004042

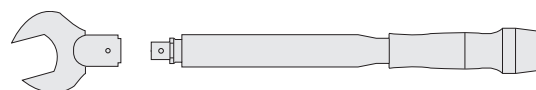


## Hex. Wrench



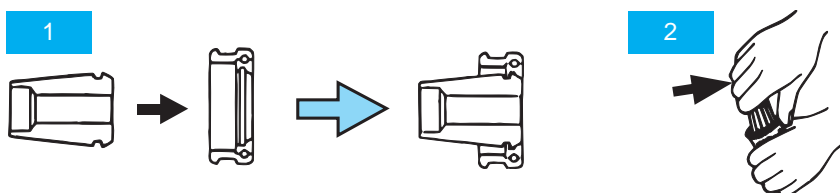
Model	Code
L-3T	6080 00000030
L-4T	6080 00115576
L-5T	6080 00115577
L-6T	6080 00115578

## Spanner Head / Torque Wrench



See P.499 for Spanner Head / Torque wrench.

## Collet insertion and removal



- To attach**  
Place FDC collet into threaded end of HDP nut. Press down on rear of the collet to "clip" the collet into the nut.
- To remove**  
While holding HDP nut firmly in one hand grasp FDC collet in the other while pushing sideways.

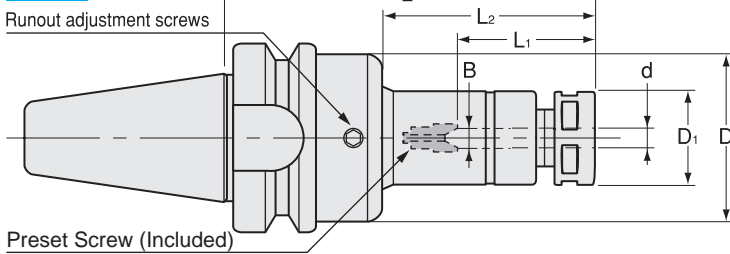


# HDZ

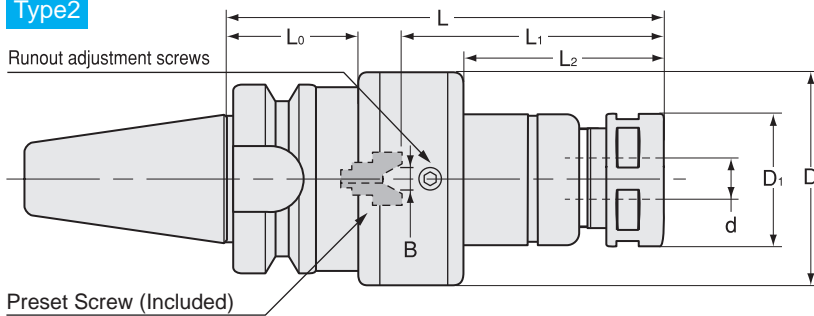
## "R"Zero Holder

- Runout accuracy of the cutting edge can be adjusted as closely as to zero.

### Type1



### Type2







Unit : Metric

Code	Model	Type	d	L	L1	L2	B	D	D1	L0	Nut	kg	Collet	Spanner	Hex. Wrench
3090 10706000	<b>BT30 -HDZ07 -60</b>	1	0.5 ~ 7.0	60	22 ~ 45	22	0 ~ 4	41	23	—	HDP-07A	0.6	FDC-07	S-0	L-3T
3090 10707500	<b>-75</b>	1	0.5 ~ 7.0	75	22 ~ 45	37	0 ~ 4	41	23	—	HDP-07A	0.6			
3090 10709000	<b>-90</b>	1	0.5 ~ 7.0	90	22 ~ 45	52	0 ~ 4	41	23	—	HDP-07A	0.7			
3090 10710500	<b>-105</b>	1	0.5 ~ 7.0	105	22 ~ 45	67	0 ~ 4	41	23	—	HDP-07A	0.7			
3090 10907500	<b>BT30 -HDZ09 -75</b>	1	2.5 ~ 9.0	75	27 ~ 57	37	0 ~ 4	45	26	—	HDP-09	0.7	FDC-09	S-1L	L-3T
3090 10909000	<b>-90</b>	1	2.5 ~ 9.0	90	27 ~ 57	52	0 ~ 4	45	26	—	HDP-09	0.7			
3090 10910500	<b>-105</b>	1	2.5 ~ 9.0	105	27 ~ 57	67	0 ~ 4	45	26	—	HDP-09	0.7			
3090 11209000	<b>BT30 -HDZ12 -90</b>	2	2.5 ~ 12.0	90	33 ~ 69	33	0 ~ 5	52	32	32	HDP-12	1.0	FDC-12	S-3L	L-4T
3090 11210500	<b>-105</b>	2	2.5 ~ 12.0	105	33 ~ 69	48	0 ~ 5	52	32	32	HDP-12	1.1			
3090 11609000	<b>BT30 -HDZ16 -90</b>	2	3.5 ~ 16.0	90	38 ~ 82	33	0 ~ 6	56	36	32	HDP-16	1.0	FDC-16	S-4L	L-4T
3090 11610500	<b>-105</b>	2	3.5 ~ 16.0	105	38 ~ 82	48	0 ~ 6	56	36	32	HDP-16	1.1			
3090 11612000	<b>-120</b>	2	3.5 ~ 16.0	120	38 ~ 82	63	0 ~ 6	56	36	32	HDP-16	1.1			
3090 30707500	<b>BT40 -HDZ07 -75</b>	1	0.5 ~ 7.0	75	22 ~ 45	32	0 ~ 4	41	23	—	HDP-07A	1.2	FDC-07	S-0	L-3T
3090 30709000	<b>-90</b>	1	0.5 ~ 7.0	90	22 ~ 45	47	0 ~ 4	41	23	—	HDP-07A	1.2			
3090 30710500	<b>-105</b>	1	0.5 ~ 7.0	105	22 ~ 45	62	0 ~ 4	41	23	—	HDP-07A	1.2			
3090 30909000	<b>BT40 -HDZ09 -90</b>	1	2.5 ~ 9.0	90	27 ~ 57	47	0 ~ 4	45	26	—	HDP-09	1.3	FDC-09	S-1L	L-3T
3090 30910500	<b>-105</b>	1	2.5 ~ 9.0	105	27 ~ 57	62	0 ~ 4	45	26	—	HDP-09	1.3			
3090 30912000	<b>-120</b>	1	2.5 ~ 9.0	120	27 ~ 57	77	0 ~ 4	45	26	—	HDP-09	1.3			
3090 30913500	<b>-135</b>	1	2.5 ~ 9.0	135	27 ~ 57	92	0 ~ 4	45	26	—	HDP-09	1.3			
3090 30916500	<b>-165</b>	1	2.5 ~ 9.0	165	27 ~ 57	122	0 ~ 4	45	26	—	HDP-09	1.3			
3090 31209000	<b>BT40 -HDZ12 -90</b>	1	2.5 ~ 12.0	90	33 ~ 69	43	0 ~ 5	56	32	—	HDP-12	1.5	FDC-12	S-3L	L-4T
3090 31210500	<b>-105</b>	1	2.5 ~ 12.0	105	33 ~ 69	58	0 ~ 5	56	32	—	HDP-12	1.6			
3090 31212000	<b>-120</b>	1	2.5 ~ 12.0	120	33 ~ 69	73	0 ~ 5	56	32	—	HDP-12	1.6			
3090 31213500	<b>-135</b>	1	2.5 ~ 12.0	135	33 ~ 69	88	0 ~ 5	56	32	—	HDP-12	1.7			
3090 31216500	<b>-165</b>	1	2.5 ~ 12.0	165	33 ~ 69	118	0 ~ 5	56	32	—	HDP-12	1.7			
3090 31219500	<b>-195</b>	1	2.5 ~ 12.0	195	33 ~ 69	148	0 ~ 5	56	32	—	HDP-12	2.0			
3090 31609000	<b>BT40 -HDZ16 -90</b>	1	3.5 ~ 16.0	90	38 ~ 82	43	0 ~ 6	62	36	—	HDP-16	1.6	FDC-16	S-4L	L-4T
3090 31610500	<b>-105</b>	1	3.5 ~ 16.0	105	38 ~ 82	58	0 ~ 6	62	36	—	HDP-16	1.7			
3090 31612000	<b>-120</b>	1	3.5 ~ 16.0	120	38 ~ 82	73	0 ~ 6	62	36	—	HDP-16	1.8			
3090 31613500	<b>-135</b>	1	3.5 ~ 16.0	135	38 ~ 82	88	0 ~ 6	62	36	—	HDP-16	1.9			
3090 31616500	<b>-165</b>	1	3.5 ~ 16.0	165	38 ~ 82	118	0 ~ 6	62	36	—	HDP-16	2.1			
3090 31619500	<b>-195</b>	1	3.5 ~ 16.0	195	38 ~ 82	148	0 ~ 6	62	36	—	HDP-16	2.1			

Code	Model	Type	d	L	L1	L2	B	D	D1	L0	Nut	kg	Collet	Spanner	Hex. Wrench
3090 32210500	<b>BT40 -HDZ22 -105</b>	2	3.5 ~ 22.0	105	47 ~ 103	31	0 ~ 8	69	46	45	HDP-22	2.1	FDC-22	S-5L	L-5T
3090 32212000	<b>-120</b>	2	3.5 ~ 22.0	120	47 ~ 103	46	0 ~ 8	69	46	45	HDP-22	2.3			
3090 32213500	<b>-135</b>	2	3.5 ~ 22.0	135	47 ~ 103	61	0 ~ 8	69	46	45	HDP-22	2.5			
3090 32216500	<b>-165</b>	2	3.5 ~ 22.0	165	47 ~ 103	91	0 ~ 8	69	46	45	HDP-22	2.8			
3090 32219500	<b>-195</b>	2	3.5 ~ 22.0	195	47 ~ 103	121	0 ~ 8	69	46	45	HDP-22				
3090 50709000	<b>BT50 -HDZ07 -90</b>	1	0.5 ~ 7.0	90	22 ~ 45	36	0 ~ 4	41	23	—	HDP-07	3.8	FDC-07A	S-0	L-3T
3090 50710500	<b>-105</b>	1	0.5 ~ 7.0	105	22 ~ 45	51	0 ~ 4	41	23	—	HDP-07				
3090 50712000	<b>-120</b>	1	0.5 ~ 7.0	120	22 ~ 45	66	0 ~ 4	41	23	—	HDP-07				
3090 50713500	<b>-135</b>	1	0.5 ~ 7.0	135	22 ~ 45	81	0 ~ 4	41	23	—	HDP-07				
3090 50716500	<b>-165</b>	1	0.5 ~ 7.0	165	22 ~ 45	111	0 ~ 4	41	23	—	HDP-07				
3090 50719500	<b>-195</b>	1	0.5 ~ 7.0	195	22 ~ 45	141	0 ~ 4	41	23	—	HDP-07				
3090 50909000	<b>BT50 -HDZ09 -90</b>	1	2.5 ~ 9.0	90	27 ~ 57	36	0 ~ 4	45	26	—	HDP-09		FDC-09	S-1L	L-3T
3090 50910500	<b>-105</b>	1	2.5 ~ 9.0	105	27 ~ 57	51	0 ~ 4	45	26	—	HDP-09	3.8			
3090 50912000	<b>-120</b>	1	2.5 ~ 9.0	120	27 ~ 57	66	0 ~ 4	45	26	—	HDP-09				
3090 50913500	<b>-135</b>	1	2.5 ~ 9.0	135	27 ~ 57	81	0 ~ 4	45	26	—	HDP-09				
3090 50916500	<b>-165</b>	1	2.5 ~ 9.0	165	27 ~ 57	111	0 ~ 4	45	26	—	HDP-09	4.1			
3090 50919500	<b>-195</b>	1	2.5 ~ 9.0	195	27 ~ 57	141	0 ~ 4	45	26	—	HDP-09				
3090 50922500	<b>-225</b>	1	2.5 ~ 9.0	225	27 ~ 57	171	0 ~ 4	45	26	—	HDP-09	4.3			
3090 50925500	<b>-255</b>	1	2.5 ~ 9.0	255	27 ~ 57	201	0 ~ 4	45	26	—	HDP-09	4.4			
3090 51209000	<b>BT50 -HDZ12 -90</b>	1	2.5 ~ 12.0	90	33 ~ 69	32	0 ~ 5	56	32	—	HDP-12	4.0	FDC-12	S-3L	L-4T
3090 51210500	<b>-105</b>	1	2.5 ~ 12.0	105	33 ~ 69	47	0 ~ 5	56	32	—	HDP-12				
3090 51212000	<b>-120</b>	1	2.5 ~ 12.0	120	33 ~ 69	62	0 ~ 5	56	32	—	HDP-12	4.1			
3090 51213500	<b>-135</b>	1	2.5 ~ 12.0	135	33 ~ 69	77	0 ~ 5	56	32	—	HDP-12				
3090 51216500	<b>-165</b>	1	2.5 ~ 12.0	165	33 ~ 69	107	0 ~ 5	56	32	—	HDP-12				
3090 51219500	<b>-195</b>	1	2.5 ~ 12.0	195	33 ~ 69	137	0 ~ 5	56	32	—	HDP-12				
3090 51222500	<b>-225</b>	1	2.5 ~ 12.0	225	33 ~ 69	167	0 ~ 5	56	32	—	HDP-12	4.6			
3090 51225500	<b>-255</b>	1	2.5 ~ 12.0	255	33 ~ 69	197	0 ~ 5	56	32	—	HDP-12	4.8			
3090 51609000	<b>BT50 -HDZ16 -90</b>	1	3.5 ~ 16.0	90	38 ~ 82	32	0 ~ 6	62	36	—	HDP-16	4.1	FDC-16	S-4L	L-4T
3090 51610500	<b>-105</b>	1	3.5 ~ 16.0	105	38 ~ 82	47	0 ~ 6	62	36	—	HDP-16	4.2			
3090 51612000	<b>-120</b>	1	3.5 ~ 16.0	120	38 ~ 82	62	0 ~ 6	62	36	—	HDP-16	4.3			
3090 51613500	<b>-135</b>	1	3.5 ~ 16.0	135	38 ~ 82	77	0 ~ 6	62	36	—	HDP-16	4.3			
3090 51616500	<b>-165</b>	1	3.5 ~ 16.0	165	38 ~ 82	107	0 ~ 6	62	36	—	HDP-16	4.5			
3090 51619500	<b>-195</b>	1	3.5 ~ 16.0	195	38 ~ 82	137	0 ~ 6	62	36	—	HDP-16	4.7			
3090 51622500	<b>-225</b>	1	3.5 ~ 16.0	225	38 ~ 82	167	0 ~ 6	62	36	—	HDP-16	4.9			
3090 51625500	<b>-255</b>	1	3.5 ~ 16.0	255	38 ~ 82	197	0 ~ 6	62	36	—	HDP-16	5.1			
3090 52210500	<b>BT50 -HDZ22 -105</b>	1	3.5 ~ 22.0	105	47 ~ 103	43	0 ~ 8	76	46	—	HDP-22	4.5	FDC-22	S-5L	L-5T
3090 52212000	<b>-120</b>	1	3.5 ~ 22.0	120	47 ~ 103	58	0 ~ 8	76	46	—	HDP-22	4.6			
3090 52213500	<b>-135</b>	1	3.5 ~ 22.0	135	47 ~ 103	73	0 ~ 8	76	46	—	HDP-22	4.8			
3090 52215000	<b>-150</b>	1	3.5 ~ 22.0	150	47 ~ 103	88	0 ~ 8	76	46	—	HDP-22	5.0			
3090 52216500	<b>-165</b>	1	3.5 ~ 22.0	165	47 ~ 103	103	0 ~ 8	76	46	—	HDP-22	5.1			
3090 52219500	<b>-195</b>	1	3.5 ~ 22.0	195	47 ~ 103	133	0 ~ 8	76	46	—	HDP-22	5.4			
3090 52222500	<b>-225</b>	1	3.5 ~ 22.0	225	47 ~ 103	163	0 ~ 8	76	46	—	HDP-22	5.7			
3090 52225500	<b>-255</b>	1	3.5 ~ 22.0	255	47 ~ 103	193	0 ~ 8	76	46	—	HDP-22	6.0			

1. Collet, spanner, hexagon head preset screw, preset screw for semi-dry processing, and hex. wrench are sold separately. Standard preset screw is included.
2. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets (OH,C or MS).
3. L1 indicates dimension when using with a preset screw.
4. See P.499 for standard Tightening Torque.

<b>Collet</b> P. 086 - 089 	<b>Spanner</b> P. 095 	<b>Preset screw</b> P. 094 	<b>Hex. Wrench</b> P. 095 
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**Ordering Example**  
**BT40 - HDZ 12 - 90**  
 Shank size                      Max.                      Projection  
    collet I.D.                      length (L)

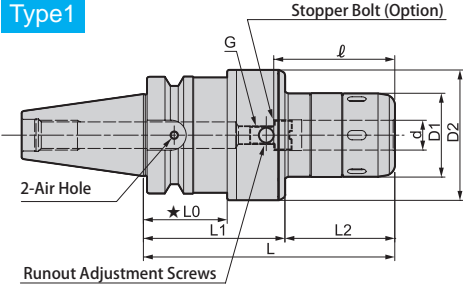


# CTZ

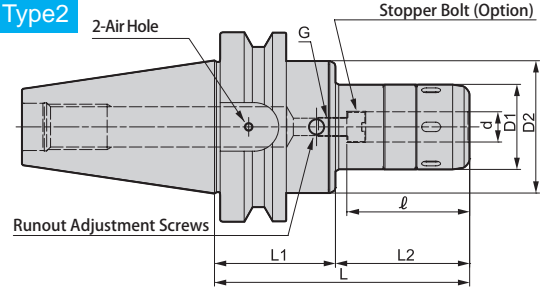
## "R"Zero Holder for Large Diameter

- Runout of the cutting edge can be adjusted as close as to zero. Suitable for large diameter reaming.

### Type1



### Type2



**Caution**

- ★ Take caution against A.T.C. arm and tool magazine interference.

**Caution**  
Please rotate the clamping ring counterclockwise more than 360 degrees after a cutting tool is removed.

## Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	L2	D1	D2	L0	ℓ	G P=1.0	Spanner	Hex. Wrench
295010325125	BT40 -CTZ25A -125	1	25	125	64	61	61	74	★ 38	80	12	HS-2.5-25	L-6L (Included)
295010325150	-150	1	25	150	74	76	61	74	48	80	12		
295010332125	BT40 -CTZ32A -125	1	32	125	64	61	68	80	★ 35	110	18	HS-3-32	
295010332150	-150	1	32	150	74	76	68	80	45	120	18		
295010525125	BT50 -CTZ25A -125	2	25	125	64	61	61	74	—	80	12	HS-2.5-25	
295010525165	-165	2	25	165	64	101	61	74	—	80	12		
295010532125	BT50 -CTZ32A -125	2	32	125	64	61	68	80	—	120	18	HS-3-32	
295010532165	-165	2	32	165	64	101	68	80	—	120	18		
295000542125	BT50 -CTZ42 -125	2	42	125	64	61	88	99	—	120	18	HS-4-42	
295000542165	-165	2	42	165	64	101	88	99	—	120	18		

- When ordering, indicate number of spanners required. "No charge" spanners are limited to number of holders on order.
- Hex. wrench is included.
- All accessories including straight collets can be used with above holders.
- Use 2pcs. of M4 × 5(S)hex. screw (included) to close air holes on the holder when internal coolant is used.

**Spanner**  
P. 069

**Ordering Example**

**BT40 - CTZ 32 A - 125**

Shank size                      I.D. (d)                      Projection length (L)

Stopper Bolt	Straight Collet	Morse Taper Adapter	Jacobs Adapter
BL (P.068)	MC (P.066)   MCA (P.067)	MA (P.068)   MAB (P.068)	JA (P.069)   JAB (P.069)

### Min. chucking length

#### Direct Chucking (without MC Collet)

I.D. of Chuck	Min. chucking length
25,32,42	50

#### With MC Collet

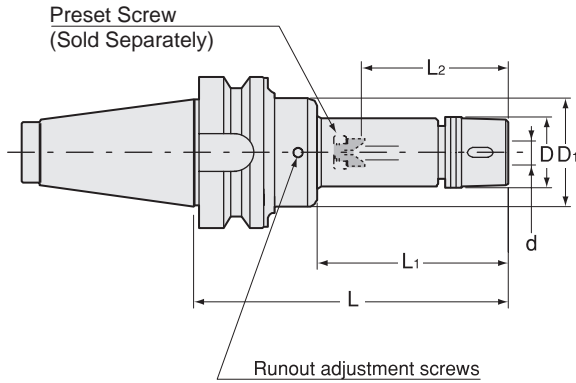
Collet I.D.	Min. chucking length	
	MC	MC-C, MC-OH
6,8	30	30
10,12	40	40
16,20	45	45
25	50	50
32	50	50

# MEMO

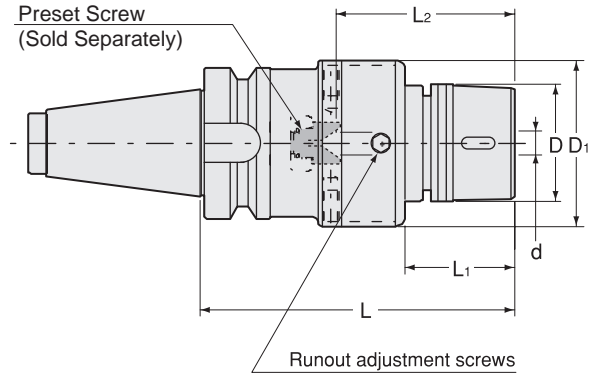
## "R"Zero Holder ( High-Balanced Type )

- Runout accuracy of the cutting edge can be adjusted as closely as to zero. (High balanced type for higher RPM)

Type1



Type2



Unit : Metric

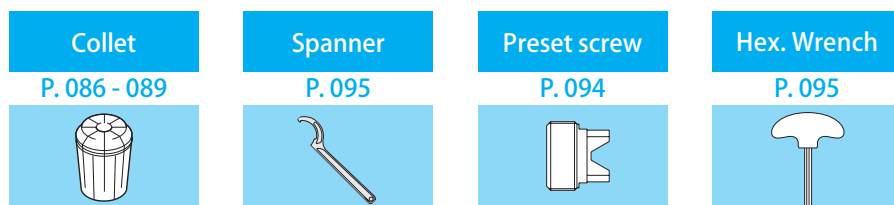
Code	Model	Type	d	L	L1	L2	D	D1	Nut	kg	Collet	Spanner	Hex. Wrench
3120 00107060	<b>BT30 -GDZ07 -60</b>	1	0.5 ~ 7.0	60	22	22 ~ 45	23	41	HDP-07A	0.6	FDC-07AA	S-0	L-3T
3120 00107075	<b>-75</b>	1	0.5 ~ 7.0	75	37	22 ~ 45	23	41	HDP-07A	0.6			
3120 00107090	<b>-90</b>	1	0.5 ~ 7.0	90	52	22 ~ 45	23	41	HDP-07A				
3120 00107105	<b>-105</b>	1	0.5 ~ 7.0	105	67	22 ~ 45	23	41	HDP-07A	0.7			
3120 00109075	<b>BT30 -GDZ09 -75</b>	1	2.5 ~ 9.0	75	28	27 ~ 57	29	41	GDP-09	0.7	FDC-09AA	FK-0025	L-3T
3120 00109090	<b>-90</b>	1	2.5 ~ 9.0	90	43	27 ~ 57	29	41	GDP-09				
3120 00109105	<b>-105</b>	1	2.5 ~ 9.0	105	58	27 ~ 57	29	41	GDP-09				
3120 00112105	<b>BT30 -GDZ12 -105</b>	2	2.5 ~ 12.0	105	42	33 ~ 69	34	52	GDP-12	1.1	FDC-12AA	FK-0034	L-4T
3120 00112120	<b>-120</b>	2	2.5 ~ 12.0	120	57	33 ~ 69	34	52	GDP-12				
3120 00112135	<b>-135</b>	2	2.5 ~ 12.0	135	72	33 ~ 69	34	52	GDP-12				
3120 00116105	<b>BT30 -GDZ16 -105</b>	2	3.5 ~ 16.0	105	42	38 ~ 82	38	56	GDP-16	1.2	FDC-16AA	FK-0034	L-4T
3120 00116120	<b>-120</b>	2	3.5 ~ 16.0	120	57	38 ~ 82	38	56	GDP-16				
3120 00116135	<b>-135</b>	2	3.5 ~ 16.0	135	72	38 ~ 82	38	56	GDP-16				
3120 00307090	<b>BT40 -GDZ07 -90</b>	1	0.5 ~ 7.0	90	43	22 ~ 45	23	41	HDP-07A	1.3	FDC-07AA	S-0	L-3T
3120 00307105	<b>-105</b>	1	0.5 ~ 7.0	105	58	22 ~ 45	23	41	HDP-07A				
3120 00307120	<b>-120</b>	1	0.5 ~ 7.0	120	73	22 ~ 45	23	41	HDP-07A				
3120 00309090	<b>BT40 -GDZ09 -90</b>	1	2.5 ~ 9.0	90	43	27 ~ 57	29	45	GDP-09	1.3	FDC-09AA	FK-0025	L-3T
3120 00309105	<b>-105</b>	1	2.5 ~ 9.0	105	58	27 ~ 57	29	45	GDP-09	1.4			
3120 00309120	<b>-120</b>	1	2.5 ~ 9.0	120	73	27 ~ 57	29	45	GDP-09				
3120 00309135	<b>-135</b>	1	2.5 ~ 9.0	135	88	27 ~ 57	29	45	GDP-09				
3120 00309165	<b>-165</b>	1	2.5 ~ 9.0	165	118	27 ~ 57	29	45	GDP-09				
3120 00312090	<b>BT40 -GDZ12 -90</b>	1	2.5 ~ 12.0	90	39	33 ~ 69	34	56	GDP-12	1.5	FDC-12AA	FK-0034	L-4T
3120 00312105	<b>-105</b>	1	2.5 ~ 12.0	105	54	33 ~ 69	34	56	GDP-12	1.6			
3120 00312120	<b>-120</b>	1	2.5 ~ 12.0	120	69	33 ~ 69	34	56	GDP-12	1.7			
3120 00312135	<b>-135</b>	1	2.5 ~ 12.0	135	84	33 ~ 69	34	56	GDP-12				
3120 00312165	<b>-165</b>	1	2.5 ~ 12.0	165	114	33 ~ 69	34	56	GDP-12				
3120 00312195	<b>-195</b>	1	2.5 ~ 12.0	195	144	33 ~ 69	34	56	GDP-12				
3120 00316090	<b>BT40 -GDZ16 -90</b>	1	3.5 ~ 16.0	90	43	38 ~ 82	38	62	GDP-16	1.6	FDC-16AA	FK-0034	L-4T
3120 00316105	<b>-105</b>	1	3.5 ~ 16.0	105	58	38 ~ 82	38	62	GDP-16	1.7			
3120 00316120	<b>-120</b>	1	3.5 ~ 16.0	120	73	38 ~ 82	38	62	GDP-16				
3120 00316135	<b>-135</b>	1	3.5 ~ 16.0	135	88	38 ~ 82	38	62	GDP-16				
3120 00316165	<b>-165</b>	1	3.5 ~ 16.0	165	118	38 ~ 82	38	62	GDP-16				
3120 00316195	<b>-195</b>	1	3.5 ~ 16.0	195	148	38 ~ 82	38	62	GDP-16				
3120 00322120	<b>BT40 -GDZ22 -120</b>	2	3.5 ~ 22.0	120	40	47 ~ 103	49	69	GDP-22	2.4			
3120 00322135	<b>-135</b>	2	3.5 ~ 22.0	135	55	47 ~ 103	49	69	GDP-22	2.6			
3120 00322165	<b>-165</b>	2	3.5 ~ 22.0	165	85	47 ~ 103	49	69	GDP-22				
3120 00322195	<b>-195</b>	2	3.5 ~ 22.0	195	115	47 ~ 103	49	69	GDP-22				

# Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	L2	D	D1	Nut	kg	Collet	Spanner	Hex. Wrench
3120 00507090	<b>BT50 -GDZ07 -90</b>	1	0.5 ~ 7.0	90	32	22 ~ 45	23	41	HDP-07A		FDC-07AA	S-0	L-3T
3120 00507105	<b>-105</b>	1	0.5 ~ 7.0	105	47	22 ~ 45	23	41	HDP-07A	3.8			
3120 00507120	<b>-120</b>	1	0.5 ~ 7.0	120	62	22 ~ 45	23	41	HDP-07A				
3120 00507135	<b>-135</b>	1	0.5 ~ 7.0	135	77	22 ~ 45	23	41	HDP-07A				
3120 00507165	<b>-165</b>	1	0.5 ~ 7.0	165	107	22 ~ 45	23	41	HDP-07A				
3120 00507195	<b>-195</b>	1	0.5 ~ 7.0	195	137	22 ~ 45	23	41	HDP-07A				
3120 00509090	<b>BT50 -GDZ09 -90</b>	1	2.5 ~ 9.0	90	32	27 ~ 57	29	45	GDP-09		FDC-09AA	FK-0025	L-3T
3120 00509105	<b>-105</b>	1	2.5 ~ 9.0	105	47	27 ~ 57	29	45	GDP-09				
3120 00509120	<b>-120</b>	1	2.5 ~ 9.0	120	62	27 ~ 57	29	45	GDP-09				
3120 00509135	<b>-135</b>	1	2.5 ~ 9.0	135	77	27 ~ 57	29	45	GDP-09				
3120 00509165	<b>-165</b>	1	2.5 ~ 9.0	165	107	27 ~ 57	29	45	GDP-09				
3120 00509195	<b>-195</b>	1	2.5 ~ 9.0	195	137	27 ~ 57	29	45	GDP-09				
3120 00509225	<b>-225</b>	1	2.5 ~ 9.0	225	167	27 ~ 57	29	45	GDP-09		FDC-12AA	FK-0034	L-4T
3120 00509255	<b>-255</b>	1	2.5 ~ 9.0	255	197	27 ~ 57	29	45	GDP-09				
3120 00512105	<b>BT50 -GDZ12 -105</b>	1	2.5 ~ 12.0	105	43	33 ~ 69	34	56	GDP-12				
3120 00512120	<b>-120</b>	1	2.5 ~ 12.0	120	58	33 ~ 69	34	56	GDP-12				
3120 00512135	<b>-135</b>	1	2.5 ~ 12.0	135	73	33 ~ 69	34	56	GDP-12				
3120 00512165	<b>-165</b>	1	2.5 ~ 12.0	165	103	33 ~ 69	34	56	GDP-12				
3120 00512195	<b>-195</b>	1	2.5 ~ 12.0	195	133	33 ~ 69	34	56	GDP-12		FDC-16AA	FK-0034	L-4T
3120 00512225	<b>-225</b>	1	2.5 ~ 12.0	225	163	33 ~ 69	34	56	GDP-12				
3120 00512255	<b>-255</b>	1	2.5 ~ 12.0	255	193	33 ~ 69	34	56	GDP-12				
3120 00516105	<b>BT50 -GDZ16 -105</b>	1	3.5 ~ 16.0	105	43	38 ~ 82	38	62	GDP-16				
3120 00516120	<b>-120</b>	1	3.5 ~ 16.0	120	58	38 ~ 82	38	62	GDP-16				
3120 00516135	<b>-135</b>	1	3.5 ~ 16.0	135	73	38 ~ 82	38	62	GDP-16	4.4			
3120 00516165	<b>-165</b>	1	3.5 ~ 16.0	165	103	38 ~ 82	38	62	GDP-16		FDC-22AA	FK-0045	L-5T
3120 00516195	<b>-195</b>	1	3.5 ~ 16.0	195	133	38 ~ 82	38	62	GDP-16				
3120 00516225	<b>-225</b>	1	3.5 ~ 16.0	225	163	38 ~ 82	38	62	GDP-16				
3120 00516255	<b>-255</b>	1	3.5 ~ 16.0	255	193	38 ~ 82	38	62	GDP-16				
3120 00522105	<b>BT50 -GDZ22 -105</b>	1	3.5 ~ 22.0	105	39	47 ~ 103	49	76	GDP-22	4.5			
3120 00522120	<b>-120</b>	1	3.5 ~ 22.0	120	54	47 ~ 103	49	76	GDP-22				
3120 00522135	<b>-135</b>	1	3.5 ~ 22.0	135	69	47 ~ 103	49	76	GDP-22		FDC-22AA	FK-0045	L-5T
3120 00522150	<b>-150</b>	1	3.5 ~ 22.0	150	84	47 ~ 103	49	76	GDP-22				
3120 00522165	<b>-165</b>	1	3.5 ~ 22.0	165	99	47 ~ 103	49	76	GDP-22	5.2			
3120 00522195	<b>-195</b>	1	3.5 ~ 22.0	195	129	47 ~ 103	49	76	GDP-22	5.6			
3120 00522225	<b>-225</b>	1	3.5 ~ 22.0	225	159	47 ~ 103	49	76	GDP-22				
3120 00522255	<b>-255</b>	1	3.5 ~ 22.0	255	189	47 ~ 103	49	76	GDP-22				

1. Collet, preset screw, spanner and hex. wrench are sold separately.
2. Always use AA class collet.
3. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets (OH,C or MS).
4. L2 indicates dimension when using with a preset screw.
5. See P.499 for standard Tightening Torque.



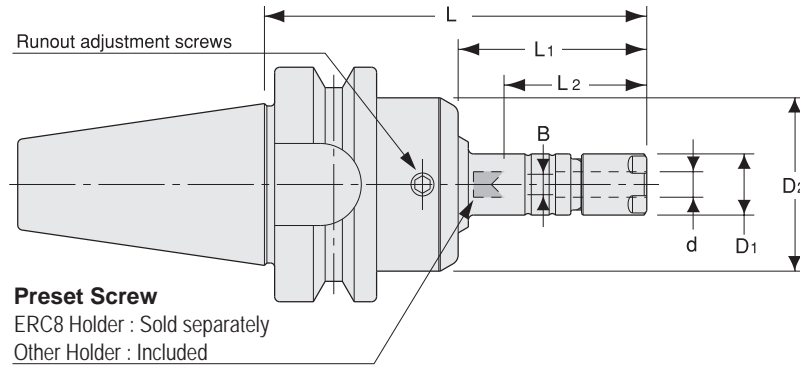
### Ordering Example

**BT40 - GDZ 09 - 90**

Shank size                      Max. collet I.D.                      Projection length (L)

## "R"Zero Holder For Small Diameters

- Runout accuracy of the cutting edge can be adjusted as closely as to zero.
- For drilling in tight space.



Unit : Metric

Code	Model	d	L	L1	B	L2	D1	D2	Nut	Collet	Spanner	Hex. Wrench
3130 00108060	<b>BT30 -ERZ8 -60</b>	0.5~5.0	60	22	— (0 ~ 3.1)	<sup>33</sup> (19 ~ 29)	12	34	ERP-8	ER8 sold separately	S-8E	L-3T
3130 00108075	<b>-75</b>	0.5~5.0	75	37	— (0 ~ 3.1)	<sup>33</sup> (19 ~ 29)	12	34	ERP-8			
3130 00108090	<b>-90</b>	0.5~5.0	90	52	— (0 ~ 3.1)	<sup>33</sup> (19 ~ 29)	12	34	ERP-8			
3130 00108105	<b>-105</b>	0.5~5.0	105	67	— (0 ~ 3.1)	<sup>33</sup> (19 ~ 29)	12	34	ERP-8			
3130 00110060	<b>BT30 -ERZ11S -60</b>	0.5~7.0	60	22	0 ~ 4	22 ~ 42	16	34	ERP-11S	ER11	S-11E	L-3T
3130 00110075	<b>-75</b>	0.5~7.0	75	37	0 ~ 4	22 ~ 42	16	34	ERP-11S			
3130 00110090	<b>-90</b>	0.5~7.0	90	52	0 ~ 4	22 ~ 42	16	34	ERP-11S			
3130 00110105	<b>-105</b>	0.5~7.0	105	67	0 ~ 4	22 ~ 42	16	34	ERP-11S			
3130 00308075	<b>BT40 -ERZ8 -75</b>	0.5~5.0	75	32	— (0 ~ 3.1)	<sup>33</sup> (19 ~ 29)	12	34	ERP-8	ER8 sold separately	S-8E	L-3T
3130 00308090	<b>-90</b>	0.5~5.0	90	47	— (0 ~ 3.1)	<sup>33</sup> (19 ~ 29)	12	34	ERP-8			
3130 00308105	<b>-105</b>	0.5~5.0	105	62	— (0 ~ 3.1)	<sup>33</sup> (19 ~ 29)	12	34	ERP-8			
3130 00308135	<b>-135</b>	0.5~5.0	135	92	— (0 ~ 3.1)	<sup>33</sup> (19 ~ 29)	12	34	ERP-8			
3130 00310075	<b>BT40 -ERZ11S -75</b>	0.5~7.0	75	32	0 ~ 4	22 ~ 42	16	34	ERP-11S	ER11	S-11E	L-3T
3130 00310090	<b>-90</b>	0.5~7.0	90	47	0 ~ 4	22 ~ 42	16	34	ERP-11S			
3130 00310105	<b>-105</b>	0.5~7.0	105	62	0 ~ 4	22 ~ 42	16	34	ERP-11S			
3130 00310135	<b>-135</b>	0.5~7.0	135	92	0 ~ 4	22 ~ 42	16	34	ERP-11S			

1. Collet ,spanner and hex. wrench are sold separately.
2. ES8, a preset screw for ERZ8, is sold separately. ERZ11S includes a standard preset screw HDS-07A-ES11.
3. " B " and " L2 " dimensions in brackets are for using ES8 preset screw.
4. Refer to P. 92 for minimum tool insertion length in case of using our coolant collets.
5. See P.499 for standard Tightening Torque.

Collet

P. 090-091



Spanner

P. 095



Preset screw

P. 094



Hex. Wrench

P. 095



## Ordering Example

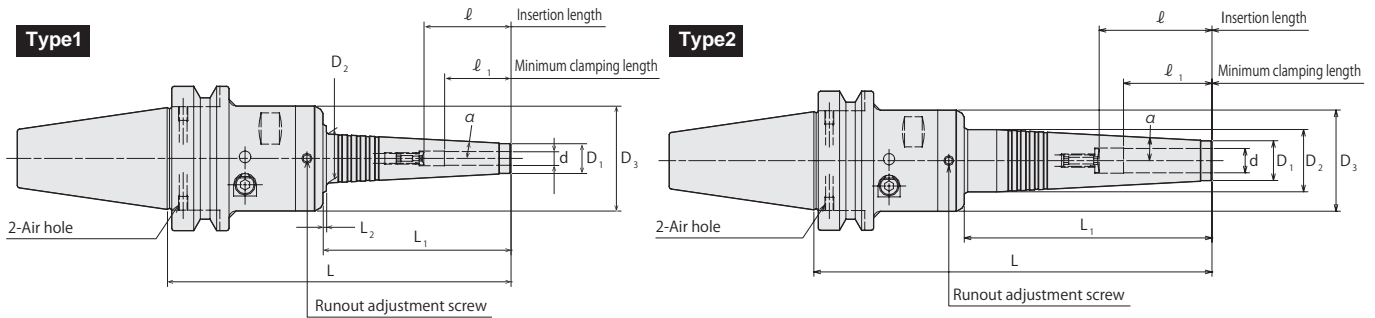
**BT40 - ERZ 8 - 105**  
 Shank size      Max.      Projection  
                          collet I.D.      length (L)



# PHZ · S New

## Slim Hydro "R" Zero Holder

- Runout accuracy of the cutting edge can be adjusted as closely as to zero.



### Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	L2	D1	D2	D3	l	l1	α	Hex. wrench for the actuating screw (Option)	Hex. wrench for runout adjustment screw (Option)
3600 00106150	<b>BT30 -PHZ06S -150</b>	1	6	150	82	1.5	13	21.5	46	37	29	3°	L-4T	L-3T
3600 00106180	<b>-180</b>	1	6	180	112	1.5	13	24.6	46	37	29	3°		
3600 00107150	<b>-PHZ07S -150</b>	1	7	150	82	1.5	14	22.5	46	37	29	3°		
3600 00107180	<b>-180</b>	1	7	180	112	1.5	14	25.6	46	37	29	3°		
3600 00108150	<b>-PHZ08S -150</b>	1	8	150	82	1.5	15	23.5	46	50	29	3°		
3600 00108180	<b>-180</b>	1	8	180	112	1.5	15	26.6	46	50	29	3°		
3600 00109150	<b>-PHZ09S -150</b>	1	9	150	82	1.5	16	24.5	46	50	40	3°		
3600 00109180	<b>-180</b>	1	9	180	112	—	16	27.6	46	50	40	3°		
3600 00110150	<b>-PHZ10S -150</b>	1	10	150	82	1.5	17	25.5	46	50	40	3°		
3600 00110180	<b>-180</b>	2	10	180	112	—	17	28.2	46	50	40	3°		
3600 00111150	<b>-PHZ11S -150</b>	1	11	150	82	1.5	18	26.5	46	50	40	3°		
3600 00111180	<b>-180</b>	2	11	180	112	—	18	28.2	46	50	40	3°		
3600 00112150	<b>-PHZ12S -150</b>	1	12	150	82	—	19	27.4	46	70	40	3°		
3600 00112180	<b>-180</b>	2	12	180	112	—	19	28.2	46	70	40	3°		
3600 00306150	<b>BT40 -PHZ06S -150</b>	1	6	150	82	1.5	13	21.5	46	37	29	3°	L-4T	L-3T
3600 00306180	<b>-180</b>	1	6	180	112	1.5	13	24.6	46	37	29	3°		
3600 00307150	<b>-PHZ07S -150</b>	1	7	150	82	1.5	14	22.5	46	37	29	3°		
3600 00307180	<b>-180</b>	1	7	180	112	1.5	14	25.6	46	37	29	3°		
3600 00308150	<b>-PHZ08S -150</b>	1	8	150	82	1.5	15	23.5	46	50	29	3°		
3600 00308180	<b>-180</b>	1	8	180	112	1.5	15	26.6	46	50	29	3°		
3600 00309150	<b>-PHZ09S -150</b>	1	9	150	82	1.5	16	24.5	46	50	40	3°		
3600 00309180	<b>-180</b>	1	9	180	112	—	16	27.6	46	50	40	3°		
3600 00310150	<b>-PHZ10S -150</b>	1	10	150	82	1.5	17	25.5	46	50	40	3°		
3600 00310180	<b>-180</b>	2	10	180	112	—	17	28.2	46	50	40	3°		
3600 00311150	<b>-PHZ11S -150</b>	1	11	150	82	1.5	18	26.5	46	50	40	3°		
3600 00311180	<b>-180</b>	2	11	180	112	—	18	28.2	46	50	40	3°		
3600 00312150	<b>-PHZ12S -150</b>	1	12	150	82	—	19	27.4	46	70	40	3°		
3600 00312180	<b>-180</b>	2	12	180	112	—	19	28.2	46	70	40	3°		
3600 00506165	<b>BT50 -PHZ06S -165</b>	1	6	165	82	1.5	13	21.5	46	37	29	3°	L-4T	L-3T
3600 00506195	<b>-195</b>	1	6	195	112	1.5	13	24.6	46	37	29	3°		
3600 00507165	<b>-PHZ07S -165</b>	1	7	165	82	1.5	14	22.5	46	37	29	3°		
3600 00507195	<b>-195</b>	1	7	195	112	1.5	14	25.6	46	37	29	3°		
3600 00508165	<b>-PHZ08S -165</b>	1	8	165	82	1.5	15	23.5	46	50	29	3°		
3600 00508195	<b>-195</b>	1	8	195	112	1.5	15	26.6	46	50	29	3°		
3600 00509165	<b>-PHZ09S -165</b>	1	9	165	82	1.5	16	24.5	46	50	40	3°		
3600 00509195	<b>-195</b>	1	9	195	112	—	16	27.6	46	50	40	3°		
3600 00510165	<b>-PHZ10S -165</b>	1	10	165	82	1.5	17	25.5	46	50	40	3°		
3600 00510195	<b>-195</b>	2	10	195	112	—	17	28.2	46	50	40	3°		
3600 00511165	<b>-PHZ11S -165</b>	1	11	165	82	1.5	18	26.5	46	50	40	3°		
3600 00511195	<b>-195</b>	2	11	195	112	—	18	28.2	46	50	40	3°		
3600 00512165	<b>-PHZ12S -165</b>	1	12	165	82	—	19	27.4	46	70	40	3°		
3600 00512195	<b>-195</b>	2	12	195	112	—	19	28.2	46	70	40	3°		

1. Tool shank diameter tolerance must be within h6.
2. Do not leave the holder with actuating screw tightened when the chuck is empty.
3. Hex-head screws (included) are necessary to plug air hole for center through coolant feed.

Tightening torque ( Torque wrench : p.498 )			
model	I.D. (d)		Tightening torque (Nm)
	mm	inch	
PHZ·S	06 ~ 12	—	9 ~ 10

Hex. Wrench

P. 095



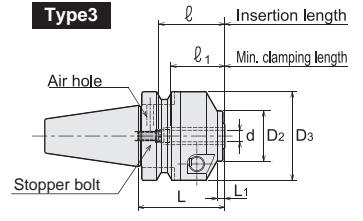
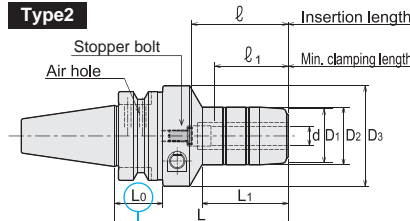
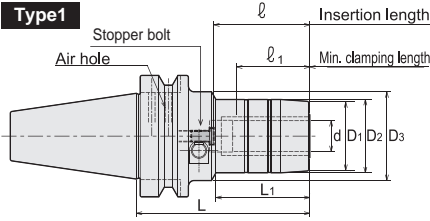
Ordering Example

**BT40 - PHZ 8 S - 105**  
 Shank size      Max. collet I.D.      Projection length (L)

# PHC-A

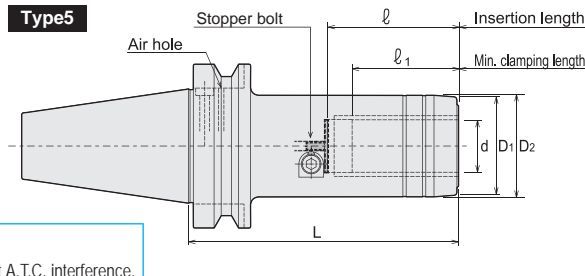
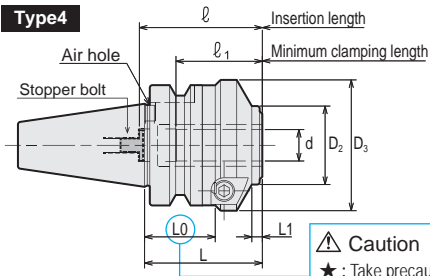
## Power Hydro Chuck

● Hydro chuck with collet holder flexibility. Suitable for high precision cutting.



For PHC04A, the Stopper bolt is not included. Please order separately (Special item).

**Caution**  
★ : Take precautions against A.T.C. interference.



**Caution**  
★ : Take precautions against A.T.C. interference.

### Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	D1	D2	D3	L0	ℓ	ℓ1	Kg	Hex. Wrench (Option)
3930 01104065	BT30 -PHC04A -65	1	4	65	25.1	—	25	46	—	29	24		L-4T (4mm)
3930 01106045	BT30 -PHC06A -45	3	6	45	4	—	26	46	—	34	29	0.6	
3930 01106075	-75	1	6	75	30	24	26	46	—	34	29	0.7	
3930 01107045	BT30 -PHC07A -45	3	7	45	4	—	28	46	—	34	29	0.6	
3930 01107075	-75	1	7	75	30	26	28	46	—	34	29	0.8	
3930 01108045	BT30 -PHC08A -45	3	8	45	4	—	28	46	—	34	29	0.6	
3930 01108075	-75	1	8	75	30	26	28	46	—	34	29	0.8	
3930 01109045	BT30 -PHC09A -45	3	9	45	4	—	30	46	—	45	33	0.6	
3930 01109090	-90	1	9	90	46	28	30	46	—	55	40	0.8	
3930 01109105	-105	2	9	105	44	28	30	52	40	50	40	1.2	
3930 01110045	BT30 -PHC10A -45	3	10	45	4	—	30	46	—	45	33	0.6	
3930 01110090	-90	1	10	90	46	28	30	46	—	55	40	0.8	
3930 01110105	-105	2	10	105	44	28	30	52	40	50	40	1.2	
3930 01111045	BT30 -PHC11A -45	3	11	45	4	—	30	46	—	45	33	0.6	
3930 01111090	-90	1	11	90	46	30	32	46	—	55	40	0.9	
3930 01111105	-105	2	11	105	45	30	32	52	40	50	40	1.1	
3930 01112045	BT30 -PHC12A -45	3	12	45	4	—	30	46	—	45	33	0.6	
3930 01112090	-90	1	12	90	46	30	32	46	—	55	40	0.9	
3930 01112105	-105	2	12	105	45	30	32	52	40	50	40	1.1	
3930 01113045	BT30 -PHC13A -45	4	13	45	4	—	30	50	27	45	33	0.6	
3930 01113090	-90	1	13	90	48	34	36	46	—	55	40	0.9	
3930 01113105	-105	2	13	105	46	34	36	52	40	50	40	1.5	
3930 01114045	BT30 -PHC14A -45	4	14	45	4	—	30	50	27	45	33	0.6	
3930 01114090	-90	1	14	90	48	34	36	46	—	55	40	0.9	
3930 01114105	-105	2	14	105	46	34	36	52	40	50	40	1.2	
3930 01115045	BT30 -PHC15A -45	4	15	45	4	—	30	50	27	45	33	0.6	
3930 01115090	-90	1	15	90	48	36	38	46	—	55	40	1.0	
3930 01115105	-105	2	15	105	46	36	38	52	40	50	40	1.2	
3930 01116045	BT30 -PHC16A -45	4	16	45	4	—	30	50	27	45	33	0.6	
3930 01116090	-90	1	16	90	48	36	38	46	—	55	40	0.9	
3930 01116105	-105	2	16	105	46	36	38	52	40	50	40	1.2	
3930 01120090	BT30 -PHC20A -90	1	20	90	49	40	42	46	—	50	40	1.0	
3930 01120120	-120	1	20	120	69	40	42	46	—	70	40	1.3	
3930 01304070	BT40 -PHC04A -70	1	4	70	25.1	—	25	46	—	29	24		L-4T (4mm)
3930 01306075	BT40 -PHC06A -75	1	6	75	30	24	26	46	—	34	29	1.3	
3930 01306105	-105	1	6	105	41	24	26	46	—	45	29	1.5	
3930 01307075	BT40 -PHC07A -75	1	7	75	30	26	28	46	—	34	29	1.3	
3930 01307105	-105	1	7	105	41	26	28	46	—	45	29	1.4	
3930 01308075	BT40 -PHC08A -75	1	8	75	30	26	28	46	—	34	29	1.3	
3930 01308105	-105	1	8	105	41	26	28	46	—	45	29	1.6	
3930 01309090	BT40 -PHC09A -90	1	9	90	44	28	30	52	—	50	40	1.4	
3930 01309120	-120	1	9	120	64	28	30	52	—	70	40	1.7	

# Metric Sizes

Unit : Metric

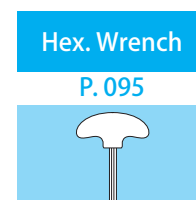
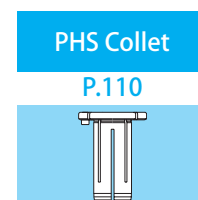
Code	Model	Type	d	L	L1	D1	D2	D3	L0	ℓ	ℓ 1	Kg	Hex. Wrench (Option)
3930 01310090	BT40 -PHC10A -90	1	10	90	44	28	30	52	—	50	40	1.4	L-4T (4mm)
3930 01310120	-120	1	10	120	64	28	30	52	—	70	40	1.7	
3930 01311090	BT40 -PHC11A -90	1	11	90	45	30	32	52	—	50	40	1.4	
3930 01311120	-120	1	11	120	65	30	32	52	—	70	40	1.7	
3930 01312090	BT40 -PHC12A -90	1	12	90	45	30	32	52	—	50	40	1.4	
3930 01312120	-120	1	12	120	65	30	32	52	—	70	40	1.7	
3930 01313090	BT40 -PHC13A -90	1	13	90	46	34	36	52	—	50	40	1.5	
3930 01313120	-120	1	13	120	66	34	36	52	—	70	40	1.8	
3930 01314090	BT40 -PHC14A -90	1	14	90	46	34	36	52	—	50	40	1.5	
3930 01314120	-120	1	14	120	66	34	36	52	—	70	40	1.8	
3930 01315090	BT40 -PHC15A -90	1	15	90	46	36	38	52	—	50	40	1.5	
3930 01315120	-120	1	15	120	66	36	38	52	—	70	40	1.8	
3930 01316090	BT40 -PHC16A -90	1	16	90	46	36	38	52	—	50	40	1.5	
3930 01316120	-120	1	16	120	66	36	38	52	—	70	40	1.8	
3930 01320090	BT40 -PHC20A -90	1	20	90	49	40	42	46	—	50	40	1.5	
3930 01320120	-120	1	20	120	69	40	42	46	—	70	40	1.8	
3930 01325105	BT40 -PHC25A -105	1	25	105	59	50	52	62	—	60	50	2.1	
3930 01325135	-135	1	25	135	79	50	52	62	—	80	50	2.5	
3930 01332120	BT40 -PHC32A -120	5	32	120	93	60	62	—	—	75	65	2.6	
3930 01332150	-150	5	32	150	123	60	62	—	—	80	65	3.2	
3930 01506090	BT50 -PHC06A -90	1	6	90	30	24	26	46	—	34	29	3.8	
3930 01506120	-120	1	6	120	41	24	26	46	—	45	29	4.1	
3930 01506150	-150	1	6	150	41	24	26	46	—	45	29	4.4	
3930 01507090	BT50 -PHC07A -90	1	7	90	30	26	28	46	—	34	29	3.9	
3930 01507120	-120	1	7	120	41	26	28	46	—	45	29	4.1	
3930 01507150	-150	1	7	150	41	26	28	46	—	45	29	4.5	
3930 01508090	BT50 -PHC08A -90	1	8	90	30	26	28	46	—	34	29	3.9	
3930 01508120	-120	1	8	120	41	26	28	46	—	45	29	4.1	
3930 01508150	-150	1	8	150	41	26	28	46	—	45	29	4.5	
3930 01509105	BT50 -PHC09A -105	1	9	105	44	28	30	52	—	50	40	4.0	
3930 01509135	-135	1	9	135	64	28	30	52	—	70	40	4.3	
3930 01509165	-165	1	9	165	64	28	30	52	—	70	40	4.7	
3930 01510105	BT50 -PHC10A -105	1	10	105	44	28	30	52	—	50	40	4.1	
3930 01510135	-135	1	10	135	64	28	30	52	—	70	40	4.3	
3930 01510165	-165	1	10	165	64	28	30	52	—	70	40	4.7	
3930 01511105	BT50 -PHC11A -105	1	11	105	45	30	32	52	—	50	40	4.1	
3930 01511135	-135	1	11	135	65	30	32	52	—	70	40	4.3	
3930 01511165	-165	1	11	165	65	30	32	52	—	70	40	4.7	
3930 01512105	BT50 -PHC12A -105	1	12	105	45	30	32	52	—	50	40	4.1	
3930 01512135	-135	1	12	135	65	30	32	52	—	70	40	4.3	
3930 01512165	-165	1	12	165	65	30	32	52	—	70	40	4.7	
3930 01513105	BT50 -PHC13A -105	1	13	105	46	34	36	52	—	50	40	4.2	
3930 01513135	-135	1	13	135	66	34	36	52	—	70	40	4.4	
3930 01513165	-165	1	13	165	66	34	36	52	—	70	40	4.8	
3930 01514105	BT50 -PHC14A -105	1	14	105	46	34	36	52	—	50	40	4.1	
3930 01514135	-135	1	14	135	66	34	36	52	—	70	40	4.4	
3930 01514165	-165	1	14	165	66	34	36	52	—	70	40	4.8	
3930 01515105	BT50 -PHC15A -105	1	15	105	46	36	38	52	—	50	40	4.1	
3930 01515135	-135	1	15	135	66	36	38	52	—	70	40	4.4	
3930 01515165	-165	1	15	165	66	36	38	52	—	70	40	4.8	
3930 01516105	BT50 -PHC16A -105	1	16	105	46	36	38	52	—	50	40	4.1	
3930 01516135	-135	1	16	135	66	36	38	52	—	70	40	4.4	
3930 01516165	-165	1	16	165	66	36	38	52	—	70	40	4.8	
3930 01520105	BT50 -PHC20A -105	1	20	105	49	40	42	46	—	50	40	4.1	
3930 01520135	-135	1	20	135	69	40	42	46	—	70	40	4.4	
3930 01520165	-165	1	20	165	69	40	42	46	—	70	40	4.7	
3930 01525120	BT50 -PHC25A -120	1	25	120	59	50	52	62	—	64	50	4.7	
3930 01525150	-150	1	25	150	79	50	52	62	—	80	50	5.2	
3930 01525165	-165	1	25	165	79	50	52	62	—	80	50	5.5	
3930 01532135	BT50 -PHC32A -135	5	32	135	—	60	62	—	—	75	65	5.2	
3930 01532165	-165	5	32	165	—	60	62	—	—	80	65	5.8	

- Cutting tool shank must be within tolerances specified below ;  
Shank diameter less than 6mm : Within h6 tolerance  
Shank diameter 6mm and over : Within h7 tolerance  
h6 or 0/-0.01 tolerance is recommended when newly making a cutting tool.
- Do not leave the holder with actuating screw tightened when the chuck is empty.
- PHC12A and PHC20A have pin holes for collet with stopper pin on its body.
- Hex-head screws (included) are necessary to plug air hole for center through coolant feed.
- For PHC04A, the stopper bolt is not included. Please order separately (Special item).
- For PHC04A, the length adjustment unit cannot be used.

### Ordering Example

**BT40 - PHC 12 A - 135**  
Shank size                      I.D. (d)                      Projection length (L)

Tightening torque ( Torque wrench : p.498 )		
model	I.D. (d)	Tightening torque (Nm)
	mm	
PHC-A	06 ~ 08	11 ~ 12
PHC-A	09 ~ 20	7 ~ 8
PHC-A	25, 32	29 ~ 30



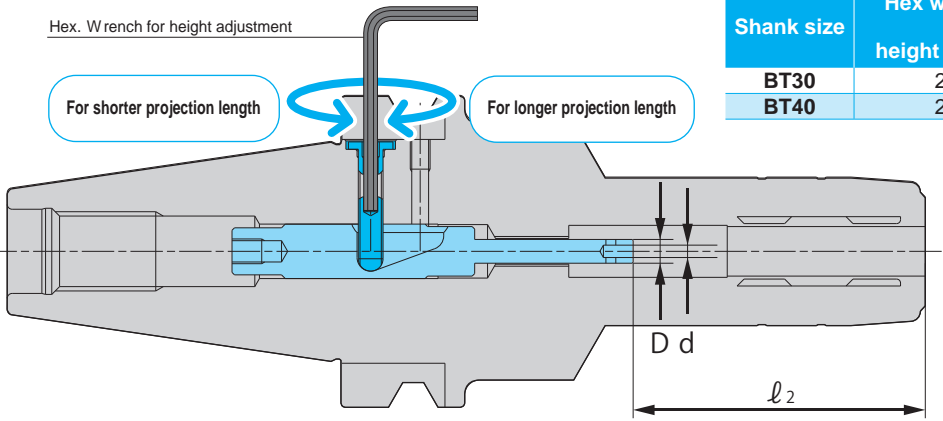
# Length adjustment unit

Hex. Wrench for height adjustment

For shorter projection length

For longer projection length

Shank size	Hex wrench size for height adjustment	Install / removal tool for length adjustment unit
BT30	2.5mm	STS-R1
BT40	2.5mm	STS-R2



## Metric Sizes

Unit : Metric

Code	Length adjustment unit	Matched chuck	Adjustment range $l_2$	Adjustable amount	Pin end I.D. (d)	Pin end O.D. (D)
3934 23044023	PHC-P304-4023	BT30 -PHC06A -75	29-34	5	2	3.8
3934 23044023	PHC-P304-4023	BT30 -PHC07A -75	29-34	5	2	3.8
3934 23044023	PHC-P304-4023	BT30 -PHC08A -75	29-34	5	2	3.8
3934 23053730	PHC-P305-3730	BT30 -PHC09A -90	40-45	5	2.5	4.8
3934 23053725	PHC-P305-3725	-90	45-50	5	2.5	4.8
3934 23053720	PHC-P305-3720	-90	50-55	5	2.5	4.8
3934 23054537	PHC-P305-4537	-105	40-45	5	2.5	4.8
3934 23054532	PHC-P305-4532	-105	45-50	5	2.5	4.8
3934 23053730	PHC-P305-3730	BT30 -PHC10A -90	40-45	5	2.5	4.8
3934 23053725	PHC-P305-3725	-90	45-50	5	2.5	4.8
3934 23053720	PHC-P305-3720	-90	50-55	5	2.5	4.8
3934 23054537	PHC-P305-4537	-105	40-45	5	2.5	4.8
3934 23054532	PHC-P305-4532	-105	45-50	5	2.5	4.8
3934 23053730	PHC-P305-3730	BT30 -PHC11A -90	40-45	5	2.5	4.8
3934 23053725	PHC-P305-3725	-90	45-50	5	2.5	4.8
3934 23053720	PHC-P305-3720	-90	50-55	5	2.5	4.8
3934 23054537	PHC-P305-4537	-105	40-45	5	2.5	4.8
3934 23054532	PHC-P305-4532	-105	45-50	5	2.5	4.8
3934 23053730	PHC-P305-3730	BT30 -PHC12A -90	40-45	5	2.5	4.8
3934 23053725	PHC-P305-3725	-90	45-50	5	2.5	4.8
3934 23053720	PHC-P305-3720	-90	50-55	5	2.5	4.8
3934 23054537	PHC-P305-4537	-105	40-45	5	2.5	4.8
3934 23054532	PHC-P305-4532	-105	45-50	5	2.5	4.8
3934 23053730	PHC-P305-3730	BT30 -PHC13A -90	40-45	5	2.5	4.8
3934 23053725	PHC-P305-3725	-90	45-50	5	2.5	4.8
3934 23053720	PHC-P305-3720	-90	50-55	5	2.5	4.8
3934 23054537	PHC-P305-4537	-105	40-45	5	2.5	4.8
3934 23054532	PHC-P305-4532	-105	45-50	5	2.5	4.8
3934 23053730	PHC-P305-3730	BT30 -PHC14A -90	40-45	5	2.5	4.8
3934 23053725	PHC-P305-3725	-90	45-50	5	2.5	4.8
3934 23053720	PHC-P305-3720	-90	50-55	5	2.5	4.8
3934 23054537	PHC-P305-4537	-105	40-45	5	2.5	4.8
3934 23054532	PHC-P305-4532	-105	45-50	5	2.5	4.8
3934 23053730	PHC-P305-3730	BT30 -PHC15A -90	40-45	5	2.5	4.8
3934 23053725	PHC-P305-3725	-90	45-50	5	2.5	4.8
3934 23053720	PHC-P305-3720	-90	50-55	5	2.5	4.8
3934 23054537	PHC-P305-4537	-105	40-45	5	2.5	4.8
3934 23054532	PHC-P305-4532	-105	45-50	5	2.5	4.8
3934 23053730	PHC-P305-3730	BT30 -PHC16A -90	40-45	5	2.5	4.8
3934 23053725	PHC-P305-3725	-90	45-50	5	2.5	4.8
3934 23053720	PHC-P305-3720	-90	50-55	5	2.5	4.8
3934 23054537	PHC-P305-4537	-105	40-45	5	2.5	4.8
3934 23054532	PHC-P305-4532	-105	45-50	5	2.5	4.8
3934 23054027	PHC-P305-4027	BT30 -PHC20A -90	40-45	5	2.5	4.8
3934 23054022	PHC-P305-4022	-90	45-50	5	2.5	4.8
3934 23054542	PHC-P305-4542	-120	50-55	5	2.5	4.8
3934 23054537	PHC-P305-4537	-120	55-60	5	2.5	4.8
3934 23054532	PHC-P305-4532	-120	60-65	5	2.5	4.8

# Metric Sizes

Unit : Metric

Code	Length adjustment unit	Matched chuck	Adjustment range $\ell$ 2	Adjustable amount	Pin end I.D. (d)	Pin end O.D. (D)
3934 24044423	PHC-P404-4423	BT40 -PHC06A -75	29-34	5	2	3.8
3934 24046334	PHC-P404-6334	-105	29-39	10	2	3.8
3934 24046328	PHC-P404-6328	-105	35-45	10	2	3.8
3934 24044423	PHC-P404-4423	BT40 -PHC07A -75	29-34	5	2	3.8
3934 24046334	PHC-P404-6334	-105	29-39	10	2	3.8
3934 24046328	PHC-P404-6328	-105	35-45	10	2	3.8
3934 24044423	PHC-P404-4423	BT40 -PHC08A -75	29-34	5	2	3.8
3934 24046334	PHC-P404-6334	-105	29-39	10	2	3.8
3934 24046328	PHC-P404-6328	-105	35-45	10	2	3.8
3934 24054427	PHC-P405-4427	BT40 -PHC09A -90	40-50	10	2.5	4.8
3934 24054952	PHC-P405-4952	-120	40-50	10	2.5	4.8
3934 24054942	PHC-P405-4942	-120	50-60	10	2.5	4.8
3934 24054932	PHC-P405-4932	-120	60-70	10	2.5	4.8
3934 24054427	PHC-P405-4427	BT40 -PHC10A -90	40-50	10	2.5	4.8
3934 24054952	PHC-P405-4952	-120	40-50	10	2.5	4.8
3934 24054942	PHC-P405-4942	-120	50-60	10	2.5	4.8
3934 24054932	PHC-P405-4932	-120	60-70	10	2.5	4.8
3934 24054427	PHC-P405-4427	BT40 -PHC11A -90	40-50	10	2.5	4.8
3934 24054952	PHC-P405-4952	-120	40-50	10	2.5	4.8
3934 24054942	PHC-P405-4942	-120	50-60	10	2.5	4.8
3934 24054932	PHC-P405-4932	-120	60-70	10	2.5	4.8
3934 24054427	PHC-P405-4427	BT40 -PHC12A -90	40-50	10	2.5	4.8
3934 24054952	PHC-P405-4952	-120	40-50	10	2.5	4.8
3934 24054942	PHC-P405-4942	-120	50-60	10	2.5	4.8
3934 24054932	PHC-P405-4932	-120	60-70	10	2.5	4.8
3934 24054427	PHC-P405-4427	BT40 -PHC13A -90	40-50	10	2.5	4.8
3934 24054952	PHC-P405-4952	-120	40-50	10	2.5	4.8
3934 24054942	PHC-P405-4942	-120	50-60	10	2.5	4.8
3934 24054932	PHC-P405-4932	-120	60-70	10	2.5	4.8
3934 24054427	PHC-P405-4427	BT40 -PHC14A -90	40-50	10	2.5	4.8
3934 24054952	PHC-P405-4952	-120	40-50	10	2.5	4.8
3934 24054942	PHC-P405-4942	-120	50-60	10	2.5	4.8
3934 24054932	PHC-P405-4932	-120	60-70	10	2.5	4.8
3934 24054427	PHC-P405-4427	BT40 -PHC15A -90	40-50	10	2.5	4.8
3934 24054952	PHC-P405-4952	-120	40-50	10	2.5	4.8
3934 24054942	PHC-P405-4942	-120	50-60	10	2.5	4.8
3934 24054932	PHC-P405-4932	-120	60-70	10	2.5	4.8
3934 24054427	PHC-P405-4427	BT40 -PHC16A -90	40-50	10	2.5	4.8
3934 24054952	PHC-P405-4952	-120	40-50	10	2.5	4.8
3934 24054942	PHC-P405-4942	-120	50-60	10	2.5	4.8
3934 24054932	PHC-P405-4932	-120	60-70	10	2.5	4.8
3934 24054427	PHC-P405-4427	BT40 -PHC20A -90	40-50	10	2.5	4.8
3934 24054952	PHC-P405-4952	-120	40-50	10	2.5	4.8
3934 24054942	PHC-P405-4942	-120	50-60	10	2.5	4.8
3934 24054932	PHC-P405-4932	-120	60-70	10	2.5	4.8
3934 24054432	PHC-P405-4432	BT40 -PHC25A -105	50-60	10	2.5	4.8
3934 24055452	PHC-P405-5452	-135	50-60	10	2.5	4.8
3934 24055442	PHC-P405-5442	-135	60-70	10	2.5	4.8
3934 24055432	PHC-P405-5432	-135	70-80	10	2.5	4.8
3934 24054432	PHC-P405-4432	BT40 -PHC32A -120	65-75	10	2.5	4.8
3934 24055452	PHC-P405-5452	-150	65-75	10	2.5	4.8
3934 24054952	PHC-P405-4952	-150	70-80	10	2.5	4.8

Length adjustment unit can be used for chucks other than 45mm projection length.  
 Length adjustment unit can be used with BT, CAT and SK shank chucks only.  
 For PHC04A, the length adjustment unit cannot be used.

### Ordering Example

BT30-PHC10A-105 with adjustment range of 40-45mm (Adjustable amount-5mm).

Chuck

+

BT30-PHC10A-105

Length adjustment unit

+

PHC-P305-4537

Install / removal tool for length adjustment unit

+

STS-R1



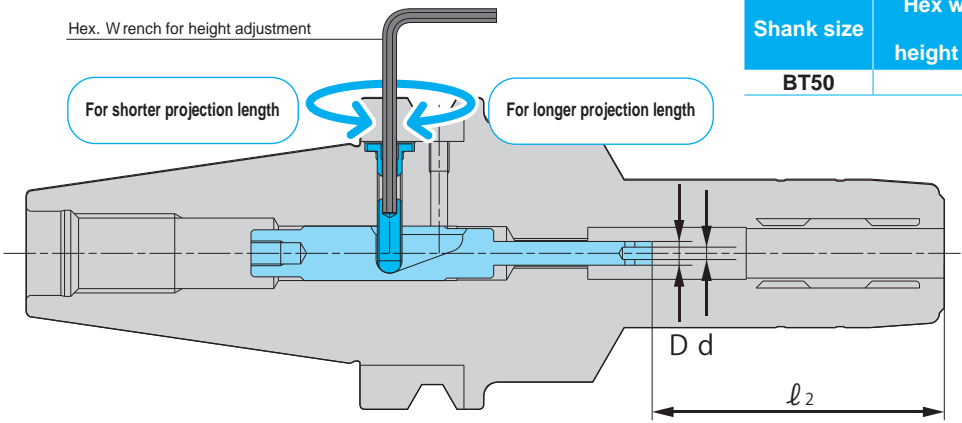
# Length adjustment unit

Hex. Wrench for height adjustment

For shorter projection length

For longer projection length

Shank size	Hex wrench size for height adjustment	Install / removal tool for length adjustment unit
BT50	3mm	STS-R2



## Metric Sizes

Unit : Metric

Code	Length adjustment unit	Matched chuck	Adjustment range $l_2$	Adjustable amount	Pin end I.D. (d)	Pin end O.D. (D)
3934 25045129	PHC-P504-5129	BT50 -PHC06A-90	29-34	5	2	3.8
3934 25047139	PHC-P504-7139	-120	29-45	16	2	3.8
3934 25040139	PHC-P504-10139	-150	29-45	16	2	3.8
3934 25045129	PHC-P504-5129	BT50 -PHC07A-90	29-34	5	2	3.8
3934 25047139	PHC-P504-7139	-120	29-45	16	2	3.8
3934 25040139	PHC-P504-10139	-150	29-45	16	2	3.8
3934 25045129	PHC-P504-5129	BT50 -PHC08A-90	29-34	5	2	3.8
3934 25047139	PHC-P504-7139	-120	29-45	16	2	3.8
3934 25040139	PHC-P504-10139	-150	29-45	16	2	3.8
3934 25055133	PHC-P505-5133	BT50 -PHC09A-105	40-50	10	2.5	4.8
3934 25056153	PHC-P505-6153	-135	40-55	15	2.5	4.8
3934 25056138	PHC-P505-6138	-135	55-70	15	2.5	4.8
3934 25059153	PHC-P505-9153	-165	40-55	15	2.5	4.8
3934 25059138	PHC-P505-9138	-165	55-70	15	2.5	4.8
3934 25055133	PHC-P505-5133	BT50 -PHC10A-105	40-50	10	2.5	4.8
3934 25056153	PHC-P505-6153	-135	40-55	15	2.5	4.8
3934 25056138	PHC-P505-6138	-135	55-70	15	2.5	4.8
3934 25059153	PHC-P505-9153	-165	40-55	15	2.5	4.8
3934 25059138	PHC-P505-9138	-165	55-70	15	2.5	4.8
3934 25055133	PHC-P505-5133	BT50 -PHC11A-105	40-50	10	2.5	4.8
3934 25056153	PHC-P505-6153	-135	40-55	15	2.5	4.8
3934 25056138	PHC-P505-6138	-135	55-70	15	2.5	4.8
3934 25059153	PHC-P505-9153	-165	40-55	15	2.5	4.8
3934 25059138	PHC-P505-9138	-165	55-70	15	2.5	4.8
3934 25055133	PHC-P505-5133	BT50 -PHC12A-105	40-50	10	2.5	4.8
3934 25056153	PHC-P505-6153	-135	40-55	15	2.5	4.8
3934 25056138	PHC-P505-6138	-135	55-70	15	2.5	4.8
3934 25059153	PHC-P505-9153	-165	40-55	15	2.5	4.8
3934 25059138	PHC-P505-9138	-165	55-70	15	2.5	4.8
3934 25055133	PHC-P505-5133	BT50 -PHC13A-105	40-50	10	2.5	4.8
3934 25056153	PHC-P505-6153	-135	40-55	15	2.5	4.8
3934 25056138	PHC-P505-6138	-135	55-70	15	2.5	4.8
3934 25059153	PHC-P505-9153	-165	40-55	15	2.5	4.8
3934 25059138	PHC-P505-9138	-165	55-70	15	2.5	4.8
3934 25055133	PHC-P505-5133	BT50 -PHC14A-105	40-50	10	2.5	4.8
3934 25056153	PHC-P505-6153	-135	40-55	15	2.5	4.8
3934 25056138	PHC-P505-6138	-135	55-70	15	2.5	4.8
3934 25059153	PHC-P505-9153	-165	40-55	15	2.5	4.8
3934 25059138	PHC-P505-9138	-165	55-70	15	2.5	4.8
3934 25055133	PHC-P505-5133	BT50 -PHC15A-105	40-50	10	2.5	4.8
3934 25056153	PHC-P505-6153	-135	40-55	15	2.5	4.8
3934 25056138	PHC-P505-6138	-135	55-70	15	2.5	4.8
3934 25059153	PHC-P505-9153	-165	40-55	15	2.5	4.8
3934 25059138	PHC-P505-9138	-165	55-70	15	2.5	4.8
3934 25055133	PHC-P505-5133	BT50 -PHC16A-105	40-50	10	2.5	4.8
3934 25056153	PHC-P505-6153	-135	40-55	15	2.5	4.8
3934 25056138	PHC-P505-6138	-135	55-70	15	2.5	4.8
3934 25059153	PHC-P505-9153	-165	40-55	15	2.5	4.8
3934 25059138	PHC-P505-9138	-165	55-70	15	2.5	4.8

# Metric Sizes

Unit : Metric

Code	Length adjustment unit	Matched chuck	Adjustment range $\ell 2$	Adjustable amount	Pin end I.D. (d)	Pin end O.D. (D)
3934 25055133	<b>PHC-P505-5133</b>	BT50 -PHC20A -105	40-50	10	2.5	4.8
3934 25056153	<b>PHC-P505-6153</b>	-135	40-55	15	2.5	4.8
3934 25056138	<b>PHC-P505-6138</b>	-135	55-70	15	2.5	4.8
3934 25059153	<b>PHC-P505-9153</b>	-165	40-55	15	2.5	4.8
3934 25059138	<b>PHC-P505-9138</b>	-165	55-70	15	2.5	4.8
3934 25055138	<b>PHC-P505-5138</b>	BT50 -PHC25A -120	50-64	14	2.5	4.8
3934 25056158	<b>PHC-P505-6158</b>	-150	50-65	15	2.5	4.8
3934 25056143	<b>PHC-P505-6143</b>	-150	65-80	15	2.5	4.8
3934 25057658	<b>PHC-P505-7658</b>	-165	50-65	15	2.5	4.8
3934 25057643	<b>PHC-P505-7643</b>	-165	65-80	15	2.5	4.8
3934 25055138	<b>PHC-P505-5138</b>	BT50 -PHC32A -135	65-75	10	2.5	4.8
3934 25056158	<b>PHC-P505-6158</b>	-165	65-80	15	2.5	4.8

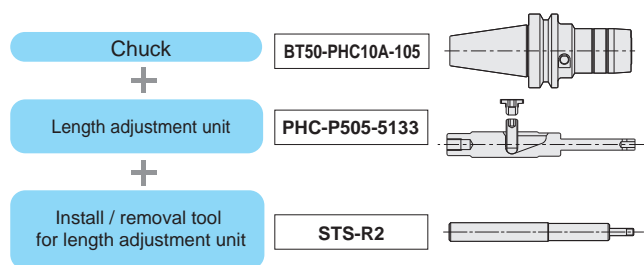
Length adjustment unit can be used for chucks other than 45mm projection length.

Length adjustment unit can be used with BT, CAT and SK shank chucks only.

For PHC04A, the length adjustment unit cannot be used.

## Ordering Example

BT50-PHC10A-105 with adjustment range of 40-45mm (Adjustable amount-5mm).



BT

BT

CAT

AHO

HSK-A/E/F/C

HSK-T

UTS

Specialized Machine

Related Equipment

Bush & Chamfering Drill

Milling Chuck

Collet Holder

"R" Zero Holder

Hydraulic Chuck

Shrink fit

Tapping Chuck

Arbors

Function Holder

Turning Tool

Retention Stud

Tool Shank Dimensions



# Collet with stopper pin

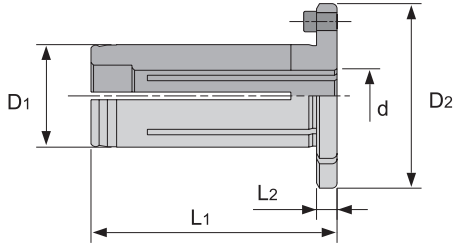
## Minimum clamping length for PHS

Collet I.D. $\square$ Metric	Collet I.D. $\square$ Inch	Min. Clamping length Metric(Inch)
3, 4	1/8	25 (0.984)
5	3/16	30 (1.181)
6, 7	5/16	34 (1.339)
8, 9	7/16	38 (1.496)
10, 11	9/16, 1/4	42 (1.654)
12, 13, 14, 15, 16	3/8, 1/2, 5/8	50 (1.969)

## $\square$ collet I.D. $\square$ Model number

$\square$	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8
$\square$	0125	0187	0250	0312	0375	0438	0500	0562	0625

## For cutter with oil hole



### $\square$ Metric, $\square$ Metric

Unit : Metric

Model	D1	D2	L1	L2	$\square$
PHS12- $\square$ -OH	12	26	48	4	3, 4, 5, 6, 7, 8, 9, 10
PHS20- $\square$ -OH	20	36	48	4	3, 4, 5, 6, 7, 8, 9, 10 11, 12, 13, 14, 15, 16

### $\square$ Metric, $\square$ Inch

Unit : Inch

Model	D1	D2	L1	L2	$\square$
PHS12- $\square$ -OH	0.472	1.024	1.890	0.158	1/8, 3/16, 1/4, 5/16, 3/8
PHS20- $\square$ -OH	0.787	1.418	1.890	0.158	1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8

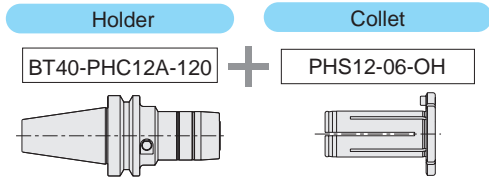
### $\square$ Inch, $\square$ Inch

Unit : Inch

Model	D1	D2	L1	L2	$\square$
PHS0500- $\square$ -OH	0.500	1.024	1.890	1.158	1/8, 3/16, 1/4, 5/16, 3/8
PHS0750- $\square$ -OH	0.750	1.418	1.890	0.158	1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8

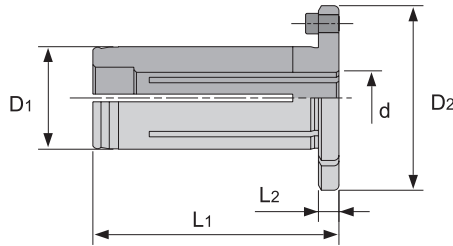
### Ordering Example

To hold  $\phi 6$  cutting tool with BT40-PHC12A-120



The collet with stopper pin can be used with PHC12A and PHC20A only.  
The collet with stopper pin can be used with the length adjustment unit.

## For collet through coolant



### $\square$ Metric, $\square$ Metric

Unit : Metric

Model	D1	D2	L1	L2	$\square$
PHS12- $\square$ -C	12	26	48	4	3, 4, 5, 6, 7, 8, 9
PHS20- $\square$ -C	20	36	48	4	3, 4, 5, 6, 7, 8, 9, 10 11, 12, 13, 14, 15, 16

### $\square$ Metric, $\square$ Inch

Unit : Inch

Model	D1	D2	L1	L2	$\square$
PHS12- $\square$ -C	0.472	1.024	1.890	0.158	1/8, 3/16, 1/4, 5/16, 3/8
PHS20- $\square$ -C	0.787	1.418	1.890	0.158	1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8

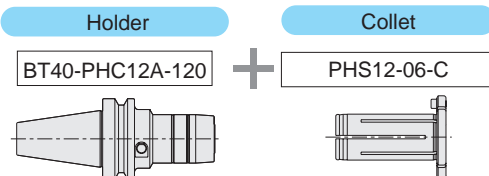
### $\square$ Inch, $\square$ Inch

Unit : Inch

Model	D1	D2	L1	L2	$\square$
PHS0500- $\square$ -C	0.500	1.024	1.890	1.158	1/8, 3/16, 1/4, 5/16, 3/8
PHS0750- $\square$ -C	0.750	1.418	1.890	0.158	1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8

### Ordering Example

To hold  $\phi 6$  cutting tool using collet through coolant feed with BT40-PHC12A-120



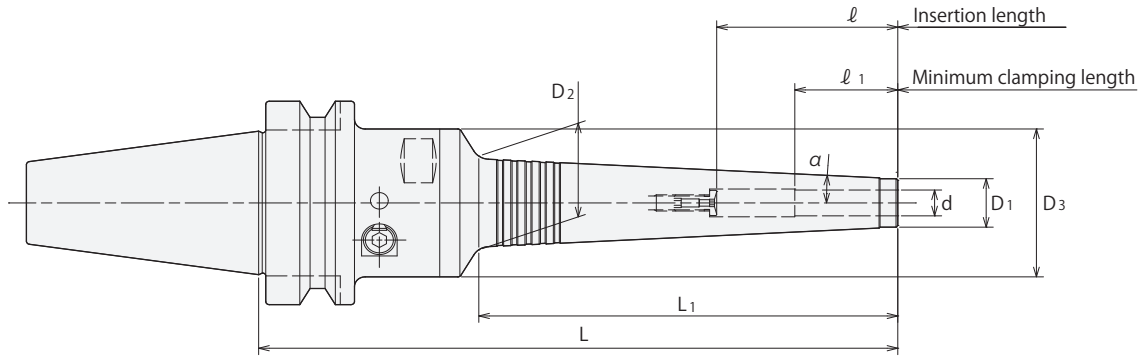
The collet with stopper pin can be used with PHC12A and PHC20A only.  
The collet with stopper pin can be used with the length adjustment unit.

# MEMO

# PHC · S New

## Slim Hydro Chuck

- Perfect choice for tight space applications, such as endmill finishing, drilling and reaming on 5-axis machines.



### Metric Sizes

Unit : Metric

Code	Model	d	L	L1	D1	D2	D3	l	l1	α	Kg	Hex. Wrench (Option)
3700 00106135	<b>BT30 -PHC06S -135</b>	6	135	71	13	20.5	46	37	29	3°	1.0	L-4T
3700 00106150	<b>-150</b>	6	150	87	13	22.2	46	37	29	3°	1.0	
3700 00106165	<b>-165</b>	6	165	102	13	23.7	46	37	29	3°	1.1	
3700 00106180	<b>-180</b>	6	180	118	13	25.4	46	37	29	3°	1.1	
3700 00107135	<b>BT30 -PHC07S -135</b>	7	135	71	14	21.5	46	37	29	3°	1.0	
3700 00107150	<b>-150</b>	7	150	87	14	23.2	46	37	29	3°	1.0	
3700 00107165	<b>-165</b>	7	165	102	14	24.7	46	37	29	3°	1.1	
3700 00107180	<b>-180</b>	7	180	118	14	26.4	46	37	29	3°	1.1	
3700 00108135	<b>BT30 -PHC08S -135</b>	8	135	72	15	22.6	46	50	29	3°	1.0	
3700 00108150	<b>-150</b>	8	150	87	15	24.2	46	50	29	3°	1.0	
3700 00108165	<b>-165</b>	8	165	103	15	25.8	46	50	29	3°	1.1	
3700 00108180	<b>-180</b>	8	180	118	15	27.4	46	50	29	3°	1.2	
3700 00109135	<b>BT30 -PHC09S -135</b>	9	135	72	16	23.6	46	50	40	3°	1.0	
3700 00109150	<b>-150</b>	9	150	87	16	25.2	46	50	40	3°	1.1	
3700 00109165	<b>-165</b>	9	165	103	16	26.8	46	50	40	3°	1.1	
3700 00109180	<b>-180</b>	9	180	118	16	28.4	46	50	40	3°	1.2	
3700 00110135	<b>BT30 -PHC10S -135</b>	10	135	72	17	24.6	46	50	40	3°	1.0	
3700 00110150	<b>-150</b>	10	150	88	17	26.3	46	50	40	3°	1.1	
3700 00110165	<b>-165</b>	10	165	103	17	27.8	46	50	40	3°	1.1	
3700 00110180	<b>-180</b>	10	180	119	17	29.5	46	50	40	3°	1.2	
3700 00111135	<b>BT30 -PHC11S -135</b>	11	135	73	18	25.7	46	50	40	3°	1.0	
3700 00111150	<b>-150</b>	11	150	88	18	27.3	46	50	40	3°	1.1	
3700 00111165	<b>-165</b>	11	165	104	18	29.0	46	50	40	3°	1.2	
3700 00111180	<b>-180</b>	11	180	119	18	30.5	46	50	40	3°	1.2	
3700 00112135	<b>BT30 -PHC12S -135</b>	12	135	73	19	26.7	46	70	40	3°	1.0	
3700 00112150	<b>-150</b>	12	150	88	19	28.3	46	70	40	3°	1.1	
3700 00112165	<b>-165</b>	12	165	104	19	30.0	46	70	40	3°	1.2	
3700 00112180	<b>-180</b>	12	180	119	19	31.5	46	70	40	3°	1.2	
3700 00306135	<b>BT40 -PHC06S -135</b>	6	135	71	13	20.5	46	37	29	3°	1.5	L-4T
3700 00306150	<b>-150</b>	6	150	87	13	22.2	46	37	29	3°	1.5	
3700 00306165	<b>-165</b>	6	165	102	13	23.7	46	37	29	3°	1.6	
3700 00306180	<b>-180</b>	6	180	118	13	25.4	46	37	29	3°	1.6	
3700 00307135	<b>BT40 -PHC07S -135</b>	7	135	71	14	21.5	46	37	29	3°	1.5	
3700 00307150	<b>-150</b>	7	150	87	14	23.2	46	37	29	3°	1.5	
3700 00307165	<b>-165</b>	7	165	102	14	24.7	46	37	29	3°	1.6	
3700 00307180	<b>-180</b>	7	180	118	14	26.4	46	37	29	3°	1.6	
3700 00308135	<b>BT40 -PHC08S -135</b>	8	135	72	15	22.6	46	50	29	3°	1.5	
3700 00308150	<b>-150</b>	8	150	87	15	24.2	46	50	29	3°	1.5	
3700 00308165	<b>-165</b>	8	165	103	15	25.8	46	50	29	3°	1.6	
3700 00308180	<b>-180</b>	8	180	118	15	27.4	46	50	29	3°	1.7	
3700 00309135	<b>BT40 -PHC09S -135</b>	9	135	72	16	23.6	46	50	40	3°	1.5	
3700 00309150	<b>-150</b>	9	150	87	16	25.2	46	50	40	3°	1.6	
3700 00309165	<b>-165</b>	9	165	103	16	26.8	46	50	40	3°	1.6	
3700 00309180	<b>-180</b>	9	180	118	16	28.4	46	50	40	3°	1.7	

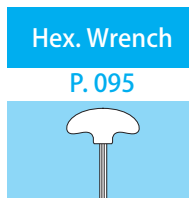
# Metric Sizes

Unit : Metric

Code	Model	d	L	L1	D1	D2	D3	ℓ	ℓ 1	α	Kg	Hex. Wrench (Option)
3700 00310135	<b>BT40 -PHC10S -135</b>	10	135	72	17	24.6	46	50	40	3°	1.5	L-4T
3700 00310150	<b>-150</b>	10	150	88	17	26.3	46	50	40	3°	1.6	
3700 00310165	<b>-165</b>	10	165	103	17	27.8	46	50	40	3°	1.6	
3700 00310180	<b>-180</b>	10	180	119	17	29.5	46	50	40	3°	1.7	
3700 00311135	<b>BT40 -PHC11S -135</b>	11	135	73	18	25.7	46	50	40	3°	1.5	
3700 00311150	<b>-150</b>	11	150	88	18	27.3	46	50	40	3°	1.6	
3700 00311165	<b>-165</b>	11	165	104	18	29.0	46	50	40	3°	1.7	
3700 00311180	<b>-180</b>	11	180	119	18	30.5	46	50	40	3°	1.7	
3700 00312135	<b>BT40 -PHC12S -135</b>	12	135	73	19	26.7	46	70	40	3°	1.5	
3700 00312150	<b>-150</b>	12	150	88	19	28.3	46	70	40	3°	1.6	
3700 00312165	<b>-165</b>	12	165	104	19	30.0	46	70	40	3°	1.7	
3700 00312180	<b>-180</b>	12	180	119	19	31.5	46	70	40	3°	1.8	
3700 00316135	<b>BT40 -PHC16S -135</b>	16	135	72	23	30.6	52.5	75	40	3°		
3700 00316165	<b>-165</b>	16	165	103	23	33.8	52.5	80	40	3°		
3700 00316180	<b>-180</b>	16	180	119	23	35.5	52.5	80	40	3°		
3700 00320135	<b>BT40 -PHC20S -135</b>	20	135	63	28	34.7	62	70	40	3°		
3700 00320165	<b>-165</b>	20	165	93	28	37.8	62	100	40	3°		
3700 00320180	<b>-180</b>	20	180	109	28	39.5	62	100	40	3°		
3700 00325135	<b>BT40 -PHC25S -135</b>	25	135	65	37	43.9	62	70	50	3°		
3700 00325165	<b>-165</b>	25	165	96	37	47.1	62	100	50	3°		
3700 00325180	<b>-180</b>	25	180	112	37	48.8	62	110	50	3°		
3700 00506150	<b>BT50 -PHC06S -150</b>	6	150	71	13	20.5	46	37	29	3°	4.1	L-4T
3700 00506165	<b>-165</b>	6	165	87	13	22.2	46	37	29	3°	4.1	
3700 00506180	<b>-180</b>	6	180	102	13	23.7	46	37	29	3°	4.2	
3700 00506195	<b>-195</b>	6	195	118	13	25.4	46	37	29	3°	4.2	
3700 00507150	<b>BT50 -PHC07S -150</b>	7	150	71	14	21.5	46	37	29	3°	4.1	
3700 00507165	<b>-165</b>	7	165	87	14	23.2	46	37	29	3°	4.1	
3700 00507180	<b>-180</b>	7	180	102	14	24.7	46	37	29	3°	4.2	
3700 00507195	<b>-195</b>	7	195	118	14	26.4	46	37	29	3°	4.2	
3700 00508150	<b>BT50 -PHC08S -150</b>	8	150	72	15	22.6	46	50	29	3°	4.1	
3700 00508165	<b>-165</b>	8	165	87	15	24.2	46	50	29	3°	4.1	
3700 00508180	<b>-180</b>	8	180	103	15	25.8	46	50	29	3°	4.2	
3700 00508195	<b>-195</b>	8	195	118	15	27.4	46	50	29	3°	4.2	
3700 00509150	<b>BT50 -PHC09S -150</b>	9	150	72	16	23.6	46	50	40	3°	4.1	
3700 00509165	<b>-165</b>	9	165	87	16	25.2	46	50	40	3°	4.1	
3700 00509180	<b>-180</b>	9	180	103	16	26.8	46	50	40	3°	4.2	
3700 00509195	<b>-195</b>	9	195	118	16	28.4	46	50	40	3°	4.3	
3700 00510150	<b>BT50 -PHC10S -150</b>	10	150	72	17	24.6	46	50	40	3°	4.1	
3700 00510165	<b>-165</b>	10	165	88	17	26.3	46	50	40	3°	4.2	
3700 00510180	<b>-180</b>	10	180	103	17	27.8	46	50	40	3°	4.2	
3700 00510195	<b>-195</b>	10	195	119	17	29.5	46	50	40	3°	4.3	
3700 00511150	<b>BT50 -PHC11S -150</b>	11	150	73	18	25.7	46	50	40	3°	4.1	
3700 00511165	<b>-165</b>	11	165	88	18	27.3	46	50	40	3°	4.2	
3700 00511180	<b>-180</b>	11	180	104	18	29.0	46	50	40	3°	4.2	
3700 00511195	<b>-195</b>	11	195	119	18	30.5	46	50	40	3°	4.3	
3700 00512150	<b>BT50 -PHC12S -150</b>	12	150	73	19	26.7	46	70	40	3°	4.1	
3700 00512165	<b>-165</b>	12	165	88	19	28.3	46	70	40	3°	4.2	
3700 00512180	<b>-180</b>	12	180	104	19	30.0	46	70	40	3°	4.3	
3700 00512195	<b>-195</b>	12	195	119	19	31.5	46	70	40	3°	4.3	
3700 00516150	<b>BT50 -PHC16S -150</b>	16	150	72	23	30.6	52.5	75	40	3°		
3700 00516180	<b>-180</b>	16	180	103	23	33.8	52.5	80	40	3°		
3700 00516195	<b>-195</b>	16	195	119	23	35.5	52.5	80	40	3°		
3700 00520150	<b>BT50 -PHC20S -150</b>	20	150	63	28	34.7	62	70	40	3°		
3700 00520180	<b>-180</b>	20	180	93	28	37.8	62	100	40	3°		
3700 00520195	<b>-195</b>	20	195	109	28	39.5	62	100	40	3°		
3700 00525150	<b>BT50 -PHC25S -150</b>	25	150	65	37	43.9	62	70	50	3°		
3700 00525180	<b>-180</b>	25	180	96	37	47.1	62	100	50	3°		
3700 00525195	<b>-195</b>	25	195	112	37	48.8	62	110	50	3°		

1. Tool shank diameter tolerance must be within h6.
2. Do not leave the holder with actuating screw tightened when the chuck is empty.
3. Hex-head screws (included) are necessary to plug air hole for center through coolant feed.

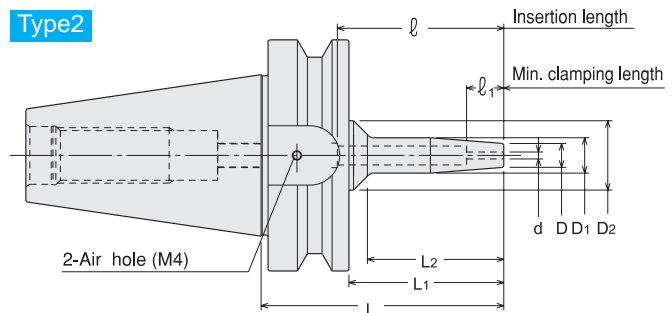
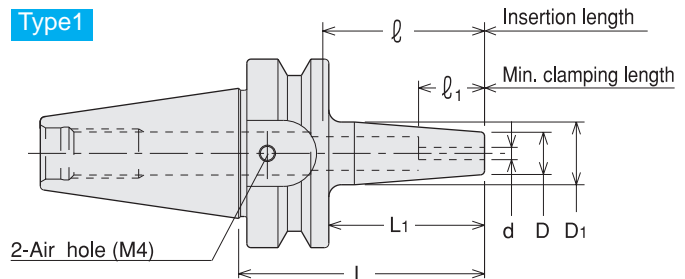
Tightening torque ( Torque wrench : p.498 )		
model	I.D. (d)	Tightening torque (Nm)
	mm	
PHC-S	06 ~ 12, 16	9 ~ 10
PHC-S	20 ~ 25	23 ~ 24



**Ordering Example**  
**BT50 - PHC 12 S - 150**  
 Shank size                      I.D. (d)                      Projection length (L)

## Shrink Fit ( Small Diameter Type )

- Shrinkage method clamps a cutting tool firmly by heating and cooling the chuck. High precision and strong Clamping force. (Small diameter type)



## Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	L2	D	D1	D2	l1	l
3060 51103045	BT30 -SRE3A -45	1	3	45	23	—	11.5	14.5	—	13	25
3060 51103060	-60	1	3	60	38	—	11.5	14.5	—	13	40
3060 51103085	-85	1	3	85	63	—	11.5	16.5	—	13	60
3060 51103105	-105	1	3	105	83	—	11.5	16.5	—	13	80
3060 51103120	-120	2	3	120	98	89	11.5	16.5	30	13	95
3060 51103145	-145	2	3	145	123	115	11.5	16.5	30	13	120
3060 51104045	BT30 -SRE4A -45	1	4	45	23	—	11.5	14.5	—	16	25
3060 51104060	-60	1	4	60	38	—	11.5	14.5	—	16	40
3060 51104085	-85	1	4	85	63	—	11.5	16.5	—	16	60
3060 51104105	-105	1	4	105	83	—	11.5	16.5	—	16	80
3060 51104120	-120	2	4	120	98	89	11.5	16.5	30	16	95
3060 51104145	-145	2	4	145	123	114	11.5	16.5	30	16	120
3060 51105045	BT30 -SRE5A -45	1	5	45	23	—	13	16	—	19	25
3060 51105060	-60	1	5	60	38	—	13	16	—	19	40
3060 51105085	-85	1	5	85	63	—	13	18	—	19	60
3060 51105105	-105	1	5	105	83	—	13	18	—	19	80
3060 51105120	-120	2	5	120	98	89	13	18	30	19	95
3060 51105145	-145	2	5	145	123	114	13	18	30	19	120
3060 51106045	BT30 -SRE6A -45	1	6	45	23	—	13	16	—	19	25
3060 51106060	-60	1	6	60	38	—	13	16	—	27	40
3060 51106085	-85	1	6	85	63	—	13	18	—	27	60
3060 51106105	-105	1	6	105	83	—	13	18	—	27	80
3060 51106120	-120	2	6	120	98	89	13	18	30	27	95
3060 51106145	-145	2	6	145	123	114	13	18	30	27	120
3060 51108045	BT30 -SRE8A -45	1	8	45	23	—	13	16	—	19	25
3060 51108060	-60	1	8	60	38	—	13	16	—	27	40
3060 51108085	-85	1	8	85	63	—	13	18	—	27	60
3060 51108105	-105	1	8	105	83	—	13	18	—	27	80
3060 51108120	-120	2	8	120	98	89	13	18	30	27	95
3060 51108145	-145	2	8	145	123	114	13	18	30	27	120
3060 51303050	BT40 -SRE3A -50	1	3	50	23	—	11.5	14.5	—	13	27
3060 51303070	-70	1	3	70	43	—	11.5	14.5	—	13	47
3060 51303100	-100	1	3	100	73	—	11.5	16.5	—	13	77
3060 51303120	-120	1	3	120	93	—	11.5	16.5	—	13	97
3060 51303135	-135	2	3	135	108	89	11.5	16.5	30	13	112
3060 51303160	-160	2	3	160	133	114	11.5	16.5	30	13	137

**Metric Sizes** Unit : Metric

Code	Model	Type	d	L	L1	L2	D	D1	D2	ℓ1	ℓ
3060 51304050	<b>BT40 -SRE4A -50</b>	1	4	50	23	—	11.5	14.5	—	16	27
3060 51304070	<b>-70</b>	1	4	70	43	—	11.5	14.5	—	16	47
3060 51304100	<b>-100</b>	1	4	100	73	—	11.5	16.5	—	16	77
3060 51304120	<b>-120</b>	1	4	120	93	—	11.5	16.5	—	16	97
3060 51304135	<b>-135</b>	2	4	135	108	89	11.5	16.5	30	16	112
3060 51304160	<b>-160</b>	2	4	160	133	114	11.5	16.5	30	16	137
3060 51305050	<b>BT40 -SRE5A -50</b>	1	5	50	23	—	13	16	—	19	27
3060 51305070	<b>-70</b>	1	5	70	43	—	13	16	—	19	47
3060 51305100	<b>-100</b>	1	5	100	73	—	13	18	—	19	77
3060 51305120	<b>-120</b>	1	5	120	93	—	13	18	—	19	97
3060 51305135	<b>-135</b>	2	5	135	108	89	13	18	30	19	112
3060 51305160	<b>-160</b>	2	5	160	133	114	13	18	30	19	137
3060 51306050	<b>BT40 -SRE6A -50</b>	1	6	50	23	—	13	16	—	19	27
3060 51306070	<b>-70</b>	1	6	70	43	—	13	16	—	27	47
3060 51306100	<b>-100</b>	1	6	100	73	—	13	18	—	27	77
3060 51306120	<b>-120</b>	1	6	120	93	—	13	18	—	27	97
3060 51306135	<b>-135</b>	2	6	135	108	89	13	18	30	27	112
3060 51306160	<b>-160</b>	2	6	160	133	114	13	18	30	27	137
3060 51308050	<b>BT40 -SRE8A -50</b>	1	8	50	23	—	13	16	—	19	27
3060 51308070	<b>-70</b>	1	8	70	43	—	13	16	—	27	47
3060 51308100	<b>-100</b>	1	8	100	73	—	13	18	—	27	77
3060 51308120	<b>-120</b>	1	8	120	93	—	13	18	—	27	97
3060 51308135	<b>-135</b>	2	8	135	108	89	13	18	30	27	112
3060 51308160	<b>-160</b>	2	8	160	133	114	13	18	30	27	137
3060 52503075	<b>BT50 -SRE3A -75</b>	2	3	75	37	28	11.5	14.5	30	13	45
3060 52503090	<b>-90</b>	2	3	90	52	43	11.5	14.5	30	13	60
3060 52503120	<b>-120</b>	2	3	120	82	73	11.5	16.5	30	13	90
3060 52503135	<b>-135</b>	2	3	135	97	89	11.5	16.5	30	13	105
3060 52503160	<b>-160</b>	2	3	160	122	114	11.5	16.5	30	13	130
3060 52504075	<b>BT50 -SRE4A -75</b>	2	4	75	37	28	11.5	14.5	30	16	45
3060 52504090	<b>-90</b>	2	4	90	52	43	11.5	14.5	30	16	60
3060 52504120	<b>-120</b>	2	4	120	82	73	11.5	16.5	30	16	90
3060 52504135	<b>-135</b>	2	4	135	97	89	11.5	16.5	30	16	105
3060 52504160	<b>-160</b>	2	4	160	122	114	11.5	16.5	30	16	130
3060 52505075	<b>BT50 -SRE5A -75</b>	2	5	75	37	28	13	16	30	19	45
3060 52505090	<b>-90</b>	2	5	90	52	43	13	16	30	19	60
3060 52505120	<b>-120</b>	2	5	120	82	73	13	18	30	19	90
3060 52505135	<b>-135</b>	2	5	135	97	89	13	18	30	19	105
3060 52505160	<b>-160</b>	2	5	160	122	114	13	18	30	19	130
3060 52506075	<b>BT50 -SRE6A -75</b>	2	6	75	37	28	13	16	30	19	45
3060 52506090	<b>-90</b>	2	6	90	52	43	13	16	30	19	60
3060 52506120	<b>-120</b>	2	6	120	82	73	13	18	30	27	90
3060 52506135	<b>-135</b>	2	6	135	97	89	13	18	30	27	105
3060 52506160	<b>-160</b>	2	6	160	122	114	13	18	30	27	130
3060 52508075	<b>BT50 -SRE8A -75</b>	2	8	75	37	28	13	16	30	19	45
3060 52508090	<b>-90</b>	2	8	90	52	43	13	16	30	19	60
3060 52508120	<b>-120</b>	2	8	120	82	73	13	18	30	27	90
3060 52508135	<b>-135</b>	2	8	135	97	89	13	18	30	27	105
3060 52508160	<b>-160</b>	2	8	160	122	114	13	18	30	27	130

1. Always use carbide shank tools with h6 tolerance.
2. Use 2pcs. of M4 x 5 (S) hex. screw (included) to close air holes on the chuck when internal coolant is used.
3. Center through coolant is not possible with SRE3A and SRE4A.

Heating device chart		
heating device	chuck	
	L1 ≤ 60mm	L1 > 60mm
ISG3400	Yes *	Yes
SRK-HA1, HB2	No	No

\*Special induction coil is needed. Refer to P.500-501.

**Ordering Example**

**BT40 - SRE 6 A - 125**  
 Shank size I.D. (d) Projection length (L)

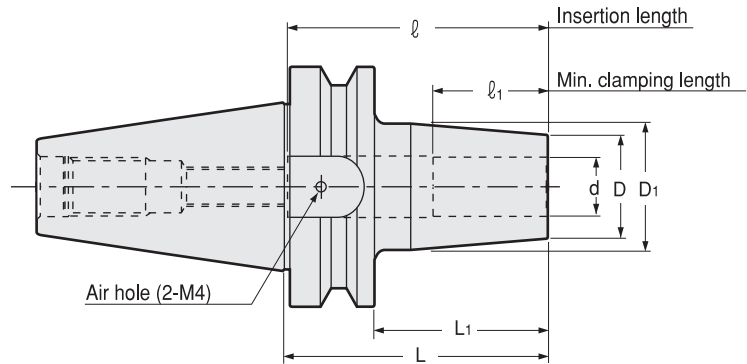


- BT
- CAT
- AHO
- HSK-A/E/F/C
- HSK-T
- UTS
- Specialized Machine
- Related Equipment
- Bush & Chamfering Drill
- Milling Chuck
- Collet Holder
- "R" Zero Holder
- Hydraulic Chuck
- Shank Fit
- Tapping Chuck
- Arbors
- Function Holder
- Turning Tool
- Retention Stud
- Tool Shank Dimensions

# SRD

## Shrink Fit ( DIN Standard )

- Shrinkage method clamps a cutting tool firmly by heating and cooling the chuck. High precision, rigidity and strong Clamping force. (DIN Type)



### Inch Sizes

Unit : Inch

Code	Model	d	L	L1	D	D1	l1	l	kg
3060 43108080	<b>BT30 -SRD0250 A -80</b>	0.250	3.150	2.283	0.827	1.063	1.417	1.024	
3060 43108105	<b>-105</b>	0.250	4.134	3.268	0.827	1.063	1.417	1.024	
3060 43108120	<b>-120</b>	0.250	4.724	3.858	0.827	1.063	1.417	1.024	
3060 43110080	<b>BT30 -SRD0312 A -80</b>	0.312	3.150	2.283	0.827	1.063	1.969	1.024	0.6
3060 43110105	<b>-105</b>	0.312	4.134	3.268	0.827	1.063	1.969	1.024	
3060 43110120	<b>-120</b>	0.312	4.724	3.858	0.827	1.063	1.969	1.024	
3060 43112080	<b>BT30 -SRD0375 A -80</b>	0.375	3.150	2.283	0.945	1.260	1.969	1.260	
3060 43112105	<b>-105</b>	0.375	4.134	3.268	0.945	1.260	1.969	1.260	
3060 43112120	<b>-120</b>	0.375	4.724	3.858	0.945	1.260	1.969	1.260	
3060 43116080	<b>BT30 -SRD0500 A -80</b>	0.500	3.150	2.283	0.945	1.260	2.244	1.457	0.6
3060 43116105	<b>-105</b>	0.500	4.134	3.268	0.945	1.260	2.244	1.457	
3060 43116120	<b>-120</b>	0.500	4.724	3.858	0.945	1.260	2.244	1.457	
3060 43120080	<b>BT30 -SRD0625 A -80</b>	0.625	3.150	2.283	1.063	1.339	3.150	1.575	0.6
3060 43120105	<b>-105</b>	0.625	4.134	3.268	1.063	1.339	3.150	1.575	
3060 43120120	<b>-120</b>	0.625	4.724	3.858	1.063	1.339	3.150	1.575	
3060 43308090	<b>BT40 SRD0250 A -90</b>	0.250	3.543	2.480	0.827	1.063	1.417	1.024	1.2
3060 43308120	<b>-120</b>	0.250	4.724	3.661	0.827	1.063	1.417	1.024	
3060 43308160	<b>-160</b>	0.250	6.299	5.236	0.827	1.063	1.417	1.024	
3060 43310090	<b>BT40 -SRD0312 A -90</b>	0.312	3.543	2.480	0.827	1.063	1.969	1.024	
3060 43310120	<b>-120</b>	0.312	4.724	3.661	0.827	1.063	1.969	1.024	
3060 43310160	<b>-160</b>	0.312	6.299	5.236	0.827	1.063	1.969	1.024	
3060 43312090	<b>BT40 -SRD0375 A -90</b>	0.375	3.543	2.480	0.945	1.260	1.969	1.260	1.3
3060 43312120	<b>-120</b>	0.375	4.724	3.661	0.945	1.260	1.969	1.260	
3060 43312160	<b>-160</b>	0.375	6.299	5.236	0.945	1.260	1.969	1.260	
3060 43316090	<b>BT40 -SRD0500 A -90</b>	0.500	3.543	2.480	0.945	1.260	2.244	1.457	1.2
3060 43316120	<b>-120</b>	0.500	4.724	3.661	0.945	1.260	2.244	1.457	
3060 43316160	<b>-160</b>	0.500	6.299	5.236	0.945	1.260	2.244	1.457	
3060 43320090	<b>BT40 -SRD0625 A -90</b>	0.625	3.543	2.480	1.063	1.339	3.150	1.575	
3060 43320120	<b>-120</b>	0.625	4.724	3.661	1.063	1.339	3.150	1.575	
3060 43320160	<b>-160</b>	0.625	6.299	5.236	1.063	1.339	3.150	1.575	
3060 43324090	<b>BT40 -SRD0750 A -90</b>	0.750	3.543	2.480	1.299	1.654	3.937	1.575	
3060 43324120	<b>-120</b>	0.750	4.724	3.661	1.299	1.654	3.937	1.575	
3060 43324160	<b>-160</b>	0.750	6.299	5.236	1.299	1.654	3.937	1.575	
3060 43328090	<b>BT40 -SRD0875 A -90</b>	0.875	3.543	2.480	1.299	1.654	3.937	1.654	
3060 43328120	<b>-120</b>	0.875	4.724	3.661	1.299	1.654	3.937	1.654	
3060 43328160	<b>-160</b>	0.875	6.299	5.236	1.299	1.654	3.937	1.654	
3060 43332100	<b>BT40 -SRD1000 A -100</b>	1.000	3.937	2.874	1.732	2.087	3.780	1.890	
3060 43332120	<b>-120</b>	1.000	4.724	3.661	1.732	2.087	3.937	1.890	
3060 43332160	<b>-160</b>	1.000	6.299	5.236	1.732	2.087	3.937	1.890	



## Inch Sizes

Unit : Inch

Code	Model	d	L	L1	D	D1	ℓ1	ℓ	kg
3060 43340100	<b>BT40 -SRD1250 A -100</b>	1.250	3.937	2.874	1.732	2.087	3.780	1.890	
3060 43340120	<b>-120</b>	1.250	4.724	3.661	1.732	2.087	3.937	1.890	
3060 43340160	<b>-160</b>	1.250	6.299	5.236	1.732	2.087	3.937	1.890	
3060 43508100	<b>BT50 -SRD0250 A -100</b>	0.250	3.937	2.441	0.827	1.063	1.417	1.024	
3060 43508120	<b>-120</b>	0.250	4.724	3.228	0.827	1.063	1.417	1.024	
3060 43508160	<b>-160</b>	0.250	6.299	4.803	0.827	1.063	1.417	1.024	
3060 43510100	<b>BT50 -SRD0312 A -100</b>	0.312	3.937	2.441	0.827	1.063	1.969	1.024	
3060 43510120	<b>-120</b>	0.312	4.724	3.228	0.827	1.063	1.969	1.024	
3060 43510160	<b>-160</b>	0.312	6.299	4.803	0.827	1.063	1.969	1.024	
3060 43512100	<b>BT50 -SRD0375 A -100</b>	0.375	3.937	2.441	0.945	1.260	1.969	1.260	
3060 43512120	<b>-120</b>	0.375	4.724	3.228	0.945	1.260	1.969	1.260	
3060 43512160	<b>-160</b>	0.375	6.299	4.803	0.945	1.260	1.969	1.260	
3060 43516100	<b>BT50 -SRD0500 A -100</b>	0.500	3.937	2.441	0.945	1.260	2.244	1.457	
3060 43516120	<b>-120</b>	0.500	4.724	3.228	0.945	1.260	2.244	1.457	3.9
3060 43516160	<b>-160</b>	0.500	6.299	4.803	0.945	1.260	2.244	1.457	
3060 43520100	<b>BT50 -SRD0625 A -100</b>	0.625	3.937	2.441	1.063	1.339	3.150	1.575	
3060 43520120	<b>-120</b>	0.625	4.724	3.228	1.063	1.339	3.150	1.575	
3060 43520160	<b>-160</b>	0.625	6.299	4.803	1.063	1.339	3.150	1.575	
3060 43524100	<b>BT50 -SRD0750 A -100</b>	0.750	3.937	2.441	1.299	1.654	3.386	1.575	
3060 43524120	<b>-120</b>	0.750	4.724	3.228	1.299	1.654	3.937	1.575	
3060 43524160	<b>-160</b>	0.750	6.299	4.803	1.299	1.654	3.937	1.575	
3060 43528100	<b>BT50 -SRD0875 A -100</b>	0.875	3.937	2.441	1.299	1.654	3.386	1.654	
3060 43528120	<b>-120</b>	0.875	4.724	3.228	1.299	1.654	3.937	1.654	
3060 43528160	<b>-160</b>	0.875	6.299	4.803	1.299	1.654	3.937	1.654	
3060 43532110	<b>BT50 -SRD1000 A -110</b>	1.000	4.331	2.835	1.732	2.087	3.780	1.890	
3060 43532135	<b>-135</b>	1.000	5.315	3.819	1.732	2.087	3.937	1.890	
3060 43532160	<b>-160</b>	1.000	6.299	4.803	1.732	2.087	3.937	1.890	
3060 43540110	<b>BT50 -SRD1250 A -110</b>	1.250	4.331	2.835	1.732	2.087	3.937	1.890	
3060 43540135	<b>-135</b>	1.250	5.315	3.819	1.732	2.087	3.937	1.890	
3060 43540160	<b>-160</b>	1.250	6.299	4.803	1.732	2.087	3.937	1.890	
3060 43548110	<b>BT50 -SRD1500 A -110</b>	1.500	4.331	2.835	1.732	2.087	3.937	1.890	3.6
3060 43548135	<b>-135</b>	1.500	5.315	3.819	1.732	2.087	3.937	1.890	
3060 43548160	<b>-160</b>	1.500	6.299	4.803	1.732	2.087	3.937	1.890	

1. Always use carbide shank tools with h6 tolerance.

2. Use 2pcs. of M4 x 5 (S) hex. screw (included) to close air holes on the chuck when internal coolant is used.

## Heating device chart

heating device	chuck	
	SRD0250A, SRD0312A	SRD0375A~SRD1500A
ISG3400	Yes	Yes
SRK-HA1, HB2	No	Yes

## Ordering Example

**BT40 - SRD 0250 A - 120**

Shank size

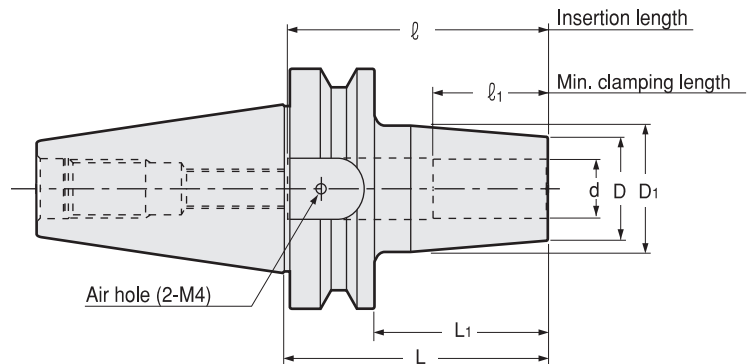
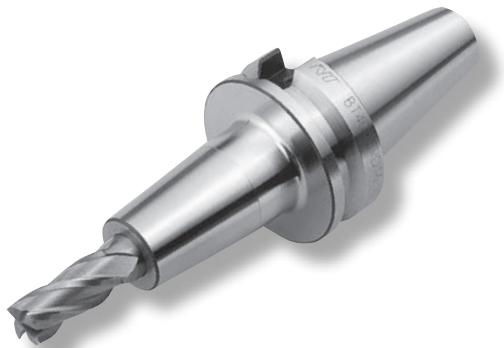
I.D. (d)

Projection  
length (L)

# SRD

## Shrink Fit ( DIN Standard )

- Shrinkage method clamps a cutting tool firmly by heating and cooling the chuck. High precision, rigidity and strong Clamping force. (DIN Type)



### Metric Sizes

Unit : Metric

Code	Model	d	L	L1	D	D1	ℓ1	ℓ	kg
3060 41106080	<b>BT30 -SRD6A -80</b>	6	80	58	21	27	26	26 ~ 36	0.6
3060 41106105	<b>-105</b>	6	105	83	21	27	26	26 ~ 36	
3060 41106120	<b>-120</b>	6	120	98	21	27	26	26 ~ 36	
3060 41108080	<b>BT30 -SRD8A -80</b>	8	80	58	21	27	26	26 ~ 50	0.6
3060 41108105	<b>-105</b>	8	105	83	21	27	26	26 ~ 50	
3060 41108120	<b>-120</b>	8	120	98	21	27	26	26 ~ 50	
3060 41110080	<b>BT30 -SRD10A -80</b>	10	80	58	24	32	32	32 ~ 50	0.7
3060 41110105	<b>-105</b>	10	105	83	24	32	32	32 ~ 50	
3060 41110120	<b>-120</b>	10	120	98	24	32	32	32 ~ 50	
3060 41112080	<b>BT30 -SRD12A -80</b>	12	80	58	24	32	37	37 ~ 70	
3060 41112105	<b>-105</b>	12	105	83	24	32	37	37 ~ 70	
3060 41112120	<b>-120</b>	12	120	98	24	32	37	37 ~ 70	
3060 41114080	<b>BT30 -SRD14A -80</b>	14	80	58	27	34	37	37 ~ 70	
3060 41114105	<b>-105</b>	14	105	83	27	34	37	37 ~ 70	
3060 41114120	<b>-120</b>	14	120	98	27	34	37	37 ~ 70	
3060 41116080	<b>BT30 -SRD16A -80</b>	16	80	58	27	34	40	40 ~ 80	0.6
3060 41116105	<b>-105</b>	16	105	83	27	34	40	40 ~ 80	
3060 41116120	<b>-120</b>	16	120	98	27	34	40	40 ~ 80	
3060 41306090	<b>BT40 -SRD6A -90</b>	6	90	63	21	27	26	26 ~ 36	1.2
3060 41306120	<b>-120</b>	6	120	93	21	27	26	26 ~ 36	
3060 41306160	<b>-160</b>	6	160	133	21	27	26	26 ~ 36	
3060 41308090	<b>BT40 -SRD8A -90</b>	8	90	63	21	27	26	26 ~ 50	1.2
3060 41308120	<b>-120</b>	8	120	93	21	27	26	26 ~ 50	
3060 41308160	<b>-160</b>	8	160	133	21	27	26	26 ~ 50	
3060 41310090	<b>BT40 -SRD10A -90</b>	10	90	63	24	32	32	32 ~ 50	1.3
3060 41310120	<b>-120</b>	10	120	93	24	32	32	32 ~ 50	
3060 41310160	<b>-160</b>	10	160	133	24	32	32	32 ~ 50	
3060 41312090	<b>BT40 -SRD12A -90</b>	12	90	63	24	32	37	37 ~ 70	
3060 41312120	<b>-120</b>	12	120	93	24	32	37	37 ~ 70	
3060 41312160	<b>-160</b>	12	160	133	24	32	37	37 ~ 70	
3060 41314090	<b>BT40 -SRD14A -90</b>	14	90	63	27	34	37	37 ~ 70	
3060 41314120	<b>-120</b>	14	120	93	27	34	37	37 ~ 70	
3060 41314160	<b>-160</b>	14	160	133	27	34	37	37 ~ 70	
3060 41316090	<b>BT40 -SRD16A -90</b>	16	90	63	27	34	40	40 ~ 80	
3060 41316120	<b>-120</b>	16	120	93	27	34	40	40 ~ 80	
3060 41316160	<b>-160</b>	16	160	133	27	34	40	40 ~ 80	
3060 41318090	<b>BT40 -SRD18A -90</b>	18	90	63	33	42	40	40 ~ 80	1.4
3060 41318120	<b>-120</b>	18	120	93	33	42	40	40 ~ 80	
3060 41318160	<b>-160</b>	18	160	133	33	42	40	40 ~ 80	

## Metric Sizes

Unit : Metric

Code	Model	d	L	L1	D	D1	ℓ1	ℓ	kg
3060 41320090	<b>BT40 -SRD20A -90</b>	20	90	63	33	42	42	42 ~ 86	1.3
3060 41320120	<b>-120</b>	20	120	93	33	42	42	42 ~ 100	
3060 41320160	<b>-160</b>	20	160	133	33	42	42	42 ~ 100	
3060 41325100	<b>BT40 -SRD25A -100</b>	25	100	73	44	53	48	48 ~ 96	
3060 41325120	<b>-120</b>	25	120	93	44	53	48	48 ~ 100	2.0
3060 41325160	<b>-160</b>	25	160	133	44	53	48	48 ~ 100	
3060 41332100	<b>BT40 -SRD32A -100</b>	32	100	73	44	53	52	52 ~ 96	1.5
3060 41332120	<b>-120</b>	32	120	93	44	53	52	52 ~ 100	1.8
3060 41332160	<b>-160</b>	32	160	133	44	53	52	52 ~ 100	
3060 41506100	<b>BT50 -SRD6A -100</b>	6	100	62	21	27	26	26 ~ 36	
3060 41506120	<b>-120</b>	6	120	82	21	27	26	26 ~ 36	
3060 41506160	<b>-160</b>	6	160	122	21	27	26	26 ~ 36	
3060 41508100	<b>BT50 -SRD8A -100</b>	8	100	62	21	27	26	26 ~ 50	
3060 41508120	<b>-120</b>	8	120	82	21	27	26	26 ~ 50	
3060 41508160	<b>-160</b>	8	160	122	21	27	26	26 ~ 50	
3060 41510100	<b>BT50 -SRD10A -100</b>	10	100	62	24	32	32	32 ~ 50	3.8
3060 41510120	<b>-120</b>	10	120	82	24	32	32	32 ~ 50	
3060 41510160	<b>-160</b>	10	160	122	24	32	32	32 ~ 50	
3060 41512100	<b>BT50 -SRD12A -100</b>	12	100	62	24	32	37	37 ~ 70	3.8
3060 41512120	<b>-120</b>	12	120	82	24	32	37	37 ~ 70	
3060 41512160	<b>-160</b>	12	160	122	24	32	37	37 ~ 70	
3060 41514100	<b>BT50 -SRD14A -100</b>	14	100	62	27	34	37	37 ~ 70	
3060 41514120	<b>-120</b>	14	120	82	27	34	37	37 ~ 70	
3060 41514160	<b>-160</b>	14	160	122	27	34	37	37 ~ 70	
3060 41516100	<b>BT50 -SRD16A -100</b>	16	100	62	27	34	40	40 ~ 80	3.8
3060 41516120	<b>-120</b>	16	120	82	27	34	40	40 ~ 80	
3060 41516160	<b>-160</b>	16	160	122	27	34	40	40 ~ 80	
3060 41518100	<b>BT50 -SRD18A -100</b>	18	100	62	33	42	40	40 ~ 80	4.0
3060 41518120	<b>-120</b>	18	120	82	33	42	40	40 ~ 80	
3060 41518160	<b>-160</b>	18	160	122	33	42	40	40 ~ 80	
3060 41520100	<b>BT50 -SRD20A -100</b>	20	100	62	33	42	42	42 ~ 100	3.9
3060 41520120	<b>-120</b>	20	120	82	33	42	42	42 ~ 100	
3060 41520160	<b>-160</b>	20	160	122	33	42	42	42 ~ 100	
3060 41525110	<b>BT50 -SRD25A -110</b>	25	110	72	44	53	48	48 ~ 110	4.3
3060 41525135	<b>-135</b>	25	135	97	44	53	48	48 ~ 110	
3060 41525160	<b>-160</b>	25	160	122	44	53	48	48 ~ 110	
3060 41532110	<b>BT50 -SRD32A -110</b>	32	110	72	44	53	52	52 ~ 120	4.0
3060 41532135	<b>-135</b>	32	135	97	44	53	52	52 ~ 120	
3060 41532160	<b>-160</b>	32	160	122	44	53	52	52 ~ 120	

1. Always use carbide shank tools with h6 tolerance.

2. Use 2pcs. of M4 × 5 (S) hex. screw (included) to close air holes on the chuck when internal coolant is used.

## Heating device chart

heating device	chuck	
	SRD6A, SRD8A	SRD10A~SRD32A
ISG3400	Yes	Yes
SRK-HA1, HB2	No	Yes

## Ordering Example

**BT40 - SRD 10 A - 120**

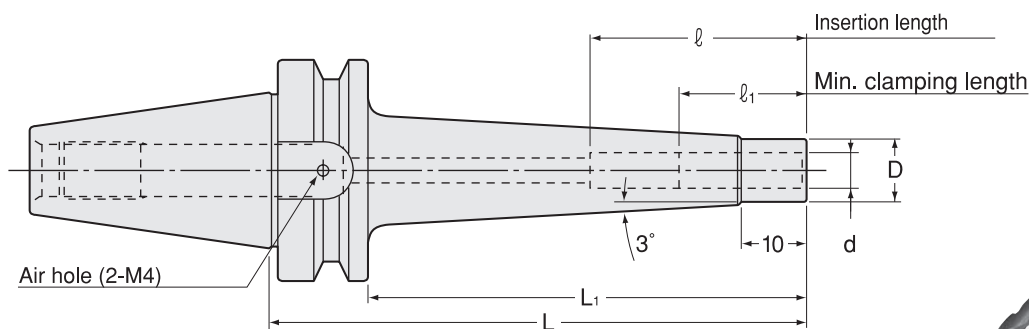
Shank size

I.D. (d)

Projection length (L)

## Shrink Fit ( Slim Type )

- Shrinkage method clamps a cutting tool firmly by heating and cooling the chuck. High precision and strong Clamping force. (Slim Type)



## Inch Sizes

Unit : Inch

Code	Model	d	L	L1	D	l	l1
3060 33108105	BT30 -SRS0250A -105	0.250	4.134	3.268	0.374	1.024	1.417
3060 33108135	-135	0.250	5.315	4.449	0.374	1.024	1.417
3060 33110105	BT30 -SRS0312A -105	0.312	4.134	3.268	0.433	1.024	1.969
3060 33110135	-135	0.312	5.315	4.449	0.433	1.024	1.969
3060 33112105	BT30 -SRS0375A -105	0.375	4.134	3.268	0.512	1.260	1.969
3060 33112135	-135	0.375	5.315	4.449	0.512	1.260	1.969
3060 33116105	BT30 -SRS0500A -105	0.500	4.134	3.268	0.591	1.457	2.756
3060 33116135	-135	0.500	5.315	4.449	0.591	1.457	2.756
3060 33120105	BT30 -SRS0625A -105	0.625	4.134	3.268	0.787	1.575	3.150
3060 33120135	-135	0.625	5.315	4.449	0.787	1.575	3.150
3060 33308105	BT40 -SRS0250A -105	0.250	4.134	3.071	0.374	1.024	1.417
3060 33308135	-135	0.250	5.315	4.252	0.374	1.024	1.417
3060 33310105	BT40 -SRS0312A -105	0.312	4.134	3.071	0.433	1.024	1.969
3060 33310135	-135	0.312	5.315	4.252	0.433	1.024	1.969
3060 33312105	BT40 -SRS0375A -105	0.375	4.134	3.071	0.512	1.260	1.969
3060 33312135	-135	0.375	5.315	4.252	0.512	1.260	1.969
3060 33312165	-165	0.375	6.496	5.433	0.512	1.260	1.969
3060 33316105	BT40 -SRS0500A -105	0.500	4.134	3.071	0.591	1.457	2.756
3060 33316135	-135	0.500	5.315	4.252	0.591	1.457	2.756
3060 33316165	-165	0.500	6.496	5.433	0.591	1.457	2.756
3060 33320105	BT40 -SRS0625A -105	0.625	4.134	3.071	0.787	1.575	3.150
3060 33320135	-135	0.625	5.315	4.252	0.787	1.575	3.150
3060 33320165	-165	0.625	6.496	5.433	0.787	1.575	3.150
3060 33324105	BT40 -SRS0750A -105	0.750	4.134	3.071	1.024	1.654	3.937
3060 33324135	-135	0.750	5.315	4.252	1.024	1.654	3.937
3060 33324165	-165	0.750	6.496	5.433	1.024	1.654	3.937
3060 33508105	BT50 -SRS0250A -105	0.250	4.134	2.638	0.374	1.024	1.417
3060 33508135	-135	0.250	5.315	3.819	0.374	1.024	1.417
3060 33510105	BT50 -SRS0312A -105	0.312	4.134	2.638	0.433	1.024	1.969
3060 33510135	-135	0.312	5.315	3.819	0.433	1.024	1.969
3060 33512105	BT50 -SRS0375A -105	0.375	4.134	2.638	0.512	1.260	1.969
3060 33512135	-135	0.375	5.315	3.819	0.512	1.260	1.969
3060 33512165	-165	0.375	6.496	5.000	0.512	1.260	1.969
3060 33512195	-195	0.375	7.677	6.181	0.512	1.260	1.969
3060 33516105	BT50 -SRS0500A -105	0.500	4.134	2.638	0.591	1.457	2.756
3060 33516135	-135	0.500	5.315	3.819	0.591	1.457	2.756
3060 33516165	-165	0.500	6.496	5.000	0.591	1.457	2.756
3060 33516195	-195	0.500	7.677	6.181	0.591	1.457	2.756
3060 33520105	BT50 -SRS0625A -105	0.625	4.134	2.638	0.787	1.575	3.150
3060 33520135	-135	0.625	5.315	3.819	0.787	1.575	3.150
3060 33520165	-165	0.625	6.496	5.000	0.787	1.575	3.150
3060 33520195	-195	0.625	7.677	6.181	0.787	1.575	3.150
3060 33524105	BT50 -SRS0750A -105	0.750	4.134	2.638	1.024	1.654	3.937
3060 33524135	-135	0.750	5.315	3.819	1.024	1.654	3.937
3060 33524165	-165	0.750	6.496	5.000	1.024	1.654	3.937
3060 33524195	-195	0.750	7.677	6.181	1.024	1.654	3.937

**Metric Sizes** Unit : Metric

Code	Model	d	L	L1	D	ℓ1	ℓ	kg
3060 31206105	<b>BT30 -SRS6A -105</b>	6	105	83	9	26	26 ~ 36	0.6
3060 31206135	<b>-135</b>	6	135	113	9	26	26 ~ 36	0.6
3060 31208105	<b>BT30 -SRS8A -105</b>	8	105	83	11	26	26 ~ 50	0.7
3060 31208135	<b>-135</b>	8	135	113	11	26	26 ~ 50	0.7
3060 31110105	<b>BT30 -SRS10A -105</b>	10	105	83	13	32	32 ~ 50	0.7
3060 31110135	<b>-135</b>	10	135	113	13	32	32 ~ 50	0.7
3060 31112105	<b>BT30 -SRS12A -105</b>	12	105	83	15	37	37 ~ 70	0.7
3060 31112135	<b>-135</b>	12	135	113	15	37	37 ~ 70	0.8
3060 31116105	<b>BT30 -SRS16A -105</b>	16	105	83	20	40	40 ~ 80	0.8
3060 31116135	<b>-135</b>	16	135	113	20	40	40 ~ 80	0.8
3060 31306105	<b>BT40 -SRS6A -105</b>	6	105	78	9	26	26 ~ 36	1.1
3060 31306135	<b>-135</b>	6	135	108	9	26	26 ~ 36	1.1
3060 31306165	<b>-165</b>	6	165	138	9	26	26 ~ 36	
3060 31308105	<b>BT40 -SRS8A -105</b>	8	105	78	11	26	26 ~ 50	1.2
3060 31308135	<b>-135</b>	8	135	108	11	26	26 ~ 50	1.2
3060 31308165	<b>-165</b>	8	165	138	11	26	26 ~ 50	
3060 31310105	<b>BT40 -SRS10A -105</b>	10	105	78	13	32	32 ~ 50	1.3
3060 31310135	<b>-135</b>	10	135	108	13	32	32 ~ 50	1.4
3060 31310165	<b>-165</b>	10	165	138	13	32	32 ~ 50	1.5
3060 31312105	<b>BT40 -SRS12A -105</b>	12	105	78	15	37	37 ~ 70	1.3
3060 31312135	<b>-135</b>	12	135	108	15	37	37 ~ 70	1.4
3060 31312165	<b>-165</b>	12	165	138	15	37	37 ~ 70	1.5
3060 31316105	<b>BT40 -SRS16A -105</b>	16	105	78	20	40	40 ~ 80	1.5
3060 31316135	<b>-135</b>	16	135	108	20	40	40 ~ 80	1.6
3060 31316165	<b>-165</b>	16	165	138	20	40	40 ~ 80	1.7
3060 31320105	<b>BT40 -SRS20A -105</b>	20	105	78	26	42	42 ~ 100	1.6
3060 31320135	<b>-135</b>	20	135	108	26	42	42 ~ 100	1.7
3060 31320165	<b>-165</b>	20	165	138	26	42	42 ~ 100	1.8
3060 31506105	<b>BT50 -SRS6A -105</b>	6	105	67	9	26	26 ~ 36	3.5
3060 31506135	<b>-135</b>	6	135	97	9	26	26 ~ 36	3.5
3060 31506165	<b>-165</b>	6	165	127	9	26	26 ~ 36	
3060 31508105	<b>BT50 -SRS8A -105</b>	8	105	67	11	26	26 ~ 50	3.6
3060 31508135	<b>-135</b>	8	135	97	11	26	26 ~ 50	3.6
3060 31508165	<b>-165</b>	8	165	127	11	26	26 ~ 50	
3060 31510105	<b>BT50 -SRS10A -105</b>	10	105	67	13	32	32 ~ 50	3.8
3060 31510135	<b>-135</b>	10	135	97	13	32	32 ~ 50	3.8
3060 31510165	<b>-165</b>	10	165	127	13	32	32 ~ 50	4.0
3060 31510195	<b>-195</b>	10	195	157	13	32	32 ~ 50	4.1
3060 31512105	<b>BT50 -SRS12A -105</b>	12	105	67	15	37	37 ~ 70	3.8
3060 31512135	<b>-135</b>	12	135	97	15	37	37 ~ 70	3.9
3060 31512165	<b>-165</b>	12	165	127	15	37	37 ~ 70	4.0
3060 31512195	<b>-195</b>	12	195	157	15	37	37 ~ 70	4.1
3060 31516105	<b>BT50 -SRS16A -105</b>	16	105	67	20	40	40 ~ 80	3.9
3060 31516135	<b>-135</b>	16	135	97	20	40	40 ~ 80	3.9
3060 31516165	<b>-165</b>	16	165	127	20	40	40 ~ 80	4.2
3060 31516195	<b>-195</b>	16	195	157	20	40	40 ~ 80	4.2
3060 31520105	<b>BT50 -SRS20A -105</b>	20	105	67	26	42	42 ~ 100	4.0
3060 31520135	<b>-135</b>	20	135	97	26	42	42 ~ 100	4.0
3060 31520165	<b>-165</b>	20	165	127	26	42	42 ~ 100	4.3
3060 31520195	<b>-195</b>	20	195	157	26	42	42 ~ 100	4.5

1. Always use carbide shank tools with h6 tolerance.
2. Use 2 pcs. of M4 × 5 (S) hex. screw (included) to close air holes on the chuck when internal coolant is used.

Heating device chart		
heating device	chuck	
	SRS0250A, SRS0312A SRS6A, SRS8A	SRS0375A~SRS0750A SRS10A~SRS20A
ISG3400	Yes	Yes
SRK-HA1, HB2	No	Yes

**Ordering Example**

**BT40 - SRS 12 A - 105**  
 Shank size                      I.D. (d)                      Projection length (L)

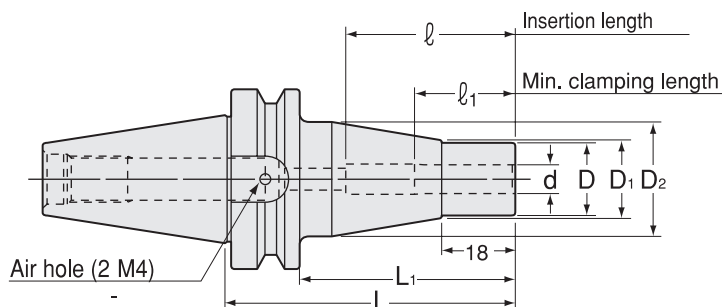
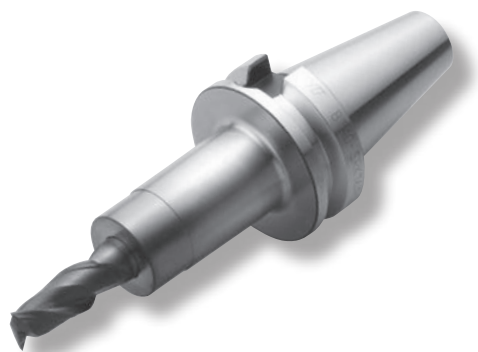


- BT
- CAT
- AHO
- HSK-A/E/F/C
- HSK-T
- UTS
- Specialized Machine
- Related Equipment
- Bush & Chamfering Drill
- Milling Chuck
- Collet Holder
- "R" Zero Holder
- Hydraulic Chuck
- Shank Fit
- Tapping Chuck
- Arbors
- Function Holder
- Turning Tool
- Retention Stud
- Tool Shank Dimensions

# SRK

## Shrink Fit ( Heavy Type )

- Shrinkage method clamps a cutting tool firmly by heating and cooling the chuck. High precision, rigidity and strong clamping force. (Heavy Type)



### Metric Sizes

Unit : Metric

Code	Model	d	L	L1	D	D1	D2	l1	l	kg
3060 01206075	BT30 -SRK6A -75	6	75	53	16	17	30	26	26 ~ 36	0.8
3060 01208075	BT30 -SRK8A -75	8	75	53	19	20	32	26	26 ~ 50	0.8
3060 01110075	BT30 -SRK10A -75	10	75	53	24	25	34	32	32 ~ 50	0.9
3060 01112075	BT30 -SRK12A -75	12	75	53	28	29	34	37	37 ~ 70	0.9
3060 01116075	BT30 -SRK16A -75	16	75	53	32	33	34	40	40 ~ 80	0.9
3060 01306090	BT40 -SRK6A -90	6	90	63	16	17	30	26	26 ~ 36	1.4
3060 01308090	BT40 -SRK8A -90	8	90	63	19	20	32	26	26 ~ 50	1.4
3060 01310090	BT40 -SRK10A -90	10	90	63	24	25	34	32	32 ~ 50	1.5
3060 01312090	BT40 -SRK12A -90	12	90	63	28	29	34	37	37 ~ 70	1.5
3060 01316090	BT40 -SRK16A -90	16	90	63	32	33	34	40	40 ~ 80	1.5
3060 01320090	BT40 -SRK20A -90	20	90	63	36	37	46	42	42 ~ 100	1.7
3060 01325105	BT40 -SRK25A -105	25	105	78	46	47	50	48	48 ~ 110	2.0
3060 01506105	BT50 -SRK6A -105	6	105	67	16	17	30	26	26 ~ 36	3.7
3060 01508105	BT50 -SRK8A -105	8	105	67	19	20	32	26	26 ~ 50	3.7
3060 01510105	BT50 -SRK10A -105	10	105	67	24	25	34	32	32 ~ 50	3.9
3060 01512105	BT50 -SRK12A -105	12	105	67	28	29	34	37	37 ~ 70	3.9
3060 01516105	BT50 -SRK16A -105	16	105	67	32	33	34	40	40 ~ 80	3.9
3060 01520105	BT50 -SRK20A -105	20	105	67	36	37	46	42	42 ~ 100	4.1
3060 01525120	BT50 -SRK25A -120	25	120	82	46	47	53	48	48 ~ 110	4.4
3060 01532120	BT50 -SRK32A -120	32	120	82	56	57	70	51	51 ~ 120	5.2

1. Always use carbide shank tools with h6 tolerance.

2. Use 2pcs. of M4 x 5 (S) hex. screw (included) to close air holes on the chuck when internal coolant is used.

#### Heating device chart

heating device	chuck	
	SRK6A, SRK8A	SRK10A~SRK32A
ISG3400	Yes	Yes *
SRK-HA1, HB2	No	Yes

\*Special induction coil is needed. Refer to P.500-501.

#### Ordering Example

**BT40 - SRK 10 A - 90**  
 Shank size I.D. (d) Projection length (L)

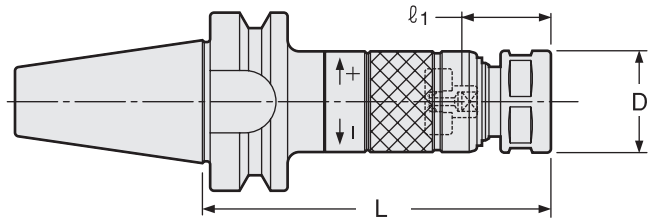
# MEMO



# STM

## Synchronous Tap Holder With Easy Tool Length Adjustment

- Projection length of the cutting tool can be adjusted by simply turning circumference of the holder.



**!** For capable tap sizes, please refer to P.462-464 chart.

(NOTE) Nut O.D. of STM8 is 19mm.

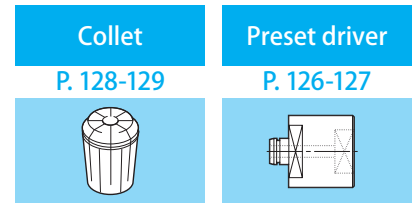
**STM Holder** + **Collet** + **STS Driver**

Unit : Metric

Code	Model	Tap Size	L	D	Nut	kg	Collet	Preset Driver	Spanner
3910 00100075	<b>BT30 -STM8 -75 *</b>	Old JIS Taps	75	21	KDP-1414		FDC-07	STS-8	Flat 17mm width
3910 00100090		M4 ~ 8	90	21	KDP-1414				
3910 00100105		-105	105	21	KDP-1414				
3910 00100120		-120	120	21	KDP-1414				
3910 00100135		-135	135	21	KDP-1414				
3910 00100150	-150	150	21	KDP-1414					
3910 10100075	<b>BT30 -STM12 -75 *</b>	Old JIS Taps	75	26	HTP-09	0.6	FSC-09	STS-12	S-1L
3910 10100090		-90	90	26	HTP-09	0.6			
3910 10100105		-105	105	26	HTP-09	0.7			
3910 10100120		-120	120	26	HTP-09	0.7			
3910 10100135		-135	135	26	HTP-09	0.8			
3910 10100150	-150	150	26	HTP-09	0.8				
3910 10100165	-165	165	26	HTP-09					
3910 30100090	<b>BT30 -STM18 -90</b>	Old JIS Taps	90	36	HTP-16	0.7	FSC-16	STS-18	S-4L
3910 30100105		-105	105	36	HTP-16	0.8			
3910 30100120		-120	120	36	HTP-16				
3910 30100135		-135	135	36	HTP-16				
3910 30100150		-150	150	36	HTP-16				
3910 30100165	-165	165	36	HTP-16					
3910 40100105	<b>BT30 -STM30 -105</b>	Old JIS Taps	105	46	HTP-22		FSC-22	STS-30	S-5L
3910 40100120		-120	120	46	HTP-22	1.2			
3910 40100135		-135	135	46	HTP-22				
3910 40100150		-150	150	46	HTP-22				
3910 40100165		-165	165	46	HTP-22				
3910 00300090	<b>BT40 -STM8 -90</b>	Old JIS Taps	90	21	KDP-1414	1.1	FDC-07	STS-8	Flat 17mm width
3910 00300105		-105	105	21	KDP-1414	1.1			
3910 00300120		-120	120	21	KDP-1414	1.2			
3910 00300135		-135	135	21	KDP-1414	1.2			
3910 00300150		-150	150	21	KDP-1414	1.2			
3910 10300090	<b>BT40 -STM12 -90</b>	Old JIS Taps	90	26	HTP-09	1.2	FSC-09	STS-12	S-1L
3910 10300105		-105	105	26	HTP-09	1.2			
3910 10300120		-120	120	26	HTP-09	1.2			
3910 10300135		-135	135	26	HTP-09	1.3			
3910 10300150		-150	150	26	HTP-09	1.3			
3910 10300180	-180	180	26	HTP-09	1.4				
3910 30300105	<b>BT40 -STM18 -105</b>	Old JIS Taps	105	36	HTP-16	1.4	FSC-16	STS-18	S-4L
3910 30300120		-120	120	36	HTP-16	1.5			
3910 30300135		-135	135	36	HTP-16	1.6			
3910 30300150		-150	150	36	HTP-16	1.7			
3910 30300180		-180	180	36	HTP-16				
3910 40300120	<b>BT40 -STM30 -120</b>	Old JIS Taps	120	46	HTP-22	1.7	FSC-22	STS-30	S-5L
3910 40300135		-135	135	46	HTP-22	1.8			
3910 40300150		-150	150	46	HTP-22				
3910 40300180		-180	180	46	HTP-22	2.4			
3910 00500090		<b>BT50 -STM8 -90 *</b>	Old JIS Taps	90	21	KDP-1414			
3910 00500105	-105		105	21	KDP-1414				
3910 00500120	-120		120	21	KDP-1414				
3910 00500135	-135		135	21	KDP-1414				
3910 00500150	-150		150	21	KDP-1414				
3910 00500165	-165	165	21	KDP-1414					
3910 10500090	<b>BT50 -STM12 -90 *</b>	Old JIS Taps	90	26	HTP-09		FSC-09	STS-12	S-1L
3910 10500105		-105	105	26	HTP-09				
3910 10500120		-120	120	26	HTP-09				
3910 10500135		-135	135	26	HTP-09				
3910 10500150		-150	150	26	HTP-09	3.9			
3910 10500180	-180	180	26	HTP-09					

Code	Model	Tap Size	L	D	Nut	kg	Collet	Preset Driver	Spanner
3910 30500105	<b>BT50 -STM18 -105</b>	Old JIS Taps	105	36	HTP-16		FSC-16	STS-18	S-4L
3910 30500120		M14 ~ 18	120	36	HTP-16				
3910 30500135		U1/2 ~ 3/4 PT1/4 ~ 3/8	135	36	HTP-16				
3910 30500150		OSG Synchro Tap	150	36	HTP-16				
3910 30500180		M12 ~ 14	180	36	HTP-16				
3910 40500120	<b>BT50 -STM30 -120</b>	Old JIS Taps	120	46	HTP-22		FSC-22	STS-30	S-5L
3910 40500135		M20 ~ 30	135	46	HTP-22				
3910 40500150		U7/8 ~ 1-1/8 PT1/2 ~ 3/4	150	46	HTP-22	4.4			
3910 40500180		OSG Synchro Taps	180	46	HTP-22				
3910 40500210		M16 ~ 27	210	46	HTP-22				

- Collet, spanner and preset driver are sold separately.
- Please see below for  $\ell 1$  dimension.
- Tap holes smaller than M4 can be made by STM8. Collets to be used are as follows.  
M1-M2.6: FDC-03007-\*\*\* M3-M3.5: FDC-04007-\*\*\*  
Tap drive will not be used for the above usages.



Ordering Example

**BT50 - STM 18 - 120**  
 Shank size                      Holder size                      Projection length (L)

**$\ell 1$  Dimension for STM**

Old JIS Taps

Without center-through coolant			With center-through coolant (STM12 ~ 30)		
Tap Size	$\ell 1$	$\ell 1( *)$	Tap Size	$\ell 1$	$\ell 1( *)$
M4 ~ 6 U No.8 ~ 1/4	21 ~ 35	21 ~ 26	M4 ~ 6 U No.8 ~ 1/4	24 ~ 35	24 ~ 26
M7 ~ 12 U 5/16 ~ U7/16 PT1/8	23 ~ 37	23 ~ 28	M7 ~ 10 U 5/16 ~ 3/8	25 ~ 37	25 ~ 28
M13 ~ 15 U 1/2 ~ 5/8 PT1/4	28 ~ 42	-	M11 ~ 12 U 7/16 PT 1/8	26 ~ 37	26 ~ 28
M16 ~ 17	32 ~ 45	-	U1/2	32 ~ 42	-
M18 ~ 27 U 3/4 ~ U1 PT3/8 ~ 5/8	33 ~ 47	-	M13 ~ 15 U9/16	33 ~ 42	-
M30 U1-1/8 PT3/4	38 ~ 52	-	U5/8 PT1/4	34 ~ 42	-
			M16	35 ~ 46	-
			M18 U 3/4 PT3/8	36 ~ 47	-
			M20 ~ 21 PT1/2	40 ~ 47	-
			M22 U 7/8	41 ~ 47	-
			M23	42 ~ 47	-
			M24 ~ 25 PT5/8	43 ~ 47	-
			M26 ~ 27 U1	44 ~ 47	-
			M28	45 ~ 52	-
			M30 PT3/4	46 ~ 52	-
			U 1-1/8	48 ~ 52	-

OSG Synchro Taps

Without center-through coolant		
Tap Size	$\ell 1$	$\ell 1( *)$
M4 ~ 6	21 ~ 35	21 ~ 26
M8 ~ 10	23 ~ 37	23 ~ 28
M12 ~ 14	28 ~ 42	-
M16 ~ 27	33 ~ 47	-

With center-through coolant (STM8)		
Tap Size	$\ell 1$	$\ell 1( *)$
M4 ~ 6	25 ~ 35	25 ~ 26

With center-through coolant (STM12 ~ 30)		
Tap Size	$\ell 1$	$\ell 1( *)$
M4 ~ 6	24 ~ 35	24 ~ 26
M8 ~ 10	26 ~ 37	26 ~ 28
M12	33 ~ 42	-
M14	34 ~ 42	-
M16 ~ 20	40 ~ 46	-
M22 ~ 27	44 ~ 47	-

YAMAWA X Series

Without center-through coolant		
Tap Size	$\ell 1$	$\ell 1( *)$
M6 M8	23 ~ 37	23 ~ 28
M10 M12	28 ~ 42	-

With center-through coolant (STM8)		
Tap Size	$\ell 1$	$\ell 1( *)$
M6	26 ~ 37	26 ~ 28

With center-through coolant (STM12 ~ 30)		
Tap Size	$\ell 1$	$\ell 1( *)$
M6	25 ~ 37	25 ~ 28
M8	26 ~ 37	26 ~ 28
M10	33 ~ 42	-
M12	34 ~ 42	-



# Tap size reference chart (collet, preset driver)

FDC-07 or FSC - collet

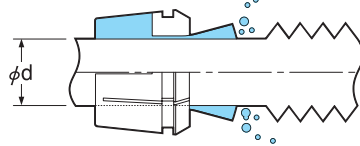
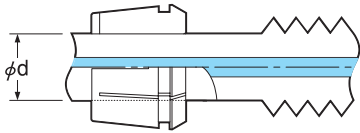
preset driver & tool for changing driver

## OH Type

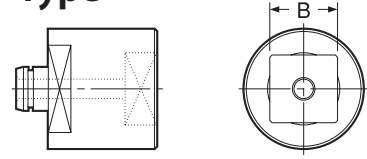
● OH type collet should be used for center-through coolant feeding and external coolant feeding.

## C Type

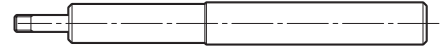
● when "collet-through" coolant feeding is needed.



## STS Type



## STS-R Type



※ Please select OH type for non-coolant use.

Holder Model	Tap Size					ød	Collet Model (OH or C)	B	Preset Driver	Tool for Changing Driver
	Metric Thread	Unified Thread	Pipe Taper Thread	OSG Synchro-Taps	YAMAWA X Series					
STM8	M4~M4.5	UNo.8				5.0	FDC-05007-**	4.0	STS8-□4.0	STS-R0
	M5~M5.5	UNo.10~12				5.5	FDC-05507-**	4.5	STS8-□4.5	STS-R0
	M6	U1/4		M4~M6		6.0	FDC-06007-**	4.5	STS8-□4.5	STS-R0
		U5/16			M6	6.0	FDC-06007-**	4.9	STS8-□4.9	STS-R0
	M7~8					6.1	FDC-06107-**	5.0	STS8-□5.0	STS-R0
					6.2	FDC-06207-**	5.0	STS8-□5.0	STS-R0	
STM12	M4~M4.5	UNo.8				5.0	FSC-09-5.0-**	4.0	STS12-□4.0	STS-R1
	M5~M5.5	UNo.10~12				5.5	FSC-09-5.5-**	4.5	STS12-□4.5	STS-R1
	M6	U1/4		M4~M6		6.0	FSC-09-6.0-**	4.5	STS12-□4.5	STS-R1
		U5/16			M6	6.0	FSC-09-6.0-**	4.9	STS12-□4.9	STS-R1
	M7~8					6.1	FSC-09-6.1-**	5.0	STS12-□5.0	STS-R1
	M9~M10	U3/8				7.0	FSC-09-7.0-**	5.5	STS12-□5.5	STS-R1
					M8	8.0	FSC-09-8.0-**	6.2	STS12-□6.2	STS-R1
	M11	U7/16	PT1/16~1/8	M8~M10		8.0	FSC-09-8.0-**	6.0	STS12-□6.0	STS-R1
	M12					8.5	FSC-09-8.5-**	6.5	STS12-□6.5	STS-R1
		U1/2				9.0	FSC-16-9.0-**	7.0	STS18-□7.0	STS-R2
					9.5	FSC-16-9.5-**	7.0	STS18-□7.0	STS-R2	
STM18	M14~15	U9/16		M12	M10	10.0	FSC-16-10.0-**	8.0	STS18-□8.0	STS-R2
			PT1/4			10.5	FSC-16-10.5-**	8.0	STS18-□8.0	STS-R2
		U5/8		M14	M12	12.0	FSC-16-12.0-**	9.0	STS18-□9.0	STS-R2
	M16					12.5	FSC-16-12.5-**	10.0	STS18-□10.0	STS-R2
	M17					13.0	FSC-16-13.0-**	10.0	STS18-□10.0	STS-R2
	M18~M19	U3/4	PT3/8			14.0	FSC-16-14.0-**	11.0	STS18-□11.0	STS-R2
						15.0	FSC-22-15.0-**	12.0	STS30-□12.0	STS-R2
STM30	M20			M16~M20		16.0	FSC-22-16.0-**	12.0	STS30-□12.0	STS-R2
	M21					17.0	FSC-22-17.0-**	13.0	STS30-□13.0	STS-R2
	M22	U7/8				17.0	FSC-22-17.0-**	13.0	STS30-□13.0	STS-R2
	M23		PT1/2			18.0	FSC-22-18.0-**	14.0	STS30-□14.0	STS-R2
	M24~M25		PT5/8			19.0	FSC-22-19.0-**	15.0	STS30-□15.0	STS-R2
	M26~M27	U1		M22~M27		20.0	FSC-22-20.0-**	15.0	STS30-□15.0	STS-R2
	M28					21.0	FSC-22-21.0-**	17.0	STS30-□17.0	STS-R2
		U1-1/8				22.0	FSC-22-22.0-**	17.0	STS30-□17.0	STS-R2
	M30		PT3/4			23.0	FSC-22-23.0-**	17.0	STS30-□17.0	STS-R2

### Ordering Example

**FSC - 22 - 20.0 - OH**

Collet size

Collet I.D. (d)

OH: for tool with coolant hole  
C: for collet through

### Combination of accessories

Tap holder	Collet	Preset driver		Nut		Tool changing driver		Spanner	
Model	Model	Model	Code	Model	Code	Model	Code	Model	Code
STM8	FDC-07	STS8	3914 0100**03	KDP-1414	0070 01001407	STS-R0	3914 00000006	Flat 17mm width	
STM12	FSC-09	STS12	3914 1100**03	HTP-09	1314 00000009	STS-R1	3914 10000006	S-1L	0803 00000011
STM18	FSC-16	STS18	3914 310**03	HTP-16	1314 00000016	STS-R2	3914 30000006	S-4L	0803 00000014
STM30	FSC-22	STS30	3914 410**03	HTP-22	1314 00000022	STS-R2	3914 30000006	S-5L	0803 00000015

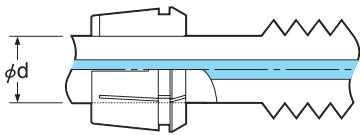
# Tap size reference chart (collet, preset driver)

## FDC-07 or FSC - collet

## preset driver & tool for changing driver

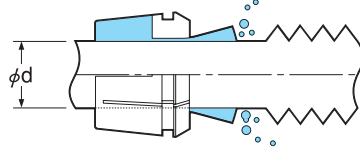
### OH Type

● OH type collet should be used for center-through coolant feeding and external coolant feeding.

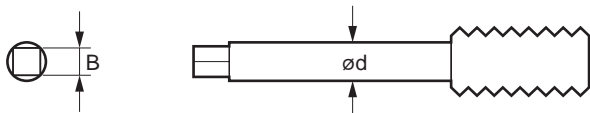


### C Type

● when "collet-through" coolant feeding is needed.

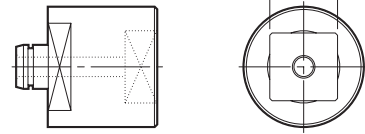


**B : Square dimension**    **ød : Shank dimension**

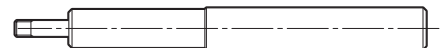


※ Please select OH type for non-coolant use.

### STS Type



### STS-R Type



Holder Model	Tap Size (ANSI)	ød (inch)	ød (mm)	Collet Model (OH or C)	B (inch)	B (mm)	Preset Driver
STM8	#0-6	0.141	3.5814	FDC-03607**	0.110	2.794	STS8-□ 2.8
	#8	0.168	4.2672	FDC-04307**	0.131	3.3274	STS8-□ 3.4
	#10	0.194	4.9276	FDC-05007**	0.152	3.8608	STS8-□ 4.0
	#12	0.22	5.588	FDC-05607**	0.165	4.191	STS8-□ 4.2
	1/4	0.255	6.477	FDC-06507**	0.191	4.8514	STS8-□ 5.0
STM12	#0-6	0.141	3.5814	FSC-09-3.6**	0.110	2.794	STS12-□ 2.8
	#8	0.168	4.2672	FSC-09-4.3**	0.131	3.3274	STS12-□ 3.4
	#10	0.194	4.9276	FSC-09-5.0**	0.152	3.8608	STS12-□ 4.0
	#12	0.22	5.588	FSC-09-5.6**	0.165	4.191	STS12-□ 4.2
	1/4	0.255	6.477	FSC-09-6.5**	0.191	4.8514	STS12-□ 5.0
	1/8SPT	0.313	7.9502	FSC-09-8.0**	0.234	5.9436	STS12-□ 6.0
	5/16	0.318	8.0772	FSC-09-8.1**	0.238	6.0452	STS12-□ 6.1
7/16	0.323	8.2042	FSC-09-8.3**	0.242	6.1468	STS12-□ 6.2	
STM18	1/2	0.367	9.3218	FSC-16-9.4**	0.275	6.985	STS18-□ 7.0
	3/8	0.381	9.6774	FSC-16-9.7**	0.286	7.2644	STS18-□ 7.3
	9/16	0.429	10.8966	FSC-16-10.9**	0.322	8.1788	STS18-□ 8.2
	1/8LPT	0.437	11.0998	FSC-16-11.1**	0.328	8.3312	STS18-□ 8.4
	5/8	0.48	12.192	FSC-16-12.2**	0.360	9.144	STS18-□ 9.2
	11/16	0.542	13.7668	FSC-16-13.8**	0.406	10.3124	STS18-□ 10.4
	1/4PT	0.562	14.2748	FSC-16-14.3**	0.421	10.6934	STS18-□ 10.7
STM30	3/4	0.59	14.986	FSC-22-15.0**	0.442	11.2268	STS30-□ 11.3
	13/16	0.652	16.5608	FSC-22-16.6**	0.489	12.4206	STS30-□ 12.5
	7/8	0.697	17.7038	FSC-22-17.8**	0.523	13.2842	STS30-□ 13.3
	3/8PT	0.7	17.78	FSC-22-17.8**	0.531	13.4874	STS30-□ 13.5
	1	0.8	20.32	FSC-22-20.4**	0.600	15.24	STS30-□ 15.3

For DIN and ISO, please refer to P.463-464.

### Ordering Example

**FSC - 22 - 20.4 - OH**

Collet size

Collet I.D. (d)

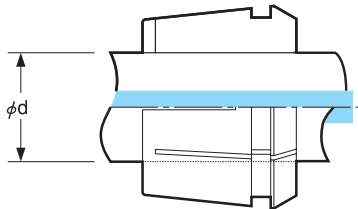
OH: for tool with coolant hole  
C: for collet through

### Combination of accessories

Tap holder	Collet	Preset driver		Nut		Tool changing driver		Spanner	
Model	Model	Model	Code	Model	Code	Model	Code	Model	Code
<b>STM8</b>	<b>FDC-07</b>	STS8	3914 0100**03	KDP-1414	0070 01001407	<b>STS-R0</b>	3914 00000006	<b>Flat 17mm width</b>	
<b>STM12</b>	<b>FSC-09</b>	STS12	3914 1100**03	<b>HTP-09</b>	1314 00000009	<b>STS-R1</b>	3914 10000006	<b>S-1L</b>	0803 00000011
<b>STM18</b>	<b>FSC-16</b>	STS18	3914 310**03	<b>HTP-16</b>	1314 00000016	<b>STS-R2</b>	3914 30000006	<b>S-4L</b>	0803 00000014
<b>STM30</b>	<b>FSC-22</b>	STS30	3914 410**03	<b>HTP-22</b>	1314 00000022	<b>STS-R2</b>	3914 30000006	<b>S-5L</b>	0803 00000015

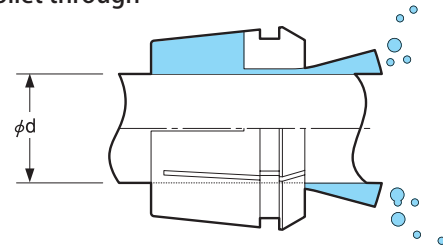
## FSC-OH

For tool with coolant hole



## FSC-C

For Collet through



Tool Shank Dia.	Size	Code	
			$\phi d$ (inch)
$\phi$ 0.141	$\phi$ 3.6	FSC-09-3.6-OH	—
$\phi$ 0.168	$\phi$ 4.3	FSC-09-4.3-OH	1334 00104309
$\phi$ 0.194	$\phi$ 5.0	FSC-09-5.0-OH	1334 00105009
$\phi$ 0.220	$\phi$ 5.6	FSC-09-5.6-OH	1334 00105609
$\phi$ 0.216	$\phi$ 5.5	FSC-09-5.5-OH	1334 00105509
$\phi$ 0.236	$\phi$ 6.0	FSC-09-6.0-OH	1334 00106009
$\phi$ 0.240	$\phi$ 6.1	FSC-09-6.1-OH	1334 00106109
$\phi$ 0.244	$\phi$ 6.2	FSC-09-6.2-OH	1334 00106209
$\phi$ 0.255	$\phi$ 6.5	FSC-09-6.5-OH	1334 00106509
$\phi$ 0.275	$\phi$ 7.0	FSC-09-7.0-OH	1334 00107009
$\phi$ 0.314	$\phi$ 8.0	FSC-09-8.0-OH	1334 00108009
$\phi$ 0.313	$\phi$ 8.0	FSC-09-8.0-OH	1334 00108009
$\phi$ 0.318	$\phi$ 8.1	FSC-09-8.1-OH	1334 00108109
$\phi$ 0.323	$\phi$ 8.3	FSC-09-8.3-OH	1334 00108309
$\phi$ 0.334	$\phi$ 8.5	FSC-09-8.5-OH	1334 00108509
$\phi$ 0.354	$\phi$ 9.0	FSC-16-9.0-OH	1334 00109016
$\phi$ 0.367	$\phi$ 9.4	FSC-16-9.4-OH	1334 00109416
$\phi$ 0.374	$\phi$ 9.5	FSC-16-9.5-OH	1334 00109516
$\phi$ 0.381	$\phi$ 9.7	FSC-16-9.7-OH	1334 00109716
$\phi$ 0.393	$\phi$ 10.0	FSC-16-10.0-OH	1334 00110016
$\phi$ 0.413	$\phi$ 10.5	FSC-16-10.5-OH	1334 00110516
$\phi$ 0.429	$\phi$ 10.9	FSC-16-10.9-OH	1334 00110916
$\phi$ 0.433	$\phi$ 11.0	FSC-16-11.0-OH	1334 00111016
$\phi$ 0.437	$\phi$ 11.1	FSC-16-11.1-OH	1334 00111116
$\phi$ 0.472	$\phi$ 12.0	FSC-16-12.0-OH	1334 00112016
$\phi$ 0.480	$\phi$ 12.2	FSC-16-12.2-OH	1334 00112216
$\phi$ 0.492	$\phi$ 12.5	FSC-16-12.5-OH	1334 00112516
$\phi$ 0.511	$\phi$ 13.0	FSC-16-13.0-OH	1334 00113016
$\phi$ 0.542	$\phi$ 13.8	FSC-16-13.8-OH	1334 00113816
$\phi$ 0.551	$\phi$ 14.0	FSC-16-14.0-OH	1334 00114016
$\phi$ 0.562	$\phi$ 14.3	FSC-16-14.3-OH	1334 00114316
$\phi$ 0.590	$\phi$ 15.0	FSC-22-15.0-OH	1334 00115022
$\phi$ 0.629	$\phi$ 16.0	FSC-22-16.0-OH	1334 00116022
$\phi$ 0.652	$\phi$ 16.6	FSC-22-16.6-OH	1334 00116622
$\phi$ 0.669	$\phi$ 17.0	FSC-22-17.0-OH	1334 00117022
$\phi$ 0.697	$\phi$ 17.8	FSC-22-17.8-OH	1334 00117822
$\phi$ 0.700	$\phi$ 17.8	FSC-22-17.8-OH	1334 00117822
$\phi$ 0.708	$\phi$ 18.0	FSC-22-18.0-OH	1334 00118022
$\phi$ 0.748	$\phi$ 19.0	FSC-22-19.0-OH	1334 00119022
$\phi$ 0.800	$\phi$ 20.4	FSC-22-20.4-OH	1334 00120422
$\phi$ 0.787	$\phi$ 20.0	FSC-22-20.0-OH	1334 00120022
$\phi$ 0.826	$\phi$ 21.0	FSC-22-21.0-OH	1334 00121022
$\phi$ 0.866	$\phi$ 22.0	FSC-22-22.0-OH	1334 00122022
$\phi$ 0.905	$\phi$ 23.0	FSC-22-23.0-OH	1334 00123022

Tool Shank Dia.	Size	Code	
			$\phi d$ (inch)
$\phi$ 0.141	$\phi$ 3.6	FSC-09-3.6-C	—
$\phi$ 0.168	$\phi$ 4.3	FSC-09-4.3-C	1335 00104309
$\phi$ 0.194	$\phi$ 5.0	FSC-09-5.0-C	1335 00105009
$\phi$ 0.220	$\phi$ 5.6	FSC-09-5.6-C	1335 00105609
$\phi$ 0.216	$\phi$ 5.5	FSC-09-5.5-C	1335 00105509
$\phi$ 0.236	$\phi$ 6.0	FSC-09-6.0-C	1335 00106009
$\phi$ 0.240	$\phi$ 6.1	FSC-09-6.1-C	1335 00106109
$\phi$ 0.244	$\phi$ 6.2	FSC-09-6.2-C	1335 00106209
$\phi$ 0.255	$\phi$ 6.5	FSC-09-6.5-C	1335 00106509
$\phi$ 0.275	$\phi$ 7.0	FSC-09-7.0-C	1335 00107009
$\phi$ 0.314	$\phi$ 8.0	FSC-09-8.0-C	1335 00108009
$\phi$ 0.313	$\phi$ 8.0	FSC-09-8.0-C	1335 00108009
$\phi$ 0.318	$\phi$ 8.1	FSC-09-8.1-C	1335 00108109
$\phi$ 0.323	$\phi$ 8.3	FSC-09-8.3-C	1335 00108309
$\phi$ 0.334	$\phi$ 8.5	FSC-09-8.5-C	1335 00108509
$\phi$ 0.354	$\phi$ 9.0	FSC-16-9.0-C	1335 00109016
$\phi$ 0.367	$\phi$ 9.4	FSC-16-9.4-C	1335 00109416
$\phi$ 0.374	$\phi$ 9.5	FSC-16-9.5-C	1335 00109516
$\phi$ 0.381	$\phi$ 9.7	FSC-16-9.7-C	1335 00109716
$\phi$ 0.393	$\phi$ 10.0	FSC-16-10.0-C	1335 00110016
$\phi$ 0.413	$\phi$ 10.5	FSC-16-10.5-C	1335 00110516
$\phi$ 0.429	$\phi$ 10.9	FSC-16-10.9-C	1335 00110916
$\phi$ 0.433	$\phi$ 11.0	FSC-16-11.0-C	1335 00111016
$\phi$ 0.437	$\phi$ 11.1	FSC-16-11.1-C	1335 00111116
$\phi$ 0.472	$\phi$ 12.0	FSC-16-12.0-C	1335 00112016
$\phi$ 0.480	$\phi$ 12.2	FSC-16-12.2-C	1335 00112216
$\phi$ 0.492	$\phi$ 12.5	FSC-16-12.5-C	1335 00112516
$\phi$ 0.511	$\phi$ 13.0	FSC-16-13.0-C	1335 00113016
$\phi$ 0.542	$\phi$ 13.8	FSC-16-13.8-C	1335 00113816
$\phi$ 0.551	$\phi$ 14.0	FSC-16-14.0-C	1335 00114016
$\phi$ 0.562	$\phi$ 14.3	FSC-16-14.3-C	1335 00114316
$\phi$ 0.590	$\phi$ 15.0	FSC-22-15.0-C	1335 00115022
$\phi$ 0.629	$\phi$ 16.0	FSC-22-16.0-C	1335 00116022
$\phi$ 0.652	$\phi$ 16.6	FSC-22-16.6-C	1335 00116622
$\phi$ 0.669	$\phi$ 17.0	FSC-22-17.0-C	1335 00117022
$\phi$ 0.697	$\phi$ 17.8	FSC-22-17.8-C	1335 00117822
$\phi$ 0.700	$\phi$ 17.8	FSC-22-17.8-C	1335 00117822
$\phi$ 0.708	$\phi$ 18.0	FSC-22-18.0-C	1335 00118022
$\phi$ 0.748	$\phi$ 19.0	FSC-22-19.0-C	1335 00119022
$\phi$ 0.800	$\phi$ 20.4	FSC-22-20.4-C	1335 00120422
$\phi$ 0.787	$\phi$ 20.0	FSC-22-20.0-C	1335 00120022
$\phi$ 0.826	$\phi$ 21.0	FSC-22-21.0-C	1335 00121022
$\phi$ 0.866	$\phi$ 22.0	FSC-22-22.0-C	1335 00122022
$\phi$ 0.905	$\phi$ 23.0	FSC-22-23.0-C	1335 00123022

OH type shall be selected in case not utilizing coolant through from the machine spindle.

## Ordering Example

**FSC - 16 - 9.0 - OH**  
 16 Series      Tool Shank Dia.

## Ordering Example

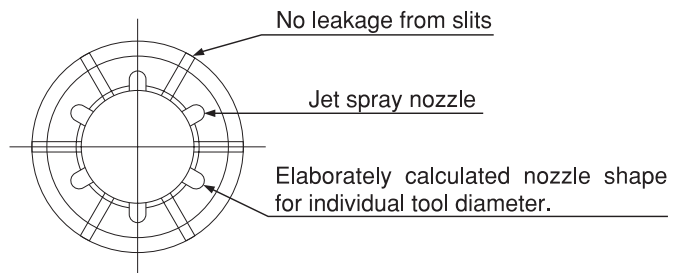
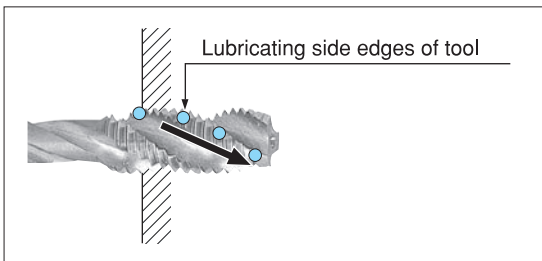
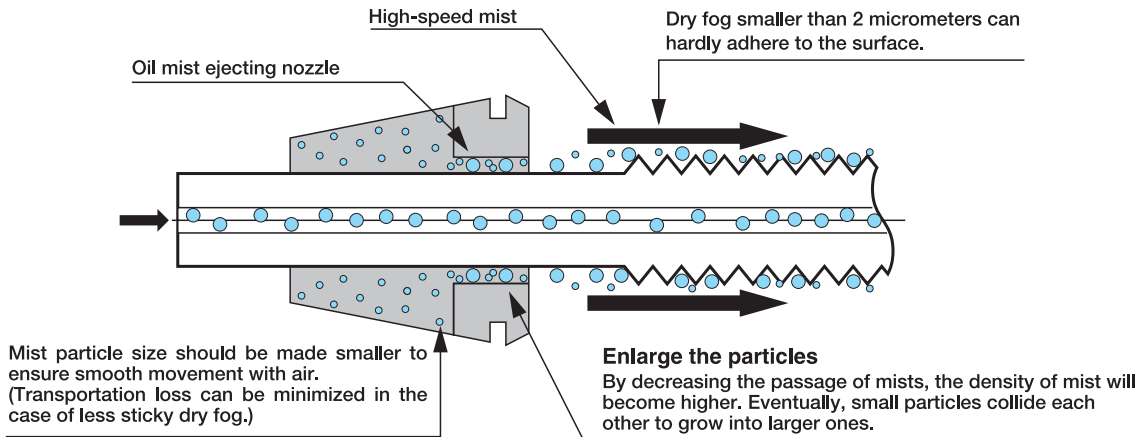
**FSC - 16 - 9.0 - C**  
 16 Series      Tool Shank Dia.



# FSC-MS

## High-Precision Collet for Tapper ( For Semidry Machining /MQL )

- Making lubricant adhere to the surface of workpiece and tool by spraying comparatively large particles alongside the tool.



Tool Shank Dia.	Model FSC-MS	
	Size	Code
ø 5.0	FSC-09-5.0-MS	1336 00105009
ø 5.5	FSC-09-5.5-MS	1336 00105509
ø 6.0	FSC-09-6.0-MS	1336 00106009
ø 6.1	FSC-09-6.1-MS	1336 00106109
ø 6.2	FSC-09-6.2-MS	1336 00106209
ø 7.0	FSC-09-7.0-MS	1336 00107009
ø 8.0	FSC-09-8.0-MS	1336 00108009
ø 8.5	FSC-09-8.5-MS	1336 00108509
ø 9.0	FSC-16-9.0-MS	1336 00109016
ø 9.5	FSC-16-9.5-MS	1336 00109516
ø 10.0	FSC-16-10.0-MS	1336 00110016
ø 10.5	FSC-16-10.5-MS	1336 00110516
ø 11.0	FSC-16-11.0-MS	1336 00111016

Tool Shank Dia.	Model FSC-MS	
	Size	Code
ø 12.0	FSC-16-12.0-MS	1336 00112016
ø 12.5	FSC-16-12.5-MS	1336 00112516
ø 13.0	FSC-16-13.0-MS	1336 00113016
ø 14.0	FSC-16-14.0-MS	1336 00114016
ø 15.0	FSC-22-15.0-MS	1336 00115022
ø 16.0	FSC-22-16.0-MS	1336 00116022
ø 17.0	FSC-22-17.0-MS	1336 00117022
ø 18.0	FSC-22-18.0-MS	1336 00118022
ø 19.0	FSC-22-19.0-MS	1336 00119022
ø 20.0	FSC-22-20.0-MS	1336 00120022
ø 21.0	FSC-22-21.0-MS	1336 00121022
ø 22.0	FSC-22-22.0-MS	1336 00122022
ø 23.0	FSC-22-23.0-MS	1336 00123022

1. Collets collapse by 0.1mm.
2. Sizes not listed above are available upon request.
3. Tools with or without coolant holes can be used.

### Ordering Example

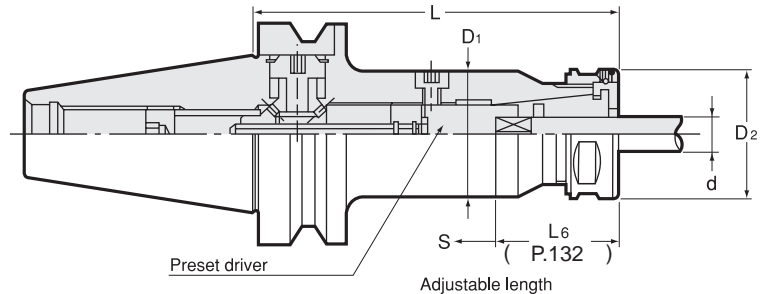
**FSC - 09 - 5.0 - MS**

09 Series      Tool Shank Dia.

# TP0

## Synchro Tapping Chuck

- Tap projection length can be easily adjusted by turning hexagon head bolt on side surface of the holder.



- Tap sizes are based on old JIS standard.

### Metric Sizes

Unit : Metric

Code	Model	Tap Size	L	S	D1	D2	kg	Collet	Spanner
2200 11090 ***	BT30 -TP0 -8 -90	M1 ~ M8	90	5	20	19	0.6	ESC8	Flat 17mm
2200 11105 ***		U1/4 ~ U5/16	105	8	20	19	0.7		
2200 12075 ***	BT30 -TP0 -10 -75	M1 ~ M10	75	10	28	26	0.6	ESC10	S-1L
2200 12090 ***		U1/4 ~ 3/8	90	15	28	26	0.7		
2200 12105 ***			105	26	28	26	0.8		
2200 41090 ***	BT40 -TP0 -8 -90	M1 ~ M8	90	8	20	19	1.1	ESC8	Flat 17mm
2200 41120 ***		U1/4 ~ U5/16	120	8	20	19	1.2		
2200 42090 ***	BT40 -TP0 -10 -90	M1 ~ M10	90	25	28	26	1.2	ESC10	S-1L
2200 42105 ***		U1/4 ~ 3/8	105	30	28	26	1.3		
2200 42120 ***			120	30	28	26	1.4		
2200 42135 ***			135	30	28	26	1.4		
2200 44105 ***	BT40 -TP0 -16 -105	M8 ~ M16	105	20	36	36	1.4	ESC16	S-4L
2200 44120 ***		U3/8 ~ U5/8	120	29	36	36	1.6		
2200 44135 ***		PIPE(PT,PS,PF)1/8 ~ 1/4	135	30	36	36	1.8		
2200 45105 ***	BT40 -TP0 -22 -105	M14 ~ M22	105	12	46	46	1.7	ESC22	S-5L
2200 45120 ***		U9/16 ~ U7/8	120	20	46	46	1.8		
2200 45135 ***		PIPE(PT,PS,PF)1/4 ~ 3/8	135	30	46	46	2.1		
2200 61090 ***	BT50 -TP0 -8 -90	M1 ~ M8	90	8	20	19	3.4	ESC8	Flat 17mm
2200 61120 ***		U1/4 ~ U5/16	120	8	20	19	3.8		
2200 62090 ***	BT50 -TP0 -10 -90	M1 ~ M10	90	25	28	26	3.8	ESC10	S-1L
2200 62105 ***		U1/4 ~ 3/8	105	30	28	26	3.9		
2200 62120 ***			120	30	28	26	4.0		
2200 62135 ***			135	30	28	26	4.0		
2200 64105 ***	BT50 -TP0 -16 -105	M8 ~ M16	105	21	36	36	4.0	ESC16	S-4L
2200 64120 ***		U3/8 ~ U5/8	120	26	36	36	4.1		
2200 64135 ***		PIPE(PT,PS,PF)1/8 ~ 1/4	135	30	36	36	4.2		
2200 65105 ***	BT50 -TP0 -22 -105	M14 ~ M22	105	13	46	46	4.0	ESC22	S-5L
2200 65120 ***		U9/16 ~ U7/8	120	27	46	46	4.3		
2200 65135 ***		PIPE(PT,PS,PF)1/4 ~ 3/8	135	30	46	46	4.5		
2200 65150 ***			150	30	46	46	4.6		
2200 65165 ***			165	30	46	46	4.8		

1. Complete with nut and preset driver. Collet and spanner are sold separately.

2. When using OSG synchro tap, tap shank size and square size will be different from JIS standard. Please contact NT when using OSG tap.

Collet

P. 131



Spanner

P. 131



### Ordering Example

**BT40 - TP0 - 16 - 120 / M10J**

Shank size

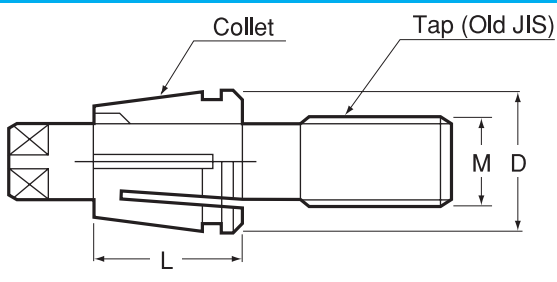
Max. tap size

Projection length (L)

Tap size



ESC - collet



Unit : Metric

Code	Model	Holder	D	L	Tap Size
0070 20008 ※※※	ESC 8- ※※	TP0-8	12	18	M1 ~ M2.6
0070 20008 ※※※	ESC 8- ※※	TP0-8	12	18	M3 ~ M8,U1/4 ~ U5/16
0070 20010 ※※※	ESC 10- ※※	TP0-10	15.25	20	M1 ~ M10,U1/4 ~ U3/8
0070 20016 ※※※	ESC 16- ※※	TP0-16	23.88	22.5	M8 ~ M16,U3/8 ~ U5/8, PIPE (PT,PS,PF) 1/8 ~ 1/4
0070 20022 ※※※	ESC 22- ※※	TP0-22	32.5	24.5	M14 ~ M22,U9/16 ~ U7/8, PIPE (PT,PS,PF) 1/4 ~ 3/8

As ESC collet precisely holds tap shank, choose correct size of ESC collet.

**Ordering Example**  
**ESC10 - M10J**  
 Max. tap size      Tap size

TPS Preset driver

Code	Model	Holder	Tap Size
2201 08000 ※※※	TPS 8- ※※	TP0-8	M1 ~ M8,U1/4 ~ U5/16
2401 10000 ※※※	TPS 10- ※※	TP0-10	M1 ~ M10,U1/4 ~ U3/8
2401 16000 ※※※	TPS 16- ※※	TP0-16	M8 ~ M16,U3/8 ~ U5/8, PIPE (PT,PS,PF) 1/8 ~ 1/4
2201 22000 ※※※	TPS 22- ※※	TP0-22	M14 ~ M22,U9/16 ~ U7/8, PIPE (PT,PS,PF) 1/4 ~ 3/8

1 pc of preset driver is included in the holder. When using other size of tap, choose correct size of TPS preset driver.

**Ordering Example**  
**TPS8 - M6J**  
 Max. tap size      Tap size

Spanner

Code	Model	Holder
Flat 17mm width		TP0-8
0803 00000011	S-1L	TP0-10
0803 00000014	S-4L	TP0-16
0803 00000015	S-5L	TP0-22

- BT
- CAT
- AHO
- HSK-A/E/F/C
- HSK-T
- UTS
- Specialized Machine
- Related Equipment
- Bush & Chamfering Drill
- Milling Chuck
- Collet Holder
- "R" Zero Holder
- Hydraulic Chuck
- Shrink Fit
- Tapping Chuck
- Arbors
- Function Holder
- Turning Tool
- Retention Stud
- Tool Shank Dimensions

## Tapping Capacity for TP0

Unit : Metric

	Tap Dimension				L6				
	Metric thread	Unified thread	Whitworth thread	Shank dia $\phi$	Square size	TP0-8	TP0-10	TP0-16	TP0-22
BT	M2.6 以下			3	2.5	25.5	27.0		
CAT	M3 M3.5			4	3.2	26.5	28.0		
AHO	M4 M4.5			5	4	27.5	29.0		
HSK-A/E/F/C	M5 M5.5			5.5	4.5	27.5	29.0		
HSK-T	M6	U1/4	W1/4	6	4.5	27.5	29.0		
UTS		U5/16	W5/16	6.1	5	28.5	30.0		
Specialized Machine	M8 M7			6.2	5	28.5	30.0	33.5	
Related Equipment	M10 M9	U3/8	W3/8	7	5.5		30.0	33.5	
Bush & Chamfering Drill	M11	U7/16	W7/16	8	6			34.5	
	M12			8.5	6.5			34.5	
Milling Chuck		U1/2	W1/2	9	7			35.5	
	M14 M15	U9/16	W9/16	10.5	8			36.5	39.8
		U5/8	W5/8	12	9			37.5	40.8
Collet Holder	M16			12.5	10			38.5	41.8
	M17			13	10			38.5	41.8
"R" Zero Holder	M18	U3/4	W3/4	14	11				42.8
	M20			15	12				43.8
	M22	U7/8	W7/8	17	13				44.8

Unit : Metric

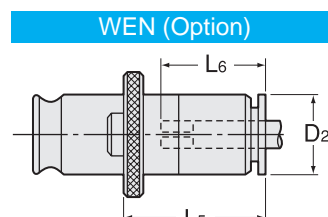
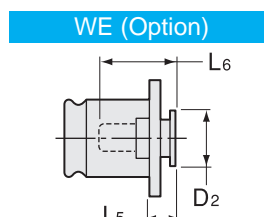
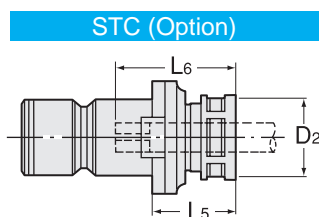
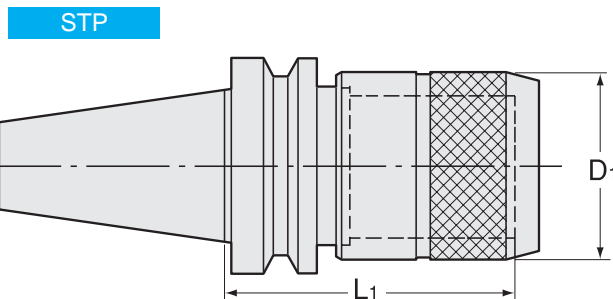
	Tap Dimension ( Pipe Tap)				L6		
	PT Pipe Taper Thread	PS Parallel Screw For Pipe Taper Thread	PF Pipe Fitting parallel screw	Shank dia $\phi$	Square size	TP0-16	TP0-22
Shrink Fit	1/8	1/8	1/8	8	6	34.5	
Tapping Chuck	1/4	1/4	1/4	11	9	※ 37.5	※ 40.8
	3/8	3/8	3/8	14	11		※ 42.8

- For pipe tap with ※ , use a short thread tap.
- Tap sizes are based on old JIS standard.
- We recommend you to have  $\pm 1.5\text{mm}$  leeway in tool layout, as L6 dimension is dispersed in each tap size.

# STP

## Synchro Tapping Chuck

- Quick-changeable tap adapter.



For Inch size tap, please refer to P. 463.

Unit : Metric

Code	Model	L1	D1	kg	Tap adapter	L5	D2	Tap Size			
								Metric thread	OSG synchro tap	Pipetap	ANSI
2780 01001065	BT30 -STP1 -65	65	38	0.6	STC1- ※※※	26	26	M3 ~ M12	M3 ~ M10	PIPE (PT,PS,PF) 1/8	#8-12, 1/4, 5/16, 7/16, 1/8SS
					WEN1B- ※※※	33	19				
					WE1- ※※※	7	19				
2780 03001065	BT40 -STP1 -65	65	38	1.2	STC1- ※※※	26	26	M3 ~ M12	M3 ~ M10	PIPE (PT,PS,PF) 1/8	#8-12, 1/4, 5/16, 7/16, 1/8SS
					WEN1B- ※※※	33	19				
					WE1- ※※※	7	19				
2780 03001095	-95	95	38	1.4	WE1- ※※※	7	19				
2780 03002085	BT40 -STP2 -85	85	55	1.5	STC2- ※※※	35	36	M8 ~ M20	M8 ~ M14	PIPE (PT,PS,PF) 1/8 PIPE (PT,PS,PF) 1/4 PIPE (PT,PS,PF) 3/8	1/4-3/4, 1/8SS, 1/8SL, 1/4P
					WEN2B- ※※※	59	30				
					WE2- ※※※	11	30				
2780 03002115	-115	115	55	2.0	WE2- ※※※	11	30				
2780 05001080	BT50 -STP1 -80	80	38	3.8	STC1- ※※※	26	26	M3 ~ M12	M3 ~ M10	PIPE (PT,PS,PF) 1/8	#8-12, 1/4, 5/16, 7/16, 1/8SS
					WEN1B- ※※※	33	19				
					WE1- ※※※	7	19				
2780 05001110	-110	110	38	4.2	WE1- ※※※	7	19				
2780 05002100	BT50 -STP2 -100	100	55	4.2	STC2- ※※※	35	36	M8 ~ M20	M8 ~ M14	PIPE (PT,PS,PF) 1/8 PIPE (PT,PS,PF) 1/4 PIPE (PT,PS,PF) 3/8	1/4-3/4, 1/8SS, 1/8SL, 1/4P
					WEN2B- ※※※	59	30				
					WE2- ※※※	11	30				
2780 05002130	-130	130	55	4.8	WE2- ※※※	11	30				

L5 values are in the case of metric thread.

### STC L6 Dimension

Please refer to P. 458 for L6 dimension of WE.  
Please refer to P. 460 for L6 dimension of WEN.

Unit : Metric

STC1 L6	M3	M4	M5	M6	M8	M10	M11	M12	Pipe1/8
MIN	24	26	31	31	32	32	32	33	34
MAX	29	31	35	35	37	37	37	37	38

Unit : Metric

STC2 L6	M8	M10	M11	M12	M14	M16	M17	M18	M20	Pipe1/8	Pipe1/4	Pipe3/8
MIN	34	34	33	35	39	41	41	43	43	29	29	33
MAX	39	39	38	40	44	46	46	48	48	33	31	34

Code	Model	Collet			Nut	Spanner
		Metric thread	Pipe tap	OSG synchro tap		
2800 00001 ※※※	<b>STC1-</b> ※※※	FDC-09		FDC-09	HDP-09B	S-1L
2800 00001 ※※※	<b>STC1-</b> ※※※		ESC10		KDP-1916	S-1L
2800 00002 ※※※	<b>STC2-</b> ※※※	FDC-16		FDC-16	HDP-16B	S-4L
2800 00002 ※※※	<b>STC2-</b> ※※※		ESC16		KDP-2825	S-4L

1. Tap size will be inserted in " ※※※ ".
2. STC adapter comes complete with collet and nut, but spanner is sold separately.
3. When using OSG synchro tap, please specify it.  
Example : STC1-M3-O
4. With FDC-OH or C collet (p.087-088) and STC Adapter, STP can be used for center-thru coolant.

**STP Holder**

**STC adapter**

**WEN·B BILZ Tap Adapter**

**Ordering Example**

**Ordering Example**

**Ordering Example**

**BT40 - STP1 - 95**  
Shank size    Adapter size    L1

**STC1 - M10**  
Size            Tap size

**WEN1B - M10**  
Size            Tap size

**Tap adapter WE**  
P.458

**Tap adapter WEN**  
P.460

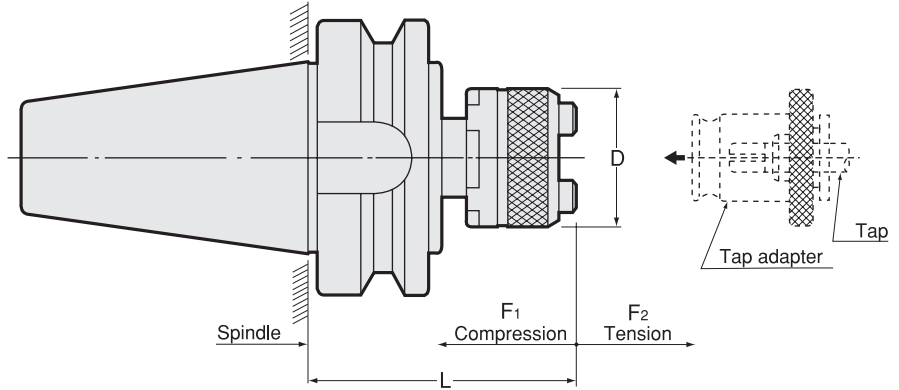
**Spanner**  
P.095



# TP1

## Quick Change Tapping Chuck

- Strong compression allows use with rolled thread tap.



For Inch size tap, please refer to P.463.

Metric Sizes										Unit : Metric
Code	Model	Tap Size	Adapter size	L	D	Axial compensation		kg		
						F1	F2			
2250 30010057	BT30 -TP1 -1 -57	M3 ~ M12,U1/4 ~ U7/16, PIPE (PT,PS,PF) 1/8	1	57	32	6	18	0.5		
2250 30020095	BT30 -TP1 -2 -95	M8 ~ M22,U3/8 ~ U7/8, PIPE (PT,PS,PF) 1/8 ~ 3/8	2	95	50	10	15	0.8		
2250 40010062	BT40 -TP1 -1 -62	M3 ~ M12,U1/4 ~ U7/16, PIPE (PT,PS,PF) 1/8	1	62	32	6	18	1.1		
2250 40020093	BT40 -TP1 -2 -93	M8 ~ M22,U3/8 ~ U7/8, PIPE (PT,PS,PF) 1/8 ~ 3/8	2	93.5	50	15	20	1.5		
2250 40030164	BT40 -TP1 -3 -164	M16 ~ M38,U3/4 ~ 1-3/8, PIPE (PT,PS,PF) 3/8 ~ 1-1/8	3	164	72	20	20	2.6		
2250 50010071	BT50 -TP1 -1 -71	M3 ~ M12,U1/4 ~ U7/16, PIPE (PT,PS,PF) 1/8	1	71	32	6	18	3.7		
2250 50020102	BT50 -TP1 -2 -102	M8 ~ M22,U3/8 ~ U7/8, PIPE (PT,PS,PF) 1/8 ~ 3/8	2	104.5	50	15	20	4.0		
2250 50030142	BT50 -TP1 -3 -142	M16 ~ M38,U3/4 ~ 1-3/8, PIPE (PT,PS,PF) 3/8 ~ 1-1/8	3	142	72	20	20	5.0		
2250 50040165	BT50 -TP1 -4 -165	M22 ~ M48,U7/8 ~ 1-3/4, PIPE (PT,PS,PF) 3/4 ~ 1-1/2	4	165	95	22.5	22.5	6.1		

1. To prevent tap breakage, use tap adapter with safety torque device.
2. Tap adapter is sold separately.

**Tap adapter**  
P. 458

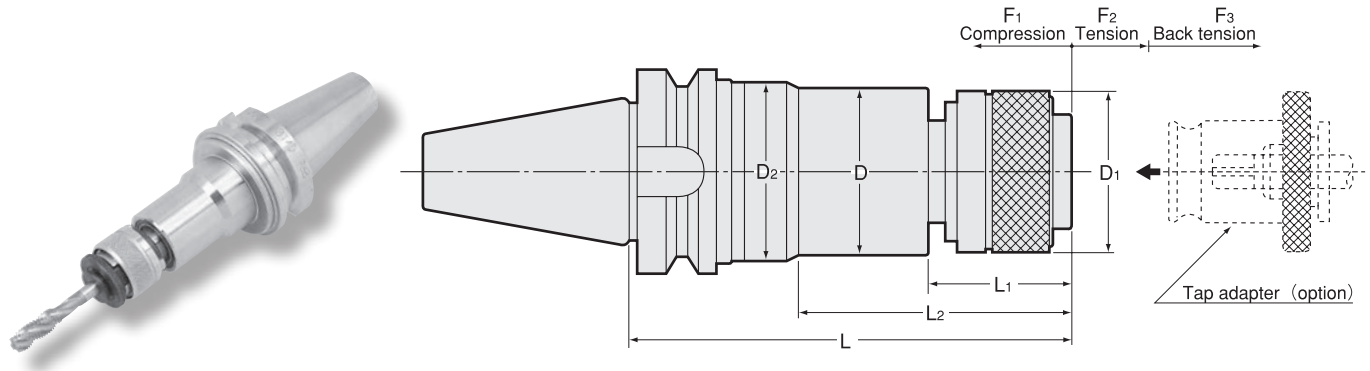
**Ordering Example**  
**BT50 - TP1-2 - 102**


Shank size    Adapter size    Projection length(L)

# TP3B

## Quick Change Tapping Chuck ( Auto Depth Control )

- Auto depth control mechanism stabilizes tapping depth.



 For Inch size tap, please refer to P.463.

### Metric Sizes

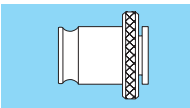
Unit : Metric

Code	Model	Tap Size	Adapter size	L	L1	L2	D	D1	D2	Axial compensation			kg
										F1	F2	F3	
3000 10001113	<b>BT30 -TP3B-1 -113</b>	M3 ~ M12 (M15), U1/4 ~ U7/16 (U9/16), Pipe(PT,PS,PF)1/8 ~ 1/4	1	113	30	61.5	34	32	39	0.5	4	8	0.8
3000 30001113	<b>BT40 -TP3B-1 -113</b>	M3 ~ M12 (M15), U1/4 ~ U7/16 (U9/16), Pipe(PT,PS,PF)1/8 ~ 1/4	1	113	30	61.5	34	32	39	0.5	4	8	1.4
3000 30002135	<b>BT40 -TP3B-2 -135</b>	M8 ~ M22, U3/8 ~ U7/8, Pipe(PT,PS,PF)1/8 ~ 1/2	2	135	44.5	86.5	52	50	56	0.5	5	11	2.1
3000 50001128	<b>BT50 -TP3B-1 -128</b>	M3 ~ M12 (M15), U1/4 ~ U7/16 (U9/16), Pipe(PT,PS,PF)1/8 ~ 1/4	1	128	30	61.5	34	32	39	0.5	4	8	4.1
3000 50002150	<b>BT50 -TP3B-2 -150</b>	M8 ~ M22, U3/8 ~ U7/8, Pipe(PT,PS,PF)1/8 ~ 1/2	2	150	44.5	86.5	52	50	56	0.5	5	11	4.7
3000 50003181	<b>BT50 -TP3B-3 -181</b>	M16 ~ M38, U5/8 ~ U1,3/8, Pipe(PT,PS,PF)1/4 ~ 1 1/8	3	181	65.5	119	76	72	80	0.5	6	12	6.4

1. Tap sizes in brackets are for light tapping only.
2. Tap adapter with safety torque clutch cannot be used.
3. Tap adapter is sold separately.

### Tap adapter

P. 458



### Ordering Example

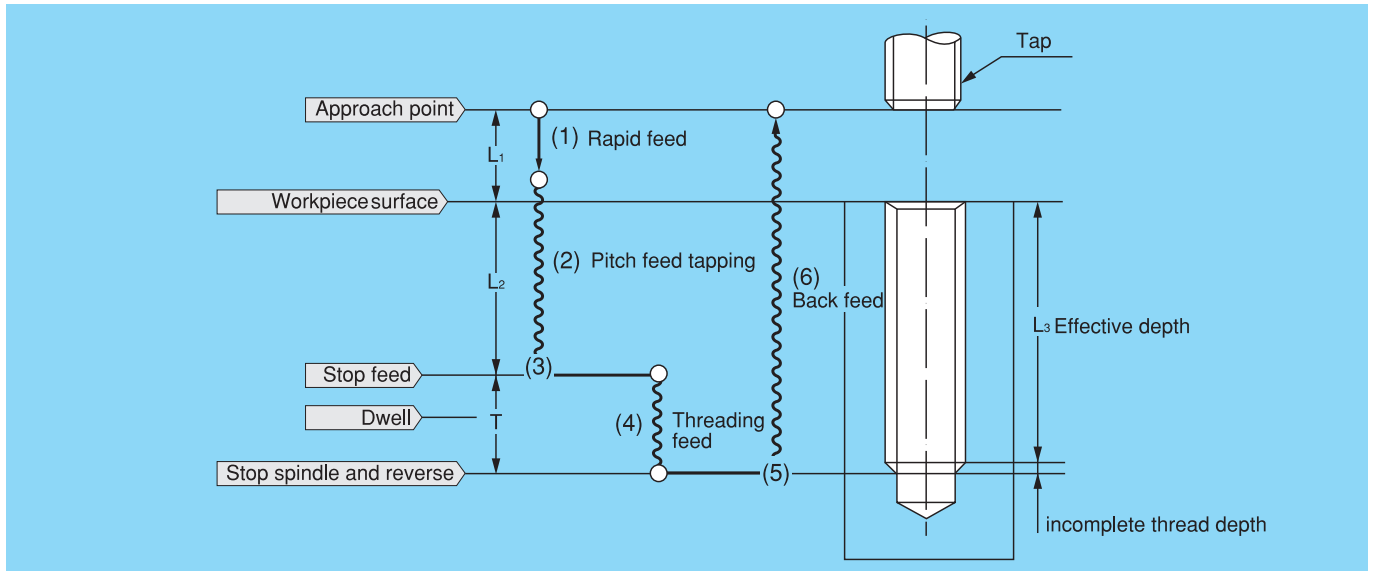
**BT40 - TP3B-1 - 113**

Shank size    Adapter size    Projection length(L)

# How to use

In case auto depth control is used: (Blind holes, tapered screws etc.)

- (1) Rapid feed from approach point
- (2) Tapping by pitch
- (3) Stop feed
- (4) Spindle rotation more than tap self-feed (Dwell)
- (5) Stop spindle and reverse
- (6) Back feed



Approach L1 = 13mm or more

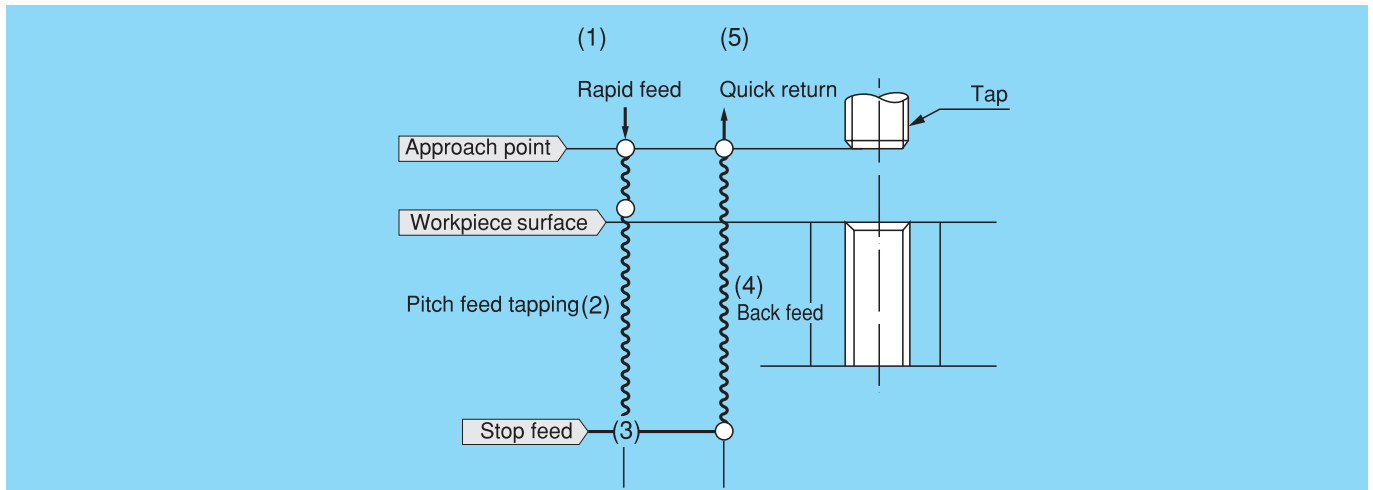
Cutting depth L2 =

Effective thread depth L3 + Incomplete thread length - Tension F2

$$\text{Dwell time (sec.)} = \frac{\text{Tension F2}}{\text{Tap pitch} \times \text{Rotation (min}^{-1})} \times 60$$

In case auto depth control is not used (through hole), use TP3B as a conventional tapping chuck.

- (1) Rapid feed from approach point
- (2) Tapping by pitch
- (3) Stop spindle and reverse
- (4) Back feed
- (5) Quick return

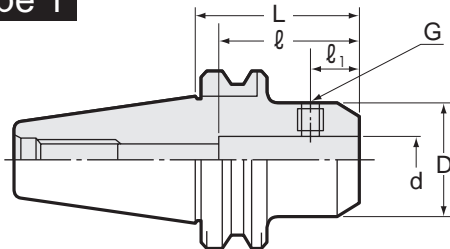




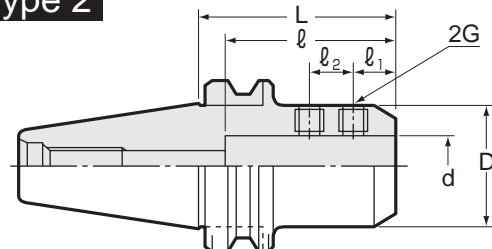
# SLH

## Side Lock Holder

### Type 1



### Type 2



### Inch Sizes

Unit : Inch

Code	Model	Type	d (H6)	D	L	ℓ	ℓ <sub>1</sub>	ℓ <sub>2</sub>	G	kg
0740 03108060	<b>BT30 -SLH -0250 -60</b>	1	0.250	0.790	2.362	3.000	0.437	—	1/4-28 × 1/4	
0740 03108105	<b>-105</b>	1	0.250	0.790	4.134	3.000	0.437	—	1/4-28 × 1/4	0.6
0740 03110060	<b>BT30 -SLH -0313 -60</b>	1	0.3125	0.870	2.362	3.000	0.437	—	5/16-24 × 1/4	
0740 03110105	<b>-105</b>	1	0.3125	0.870	4.134	3.000	0.437	—	5/16-24 × 1/4	
0740 03112060	<b>BT30 -SLH -0375 -60</b>	1	0.375	1.000	2.362	3.000	0.710	—	3/8-24 × 5/16	
0740 03112105	<b>-105</b>	1	0.375	1.000	4.134	3.000	0.710	—	3/8-24 × 5/16	
0740 03114060	<b>BT30 -SLH -0438 -60</b>	1	0.4375	1.380	2.362	3.000	0.710	—	7/16-20 × 3/8	
0740 03114105	<b>-105</b>	1	0.4375	1.380	4.134	3.000	0.710	—	7/16-20 × 3/8	
0740 03116060	<b>BT30 -SLH -0500 -60</b>	1	0.500	1.380	2.362	3.000	0.710	—	7/16-20 × 3/8	
0740 03116105	<b>-105</b>	1	0.500	1.380	4.134	3.000	0.710	—	7/16-20 × 3/8	
0740 03120060	<b>BT30 -SLH -0625 -60</b>	1	0.625	1.650	2.362	3.150	0.700	—	9/16-18 × 1/2	
0740 03120105	<b>-105</b>	1	0.625	1.650	4.134	3.150	0.700	—	9/16-18 × 1/2	
0740 03124090	<b>BT30 -SLH -0750 -90</b>	1	0.750	1.750	3.543	3.976	0.740	—	5/8-18 × 1/2	
0740 03124120	<b>-120</b>	1	0.750	1.750	4.724	3.976	0.740	—	5/8-18 × 1/2	
0740 03128090	<b>BT30 -SLH -0875 -90</b>	1	0.875	2.000	3.543	3.453	0.740	—	5/8-18 × 1/2	
0740 03128120	<b>-120</b>	1	0.875	2.000	4.724	4.331	0.740	—	5/8-18 × 1/2	
0740 03308075	<b>BT40 -SLH -0250 -75</b>	1	0.250	0.790	2.953	3.000	0.437	—	1/4-28 × 1/4	
0740 03308105	<b>-105</b>	1	0.250	0.790	4.134	3.000	0.437	—	1/4-28 × 1/4	
0740 03310075	<b>BT40 -SLH -0313 -75</b>	1	0.3125	0.870	2.953	3.000	0.437	—	5/16-24 × 1/4	
0740 03310105	<b>-105</b>	1	0.3125	0.870	4.134	3.000	0.437	—	5/16-24 × 1/4	
0740 03312075	<b>BT40 -SLH -0375 -75</b>	1	0.375	1.000	2.953	3.000	0.710	—	3/8-24 × 5/16	1.1
0740 03312105	<b>-105</b>	1	0.375	1.000	4.134	3.000	0.710	—	3/8-24 × 5/16	
0740 03314075	<b>BT40 -SLH -0438 -75</b>	1	0.4375	1.380	2.953	3.000	0.710	—	7/16-20 × 3/8	
0740 03314105	<b>-105</b>	1	0.4375	1.380	4.134	3.000	0.710	—	7/16-20 × 3/8	
0740 03316075	<b>BT40 -SLH -0500 -75</b>	1	0.500	1.380	2.953	3.000	0.710	—	7/16-20 × 3/8	1.3
0740 03316105	<b>-105</b>	1	0.500	1.380	4.134	3.000	0.710	—	7/16-20 × 3/8	
0740 03320075	<b>BT40 -SLH -0625 -75</b>	1	0.625	1.650	2.953	3.150	0.700	—	9/16-18 × 1/2	
0740 03320105	<b>-105</b>	1	0.625	1.650	4.134	3.150	0.700	—	9/16-18 × 1/2	
0740 03324075	<b>BT40 -SLH -0750 -75</b>	1	0.750	1.750	2.953	3.976	0.740	—	5/8-18 × 1/2	1.3
0740 03324105	<b>-105</b>	1	0.750	1.750	4.134	3.976	0.740	—	5/8-18 × 1/2	
0740 03328090	<b>BT40 -SLH -0875 -90</b>	1	0.875	2.000	3.543	4.331	0.740	—	5/8-18 × 1/2	
0740 03328135	<b>-135</b>	1	0.875	2.000	5.315	4.331	0.740	—	5/8-18 × 1/2	
0740 03332090	<b>BT40 -SLH -1000 -90</b>	1	1.000	2.360	3.543	3.543	0.860	—	3/4-16 × 11/16	
0740 03332135	<b>-135</b>	1	1.000	2.360	5.315	4.843	0.860	—	3/4-16 × 11/16	
0740 03340090	<b>BT40 -SLH -1250 -90</b>	1	1.250	2.650	3.543	3.543	0.860	—	3/4-16 × 11/16	
0740 03340135	<b>-135</b>	1	1.250	2.650	5.315	4.843	0.860	—	3/4-16 × 11/16	
0740 03348105	<b>BT40 -SLH -1500 -105</b>	1	1.500	2.990	4.134	3.543	1.181	—	3/4-16 × 11/16	
0740 03348150	<b>-150</b>	1	1.500	2.990	5.906	4.843	1.181	—	3/4-16 × 11/16	

# Inch Sizes

Unit : Inch

Code	Model	Type	d (H6)	D	L	ℓ	ℓ <sub>1</sub>	ℓ <sub>2</sub>	G	kg
0740 03508090	<b>BT50 -SLH -0250 -90</b>	1	0.250	0.790	3.543	3.000	0.437	—	1/4-28 × 1/4	
0740 03508135		1	0.250	0.790	5.315	3.000	0.437	—	1/4-28 × 1/4	
0740 03510090	<b>BT50 -SLH -0313 -90</b>	1	0.3125	0.870	3.543	3.000	0.437	—	5/16-24 × 1/4	
0740 03510135		1	0.3125	0.870	5.315	3.000	0.437	—	5/16-24 × 1/4	
0740 03512090	<b>BT50 -SLH -0375 -90</b>	1	0.375	1.000	3.543	3.000	0.710	—	3/8-24 × 5/16	
0740 03512135		1	0.375	1.000	5.315	3.000	0.710	—	3/8-24 × 5/16	
0740 03514090	<b>BT50 -SLH -0438 -90</b>	1	0.4375	1.380	3.543	3.000	0.710	—	7/16-20 × 3/8	
0740 03514135		1	0.4375	1.380	5.315	3.000	0.710	—	7/16-20 × 3/8	
0740 03516090	<b>BT50 -SLH -0500 -90</b>	1	0.500	1.380	3.543	3.000	0.710	—	7/16-20 × 3/8	
0740 03516135		1	0.500	1.380	5.315	3.000	0.710	—	7/16-20 × 3/8	
0740 03520090	<b>BT50 -SLH -0625 -90</b>	1	0.625	1.650	3.543	3.150	0.700	—	9/16-18 × 1/2	
0740 03520135		1	0.625	1.650	5.315	3.150	0.700	—	9/16-18 × 1/2	
0740 03524090	<b>BT50 -SLH -0750 -90</b>	1	0.750	1.750	3.543	3.976	0.740	—	5/8-18 × 1/2	
0740 03524135		1	0.750	1.750	5.315	3.976	0.740	—	5/8-18 × 1/2	4.5
0740 03528090	<b>BT50 -SLH -0875 -90</b>	1	0.875	2.000	3.543	4.331	0.740	—	5/8-18 × 1/2	
0740 03528135		1	0.875	2.000	5.315	4.331	0.740	—	5/8-18 × 1/2	
0740 03532105	<b>BT50 -SLH -1000 -105</b>	1	1.000	2.360	4.134	4.843	0.860	—	3/4-16 × 11/16	
0740 03532150		1	1.000	2.360	5.906	4.843	0.860	—	3/4-16 × 11/16	
0740 03540105	<b>BT50 -SLH -1250 -105</b>	1	1.250	2.650	4.134	4.843	0.860	—	3/4-16 × 11/16	
0740 03540150		1	1.250	2.650	5.906	4.843	0.860	—	3/4-16 × 11/16	5.8
0740 03548105	<b>BT50 -SLH -1500 -105</b>	1	1.500	2.990	4.134	4.843	1.181	—	3/4-16 × 11/16	
0740 03548150		1	1.500	2.990	5.906	4.843	1.181	—	3/4-16 × 11/16	
0740 03564135	<b>BT50 -SLH -2000 -135</b>	2	2.000	3.740	5.315	4.843	1.260	1.500	1-12 × 7/8	
0740 03564165		2	2.000	3.740	6.496	4.843	1.260	1.500	1-12 × 7/8	

### Ordering Example

**BT30 - SLH - 0250 - 60**

Shank size

I.D. (d)

Projection length (L)

BT

BT

CAT

AHO

HSK-A/E/F/C

HSK-T

UTS

Specialized Machine

Related Equipment

Bush & Chamfering Drill

Milling Chuck

Collet Holder

"R" Zero Holder

Hydraulic Chuck

Shrink Fit

Tapping Chuck

Arbors

Function Holder

Turning Tool

Retention Stud

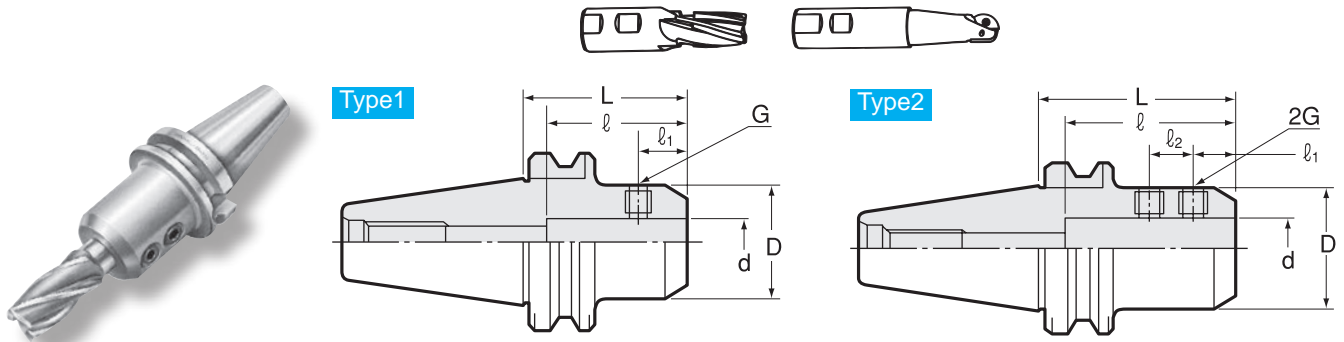
Tool Shank Dimensions



# SL2

## Side Lock Holder

- For JIS straight shank endmill with flat.

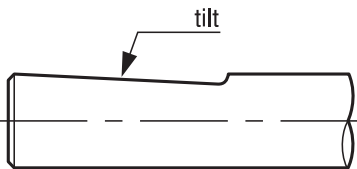


### Metric Sizes

Unit : Metric

Code	Model	Type	d (H6)	D	L	l <sub>1</sub>	l <sub>2</sub>	l	G	kg
0740 02106060	<b>BT30 -SL2 -6 -60</b>	1	6	25	60	18	—	36	M6	0.5
0740 02108060	<b>-8 -60</b>	1	8	28	60	18	—	36	M8	0.8
0740 02110060	<b>-10 -60</b>	1	10	35	60	20	—	40	M10	0.7
0740 02112060	<b>-12 -60</b>	1	12	42	60	22.5	—	45	M12	0.8
0740 02116090	<b>-16 -90</b>	1	16	48	90	24	—	48	M14	1.2
0740 02120090	<b>-20 -90</b>	1	20	52	90	25	—	50	M16	1.3
0740 02306075	<b>BT40 -SL2 -6 -75</b>	1	6	25	75	18	—	36	M6	1.2
0740 02308075	<b>-8 -75</b>	1	8	28	75	18	—	36	M8	1.2
0740 02310075	<b>-10 -75</b>	1	10	35	75	20	—	40	M10	1.2
0740 02312075	<b>-12 -75</b>	1	12	42	75	22.5	—	45	M12	1.4
0740 02316075	<b>-16 -75</b>	1	16	48	75	24	—	48	M14	1.5
0740 02320075	<b>-20 -75</b>	1	20	52	75	25	—	50	M16	1.6
0740 02325090	<b>-25 -90</b>	2	25	65	90	24	25	56	M18	2.3
0740 02332120	<b>-32 -120</b>	2	32	72	120	24	28	60	M20	3.3
0740 02506090	<b>BT50 -SL2 -6 -90</b>	1	6	25	90	18	—	36	M6	3.7
0740 02508090	<b>-8 -90</b>	1	8	28	90	18	—	36	M8	3.7
0740 02510090	<b>-10 -90</b>	1	10	35	90	20	—	40	M10	3.8
0740 02512090	<b>-12 -90</b>	1	12	42	90	22.5	—	45	M12	4.0
0740 02516090	<b>-16 -90</b>	1	16	48	90	24	—	48	M14	4.1
0740 02520090	<b>-20 -90</b>	1	20	52	90	25	—	50	M16	4.2
0740 02525105	<b>-25 -105</b>	2	25	65	105	24	25	56	M18	4.9
0740 02532120	<b>-32 -120</b>	2	32	72	120	24	28	60	M20	5.6
0740 02540120	<b>-40 -120</b>	2	40	80	120	30	32	70	M20	5.9
0740 02542120	<b>-42 -120</b>	2	42	82	120	30	32	70	M20	6.0

Please contact NT if the cutting tool has tilted flat on the shank.  
Special tool holder that matches to the tilted flat can be manufactured.



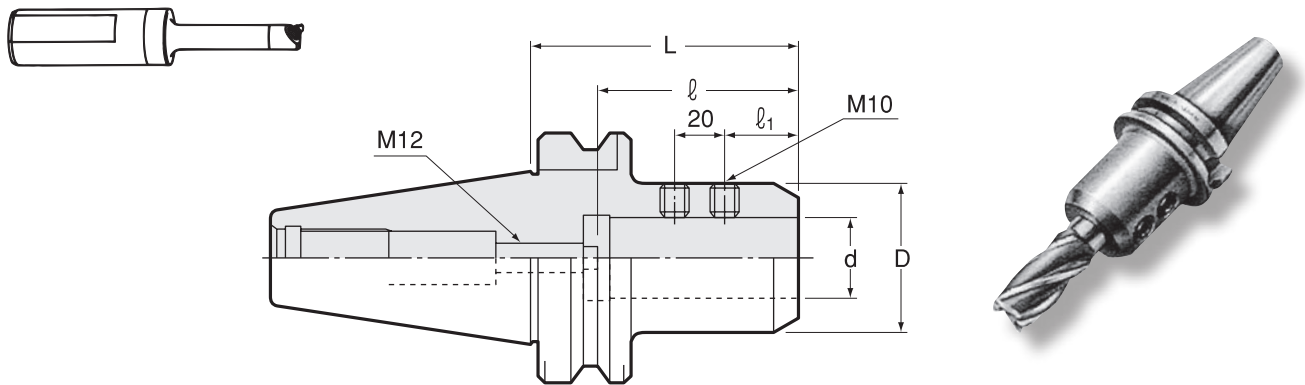
### Ordering Example

**BT30 - SL2 - 6 - 60**  
 Shank size                      I.D. (d)                      Projection length (L)

# SLA

## Side Lock Holder

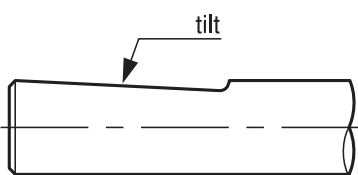
- For straight shank boring bar with flat and straight shank boring head with flat.



### Metric Sizes

Unit : Metric

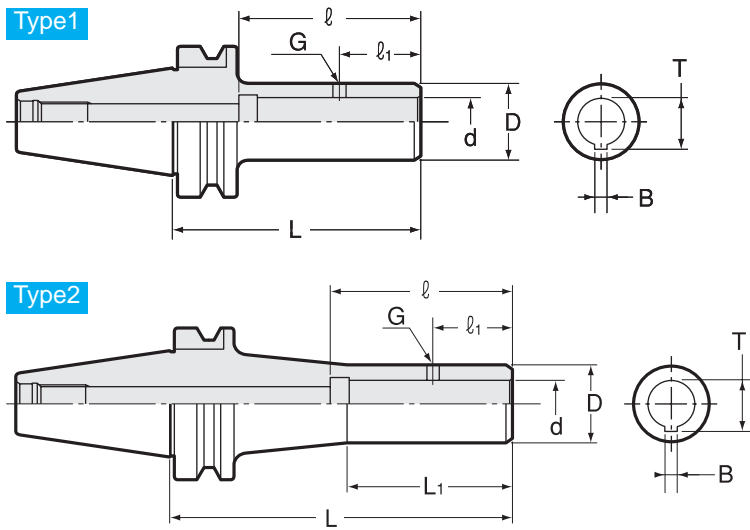
Code	Model	d (H6)	L	D	l MIN	l MAX	l1	kg
0740 00116075	BT30 -SLA16 -75	16	75	40	55	70	25	0.8
0740 00120075	BT30 -SLA20 -75	20	75	40	55	70	25	0.8
0740 00125075	BT30 -SLA25 -75	25	75	46	55	70	25	0.8
0740 00320090	BT40 -SLA20 -90	20	90	50	55	70	25	1.8
0740 00325090	BT40 -SLA25 -90	25	90	50	55	70	25	1.7
0740 00332090	BT40 -SLA32 -90	32	90	60	65	80	30	1.9
0740 00342090	BT40 -SLA42 -90	42	90	63	65	80	30	1.6
0740 00520105	BT50 -SLA20 -105	20	105	50	55	70	25	4.4
0740 00525105	BT50 -SLA25 -105	25	105	50	55	70	25	4.3
0740 00532105	BT50 -SLA32 -105	32	105	60	65	80	30	4.5
0740 00542105	BT50 -SLA42 -105	42	105	70	65	80	30	4.7



Please contact NT if the cutting tool has tilted flat on the shank.  
Special tool holder that matches to the tilted flat can be manufactured.

### Ordering Example

**BT30 - SLA 16 - 75**  
 Shank size                      I.D. (d)                      Projection length (L)



## Metric Sizes

Unit : Metric

Code	Model	Type	d (H6)	L	l <sub>1</sub>	l	D	G	L <sub>1</sub>	B	T	kg
0740 01116075	BT30 -SLB16 -75	1	16	75	34	74	35	M8	—	5	17.3	0.5
0740 01116105	-105	1	16	105	34	74	35	M8	—	5	17.3	0.7
0740 01120075	BT30 -SLB20 -75	1	20	75	34	77	40	M8	—	5	21.3	0.7
0740 01120105	-105	1	20	105	34	77	40	M8	—	5	21.3	1.0
0740 01320105	BT40 -SLB20 -105	1	20	105	34	77	32	M6	—	5	21.3	1.5
0740 01320145	-145	2	20	145	34	77	32	M6	70	5	21.3	1.5
0740 01326105	BT40 -SLB26 -105	1	26	105	40	85	50	M10	—	5	28.2	1.8
0740 01328135	BT40 -SLB28 -135	1	28	135	38	85	40	M8	—	6	29.7	1.5
0740 01328175	-175	2	28	175	38	85	40	M8	78	6	29.7	2.1
0740 01335135	BT40 -SLB35 -135	1	35	135	55	106	60	M10	—	6	37.6	2.2
0740 01335136	BT40 -SLB35T -135	1	35	135	55	106	60	M10	—	7	38.2	2.2
0740 01336135	BT40 -SLB36 -135	1	36	135	45	106	50	M8	—	8	37.7	2.3
0740 01520135	BT50 -SLB20 -135	1	20	135	34	77	32	M6	—	5	21.3	4.5
0740 01520175	-175	2	20	175	34	77	32	M6	70	5	21.3	4.7
0740 01526105	BT50 -SLB26 -105	1	26	105	40	85	50	M10	—	5	28.2	4.4
0740 01528135	BT50 -SLB28 -135	1	28	135	38	85	40	M8	—	6	29.7	4.0
0740 01528175	-175	2	28	175	38	85	40	M8	78	6	29.7	4.6
0740 01535135	BT50 -SLB35 -135	1	35	135	55	106	60	M10	—	6	37.6	4.7
0740 01535136	BT50 -SLB35T -135	1	35	135	55	106	60	M10	—	7	38.2	4.7
0740 01536165	BT50 -SLB36 -165	1	36	165	45	106	50	M8	—	8	37.7	4.5
0740 01536205	-205	2	36	205	45	106	50	M8	98	8	37.7	5.2
0740 01548165	BT50 -SLB48 -165	1	48	165	65	129	80	M10	—	8	51.0	6.5

## SLB Sub Holders

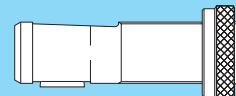
Straight drill chuck

P. 482



Adjustable adapter

P. 468



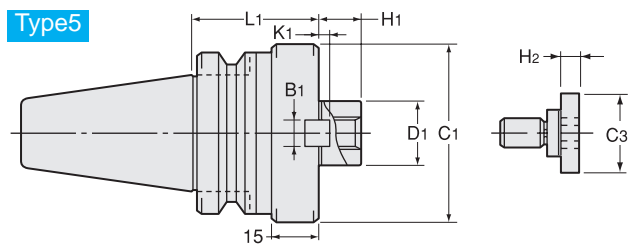
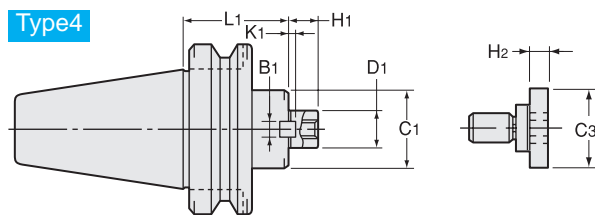
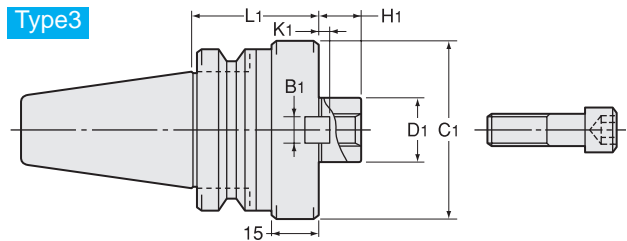
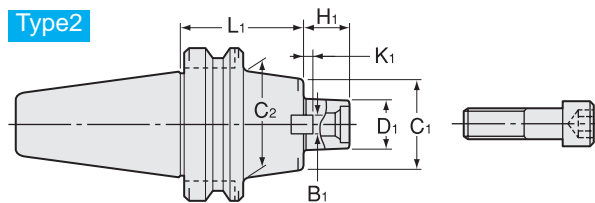
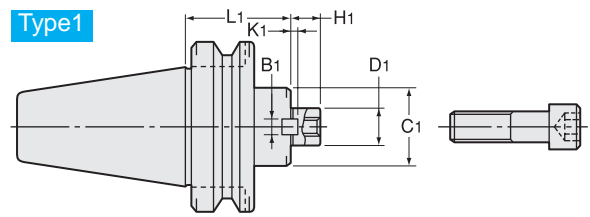
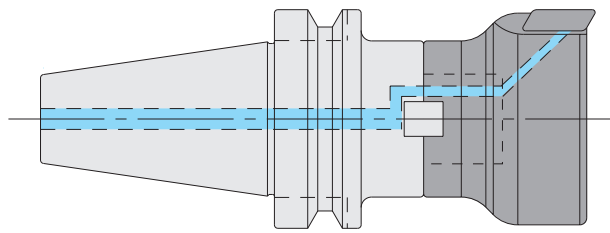
## Ordering Example

**BT30 - SLB 16 - 75**  
 Shank size      I.D. (d)      Projection length (L)

# FMH

## Face Mill Arbor (For Cutters With Oil Hole)

- Coolant flows from the end face of centering location to cutter with oil hole.



### Metric Sizes

Unit : Metric

Code	Model	Type	D1	L1	C1	C2	H1	B1	K1	C3	H2	Clamp Bolt	Cutter dia. Example
0770 05116045	<b>BT30 -FMH16 -45</b>	1	16	45	34	—	17	8	5	—	—	M8	40 50
0770 05116060	<b>-60</b>	1	16	60	34	—	17	8	5	—	—	M8	40 50
0770 05122045	<b>BT30 -FMH22 -45</b>	1	22	45	45	—	18	10	5.6	—	—	M10	50 63
0770 05122060	<b>-60</b>	1	22	60	45	—	18	10	5.6	—	—	M10	50 63
0770 05125060	<b>BT30 -FMH25.4 -60</b>	3	25.4	60	70	—	22	9.5	5	—	—	M12	80 100 125
0770 05316045	<b>BT40 -FMH16 -45</b>	1	16	45	34	—	17	8	5	—	—	M8	40 50
0770 05316060	<b>-60</b>	1	16	60	34	—	17	8	5	—	—	M8	40 50
0770 05316075	<b>-75</b>	1	16	75	34	—	17	8	5	—	—	M8	40 50
0770 05316090	<b>-90</b>	2	16	90	34	40	17	8	5	—	—	M8	40 50
0770 05322045	<b>BT40 -FMH22 -45</b>	1	22	45	45	—	18	10	5.6	—	—	M10	50 63
0770 05322060	<b>-60</b>	1	22	60	45	—	18	10	5.6	—	—	M10	50 63
0770 05322075	<b>-75</b>	1	22	75	45	—	18	10	5.6	—	—	M10	50 63
0770 05322090	<b>-90</b>	1	22	90	45	—	18	10	5.6	—	—	M10	50 63
0770 05325060	<b>BT40 -FMH25.4 -60</b>	3	25.4	60	70	—	22	9.5	5	—	—	M12	80 100 125
0770 05325075	<b>-75</b>	3	25.4	75	70	—	22	9.5	5	—	—	M12	80 100 125
0770 05325090	<b>-90</b>	3	25.4	90	70	—	22	9.5	5	—	—	M12	80 100 125
0770 05331060	<b>BT40 -FMH31.75 -60</b>	3	31.75	60	80	—	30	12.7	7	—	—	M16	80 100
0770 05331075	<b>-75</b>	3	31.75	75	80	—	30	12.7	7	—	—	M16	80 100
0770 05331090	<b>-90</b>	3	31.75	90	80	—	30	12.7	7	—	—	M16	80 100
0770 05338060	<b>BT40 -FMH38.1 -60</b>	5	38.1	60	90	—	34	15.9	9	50	14	MBAH-M20	125
0770 05338075	<b>-75</b>	5	38.1	75	90	—	34	15.9	9	50	14	MBAH-M20	125
0770 05338090	<b>-90</b>	5	38.1	90	90	—	34	15.9	9	50	14	MBAH-M20	125

## Metric Sizes

Unit : Metric

Code	Model	Type	D1	L1	C1	C2	H1	B1	K1	C3	H2	Clamp Bolt	Cutter dia. Example
0770 05516045	<b>BT50 -FMH16 -45</b>	1	16	45	34	—	17	8	5	—	—	M8	40 50
0770 05516090	<b>-90</b>	2	16	90	34	40	17	8	5	—	—	M8	40 50
0770 05516150	<b>-150</b>	2	16	150	34	40	17	8	5	—	—	M8	40 50
0770 05516200	<b>-200</b>	2	16	200	34	40	17	8	5	—	—	M8	40 50
0770 05522045	<b>BT50 -FMH22 -45</b>	1	22	45	45	—	18	10	5.6	—	—	M10	50 63
0770 05522090	<b>-90</b>	1	22	90	45	—	18	10	5.6	—	—	M10	50 63
0770 05522150	<b>-150</b>	1	22	150	45	—	18	10	5.6	—	—	M10	50 63
0770 05522200	<b>-200</b>	1	22	200	45	—	18	10	5.6	—	—	M10	50 63
0770 05525045	<b>BT50 -FMH25.4 -45</b>	1	25.4	45	70	—	22	9.5	5	—	—	M12	80 100 125
0770 05525090	<b>-90</b>	2	25.4	90	70	80	22	9.5	5	—	—	M12	80 100 125
0770 05525150	<b>-150</b>	2	25.4	150	70	80	22	9.5	5	—	—	M12	80 100 125
0770 05525200	<b>-200</b>	2	25.4	200	70	80	22	9.5	5	—	—	M12	80 100 125
0770 05531045	<b>BT50 -FMH31.75 -45</b>	1	31.75	45	80	—	30	12.7	7	—	—	M16	80 100
0770 05531105	<b>-105</b>	1	31.75	105	80	—	30	12.7	7	—	—	M16	80 100
0770 05531150	<b>-150</b>	1	31.75	150	80	—	30	12.7	7	—	—	M16	80 100
0770 05531200	<b>-200</b>	1	31.75	200	80	—	30	12.7	7	—	—	M16	80 100
0770 05538045	<b>BT50 -FMH38.1 -45</b>	4	38.1	45	90	—	34	15.9	9	50	14	MBAH-M20	125
0770 05538075	<b>-75</b>	4	38.1	75	90	—	34	15.9	9	50	14	MBAH-M20	125
0770 05538105	<b>-105</b>	4	38.1	105	90	—	34	15.9	9	50	14	MBAH-M20	125
0770 05538150	<b>-150</b>	4	38.1	150	90	—	34	15.9	9	50	14	MBAH-M20	125
0770 05550045	<b>BT50 -FMH50.8 -45</b>	4	50.8	45	100	—	36	19.05	10	65	14	MBAH-M24	160
0770 05550075	<b>-75</b>	4	50.8	75	100	—	36	19.05	10	65	14	MBAH-M24	160
0770 05550105	<b>-105</b>	4	50.8	105	100	—	36	19.05	10	65	14	MBAH-M24	160
0770 05550150	<b>-150</b>	4	50.8	150	100	—	36	19.05	10	65	14	MBAH-M24	160

Clamp bolt is Included.

## Ordering Example

**BT30 - FMH 25.4 - 60**

Shank size

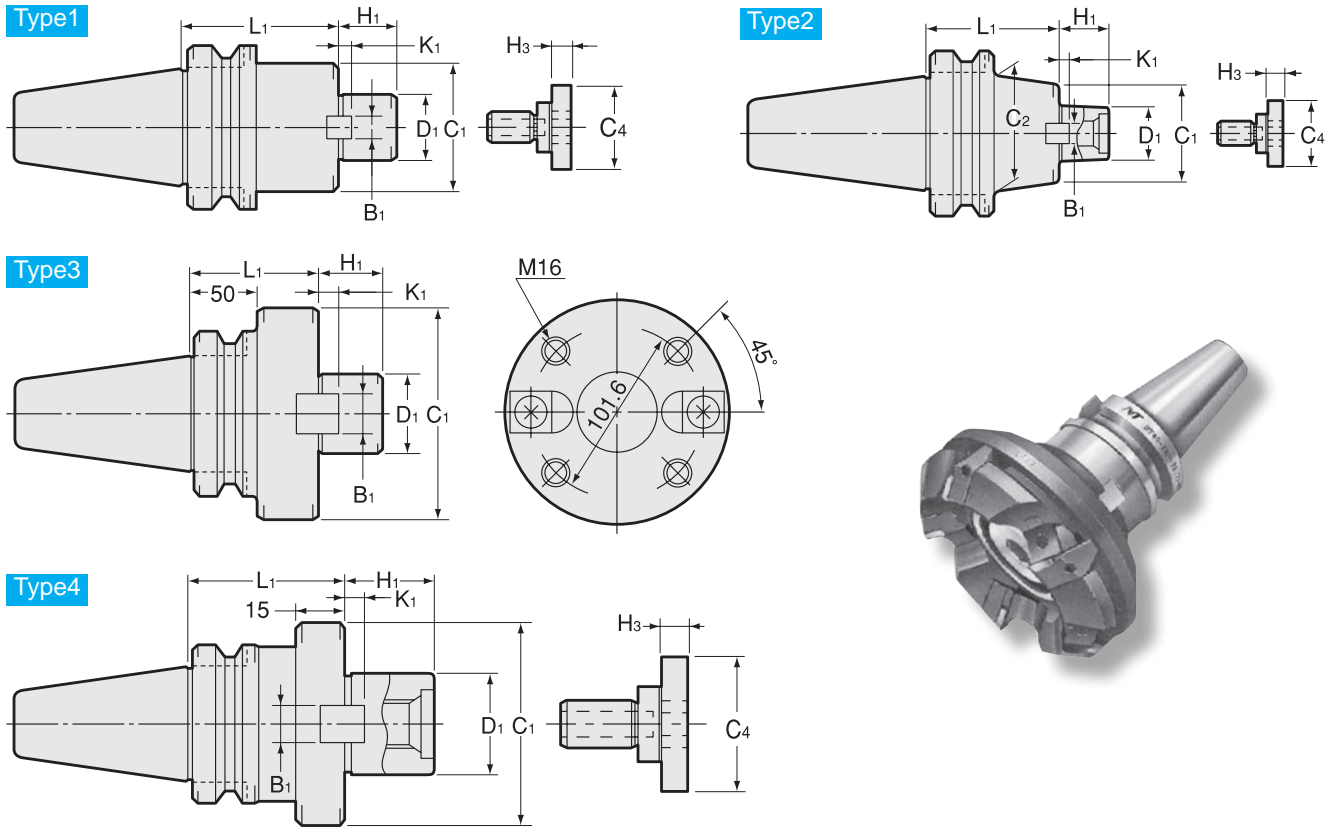
D1

Projection  
length (L)



## Face Mill Arbor

● For JIS B4113 face mill.



Metric Sizes														Unit : Metric	
Code	Model	Type	D1 (h6)	L1	C1	C2	H1	B1	K1	C4	H3	kg	Clamp Bolt	Cutter dia. example	
0770 00125045	<b>BT30 -FMA25.4 -45</b>	4	25.4	45	50	—	22	9.5	5	33	10	0.9	MBA-M12	80	
0770 00125060	<b>-60</b>	4	25.4	60	50	—	22	9.5	5	33	10	1.1			
0770 00125090	<b>-90</b>	4	25.4	90	50	—	22	9.5	5	33	10	1.5			
0770 00325045	<b>BT40 -FMA25.4 -45</b>	1	25.4	45	50	—	22	9.5	5	33	10	1.5	MBA-M12	80	
0770 00325090	<b>-90</b>	1	25.4	90	50	—	22	9.5	5	33	10	2.1			
0770 00331045	<b>BT40 -FMA31.75 -45</b>	1	31.75	45	60	—	30	12.7	7	40	10	1.7			
0770 00331075	<b>-75</b>	1	31.75	75	60	—	30	12.7	7	40	10	2.3	MBA-M16	100	
0770 00338060	<b>BT40 -FMA38.1 -60</b>	4	38.1	60	80	—	34	15.9	9	50	14	2.5			
0770 00338090	<b>-90</b>	4	38.1	90	80	—	34	15.9	9	50	14	3.3	MBA-M20	125	
0770 00525045	<b>BT50 -FMA25.4 -45</b>	1	25.4	45	50	—	22	9.5	5	33	10	4.0			
0770 00525090	<b>-90</b>	2	25.4	90	50	70	22	9.5	5	33	10	5.0	MBA-M12	80	
0770 00525150	<b>-150</b>	2	25.4	150	50	70	22	9.5	5	33	10	6.4			
0770 00531045	<b>BT50 -FMA31.75 -45</b>	1	31.75	45	60	—	30	12.7	7	40	10	4.1			
0770 00531075	<b>-75</b>	2	31.75	75	60	70	30	12.7	7	40	10	4.9	MBA-M16	100	
0770 00531105	<b>-105</b>	2	31.75	105	60	70	30	12.7	7	40	10	5.7			
0770 00538045	<b>BT50 -FMA38.1 -45</b>	1	38.1	45	80	—	34	15.9	9	50	14	4.4	MBA-M20	125	
0770 00538075	<b>-75</b>	1	38.1	75	80	—	34	15.9	9	50	14	5.6			
0770 00550045	<b>BT50 -FMA50.8 -45</b>	1	50.8	45	100	—	36	19.05	10	65	14	5.0	MBA-M24	160	
0770 00550075	<b>-75</b>	1	50.8	75	100	—	36	19.05	10	65	14	6.8			
0770 00547075	<b>BT50 -FMA47.625 -75</b>	3	47.625	75	128.57	—	38	25.4	12.5	—	—	7.9	M16	200	

Clamp bolt is Included.

### Ordering Example

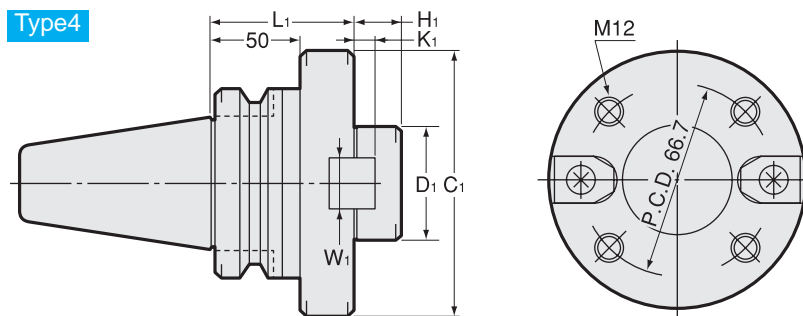
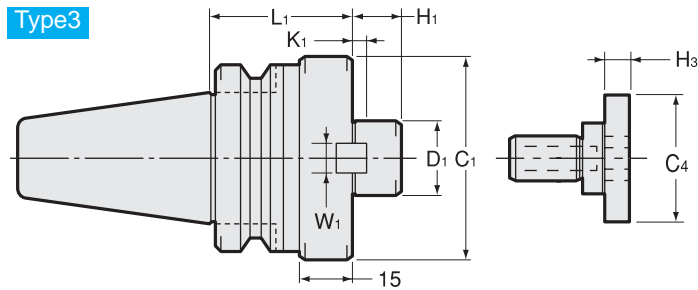
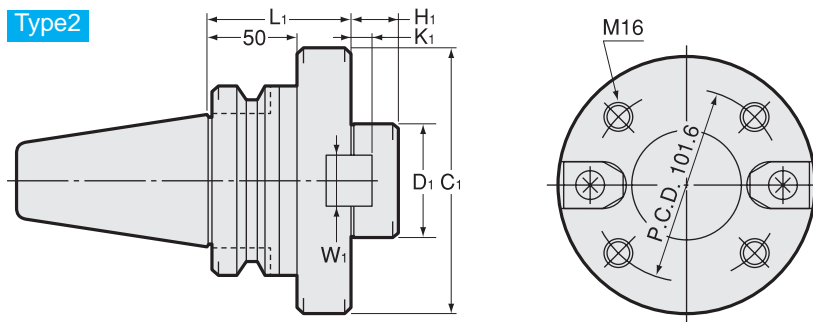
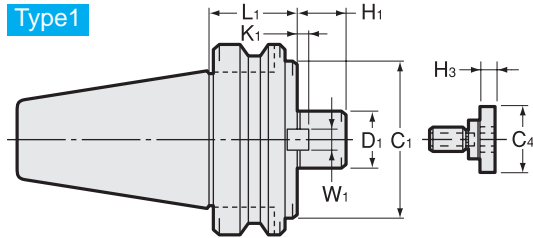
**BT40 - FMA 25.4 - 90**

Shank size

D1

Projection length (L)

## Face Mill Arbor



BT  
CAT  
AHO  
HSK-A/E/F/C  
HSK-T  
UTS  
Specialized Machine  
Related Equipment  
Bush & Chamfering Drill

Milling Chuck

Collet Holder

"R"-Zero Holder

Hydraulic Chuck

Shrink Fit

Tapping Chuck

Arbors

Function Holder

Turning Tool

Retention Stud

Tool Shank Dimensions

## Metric Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	H1	W1	K1	C4	H3	kg	Clamp Bolt	Cutter dia. example
0770 01127060	<b>BT30 -FMB27 -60</b>	3	27	60	80	26	12	6	33	10	1.5	MBA-M12	80
0770 01327060	<b>BT40 -FMB27 -60</b>	3	27	60	80	26	12	6	33	10	2.2	MBA-M12	80
0770 01327090	<b>-90</b>	3	27	90	80	26	12	6	33	10	3.0		
0770 01340060	<b>BT40 -FMB40 -60</b>	3	40	60	85	26	16	8.5	50	14	2.5	MBA-M20	100 125
0770 01527045	<b>BT50 -FMB27 -45</b>	1	27	45	80	26	12	6	33	10	4.2		
0770 01527090	<b>-90</b>	1	27	90	80	26	12	6	33	10	5.9	MBA-M12	80
0770 01527150	<b>-150</b>	1	27	150	80	26	12	6	33	10	8.3		
0770 01540045	<b>BT50 -FMB40 -45</b>	1	40	45	85	26	16	8.5	50	14	4.4		
0770 01540075	<b>-75</b>	1	40	75	85	26	16	8.5	50	14	5.8	MBA-M20	100 125
0770 01540105	<b>-105</b>	1	40	105	85	26	16	8.5	50	14	7.1		
0770 01541075	<b>BT50 -FMB40F -75</b>	4	40	75	110	26	16	8.5	50	14	6.8	M12, MBA-M20	160
0770 01560075	<b>BT50 -FMB60 -75</b>	2	60	75	140	25	25.4	12.5	—	—	8.2	M16	200

Clamp bolt is Included.

## Ordering Example

**BT30 - FMB 27 - 60**  
 Shank size                      D1                      Projection  
    length (L)

## Inch Sizes

Unit : Metric

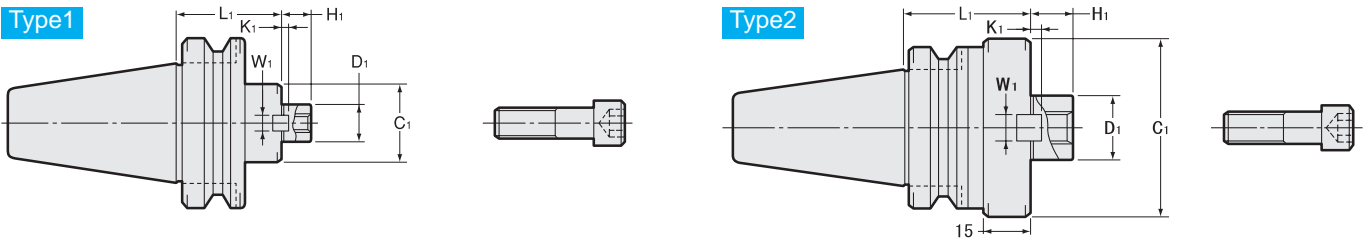
Code	Model	Type	D1 (h6)	L1	C1	H1	W1	K1	C4	H3	kg	Clamp Bolt	Cutter dia. example
0770 02125060	<b>BT30 -FMB25.4 -60</b>	3	25.4	60	80	26	9.5	5	33	10	1.5	MBA-M12	80
0770 02325060	<b>BT40 -FMB25.4 -60</b>	3	25.4	60	80	26	9.5	5	33	10	2.2	MBA-M12	80
0770 02325090	<b>-90</b>	3	25.4	90	80	26	9.5	5	33	10	2.9		
0770 02338060	<b>-FMB38.1 -60</b>	3	38.1	60	85	26	15.9	9	50	14	2.6	MBA-M20	100 125
0770 02525045	<b>BT50 -FMB25.4 -45</b>	1	25.4	45	80	26	9.5	5	33	10	4.1		
0770 02525090	<b>-90</b>	1	25.4	90	80	26	9.5	5	33	10	5.9	MBA-M12	80
0770 02525150	<b>-150</b>	1	25.4	150	80	26	9.5	5	33	10	8.4		
0770 02538045	<b>BT50 -FMB38.1 -45</b>	1	38.1	45	85	26	15.9	9	50	14	4.4		
0770 02538075	<b>-75</b>	1	38.1	75	85	26	15.9	9	50	14	5.7	MBA-M20	100 125
0770 02538105	<b>-105</b>	1	38.1	105	85	26	15.9	9	50	14	7.1		
0770 02539075	<b>BT50 -FMB38.1F -75</b>	4	38.1	75	110	26	15.9	9	50	14	5.7	M12, MBA-M20	160

Clamp bolt is Included.

## Ordering Example

**BT30 - FMA 25.4 - 60**  
 Shank size                      D1                      Projection  
    length (L)

## Face Mill Arbor



### Metric Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	H1	W1	K1	kg	Clamp Bolt JIS B1176	Cutter dia. example
0770 03122045	<b>BT30 -FMC22 -45</b>	1	22	45	45	18	10	5	0.8	M10	50 63
0770 03322045	<b>BT40 -FMC22 -45</b>	1	22	45	45	18	10	5	1.3	M10	50 63
0770 03322090	<b>-90</b>	1	22	90	45	18	10	5	1.9	M10	50 63
0770 03327060	<b>BT40 -FMC27 -60</b>	2	27	60	70	20	12	6	2.0	M12	80
0770 03327090	<b>-90</b>	2	27	90	70	20	12	6	2.8	M12	80
0770 03332060	<b>BT40 -FMC32 -60</b>	2	32	60	85	22	14	7	2.3	M16	100
0770 03332075	<b>-75</b>	2	32	75	85	22	14	7	2.7	M16	100
0770 03522060	<b>BT50 -FMC22 -60</b>	1	22	60	45	18	10	5	4.0	M10	50 63
0770 03522105	<b>-105</b>	1	22	105	45	18	10	5	4.6	M10	50 63
0770 03522150	<b>-150</b>	1	22	150	45	18	10	5	5.2	M10	50 63
0770 03527045	<b>BT50 -FMC27 -45</b>	1	27	45	70	20	12	6	4.0	M12	80
0770 03527090	<b>-90</b>	1	27	90	70	20	12	6	5.4	M12	80
0770 03527150	<b>-150</b>	1	27	150	70	20	12	6	7.2	M12	80
0770 03532045	<b>BT50 -FMC32 -45</b>	1	32	45	85	22	14	7	4.2	M16	100
0770 03532075	<b>-75</b>	1	32	75	85	22	14	7	5.5	M16	100
0770 03532105	<b>-105</b>	1	32	105	85	22	14	7	6.9	M16	100

Clamp bolt is Included.

### Ordering Example

**BT30 - FMC 27 - 45**  
 Shank size                      D1                      Projection length (L)

### Inch Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	H1	W1	K1	kg	Clamp Bolt JIS B1176	Cutter dia. example
0770 04125060	<b>BT30 -FMC25.4 -60</b>	2	25.4	60	70	20	9.5	5	1.3	M12	80
0770 04325060	<b>BT40 -FMC25.4 -60</b>	2	25.4	60	70	20	9.5	5	2.0	M12	80
0770 04325090	<b>-90</b>	2	25.4	90	70	20	9.5	5	2.7	M12	80
0770 04338060	<b>BT40 -FMC38.1 -60</b>	2	38.1	60	85	22	15.9	7	2.3	M16	100
0770 04338075	<b>-75</b>	2	38.1	75	85	22	15.9	7	2.6	M16	100
0770 04525045	<b>BT50 -FMC25.4 -45</b>	1	25.4	45	70	20	9.5	5	4.1	M12	80
0770 04525090	<b>-90</b>	1	25.4	90	70	20	9.5	5	5.4	M12	80
0770 04525150	<b>-150</b>	1	25.4	150	70	20	9.5	5	7.2	M12	80
0770 04538045	<b>BT50 -FMC38.1 -45</b>	1	38.1	45	85	22	15.9	7	4.3	M16	100
0770 04538075	<b>-75</b>	1	38.1	75	85	22	15.9	7	5.5	M16	100
0770 04538105	<b>-105</b>	1	38.1	105	85	22	15.9	7	6.9	M16	100

Clamp bolt is Included.

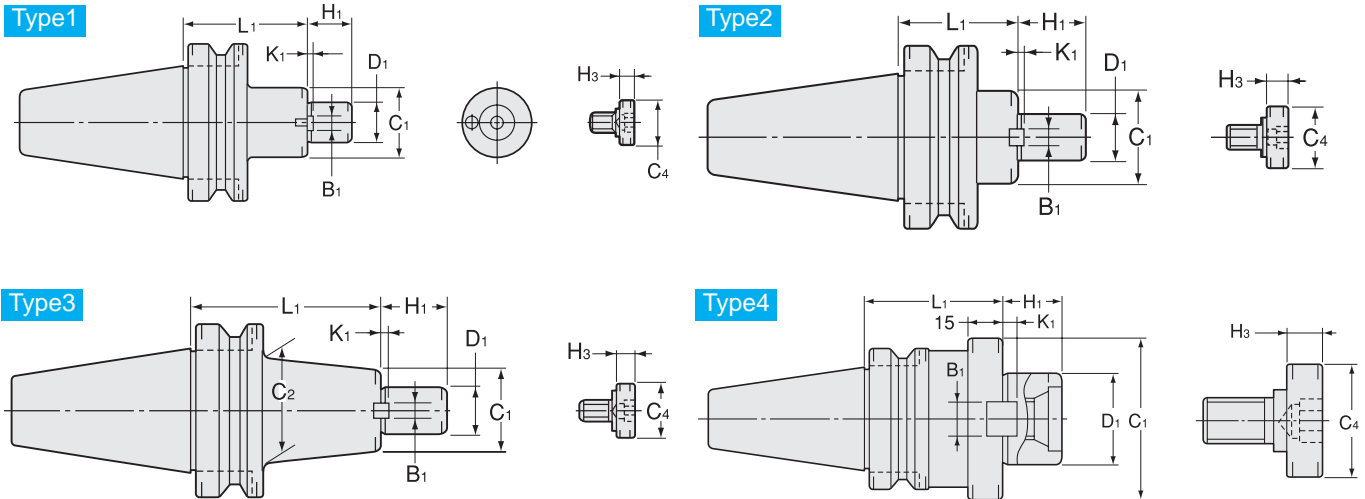
### Ordering Example

**BT30 - FMC 25.4 - 60**  
 Shank size                      D1                      Projection length (L)

# SM1

## Shell End Mill Arbor

● For JIS B4214-1975 Shell end mill.



### Metric Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	C2	H1	B1	K1	C4	H3	kg	Clamp Bolt	Cutter dia. Example
0780 00116030	<b>BT30 -SM1-16 -30</b>	1	16	30	34	—	15	8	5	20	7	0.5	MBA-M8	40
0780 00122030	<b>BT30 -SM1-22 -30</b>	1	22	30	42	—	17	10	5.6	28	9	0.6	MBA-M10	50
0780 00316060	<b>BT40 -SM1-16 -60</b>	1	16	60	34	—	15	8	5	20	7	1.3	MBA-M8	40
0780 00316120	<b>-120</b>	1	16	120	34	—	15	8	5	20	7	1.7	MBA-M8	40
0780 00322060	<b>BT40 -SM1-22 -60</b>	1	22	60	42	—	17	10	5.6	28	9	1.5	MBA-M10	50
0780 00322120	<b>-120</b>	1	22	120	42	—	17	10	5.6	28	9	2.1	MBA-M10	50
0780 00327045	<b>BT40 -SM1-27 -45</b>	2	27	45	48	—	19	12	6.3	33	10	1.4	MBA-M12	63 80
0780 00327105	<b>-105</b>	2	27	105	48	—	19	12	6.3	33	10	2.3	MBA-M12	63 80
0780 00332045	<b>BT40 -SM1-32 -45</b>	2	32	45	58	—	24	14	7	40	10	1.6	MBA-M16	100
0780 00332075	<b>-75</b>	2	32	75	58	—	24	14	7	40	10	2.3	MBA-M16	100
0780 00340060	<b>BT40 -SM1-40 -60</b>	4	40	60	70	—	27	16	8	50	14	2.3	MBA-M20	125
0780 00516075	<b>BT50 -SM1-16 -75</b>	1	16	75	34	—	15	8	5	20	7	4.0	MBA-M8	40
0780 00516120	<b>-120</b>	1	16	120	34	—	15	8	5	20	7	6.3	MBA-M8	40
0780 00522075	<b>BT50 -SM1-22 -75</b>	1	22	75	42	—	17	10	5.6	28	9	4.3	MBA-M10	50
0780 00522120	<b>-120</b>	1	22	120	42	—	17	10	5.6	28	9	4.7	MBA-M10	50
0780 00522180	<b>-180</b>	1	22	180	42	—	17	10	5.6	28	9	5.3	MBA-M10	50
0780 00527060	<b>BT50 -SM1-27 -60</b>	2	27	60	48	—	19	12	6.3	33	10	4.2	MBA-M12	63 80
0780 00527105	<b>-105</b>	3	27	105	48	60	19	12	6.3	33	10	5.0	MBA-M12	63 80
0780 00527150	<b>-150</b>	3	27	150	48	60	19	12	6.3	33	10	5.9	MBA-M12	63 80
0780 00532045	<b>BT50 -SM1-32 -45</b>	2	32	45	58	—	24	14	7	40	10	4.2	MBA-M16	100
0780 00532075	<b>-75</b>	3	32	75	58	70	24	14	7	40	10	4.8	MBA-M16	100
0780 00532105	<b>-105</b>	3	32	105	58	70	24	14	7	40	10	5.6	MBA-M16	100
0780 00540075	<b>BT50 -SM1-40 -75</b>	3	40	75	70	80	27	16	8	50	14	5.5	MBA-M20	125
0780 00540105	<b>-105</b>	3	40	105	70	80	27	16	8	50	14	6.4	MBA-M20	125

Clamp bolt is Included.

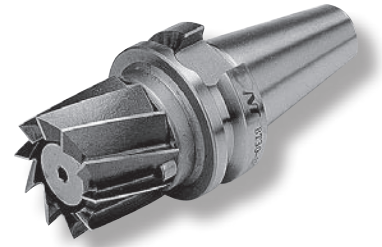
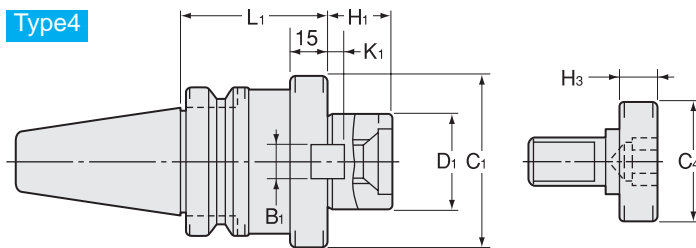
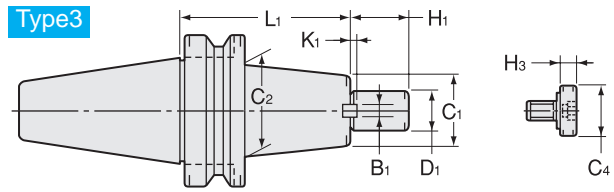
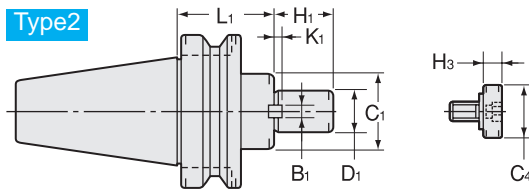
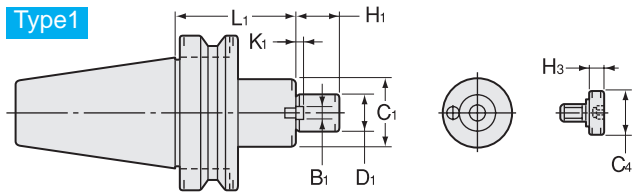
### Ordering Example

**BT30 - SM1 - 16 - 30**  
 Shank size                      D1                      Projection length (L)

# SMA

## Shell End Mill Arbor

● For JIS B4214-1966 Shell end mill.



### Metric Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	C2	H1	B1	K1	C4	H3	kg	Clamp Bolt	Cutter dia. Example
0780 01116030	<b>BT30 -SMA16 -30</b>	1	16	30	34	—	17	8	3	20	7	0.5	MBA-M 8	35 40
0780 01122030	<b>BT30 -SMA22 -30</b>	1	22	30	42	—	27	8	3.5	28	9	0.6	MBA-M10	45 50
0780 01316060	<b>BT40 -SMA16 -60</b>	1	16	60	34	—	17	8	3	20	7	1.3	MBA-M 8	35 40
0780 01316120	<b>-120</b>	1	16	120	34	—	17	8	3	20	7	1.7	MBA-M 8	35 40
0780 01322060	<b>BT40 -SMA22 -60</b>	1	22	60	42	—	27	8	3.5	28	9	1.4	MBA-M10	45 50
0780 01322120	<b>-120</b>	1	22	120	42	—	27	8	3.5	28	9	2.2	MBA-M10	45 50
0780 01327045	<b>BT40 -SMA27 -45</b>	2	27	45	50	—	36	10	4	33	10	1.4	MBA-M12	60 75
0780 01327105	<b>-105</b>	2	27	105	50	—	36	10	4	33	10	2.4	MBA-M12	60 75
0780 01332045	<b>BT40 -SMA32 -45</b>	2	32	45	60	—	38	10	4.5	40	10	1.7	MBA-M16	100
0780 01332075	<b>-75</b>	2	32	75	60	—	38	10	4.5	40	10	2.3	MBA-M16	100
0780 01340060	<b>BT40 -SMA40 -60</b>	4	40	60	80	—	38	12	5	50	14	2.0	MBA-M20	125
0780 01516075	<b>BT50 -SMA16 -75</b>	1	16	75	34	—	17	8	3	20	7	4.0	MBA-M 8	35 40
0780 01516120	<b>-120</b>	1	16	120	34	—	17	8	3	20	7	4.3	MBA-M 8	35 40
0780 01522075	<b>BT50 -SMA22 -75</b>	1	22	75	42	—	27	8	3.5	28	9	4.3	MBA-M10	45 50
0780 01522120	<b>-120</b>	1	22	120	42	—	27	8	3.5	28	9	4.7	MBA-M10	45 50
0780 01522180	<b>-180</b>	1	22	180	42	—	27	8	3.5	28	9	5.4	MBA-M10	45 50
0780 01527060	<b>BT50 -SMA27 -60</b>	2	27	60	50	—	36	10	4	33	10	4.3	MBA-M12	60 75
0780 01527105	<b>-105</b>	3	27	105	50	60	36	10	4	33	10	5.2	MBA-M12	60 75
0780 01527150	<b>-150</b>	3	27	150	50	60	36	10	4	33	10	6.0	MBA-M12	60 75
0780 01532045	<b>BT50 -SMA32 -45</b>	2	32	45	60	—	38	10	4.5	40	10	4.2	MBA-M16	100
0780 01532075	<b>-75</b>	3	32	75	60	70	38	10	4.5	40	10	5.0	MBA-M16	100
0780 01532105	<b>-105</b>	3	32	105	60	70	38	10	4.5	40	10	5.7	MBA-M16	100
0780 01540045	<b>BT50 -SMA40 -45</b>	2	40	45	80	—	38	12	5	50	14	4.3	MBA-M20	125
0780 01540075	<b>-75</b>	2	40	75	80	—	38	12	5	50	14	5.7	MBA-M20	125

Clamp bolt is Included.

Inch to Metric (mm) → Inch × 25.4  
Metric (mm) to Inch → Metric ÷ 25.4 or Metric × 0.03937



Special / Custom Sizes on request

# Inch Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	C2	H1	B1	K1	C4	H3	kg	Clamp Bolt	Cutter dia. Example
0780 02115030	<b>BT30 -SMA15.875 -30</b>	1	15.875	30	34	—	17	8	3	20	7	0.6	MBA-M 8	35 40
0780 02122030	<b>BT30 -SMA22.225 -30</b>	1	22.225	30	42	—	27	8	3.5	28	9	1.0	MBA-M10	45 50
0780 02315060	<b>BT40 -SMA15.875 -60</b>	1	15.875	60	34	—	17	8	3	20	7	1.3	MBA-M 8	35 40
0780 02315120	<b>-120</b>	1	15.875	120	34	—	17	8	3	20	7	1.7	MBA-M 8	35 40
0780 02322060	<b>BT40 -SMA22.225 -60</b>	1	22.225	60	42	—	27	8	3.5	28	9	1.5	MBA-M10	45 50
0780 02322120	<b>-120</b>	1	22.225	120	42	—	27	8	3.5	28	9	2.1	MBA-M10	45 50
0780 02325045	<b>BT40 -SMA25.4 -45</b>	2	25.4	45	50	—	36	10	4	33	10	1.4	MBA-M12	60 75
0780 02325105	<b>-105</b>	2	25.4	105	50	—	36	10	4	33	10	2.3	MBA-M12	60 75
0780 02331045	<b>BT40 -SMA31.75 -45</b>	2	31.75	45	60	—	38	10	4.5	40	10	1.6	MBA-M16	100
0780 02331075	<b>-75</b>	2	31.75	75	60	—	38	10	4.5	40	10	2.3	MBA-M16	100
0780 02338060	<b>BT40 -SMA38.1 -60</b>	4	38.1	60	80	—	38	12	5	50	14	3.0	MBA-M20	125
0780 02515075	<b>BT50 -SMA15.875 -75</b>	1	15.875	75	34	—	17	8	3	20	7	4.2	MBA-M 8	35 40
0780 02515120	<b>-120</b>	1	15.875	120	34	—	17	8	3	20	7	5.8	MBA-M 8	35 40
0780 02522075	<b>BT50 -SMA22.225 -75</b>	1	22.225	75	42	—	27	8	3.5	28	9	4.3	MBA-M10	45 50
0780 02522120	<b>-120</b>	1	22.225	120	42	—	27	8	3.5	28	9	4.7	MBA-M10	45 50
0780 02522180	<b>-180</b>	1	22.225	180	42	—	27	8	3.5	28	9	5.5	MBA-M10	45 50
0780 02525060	<b>BT50 -SMA25.4 -60</b>	2	25.4	60	50	—	36	10	4	33	10	4.3	MBA-M12	60 75
0780 02525105	<b>-105</b>	3	25.4	105	50	60	36	10	4	33	10	5.2	MBA-M12	60 75
0780 02525150	<b>-150</b>	3	25.4	150	50	60	36	10	4	33	10	6.0	MBA-M12	60 75
0780 02531045	<b>BT50 -SMA31.75 -45</b>	2	31.75	45	60	—	38	10	4.5	40	10	4.2	MBA-M16	100
0780 02531075	<b>-75</b>	3	31.75	75	60	70	38	10	4.5	40	10	4.9	MBA-M16	100
0780 02531105	<b>-105</b>	3	31.75	105	60	70	38	10	4.5	40	10	6.2	MBA-M16	100
0780 02538045	<b>BT50 -SMA38.1 -45</b>	2	38.1	45	80	—	38	12	5	50	14	4.3	MBA-M20	125
0780 02538075	<b>-75</b>	2	38.1	75	80	—	38	12	5	50	14	5.5	MBA-M20	125

Clamp bolt is Included.

## Ordering Example

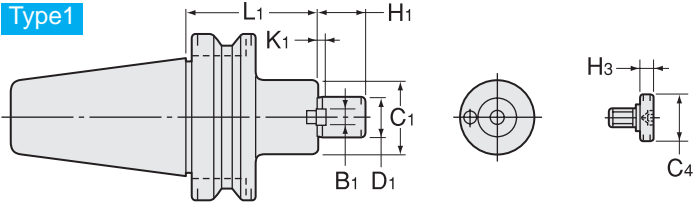
**BT30 - SMA - 16 - 30**  
 Shank size                      D1                      Projection length (L)



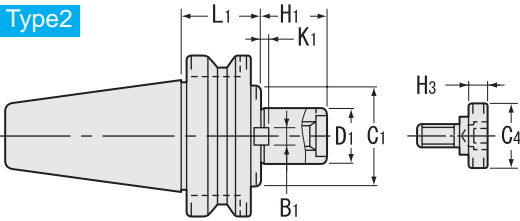
# SMB

## Shell End Mill Arbor

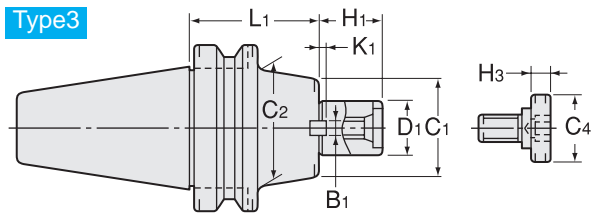
Type1



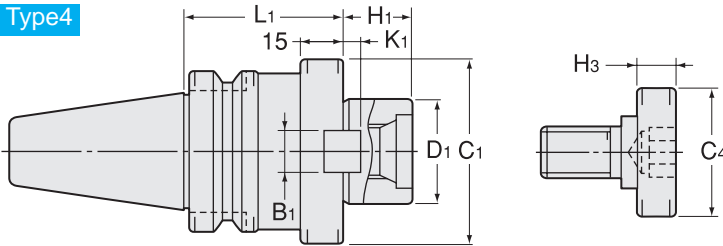
Type2



Type3



Type4



### Metric Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	C2	H1	B1	K1	C4	H3	kg	Clamp Bolt	Cutter dia. Example
0780 03122030	<b>BT30 -SMB22.225 -30</b>	1	22.225	30	45	—	17	8	3.5	28	9	0.6	MBA-M10	50
0780 03322045	<b>BT40 -SMB22.225 -45</b>	1	22.225	45	45	—	17	8	3.5	28	9	1.3	MBA-M10	50
0780 03322120	<b>-120</b>	1	22.225	120	45	—	17	8	3.5	28	9	2.2	MBA-M10	50
0780 03331045	<b>BT40 -SMB31.75 -45</b>	2	31.75	45	60	—	30	12.7	4.5	40	10	1.7	MBA-M16	75
0780 03331075	<b>-75</b>	2	31.75	75	60	—	30	12.7	4.5	40	10	2.3	MBA-M16	75
0780 03338060	<b>BT40 -SMB38.1 -60</b>	4	38.1	60	80	—	36	15.9	5	50	14	2.8	MBA-M20	100
0780 03522060	<b>BT50 -SMB22.225 -60</b>	1	22.225	60	45	—	17	8	3.5	28	9	4.3	MBA-M10	50
0780 03522120	<b>-120</b>	1	22.225	120	45	—	17	8	3.5	28	9	4.8	MBA-M10	50
0780 03522180	<b>-180</b>	1	22.225	180	45	—	17	8	3.5	28	9	5.7	MBA-M10	50
0780 03531045	<b>BT50 -SMB31.75 -45</b>	2	31.75	45	60	—	30	12.7	4.5	40	10	4.2	MBA-M16	75
0780 03531075	<b>-75</b>	3	31.75	75	60	70	30	12.7	4.5	40	10	4.9	MBA-M16	75
0780 03531105	<b>-105</b>	3	31.75	105	60	70	30	12.7	4.5	40	10	6.2	MBA-M16	75
0780 03538045	<b>BT50 -SMB38.1 -45</b>	2	38.1	45	80	—	36	15.9	5	50	14	4.3	MBA-M20	100
0780 03538075	<b>-75</b>	2	38.1	75	80	—	36	15.9	5	50	14	5.5	MBA-M20	100

Clamp bolt is Included.

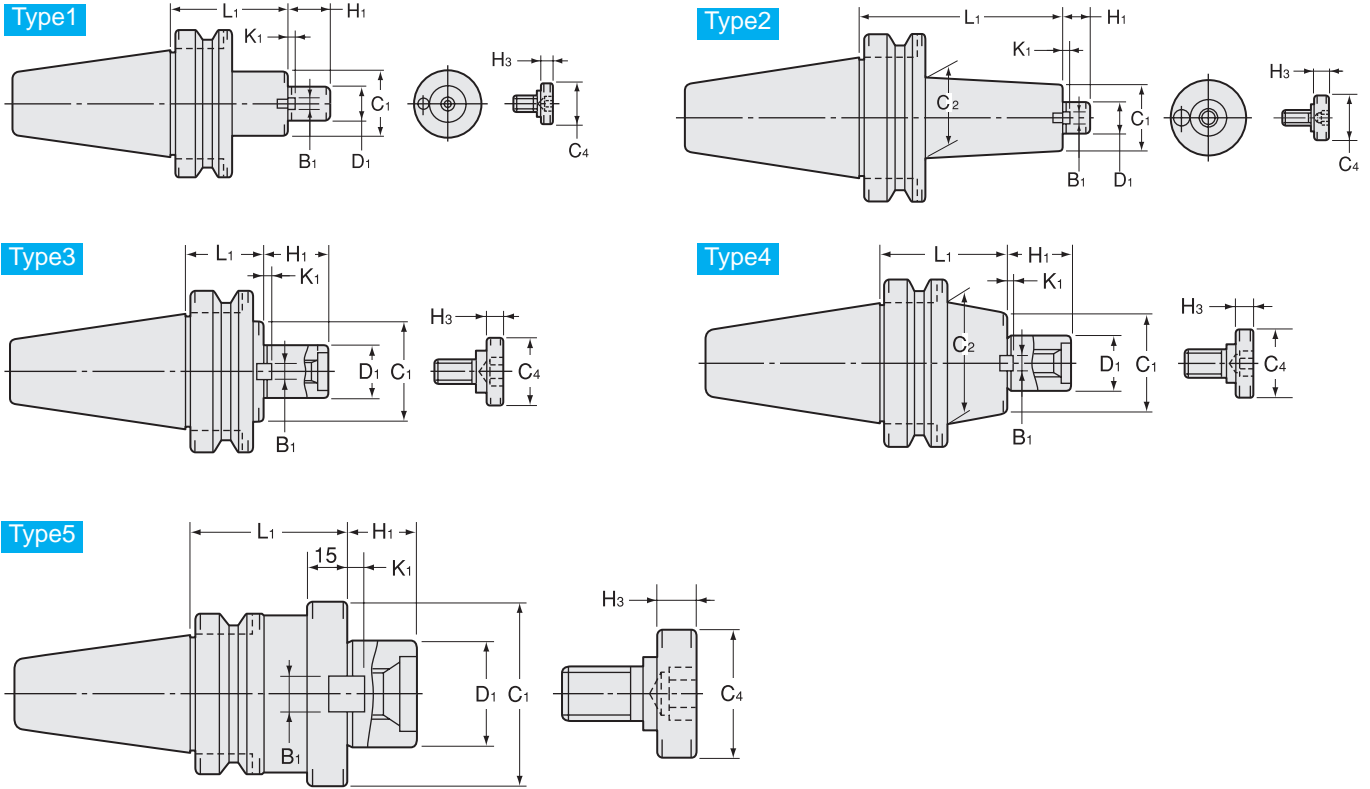
### Ordering Example

**BT30 - SMB - 22.225 - 30**

Shank size

D1

Projection length (L)



### Metric Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	C2	H1	B1	K1	C4	H3	kg	Clamp Bolt	Cutter dia. Example
0780 04319060	<b>BT40 -SMC19.05 -60</b>	1	19.05	60	40	—	16	8	3.5	28	9	2.4	MBA-M10	50
0780 04319120	<b>-120</b>	2	19.05	120	40	45	16	8	3.5	28	9	2.9	MBA-M10	50
0780 04331045	<b>BT40 -SMC31.75 -45</b>	3	31.75	45	60	—	18	12.7	4.5	40	10	1.6	MBA-M16	75
0780 04331105	<b>-105</b>	3	31.75	105	60	—	18	12.7	4.5	40	10	2.9	MBA-M16	75
0780 04338060	<b>BT40 -SMC38.1 -60</b>	5	38.1	60	80	—	24	15.9	5	50	14	2.4	MBA-M20	100
0780 04338090	<b>-90</b>	5	38.1	90	80	—	24	15.9	5	50	14	3.1	MBA-M20	100
0780 04519060	<b>BT50 -SMC19.05 -60</b>	1	19.05	60	40	—	16	8	3.5	28	9	4.0	MBA-M10	50
0780 04519120	<b>-120</b>	2	19.05	120	40	45	16	8	3.5	28	9	4.7	MBA-M10	50
0780 04519180	<b>-180</b>	2	19.05	180	40	45	16	8	3.5	28	9	5.6	MBA-M10	50
0780 04531045	<b>BT50 -SMC31.75 -45</b>	3	31.75	45	60	—	18	12.7	4.5	40	10	4.0	MBA-M16	75
0780 04531075	<b>-75</b>	4	31.75	75	60	70	18	12.7	4.5	40	10	4.8	MBA-M16	75
0780 04531105	<b>-105</b>	4	31.75	105	60	70	18	12.7	4.5	40	10	6.2	MBA-M16	75
0780 04538045	<b>BT50 -SMC38.1 -45</b>	3	38.1	45	80	—	24	15.9	5	50	14	4.3	MBA-M20	100
0780 04538075	<b>-75</b>	3	38.1	75	80	—	24	15.9	5	50	14	5.5	MBA-M20	100

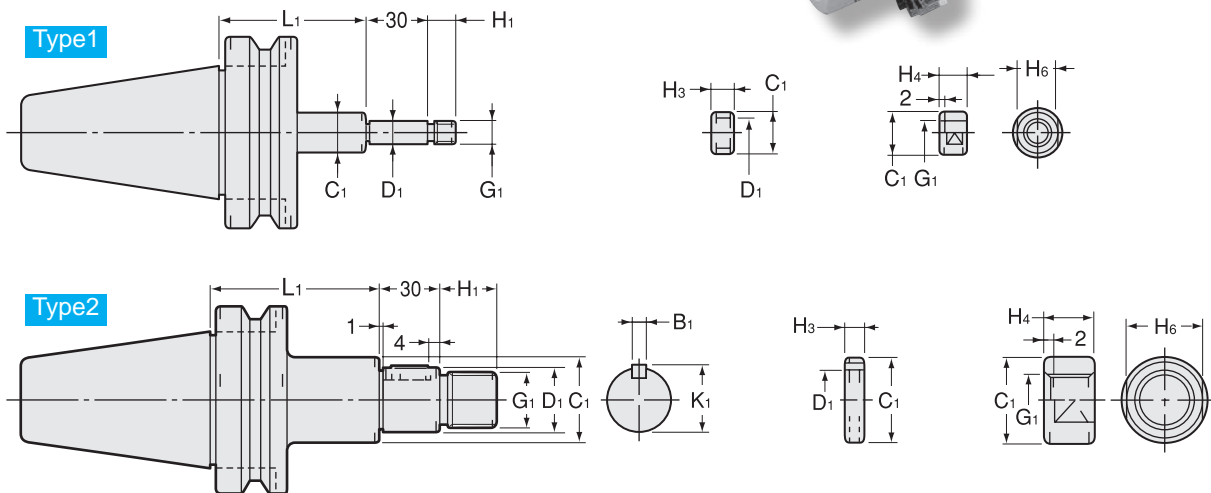
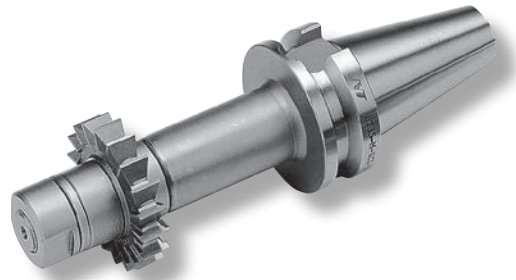
Clamp bolt is Included.

### Ordering Example

**BT50 - SMC - 19.05 - 60**  
 Shank size                      D1                      Projection length (L)

## Side Cutter Arbor

- For JIS side cutter and metal saw.



## Metric Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	G1	H1	B1	K1	H3	H4	H6	kg	Cutter dia. Example
0790 00113075	<b>BT30 -SCA13 -75</b>	1	13	75	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	0.7	50
0790 00116075	<b>BT30 -SCA16 -75</b>	2	16	75	26	M14 × 1.5	16	4	17.2	3,5,7,8,10,12	13	22	0.9	50 ~ 63
0790 00122075	<b>BT30 -SCA22 -75</b>	2	22	75	34	M20 × 1.5	21	6	23.6	3,5,7,8,10,12	18	30	1.2	60 ~ 125
0790 00313060	<b>BT40 -SCA13 -60</b>	1	13	60	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	1.4	50
0790 00313090	<b>-90</b>	1	13	90	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	1.7	50
0790 00316075	<b>BT40 -SCA16 -75</b>	2	16	75	26	M14 × 1.5	16	4	17.2	3,5,7,8,10,12	13	22	1.4	50 ~ 63
0790 00316105	<b>-105</b>	2	16	105	26	M14 × 1.5	16	4	17.2	3,5,7,8,10,12	13	22	1.6	50 ~ 63
0790 00322075	<b>BT40 -SCA22 -75</b>	2	22	75	34	M20 × 1.5	21	6	23.6	3,5,7,8,10,12	18	30	1.7	60 ~ 125
0790 00322120	<b>-120</b>	2	22	120	34	M20 × 1.5	21	6	23.6	3,5,7,8,10,12	18	30	2.1	60 ~ 125
0790 00327075	<b>BT40 -SCA27 -75</b>	2	27	75	40	M24 × 2	25	7	29	3,5,7,8,10,12	21	32	2.0	75 ~ 100
0790 00327120	<b>-120</b>	2	27	120	40	M24 × 2	25	7	29	3,5,7,8,10,12	21	32	2.4	75 ~ 100
0790 00332090	<b>BT40 -SCA32 -90</b>	2	32	90	46	M30 × 2	30	8	34	3,5,7,8,10,12	26	41	2.6	100 ~ 250
0790 00513075	<b>BT50 -SCA13 -75</b>	1	13	75	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	4.3	50
0790 00513105	<b>-105</b>	1	13	105	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	4.4	50
0790 00516090	<b>BT50 -SCA16 -90</b>	2	16	90	26	M14 × 1.5	16	4	17.2	3,5,7,8,10,12	13	22	4.1	50 ~ 63
0790 00516120	<b>-120</b>	2	16	120	26	M14 × 1.5	16	4	17.2	3,5,7,8,10,12	13	22	4.2	50 ~ 63
0790 00522090	<b>BT50 -SCA22 -90</b>	2	22	90	34	M20 × 1.5	21	6	23.6	3,5,7,8,10,12	18	30	4.4	60 ~ 125
0790 00522135	<b>-135</b>	2	22	135	34	M20 × 1.5	21	6	23.6	3,5,7,8,10,12	18	30	4.7	60 ~ 125
0790 00527090	<b>BT50 -SCA27 -90</b>	2	27	90	40	M24 × 2	25	7	29	3,5,7,8,10,12	21	32	4.5	75 ~ 100
0790 00527135	<b>-135</b>	2	27	135	40	M24 × 2	25	7	29	3,5,7,8,10,12	21	32	4.9	75 ~ 100
0790 00532090	<b>BT50 -SCA32 -90</b>	2	32	90	46	M30 × 2	30	8	34	3,5,7,8,10,12	26	41	4.9	100 ~ 250
0790 00532135	<b>-135</b>	2	32	135	46	M30 × 2	30	8	34	3,5,7,8,10,12	26	41	5.7	100 ~ 250
0790 00540090	<b>BT50 -SCA40 -90</b>	2	40	90	55	M36 × 3	36	10	42.5	3,5,7,8,10,12	31	46	5.9	150 ~ 315
0790 00540135	<b>-135</b>	2	40	135	55	M36 × 3	36	10	42.5	3,5,7,8,10,12	31	46	6.7	150 ~ 315

## Inch Sizes

Unit : Metric

Code	Model	Type	D1 (h6)	L1	C1	G1	H1	B1	K1	H3	H4	H6	kg	Cutter dia. Example
0790 01112075	<b>BT30 -SCA12.7 -75</b>	1	12.7	75	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	1.0	50
0790 01115075	<b>BT30 -SCA15.875 -75</b>	2	15.875	75	26	M14 × 1.5	16	3.18	17.42	3,5,7,8,10,12	13	22	1.2	50 ~ 63
0790 01122075	<b>BT30 -SCA22.225 -75</b>	2	22.225	75	34	M20 × 1.5	21	3.18	23.82	3,5,7,8,10,12	18	30	1.5	60 ~ 63
0790 01312060	<b>BT40 -SCA12.7 -60</b>	1	12.7	60	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	1.4	50
0790 01312090	<b>-90</b>	1	12.7	90	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	1.7	50
0790 01315075	<b>BT40 -SCA15.875 -75</b>	2	15.875	75	26	M14 × 1.5	16	3.18	17.42	3,5,7,8,10,12	13	22	1.4	50 ~ 63
0790 01315105	<b>-105</b>	2	15.875	105	26	M14 × 1.5	16	3.18	17.42	3,5,7,8,10,12	13	22	1.5	50 ~ 63
0790 01322075	<b>BT40 -SCA22.225 -75</b>	2	22.225	75	34	M20 × 1.5	21	3.18	23.82	3,5,7,8,10,12	18	30	1.7	60 ~ 63
0790 01322120	<b>-120</b>	2	22.225	120	34	M20 × 1.5	21	3.18	23.82	3,5,7,8,10,12	18	30	2.0	60 ~ 63
0790 01325075	<b>BT40 -SCA25.4 -75</b>	2	25.4	75	40	M24 × 2	25	6.35	27.78	3,5,7,8,10,12	21	32	2.0	75 ~ 125
0790 01325120	<b>-120</b>	2	25.4	120	40	M24 × 2	25	6.35	27.78	3,5,7,8,10,12	21	32	2.4	75 ~ 125
0790 01331090	<b>BT40 -SCA31.75 -90</b>	2	31.75	90	46	M30 × 2	30	7.92	34.92	3,5,7,8,10,12	26	41	2.6	100 ~ 250
0790 01512075	<b>BT50 -SCA12.7 -75</b>	1	12.7	75	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	4.3	50
0790 01512105	<b>-105</b>	1	12.7	105	20	M12 × 1.25	15	—	—	3,5,7,8,10,12	12	17	4.4	50
0790 01515090	<b>BT50 -SCA15.875 -90</b>	2	15.875	90	26	M14 × 1.5	16	3.18	17.42	3,5,7,8,10,12	13	22	4.2	50 ~ 63
0790 01515120	<b>-120</b>	2	15.875	120	26	M14 × 1.5	16	3.18	17.42	3,5,7,8,10,12	13	22	4.4	50 ~ 63
0790 01522090	<b>BT50 -SCA22.225 -90</b>	2	22.225	90	34	M20 × 1.5	21	3.18	23.82	3,5,7,8,10,12	18	30	4.4	60 ~ 63
0790 01522135	<b>-135</b>	2	22.225	135	34	M20 × 1.5	21	3.18	23.82	3,5,7,8,10,12	18	30	4.7	60 ~ 63
0790 01525090	<b>BT50 -SCA25.4 -90</b>	2	25.4	90	40	M24 × 2	25	6.35	27.78	3,5,7,8,10,12	21	32	4.5	75 ~ 125
0790 01525135	<b>-135</b>	2	25.4	135	40	M24 × 2	25	6.35	27.78	3,5,7,8,10,12	21	32	4.9	75 ~ 125
0790 01531090	<b>BT50 -SCA31.75 -90</b>	2	31.75	90	46	M30 × 2	30	7.92	34.92	3,5,7,8,10,12	26	41	4.7	100 ~ 250
0790 01531135	<b>-135</b>	2	31.75	135	46	M30 × 2	30	7.92	34.92	3,5,7,8,10,12	26	41	5.2	100 ~ 250
0790 01538090	<b>BT50 -SCA38.1 -90</b>	2	38.1	90	55	M36 × 3	36	9.52	42.06	3,5,7,8,10,12	31	46	4.9	150 ~ 315
0790 01538135	<b>-135</b>	2	38.1	135	55	M36 × 3	36	9.52	42.06	3,5,7,8,10,12	31	46	5.9	150 ~ 315

One clamp nut and spacers (size 3, 5, 7, 8, 10, and 12 / one each) are included.

## Ordering Example

**BT30 - SCA 12.7 - 75**

Shank size

D1

Projection  
length (L)

BT

CAT

AHO

HSK-A/E/F/C

HSK-T

UTS

Specialized  
MachineRelated  
EquipmentBush &  
Chamfering  
Drill

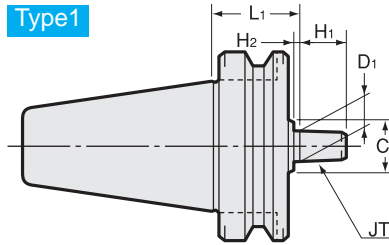
# JTA

## Jacobs Taper Arbor

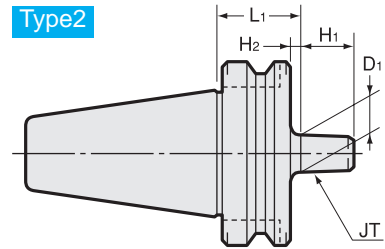
- Arbor for Jacobs taper keyless chuck.



Type1



Type2



### Metric Sizes

Unit : Metric

Code	Model	Type	JT	L1	D1	C1	H1	H2	kg
0750 00101030	<b>BT30 -JTA1 -30</b>	1	1	30	9.754	30	15	3	0.5
0750 00122030	<b>BT30 -JTA2S -30</b>	1	2short	30	13.940	30	18	3	0.5
0750 00102030	<b>BT30 -JTA2 -30</b>	1	2	30	14.199	30	20	4	0.5
0750 00133030	<b>BT30 -JTA33 -30</b>	1	33	30	15.850	30	24	4	0.5
0750 00106030	<b>BT30 -JTA6 -30</b>	1	6	30	17.170	30	24	4	0.5
0750 00103030	<b>BT30 -JTA3 -30</b>	1	3	30	20.599	35	28	5	0.5
0750 00301045	<b>BT40 -JTA1 -45</b>	1	1	45	9.754	30	15	3	1.1
0750 00301090	<b>-90</b>	1	1	90	9.754	30	15	3	1.4
0750 00322045	<b>BT40 -JTA2S -45</b>	1	2short	45	13.940	30	18	3	1.1
0750 00322090	<b>-90</b>	1	2short	90	13.940	30	18	3	1.4
0750 00302045	<b>BT40 -JTA2 -45</b>	1	2	45	14.199	30	20	4	1.1
0750 00302090	<b>-90</b>	1	2	90	14.199	30	20	4	1.4
0750 00333045	<b>BT40 -JTA33 -45</b>	1	33	45	15.850	30	24	4	1.1
0750 00333090	<b>-90</b>	1	33	90	15.850	30	24	4	1.4
0750 00306045	<b>BT40 -JTA6 -45</b>	1	6	45	17.170	30	24	4	1.2
0750 00306090	<b>-90</b>	1	6	90	17.170	30	24	4	1.4
0750 00303045	<b>BT40 -JTA3 -45</b>	1	3	45	20.599	35	28	5	1.2
0750 00303090	<b>-90</b>	1	3	90	20.599	35	28	5	1.5
0750 00501045	<b>BT50 -JTA1 -45</b>	1	1	45	9.754	30	15	3	3.7
0750 00501105	<b>-105</b>	1	1	105	9.754	30	15	3	4.1
0750 00522045	<b>BT50 -JTA2S -45</b>	1	2short	45	13.940	30	18	3	4.0
0750 00522105	<b>-105</b>	1	2short	105	13.940	30	18	3	4.1
0750 00502045	<b>BT50 -JTA2 -45</b>	1	2	45	14.199	30	20	4	4.0
0750 00502105	<b>-105</b>	1	2	105	14.199	30	20	4	4.4
0750 00533045	<b>BT50 -JTA33 -45</b>	1	33	45	15.850	30	24	4	3.8
0750 00533105	<b>-105</b>	1	33	105	15.850	30	24	4	4.4
0750 00506045	<b>BT50 -JTA6 -45</b>	1	6	45	17.170	30	24	4	4.0
0750 00506105	<b>-105</b>	1	6	105	17.170	30	24	4	4.4
0750 00503045	<b>BT50 -JTA3 -45</b>	2	3	45	20.599	—	28	7	4.0
0750 00503105	<b>-105</b>	1	3	105	20.599	35	28	5	4.6

### Ordering Example

**BT30 - JTA1 - 30**

Shank size

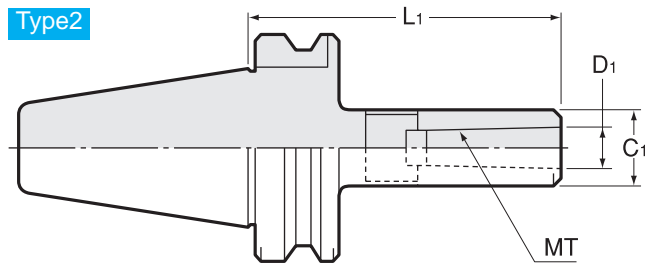
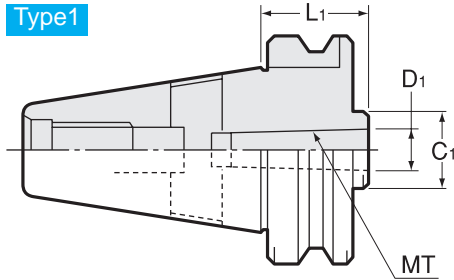
JT1

Projection length (L)

# MTA

## Morse Taper Holder

- For Morse taper shank with tang.



### Metric Sizes

Unit : Metric

Code	Model	Type	MT	L1	D1	C1	kg
0760 00101045	<b>BT30 -MTA1 -45</b>	1	1	45	12.065	25	0.5
0760 00102060	<b>BT30 -MTA2 -60</b>	1	2	60	17.780	32	0.5
0760 00103075	<b>BT30 -MTA3 -75</b>	1	3	75	23.825	40	0.7
0760 00301045	<b>BT40 -MTA1 -45</b>	1	1	45	12.065	25	1.0
0760 00301120	<b>-120</b>	2	1	120	12.065	25	1.3
0760 00302045	<b>BT40 -MTA2 -45</b>	1	2	45	17.780	32	1.0
0760 00302120	<b>-120</b>	2	2	120	17.780	32	1.4
0760 00303075	<b>BT40 -MTA3 -75</b>	1	3	75	23.825	40	1.2
0760 00303135	<b>-135</b>	2	3	135	23.825	40	1.8
0760 00304090	<b>BT40 -MTA4 -90</b>	1	4	90	31.267	50	1.4
0760 00304165	<b>-165</b>	2	4	165	31.267	50	2.4
0760 00501045	<b>BT50 -MTA1 -45</b>	1	1	45	12.065	25	3.6
0760 00501120	<b>-120</b>	2	1	120	12.065	25	3.8
0760 00501180	<b>-180</b>	2	1	180	12.065	25	3.9
0760 00502045	<b>BT50 -MTA2 -45</b>	1	2	45	17.780	32	3.6
0760 00502135	<b>-135</b>	2	2	135	17.780	32	4.0
0760 00502180	<b>-180</b>	2	2	180	17.780	32	4.2
0760 00503045	<b>BT50 -MTA3 -45</b>	1	3	45	23.825	40	3.5
0760 00503150	<b>-150</b>	2	3	150	23.825	40	4.3
0760 00503180	<b>-180</b>	2	3	180	23.825	40	4.5
0760 00504075	<b>BT50 -MTA4 -75</b>	1	4	75	31.267	50	3.6
0760 00504180	<b>-180</b>	2	4	180	31.267	50	5.0
0760 00505105	<b>BT50 -MTA5 -105</b>	1	5	105	44.399	65	3.9
0760 00505210	<b>-210</b>	2	5	210	44.399	65	6.3

### Ordering Example

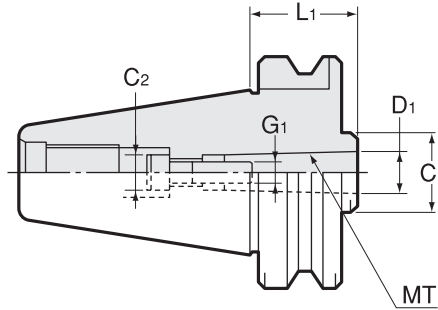
**BT30 - MTA1 - 45**

Shank size      MT1      Projection length (L)

# MTB

## Morse Taper Holder

- For Morse taper shank with draw-in screw.



### Metric Sizes

Unit : Metric

Code	Model	MT	L1	D1	C1	C2	G1	kg
0760 01101045	<b>BT30 -MTB1 -45</b>	1	45	12.065	25	10	M6	0.5
0760 01301045	<b>BT40 -MTB1 -45</b>	1	45	12.065	25	10	M6	1.1
0760 01302045	<b>BT40 -MTB2 -45</b>	2	45	17.780	32	13	M10	1.0
0760 01501045	<b>BT50 -MTB1 -45</b>	1	45	12.065	25	10	M6	3.7
0760 01502045	<b>BT50 -MTB2 -45</b>	2	45	17.780	32	16	M10	3.7
0760 01503060	<b>BT50 -MTB3 -60</b>	3	60	23.825	40	18	M12	3.7
0760 01504075	<b>BT50 -MTB4 -75</b>	4	75	31.267	50	20.5	M16	3.7

### Ordering Example

**BT30 - MTB1 - 45**

Shank size

MT1

Projection  
length (L)

BT

CAT

AHO

HSK-A/E/F/C

HSK-T

UTS

Specialized

Machine

Related

Equipment

Bush &amp;

Chamfering

Drill

Milling Chuck

Collet Holder

"R" Zero Holder

Hydraulic Chuck

Shrink Fit

Tapping Chuck

Arbors

Function Holder

Turning Tool

Retention Stud

Tool Shank

Dimensions

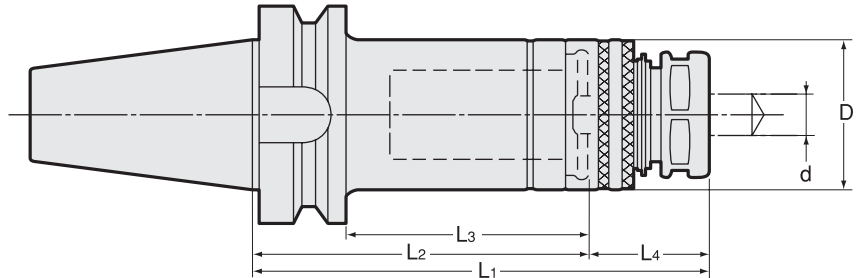


# MEMO

# KHE/BT

## BT Shank For Stub Holder

- Quick-changeable base holder that accommodates KH-E type stub holder.



### Metric Sizes

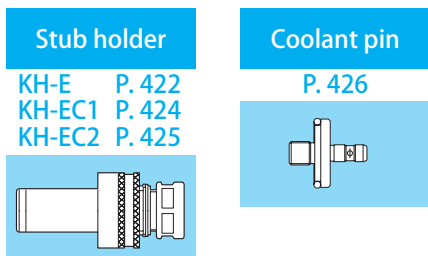
Unit : Metric

Code	Model	d	L1	L2	L3	L4	D	kg	Stub holder
2720 10016075	<b>BT30 -KH16E -75</b> ※	2.5 ~ 9.0	75	40	18	35	32	0.5	KH-16E
2720 10016090	<b>-90</b>	2.5 ~ 9.0	90	55	33	35	32	0.5	
2720 10016105	<b>-105</b>	2.5 ~ 9.0	105	70	48	35	32	0.6	
2720 10019075	<b>BT30 -KH19E -75</b> ※	2.5 ~ 9.0	75	40	18	35	35	0.4	KH-19E
2720 10019090	<b>-90</b>	2.5 ~ 9.0	90	55	33	35	35	0.5	
2720 10019105	<b>-105</b>	2.5 ~ 9.0	105	70	48	35	35	0.6	
2720 10020075	<b>BT30 -KH20E -75</b> ※	2.5 ~ 9.0	75	40	18	35	35	0.5	KH-20E
2720 10020090	<b>-90</b>	2.5 ~ 9.0	90	55	33	35	35		
2720 10020105	<b>-105</b>	2.5 ~ 9.0	105	70	48	35	35		
2720 10022090	<b>BT30 -KH22E -90</b> ※	2.5 ~ 12.0	90	55	33	35	38	0.5	KH-22E
2720 10022105	<b>-105</b>	2.5 ~ 12.0	105	70	48	35	38	0.6	
2720 10022120	<b>-120</b>	2.5 ~ 12.0	120	85	63	35	38	0.7	
2720 10024090	<b>BT30 -KH24E -90</b> ※	2.5 ~ 12.0	90	55	33	35	40	0.6	KH-24E
2720 10024105	<b>-105</b>	2.5 ~ 12.0	105	70	48	35	40		
2720 10024120	<b>-120</b>	2.5 ~ 12.0	120	85	63	35	40		
2720 10025105	<b>BT30 -KH25E -105</b> ※	3.5 ~ 16.0	105	70	48	35	44	0.7	KH-25E
2720 10025120	<b>-120</b> ※	3.5 ~ 16.0	120	85	63	35	44		
2720 10026105	<b>BT30 -KH26E -105</b> ※	3.5 ~ 16.0	105	70	48	35	44	0.7	
2720 10026120	<b>-120</b> ※	3.5 ~ 16.0	120	85	63	35	44	0.8	KH-26E
2720 30016090	<b>BT40 -KH16E -90</b>	2.5 ~ 9.0	90	55	28	35	32	1.1	KH-16E
2720 30016105	<b>-105</b>	2.5 ~ 9.0	105	70	43	35	32	1.2	
2720 30016135	<b>-135</b>	2.5 ~ 9.0	135	100	73	35	32	1.3	
2720 30019090	<b>BT40 -KH19E -90</b>	2.5 ~ 9.0	90	55	28	35	35	1.1	KH-19E
2720 30019105	<b>-105</b>	2.5 ~ 9.0	105	70	43	35	35	1.2	
2720 30019135	<b>-135</b>	2.5 ~ 9.0	135	100	73	35	35	1.4	
2720 30020090	<b>BT40 -KH20E -90</b>	2.5 ~ 9.0	90	55	28	35	35	1.1	KH-20E
2720 30020105	<b>-105</b>	2.5 ~ 9.0	105	70	43	35	35	1.2	
2720 30020135	<b>-135</b>	2.5 ~ 9.0	135	100	73	35	35	1.4	
2720 30022090	<b>BT40 -KH22E -90</b>	2.5 ~ 12.0	90	55	28	35	38	1.1	KH-22E
2720 30022105	<b>-105</b>	2.5 ~ 12.0	105	70	43	35	38	1.1	
2720 30022135	<b>-135</b>	2.5 ~ 12.0	135	100	73	35	38	1.4	
2720 30024105	<b>BT40 -KH24E -105</b>	2.5 ~ 12.0	105	70	43	35	40	1.2	KH-24E
2720 30024135	<b>-135</b>	2.5 ~ 12.0	135	100	73	35	40	1.4	
2720 30025105	<b>BT40 -KH25E -105</b>	3.5 ~ 16.0	105	70	43	35	44	1.2	
2720 30025135	<b>-135</b>	3.5 ~ 16.0	135	100	73	35	44	1.5	KH-25E
2720 30026105	<b>BT40 -KH26E -105</b>	3.5 ~ 16.0	105	70	43	35	44	1.2	KH-26E
2720 30026135	<b>-135</b>	3.5 ~ 16.0	135	100	73	35	44	1.5	
2720 30028105	<b>BT40 -KH28E -105</b> ※	3.5 ~ 16.0	105	70	43	35	47	1.2	
2720 30028135	<b>-135</b>	3.5 ~ 16.0	135	100	73	35	47	1.5	KH-28E
2720 30030105	<b>BT40 -KH30E -105</b> ※	3.5 ~ 16.0	105	70	43	35	47	1.4	KH-30E
2720 30030135	<b>-135</b>	3.5 ~ 16.0	135	100	73	35	47		

**Metric Sizes** Unit : Metric

Code	Model	d	L1	L2	L3	L4	D	kg	Stub holder
2720 30032135	<b>BT40 -KH32E -135</b>	3.5 ~ 22.0	135	95	68	40	51	1.4	KH-32E
2720 30032165	<b>-165</b>	3.5 ~ 22.0	165	125	98	40	51	1.8	
2720 30035135	<b>BT40 -KH35E -135 ※</b>	3.5 ~ 22.0	135	95	68	40	55		KH-35E
2720 30035165	<b>-165</b>	3.5 ~ 22.0	165	125	98	40	55		
2720 30036135	<b>BT40 -KH36E -135 ※</b>	3.5 ~ 22.0	135	95	68	40	55	1.5	KH-36E
2720 30036165	<b>-165</b>	3.5 ~ 22.0	165	125	98	40	55	1.9	
2720 50016105	<b>BT50 -KH16E -105</b>	2.5 ~ 9.0	105	70	32	35	32	3.8	KH-16E
2720 50016135	<b>-135</b>	2.5 ~ 9.0	135	100	62	35	32	3.8	
2720 50019105	<b>BT50 -KH19E -105</b>	2.5 ~ 9.0	105	70	32	35	35	3.7	KH-19E
2720 50019135	<b>-135</b>	2.5 ~ 9.0	135	100	62	35	35	3.8	
2720 50020105	<b>BT50 -KH20E -105</b>	2.5 ~ 9.0	105	70	32	35	35		KH-20E
2720 50020135	<b>-135</b>	2.5 ~ 9.0	135	100	62	35	35		
2720 50020165	<b>-165</b>	2.5 ~ 9.0	165	130	92	35	35	4.0	
2720 50022105	<b>BT50 -KH22E -105</b>	2.5 ~ 12.0	105	70	32	35	38	3.7	KH-22E
2720 50022135	<b>-135</b>	2.5 ~ 12.0	135	100	62	35	38	3.9	
2720 50022165	<b>-165</b>	2.5 ~ 12.0	165	130	92	35	38	4.2	
2720 50024105	<b>BT50 -KH24E -105</b>	2.5 ~ 12.0	105	70	32	35	40	3.7	KH-24E
2720 50024135	<b>-135</b>	2.5 ~ 12.0	135	100	62	35	40	3.9	
2720 50024165	<b>-165</b>	2.5 ~ 12.0	165	130	92	35	40	4.1	
2720 50025105	<b>BT50 -KH25E -105</b>	3.5 ~ 16.0	105	70	32	35	44	3.7	KH-25E
2720 50025135	<b>-135</b>	3.5 ~ 16.0	135	100	62	35	44	4.0	
2720 50025165	<b>-165</b>	3.5 ~ 16.0	165	130	92	35	44	4.2	
2720 50026105	<b>BT50 -KH26E -105</b>	3.5 ~ 16.0	105	70	32	35	44	3.7	KH-26E
2720 50026135	<b>-135</b>	3.5 ~ 16.0	135	100	62	35	44	3.9	
2720 50026165	<b>-165</b>	3.5 ~ 16.0	165	130	92	35	44	4.4	
2720 50028105	<b>BT50 -KH28E -105</b>	3.5 ~ 16.0	105	70	32	35	47	3.6	KH-28E
2720 50028135	<b>-135</b>	3.5 ~ 16.0	135	100	62	35	47	4.1	
2720 50028165	<b>-165</b>	3.5 ~ 16.0	165	130	92	35	47	4.5	
2720 50030105	<b>BT50 -KH30E -105</b>	3.5 ~ 16.0	105	70	32	35	47	3.6	KH-30E
2720 50030135	<b>-135</b>	3.5 ~ 16.0	135	100	62	35	47	3.9	
2720 50030165	<b>-165</b>	3.5 ~ 16.0	165	130	92	35	47	4.2	
2720 50032135	<b>BT50 -KH32E -135</b>	3.5 ~ 22.0	135	95	57	40	51	3.8	KH-32E
2720 50032165	<b>-165</b>	3.5 ~ 22.0	165	125	87	40	51	4.4	
2720 50035135	<b>BT50 -KH35E -135</b>	3.5 ~ 22.0	135	95	57	40	55	4.0	KH-35E
2720 50035165	<b>-165</b>	3.5 ~ 22.0	165	125	87	40	55	4.5	
2720 50036135	<b>BT50 -KH36E -135</b>	3.5 ~ 22.0	135	95	57	40	55	3.8	KH-36E
2720 50036165	<b>-165</b>	3.5 ~ 22.0	165	125	87	40	55	4.3	
2720 50048135	<b>BT50 -KH48E -135 ※</b>	20.0 ~ 32.0	135	85	47	50	75		KH-48E
2720 50048165	<b>-165 ※</b>	20.0 ~ 32.0	165	115	77	50	75		

1. Stub holders are sold separately.
2. For center through coolant feed, attach a coolant pin to the holder and use with KH-EC1 or KH-EC2 stub holder.
3. ※ marks cannot be used with KH-EC1 and KH-EC2.



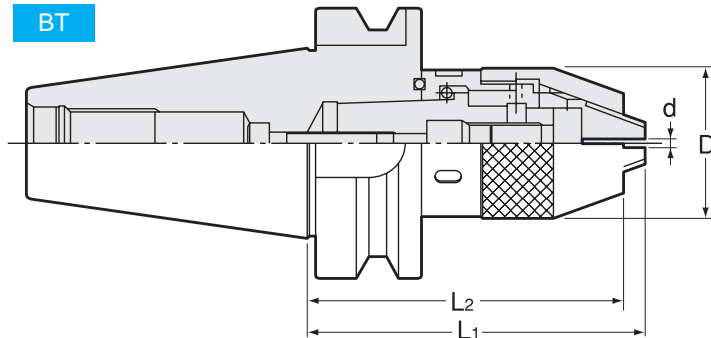
**Ordering Example**

**BT50 - KH20E - 105**

Shank size      Stub Holder Size (KH-20E)      Projection length (L)

# KLD

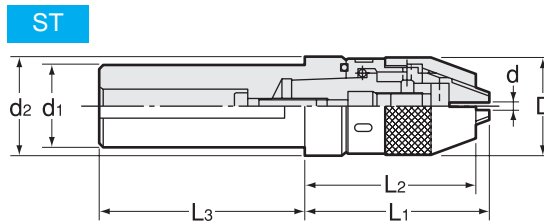
## Keyless Drill Chuck



### Metric Sizes

Unit : Metric

Code	Model	d	D	L1	L2	kg	Spanner
2680 01065070	<b>BT30 -KLD6.5 -70</b>	0.5 ~ 6.5	34	76	70	1.0	FC6.5LC
2680 01130090	<b>BT30 -KLD13 -90</b>	0.5 ~ 13	50	102	90	1.5	FC13LC
2680 03065075	<b>BT40 -KLD6.5 -75</b>	0.5 ~ 6.5	34	81	75	1.2	FC6.5LC
2680 03065105	<b>-105</b>	0.5 ~ 6.5	34	111	105	1.4	FC6.5LC
2680 03065150	<b>-150</b>	0.5 ~ 6.5	34	156	150	1.6	FC6.5LC
2680 03130095	<b>BT40 -KLD13 -95</b>	0.5 ~ 13	50	107	95	1.7	FC13LC
2680 03130105	<b>-105</b>	0.5 ~ 13	50	117	105	1.9	FC13LC
2680 03130150	<b>-150</b>	0.5 ~ 13	50	162	150	2.5	FC13LC
2680 05065085	<b>BT50 -KLD6.5 -85</b>	0.5 ~ 6.5	34	91	85	3.8	FC6.5LC
2680 05065105	<b>-105</b>	0.5 ~ 6.5	34	111	105	3.9	FC6.5LC
2680 05065150	<b>-150</b>	0.5 ~ 6.5	34	156	150	4.1	FC6.5LC
2680 05130105	<b>BT50 -KLD13 -105</b>	0.5 ~ 13	50	117	105	4.3	FC13LC
2680 05130135	<b>-135</b>	0.5 ~ 13	50	147	135	4.6	FC13LC
2680 05130165	<b>-165</b>	0.5 ~ 13	50	177	165	5.0	FC13LC



### Metric Sizes

Unit : Metric

Code	Model	d	D	d1	d2	L1	L2	L3	kg	Spanner
2684 20065065	<b>ST20 -KLD6.5 -65</b>	0.5 ~ 6.5	34	20	32	84	78	65	0.4	FC6.5LC
2684 25065065	<b>ST25 -KLD6.5 -65</b>	0.5 ~ 6.5	34	25	32	64	58	65	0.5	FC6.5LC
2684 25465065	<b>ST25.4 -KLD6.5 -65</b>	0.5 ~ 6.5	34	25.4	32	64	58	65	0.5	FC6.5LC
2684 32065065	<b>ST32 -KLD6.5 -65</b>	0.5 ~ 6.5	34	32	—	54	48	65	0.7	FC6.5LC
2684 32130065	<b>ST32 -KLD13 -65</b>	0.5 ~ 13	50	32	48	86	74	65	1.2	FC13LC
2684 38065075	<b>ST38.1 -KLD6.5 -75</b>	0.5 ~ 6.5	34	38.1	—	54	48	75	1.0	FC6.5LC
2684 38130075	<b>ST38.1 -KLD13 -75</b>	0.5 ~ 13	50	38.1	48	86	74	75	1.5	FC13LC
2684 40065075	<b>ST40 -KLD6.5 -75</b>	0.5 ~ 6.5	34	40	—	54	48	75	1.0	FC6.5LC
2684 40130075	<b>ST40 -KLD13 -75</b>	0.5 ~ 13	50	40	48	86	74	75	1.5	FC13LC
2684 42065080	<b>ST42 -KLD6.5 -80</b>	0.5 ~ 6.5	34	42	—	54	48	80	1.1	FC6.5LC
2684 42130080	<b>ST42 -KLD13 -80</b>	0.5 ~ 13	50	42	48	86	74	80	1.7	FC13LC
2684 50065085	<b>ST50 -KLD6.5 -85</b>	0.5 ~ 6.5	34	50	—	54	48	85	1.6	FC6.5LC
2684 50130085	<b>ST50 -KLD13 -85</b>	0.5 ~ 13	50	50	—	76	64	85	2.2	FC13LC

#### Spanner (option)

Model	Code
<b>FC6.5LC</b>	2685 00000065
<b>FC13LC</b>	2685 00000130

#### Ordering Example

**BT40 - KLD13 - 105**  
 Shank size    Max chucking dia.    Projection length (L)

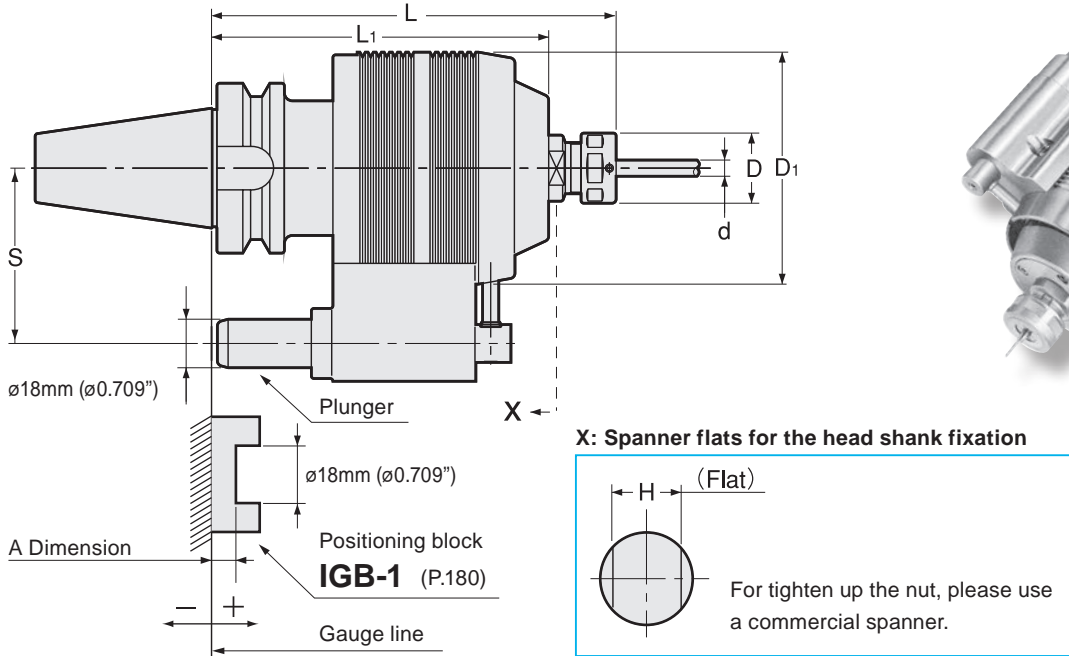
# HP-H

High-speed type

# 30,000min<sup>-1</sup>

## Hyper Spindle ( Speed Inserter )

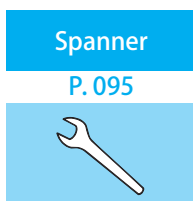
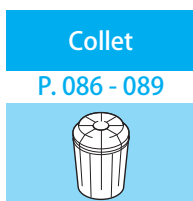
- Enables high speed cutting operation by multiplying the machine spindle speed at the cutting edge. (Max30000min<sup>-1</sup>)



Unit : Metric

Code	Model	L	S	d	D	D1	L1	Nut	H	Speed boost	MAX min <sup>-1</sup>	kg
2520 1 ※ 307150	<b>BT40 -HP07H -150 -※</b>	150	65	0.5 ~ 7.0	23	86	125	HDP-07A	16	5	30,000	3.4
2520 1 ※ 307180	<b>-180 -※</b>	180	65	0.5 ~ 7.0	23	86	125	HDP-07A	16	5	30,000	3.5
2520 1 ※ 309150	<b>BT40 -HP09H -150 -※</b>	150	65	2.6 ~ 9.0	26	86	125	HDP-09	21	5	30,000	3.4
2520 1 ※ 309180	<b>-180 -※</b>	180	65	2.6 ~ 9.0	26	86	125	HDP-09	21	5	30,000	3.5
2520 1 ※ 312165	<b>BT40 -HP12H -165 -※</b>	165	65	2.6 ~ 12.0	32	86	125	HDP-12	21	5	30,000	3.5
2520 1 ※ 312180	<b>-180 -※</b>	180	65	2.6 ~ 12.0	32	86	125	HDP-12	21	5	30,000	3.6
2520 1 ※ 507150	<b>BT50 -HP07H -150 -※</b>	150	80	0.5 ~ 7.0	23	86	125	HDP-07A	16	5	30,000	5.9
2520 1 ※ 507180	<b>-180 -※</b>	180	80	0.5 ~ 7.0	23	86	125	HDP-07A	16	5	30,000	6.0
2520 1 ※ 509150	<b>BT50 -HP09H -150 -※</b>	150	80	2.6 ~ 9.0	26	86	125	HDP-09	21	5	30,000	5.9
2520 1 ※ 509180	<b>-180 -※</b>	180	80	2.6 ~ 9.0	26	86	125	HDP-09	21	5	30,000	6.0
2520 1 ※ 512165	<b>BT50 -HP12H -165 -※</b>	165	80	2.6 ~ 12.0	32	86	125	HDP-12	21	5	30,000	6.0
2520 1 ※ 512180	<b>-180 -※</b>	180	80	2.6 ~ 12.0	32	86	125	HDP-12	21	5	30,000	6.0

1. When ordering, please specify the plunger number (No.1~No.5).
2. Plunger is adjustable. Please refer to a chart on the right.
3. Collet and spanner are sold separately.
4. Use AA class collet only.



Plunger table					
Model	Plunger No. A				
	No.1	No.2	No.3	No.4	No.5
All Model	+24~+15.1	+15~+6.1	+6~-2.9	-3~-11.9	-12~-20.9

Holder	Collet	d	Spanner
HP07H	FDC-07AA	0.5 ~ 7.0	S-0
HP09H	FDC-09AA	2.6 ~ 9.0	S-1L
HP12H	FDC-12AA	2.6 ~ 12.0	S-3L

### Ordering Example

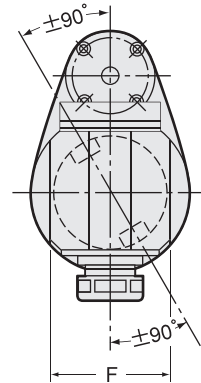
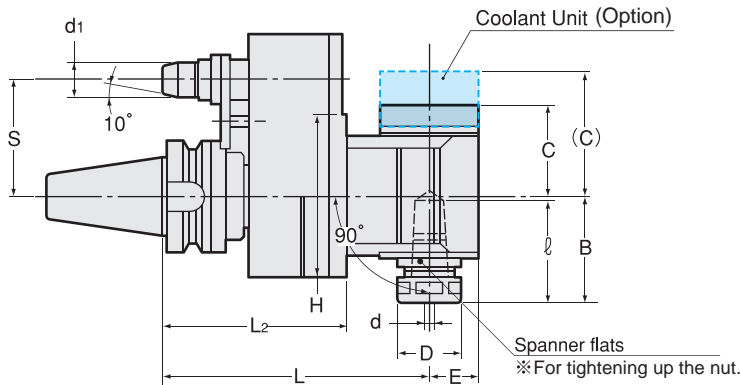
**BT40 - HP 07 H - 150 - 1**

Shank size                      Max. collet I.D.                      Projection length (L)                      Plunger No.

# AH, AH-OH

90°

Angle Heads ( Fixed Type )



※ Requires a positioning block. Please refer to P.179-180.

Unit : Metric

Code	Model	d	L	L2	ℓ	d1	D	B	C (C)	E	F	H	S	kg
2760 459000 ※※	<b>BT30 -AH0790 -120-50- ※※</b>	0.5 ~ 7.0	120	75.3	40	13	23	42	33	17	45	78	50	1.8
2760 469000 ※※	<b>BT30 -AH1290 -125-50- ※※</b>	2.5 ~ 12.0	125	75.3	63.5	13	32	58	44.5	22	47	78	50	2.0
2760 019000 ※※	<b>BT40 -AH0790 (-AH0790-OH) -150-65- ※※</b>	0.5 ~ 7.0	150	103	40	19.6	23	42	33 (46.5)	17	51	90	65	4.6
2760 029000 ※※	<b>-180-65- ※※</b>	0.5 ~ 7.0	180	103	40	19.6	23	42	33 (46.5)	17	51	90	65	5.0
2760 039000 ※※	<b>-210-65- ※※</b>	0.5 ~ 7.0	210	103	40	19.6	23	42	33 (46.5)	17	51	90	65	5.4
2760 049000 ※※	<b>-240-65- ※※</b>	0.5 ~ 7.0	240	120	40	19.6	23	42	33 (46.5)	17	51	90	65	5.8
2760 059000 ※※	<b>-270-65- ※※</b>	0.5 ~ 7.0	270	120	40	19.6	23	42	33 (46.5)	17	51	90	65	6.0
2760 069000 ※※	<b>BT40 -AH0990 (-AH0990-OH) -150-65- ※※</b>	2.5 ~ 9.0	150	103	55	19.6	26.3	53.5	44.5 (58.5)	22	58	90	65	4.7
2760 079000 ※※	<b>-180-65- ※※</b>	2.5 ~ 9.0	180	103	55	19.6	26.3	53.5	44.5 (58.5)	22	58	90	65	5.1
2760 089000 ※※	<b>-210-65- ※※</b>	2.5 ~ 9.0	210	103	55	19.6	26.3	53.5	44.5 (58.5)	22	58	90	65	5.5
2760 099000 ※※	<b>-240-65- ※※</b>	2.5 ~ 9.0	240	120	55	19.6	26.3	53.5	44.5 (58.5)	22	58	90	65	6.0
2760 109000 ※※	<b>BT40 -AH1690 (-AH1690-OH) -150-65- ※※</b>	3.5 ~ 16.0	150	103	59	19.6	36.3	59	51 (64.5)	28	67	90	65	4.8
2760 119000 ※※	<b>-180-65- ※※</b>	3.5 ~ 16.0	180	103	59	19.6	36.3	59	51 (64.5)	28	67	90	65	5.2
2760 129000 ※※	<b>-210-65- ※※</b>	3.5 ~ 16.0	210	103	59	19.6	36.3	59	51 (64.5)	28	67	90	65	5.6
2760 139000 ※※	<b>BT50 -AH0790 (-AH0790-OH) -165-80- ※※</b>	0.5 ~ 7.0	165	118	40	28	23	42	33 (46.5)	17	51	90	80	7.6
2760 149000 ※※	<b>-195-80- ※※</b>	0.5 ~ 7.0	195	118	40	28	23	42	33 (46.5)	17	51	90	80	8.2
2760 159000 ※※	<b>-225-80- ※※</b>	0.5 ~ 7.0	225	118	40	28	23	42	33 (46.5)	17	51	90	80	8.8
2760 169000 ※※	<b>-255-80- ※※</b>	0.5 ~ 7.0	255	135	40	28	23	42	33 (46.5)	17	51	90	80	9.4
2760 179000 ※※	<b>-285-80- ※※</b>	0.5 ~ 7.0	285	135	40	28	23	42	33 (46.5)	17	51	90	80	10.0
2760 289000 ※※	<b>BT50 -AH0790 (-AH0790-OH) -165-110- ※※</b>	0.5 ~ 7.0	165	118	40	28	23	42	33 (46.5)	17	51	90	110	7.6
2760 299000 ※※	<b>-195-110- ※※</b>	0.5 ~ 7.0	195	118	40	28	23	42	33 (46.5)	17	51	90	110	8.2
2760 309000 ※※	<b>-225-110- ※※</b>	0.5 ~ 7.0	225	118	40	28	23	42	33 (46.5)	17	51	90	110	8.8
2760 319000 ※※	<b>-255-110- ※※</b>	0.5 ~ 7.0	255	135	40	28	23	42	33 (46.5)	17	51	90	110	9.4
2760 329000 ※※	<b>-285-110- ※※</b>	0.5 ~ 7.0	285	135	40	28	23	42	33 (46.5)	17	51	90	110	10.0

Code	Model	d	L	L2	ℓ	d1	D	B	C (C)	E	F	H	S	kg
2760 189000 ※※	BT50 -AH0990 (-AH0990-OH) -165-80- ※※	2.5 ~ 9.0	165	118	55	28	26.3	53.5	44.5 (58.5)	22	58	90	80	7.7
2760 199000 ※※	-195-80- ※※	2.5 ~ 9.0	195	118	55	28	26.3	53.5	44.5 (58.5)	22	58	90	80	8.3
2760 209000 ※※	-225-80- ※※	2.5 ~ 9.0	225	118	55	28	26.3	53.5	44.5 (58.5)	22	58	90	80	8.9
2760 219000 ※※	-255-80- ※※	2.5 ~ 9.0	255	135	55	28	26.3	53.5	44.5 (58.5)	22	58	90	80	9.5
2760 339000 ※※	BT50 -AH0990 (-AH0990-OH) -165-110- ※※	2.5 ~ 9.0	165	118	55	28	26.3	53.5	44.5 (58.5)	22	58	90	110	7.7
2760 349000 ※※	-195-110- ※※	2.5 ~ 9.0	195	118	55	28	26.3	53.5	44.5 (58.5)	22	58	90	110	8.3
2760 359000 ※※	-225-110- ※※	2.5 ~ 9.0	225	118	55	28	26.3	53.5	44.5 (58.5)	22	58	90	110	8.9
2760 369000 ※※	-255-110- ※※	2.5 ~ 9.0	255	135	55	28	26.3	53.5	44.5 (58.5)	22	58	90	110	9.5
2760 229000 ※※	BT50 -AH1690 (-AH1690-OH) -165-80- ※※	3.5 ~ 16.0	165	118	59	28	36.3	59	51 (64.5)	28	67	90	80	7.8
2760 239000 ※※	-195-80- ※※	3.5 ~ 16.0	195	118	59	28	36.3	59	51 (64.5)	28	67	90	80	8.4
2760 249000 ※※	-225-80- ※※	3.5 ~ 16.0	225	118	59	28	36.3	59	51 (64.5)	28	67	90	80	9.0
2760 379000 ※※	BT50 -AH1690 (-AH1690-OH) -165-110- ※※	3.5 ~ 16.0	165	118	59	28	36.3	59	51 (64.5)	28	67	90	110	7.8
2760 389000 ※※	-195-110- ※※	3.5 ~ 16.0	195	118	59	28	36.3	59	51 (64.5)	28	67	90	110	8.4
2760 399000 ※※	-225-110- ※※	3.5 ~ 16.0	225	118	59	28	36.3	59	51 (64.5)	28	67	90	110	9.0
2760 259000 ※※	BT50 -AH2290 (-AH2290-OH) -180-80- ※※	3.5 ~ 22.0	180	117	65	28	46.3	69	57 (70.5)	34.5	75	113	80	9.5
2760 269000 ※※	-210-80- ※※	3.5 ~ 22.0	210	117	65	28	46.3	69	57 (70.5)	34.5	75	113	80	10.3
2760 279000 ※※	-240-80- ※※	3.5 ~ 22.0	240	117	65	28	46.3	69	57 (70.5)	34.5	75	113	80	11.0
2760 409000 ※※	BT50 -AH2290 (-AH2290-OH) -180-110- ※※	3.5 ~ 22.0	180	117	65	28	46.3	69	57 (70.5)	34.5	75	113	110	9.5
2760 419000 ※※	-210-110- ※※	3.5 ~ 22.0	210	117	65	28	46.3	69	57 (70.5)	34.5	75	113	110	10.3
2760 429000 ※※	-240-110- ※※	3.5 ~ 22.0	240	117	65	28	46.3	69	57 (70.5)	34.5	75	113	110	11.0
2760 439000 ※※	BT50 -AH2590 (-AH2590-OH) -195-80- ※※	9.5 ~ 25.0	195	117	101	28	65	90	73 (86.5)	45	90	113	80	15.0
2760 449000 ※※	-195-110- ※※	9.5 ~ 25.0	195	117	101	28	65	90	73 (86.5)	45	90	113	110	15.0

Model names in brackets show "Coolant type", which are quoted on request.

- ※ is for A dimension. Please refer to P. 179.
- When ordering, please specify plunger size ( "A" dimension ).
- Plunger is fixed (non-adjustable)
- Collet and spanner are sold separately.
- BT30-AH1290-125-50- ※※ is light cutting only.

Accessories for Angle heads fixed type

Model	Nut	Collet	Spanner for nut	Spanner flats for the head
AH0790	HDP-07A	FDC-07A	S-0	Standard 14mm spanner
AH0990	HDP-09	FDC-09	S-1L	S-1L
AH1290	HDP-12	FDC-12	S-3L	S-3L
AH1690	HDP-16	FDC-16	S-4L	S-4L
AH2290	HDP-22	FDC-22	S-5L	S-5L
AH2590	HPP-25	NTG25	HS2.5-25	HS2.5-25

Collet

P. 086 - 089



Spanner

P. 095



Ordering Example

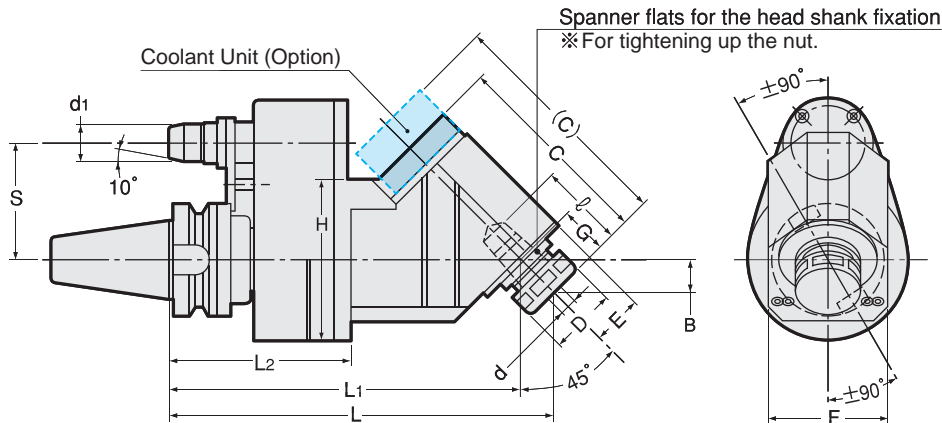
BT40 - AH 07 90 - 150 - 65 - 06  
 Shank size                      Max.      Angle      Projection  
    collet I.D.      length (L)



# AH, AH-OH

45°

Angle Heads ( Fixed Type )



※ Requires a positioning block. Please refer to P.179-180.



Unit : Metric

Code	Model	d	L	L1	L2	ℓ	d1	D	B	C (C)	E	F	G	H	S	kg
2760 014500 ※※	<b>BT40</b> -AH0745 (-AH0745-OH) -195-65- ※※	0.5 ~ 7.0	195	179.5	103	35	19.6	23	15.6	88.5 (102)	17	51	22	90	65	4.2
2760 024500 ※※	-215-65- ※※	0.5 ~ 7.0	215	199.5	103	35	19.6	23	15.6	88.5 (102)	17	51	22	90	65	
2760 034500 ※※	-245-65- ※※	0.5 ~ 7.0	245	229.5	103	35	19.6	23	15.6	88.5 (102)	17	51	22	90	65	
2760 044500 ※※	<b>BT40</b> -AH0945 (-AH0945-OH) -205-65- ※※	2.5 ~ 9.0	205	186.5	103	45	19.6	26.3	19.1	104 (118)	22	58	27	90	65	4.5
2760 054500 ※※	-230-65- ※※	2.5 ~ 9.0	230	211.5	103	45	19.6	26.3	19.1	104 (118)	22	58	27	90	65	
2760 064500 ※※	-260-65- ※※	2.5 ~ 9.0	260	241.5	103	45	19.6	26.3	19.1	104 (118)	22	58	27	90	65	
2760 074500 ※※	<b>BT40</b> -AH1645 (-AH1645-OH) -215-65- ※※	3.5 ~ 16.0	215	197	103	53	19.6	36.3	18.4	113.5 (127)	28	67	26	90	65	5.3
2760 084500 ※※	-245-65- ※※	3.5 ~ 16.0	245	227	103	53	19.6	36.3	18.4	113.5 (127)	28	67	26	90	65	
2760 094500 ※※	<b>BT50</b> -AH0745 (-AH0745-OH) -210-80- ※※	0.5 ~ 7.0	210	194.5	118	35	28	23	15.6	88.5 (102)	17	51	22	90	80	7.8
2760 104500 ※※	-230-80- ※※	0.5 ~ 7.0	230	214.5	118	35	28	23	15.6	88.5 (102)	17	51	22	90	80	
2760 114500 ※※	-260-80- ※※	0.5 ~ 7.0	260	244.5	118	35	28	23	15.6	88.5 (102)	17	51	22	90	80	
2760 174500 ※※	<b>BT50</b> -AH0745 (-AH0745-OH) -210-110- ※※	0.5 ~ 7.0	210	194.5	118	35	28	23	15.6	88.5 (102)	17	51	22	90	110	
2760 184500 ※※	-230-110- ※※	0.5 ~ 7.0	230	214.5	118	35	28	23	15.6	88.5 (102)	17	51	22	90	110	
2760 194500 ※※	-260-110- ※※	0.5 ~ 7.0	260	244.5	118	35	28	23	15.6	88.5 (102)	17	51	22	90	110	
2760 124500 ※※	<b>BT50</b> -AH0945 (-AH0945-OH) -220-80- ※※	2.5 ~ 9.0	220	201.5	118	45	28	26.3	19.1	104 (118)	22	58	27	90	80	7.8
2760 134500 ※※	-245-80- ※※	2.5 ~ 9.0	245	226.5	118	45	28	26.3	19.1	104 (118)	22	58	27	90	80	
2760 144500 ※※	-275-80- ※※	2.5 ~ 9.0	275	256.5	118	45	28	26.3	19.1	104 (118)	22	58	27	90	80	
2760 204500 ※※	<b>BT50</b> -AH0945 (-AH0945-OH) -220-110- ※※	2.5 ~ 9.0	220	201.5	118	45	28	26.3	19.1	104 (118)	22	58	27	90	110	
2760 214500 ※※	-245-110- ※※	2.5 ~ 9.0	245	226.5	118	45	28	26.3	19.1	104 (118)	22	58	27	90	110	
2760 224500 ※※	-275-110- ※※	2.5 ~ 9.0	275	256.5	118	45	28	26.3	19.1	104 (118)	22	58	27	90	110	
2760 154500 ※※	<b>BT50</b> -AH1645 (AH1645-OH) -230-80- ※※	3.5 ~ 16.0	230	212	118	53	28	36.3	18.4	113.5 (127)	28	67	26	90	80	
2760 164500 ※※	-260-80- ※※	3.5 ~ 16.0	260	242	118	53	28	36.3	18.4	113.5 (127)	28	67	26	90	80	
2760 234500 ※※	<b>BT50</b> -AH1645 (AH1645-OH) -230-110- ※※	3.5 ~ 16.0	230	212	118	53	28	36.3	18.4	113.5 (127)	28	67	26	90	110	
2760 244500 ※※	-260-110- ※※	3.5 ~ 16.0	260	242	118	53	28	36.3	18.4	113.5 (127)	28	67	26	90	110	

Model names in brackets show "Coolant type", which are quoted on request.

- ※ is for A dimension. Please refer to P. 179.
- When ordering, please specify plunger size ( "A" dimension ).
- Plunger is fixed (non-adjustable)
- Collet and spanner are sold separately.

#### Accessories for Angle heads fixed type

Model	Nut	Collet	Spanner for nut	Spanner flats for the head
<b>AH0745</b>	HDP-07A	FDC-07A	S-0	<b>Standard 14mm spanner</b>
<b>AH0945</b>	HDP-09	FDC-09	S-1L	S-1L
<b>AH1645</b>	HDP-16	FDC-16	S-4L	S-4L

#### Collet

P. 086 - 089



#### Spanner

P. 095



#### Ordering Example

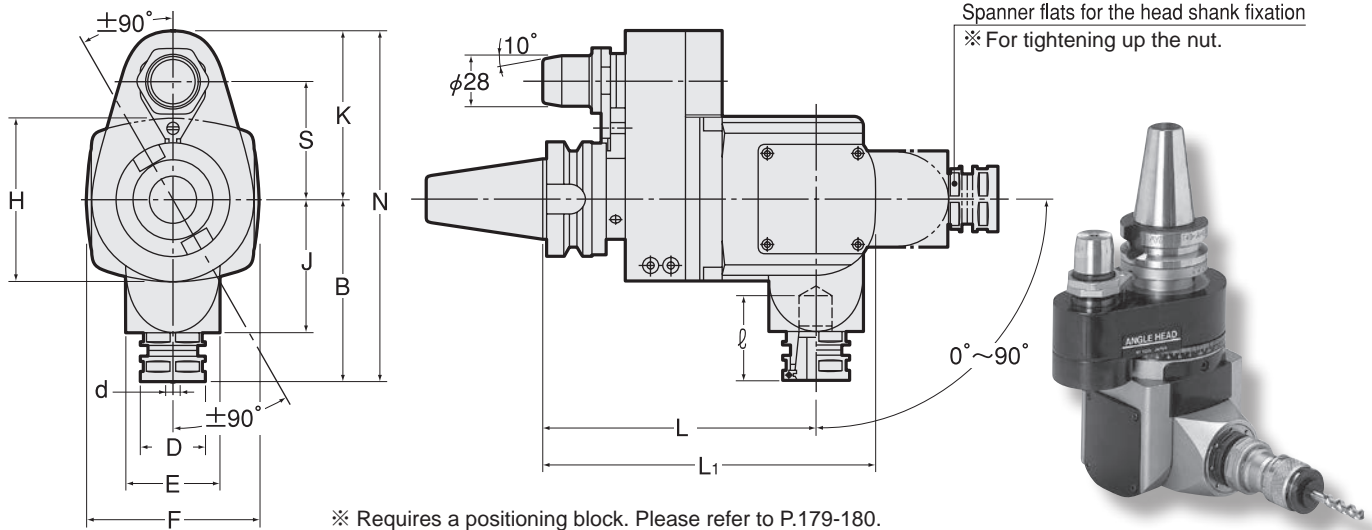
**BT40 - AH 07 45 - 195 - 65 - 06**

Shank size      Max.      Angle      Projection      S      Dimension  
collet I.D.      length (L)      A

# AHS, AHL

0-90°

Angle Heads ( Flexible Type )



Unit : Metric

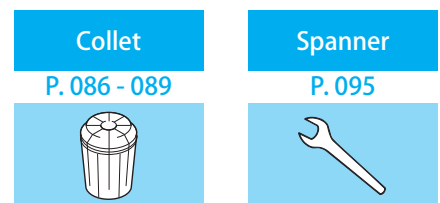
Code	Model	d	L	L1	ℓ	D	B	E	F	H	J	K	N	S	kg	Collet
2640 010000 ※※	BT40 -AHS07 -150-65- ※※	0.5 ~ 7.0	150	183	65	23	100	52	96	90	73	93	193	65	8.0	FDC-07
2640 020000 ※※	BT40 -AHS09 -150-65- ※※	2.5 ~ 9.0	150	183	65	26	100	52	96	90	73	93	193	65	8.0	FDC-09
2640 030000 ※※	BT40 -AHS16 -150-65- ※※	3.5 ~ 16.0	150	183	47	36	100	52	96	90	73	93	193	65	8.0	FDC-16
2640 040000 ※※	BT50 -AHS07 -165-80- ※※	0.5 ~ 7.0	165	198	65	23	100	52	96	90	73	108	208	80	12.0	FDC-07
2640 050000 ※※	BT50 -AHS09 -165-80- ※※	2.5 ~ 9.0	165	198	65	26	100	52	96	90	73	108	208	80	12.0	FDC-09
2640 060000 ※※	BT50 -AHS16 -165-80- ※※	3.5 ~ 16.0	165	198	47	36	100	52	96	90	73	108	208	80	12.0	FDC-16
2640 070000 ※※	BT50 -AHS07 -165-110- ※※	0.5 ~ 7.0	165	198	65	23	100	52	96	90	73	138	238	110	12.0	FDC-07
2640 080000 ※※	BT50 -AHS09 -165-110- ※※	2.5 ~ 9.0	165	198	65	26	100	52	96	90	73	138	238	110	12.0	FDC-09
2640 090000 ※※	BT50 -AHS16 -165-110- ※※	3.5 ~ 16.0	165	198	47	36	100	52	96	90	73	138	238	110	12.0	FDC-16
2640 100000 ※※	BT50 -AHL16 -165-80- ※※	3.5 ~ 16.0	165	205	70	36	110	66	118	110	78	108	218	80	15.0	FDC-16
2640 110000 ※※	BT50 -AHL22 -165-80- ※※	3.5 ~ 22.0	165	205	65	46	110	66	118	110	78	108	218	80	15.0	FDC-22
2640 120000 ※※	BT50 -AHL16 -165-110- ※※	3.5 ~ 16.0	165	205	70	36	110	66	118	110	78	138	248	110	15.0	FDC-16
2640 130000 ※※	BT50 -AHL22 -165-110- ※※	3.5 ~ 22.0	165	205	65	46	110	66	118	110	78	138	248	110	15.0	FDC-22

1. ※ is for A dimension. Please refer to P. 179.
2. When ordering, please specify plunger size ("A" dimension)
3. Plunger is fixed (non-adjustable)
4. Collet and spanner are sold separately.

**Ordering Example**

**BT40 - AHS 07 - 150 - 65 - 06**

Shank size      Max.      Projection      S      Dimension  
 collet I.D.      length (L)      A



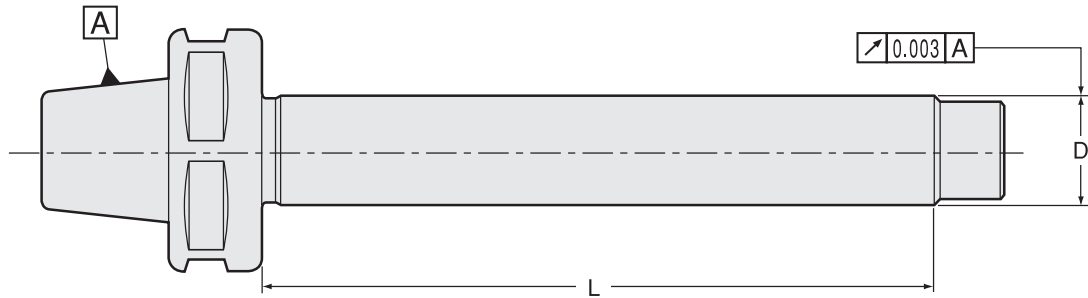
**Accessories for Angle heads flexibled type**

Model	Nut	Collet	Spanner for nut	Spanner flats for the head
AHS07	HDP-07A	FDC-07	S-0	Standard 16mm spanner
AHS09	HDP-09	FDC-09	S-1L	Standard 21mm spanner
AHS16	HDP-16	FDC-16	S-4L	S-4L
AHL16	HDP-16	FDC-16	S-4L	S-3L
AHL22	HDP-22	FDC-22	S-5L	S-5L

# Accessories for ANGLE HEADS

MASTER BAR

**MS**



## Metric Sizes

Unit : Metric

Code	Model	D	L	Applicable Angle Head model Number
2767 00007100	<b>AH07-MS7-100</b>	7	100	AH0790, AH0745, AHS07
2767 00009100	<b>AH09-MS16-100</b>	16	100	AH0990, AH0945, AHS09
2767 00016100	<b>AH16-MS16-100</b>	16	100	AH1690, AH1645, AHS16, AHL16
2767 00022100	<b>AH22-MS22-100</b>	22	100	AH2290, AHL22
2767 00025110	<b>AH25-MS25-110</b>	25	110	AH2590

- 1.Angle Head comes complete with a set of Master bar. Please order an extra Master bar in case you need one.
- 2.With regard to AH07-MS7-100, nut and Master bar are separated. Master bar and nut must be put together before use. (As for other sizes, Master bar and cap nut are already integrated. )

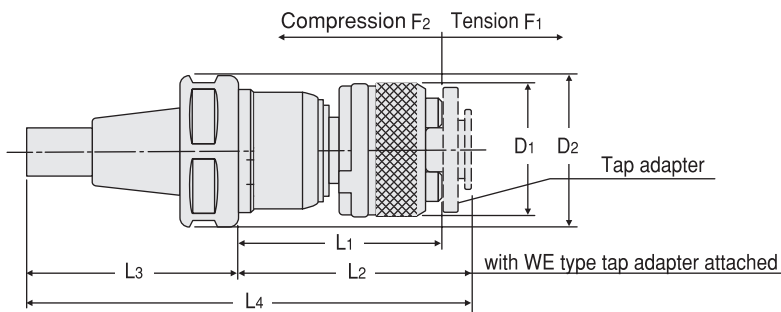
### Ordering Example

**AH09 - MS16 - 100**

Collet size      D      L

Quick-change tapping attachment

**TPC**



### Ordering Example

**TPC22 - 1**

Tap adapter size

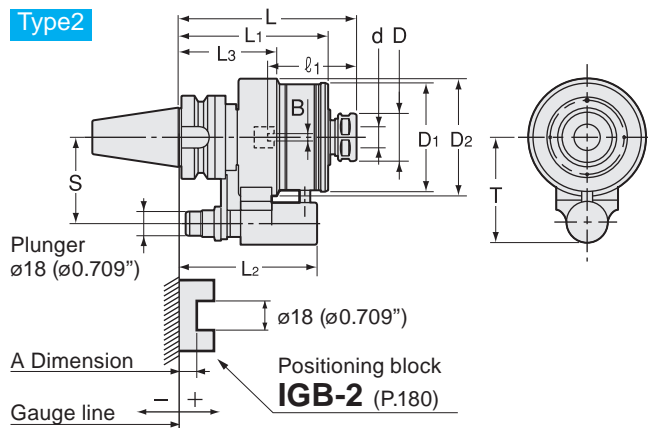
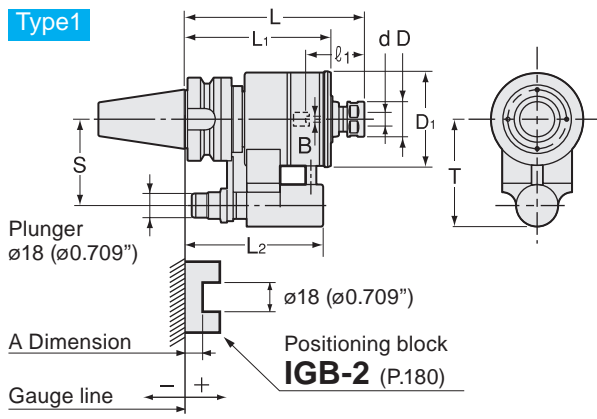
## Metric Sizes

Unit : Metric

Type	Tap adapter size	Tap size (Please refer to P.463-464.)	L1	L2	L3	L4	D1	D2	Axial compensation		Applicable Angle Head model Number
									F1	F2	
TPC16-1	1	M3 ~ M12 (M15) U1/4 ~ U7/16 (U9/16) Pipe (PT,PS,PF) 1/8 ~ 1/4	49.5	56.5	64.5	121	32	36	10	2	AH1645, AH1690, AHS16, AHL16
TPC22-1	1	M3 ~ M12 (M15) U1/4 ~ U7/16 (U9/16) Pipe (PT,PS,PF) 1/8 ~ 1/4	49.5	56.5	70	126.5	32	46	10	2	AH2290, AHL22
TPC22-2	2	M8 ~ M22 U3/8 ~ U7/8	69	80	70	150	50	46	10	2	AH2290, AHL22

# HDC·A-CS

Collet Holder ( Coolant Inducer)



Unit : Metric

Code	Model	Type	d	L	B	l1	L1	L2	L3	D	D1	D2	T	S	MAX min <sup>-1</sup>	Max. Coolant	Seal unit	kg
2980 8307135 ※	<b>BT40 -HDC07A -135CS-</b> ※	1	3.0 ~ 7	135	0 ~ 4	22 ~ 48	110	105	—	23	71	—	81	65	8,000	2MPa	CS-1	3.6
2980 8307165 ※	<b>-165CS-</b> ※	1	3.0 ~ 7	165	0 ~ 4	22 ~ 48	110	105	—	23	71	—	81	65	8,000	2MPa	CS-1	3.7
2980 8309135 ※	<b>BT40 -HDC09A -135CS-</b> ※	1	3.0 ~ 9	135	0 ~ 4	27 ~ 48	110	105	—	26	71	—	81	65	8,000	2MPa	CS-1	3.6
2980 8309165 ※	<b>-165CS-</b> ※	1	3.0 ~ 9	165	0 ~ 4	27 ~ 48	110	105	—	26	71	—	81	65	8,000	2MPa	CS-1	3.7
2980 8312135 ※	<b>BT40 -HDC12A -135CS-</b> ※	1	3.0 ~ 12	135	0 ~ 5	33 ~ 46	110	105	—	32	71	—	81	65	8,000	2MPa	CS-1	3.6
2980 8312165 ※	<b>-165CS-</b> ※	1	3.0 ~ 12	165	0 ~ 5	33 ~ 46	110	105	—	32	71	—	81	65	8,000	2MPa	CS-1	3.8
2980 8316135 ※	<b>BT40 -HDC16A -135CS-</b> ※	2	6.0 ~ 16	135	0 ~ 6	38 ~ 66	114	105	75	36	82	89	81	65	6,000	2MPa	CS-2	4.5
2980 8316165 ※	<b>-165CS-</b> ※	2	6.0 ~ 16	165	0 ~ 6	38 ~ 66	114	105	75	36	82	89	81	65	6,000	2MPa	CS-2	4.7
2980 8322150 ※	<b>BT40 -HDC22A -150CS-</b> ※	1	6.0 ~ 22	150	0 ~ 8	47 ~ 103	114	105	—	46	90	—	81	65	5,000	2MPa	CS-3	4.7
2980 8322180 ※	<b>-180CS-</b> ※	1	6.0 ~ 22	180	0 ~ 8	47 ~ 103	114	105	—	46	90	—	81	65	5,000	2MPa	CS-3	5.1
2980 8507150 ※	<b>BT50 -HDC07A -150CS-</b> ※	1	3.0 ~ 7	150	0 ~ 4	22 ~ 48	119	114	—	23	71	—	96	80	8,000	2MPa	CS-1	6.1
2980 8507180 ※	<b>-180CS-</b> ※	1	3.0 ~ 7	180	0 ~ 4	22 ~ 48	119	114	—	23	71	—	96	80	8,000	2MPa	CS-1	6.3
2980 8509150 ※	<b>BT50 -HDC09A -150CS-</b> ※	1	3.0 ~ 9	150	0 ~ 4	27 ~ 48	119	114	—	26	71	—	96	80	8,000	2MPa	CS-1	6.1
2980 8509180 ※	<b>-180CS-</b> ※	1	3.0 ~ 9	180	0 ~ 4	27 ~ 48	119	114	—	26	71	—	96	80	8,000	2MPa	CS-1	6.3
2980 8512150 ※	<b>BT50 -HDC12A -150CS-</b> ※	1	3.0 ~ 12	150	0 ~ 5	33 ~ 46	119	114	—	32	71	—	96	80	8,000	2MPa	CS-1	6.9
2980 8512180 ※	<b>-180CS-</b> ※	1	3.0 ~ 12	180	0 ~ 5	33 ~ 46	119	114	—	32	71	—	96	80	8,000	2MPa	CS-1	7.0
2980 8516150 ※	<b>BT50 -HDC16A -150CS-</b> ※	2	6.0 ~ 16	150	0 ~ 6	38 ~ 66	123	114	84	36	82	89	96	80	6,000	2MPa	CS-2	7.7
2980 8516180 ※	<b>-180CS-</b> ※	2	6.0 ~ 16	180	0 ~ 6	38 ~ 66	123	114	84	36	82	89	96	80	6,000	2MPa	CS-2	8.0
2980 8522150 ※	<b>BT50 -HDC22A -150CS-</b> ※	1	6.0 ~ 22	150	0 ~ 8	47 ~ 103	123	114	—	46	90	—	96	80	5,000	2MPa	CS-3	7.8
2980 8522180 ※	<b>-180CS-</b> ※	1	6.0 ~ 22	180	0 ~ 8	47 ~ 103	123	114	—	46	90	—	96	80	5,000	2MPa	CS-3	8.2

1. Coolant collet and spanner are sold separately.
2. When ordering, please specify the plunger number(No.1~No.5).
3. Plunger is adjustable. Please refer to a chart on the right.
4. Refer to P. 092 for minimum tool insertion length in case of using our coolant collets (OH,C).
5. l1 dimensions in brackets are for using preset screw.
6. Seal unit can be replaced by customer.

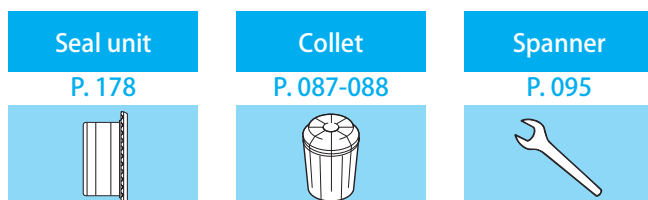
Plunger table

Model	Plunger No. A				
	No.1	No.2	No.3	No.4	No.5
<b>BT40</b>	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
<b>BT50</b>	+28 ~ +18.1	+18 ~ +8.1	+8 ~ -1.9	-2 ~ -11.9	-12 ~ -21.9

## Ordering Example

**BT40 - HDC 07 A - 135 CS - 1**

Shank size                      Max. collet I.D.                      Projection length (L)                      Plunger No.



Accessories

Model	Nut	Collet	Spanner
<b>HDC07</b>	HDP-07A	FDC-07 (OH or C)	S-0
<b>HDC09</b>	HDP-09	FDC-09 (OH or C)	S-1L
<b>HDC12</b>	HDP-12	FDC-12 (OH or C)	S-3L
<b>HDC16</b>	HDP-16	FDC-16 (OH or C)	S-4L
<b>HDC22</b>	HDP-22	FDC-22 (OH or C)	S-5L

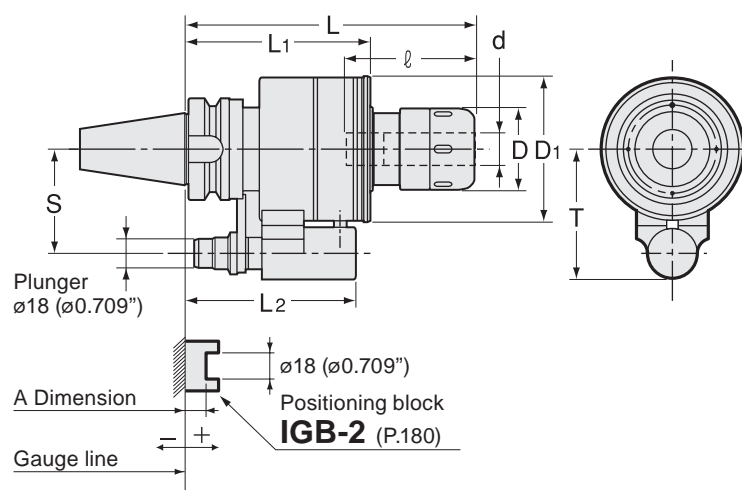
Inch to Metric (mm) → Inch × 25.4  
Metric (mm) to Inch → Metric ÷ 25.4 or Metric × 0.03937



Special / Custom Sizes on request

# CT·S-CS

Super Tite-Lock Milling Chuck (Coolant Inducer)



## Metric Sizes

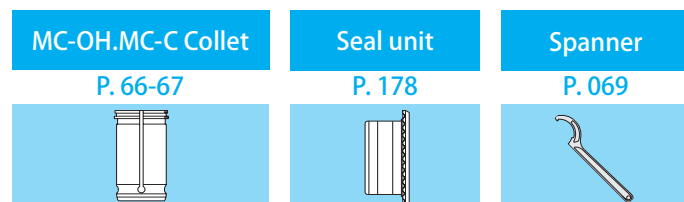
Unit : Metric

Code	Model	d	L	l	L1	L2	D	D1	T	S	MAX min <sup>-1</sup>	Max. Coolant	Seal unit	Spanner
2980 7316165 ※	<b>BT40 -CT16S -165CS-</b> ※	16	165	60	114	105	45	90	81	65	5,000	2MPa	CS-3	HS-1-16
2980 7320180 ※	<b>BT40 -CT20S -180CS-</b> ※	20	180	70	114	105	52	90	81	65	5,000	2MPa	CS-3	HS-2-20
2980 7325195 ※	<b>BT40 -CT25S -195CS-</b> ※	25	195	75	128	117	61	100	81	65	4,000	2MPa	CS-4	HS-2.5-25
2980 7332195 ※	<b>BT40 -CT32S -195CS-</b> ※	32	195	80	128	117	73	100	81	65	4,000	2MPa	CS-4	HS-3-32
2980 7516180 ※	<b>BT50 -CT16S -180CS-</b> ※	16	180	60	123	114	45	90	96	80	5,000	2MPa	CS-3	HS-1-16
2980 7520180 ※	<b>BT50 -CT20S -180CS-</b> ※	20	180	70	123	114	52	90	96	80	5,000	2MPa	CS-3	HS-2-20
2980 7525195 ※	<b>BT50 -CT25S -195CS-</b> ※	25	195	75	125	114	61	100	96	80	4,000	2MPa	CS-4	HS-2.5-25
2980 7532195 ※	<b>BT50 -CT32S -195CS-</b> ※	32	195	80	125	114	73	100	96	80	4,000	2MPa	CS-4	HS-3-32

1. When ordering, please specify the plunger number(No.1~No.5).
2. Plunger is adjustable. Please refer to a chart on the right.
3. Please return your coolant holder to us through your dealer for seal unit replacement.
4. When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
5. Accessories cannot be used except for MC-C and MC-OH.
6. Tolerance of cutting tool shank must be h7.

### Ordering Example

**BT50 - CT 32 S - 195 CS - 1**  
 Shank size      I.D. (d)      Projection length (L)      Plunger No.



Model	Plunger table				
	Plunger No. A				
	No.1	No.2	No.3	No.4	No.5
<b>BT40-CT16S</b>	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
<b>BT40-CT20S</b>	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
<b>BT40-CT25S</b>	+33 ~ +23.1	+23 ~ +13.1	+13 ~ +3.1	+3 ~ -6.9	-7 ~ -16.9
<b>BT40-CT32S</b>	+33 ~ +23.1	+23 ~ +13.1	+13 ~ +3.1	+3 ~ -6.9	-7 ~ -16.9
<b>BT50</b>	+28 ~ +18.1	+18 ~ +8.1	+8 ~ -1.9	-2 ~ -11.9	-12 ~ -21.9

### Min. chucking length

Without coolant collet (MC-C, MC-OH)

I.D. of Milling Chuck	Min. chucking length
16, 20	40
25, 32	50

With coolant collet (MC-C, MC-OH)

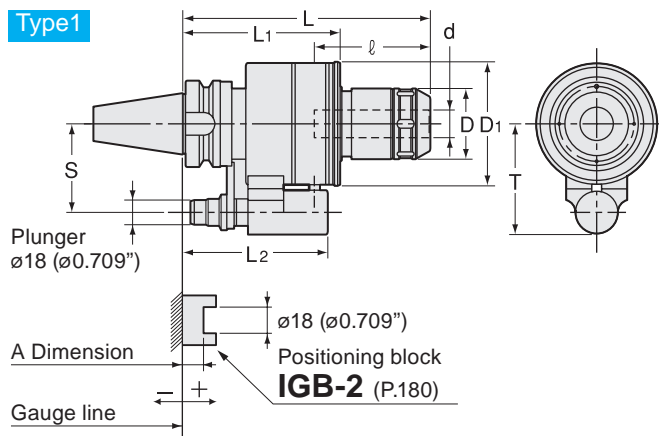
Collet I.D.	Min. chucking length
6, 8	30
10, 12	40
16, 20	45
25	50



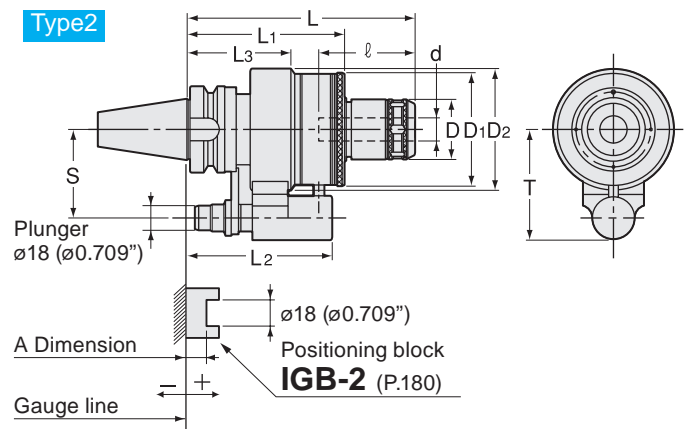
# CT·A-CS

Tite-Lock Milling Chuck (Coolant Inducer)

Type1



Type2



## Metric Sizes

Unit : Metric

Code	Model	Type	d	L	ℓ	L1	L2	L3	D	D1	D2	T	S	MAX min <sup>-1</sup>	Max. Coolant	kg	Spanner
2980 2316165 ※	<b>BT40 -CT16A -165CS- ※</b>	2	16	165	60	114	105	75	45	82	89	81	65	6,000	2MPa	4.9	HS-1-16
2980 2320180 ※	<b>BT40 -CT20A -180CS- ※</b>	1	20	180	70	114	105	—	52	90	—	81	65	5,000	2MPa	5.5	HS-2-20
2980 2325180 ※	<b>BT40 -CT25A -180CS- ※</b>	1	25	180	75	114	105	—	61	90	—	81	65	5,000	2MPa	5.7	HS-2.5-25
2980 2332195 ※	<b>BT40 -CT32A -195CS- ※</b>	1	32	195	80	128	117	—	73	100	—	81	65	4,000	2MPa	7.3	HS-3-32
2980 2516180 ※	<b>BT50 -CT16A -180CS- ※</b>	2	16	180	60	123	114	84	45	82	89	96	80	6,000	2MPa	7.7	HS-1-16
2980 2520195 ※	<b>BT50 -CT20A -195CS- ※</b>	1	20	195	70	123	114	—	52	90	—	96	80	5,000	2MPa	8.8	HS-2-20
2980 2525195 ※	<b>BT50 -CT25A -195CS- ※</b>	1	25	195	80	123	114	—	61	90	—	96	80	5,000	2MPa	9.5	HS-2.5-25
2980 2532195 ※	<b>BT50 -CT32A -195CS- ※</b>	1	32	195	80	125	114	—	73	100	—	96	80	4,000	2MPa	10.2	HS-3-32

- When ordering, please specify the plunger number(No.1~No.5).
- Plunger is adjustable. Please refer to a chart on the right.
- Please return your coolant holder to us through your dealer for seal unit replacement.
- When ordering, indicate number of spanners required. "No charge" spanners are limited to number of milling chucks on order.
- Accessories cannot be used except for MC-C and MC-OH.
- Tolerance of cutting tool shank must be h7.

### Ordering Example

**BT50 - CT 32 A - 195 CS - 1**

Shank size      I.D. (d)      Projection length (L)      Plunger No.

### Min. chucking length

Without coolant collet (MC-C, MC-OH)

I.D. of Milling Chuck	Min. chucking length
16	40
20、25	45
32	60

With coolant collet (MC-C, MC-OH)

Collet I.D.	Min. chucking length
6、8	30
10、12	40
16、20	45
25	55

### Plunger table

Model	Plunger No. A				
	No.1	No.2	No.3	No.4	No.5
<b>BT40-CT16A</b>	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
<b>BT40-CT20A</b>	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
<b>BT40-CT25A</b>	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
<b>BT40-CT32A</b>	+33 ~ +23.1	+23 ~ +13.1	+13 ~ +3.1	+3 ~ -6.9	-7 ~ -16.9
<b>BT50</b>	+28 ~ +18.1	+18 ~ +8.1	+8 ~ -1.9	-2 ~ -11.9	-12 ~ -21.9

### MC-OH.MC-C Collet

P. 66-67



### Spanner

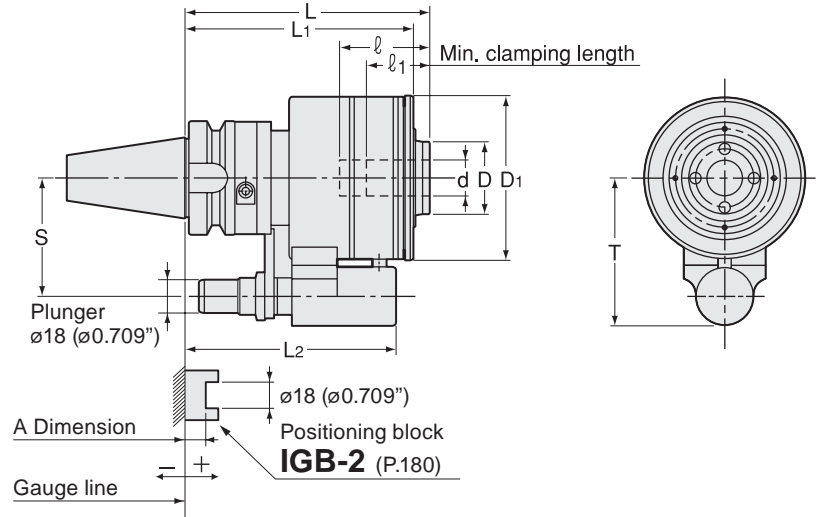
P. 069





# HC-CS

Hydraulic Chuck (Coolant Inducer)



## Metric Sizes

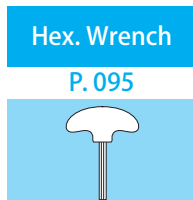
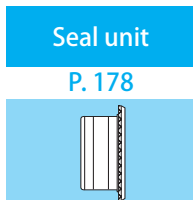
Unit : Metric

Code	Model	d	L	L1	L2	D	D1	ℓ	ℓ1	T	S	MAX min <sup>-1</sup>	Max. Coolant	Seal unit	kg	Hex. Wrench (Option)
2980 3316135 ※	<b>BT40 -HC16 -135CS-</b> ※	16	135	126	117	41	90	50	40	81	65	5,000	2MPa	CS-3	5.0	L-4T
2980 3320135 ※	<b>BT40 -HC20 -135CS-</b> ※	20	135	126	117	45	90	50	40	81	65	5,000	2MPa	CS-3	5.0	
2980 3325135 ※	<b>BT40 -HC25 -135CS-</b> ※	25	135	130	118	50	100	60	50	81	65	4,000	2MPa	CS-4	5.7	L-6T
2980 3516150 ※	<b>BT50 -HC16 -150CS-</b> ※	16	150	135	126	42	90	50	40	96	80	5,000	2MPa	CS-3	8.1	L-4T
2980 3520150 ※	<b>BT50 -HC20 -150CS-</b> ※	20	150	135	126	46	90	50	40	96	80	5,000	2MPa	CS-3	8.8	
2980 3525150 ※	<b>BT50 -HC25 -150CS-</b> ※	25	150	139	128	52	100	60	50	96	80	4,000	2MPa	CS-4	9.4	L-6T

- When ordering, please specify the plunger number(No.1~No.5).
- Plunger is adjustable. Please refer to a chart on the right.
- Please use cutting tool with smaller tolerance than h7. Tolerance within  $\pm 0.01$  is recommended in case newly making cutting tools.
- Never operate clamp bolt without cutting tool in the chuck, otherwise the chuck will be damaged.
- Seal unit can be replaced by customer.

### Ordering Example

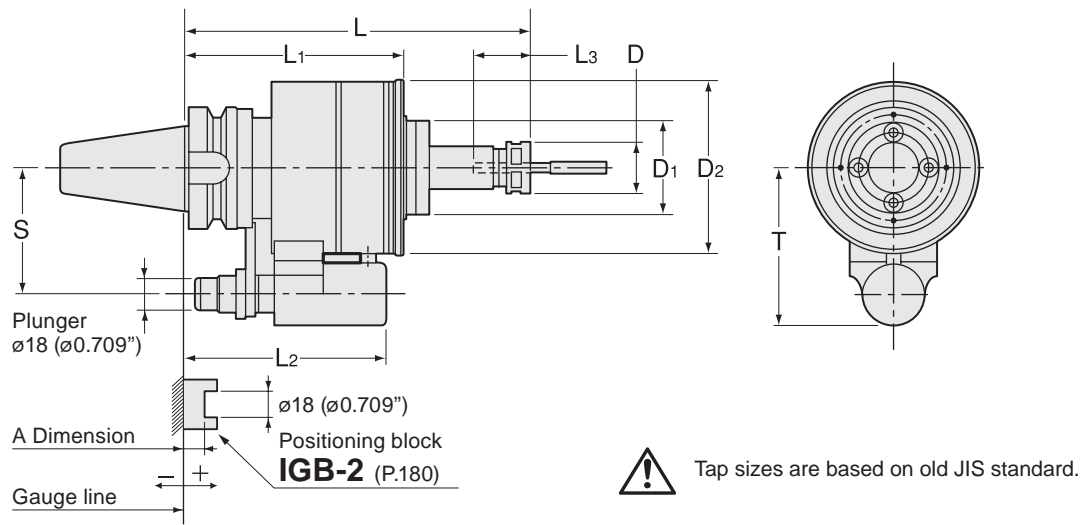
**BT40 - HC 16 S - 135 CS - 1**  
 Shank size I.D. (d) Projection length (L) Plunger No.



Plunger table					
Model	Plunger No. A				
	No.1	No.2	No.3	No.4	No.5
<b>BT40-HC16</b>	+32 ~ +22.1	+22 ~ +12.1	+12 ~ +2.1	+2 ~ -7.9	-8 ~ -17.9
<b>BT40-HC20</b>	+32 ~ +22.1	+22 ~ +12.1	+12 ~ +2.1	+2 ~ -7.9	-8 ~ -17.9
<b>BT40-HC25</b>	+34 ~ +24.1	+24 ~ +14.1	+14 ~ +4.1	+4 ~ -5.9	-6 ~ -15.1
<b>BT50-HC16</b>	+40 ~ +30.1	+30 ~ +20.1	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9
<b>BT50-HC20</b>	+40 ~ +30.1	+30 ~ +20.1	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9
<b>BT50-HC25</b>	+42 ~ +32.1	+32 ~ +22.1	+22 ~ +12.1	+12 ~ +2.1	+2 ~ -7.9

# TP-CS

Tapping Chuck (Coolant Inducer)



Tap sizes are based on old JIS standard.

## Metric Sizes

Unit : Metric

Code	Model	Tap size	L	L1	L2	L3 ± 3	D	Compression	Tension	D1	D2	T	S	MAX min <sup>-1</sup>	Max. Coolant	Seal unit	kg
2980 6309180 ※	<b>BT40 -TP09 -180CS- ※</b>	M6 ~ M10	180	114	105	26	26	0.5	20	48	90	81	65	5,000	2MPa	CS-3	4.9
2980 6312195 ※	<b>BT40 -TP12 -195CS- ※</b>	M6 ~ M10	195	114	105	35	32	0.5	20	48	90	81	65	5,000	2MPa	CS-3	4.5
2980 6312195 ※	<b>-195CS- ※</b>	M12 ~ M14	195	114	105	40	32	0.5	20	48	90	81	65	5,000	2MPa	CS-3	4.5
2980 6316210 ※	<b>BT40 -TP16 -210CS- ※</b>	M12 ~ M14	210	128	117	40	36	0.5	20	58	100	81	65	4,000	2MPa	CS-4	5.0
2980 6316210 ※	<b>-210CS- ※</b>	M16 ~ M18	210	128	117	47	36	0.5	20	58	100	81	65	4,000	2MPa	CS-4	5.0
2980 6322225 ※	<b>BT40 -TP22 -225CS- ※</b>	M16 ~ M20	225	128	117	47	46	0.5	20	58	100	81	65	4,000	2MPa	CS-4	6.5
2980 6322225 ※	<b>-225CS- ※</b>	M22 ~ M27	225	128	117	53	46	0.5	20	58	100	81	65	4,000	2MPa	CS-4	6.5
2980 6509195 ※	<b>BT50 -TP09 -195CS- ※</b>	M6 ~ M10	195	123	114	26	26	0.5	20	48	90	96	80	5,000	2MPa	CS-3	7.8
2980 6512210 ※	<b>BT50 -TP12 -210CS- ※</b>	M6 ~ M10	210	123	114	35	32	0.5	20	48	90	96	80	5,000	2MPa	CS-3	8.2
2980 6512210 ※	<b>-210CS- ※</b>	M12 ~ M14	210	123	114	40	32	0.5	20	48	90	96	80	5,000	2MPa	CS-3	8.2
2980 6516210 ※	<b>BT50 -TP16 -210CS- ※</b>	M12 ~ M14	210	125	114	40	36	0.5	20	58	100	96	80	4,000	2MPa	CS-4	8.3
2980 6516210 ※	<b>-210CS- ※</b>	M16 ~ M18	210	125	114	47	36	0.5	20	58	100	96	80	4,000	2MPa	CS-4	8.3
2980 6522225 ※	<b>BT50 -TP22 -225CS- ※</b>	M16 ~ M20	225	125	114	47	46	0.5	20	58	100	96	80	4,000	2MPa	CS-4	8.5
2980 6522225 ※	<b>-225CS- ※</b>	M22 ~ M27	225	125	114	53	46	0.5	20	58	100	96	80	4,000	2MPa	CS-4	8.5

1. When ordering, please specify the plunger number(No.1~No.5).
2. Plunger is adjustable. Please refer to a chart on the right.
3. Preset driver, coolant collet and spanner are sold separately.
4. Seal unit can be replaced by customer.

### Accessories

Model	Preset driver	Tap size	Collet	Spanner
<b>TP09</b>	CTPS09- ※	M6 ~ M10	FDC-09 (OH or C)	S-1L
<b>TP12</b>	CTPS12- ※	M6 ~ M14	FDC-12 (OH or C)	S-3L
<b>TP16</b>	CTPS16- ※	M12 ~ M18	FDC-16 (OH or C)	S-4L
<b>TP22</b>	CTPS22- ※	M16 ~ M27	FDC-22 (OH or C)	S-5L

### Seal unit

P. 178



1. Please specify tap size.
2. Please refer to tap size for I.D. of collet.

## Tap size (Old JIS)

Metric Thread	Unified Thread	Whitworth Thread	Shank Dia. $\phi$	Square $\square$
M6	U1/4	W1/4	6	4.5
	U5/16	W5/16	6.1	5
M7 M8			6.2	5
M9 M10	U3/8	W3/8	7	5.5
M11	U7/16	W7/16	8	6
M12			8.5	6.5
	U1/2	W1/2	9	7
M14 M15	U9/16	W9/16	10.5	8
	U5/8	W5/8	12	9
M16			12.5	10
M17			13	10
M18	U3/4	W3/4	14	11
M20			15	12
M22	U7/8	W7/8	17	13

## Plunger table

Model	Plunger No. A				
	No.1	No.2	No.3	No.4	No.5
BT40-TP09	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	+20 ~ -29.9
BT40-TP12	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	+20 ~ -29.9
BT40-TP16	+33 ~ +23.1	+23 ~ +13.1	+13 ~ +3.1	+3 ~ -6.9	-7 ~ -16.9
BT40-TP22	+33 ~ +23.1	+23 ~ +13.1	+13 ~ +3.1	+3 ~ -6.9	-7 ~ -16.9
BT50	+28 ~ +18.1	+18 ~ +8.1	+8 ~ -1.9	-2 ~ -11.9	-12 ~ -21.9

## Ordering Example

**BT40 - TP 09 - 180 CS - 1**

Shank size      Size      Projection length (L)      Plunger No.

BT  
CAT  
AHO  
HSK-A/E/F/C  
HSK-T  
UTS  
Specialized Machine  
Related Equipment  
Bush & Chamfering Drill

Milling Chuck

Collet Holder

"R" Zero Holder

Hydraulic Chuck

Shrink fit

Tapping Chuck

Arbors

Function Holder

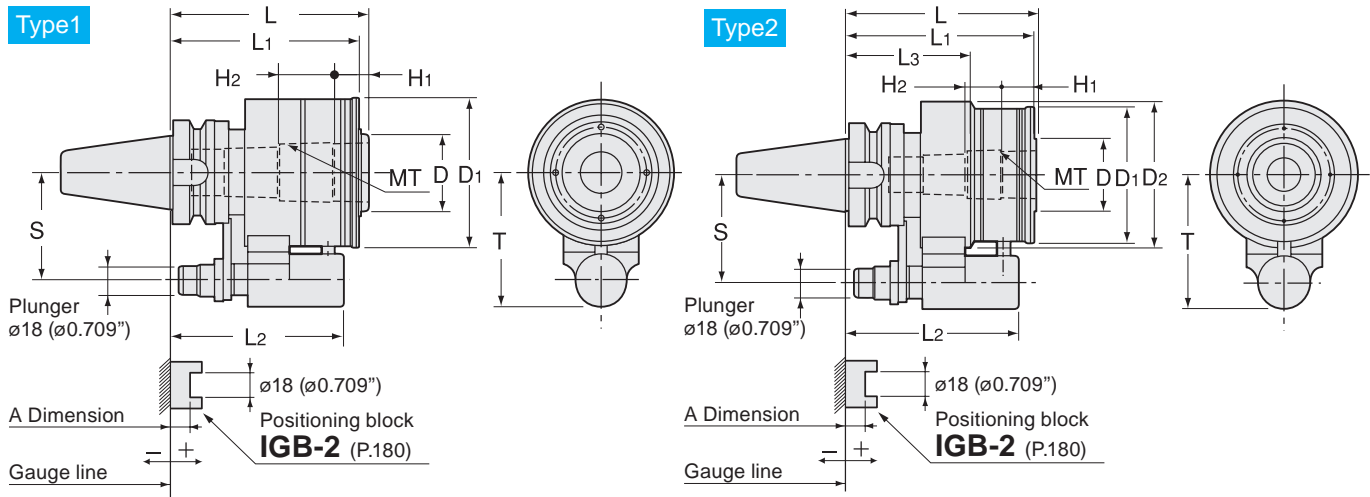
Turning Tool

Reversion Stud

Tool Shank Dimensions

# MT-CS

Morse Taper Holder (Coolant Inducer)



## Metric Sizes

Unit : Metric

Code	Model	Type	MT	L	L1	L2	L3	D	D1	D2	T	H1	H2	S	MAX min <sup>-1</sup>	Max. Coolant	Seal unit	kg
2980 1303115 ※	<b>BT40 -MT3 -115CS-</b> ※	2	3	115	114	105	75	45	82	89	81	21	22	65	6,000	2MPa	CS-2	3.3
2980 1304120 ※	<b>BT40 -MT4 -120CS-</b> ※	1	4	120	114	105	—	48	90	—	81	21	34	65	5,000	2MPa	CS-3	3.4
2980 1503125 ※	<b>BT50 -MT3 -125CS-</b> ※	2	3	125	123	114	84	45	82	89	96	21	22	80	6,000	2MPa	CS-2	6.4
2980 1504135 ※	<b>BT50 -MT4 -135CS-</b> ※	1	4	135	123	114	—	48	90	—	96	21	34	80	5,000	2MPa	CS-3	6.8
2980 1505135 ※	<b>BT50 -MT5 -135CS-</b> ※	1	5	135	125	114	—	58	100	—	96	28	40	80	4,000	2MPa	CS-4	7.2

1. When ordering, please specify the plunger number(No.1~No.5).
2. Plunger is adjustable. Please refer to a chart on the right.
3. Seal unit can be replaced by customer.

### Ordering Example

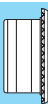
**BT50 - MT4 - 120 CS - 1**  
 Shank size MT4 Projection length (L) Plunger No.

### Plunger table

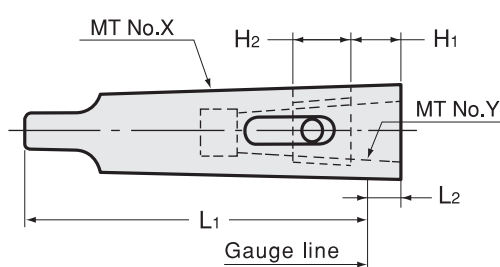
Model	Plunger No. A				
	No.1	No.2	No.3	No.4	No.5
<b>BT40</b>	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
<b>BT50</b>	+28 ~ +18.1	+18 ~ +8.1	+8 ~ -1.9	-2 ~ -11.9	-12 ~ -21.9

### Seal unit

P. 178



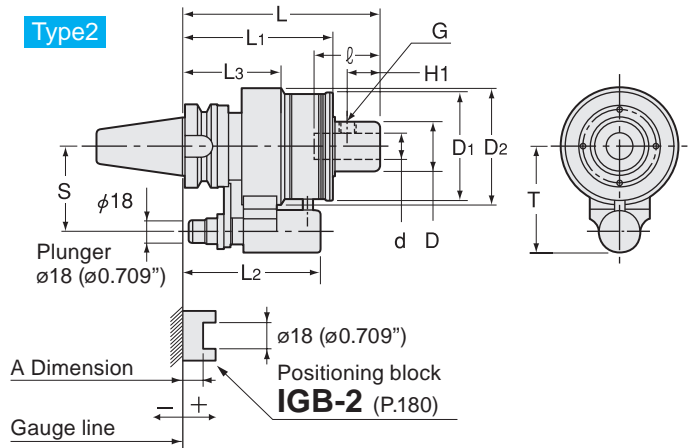
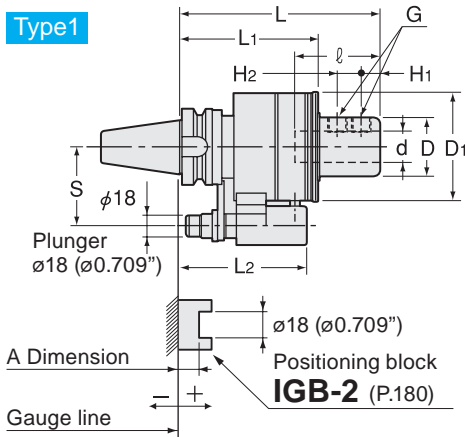
## Reduction sleeve for CMT



Code	Model	MT No.X	MT No.Y	L1	L2	H1	H2	kg
2504 11000031	<b>CMT3 -1</b>	3	1	94	5	13	15	0.3
2504 11000032	<b>-2</b>	3	2	94	15	17	20	0.3
2504 11000041	<b>CMT4 -1</b>	4	1	117.5	4.5	13	15	0.6
2504 11000042	<b>-2</b>	4	2	117.5	6.5	17	20	0.6
2504 11000043	<b>-3</b>	4	3	117.5	22.5	21	22	0.7
2504 11000052	<b>CMT5 -2</b>	5	2	149.5	0.5	17	20	1.4
2504 11000053	<b>-3</b>	5	3	149.5	2.5	21	22	1.3
2504 11000054	<b>-4</b>	5	4	149.5	15.5	21	34	1.3

# SL-CS

Side Lock Holder ( Coolant Inducer)



## Metric Sizes

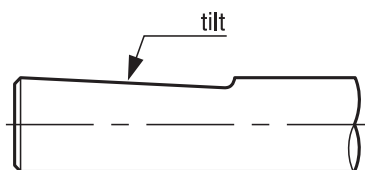
Unit : Metric

Code	Model	Type	d	L	L1	D	D1	D2	l	L2	L3	T	H1	H2	G	S	MAX min <sup>-1</sup>	Max. Coolant	Seal unit	kg
2980 0316150 ※	BT40 -SL16 -150CS- ※	2	16	150	114	38	82	89	48	105	75	81	25	—	M12	65	6,000	2MPa	CS-2	4.7
2980 0320150 ※	BT40 -SL20 -150CS- ※	2	20	150	114	38	82	89	50	105	75	81	25	—	M12	65	6,000	2MPa	CS-2	4.7
2980 0325165 ※	BT40 -SL25 -165CS- ※	1	25	165	114	48	90	—	56	105	—	81	15	20	M16	65	5,000	2MPa	CS-3	5.2
2980 0332180 ※	BT40 -SL32 -180CS- ※	1	32	180	128	58	100	—	60	117	—	81	15	20	M16	65	4,000	2MPa	CS-4	6.5
2980 0516165 ※	BT50 -SL16 -165CS- ※	2	16	165	123	38	82	89	48	114	84	96	25	—	M12	80	6,000	2MPa	CS-2	8.0
2980 0520165 ※	BT50 -SL20 -165CS- ※	2	20	165	123	38	82	89	50	114	84	96	25	—	M12	80	6,000	2MPa	CS-2	7.9
2980 0525180 ※	BT50 -SL25 -180CS- ※	1	25	180	123	48	90	—	56	114	—	96	15	20	M16	80	5,000	2MPa	CS-3	8.5
2980 0532180 ※	BT50 -SL32 -180CS- ※	1	32	180	125	58	100	—	60	114	—	96	15	20	M16	80	4,000	2MPa	CS-4	9.4
2980 0540180 ※	BT50 -SL40 -180CS- ※	1	40	180	125	90	100	—	70	114	—	96	15	25	M16	80	4,000	2MPa	-	10.6

1. When ordering, please specify the plunger number(No.1~No.5).
2. Plunger is adjustable. Please refer to a chart on the right.
3. Please return your coolant holder ( BT50-SL40 only ) to us through your dealer for seal unit replacement.

### Ordering Example

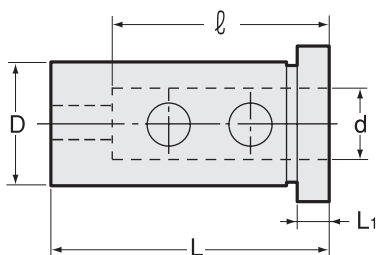
**BT50 - SL 16 - 165 CS - 1**  
 Shank size                      I.D. (d)                      Projection length (L)                      Plunger No.



Please contact our engineering staff if flats are tilted.

Model	Plunger No. A				
	No.1	No.2	No.3	No.4	No.5
BT40-SL16	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
BT40-SL20	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
BT40-SL25	+20 ~ +10.1	+10 ~ +0.1	0 ~ -9.9	-10 ~ -19.9	-20 ~ -29.9
BT40-SL32	+33 ~ +23.1	+23 ~ +13.1	+13 ~ +3.1	+3 ~ -6.9	-7 ~ -16.9
BT50	+28 ~ +18.1	+18 ~ +8.1	+8 ~ -1.9	-2 ~ -11.9	-12 ~ -21.9

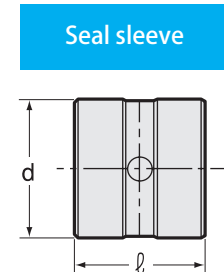
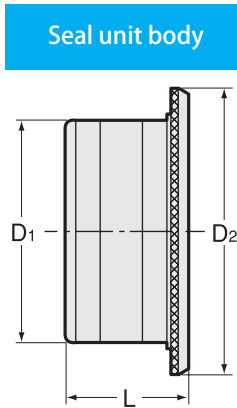
## Reduction sleeve for CSL



Code	Model	d	D	l	L	L1	kg
2504 01002016	CSL20 -16	16	20	48	55.5	5.5	0.1
2504 01002516	CSL25 -16	16	25	48	61.5	5.5	0.2
2504 01002520	CSL25 -20	20	25	50	61.5	5.5	0.2
2504 01003216	CSL32 -16	16	32	48	65.5	5.5	0.3
2504 01003220	CSL32 -20	20	32	50	65.5	5.5	0.3
2504 01003225	CSL32 -25	25	32	56	65.5	5.5	0.2
2504 01004016	CSL40 -16	16	40	48	75.5	5.5	0.7
2504 01004020	CSL40 -20	20	40	50	75.5	5.5	0.7
2504 01004025	CSL40 -25	25	40	56	75.5	5.5	0.6
2504 01004032	CSL40 -32	32	40	60	75.5	5.5	0.6

## Seal Unit

When replacing seal unit, please purchase both body and seal sleeve.

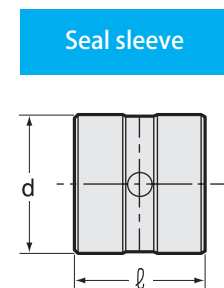
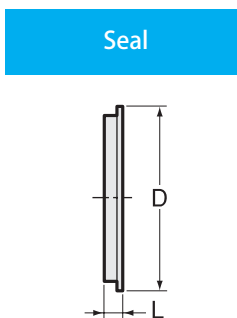


Unit : Metric (inch)

Code	Model	Seal unit body			Seal sleeve	
		D1	D2	L	d	l
2984 00000001	<b>CS-1</b>	56 (2.205)	71 (2.795)	31 (1.220)	35 (1.378)	33 (1.299)
2984 00000002	<b>CS-2</b>	67 (2.638)	82 (3.228)	31 (1.220)	45 (1.772)	33 (1.299)
2984 00000003	<b>CS-3</b>	75 (2.953)	90 (3.543)	31 (1.220)	55 (2.165)	33 (1.299)
2984 00000004	<b>CS-4</b>	85	100	31	65	33

Seal unit body and seal sleeve are made as one unit.

When replacing 2 seals only, please purchase a seal set as shown below.



Unit : Metric (inch)

Code	Model	D	Seal		d	Seal sleeve	
			L	Qty		l	Qty
2984 10000001	<b>CS-1P</b>	47 (1.850)	4.8 (0.189)	2	35 (1.378)	33 (1.299)	1
2984 10000002	<b>CS-2P</b>	57 (2.244)	4.8 (0.189)	2	45 (1.772)	33 (1.299)	1
2984 10000003	<b>CS-3P</b>	67 (2.638)	4.8 (0.189)	2	55 (2.165)	33 (1.299)	1
2984 10000004	<b>CS-4P</b>	77	4.8	2	65	33	1

1.2 seals and 1 seal sleeve are made as one unit.

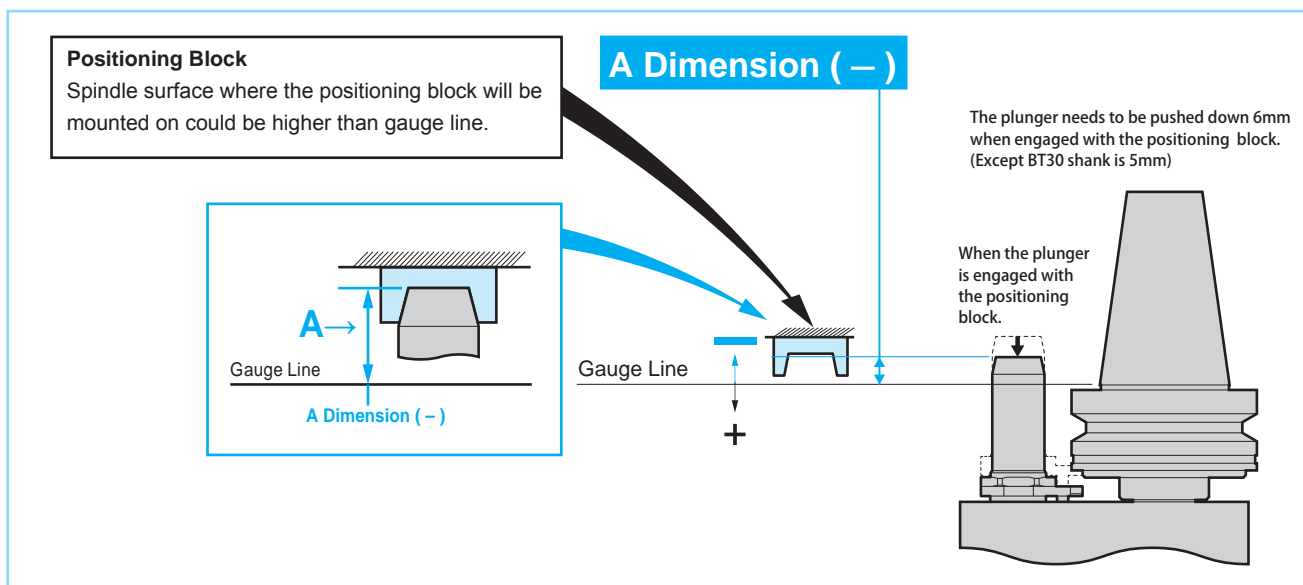
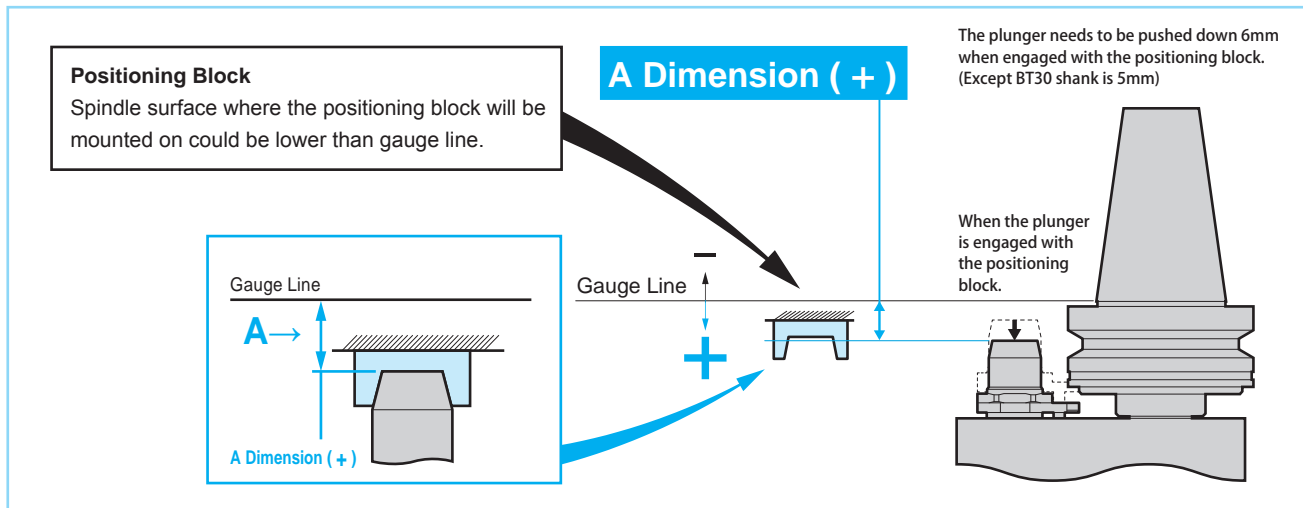
2. Refer to "How to replace seal unit" in the instruction manual.

# Positioning Block

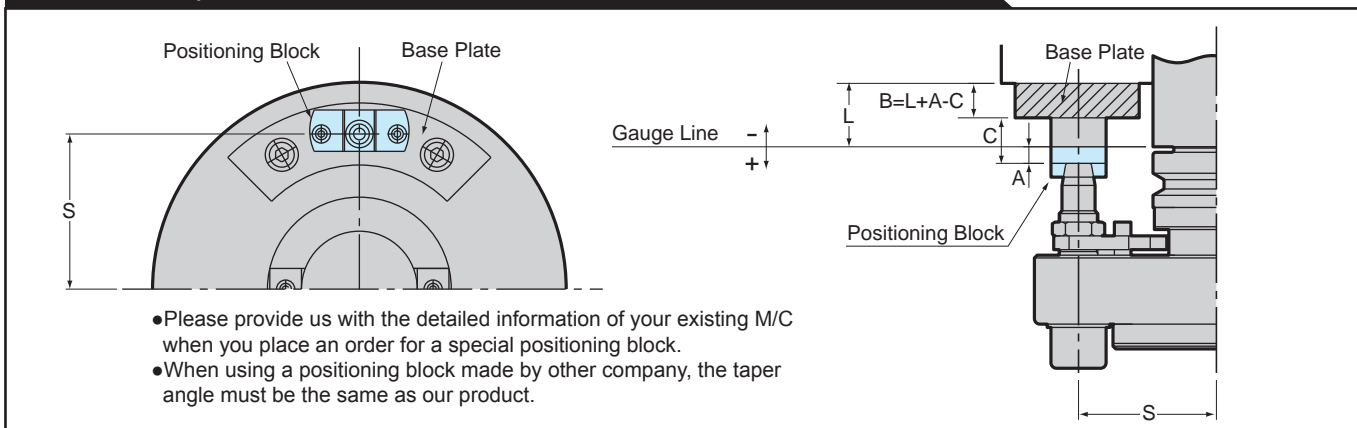
Before using NT's Coolant Inducer, Hyper Spindle or Angle Heads, please install a positioning block to your M/C.

## What is "A" dimension?

"A" dimension is an axial distance between your machine's gauge line and the bottom of the groove of the positioning block. This "A" dimension is VERY important to be able to use our plunger products correctly. Using incorrect plunger size may result in damaging the products. NT TOOL can help you measure this "A" dimension. Please call us with this page opened. Also, your "Spindle surface drawing" from your machine manufacturer is helpful.



In order to retrofit NT standard positioning blocks to your existing machine, a base plate shown below must be made. For more details, please contact NT USA.



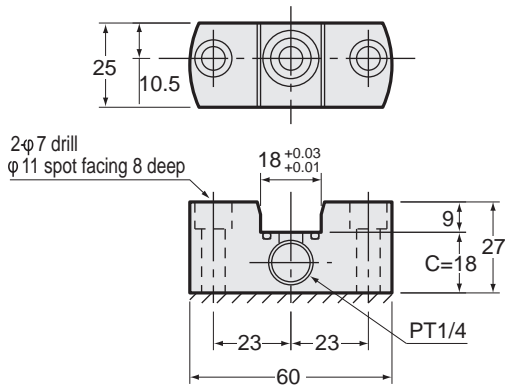


## Positioning Blocks Dimensional data

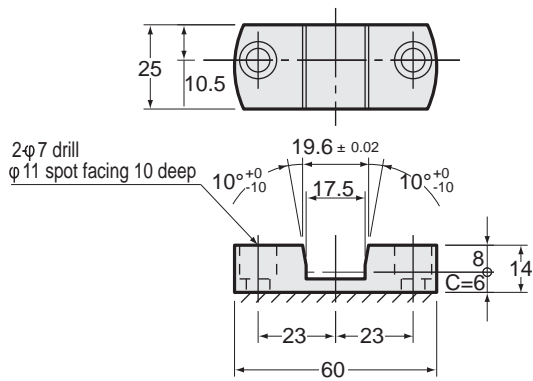
Before using NT's Coolant Inducer, Hyper Spindle or Angle Heads, please install a positioning block to your M/C.

Part Number	Suitable tool holders
IGB-1	40/50 Hyper Spindles
IGB-2	40/50 Coolant Inducer (and Hyper Spindles)
IGB-3	Angle Heads BT30
IGB-4	Angle Heads Fixed types (BT40, CAT40, HSK63A)
IGB-5	Angle Heads Fixed types with center-thru coolant feed (BT40, CAT40, HSK63A)
IGB-6	Angle Heads Fixed types (BT50, CAT50, HSK100A) and Flexible Types (BT40, BT50, CAT40, CAT50, HSK63A, HSK100A)
IGB-7	Angle Heads Fixed Types with center-thru coolant feed (BT50, CAT50, HSK100A)

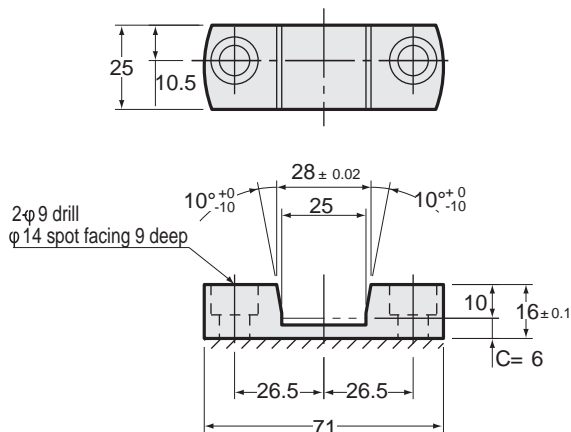
### IGB-2 ( 40/50 Coolant Inducer (and Hyper Spindles )



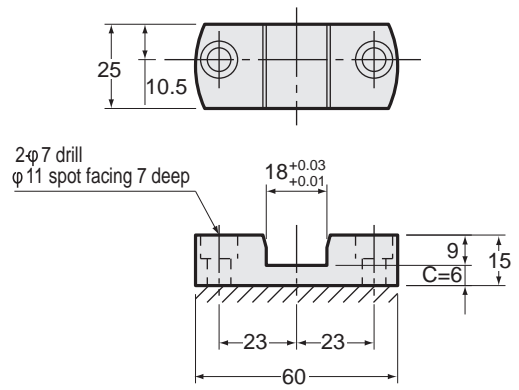
### IGB-4 Angle Heads Fixed types (BT40, CAT40, HSK63A)



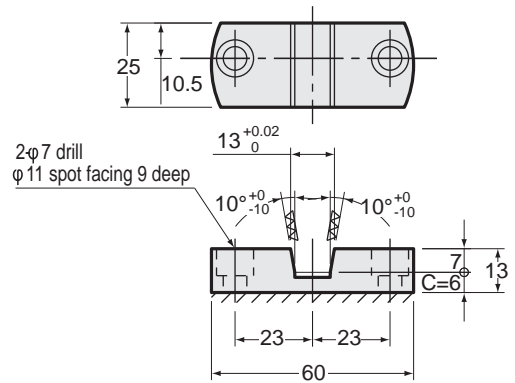
### IGB-6 Angle Heads Fixed types (BT50, CAT50, HSK100A) and Flexible Types (BT40, BT50, CAT40, CAT50, HSK63A, HSK100A)



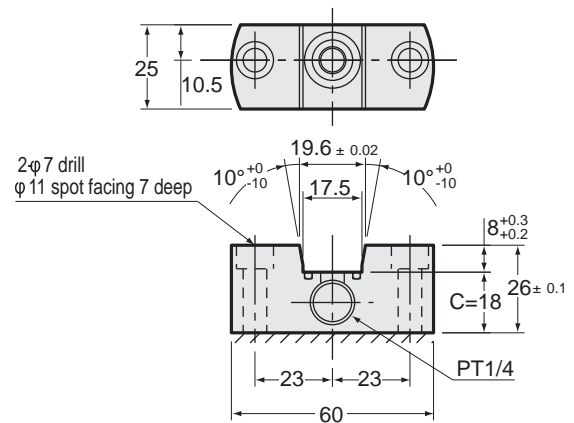
### IGB-1 ( 40/50 Hyper Spindles )



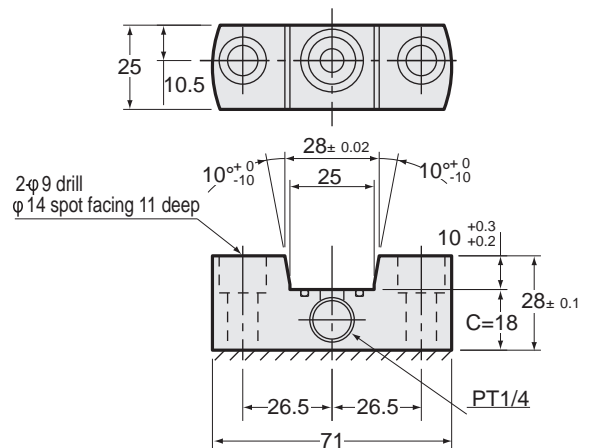
### IGB-3 ( Angle Heads BT30 )



### IGB-5 Angle Heads Fixed types with center-thru coolant feed (BT40, CAT40, HSK63A)

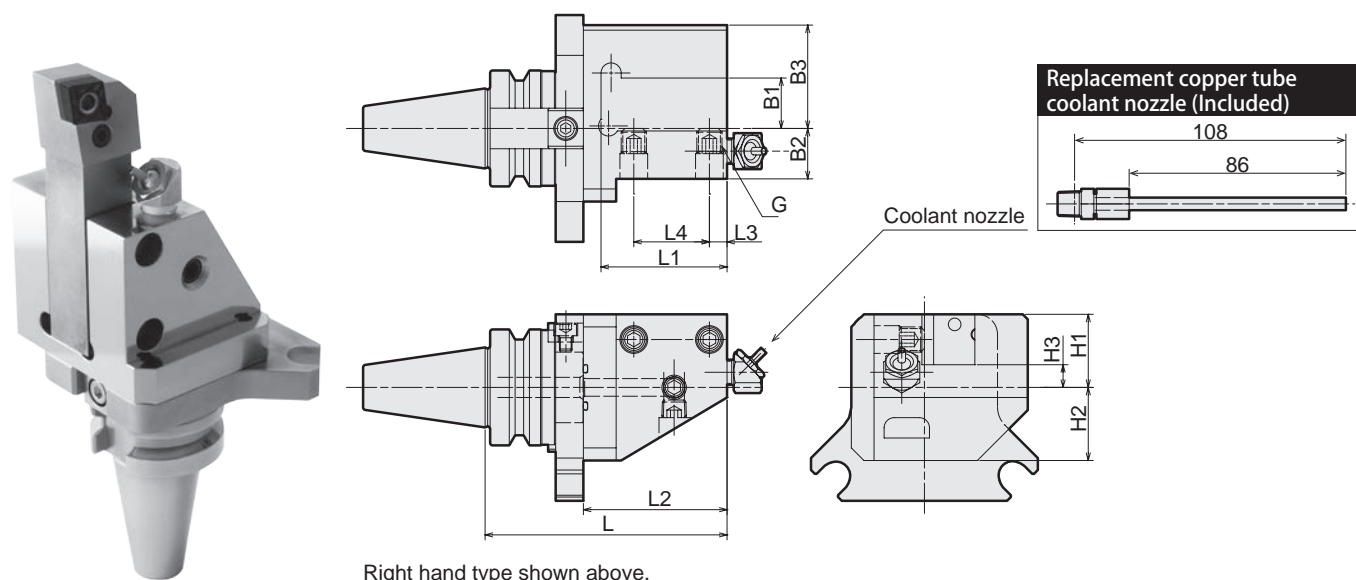


### IGB-7 Angle Heads Fixed Types with center-thru coolant feed (BT50, CAT50, HSK100A)



## Turning Tools for brother's SPEEDIO M140X1

- For External / Facing



Code	Model			L	L1	L2	L3	L4	B1	B2	B3	H1	H2	H3	G	Kg
2120 02020096	<b>BT30</b>	<b>-SBV2020</b>	<b>R</b>	96	50	57	7	30	20	20	41	29	29	9	M10	2.0
2120 02120096			<b>L</b>													

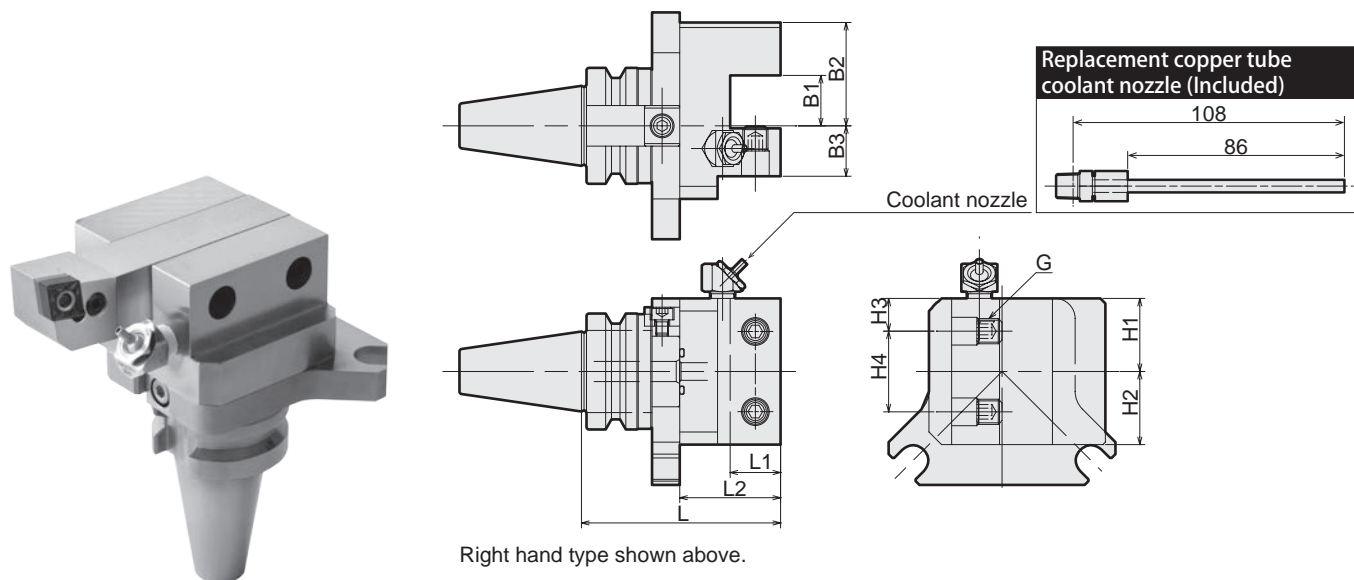
1. Direction of the coolant nozzle is adjustable.
2. Please replace the standard coolant nozzle with the replacement copper tube coolant nozzle (included) in case coolant is not reaching the cutting edge.
3. Please shorten a square bit if necessary.

### Ordering Example

**BT30** - **SBV 2020** **R** - **75**  
 Shank size Left hand - L Projection  
Right hand - R length (L)

## Turning Tools for brother's SPEEDIO M140X1

- For Facing



Code	Model	L	L1	L2	B1	B2	B3	H1	H2	H3	H4	G	Kg	
2120 01020079	<b>BT30 -SBH2020</b> <span style="margin-left: 10px;">R</span>	-79	79	20	40	20	41	20	29	29	13	32	M10	1.8
2120 01120079														

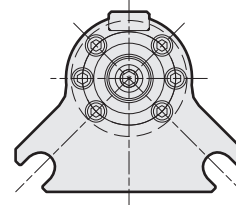
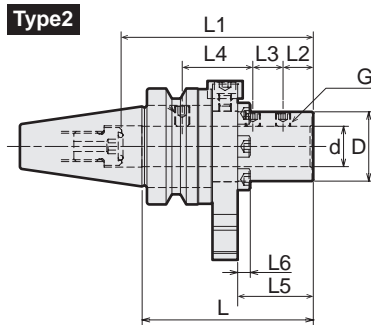
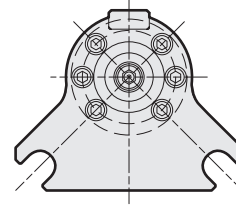
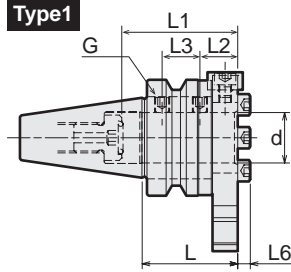
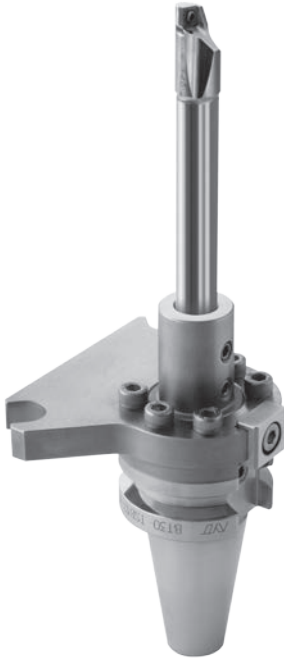
1. Direction of the coolant nozzle is adjustable.
2. Please replace the standard coolant nozzle with the replacement copper tube coolant nozzle (included) in case coolant is not reaching the cutting edge.
3. Please shorten a square bit if necessary.

### Ordering Example

**BT30** - **SBH 2020** **R** - **79**  
 Shank size Left hand - L Projection  
Right hand - R length (L)

## Turning Tools for brother's SPEEDIO M140X1

● For Boring bar



Code	Model	Type	d	D	L	L1	L2	L3	L4	L5	L6	G	Kg
2120 00010038	BT30 -TSB10 -38	1	10	-	38	40	15	15	-	-	5	M6	0.8
2120 00010068	BT30 -TSB10 -68	2	10	20	68	45	12	12	-	30	5	M6	0.9
2120 00012038	BT30 -TSB12 -38	1	12	-	38	40	15	15	-	-	5	M6	0.8
2120 00012068	BT30 -TSB12 -68	2	12	22	68	65	12	12	26	30	5	M6	0.9
2120 00016038	BT30 -TSB16 -38	1	16	-	38	46	15	15	-	-	5	M6	0.8
2120 00016068	BT30 -TSB16 -68	2	16	27.5	68	76	12	12	26	30	5	M6	0.9
2120 00020038	BT30 -TSB20 -38	1	20	-	38	46	15	15	-	-	5	M6	0.8

### Ordering Example

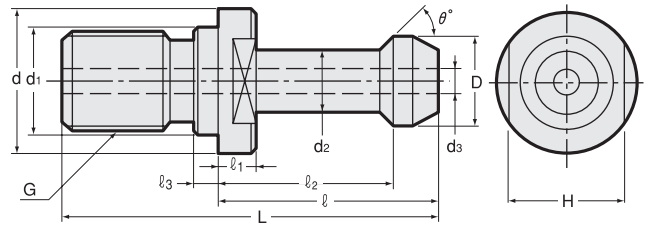
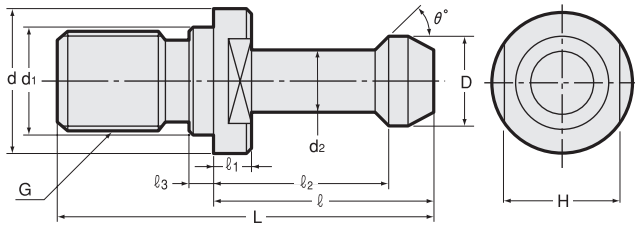
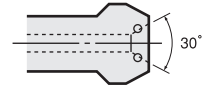
**BT30 - TSB 20 - 38**  
 Shank size                      I.D. (d)                      Projection length (L)

# Retention Stud

Center- thru noncompliant

Center- thru compliant

PSB-25



## Metric Sizes

Unit : Metric

Code	Model	Shank	Standard	Center-thru	D <sub>0</sub> <sup>-0.1</sup>	d	d1 <sub>h7</sub>	d2 <sub>0</sub> <sup>-0.1</sup>	L	ℓ	ℓ1	ℓ2 <sub>0</sub> <sup>-0.1</sup>	ℓ3	H	G	θ°	d3
0754 0000000	PSB -0	BT30	MAS-1	—	11	16.5	12.5	7	43	23	5	18	4	13	M12	45°	—
0754 00000100	PSB -0A	BT30	MAS-2	—	11	16.5	12.5	7	43	23	5	18	4	13	M12	60°	—
0754 00000001	PSB -1	—	—	—	13.7	20	13	8.9	53	28	5	22.5	5	17	M12	60°	—
0754 00000002	PSB -2	BT30	—	—	10	18	13	7	43	25	5	20	3	14	M12	45°	—
0754 00000302	PSB -2M	BT35	MAS-1	—	13	20	12.5	8.5	48	28	5	22.5	4	17	M12	45°	—
0754 00000003	PSB -3	BT40	MAS-1	—	15	23	17	10	60	35	6	28	5	19	M16	45°	—
0754 00000004	PSB -4	BT40	MAS-2	—	15	23	17	10	60	35	6	28	5	19	M16	60°	—
0754 00000005	PSB -5	BT45	MAS-1	—	19	31	21	14	70	40	8	31	6	24	M20	45°	—
0754 00000007	PSB -7	BT50	MAS-1	—	23	38	25	17	85	45	10	35	8	30	M24	45°	—
0754 00000008	PSB -8	BT50	MAS-2	—	23	38	25	17	85	45	10	35	8	30	M24	60°	—
0754 00000009	PSB -9	BT40	—	—	15	23	17	10	54.6	30	5	23	5	19	M16	90°	—
0754 00000010	PSB -10	BT40	—	—	15	23	17	10	50	25	5	18	5	19	M16	90°	—
0754 00000011	PSB -11	BT40	—	—	15	23	17	10	60	35	6	28	5	19	M16	90°	—
0754 00000013	PSB -13	BT50	—	—	25	39	25	18	95	55	29	45.5	8	30	M24	60°	—
0754 00000014	PSB -14	BT50	—	—	23	38	25	17	85	45	7.5	35	8	30	M24	90°	—
0754 00000015	PSB -15	BT50	—	—	22	38	25	17	111	73	37	63	5	30	M24	45°	—
0754 00000016	PSB -16	BT50	—	—	21	39	25	15	105	63	29	55	5	30	M24	45°	—
0754 00000017	PSB -17	BT50	—	—	24	36	25	18	71	31	5	23	8	30	M24	90°	—
0754 00000018	PSB -18	BT50	—	—	22	38	25	16	112	72	35	61	6	30	M24	60°	—
0754 00000019	PSB -19	BT50	—	—	23	38	25	17	85	45	10	35	8	30	M24	90°	—
0754 00000022	PSB -22	BT50	—	—	23	39.6	25	18	104	64	30	56	8	29	M24	4R	—
0754 00000023	PSB -23	BT40	—	○	18.8	22	17	12.5	44.1	19.1	3	14	5	19	M16	45°	7
0754 00000024	PSB -24	BT50	—	○	29	37	25	20.9	65.2	25.2	5	17.6	8	30	M24	45°	10
0754 00000025	PSB -25	BT40	—	○	19	23	17	14	54	29	4	23	7	19	M16	75°	7
0754 00000026	PSB -26	BT30	—	○	11	16.5	12.5	7.5	43	23	5	18	4	13	M12	60°	2.5
0754 10000000	PSB -0-CH	BT30	MAS-1	○	11	16.5	12.5	7	43	23	5	18	5.5	13	M12	45°	2.5
0754 10000100	PSB -0A-CH	BT30	MAS-2	○	11	16.5	12.5	7	43	23	5	18	5.5	13	M12	60°	2.5
0754 10000401	PSB -1T	BT30	—	○	11	16.5	12.5	8	43	23	5	18	5.5	13	M12	45°	4
0754 10000003	PSB -3-CH	BT40	MAS-1	○	15	23	17	10	60	35	6	28	7	19	M16	45°	4
0754 10000004	PSB -4-CH	BT40	MAS-2	○	15	23	17	10	60	35	6	28	7	19	M16	60°	4
0754 10000007	PSB -7-CH	BT50	MAS-1	○	23	38	25	17	85	45	10	35	10	30	M24	45°	6
0754 10000008	PSB -8-CH	BT50	MAS-2	○	23	38	25	17	85	45	10	35	10	30	M24	60°	6
0754 00000030	PSB -30P	BT30	JIS-30P	○	12	16.5	12.5	8	43	23.4	5	18.4	6	13	M12	75°	4
0754 00000040	PSB -40P	BT40	JIS-40P	○	19	23	17	14	54	29	7	23	7	19	M16	75°	7
0754 00000050	PSB -50P	BT50	JIS-50P	○	28	38	25	21	74	34	7	25	10	30	M24	75°	10

## Retention Stud Selection Table

1. This selection table describes standard retention studs for each of standard machines. Please check operation manual of machines to select appropriate type of the retention studs.  
 2. Take note that our center through coolant retention stud may not be used on certain M/C because of specifications.

Machine Tool Maker	M/C Model	BT	Center Through Coolant	PSB
IKEGAI	TV4, TH500	BT40	No	PSB-3
	TVU400, THU500	BT40	Yes	PSB-40P
	TV5, TH600, TVU5, THU600, NB110T, NB130T	BT50	No	PSB-7
ENSHU	JE Series, E130, ES400, EV360	BT30	No	PSB-0A
	JE Series, E130, ES400, EV360	BT30	Yes	PSB-0A -CH
	JE Series, EV Series, ES450	BT40	No	PSB-4
	JE Series, EV Series, ES450	BT40	Yes	PSB-4 -CH
	JE Series, EV Series	BT50	No	PSB-8
	JE Series, EV Series	BT50	Yes	PSB-8 -CH
OKUMA	MU Series, MA-400H, MB Series	BT40	Yes	PSB-4 -CH
	MILLAC Series	BT40	Yes	PSB-3 -CH
	MA Series, MB Series, MCR Series, MCM-B, MCV-AII, MILLACSeries	BT50	Yes	PSB-8 -CH
	MU Series, MA-400H, MB Series	BT40	No	PSB-4
	MILLAC Series	BT40	No	PSB-3
OKK	MA Series, MB Series, MCR Series, MCM-B, MCV-AII, MILLACSeries	BT50	No	PSB-8
	PM Series, HM Series, PG-8, 5AX Series, VM Series, VP Series, GR, VC51, VB53	BT40	No	PSB-3
	MCV1260, HM Series, HCM1000II, 5AX Series, VPSeries	BT50	No	PSB-19
	PM Series, HM Series, 5AX Series, GC Series, VC51, VB53	BT40	Yes	PSB-3 -CH
	HM Series, 5AX Series	BT50	Yes	Custom sizes available
KITAMURA	Mycenter Series, Nano Mycenter	BT30	No	PSB-0
	Mycenter Series	BT30	Yes	PSB-30P
	Mycenter Series	BT40	Yes	PSB-40P
	Mycenter Series, BRIDGE center, HX500i, HX630i, H500	BT50	Yes	PSB-50P
KIRA	PC Series, KPC Series, HPC30Vb	BT30	No	PSB-0
	PC Series, KPC Series, HPC30Vb(Center Through Coolant model)	BT30	Yes	PSB-0-CH
	KN Series, VTC Series, PC-40b	BT40	No	PSB-3
	KN Series, VTC Series, PC-40b(Center Through Coolant model)	BT40	Yes	PSB-3-CH
KIWA	V21 Series, V41 Series, KH-45, KH-41, KNH400/426, KCW-10V	BT40	Yes	PSB-40P
	D433 Series, EX Series, PX Series, PMM40, AD-8	BT40	No	PSB-3
	D433 Series, EX Series, PX Series, PMM40, AD-8	BT40	Yes	PSB-3 -CH
	KH-55	BT50	Yes	PSB-50P
KURAKI	KBT, KBF, KBM, KBH, KGD, CMN, KMP	BT50	No	PSB-7
SHIZUOKA	CM-210G	BT30	No	PSB-0
	B Series, CM-350G	BT40	No	PSB-11
	BSeries	BT50	No	PSB-19
SNK	CMV Series	BT40	No	PSB-4
	CMV Series, DC Series, HF Series, PC Series, RB Series, AIC Series, MAC Series	BT50	No	PSB-8
	FSP Series, HPS Series, PARTE	BT50	No	PSB-8
SUGINO	NSV-1555, SCV-1555, SCV-611, SCH Series	BT30	No	PSB-0A
TAKISAWA	MAC-V40 / Y520	BT40	Yes	PSB-40P
	MAC-V1E / 430VP	BT40	No	PSB-3
TSUGAMI	VMA3-III, VML3-III, VMC3-III, VA32A	BT30	No	PSB-0
	VMA4-III, VLA4-III, FMA3-III, FMA5-III	BT40	No	PSB-3
	VMT4-III, VLT4-III	BT40	Yes	PSB-40P
TOSHIBA	BF, BMC, BTD, BTF Series, BTU-14, VMC-7, NX-630, BTH Series	BT50	No	PSB-7
TOYOSK	TVT Series, THMC Series, TVMC310	BT30	No	PSB-0A
	H46, THMC410	BT40	No	PSB-3
	H46, THMC410	BT40	Yes	PSB-3 -CH
JTEKT	FV Series, UXSeries	BT40	No	PSB-3
	FV Series, RBSeries, SBSeries	BT50	No	PSB-7
	FV Series	BT40	Yes	PSB-3-CH
	FV Series	BT50	Yes	PSB-7-CH
	FHSeries	BT40	No	PSB-3 or PSB-10
	FHSeries	BT40	Yes	PSB-40P
	FHSeries, FA Series	BT50	No	PSB-7 or PSB-17
FHSeries, FA Series	BT50	Yes	PSB-50P	
NIIGATA	HNSeries(Standard model), ULTYSeries (Standard model)	BT50	No	PSB-8
Nishida Machine	HFA3, HLB3, HS-2A, HLA3S, VFR3	BT30	No	PSB-0
	HA40, HFB-4A, HLB-4A, HFA4, HAB4, HFB4	BT40	No	PSB-3
	HFA5, HFB5, HS Series	BT50	No	PSB-8
	HFA3, HLB3, HS-2A, HLA3S, VFR3	BT30	Yes	PSB-0-CH
	HA40, HFB-4A, HLB-4A, HFA4, HAB4, HFB4	BT40	Yes	PSB-3 -CH
	HFA5, HFB5, HS Series	BT50	Yes	PSB-8-CH

BT  
 CAT  
 AHO  
 HSK-A/E/F/C  
 HSK-T  
 UTS  
 Specialized Machine  
 Related Equipment  
 Bush & Chamfering Drill  
 Milling Chuck  
 Collet Holder  
 "R" Zero Holder  
 Hydraulic Chuck  
 Shrink Fit  
 Tapping Chuck  
 Arbors  
 Function Holder  
 Turning Tool  
 Retention Stud  
 Tool Shank Dimensions



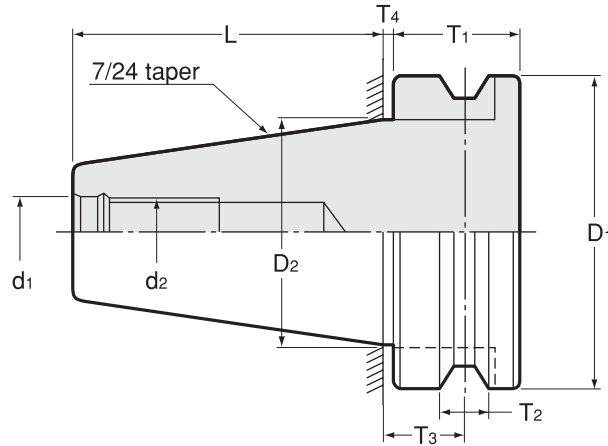
Machine Tool Maker	M/C Model	BT	Center Through Coolant	PSB
<b>KOMATSU NTC</b>	N3 Series, Z3V	BT30	No	PSB-0
	Z Series, TMC Series	BT40	No	PSB-3
	N5H, ZV Series	BT50	No	PSB-7
	N3 Series, Z3V	BT30	Yes	PSB-0 -CH
	Z Series, TMC Series	BT40	Yes	PSB-3 -CH
	N5H, ZV Series	BT50	Yes	PSB-7 -CH
<b>FANUC</b>	ROBODRILL Series	BT30	No	PSB-0
<b>BROTHER</b>	SPEEDIO M140X1, TC Series	BT30	No	PSB-0A
	SPEEDIO M140X1, TC Series( Center Through Coolant model)	BT30	Yes	PSB-26
<b>HORKOS</b>	RS50H, ES50H, NJ50	BT30	No	PSB-0
	RM70H, RM70V, DM70H, NS70	BT40	No	PSB-3
	RM100H, DM100H, NM100, HFN-C50H	BT50	No	PSB-7
	RS50H, ES50H, NJ50	BT30	Yes	PSB-0-CH
	RM70H, RM70V, DM70H, NS70	BT40	Yes	PSB-3-CH
	RM100H, DM100H, NM100, HFN-C50H	BT50	Yes	PSB-7-CH
<b>HOWA MACHINERY</b>	MEN-500V, MJN400, MBN-350Ha, MKN Series	BT30	Yes	PSB-0 -CH
	MBN Series	BT40	Yes	PSB-3 -CH
	MEN-500V, MJN400, MBN-350Ha, MKN Series	BT30	No	PSB-0
	MBN Series	BT40	No	PSB-3
<b>HOMMA</b>	HVM Series( High speed model)	BT40	No	PSB-40P
	FM Series, TAC-M Series, STAC-M Series, HVM Series(Standard model), HTM Series	BT50	No	PSB-8
	HVM Series( High speed model)	BT40	Yes	PSB-40P
	FM Series, TAC-M Series, STAC-M Series, HVM Series(Standard model), HTM Series	BT50	Yes	PSB-8-CH
<b>MAKINO</b>	A, V, a Series	BT40	No	PSB-3 or PSB-4
	A, V, a Series, D500	BT40	Yes	PSB-40P or PSB-3-CH or PSB-4-CH
	A, GF, MC, MCC, MCD, MCF, V, a Series	BT50	No	PSB-7 or PSB-8
<b>Matsuura</b>	LX Series, FX Series	BT30	No	PSB-30P
	H.Plus Series, V.Plus Series, R.Plus-800, RA-1X / 2G, Mold.Plus-800	BT40	No	PSB-10 or PSB-40P
	MAM72 Series, MC Series, FX-10G	BT40	No	PSB-10 or PSB-40P
	H.Plus-630	BT50	No	PSB-50P
	LX Series, FX Series	BT30	Yes	PSB-30P
	H.Plus Series, V.Plus Series, R.Plus-800, RA-1X / 2G, Mold.Plus-800	BT40	Yes	PSB-40P
	MAM72 Series, MC Series, FX-10G	BT40	Yes	PSB-40P
	H.Plus-630	BT50	Yes	PSB-50P
<b>MITSUI SEIKI</b>	HU40A, 40-T, 50A, 63A, 63A-5X, 80A, 80A-5X, VJ7, VU50A, 65A, VERTEX550-5X	BT40	No	PSB-10
	HU40A, 40-T, 50A, 63A, 63A-5X, 80A, 80A-5X, VJ7, VU50A, 65A, VERTEX550-5X	BT40	Yes	PSB-40P
	H5D, 6D, HU50-T, 50A, 50A-5X, 63A, 63A-5X, 80A, 80A-5X, HS6A-5X, HB63-T, VJ7	BT50	No	PSB-17
<b>MITSUBISHI</b>	M-H Series, M-V Series	BT40	No	PSB-3 or PSB-4
	M-H Series, DH Series, M-V Series, MVR Series, MVR-DX Series, MG Series, M-VRD Series	BT50	No	PSB-8 or PSB-7
	MHT Series, MAF-S Series, MAF-R Series, MAF-RS Series, MAF-C Series, MAF-B Series	BT50	No	PSB-8 or PSB-7
	M-H Series, M-V Series	BT40	Yes	PSB-3-CH or PSB-4-CH
	M-H Series, DH Series, M-V Series, MVR Series, MVR-DX Series, MG Series, M-VRD Series	BT50	Yes	PSB-8-CH or PSB-7-CH
	MHT Series, MAF-S Series, MAF-R Series, MAF-RS Series, MAF-C Series, MAF-B Series	BT50	Yes	PSB-8-CH or PSB-7-CH
<b>MECTRON</b>	MTV-T301, T351 Series, T360, C350, MTS-C351, MCH-80	BT30	No	PSB-0A
	MTV-C410, T451 Series, T452W, T470	BT40	No	PSB-4
<b>MORI SEIKI</b>	ACCUMILL Series, ULTIMILL Series	BT30	No	PSB-0
	NV Series, DuraVertical Series, VS Series, MV-653, SVL5000	BT40	No	PSB-11
	NVD Series, NH Series, SH junior, AFM2400, FM Series	BT40	No	PSB-11
	NV Series, DuraVertical Series, VS Series, MV-653, SVL5000, NVD Series	BT40	Yes	PSB-25
	NH Series, SH junior, AFM2400, FM Series( Center Through Coolant model)	BT40	Yes	PSB-25
<b>YASDA</b>	NV Series, VS Series, MV Series, NH Series, HG Series, MH Series	BT50	No	PSB-19
	H30i /H 40i, Vi40, YBM-640V / 950V / 9150V	BT40	No	PSB-25
	YBM-N Series, YBM-T Series, YBM-1218V	BT50	No	PSB-7
	H30i /H 40i, Vi40, YBM-640V / 950V / 9150V	BT40	Yes	Custom sizes available
<b>MAZAK</b>	YBM-N Series, YBM-T Series, YBM-1218V	BT50	Yes	Custom sizes available
	UN Series	BT30	Yes	Custom sizes available S/PSB-30P
	VRX Series, VCN Series, VTC Series, SVC Series, FF&F3Series, FJV Series	BT40	Yes	PSB-23
	MM/SMM Series, HCN Series, FH/PFH Series, μ Series, ANGULAX Series	BT40	Yes	PSB-23
	VRX Series, VCN Series, MAZATECH V Series, VERSATECH V Series	BT50	Yes	PSB-24
<b>ROKU-ROKU</b>	VORTEX Series, FJV Series, HCN Series, FH Series, μ Series	BT50	Yes	PSB-24
	RX Series	BT30	No	PSB-0
	KX, LX, MX Series	BT40	No	PSB-3
	GIGA-650	BT40	No	PSB-11



# BT, NT

Tool Shank Dimensions For BT , NT

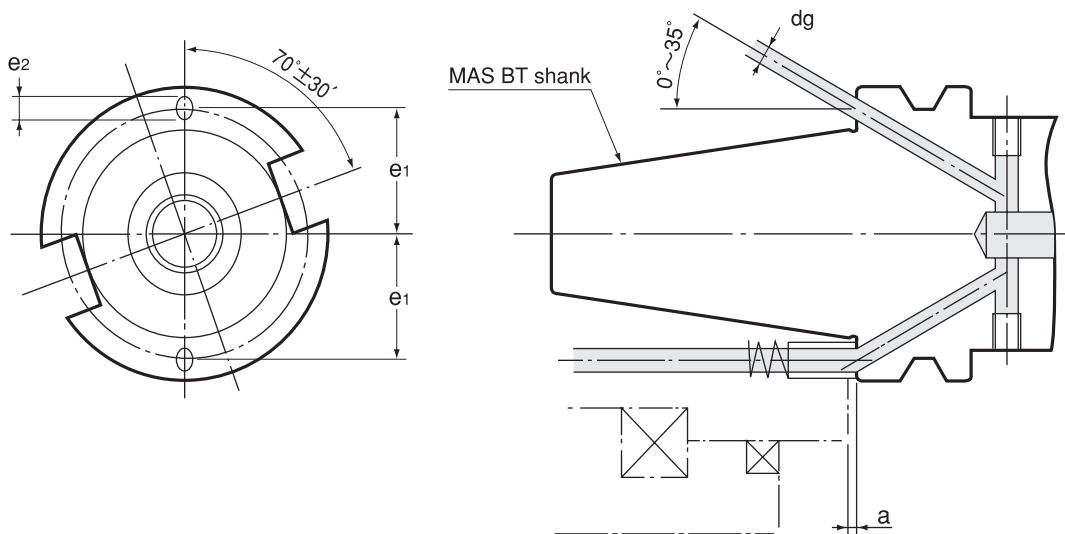
## BT Shank (MAS403-1982)



Unit : Metric

Model	D1	D2	d1	d2	L ±0.2	T1	T2 <sup>+0.1</sup> / <sub>0</sub>	T3 ±0.1	T4	Reference
BT30	46 <sup>0</sup> / <sub>-0.039</sub>	31.75	12.5 <sup>+0.027</sup> / <sub>0</sub>	M12	48.4	20	8	13.6	2	MAS
BT35	53 <sup>0</sup> / <sub>-0.046</sub>	38.1	12.5 <sup>+0.027</sup> / <sub>0</sub>	M12	56.4	22	10	14.6	2	MAS
BT35-MS	53 <sup>0</sup> / <sub>-0.046</sub>	38.1	13.0 <sup>+0.027</sup> / <sub>0</sub>	M12	56.5	20	10	13.0	2	MS
BT40	63 <sup>0</sup> / <sub>-0.046</sub>	44.45	17.0 <sup>+0.027</sup> / <sub>0</sub>	M16	65.4	25	10	16.6	2	MAS
BT45	85 <sup>0</sup> / <sub>-0.054</sub>	57.15	21.0 <sup>+0.033</sup> / <sub>0</sub>	M20	82.8	30	12	21.2	3	MAS
BT50	100 <sup>0</sup> / <sub>-0.054</sub>	69.85	25.0 <sup>+0.033</sup> / <sub>0</sub>	M24	101.8	35	15	23.2	3	MAS

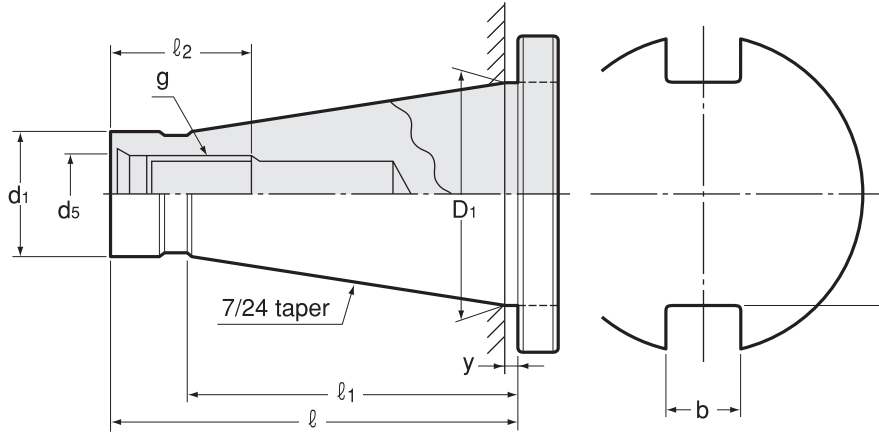
## BT Shank Flange-through coolant type (DIN69871/B)



Unit : Metric

Model	dg	e1 ±0.1	e2 max	a ±0.1
BT40	4	27	5	2
BT50	6	42	7	3

# National taper shank



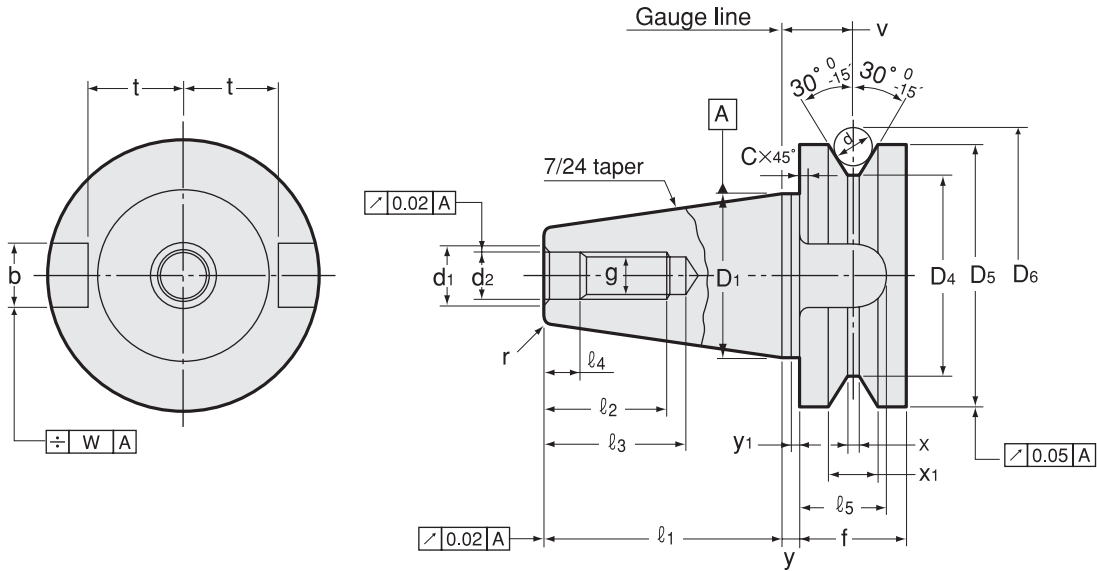
Unit : Metric

Model	D1	d1	l Max	l 1	y	b	t Max	g	l 2	d5
<b>NT30</b>	31.75	17.4 <sup>-0.29</sup> <sub>-0.36</sub>	70	50	1.6	16.1 <sup>+0.18</sup> <sub>0</sub>	16.2	M12	24	12.5
<b>NT40</b>	44.45	25.3 <sup>-0.30</sup> <sub>-0.38</sub>	95	67	1.6	16.1 <sup>+0.18</sup> <sub>0</sub>	22.5	M16	30	17
<b>NT50</b>	69.85	39.6 <sup>-0.31</sup> <sub>-0.41</sub>	130	105	3.2	25.7 <sup>+0.21</sup> <sub>0</sub>	35.3	M24	45	25

- BT
- CAT
- AHO
- HSK-A/E/F/C
- HSK-T
- UTS
- Specialized Machine
- Related Equipment
- Bush & Chamfering Drill

- Milling Chuck
- Collet Holder
- "R" Zero Holder
- Hydraulic Chuck
- Shrink Fit
- Tapping Chuck
- Arbors
- Function Holder
- Turning Tool
- Retention Stud

## JBS shank



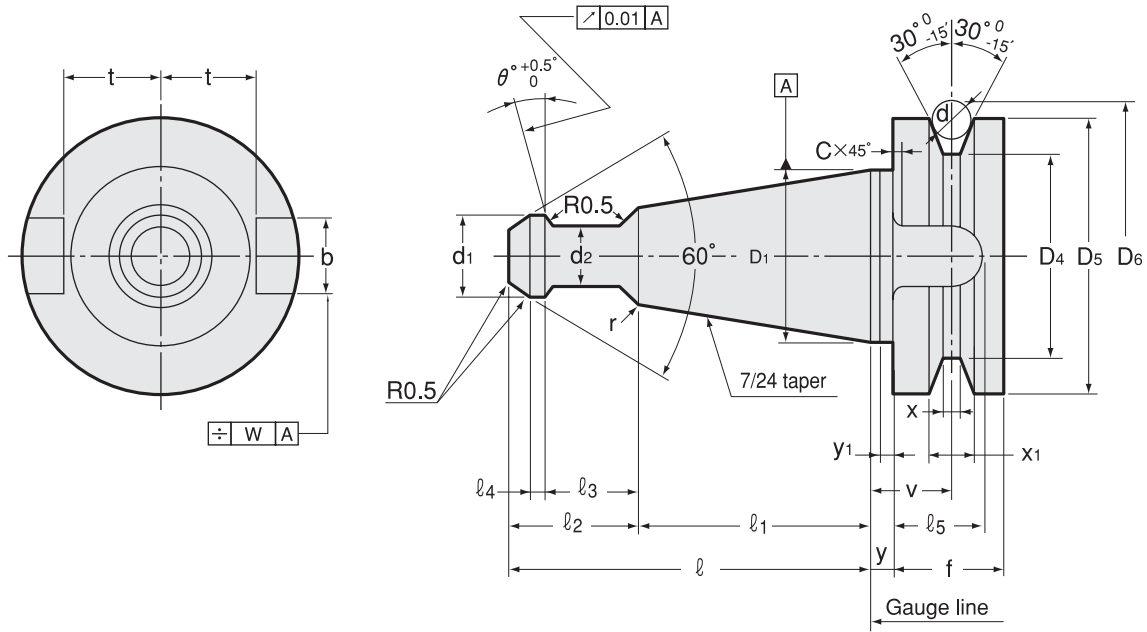
Unit : Metric

Model	Shank part			Thread part						Tenon part				
	D1	$\ell 1 \pm 0.151$	r Max	d1	d2 H8	g H6	$\ell 2$ Min	$\ell 3$ Min	$\ell 4 \begin{smallmatrix} +0.5 \\ 0 \end{smallmatrix}$	b H12	$\ell 5$ Min	t $\begin{smallmatrix} 0 \\ -0.2 \end{smallmatrix}$	W	C Max
5T	12.700	17.5	0.3	5.5	4.5	M4	12	16	5	6.5	8.0	6.5	0.1	0.3
10T	15.875	22	0.3	6.5	5.5	M5	13	18	5	6.5	8.0	8.2	0.1	0.3
15T	19.050	27	0.5	7.5	6.5	M6	15	21	5	8.1	9.5	9.8	0.1	0.3
20T	22.225	33	0.5	9.5	8.5	M8	18	26	6	8.1	9.5	11.4	0.1	0.3
25T	25.400	40	0.5	9.5	8.5	M8	18	26	6	9.6	11.0	13.0	0.1	0.3

Unit : Metric

Model	Flange part									
	D4	D5 h8	f	v $\pm 0.1$	X	X1 $\begin{smallmatrix} +0.1 \\ 0 \end{smallmatrix}$	y $\pm 0.4$	y1 $\begin{smallmatrix} 0 \\ -0.4 \end{smallmatrix}$	d	D6
5T	15	20	10	6.0	2.0	4	1.0	1.0	4	25.072
10T	18	23	10	6.0	2.0	4	1.0	1.0	4	28.072
15T	21	27	11	7.0	2.5	5	1.5	1.5	5	33.340
20T	24	30	11	7.0	2.5	5	1.5	1.5	5	36.340
25T	28	35	13	8.5	3.0	6	2.0	2.0	6	42.608

# JBS shank



Unit : Metric

Model	Shank part				Grip part							$\theta$	
	D1	$l_1 \pm 0.15$	r Max	$l \begin{smallmatrix} +0.05 \\ -0.15 \end{smallmatrix}$	$d1 \begin{smallmatrix} 0 \\ -0.1 \end{smallmatrix}$	$d2 \begin{smallmatrix} 0 \\ -0.1 \end{smallmatrix}$	r1	$l_2 \begin{smallmatrix} 0 \\ -0.1 \end{smallmatrix}$	$l_3 \begin{smallmatrix} 0 \\ -0.1 \end{smallmatrix}$	$l_4$			
												1形	2形
5TP	12.700	19.5	0.3	28.5	5.0	3	1.0	9.0	6.5	1.0	$15^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	$0^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	
10TP	15.875	24.5	0.3	35.0	6.0	4	1.0	10.5	7.5	1.3	$15^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	$0^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	
15TP	19.050	30.0	0.5	42.0	7.0	5	1.5	12.0	8.5	1.5	$15^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	$0^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	
20TP	22.225	36.5	0.5	50.5	8.5	6	1.5	14.0	10.0	1.8	$15^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	$0^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	
25TP	25.400	44.0	0.5	60.0	10.0	7	1.5	16.0	11.5	2.0	$15^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	$0^\circ \begin{smallmatrix} +0.5^\circ \\ 0^\circ \end{smallmatrix}$	

Unit : Metric

Model	Tenon part					Flange part									
	$b_{H12}$	$l_5$ Min	$t \begin{smallmatrix} 0 \\ -0.2 \end{smallmatrix}$	W	C Max	D4	D5 h8	f	$v \pm 0.1$	X	$X1 \begin{smallmatrix} +0.1 \\ 0 \end{smallmatrix}$	$y \pm 0.4$	$y1 \begin{smallmatrix} 0 \\ -0.2 \end{smallmatrix}$	d	D6
5TP	6.5	8.0	6.5	0.1	0.3	15	20	10	6.0	2.0	4	1.0	1.0	4	25.072
10TP	6.5	8.0	8.2	0.1	0.3	18	23	10	6.0	2.0	4	1.0	1.0	4	28.072
15TP	8.1	9.5	9.8	0.1	0.3	21	27	11	7.0	2.5	5	1.5	1.5	5	33.340
20TP	8.1	9.5	11.4	0.1	0.3	24	30	11	7.0	2.5	5	1.5	1.5	5	36.340
25TP	9.6	11.0	13.0	0.1	0.3	28	35	13	8.5	3.0	6	2.0	2.0	6	42.608