SHOWA TOOL

BT series

MICRON CHUCK (Milling Chuck)

FEATURES P.1-6

BT№-HPCⒹ-Ⓛ

▶▶▶ Thru-the-tool Coolant Available
▶▶▶ Thru-the-groove Coolant Available
▶▶▶ BBT Available

Standard

FIG.1

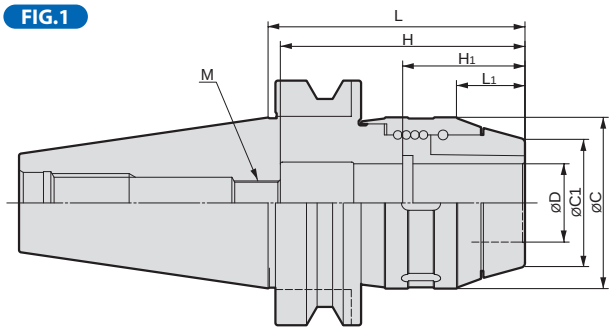


FIG.2

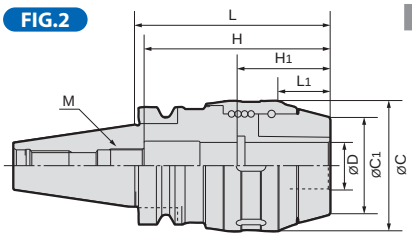
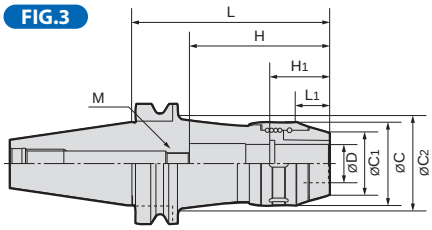


FIG.3



Cutter shank diameter should be h7 or better.

MODEL		A	AA	BBT	Fig	øD	L	L1	øC	øC1	øC2	H	H1	min tool insert length ST	min tool insert length CT	Adjust min/max	M	N/W (kg)
Max. 10,000 min^{-1}																		
BT30 (BBT30)	HPC16- 100	○	○	○	2	16	100	26	56	34	–	85	50	40	51	70~80	M10	1.4
	HPC20- 100	○	○	○		20				38				45				1.3
	HPC25- 100	△	△	△		25		27.5	62	44		80		50		57~70	M18	1.6
	HPC32- 105	△	△	△		32	105		70	52			53	55	55			1.9
Max. 10,000 min^{-1}																		
BT40 (BBT40)	HPC16- 090	○	○	○	1	16	90	26	56	34	–	85	50	40	51	70~80	M10	1.8
	120	△	△	△			120											2.2
	HPC20- 090	○	○	○		20	90			38				45				1.7
	120	△	△	△			120											2.1
	HPC25- 105	○	○	○		25	105	27.5	62	44		100		50		77~90	M18	2.0
	135	△	△	△			135											2.5
	HPC32- 105	○	○	○	2	32	105		70	52		117	53	55	55	94~107		2.2
	135	△	△	△			135											2.5
	HPC42- 135	△	△	△		42	135	30.5	82	62		100	57	60	60	77~90		3.5

MODEL		A	AA	BBT	Fig	øD	L	L1	øC	øC1	øC2	H	H1	min tool insert length ST	min tool insert length CT	Adjust min/max	M	N/W (kg)
Max. 8,000 min^{-1}																		
BT50 (BBT50)	HPC16- 105	○	○	○	1	16	105	26	56	34	–	85	50	40	51	70~80	M10	4.4
	135	△	△	△	3		135				57							4.7
	165	△	△	△			165				62							5.5
	HPC20- 105	○	○	○	1	20	105			38	–			45				4.3
	135	△	△	△	3		135				57							4.7
	165	○	○	△			165				62							5.5
	HPC25- 105	○	○	○	1	25	105	27.5	62	44	–	100		50		77~90	M18	4.4
	135	△	△	△	3		135				62							4.8
	165	○	○	△			165				72							5.7
	200	△	△	△	3		200				–							6.6
	250	△4	—	△			250											7.8
	HPC32- 105	○	○	○	1	32	105		70	52	–	117	53	55	55	94~107	M18	4.4
	135	△	△	△	3		135				70							5.0
	165	○	○	△			165				75							5.6
	200	△	△	△	3		200											7.2
	250	△4	—	△			250											8.6
	300	△4	—	△			300											10.3
	HPC42- 110	○	○	○	1	42	110	30.5	82	62	80	122	57	60	60	99~112	M18	4.6
	135	△	△	△	3		135											5.3
	165	○	○	△			165				82							6.2
	200	△	△	△			200											8.3

△ : Mark tools are manufatured to order.

NOTE : 1. Chuck wrench and adjust screw are sold separately.
2. Insert the O-ring included in the box to the groove of the ID for thru-the-tool use.
3. The above-mentioned maximum speed will vary depending rigidity of the machine and balance of cutter. An adequate cutting condition should be selected for each case.
4. If the L dimension is 200 mm or more, the runout will be 5 μ of chuck nose and 8 μ of 3D point.

ACCESSORIES P.39 STRAIGHT COLLETS

ACCESSORIES P.40 ADJUST SCREW, CHUCK WRENCH

ORDERING EXAMPLE

①	②	③	④	⑤
BT30	- HPC	16	- 100	A

① Shank Size
② Holder's Name
③ Cutter's Shank Dia.
④ G.L. Length
⑤ Grade

MICRON CHUCK N series

FEATURES P.1-6

BT№-HPCⒹN-Ⓛ

FIG.1

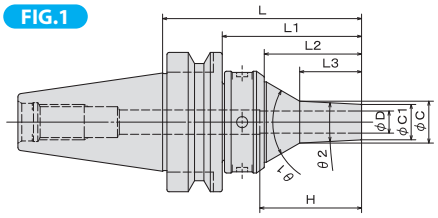
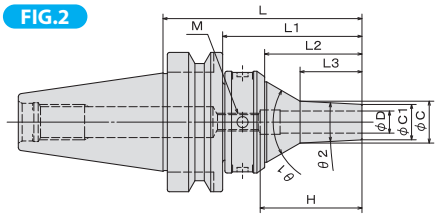


FIG.2



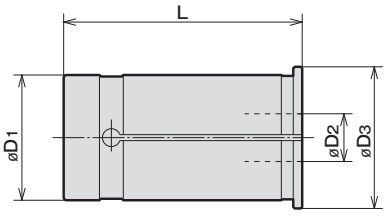
MODEL ø		CODE A	CODE AA	CODE G Type	FIG	øD	øC1	ø1	L	L1	L2	L3	H	Min insert length	Adjust MIN	Adjust MAX	M	θ1	θ2
BBT30	HPC03N-085	200850	200856	200862	1	3	9	10.4	85	63	44	27	–	20	–	–	–	80	3
	HPC04N-085	200851	200857	200863		4	10	11.5				28							
	HPC06N-085	200852	200858	200864		6	12	13.5				29		35					
	HPC08N-085	200853	200859	200865		8	14	15.5										74	
	HPC10N-085	200854	200860	200866	2	10	16	17.5					50		35	50	M8	68	
	HPC12N-085	200855	200861	200867		12	18	21				28	55	40	40	55	M10	60	6
BBT40	HPC03N-090	270740	270746	270752	1	3	9	10.4	90	63	44	27	–	20	–	–	–	80	3
	HPC04N-090	270741	270747	270753		4	10	11.5				28							
	HPC06N-090	270742	270748	270754		6	12	13.5				29		35					
	HPC08N-090	270743	270749	270755		8	14	15.5										74	
	HPC10N-090	270744	270750	270756		10	16	17.5										68	
	HPC12N-090	270745	270751	270757		12	18	21				28		40				60	6

ACCESSORIES
P.44 CHUCK WRENCH

ACCESSORIES

STRAIGHT COLLET

SC Ⓓ1 - Ⓓ2



CODE SC Ⓓ1 - Ⓓ2		øD3	L
SC16	-6·8·10·12	20	47
SC20	-6·6.8·7·8·8.5·9·10·11·12·13·14·15·16	23.5	50
SC25	-6·6.8·7·8·8.5·9·10·11·12·13·14·15·16·17·18·19·20·21	30	60
SC32	-6·6.8·7·8·8.5·9·10·11·12·13·14·15·16·17·18·19·20·21·22·23·24·25	37.5	70
SC42	-6·6.8·7·8·8.5·9·10·11·12·13·14·15·16·17·18·19·20·21·22·23·24·25·32	47.5	80

ORDERING EXAMPLE

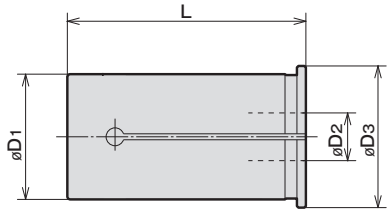
① SC ② 16 - ③ 6

① Name
② D1
③ D2

ACCESSORIES

STRAIGHT COLLET (Oil-Hole Type)

SCOH Ⓓ1 - Ⓓ2



CODE SCOH Ⓓ1-Ⓓ2		ϕD3	L	Qty of smallest insersion
SCOH20	-6	23.5	54.5	27
	-8			30
	-10			34
	-12			35
	-16			38
SCOH25	-6	30	60	27
	-8			30
	-10			32
	-12			35
	-16			38
	-20			41
SCOH32	-6	37.5	70	27
	-8			30
	-10			32
	-12			35
	-16			38
	-20			40
	-25			44

CODE SCOH Ⓓ1-Ⓓ2		ϕD3	L	Qty of smallest insersion
SCOH42	-6	47.5	80	27
	-8			30
	-10			32
	-12			35
	-16			42
	-20			45
	-25			50
	-32			

ORDERING EXAMPLE

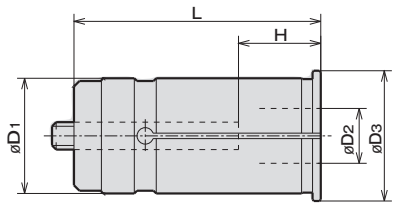
① SCOH ② 32 - ③ 20

① Name
② D1
③ D2

ACCESSORIES

STRAIGHT COLLET WITH ADJUST SCREW

NC Ⓓ1 - Ⓓ2



CODE NC Ⓓ1 - Ⓓ2		øD3	L	H MIN.	H MAX.
NC20	-6·8·10·12·16	23.5	60	25	35
NC32	6·8·10	37.5	80	20	45
	-12·16·20·25			25	55
NC42	-6·8·10·12	47.5	90	20	45
	-16·20·25·32			30	65

NOTE : Applicable to Micron chucks and Hard chucks.

ORDERING EXAMPLE

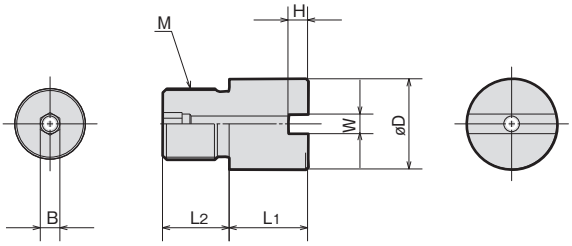
① NC ② 32 - ③ 6

① Name
② D1
③ D2

ACCESSORIES for MICRON CHUCK (Milling Chuck)

ACCESSORIES

ADJUST SCREW (For MICRON CHUCK standard)



MODEL	CODE	øD	M	L1	L2	W	H	B	MICRON CHUCK
HAS1620-05	17602	15	M10×1.0	5	14	5	3.5	5	HPC16 HPC20
HAS1620-15	17604			15					
HAS1620-25	17606			25					
HAS2532-10	17612	23	M18×1.0	10	17	5	5	5	HPC25 HPC32
HAS2532-20	17614			20					
HAS2532-35	17616			35					
HAS4250-10	17622	33	M18×1.0	10	17	5	5	5	HPC42 HPC50
HAS4250-20	17624			20					
HAS4250-35	17626			35					

NOTE : 1. The above Adjust Screws are sold separately.
2. Above Adjust Screws can not be used for "H" and "M" series Micron Chucks.

ACCESSORIES

CHUCK WRENCH (For MICRON CHUCK standard)

HOOK SPANNER		
CHUCK CODE MICRON CHUCK	WRENCH CODE	
HPC16,HPC20	FS52-55G	35852
HPC25,HPC16S,HPC20S	FS58-62G	35853
HPC32,HPC25S	FS68-75G	35854
HPC42,HPC32S	FS80-90G	35855
HPC03H~HPC16H HPC03M~HPC12M HPC03N~HPC12N	FP45-48G	35851

MICRON CHUCK H series

FEATURES P.1-6

BT№-HPCⒹH-Ⓛ

▶▶▶ Thru -the-tool Coolant Available (Option)

▶▶▶ Thru-the-groove Coolant Available(Option)

▶▶▶ BBT Available

H-series

FIG.1

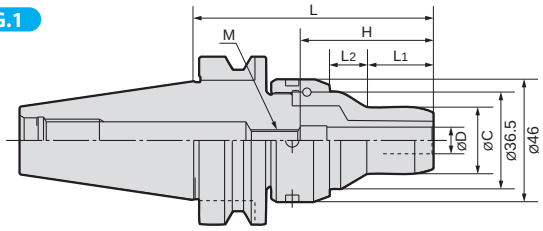
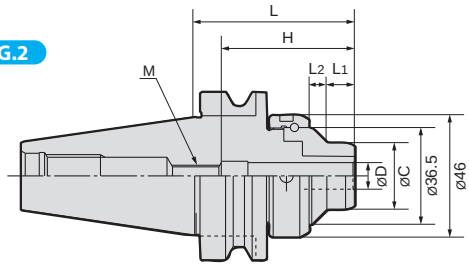


FIG.2



Note : When HPC03H, HPC04H and HPC05H is used through the groove coolant or through the tool coolant usage, please keep the coolant pressure within 1MPa and under. In case those 3 kinds of tools are used in through the tool coolant at over 1MPa pressure, it requires special adjustment according to its pressure, need additional cost, please contact Showa distributor.

Cutter shank diameter should be h7 or better.

MODEL			A	AA	GType	FIG	φD	L	L1	L2	φC	H	Min insert length	Adjust MIN	Adjust MAX	Adjust screw M	ST	CT	N/W (Kg)
Max. 20,000 min^{-1} (G Type:Max. 30,000 min^{-1})																			
BT30 (BBT30)	HPC03H	060	○	○	○	2	3	60	10.3	6.7	25	-	15	-	-	-	○	○ additional work	0.9
		090	○	○	○	1		90	25	14							○	○ additional work	1.0
	HPC04H	060	○	○	○	2	4	60	10.3	6.7							○	○ additional work	0.9
		090	○	○	○	1		90	25	14							○	○ additional work	1.0
	HPC05H	060	△	△	△	2	5	60	10.3	6.7							○	○ additional work	0.9
		090	△	△	△	1		90	25	14							○	○ additional work	1.0
	HPC06H	060	○	○	○	2	6	60	10.3	6.7		37.5	23	28	37	AS17-2-M5-CTW	○at cost	○	0.9
		090	○	○	○	1		90	25	14			30	30			○at cost	○	1.0
	HPC07H	060	△	△	△	2	7	60	10.3	6.7			23	28		AS17-2-M6-CTW	○at cost	○	0.9
		090	△	△	△	1		90	25	14			30	30			○at cost	○	1.0
	HPC08H	060	○	○	○	2	8	60	10.3	6.7		50	23	35	50	AS22-2-M6-CTW	○at cost	○	0.9
		090	○	○	○	1		90	25	14			35				○at cost	○	1.0
	HPC09H	060	△	△	△	2	9	60	10.3	6.7			23			AS22-2-M8-CTW	○at cost	○	0.9
		090	△	△	△	1		90	25	14			35				○at cost	○	1.0
	HPC10H	060	○	○	○	2	10	60	10.3	6.7			23				○at cost	○	0.9
		090	○	○	○	1		90	25	14			35				○at cost	○	1.0
	HPC11H	060	△	△	△	2	11	60	12.2	4.8	32	55	25	32	50	AS25-2-M10-CTW	○at cost	○	0.9
		090	△	△	△	1		90	25	14			40	40	55		○at cost	○	1.0
	HPC12H	060	○	○	○	2	12	60	12.2	4.8		50	25	32	50		○at cost	○	0.9
		090	○	○	○	1		90	25	14		55	40	40	55		○at cost	○	
	HPC13H	090	△	△	△		13					60		42	60		○at cost	○	
	HPC14H	090	△	△	△		14										○at cost	○	1.0
	HPC15H	090	△	△	△		15					65		47	65		○at cost	○	
	HPC16H	090	△	△	△		16										○at cost	○	
Max. 20,000 min^{-1} (G Type:Max. 30,000 min^{-1})																			
BT40 (BBT40)	HPC03H	060	○	○	○	2	3	60	10.3	6.7	25	15	15	-	-	-	○	○ additional work	1.4
		090	○	○	○	1		90	25	14							○	○ additional work	1.5
		120	○	○	○			120									○	○ additional work	1.7
	HPC04H	060	○	○	○	2	4	60	10.3	6.7							○	○ additional work	1.4
		090	○	○	○	1		90	25	14							○	○ additional work	1.5
		120	○	○	○			120									○	○ additional work	1.7
	HPC05H	090	△	△	△	1	5	90	25	14							○	○ additional work	1.5
		120	△	△	△			120									○	○ additional work	1.7
	HPC06H	060	○	○	○	2	6	60	10.3	6.7		37.5	23	28	37	AS17-2-M5-CTW	○at cost	○	1.4
		090	○	○	○	1		90	25	14			30	30			○at cost	○	1.5
		120	○	○	○			120									○at cost	○	1.7
	HPC07H	090	△	△	△	1	7	90	25	14						AS17-2-M6-CTW	○at cost	○	1.5
		120	△	△	△			120									○at cost	○	1.7
	HPC08H	060	○	○	○	2	8	60	10.3	6.7		50	23	35	50	AS22-2-M6-CTW	○at cost	○	1.4
		090	○	○	○	1		90	25	14			35				○at cost	○	1.5
		120	○	○	○			120									○at cost	○	1.7
	HPC09H	090	△	△	△	1	9	90	25	14						AS22-2-M8-CTW	○at cost	○	1.5
		120	△	△	△			120									○at cost	○	1.7

MODEL			A	AA	GType	FIG	φD	L	L1	L2	φC	H	Min insert length	Adjust MIN	Adjust MAX	Adjust screw M	ST	CT	N/W (Kg)
Max. 20,000 min^{-1}(G Type:Max. 30,000 min^{-1})																			
BT40 (BBT40)	HPC10H	060	○	○	○	2	10	60	10.3	6.7	25	50	23	35	50	AS22-2-M8-CTW	○at cost	○	1.4
		090	○	○	○	1		90	25	14			35				○at cost	○	1.5
		120	○	○	○			120									○at cost	○	1.7
	HPC11H	090	△	△	△		11	90			32		40	40		AS25-2-M10-CTW	○at cost	○	1.5
		120	△	△	△			120									○at cost	○	1.7
	HPC12H	060	○	○	○	2	12	60	12.2	4.8			25				○at cost	○	1.4
		090	○	○	○	1		90	25	14		55	40		55		○at cost	○	1.5
		120	○	○	○			120									○at cost	○	1.7
	HPC13H	090	△	△	△		13	90				60		42	60		○at cost	○	1.6
	HPC14H	090	△	△	△		14										○at cost	○	
	HPC15H	090	△	△	△		15					65		47	65		○at cost	○	
	HPC16H	090	△	△	△		16										○at cost	○	
Max. 12,000 min^{-1}																			
BT50 (BBT50)	HPC03H	105	○	○	—	1	3	105	25	14	25	15	15	-	-	-	○	○ additional work	4.0
		150	○	○	—			150									○	○ additional work	4.6
	HPC04H	105	○	○	—		4	105									○	○ additional work	4.0
		150	○	○	—			150									○	○ additional work	4.6
	HPC05H	105	△	△	—		5	105									○	○ additional work	4.0
	HPC06H	105	○	○	—		6	150				37.5	30	30	37	AS17-2-M5-CTW	○at cost	○	4.6
		150	○	○	—												○at cost	○	
	HPC07H	105	△	△	—		7	105								AS17-2-M6-CTW	○at cost	○	4.0
	HPC08H	105	○	○	—		8	150				50	35	35	50	AS22-2-M6-CTW	○at cost	○	
		150	○	○	—												○at cost	○	4.6
	HPC09H	105	△	△	—		9	105								AS22-2-M8-CTW	○at cost	○	4.0
	HPC10H	105	○	○	—		10	150									○at cost	○	
		150	○	○	—												○at cost	○	4.6
	HPC11H	105	△	△	—		11	105			32	55	40	40	55	AS25-2-M10-CTW	○at cost	○	4.0
	HPC12H	105	○	○	—		12										○at cost	○	
		150	○	○	—			150									○at cost	○	4.6
	HPC13H	105	△	△	—		13	105				60		42	60		○at cost	○	4.0
	HPC14H	105	△	△	—		14										○at cost	○	
	HPC15H	105	△	△	—		15					65		47	65		○at cost	○	
	HPC16H	105	△	△	—		16										○at cost	○	

△ : Mark tools are manufatured to order.

NOTE : 1.Chuck wrench and adjust screw are sold separately.
2.When the thru-the-coolant application is needed for HPC03H, HPC04, or HPC05, please instruct when ordering. "CT" will be marked for this application.
3.The the thru-the-groove-coolant application for HPC06 or larger will be charged. Please instruct when ordering. "ST" will be marked for this application.
4.The above-mentioned maximum speed will vary depending rigidity of the machine and balance of cutter. An adequate cutting condition should be selected for each case.
5.Please feel free to ask us when need BBT shanks.

ACCESSORIES P.42 ADJUST SCREW

ACCESSORIES P.44 CHUCK WRENCH

ORDERING EXAMPLE

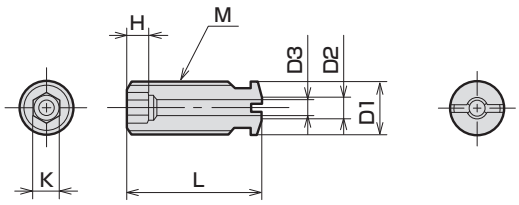
① ② ③ ④ ⑤ ⑥

BT30	-	HPC	03	H	-	060	A

① Shank Size
② Holder's Name
③ Cutter's Shank Dia.
④ H series
⑤ G.L. Length
⑥ Grade

ACCESSORIES for MICRON CHUCK H series M series

ADJUST SCREW for MICRON CHUCK H series, M series



MODEL	CODE	M	L	D1	D2	D3	K	H	MICRON CHUCK
AS17-2-M5-CTW	17672	M5×0.8	17	5	3	2	2.5	3	HPC06H
AS17-2-M6-CTW	17676	M6×1.0	17	6			3		HPC07H
AS22-2-M6-CTW	17678		22						HPC08H,HPC08M
AS22-2-M8-CTW	17680	M8×1.25		8	5	4	4	5	HPC09H,HPC10H HPC09M,HPC10M,HPC11M～12M
AS25-2-M8-CTW	17682		25						
AS25-2-M10-CTW	17684	M10×1.5		10	6	5	5	6	HPC11H～16H

MICRON CHUCK M series

FEATURES P. 1-6

BT№-HPCⒹM-Ⓛ

▶▶▶ Thru-the-tool Coolant Available

▶▶▶ BBT Available

M-series

FIG.1

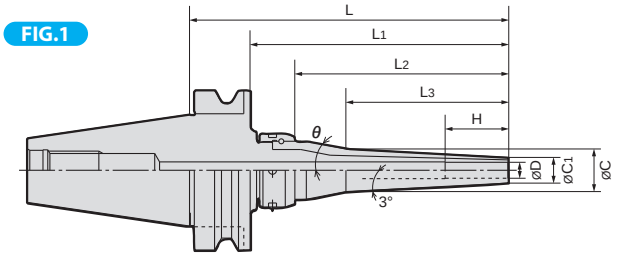


FIG.2

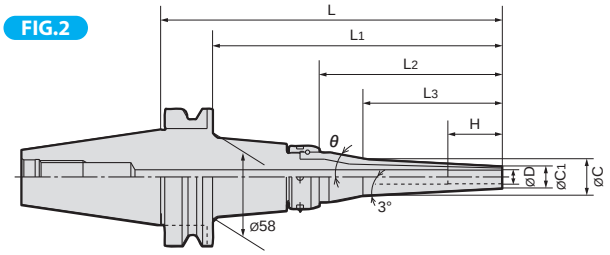
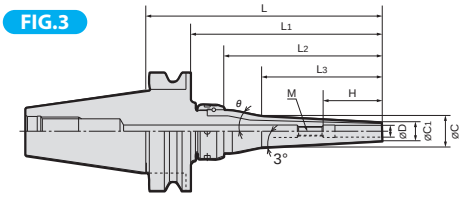


FIG.3



Cutter shank diameter should be h6 or better.

	MODEL		STOCK	Fig	øD	øC1	øC	L	L1	L2	L3	H	Min insert length	Adjust length MIN	Adjust length MAX	M	θ	N/W (kg)
Max. 15,000 min^{-1}																		
BT30 (BBT30)	HPC03M-	130	△	1	3	9	16	130	108	84	67	–	20	–	–	–	34	0.8
		180	△				20	180	158	134	102						18	1.0
	HPC04M-	130	△		4	10	17	130	108	84	67						33	0.8
		180	△				21	180	158	134	102						17	1.0
	HPC05M-	130	△		5	11	18	130	108	84	67						32	0.8
		180	△				22	180	158	134	102						16	1.0
	HPC06M-	130	△		6	12	19	130	108	84	67		35				30	0.8
		180	△				23	180	158	134	102						15	1.0
	HPC07M-	130	△		7	13	20	130	108	84	67						28	0.8
		180	△				24	180	158	134	102						14	1.0
	HPC08M-	130	△		8	14	21	130	108	84	67						27	0.8
		180	△				25	180	158	134	102						13	1.0
	HPC09M-	130	△		9	15	22	130	108	84	67						26	0.8
		180	△				26	180	158	134	102						12	1.0
	HPC10M-	130	△	3	10	16	23	130	108	84	67	50		35	50	M8	24	0.8
		180	△				27	180	158	134	102						11	1.0
	HPC11M-	130	△		11	17	24	130	108	84	67	55		40	55	M10	23	0.8
		180	△				28	180	158	134	102						10	1.0
	HPC12M-	130	△		12	18	25	130	108	84	67		40				21	0.8
		180	△				29	180	158	134	102						9	1.0
Max. 15,000 min^{-1}																		
BT40 (BBT40)	HPC03M-	135	○	1	3	9	16	135	108	84	67	–	20	–	–	–	34	1.4
		185	○				20	185	158	134	102						18	1.6
	HPC04M-	135	○		4	10	17	135	108	84	67						33	1.4
		185	○				21	185	158	134	102						17	1.6
	HPC05M-	135	△		5	11	18	135	108	84	67						32	1.4
		185	△				22	185	158	134	102						16	1.6
	HPC06M-	135	○		6	12	19	135	108	84	67		35				30	1.5
		185	○				23	185	158	134	102						15	1.6
	HPC07M-	135	△		7	13	20	135	108	84	67						28	1.5
		185	△				24	185	158	134	102						14	1.6
	HPC08M-	135	○		8	14	21	135	108	84	67						27	1.5
		185	○				25	185	158	134	102						13	1.7
	HPC09M-	135	△		9	15	22	135	108	84	67						26	1.5
		185	△				26	185	158	134	102						12	1.7
	HPC10M-	135	○		10	16	23	135	108	84	67						24	1.5
		185	○				27	185	158	134	102						11	1.7
	HPC11M-	135	△		11	17	24	135	108	84	67						23	1.5
		185	△				28	185	158	134	102						10	1.7
	HPC12M-	135	○		12	18	25	135	108	84	67		40				21	1.5
		185	○				29	185	158	134	102						9	1.7

MODEL		STOCK	Fig	øD	øC1	øC	L	L1	L2	L3	H	Min insert length	Adjust length MIN	Adjust length MAX	M	θ	N/W (kg)
Max. 10,000 min^{-1}																	
BT50 (BBT50)	HPC03M-150	○	1	3	9	16	150	112	84	67	–	20	–	–	–	34	4.2
	HPC03M-200	○	1	3	9	20	200	162	134	102	–	20	–	–	–	18	4.4
	HPC03M-250	○	2	3	9	20	250	212	134	102	–	20	–	–	–	18	5.3
	HPC04M-150	○	1	4	10	17	150	112	84	67	–	20	–	–	–	33	4.3
	HPC04M-200	○	1	4	10	21	200	162	134	102	–	20	–	–	–	17	4.3
	HPC04M-250	○	2	4	10	21	150	212	134	102	–	20	–	–	–	17	4.4
	HPC05M-150	△	1	5	11	18	150	112	84	67	–	20	–	–	–	32	5.3
	HPC05M-200	△	1	5	11	22	200	162	134	102	–	20	–	–	–	16	4.4
	HPC05M-250	△	2	5	11	22	250	212	134	102	–	20	–	–	–	16	5.3
	HPC06M-150	○	1	6	12	19	150	112	84	67	–	35	–	–	–	30	4.3
	HPC06M-200	○	1	6	12	23	200	162	134	102	–	35	–	–	–	15	4.5
	HPC06M-250	○	2	6	12	23	250	212	134	102	–	35	–	–	–	15	5.3
	HPC07M-150	△	1	7	13	20	150	112	84	67	–	35	–	–	–	28	4.3
	HPC07M-200	△	1	7	13	24	200	162	134	102	–	35	–	–	–	14	4.5
	HPC07M-250	△	2	7	13	24	250	212	134	102	–	35	–	–	–	14	5.3
	HPC08M-150	○	1	8	14	21	150	112	84	67	–	35	–	–	–	27	4.3
	HPC08M-200	○	1	8	14	25	200	162	134	102	–	35	–	–	–	13	4.5
	HPC08M-250	○	2	8	14	25	250	212	134	102	–	35	–	–	–	13	5.4
	HPC09M-150	△	1	9	15	22	150	112	84	67	–	35	–	–	–	26	4.3
	HPC09M-200	△	1	9	15	26	200	162	134	102	–	35	–	–	–	12	4.5
	HPC09M-250	△	2	9	15	26	250	212	134	102	–	35	–	–	–	12	5.4
	HPC10M-150	○	1	10	16	23	150	112	84	67	–	35	–	–	–	24	4.3
	HPC10M-200	○	1	10	16	27	200	162	134	102	–	35	–	–	–	11	4.5
	HPC10M-250	○	2	10	16	27	250	212	134	102	–	35	–	–	–	11	5.4
	HPC11M-150	△	1	11	17	24	150	112	84	67	–	35	–	–	–	23	4.3
	HPC11M-200	△	1	11	17	28	200	162	134	102	–	35	–	–	–	10	4.5
	HPC11M-250	△	2	11	17	28	250	212	134	102	–	35	–	–	–	10	5.4
	HPC12M-150	○	1	12	18	25	150	112	84	67	–	40	–	–	–	21	4.3
	HPC12M-200	○	1	12	18	29	200	162	134	102	–	40	–	–	–	9	4.5
	HPC12M-250	○	2	12	18	29	250	212	134	102	–	40	–	–	–	9	5.4

△ : Mark tools are manufatured to order.

NOTE : 1. Chuck wrench and adjust screw are sold separately.
2. Adjust screw is manufactured to order.
Please instruct when ordering.
3. The above-mentioned maximum speed will vary depending rigidity of the machine and balance of cutter.
An adequate cutting condition should be selected for each case.
4. Please feel free to ask us when need BBT shanks.

ACCESSORIES P.42 ADJUST SCREW

ACCESSORIES P.44 CHUCK WRENCH

ORDERING EXAMPLE

① BT50 - ② HPC ③ 06 ④ M - ⑤ 150

① Shank Size
② Holder's Name
③ Cutter's Shank Dia.
④ M series
⑤ G.L. Length

ACCESSORIES for MICRON CHUCK H series M series

ACCESSORIES

CHUCK WRENCH (For MICRON CHUCK H series, M series and N series)

HOOK PIN SPANNER		
CHUCK CODE	WRENCH CODE	
MICRON CHUCK		
HPC03H~HPC16H HPC03M~HPC12M HPC03N~HPC12N	FP45-48G	35851

HARD CHUCK

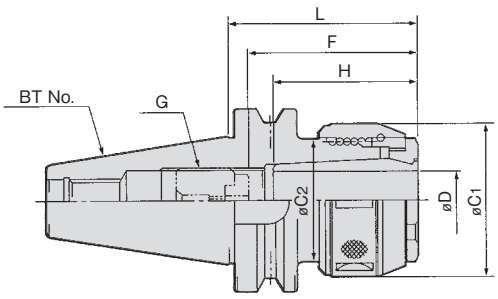
FEATURES P.7-8

BT№-CTHⒹ-Ⓛ

▶▶▶ Thru-the-tool Coolant Available

FEATURES

- The ball screw structure provides high clamping power.
- Easy handling.
- High accuracy and rigidity are kept long.



MODEL		CODE BT	CODE SBT	øD	L	øC1	øC2	H	G	F MIN.	F MAX.	SPRING COLLET	ADJUST SCREW	N/W (kg)
BT40 SBT40	-CTH16 -105	11192	2201002	16	105	52	50	50	M18×1.5	50	80	C16-(16)	OR-M18	1.9
	-135	11194	2201004		135									2.3
	-165	11196	2201006		165									2.7
	-CTH20 -090	11198	2201008	20	90	60	54	50	M18×1.5	50	75	C20-(20)	OR-M18	1.9
	-120	11200	2201010		120									2.4
	-CTH25 -105	11202	2201012	25	105	68	62	68	M28×1.5	68	85	C25-(25)	OR-M28	2.2
	-135	11204	2201014		135									2.9
	-165	11206	2201016		165									3.5
	-CTH32 -105	11208	2201018	32	105	80	62	70	M18×1.5	80	95	CS32-(32)	OR-M18	2.6
	-135	11210	2201020		135				M28×1.5				OR-M28	3.3
BT50 SBT50	-CTH16 -105	13402	2202002	16	105	52	50	50	M18×1.5	50	100	C16-(16)	OR-M18	4.2
	-135	13404	2202004		135									4.7
	-165	13406	2202006		165									5.2
	-CTH20 -105	13428	2202008	20	105	60	54	50	M18×1.5	50	100	C20-(20)	OR-M18	4.6
	-135	13430	2202010		135									5.1
	-165	13432	2202012		165									5.6
	-CTH25 -105	13408	2202014	25	105	68	62	68	M28×1.5	68	100	C25-(25)	OR-M28	4.6
	-135	13410	2202016		135									5.2
	-165	13412	2202018		165									6.0
	-CTH32 -105	13414	2202020	32	105	80	67.5	80	M36×1.5	80	100	C32-(32)	OR-M36	4.8
	-135	13416	2202022		135		75							5.9
	-165	13418	2202024		165									6.9
	-CTH42 -105	13420	2202026	42	105	95	79.5	90	M36×1.5	90	110	C42-(42)	OR-M36	5.2
	-135	13422	2202028		135		87							6.5
	-165	13424	2202030		165									7.7
	-CTH50 -120	13434	2202032	50 (50.8)	120	105	99	95	M36×1.5	95	115	C50-(50) -(50.8)	OR-M36	6.4
	-135	13436			135									7.2
	-165	13438			165									8.7

NOTE:1. A spring collet is supplied with Hard chuck.
Unless otherwise required, maximum ID spring collet is supplied.
2. Chuck wrench and adjust screw are sold separately.
3. For thru-the-tool coolant application, OR-adjust screw is used.
OR-adjust screw is sold separately.
4. SBT is shank for BT Dual-Face-Contact spindle.

ORDERING EXAMPLE

① BT40 - ② CTH ③ 20 - ④ 135

① Shank Size
② Holder's Name
③ Cutter's Shank Dia.
④ G.L. Length

SLIM HARD CHUCK

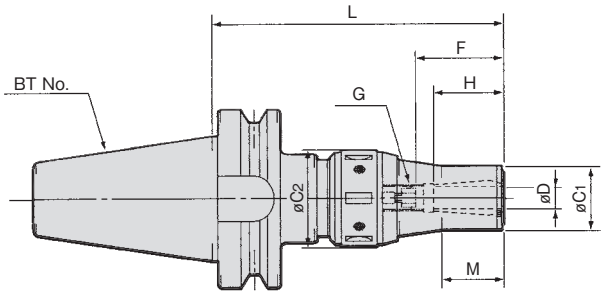
FEATURES P. 7-8

BT№-CTH12L-Ⓛ

Thru-the-tool Coolant Available

FEATURES

- The ball screw structure provides high clamping power.
- Easy handling.
- High accuracy and rigidity are kept long.



MODEL		CODE BT	CODE SBT	øD	L	M	øC1	øC2	H	G	F MIN.	F MAX.	SPRING COLLET	ADJUST SCREW	N/W (kg)
BT40 SBT40	-CTH12L -135	11216	2201034	6~12	135	35	35	52	40	M14×1.5	40	70	C12-(D)	OR-M14	1.9
BT50 SBT50	-CTH12L -165	13427	2201036		165										4.7

NOTE : 1. For thru-the-tool coolant application, OR-adjust screw is used.
2. Spling collet and chuck wrench are sold separetely.
3. SBT is shank for BT Dual-Face-Contact spindle.

ACCESSORIES P.47 SPLING COLLET

ACCESSORIES P.48 STRAIGHT COLLETS, ADJUST SCREW

ACCESSORIES P.49 CHUCK WRENCH

ORDERING EXAMPLE

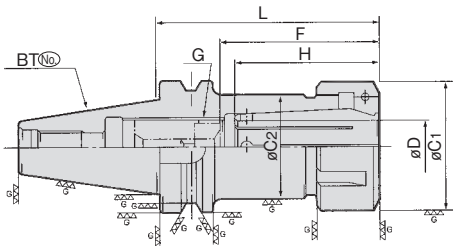
① BT40 - ② CTH ③ 12 ④ L - ⑤ 135

① Shank Size
② Holder's Name
③ Max. øD
④ Long Type
⑤ G.L. Length

NEW MILLING CHUCK G type

BT№-CT Ⓓ-Ⓛ G

▶▶▶ Thru-the-tool Coolant Available



MODEL		CODE	øD	L	øC1	øC2	H	G	F MIN.	F MAX.	SPRING COLLET	ADJUST SCREW	N/W (kg)
Max. 25,000 min-1													
BT40	-CT25-075G	11934	25	75	62	50	68	M18×1.5	68	78	C25-(25)	OR-M18	
	- 90G	11935		90				M28×1.5				OR-M28	
	-105G	11930		105					68	85			
	-135G	11931		135									
	-CT32-090G	11936	32	90	74	61	70	M18×1.5	80	90	CS32-(32)	OR-M18	
	-105G	11932		105									
	※ -135G	11933		135									
Max. 25,000 min-1													
BT50	-CT25-075G	14504	25	75	62	-	68	M28×1.5	68	90	C25-(25)	OR-M28	
	-105G	14500		105		55				100			
	-135G	14501		135									
	-CT32-075G	14505	32	75	74	-	80	M36×1.5	80	95	CS32-(32)	OR-M36	
	-105G	14502		105		65				100			
	※ -135G	14503		135									

※**Marks : Max.15,000min-1**

NOTE : 1. A spring collet is supplied with Unless ohterwise required, maximum ID spring collet is
2. Chuck wench and adjust screw are sold separately.
3. OR-Adjust screw is used for thru-the-tool application.
4. The above-mentioned maximum speed will vary depending of cutter.
An adequated cutting condition should be selected for each case.

ORDERING EXAMPLE

① BT40 - ② CT ③ 25 - ④ 075 ⑤ G

① Shank Size
② Holder's Name
③ Cutter's Shank Dia.
④ G.L. Length
⑤ G Type

ACCESSORIES for HARD CHUCK

ACCESSORIES

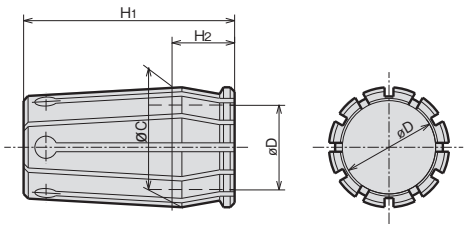
SPRING COLLET (For HARD CHUCK)

C№-Ⓓ

ORDERING EXAMPLE

① C12 - ② 6

① Chack Type
② øD



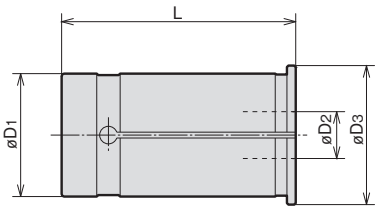
CODE	øD											øC	H1	H2	Applicable holder		
															CTH12L	CTH	CT
C12L-D	6	8	10	12								18.00	40	13	CTH12L	—	—
C16-D	6	8	10	12	16							24.00	50	17	—	CTH16	—
C20-D	6	8	10	12	16	20						28.75	50	15	—	CTH20	—
C25-D			10	12	16	20	25					35.75	68	19	—	CTH25	CT25
C32-D					16	20	25	32				45.25	80	21	—	CTH32	CT32
※CS32-D(SHORT)					16	20	25	32				45.25	70	21	—	CTH32	—
C42-D						20	25	32	42			55.00	90	21	—	CTH42	—
C50-D								32	42	50	50.8	65.00	95	25	—	CTH50	—

NOTE※ CS32-D(SHORT) spring collet is for BT40·NT40 Hard Chuck.

ACCESSORIES for HARD CHUCK

STRAIGHT COLLET

SC Ⓓ1 - Ⓓ2



CODE SC Ⓓ1 - Ⓓ2		øD3	L
SC16	-6·8·10·12	20	47
SC20	-6·6.8·7·8·8.5·9·10·11·12·13·14·15·16	23.5	50
SC25	-6·6.8·7·8·8.5·9·10·11·12·13·14·15·16·17·18·19·20·21	30	60
SC32	-6·6.8·7·8·8.5·9·10·11·12·13·14·15·16·17·18·19·20·21·22·23·24·25	37.5	70
SC42	-6·6.8·7·8·8.5·9·10·11·12·13·14·15·16·17·18·19·20·21·22·23·24·25·32	47.5	80

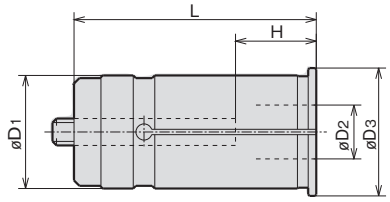
ORDERING EXAMPLE

① SC ② 16 - ③ 6

① Name
② D1
③ D2

STRAIGHT COLLET WITH ADJUST SCREW

NC Ⓓ1 - Ⓓ2



CODE NC Ⓓ1 - Ⓓ2		øD3	L	H MIN.	H MAX.
NC20	-6·8·10·12·16	23.5	60	25	35
NC32	-6·8·10	37.5	80	20	45
	-12·16·20·25			25	55
NC42	-6·8·10·12	47.5	90	20	45
	-16·20·25·32			30	65

Note:
* For all SHOWA chuck

ORDERING EXAMPLE

① NC ② 32 - ③ 6

① Name
② D1
③ D2

ADJUST SCREW (For HARD CHUCK,NEW MILLING CHUCK)

OR-MⒹ - Ⓛ

FIG.1

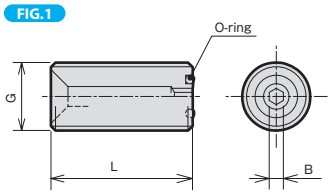
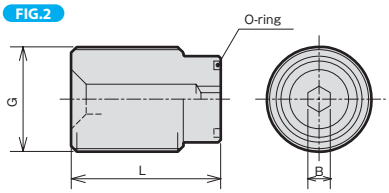


FIG.2



CODE	FIG.	G	L	B	O-ring
OR-M10(-25)	1	M10×1.5	25	2.5	S- 5
OR-M12(-25)		M12×1.5	25	2.5	S- 5
OR-M14(-35)	2	M14×1.5	35	4	P- 6
OR-M18(-25)		M18×1.5	25	5	P- 9
OR-M18(-35)		M18×1.5	35	5	P- 9
OR-M24 -25		M24×1.5	25	6	P- 9
OR-M24(-35)		M24×1.5	35	6	P- 9
OR-M28 -25		M28×1.5	25	6	P-16
OR-M28 -30		M28×1.5	30	6	P-16
OR-M28(-40)		M28×1.5	40	6	P-16
OR-M36 -20		M36×1.5	20	6	P-21
OR-M36(-40)		M36×1.5	40	6	P-21

ORDERING EXAMPLE

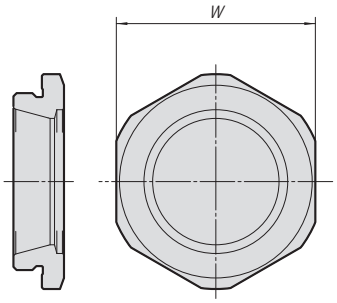
① OR ② M10 - ③ 25

① Name
② G
③ L

ACCESSORIES

NOSE PIECE (For HARD CHUCK)

N№-Ⓓ

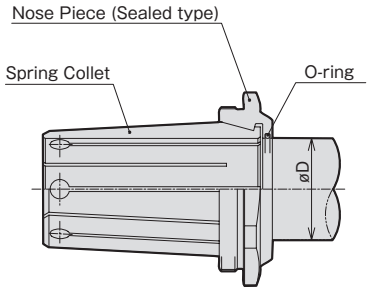


MODEL	CODE	W	holder
N16-16	33702	39	CTH16
N20-20	33703	43	CTH20
N25-25	33704	51	CTH25
N32-32	33706	63	CTH32
N42-42	33708	74	CTH42
N50-50	33710	84	CTH50

ACCESSORIES

NOSE PIECE (For HARD CHUCK)

NG№-Ⓓ



ORDERING EXAMPLE

① NG ② 16 - ③ 6

① Name
② Chack Size
③ øD

CODE	øD											HARD CHUCK CODE
NG16-øD	6	8	10	12	16							CTH16
NG20-øD	6	8	10	12	16	20						CTH20
NG25-øD				12	16	20	25					CTH25
NG32-øD					16	20	25	32				CTH32
NG42-øD						20	25	32	42			CTH42
NG50-øD								32	42	50	50.8	CTH50

ACCESSORIES

CHUCK WRENCH (For HARD CHUCK)

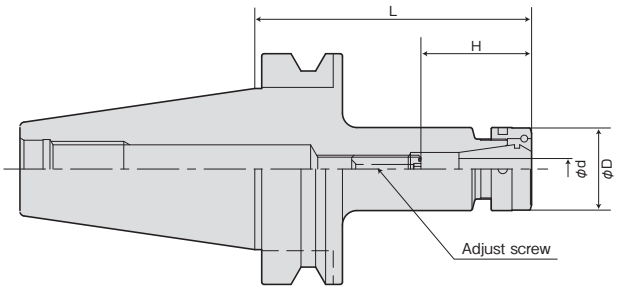
HOOK SPANNER		
CHUCK CODE HARD CHUCK	WRENCH CODE	
CTH12L,CTH16	FS52-55G	35852
CTH20,CT25G	FS58-62G	35853
CTH25,CT32G	FS68-75G	35854
CTH32	FS80-90G	35855
CTH42	FS92-100	
CTH50	FS105-115	35829

COLLET CHUCK

FEATURES P.9-10

BT№-RSCⒹMAX-Ⓛ

▶▶▶ Thru-the-tool Coolant Available
▶▶▶ Thru-the-groove Coolant Available
▶▶▶ BBT Available



MODEL		CODE	ϕd (GRIPPINGRANGE)	ϕD	L	H	COLLET	NUT	ADJUST SCREW
Max. 12,000min^{-1}									
BT30 BBT30	RSC07N-060	200660	0.5~7	24	60	24~40	CR07-(D)	RSN07NB	M6×20L-CTW
	-075	200661			75				
	-090	200662			90				
	-120	200664			120				
	RSC10N-060	200666	0.5~10	30	60	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	-075	200667			75				
	-090	200668			90				
	-120	200670			120				
	RSC13N-060	200672	0.5~13	36	60	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	-075	200673			75				
	-090	200674			90				
	-120	200676			120				
	RSC16N-060	200678	1~16	42	60	38~50	CR16-(D)	RSN16NB	RAS16-25-5
	-075	200679			75				
	-090	200680			90	38~72			
	-120	200682			120				
	RSC20N-075	200684	1.5~20	50	75	44~56.5	CR20-(D)	RSN20NB	
	-090	200686			90				
	-120	200688			120				
BT40 BBT40	RSC07N-060	221100	0.5~7	24	60	24~40	CR07-(D)	RSN07NB	M6×20L-CTW
	-075	221101			75				
	-090	221102			90				
	-120	221104			120				
	-150	221106			150				
	RSC10N-060	221108	0.5~10	30	60	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	-075	221109			75				
	-090	221110			90				
	-120	221112			120				
	-150	221114			150				
	RSC13N-060	221116	0.5~13	36	60	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	-075	221117			75				
	-090	221118			90				
	-120	221120			120				
	-150	221122			150				
	RSC16N-060	221124	1~16	42	60	38~70	CR16-(D)	RSN16NB	RAS16-25-5
	-075	221125			75	38~77			
	-090	221126			90				
	-120	221128			120				
	-150	221130			150				
	RSC20N-060	221132	1.5~20	50	60	44~70	CR20-(D)	RSN20NB	RAS20-25-5
	-075	221133			75				
	-090	221134			90	44~72			
	-120	221136			120	44~82			
	-150	221138			150				

NOTE : 1. Collet and chuck wrench are sold separately.
2. CROH collet is used for thru-the-tool coolant application.
3. The above-mentioned maximum speed will vary depending on rigidity of machine and balance of cutter. An adequated cutting condition should be selected for each case.
4. Only BT shank tools are coated. BBT shank tools are not coated.

ORDERING EXAMPLE

①		②		③		④
BT30	-	RSC		07	-	090

① Shank Size
② Holder's Name
③ Max. øD
④ G.L. Length

COLLET CHUCK

FEATURES P.9-10

BT№-RSCⒹMAX-Ⓛ

▶▶▶ Thru-the-tool Coolant Available
▶▶▶ Thru-the-groove Coolant Available
▶▶▶ BBT Available

FIG.1

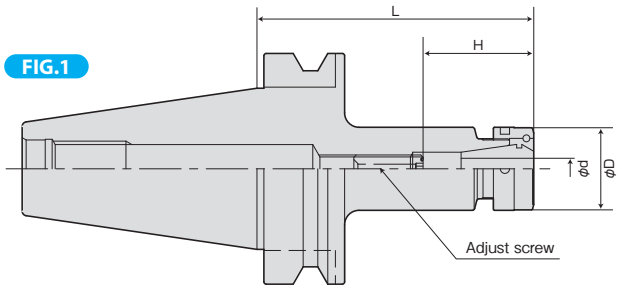
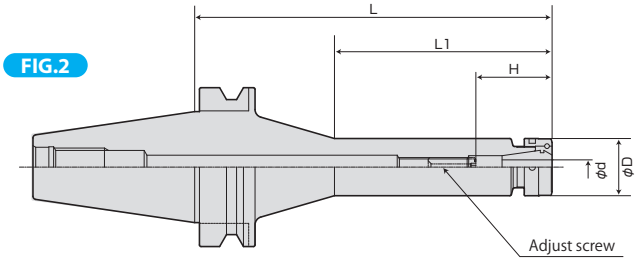


FIG.2



MODEL		CODE	FIG	ϕd (GRIPPINGRANGE)	ϕD	L	L1	H	COLLET	NUT	ADJUST SCREW
Max. 8,000 min^{-1}											
BT50 BBT50	RSC07N-090	251230	1	0.5~7	24	90	-	24~40	CR07-(D)	RSN07NB	M6×20L-CTW
	-135	251232				135					
	-165	251234				165					
	-195	251235				195					
	RSC10N-075	251238	1	0.5~10	30	75	-	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	-105	251240				105					
	-135	251242				135					
	-165	251244				165					
	-195	251246				195					
	-225	251248	2			225	150				
	-255	251250				255	180				
	-285	251252				285	190				
	RSC13N-075	251254	1	0.5~13	36	75	-	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	-105	251256				105					
	-135	251258				135					
	-165	251260				165					
	-195	251262				195					
	-225	251264	2			225	150				
	-255	251266				255	180				
	-285	251268				285	190				
	RSC16N-075	251270	1	1~16	42	75	-	38~95	CR16-(D)	RSN16NB	RAS16-25-5
	-105	251272				105					
	-135	251274				135					
	-165	251276				165		38~77			
	-195	251278				195					
	-225	251280	2			225	150				
	-255	251282				255	180				
	-285	251284				285	190				
	RSC20N-075	251286	1	1.5~20	50	75	-	44~82	CR20-(D)	RSN20NB	RAS20-25-5
	-105	251288				105					
	-135	251290				135					
	-165	251292				165					
	-195	251294				195					
	-225	251296	2			225	150				
	-255	251298				255	180				
	-285	251300				285	190				

NOTE : 1. Collet and chuck wrench are sold separately.
2. CROH collet is used for thru-the-tool coolant application.
3. The above-mentioned maximum speed will vary depending on rigidity of machine and balance of cutter. An adequated cutting condition should be selected for each case.
4. Only BT shank tools are coated. BBT shank tools are not coated.

ORDERING EXAMPLE

①	②	③	④
BT50	- RSC	10	- 225

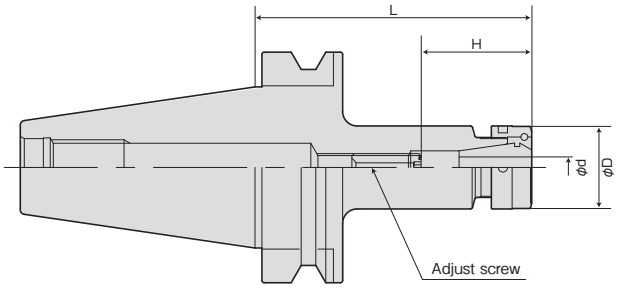
① Shank Size
② Holder's Name
③ Max. øD
④ G.L. Length

COLLET CHUCK G Type

FEATURES P.9-10

BT№-RSCⒹMAX-ⓁG

Thru-the-tool Coolant Available
Thru-the-groove Coolant Available
BBT Available



MODEL		CODE	φd (GRIPPINGRANGE)	φD	L	H	COLLET	NUT	ADJUST SCREW
Max. 25,000 min^{-1}									
BT30 BBT30	RSC07N-060G	200700	0.5~7	24	60	24~40	CR07-(D)	RSN07NB	M6×20L-CTW
	-075G	200701			75				
	-090G	200702			90				
	-120G	200704			120				
	RSC10N-060G	200706	0.5~10	30	60	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	-075G	200707			75				
	-090G	200708			90				
	-120G	200710			120				
	RSC13N-060G	200712	0.5~13	36	60	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	-075G	200713			75				
	-090G	200714			90				
	-120G	200716			120				
	RSC16N-060G	200718	1~16	42	60	38~50	CR16-(D)	RSN16NB	RAS16-25-5
	-075G	200719			75				
	-090G	200720			90	38~72			
	-120G	200722			120				
	RSC20N-075G	200724	1.5~20	50	75	44~56.5	CR20-(D)	RSN20NB	
	-090G	200726			90				
	-120G	200728			120				
BT40 BBT40	RSC07N-060G	221150	0.5~7	24	60	24~40	CR07-(D)	RSN07NB	M6×20L-CTW
	-075G	221151			75				
	-090G	221152			90				
	-120G	221154			120				
	-150G	221156			150				
	RSC10N-060G	221158	0.5~10	30	60	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	-075G	221159			75				
	-090G	221160			90				
	-120G	221162			120				
	-150G	221164			150				
	RSC13N-060G	221166	0.5~13	36	60	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	-075G	221167			75				
	-090G	221168			90				
	-120G	221170			120				
	-150G	221172			150				
	RSC16N-060G	221174	1~16	42	60	38~70	CR16-(D)	RSN16NB	RAS16-25-5
	-075G	221175			75				
	-090G	221176			90	38~77			
	-120G	221178			120				
	-150G	221180			150				
	RSC20N-060G	221182	1.5~20	50	60	44~70	CR20-(D)	RSN20NB	RAS20-25-5
	-075G	221183			75				
	-090G	221184			90	44~72			
	-120G	221186			120	44~82			
	-150G	221188			150				

NOTE : 1. Collet and chuck wrench are sold separately.
2. CROH collet is used for thru-the-tool coolant application.
3. The above-mentioned maximum speed will vary depending on rigidity of machine and balance of cutter. An adequated cutting condition should be selected for each case.
4. Only BT shank tools are coated. BBT shank tools are not coated.

ORDERING EXAMPLE

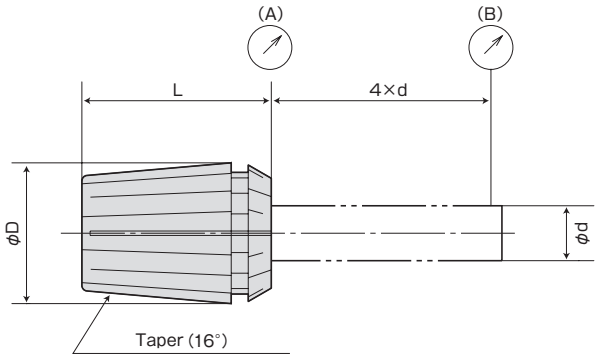
①	②	③	④	⑤
BT30	- RSC	07	- 090	G

① Shank Size
② Holder's Name
③ Max. øD
④ G.L. Length
⑤ G Type

ACCESSORIES

CR COLLET

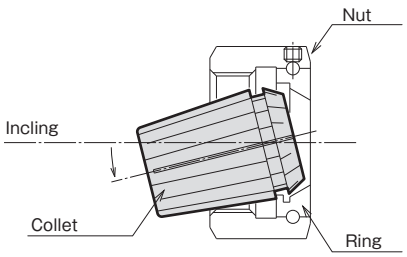
CR№-Ⓓ



GRADE	RUNOUT (MAX, μm)	
	NOSE (A)	POINT (B)
(AA)	1	3
(A)	2	5
(STD)	5	15

Easy collet setting

- A half of ID of the ring is enlarged. Collet can be mounted easily by inclining it.



Grade	application
AA grade · A grade	Reamer · Center drill Carbide small diameter drill, Endmill Whetstone for internal cylindrical grinding, Tool for high frequency motors Carbide drill Rotating tool for lathes (the tool rotation)
Standard	General drill, tap Rotating tool for lathes (Work rotating)

CHUCK	RSC07		RSC10		RSC13		RSC16		RSC20	
COLLET CODE	CR07-d GRADE		CR10-d GRADE		CR13-d GRADE		CR16-d GRADE		CR20-d GRADE	
	ϕd	RANGE	ϕd	RANGE	ϕd	RANGE	ϕd	RANGE	ϕd	RANGE
	1.0	0.5~1.0	1.0	0.5~1.0	1.0	0.5~1.0	1.5	1.0~1.5	2.0	1.5~2.0
	1.5	1.0~1.5	1.5	1.0~1.5	1.5	1.0~1.5	2.0	1.5~2.0	2.5	2.0~2.5
	2.0	1.5~2.0	2.0	1.5~2.0	2.0	1.5~2.0	2.5	2.0~2.5	3.0	2.5~3.0
	2.5	2.0~2.5	2.5	2.0~2.5	2.5	2.0~2.5	3.0	2.5~3.0	4.0	3.0~4.0
	3.0	2.5~3.0	3.0	2.5~3.0	3.0	2.5~3.0	4.0	3.0~4.0	5.0	4.0~5.0
	3.5	3.0~3.5	4.0	3.0~4.0	4.0	3.0~4.0	5.0	4.0~5.0	6.0	5.0~6.0
	4.0	3.5~4.0	5.0	4.0~5.0	5.0	4.0~5.0	6.0	5.0~6.0	7.0	6.0~7.0
	4.5	4.0~4.5	6.0	5.0~6.0	6.0	5.0~6.0	7.0	6.0~7.0	8.0	7.0~8.0
	5.0	4.5~5.0	7.0	6.0~7.0	7.0	6.0~7.0	8.0	7.0~8.0	9.0	8.0~9.0
ϕd	5.5	5.0~5.5	8.0	7.0~8.0	8.0	7.0~8.0	9.0	8.0~9.0	10.0	9.0~10.0
	6.0	5.5~6.0	9.0	8.0~9.0	9.0	8.0~9.0	10.0	9.0~10.0	11.0	10.0~11.0
	6.5	6.0~6.5	10.0	9.0~10.0	10.0	9.0~10.0	11.0	10.0~11.0	12.0	11.0~12.0
	7.0	6.5~7.0			11.0	10.0~11.0	12.0	11.0~12.0	13.0	12.0~13.0
					12.0	11.0~12.0	13.0	12.0~13.0	14.0	13.0~14.0
					13.0	12.0~13.0	14.0	13.0~14.0	15.0	14.0~15.0
							15.0	14.0~15.0	16.0	15.0~16.0
							16.0	15.0~16.0	17.0	16.0~17.0
									18.0	17.0~18.0
									19.0	18.0~19.0
									20.0	19.0~20.0
ϕD	11		16		20		25		32	
L	18		27		31		35		40	

Collet for through the groove (produce by order) are also available.

ORDERING EXAMPLE

① CR07 - ② 1.5 ③ AA

① Chuck Type
② ød
③ Grade

ACCESSORIES for COLLET CHUCK

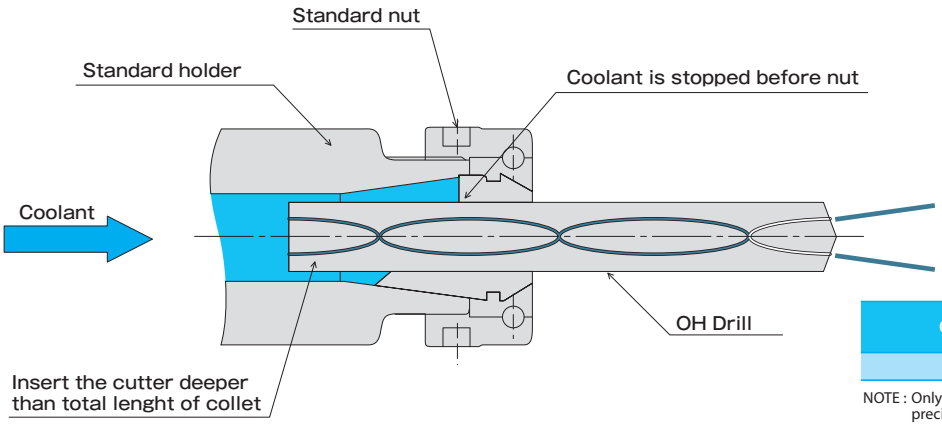
ACCESSORIES

OIL HOLE CR COLLET

CROH№-Ⓓ

FEATURES

- For thru-the tool coolant application.
- High pressure up to 7 Mpa is acceptable.
- Standard holders and nuts can be used.
- Bearing of nut is not affected by coolant.



GRADE	RUNOUT (MAX, μm) 4×d
(AA)	5μm

NOTE : Only super precious grade (AA) is available for sale only ultra precision grade (AA) type.

COLLET CODECHUCK	RSC07 CROH07-d GRADE		RSC10 CROH10-d GRADE		RSC13 CROH13-d GRADE		RSC16 CROH16-d GRADE		RSC20 CROH20-d GRADE	
	ϕd	RANGE	ϕd	RANGE	ϕd	RANGE	ϕd	RANGE	ϕd	RANGE
	2.0	1.9~2.0	2.0	1.9~2.0	3.0	2.9~3.0	3.0	2.9~3.0	3.0	2.9~3.0
	2.5	2.4~2.5	2.5	2.4~2.5	3.5	3.4~3.5	3.5	3.4~3.5	3.5	3.4~3.5
	3.0	2.9~3.0	3.0	2.9~3.0	4.0	3.9~4.0	4.0	3.9~4.0	4.0	3.9~4.0
	4.0	3.9~4.0	4.0	3.9~4.0	4.5	4.4~4.5	4.5	4.4~4.5	4.5	4.4~4.5
	4.5	4.4~4.5	4.5	4.4~4.5	5.0	4.9~5.0	5.0	4.9~5.0	5.0	4.9~5.0
	5.0	4.9~5.0	5.0	4.9~5.0	5.5	5.0~5.5	5.5	5.4~5.5	5.5	5.4~5.5
	5.5	5.4~5.5	5.5	5.0~5.5	6.0	5.5~6.0	6.0	5.5~6.0	6.0	5.9~6.0
	6.0	5.9~6.0	6.0	5.5~6.0	6.5	6.0~6.5	6.5	6.0~6.5	6.5	6.4~6.5
	6.5	6.4~6.5	6.5	6.0~6.5	7.0	6.5~7.0	7.0	6.5~7.0	7.0	6.9~7.0
	7.0	6.9~7.0	7.0	6.5~7.0	7.5	7.0~7.5	7.5	7.0~7.5	7.5	7.4~7.5
			7.5	7.0~7.5	8.0	7.5~8.0	8.0	7.5~8.0	8.0	7.5~8.0
			8.0	7.5~8.0	8.5	8.0~8.5	8.5	8.0~8.5	8.5	8.0~8.5
			8.5	8.0~8.5	9.0	8.5~9.0	9.0	8.5~9.0	9.0	8.5~9.0
			9.0	8.5~9.0	9.5	9.0~9.5	9.5	9.0~9.5	9.5	9.0~9.5
			9.5	9.0~9.5	10.0	9.5~10.0	10.0	9.5~10.0	10.0	9.5~10.0
			10.0	9.5~10.0	10.5	10.0~10.5	10.5	10.0~10.5	10.5	10.0~10.5
ϕd					11.0	10.5~11.0	11.0	10.5~11.0	11.0	10.5~11.0
					11.5	11.0~11.5	11.5	11.0~11.5	11.5	11.0~11.5
					12.0	11.5~12.0	12.0	11.5~12.0	12.0	11.5~12.0
					12.5	12.0~12.5	12.5	12.0~12.5	12.5	12.0~12.5
					13.0	12.5~13.0	13.0	12.5~13.0	13.0	12.5~13.0
							13.5	13.0~13.5	13.5	13.0~13.5
							14.0	13.5~14.0	14.0	13.5~14.0
							14.5	14.0~14.5	14.5	14.0~14.5
							15.0	14.5~15.0	15.0	14.5~15.0
							15.5	15.0~15.5	15.5	15.0~15.5
							16.0	15.5~16.0	16.0	15.5~16.0
									16.5	16.0~16.5
									17.0	16.5~17.0
									17.5	17.0~17.5
									18.0	17.5~18.0
									18.5	18.0~18.5
									19.0	18.5~19.0
									19.5	19.0~19.5
									20.0	19.5~20.0
ϕD	11		16		20		25		32	
L	18		27		31		35		40	

NOTE : 1. Applicable for drill with oil hole.
2. When in use insert a drill to the end from the rear of the collet.
3. Do not use smaller sized cutting tools than inner diameter of collet, or coolant may leak out of a collet.
4. If flat-face shank cutting tool is used, sealing function of collet does not work.

ORDERING EXAMPLE

① CROH10 - ② 10 ③ AA

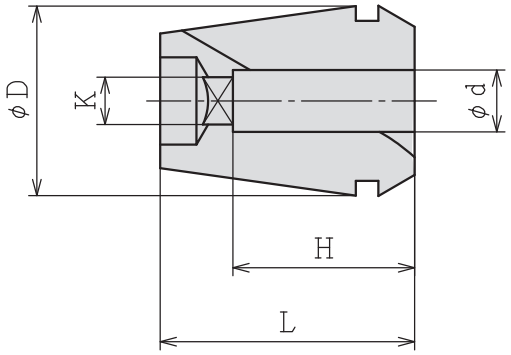
① Chuck Type
② ød
③ Grade

ACCESSORIES

CR TAP COLLET

CR№GB-Ⓓ

CR collet with square hole for shank end of tap (for synchro tap).



MODEL		CODE	TAP SIZE	φd	K	H	φD	L	TAP HOLDER	COLLET CHUCK
CR10GB	-M4	84700	M4	5	4	15	16	27	-	RSC10
	-M5	84702	M5	5.5	4.5	15				
	-M6	84704	M6	6	4.5	15				
	-M8	84706	M8	6.2	5	20				
	-M10	84708	M10	7	5.5	20				
	-P1/8	84710	P1/8	8	6	20				
CR13GB	-M4	84712	M4	5	4	15	20	31	SYFN12	RSC13
	-M5	84714	M5	5.5	4.5	15				
	-M6	84716	M6	6	4.5	15				
	-M8	84718	M8	6.2	5	20				
	-M10	84720	M10	7	5.5	20				
	-P1/8	84722	P1/8	8	6	20				
	-M12	84724	M12	8.5	6.5	20				
CR16GB	-M4	84726	M4	5	4	15	25	35	SYFN16S	RSC16
	-M5	84728	M5	5.5	4.5	15				
	-M6	84730	M6	6	4.5	15				
	-M8	84732	M8	6.2	5	20				
	-M10	84734	M10	7	5.5	20				
	-P1/8	84736	P1/8	8	6	20				
	-M12	84738	M12	8.5	6.5	20				
	-M14	84740	M14	10.5	8	25				
	-P1/4	84742	P1/4	11	9	17				
	-M16	84744	M16	12.5	10	25				
	-P3/8	84746	P3/8	14	11	18				
CR20GB	-M4	84748	M4	5	4	15	32	40	SYFN20	RSC20
	-M5	84750	M5	5.5	4.5	15				
	-M6	84752	M6	6	4.5	15				
	-M8	84754	M8	6.2	5	20				
	-M10	84756	M10	7	5.5	20				
	-P1/8	84758	P1/8	8	6	20				
	-M12	84760	M12	8.5	6.5	20				
	-M14	84762	M14	10.5	8	25				
	-P1/4	84764	P1/4	11	9	17				
	-M16	84766	M16	12.5	10	25				
	-P3/8	84768	P3/8	14	11	18				
	-M18	84770	M18	14	11	30				
	-M20	84772	M20	15	12	30				

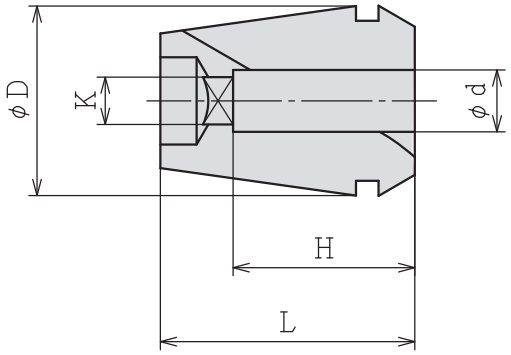
NOTE : 1. Above table is for a tap of JIS standard shank.
2. Run-out accuracy is subject to ordinary (STD) class.

ACCESSORIES

OIL HOLE CR TAP COLLET

CR№GH-Ⓓ

OH-type collet with square hole is for high-pressure centre-through coolant feeding (for synchro tapping).



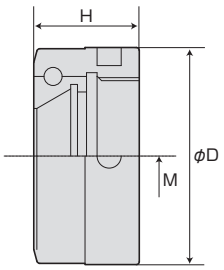
MODEL		CODE	TAP SIZE	φd	K	H	φD	L	TAP HOLDER	COLLET CHUCK
CR10GH	-M6	84800	M6	6	4.5	22	16	27	-	RSC10
	-M8	84802	M8	6.2	5	22				
	-M10	84804	M10	7	5.5	22				
	-P1/8	84806	P1/8	8	6	22				
CR13GH	-M6	84808	M6	6	4.5	25	20	31	SYFN12	RSC13
	-M8	84810	M8	6.2	5	25				
	-M10	84812	M10	7	5.5	25				
	-P1/8	84814	P1/8	8	6	25				
	-M12	84816	M12	8.5	6.5	25				
CR16GH	-M6	84818	M6	6	4.5	25	25	35	SYFN16S	RSC16
	-M8	84820	M8	6.2	5	25				
	-M10	84822	M10	7	5.5	25				
	-P1/8	84824	P1/8	8	6	25				
	-M12	84826	M12	8.5	6.5	30				
	-M14	84828	M14	10.5	8	30				
	-P1/4	84830	P1/4	11	9	30				
	-M16	84832	M16	12.5	10	30				
	-P3/8	84834	P3/8	14	11	30				
CR20GH	-M6	84836	M6	6	4.5	25	32	40	SYFN20	RSC20
	-M8	84838	M8	6.2	5	25				
	-M10	84840	M10	7	5.5	30				
	-P1/8	84842	P1/8	8	6	30				
	-M12	84844	M12	8.5	6.5	30				
	-M14	84846	M14	10.5	8	30				
	-P1/4	84848	P1/4	11	9	35				
	-M16	84850	M16	12.5	10	35				
	-P3/8	84852	P3/8	14	11	35				
	-M18	84854	M18	14	11	35				
	-M20	84856	M20	15	12	35				

NOTE : 1. Above table is for a tap of JIS standard shank.
2. Run-out accuracy is subject to ordinary (STD) class.
3. In the case of OSG Corporation synchro tap, shank diameter, square end dimensions are different from others so that there is the case that you can not use it even if tap size is the same.
4. Gap-through collet is also available. Please order separately.

ACCESSORIES

NUT FOR COLLET CHUCK

RSN № - TYPE



for BT, ST

CODE		M	ϕD	H	CHUCK
RSN07NB(Ni)	30891	M16×1.0	24	11.5	RSC07
RSN10NB(Ni)	30892	M21×1.0	30	15.5	RSC10
RSN13NB(Ni)	30893	M26×1.0	36	17.5	RSC13
RSN16NB(Ni)	30894	M32×1.0	42	17.5	RSC16
RSN20NB(Ni)	30895	M40×1.0	50	17.5	RSC20

Through-Coolant use

CODE		M	ϕD	H	CHUCK
RSN10NB-OH	30870	M21×1.0	30	15.5	RSC10
RSN13NB-OH	30871	M26×1.0	36	17.5	RSC13
RSN16NB-OH	30872	M32×1.0	42		RSC16
RSN20NB-OH	30873	M40×1.0	50		RSC20

Note: Single use of OH nut can not cope with the thru-the-tool coolant.

ACCESSORIES

ADJUST SCREW (For COLLET CHUCK)

FIG.1

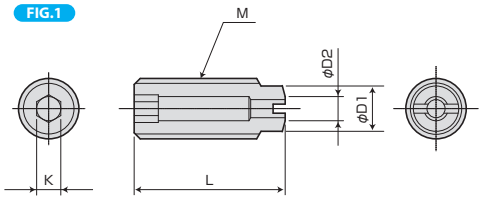
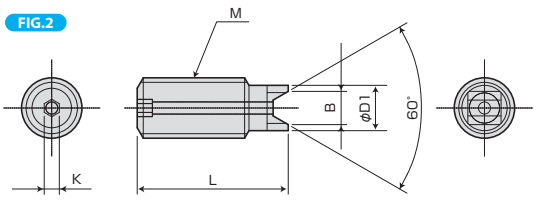


FIG.2



MODEL	FIG	M	L	D1	D2	K	B	HOLDER
M6×20L-CTW 1)	1	M6×1.0	20	4.5	3	3	—	RSC07
RAS10-25-2.5 2)	2	M10×1.5	25	7.5	—	2.5	5.5	RSC10
RAS13-25-2.5 2)		M12×1.5		9.5			7.2	RSC13
RAS16-25-5 2)		M18×1.5		13.5		5	9.5	RSC16
RAS20-25-5 2)		M24×1.5		17.5				RSC20

Note 1: Drill less than φ3 cannnot ne used for adjustment protrusion in order to enter the coolant hole.
CTW is not in the two pieces shape
Note 2: Drill less than φ2 cannnot ne used for adjustment protrusion in order to enter the coolant hole.

ACCESSORIES

CHUCK WRENCH (For COLLET CHUCK)

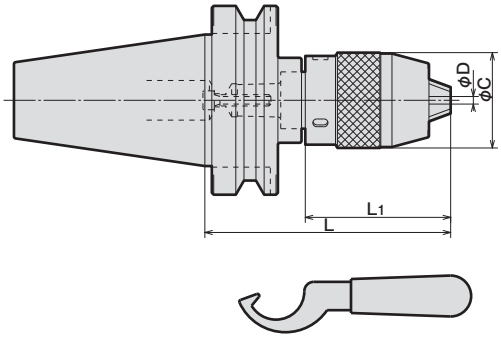
CODE		CHUCK
FP25	35844	RSC07
FP30	35845	RSC10
FP35	35846	RSC13
FP42	35847	RSC16
FP50	35848	RSC20

DRILL CHUCK

BT№-SDCⒹMAX-Ⓛ

FEATURES

- Drill chuck is positively coupled with the holder.
- Short (L length) and compact.
- Clamping force can be increased by the attached wrench.



MODEL		CODE	øD GRIPPING RANGE	L		L1		øC	N/W (kg)
				OPEN	CLOSE	OPEN	CLOSE		
BT30 (BBT30)	-SDC08-080	10036	0.5～ 8	83	90.5	50	57.5	37.5	0.7
	-SDC13-100	10038	1～13	99	111.5	66	78.5	50	1.3
BT40 (BBT40)	-SDC08-080	11148	0.5～ 8	83	90.5	50	57.5	37.5	1.3
	-SDC13-100	11150	1～13	99	111.5	66	78.5	50	1.8
BT50 (BBT50)	-SDC08-100	13291	0.5～ 8	103	110.5	50	57.5	37.5	4.1
	-SDC13-120	13293	1～13	119	131.5	66	78.5	50	4.5
	-SDC13-160	13294		159	171.5				5.1

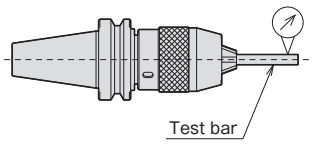
NOTE : 1. Each SDC chuck is supplied with a wrench.

ORDERING EXAMPLE

① BT30 - ② SDC ③ 08 - ④ 080

① Shank Size
② Holder's Name
③ Max. øD
④ G.L. Length

RUNOUT



SDC NO.	DIA. OF TEST BAR	RUNOUT
SDC08	4&8mm	0.05mm以下
SDC13	6.5&13mm	

● Runout was measured at three times the diameter from chuck nose.

CLAMPING POWER

	CLAMPING	TWISTING MOMENT	Comparison %
TRADITIONAL KEYLESS CHUCK	Manual	6.9 N·m	100
SHOWA SDC CHUCK			
SHOWA SDC CHUCK	With wrench	21.6 N·m	314

NOTE : Twisting moment was measured with a ø9mm test bar.

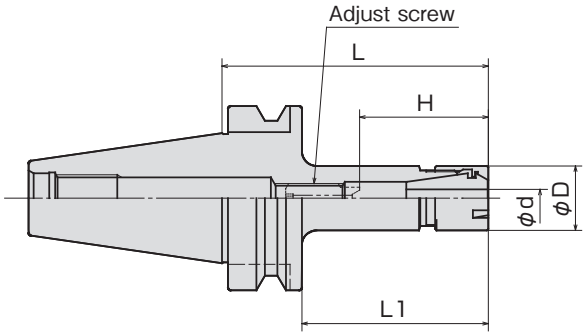
COLLET CHUCK (SLIM TYPE)

FEATURES P.13

BT№-SSCⒹMAX-Ⓛ

Thru-the-tool Coolant Available

Thru-the-groove Coolant Available(Option)



MODEL		CODE	ød	øD	L	L1	H	COLLET	NUT	ADJUST SCREW
BT30	SSC07-090	10101	0.5~7	16	90	68	25~40	CR07-d	ER11MN	M6×20L-CTW
	SSC07-135	10102			135	113				
	SSC10-090	10103	0.5~10	22	90	68	31~48	CR10-d	ER16MN	RAS10-25-2.5
	SSC10-135	10104			135	113				
	SSC13-090	10105	0.5~13	28	90	68	35~52	CR13-d	ER20MN	RAS13-25-2.5
	SSC13-135	10106			135	113				
BT40	SSC07-090	11273	0.5~7	16	90	63	25~40	CR07-d	ER11MN	M6×20L-CTW
	SSC07-135	11274			135	108				
	SSC10-090	11275	0.5~10	22	90	63	31~48	CR10-d	ER16MN	RAS10-25-2.5
	SSC10-135	11276			135	108				
	SSC13-105	11277	0.5~13	28	105	78	35~52	CR13-d	ER20MN	RAS13-25-2.5
	SSC13-150	11278			150	123				
BT50	SSC07-090	13565	0.5~7	16	90	52	25~40	CR07-d	ER11MN	M6×20L-CTW
	SSC07-135	13566			135	97				
	SSC10-105	13567	0.5~10	22	105	67	31~48	CR10-d	ER16MN	RAS10-25-2.5
	SSC10-150	13568			150	112				
	SSC13-120	13569	0.5~13	28	120	82	35~52	CR13-d	ER20MN	RAS13-25-2.5
	SSC13-165	13570			165	127				
	SSC13-195	13571			195	157				

NOTE : 1. Collet and chuck wrench are sold separately.
2. CROH collet is used for thru-the-tool coolant application.

ORDERING EXAMPLE

① BT50 - ② SSC ③ 10 - ④ 105

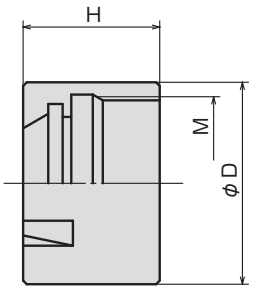
① Shank Size
② Holder's Name
③ Max. øD
④ G.L. Length

ACCESSORIES P.53,54 COLLETS

ACCESSORIES P.60 NUT,ADJUST SCREW, CHUCK WRENCH

ACCESSORIES for SLIM CHUCK

NUT FOR SLIM CHUCK



CODE		M	øD	H	CHUCK
ER11MN	30924	M13×0.75	16	11.3	SSC07
ER16MN	30926	M19×1.0	22	18	SSC10
ER20MN	30928	M24×1.0	28	19	SSC13
ER25MN	30929	M30×1.0	35	20	SYFN16S

ER25MN is a nut for Synchro Tap Holder SYFN16S type, on page 57 and page 111.

ADJUST SCREW (For SLIM CHUCK)

FIG.1

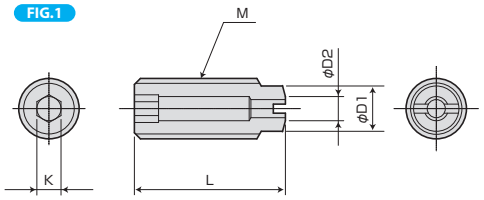
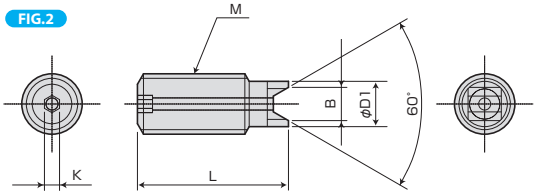


FIG.2



MODEL	FIG	M	L	D1	D2	K	B	HOLDER
M6×20L-CTW 1)	1	M6×1.0	20	4.5	3	3	—	SSC07
RAS10-25-2.5 2)	2	M10×1.5	25	7.5	—	2.5	5.5	SSC10
RAS13-25-2.5 2)		M12×1.5		9.5			7.2	SSC13

Note 1: Drill less than φ3 cannnot ne used for adjustment protrusion in order to enter the coolant hole. CTW is not in the two pieces shape
Note 2: Drill less than φ2 cannnot ne used for adjustment protrusion in order to enter the coolant hole.

CHUCK WRENCH (For SLIM CHUCK)

CODE		CHUCK
ER11MS	35861	SSC07
ER16MS	35863	SSC10
ER20MS	35865	SSC13
ER25MS	35867	SYFN16S

NOTE : ER25MS is a wrench for Synchro Tap Holder SYFN16S, type, on page 57 and page 111.

Hy-Dual CHUCK

FEATURES P.19-20

BBT№-HDUⒹ-Ⓛ

FIG.1

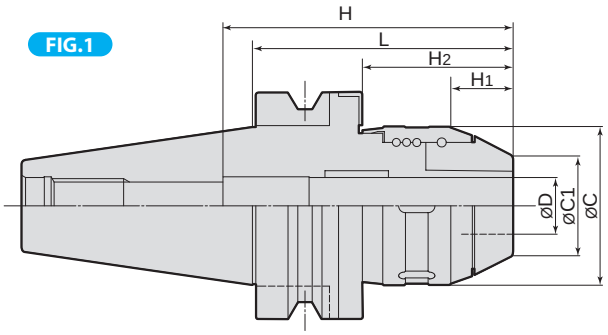
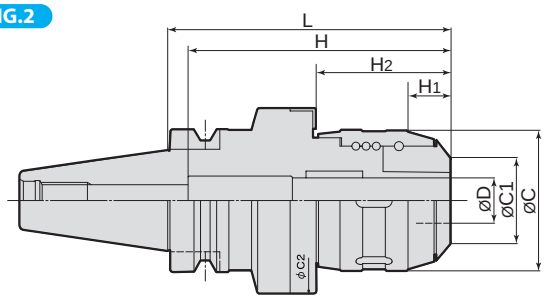


FIG.2



Cutter shank diameter should be h6 or better.

MODEL			A	Fig	øD	L	H	øC	øC1	øC2	H1	H2	Min insert length	N/W (kg)
BBT40	-HDU16-	120	○	2	16	120	112	62	38	82	14	54.5	57	
	-HDU20-	125	○		20	125	117				19	59.5	70	
BBT50	-HDU16-	105	○	1	16	105	112	62	38	–	14	54.5	57	
		135	△			135								
		165	△			165								
	-HDU20-	110	○		20	110	117				19	59.5	70	
		140	△			140								
		170	△			170								
	-HDU25-	115	○		25	115	128	70	44		27.5	66.5	85	
		145	△			145								
		175	△			175								
	-HDU32-	120	○		32	120	133	82	52			68.5	90	
		150	△			150								
		180	△			180								

NOTE : 1. Please don't use with collets because it may destroy the inside of the holder.
2. After 100 clamping cycles, or every 3month interval, please confirm clamping power of hydraulic portion.
3. When you check clamping power of hydraulic portion, please use exclusive test bar (separately sold).

ACCESSORIES
P.62 CHUCK WRENCH

ORDERING EXAMPLE

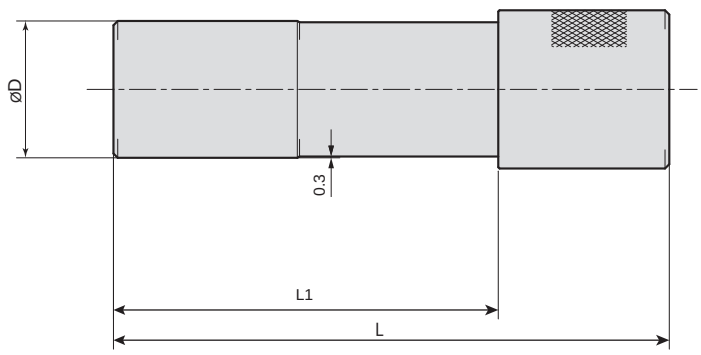
① BBT50 - ② HDU ③ 32 - ④ 120

① Shank Size
② Holder's Name
③ Max. øD
④ G.L. Length

NOTE : Big Plus system (BBT) is a licensed of BIG DAISHOWA

ACCESSORIES

Tester for clamping power



MODEL		øD	L	L1
TB	HDU16	16	110	57
	HDU20	20	110	70
	HDU25	25	125	85
	HDU32	32	130	90

ORDERING EXAMPLE

① TB - ② HDU16

① Holder's Name
② Chack Size

ACCESSORIES

CHUCK WRENCH (For Hy-Dual CHUCK)

HOOK SPANNER		
CHUCK CODE Hy-DUAL CHUCK	WRENCH CODE	
HDU16,HDU20	FS58-62G	35853
HDU25	FS68-75G	35854
HDU32	FS80-90G	35855

SYNCHRO TAP HOLDER
SYFN/SYFS

FEATURES P.11-12

BT№-SYFN/SYFS№-Ⓛ

▶▶▶ Thru-the-tool Coolant Available

▶▶▶ Thru-the-groove Coolant Available(Option)

FIG.1

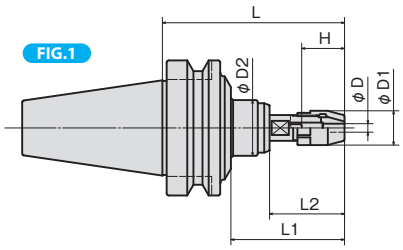


FIG.2

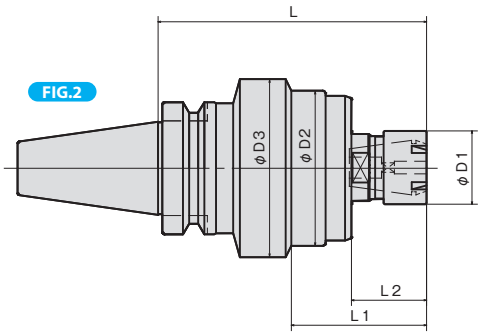


FIG.3

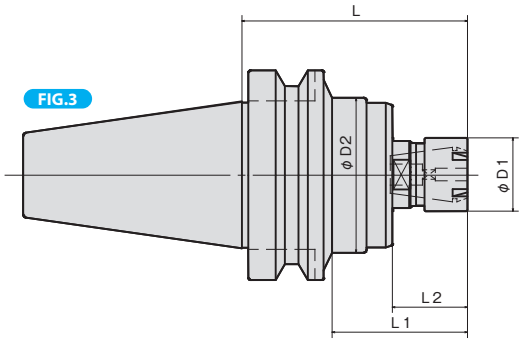


FIG.4

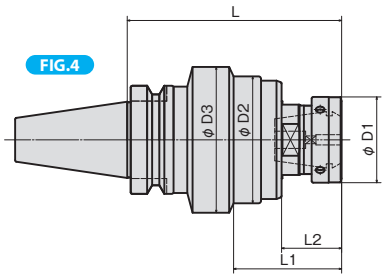
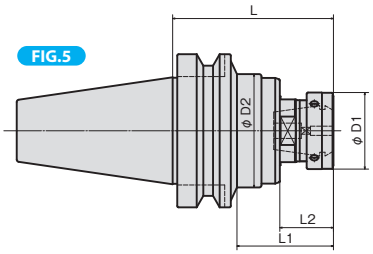


FIG.5



Please use the tool having shank tolerance within h7 for SYFS type.

MODEL			CODE	FIG	øD	øD1	øD2	øD3	L	L1	L2	H	TAP SIZE	COLLET
BT30	-SYFS02	-095	200602	1	3	16	26	–	95	53	35	22	M1,M1.6,M2,No.3,No.4 M3,No.5,No.6	–
	-SYFS03	-095	200604		4									
	-SYFN12	-105	200616	4	–	36	51	62.5	105	54	30	–	M4~M12,No.8~U1/2 P1/8	CR13GBorGH
		-135	200617						135	84	60			
BT40	-SYFS02	-085	221042	1	3	16	26	–	85	53	35	22	M1,M1.6,M2,No.3,No.4 M3,No.5,No.6	–
	-SYFS03	-085	221044		4									
	-SYFN12	-090	221052	5	–	36	51	–	90	54	30	–	M4~M12,No.8~U1/2 P1/8	CR13GBorGH
		-120	221053						120	84	60			
	-SYFN16S	-125	221039	2	–	35	74	85	125	63	35	–	M4~M16,No.8~U5/8, P1/4	CR16GBorGH
		-155	221040						155	93	65			
		-185	221041						185	123	95			
	-SYFN20	-125	221055	4	–	50	74	85	125	63	35	–	M4~M20,U5/16~U5/8, P1/8~P3/8	CR20GBorGH
		-155	221056						155	93	65			
		-185	221057						185	123	95			
BT50	-SYFS02	-095	251091	1	3	16	26	–	95	53	35	22	M1,M1.6,M2,No.3,No.4 M3,No.5,No.6	–
	-SYFS03	-095	251093		4									
	-SYFN16S	-105	251107	3	–	35	74	–	105	63	35	–	M4~M16,No.8~U5/8, P1/4	CR16GBorGH
		-135	251108						135	93	65			
		-165	251109						165	123	95			
		-195	251110						195	153	125			
		-225	251100						225	183	155			
	-SYFN20	-105	251104	5	–	50	74	–	105	63	35	–	M4~M20,U5/16~U5/8, P1/8~P3/8	CR20GBorGH
		-135	251105						135	93	65			
		-165	251106						165	123	95			

NOTE :1. Collet and chuck wrench are sold separately.
2. Applicable to synchronized machines only.
3. Thru-the-groove coolant type is manufacturered to orders.

ACCESSORIES P.53-56 COLLETS

ACCESSORIES P.57 NUT, CHUCK WRENCH

ORDERING EXAMPLE

① BT30 - ② SYFN ③ 12 - ④ 105

① Shank Size
② Name
③ Type No
④ G.L. Length

ACCESSORIES for SYNCHRO TAP HOLDER

ACCESSORIES

COLLET CHUCK (SLIM TYPE)

FEATURES P.14

ST Ⓓ-SSC Ⓓ MAX-Ⓛ

Thru-the-tool Coolant Available

Thru-the-groove Coolant Available

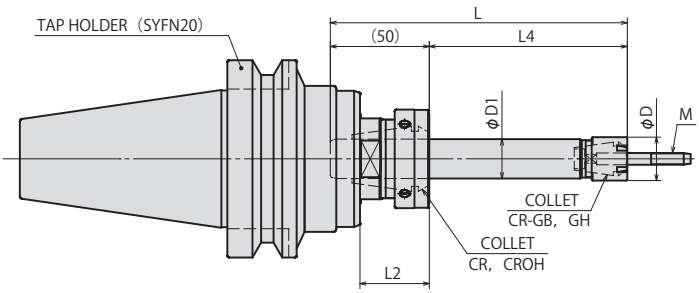


FIG.1

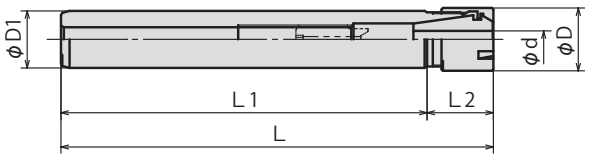
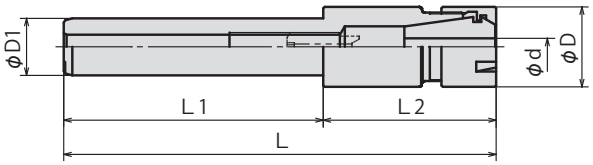


FIG.2



MODEL		CODE	FIG	øD	øD1	L	L1	L2	L3	L4	Suitable holder	Suitable collet	TAP SIZE	Collet for suitable collet	NUT
ST16	SSC07-100	30377	1	16	16	100	83	17	50 (min40)	50	SYFN20	CR20-16 CROH20-16	M2~M6, No.3~ U1/4	CR07-d CROH07-d	ER11MN
	SSC07-150	30378				150	133			100					
	SSC07-200	30379				200	183			150					
ST20	SSC10-100	30831	1	22	20	100	77	23	50 (min45)	50	SYFN20	CR20-20 CROH20-20	M4~M10, No.8~ U7/16	CR10GB CR10GH	ER16MN
	SSC10-150	30832				150	127			100					
	SSC10-200	30833				200	177			150					
	SSC10-250	30834				250	227			200					
	SSC13-150	30835	2	28	20	150	90	60		100			M4~M12, No.8~ U1/2,P1/8	CR13GB CR13GH	ER20MN
	SSC13-200	30836				200	140			150					

NOTE: 1. Collet and chuck wrench are sold separately.
2. CROH collet is used for thru-the-tool coolant application.

ACCESSORIES P.53-56 COLLETS

ACCESSORIES P.57 NUT, CHUCK WRENCH

ORDERING EXAMPLE

① BT30 - ② SYFN ③ 12 - ④ 105

① Shank Size
② Name
③ Type No
④ G.L. Length

TAP HOLDER (Clockwise Rotation)

BT№-TPCD_1-L_1

FEATURES

- Torque limitter collets are available.
  Tapping torque can be adjusted to prevent tap breakage.
- Accurate threads are made with the tensioncompression mechanism, compensating pitch error of the machining center.

FIG.1

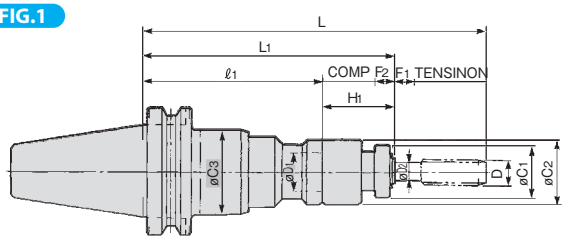
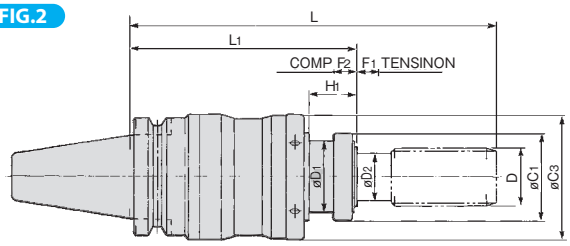


FIG.2



	MODEL	CODE BT	CODE SBT	FIG.	øD1	L1	ℓ 1	øC1	øC2	øC3	H1	F1	F2	øD2	D	TAP COLLET CODE	N/W (kg)
BT40 SBT40	-TPC20-150	11282	2220002	1	20	150	105	32	40	47	45	15	15	5~12.5	M4~M14	TCC20-(D)	1.9
	-TPC29-195	11284	2220004	1	29	195	140	45	55	63	55	15	15	8.5~20	M12~M27	TCC29-(D)	2.6
BT50 SBT50	-TPC20-165	13582	2221002	1	20	165	120	32	40	47	45	15	15	5~12.5	M4~M14	TCC20-(D)	4.3
	-TPC29-195	13584	2221004	1	29	195	140	45	55	63	55	15	15	8.5~20	M12~M27	TCC29-(D)	5.0
	-TPC40-225	13586	2221006	1	40	225	150	60	80	85	75	20	20	14~30	M18~M39	TCC40-(D)	6.2
	-TPC60-195	13588	2221008	2	60	195	—	75	—	106	39	20	20	30~42	M39~M52	TCC60-(D)	8.1

NOTE:1. TPC20, TPC29 & TPC40 of Fig.1→Torque is adjusted by tap collet.
2. TPC60 of Fig.2→Torque is adjusted by holder.
3. SBT is shank for BT Dual-Face-Contact spindle.

ORDERING EXAMPLE

① BT40 - ② TPC ③ 20 - ④ 150

① Shank Size
② Holder's Name
③ øD1
④ L1

TAP COLLETS (Type TCC)

FIG.1 With torque control

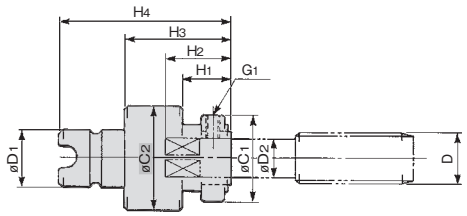
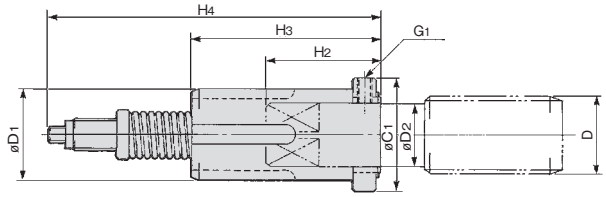


FIG.2 Without torque control



ORDERING EXAMPLE

① TCC ② 20 - ③ M5

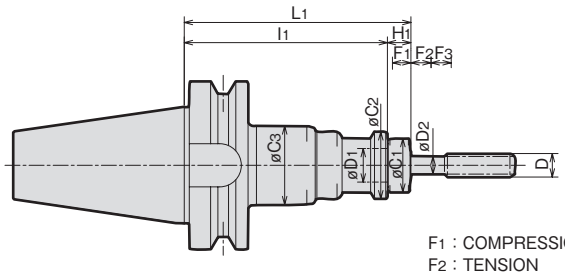
① Holder's Name
② øD1
③ Tap Size

CODE	FIG.	øD1	D	øC1	øD2	H1	H3	H4	G1
TCC20-(D)	1	20	M4 ~M14	32	40	20	45	73	M6
TCC29-(D)	1	29	M12~M27	45	55	25	55	90	M8
TCC40-(D)	1	40	M18~M39	60	80	40	75	123	M10
TCC60-(D)	2	60	M39~M52	75	—	—	124	219	M10

CODE	M(JIS B 4430-1972)						UNC(JIS B 4432-1972)						PF PT(JIS B 4445,4446-1967)					
	D	D2	H2		L		D	D2	H2		L		D	D2	H2		L	
TCC20-(D)	M4	5	22		195		NO.8U	5	22		195		—	—	—		—	
	M4.5	5			198		—	—	—		—		—	—				
	M5	5.5			203		10U NO.12U	5.5	22		203		—	—				
	M6	6			205		1/4U	6			205		—	—				
	—	—	—		—		5/16U	6.1	23		212		—	—	—		—	
	M7	6.2	23		207		—	—	—		—		—	—				
	M8	6.2			212		—	—					—	—				
	M9	7			214		3/8U	7	23		217		—	—				
	M10	7			217		—	—	—		—		—	—				
	M11	8			222		7/16U	8	24		221		PF PT 1/8	8	24		196	
TCC29-(D)	M12	8.5	24	29	223	248	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	1/2U	9	25	30	225	250	—	—				
	M14	10.5	25	31	228	252	9/16U	10.5		31	230	254	—	—				
	—	—	—	—	—	—	—	—	—	—	—	—	PF PT 1/4	11	25	31	202	226
	—	—					5/8U	12	25	32	235	258	—	—	—	—	—	—
	M16	12.5	25	33	235	257	—	—	—	—	—	—	—	—	—	—		
TCC40-(D)	M18	14		34		261 291	3/4U	14		34 34		266 296	PF PT 3/8	14		34 34		226 256
	M20	15	34	35		266 295	—	—		— —		— —	—	—		— —		— —
	M22	17		36		276 304	7/8U	17		34 36		276 304	—	—				
	—	—	—	—		— —	—	—		— —		— —	PF PT 1/2	18	34	42		241 263
	M24	19	34	43		281 302	—	—					PF PT 5/8	19		43		243 264
	M27	20				291 312	1U	20		34 43		286 307	—	—	—	—		— —
	—	—		—		—	1 1/8U	22		45		315	—	—				
	M30	23		45		315	—	—		—		—	PF PT 3/4	23		45		265
	—	—		—		—	1 1/4U	24		47		323	PF 7/8	24		47		268
	M33	25		47		323	—	—		—		—	—	—		—		—
	—	—		—		—	1 3/8U	26		47		333	PF PT 1	26		47		273
	M36	28		49		331	—	—		—		—	PF1 1/8	28		50		275
TCC60-(D)	M39	30		50	61	340 299	1 1/2U	30		50	61	335 294	—	—		—	—	— —
	M42	32			65	305	—	—			—	—	PF PT 1 1/4	32			57	243
	M45	35			70	305	1 3/4U	35			70	300	—	—			—	—
	M48	38			72	308	—	—			—	—	PF PT 1 1/2	38			62	243
	—	—			—	—	2U	40			75	315	—	—			—	—
	M52	42			75	315	—	—			—	—	PF1 3/4	42			67	243

DEPTH CONTROL TAPPER

BT№-ADC D1-L1



F1 : COMPRESSION
F2 : TENSION
F3 : BACK TENSION

MODEL		CODE	øD1	L1	ℓ 1	øC1	øC2	øC3	H1	F1	F2	F3	øD2	D	TAP COLLET CODE	N/W (kg)
BT40	-ADC20-150	11292	20	123	109	32	40	47	14	6	10	6	3~12.5	M2.5~M16	TC20-(D)	1.6
	-ADC29-195	11294	29	163	143	45	55	63	20	8	15	10	8.5 ~20	M 12~M27	TC29-(D)	2.6
BT50	-ADC20-165	13602	20	138	124	32	40	47	14	6	10	6	3~12.5	M2.5~M16	TC20-(D)	4.2
	-ADC29-195	13604	29	163	143	45	55	63	20	8	15	10	8.5~20	M12~M27	TC29-(D)	4.9
	-ADC40-225	13606	40	173	153	60	80	80	20	10	15	12	14~30	M18~M39	TC40-(D)	6.0

ORDERING EXAMPLE

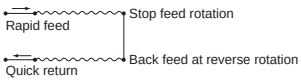
① BT40 - ② ADC ③ 20 - ④ 150

① Shank Size
② Holder's Name
③ øD1
④ L1

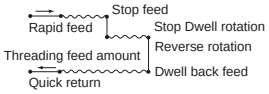
(Depth limit device) How to set

- The ADC tapper, in which the limit device is incorporated to determine thread depth automatically, can decide thread depth accurately. Variations in accuracy of depth tapping is ±0.1.
- Please use TC type tap, which has no torque limiter. In addition, traditional TCC collet having torque limiter can be used.
- It automatically corrects the error in the machine and feed tap pitch by the action of the float mechanism (tension-compression), which can make it tapping with high accuracy.

Example: through-hole program



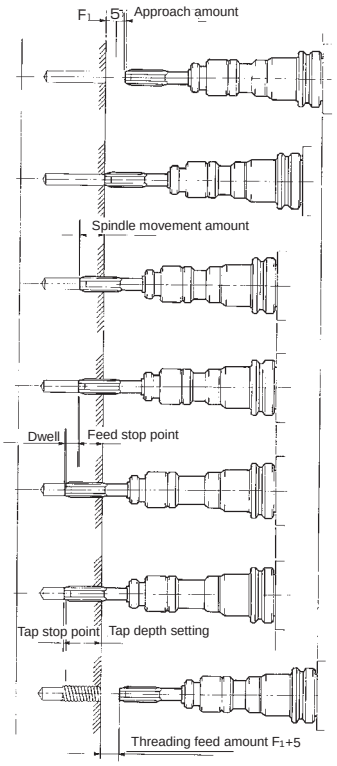
Example: blind hole program



Calculation method of dwell time

[Example] tapper: ADC20 (threading feel amount 6)
Tap: M12×1.75
Rotational speed: 180min^{-1} (3RPS)

$$\text{Dwell time} = \frac{6}{1.75 \times 180/60} \times 2 = 2.3 \text{ seconds}$$



①approach amount setting

Set to F1-5mm. Set slightly slower or equal to the speed of travel of the tap.

② Start tapping

③Spindle movement amount

Amount obtained by subtracting the threading feed amount (F1) by the tap depth setting amount.

④Feed stop point

Stop the feed of the machine, and let only the spindle (Dwell) turn.

⑤Dwell time

$$\text{Dwell time} = \frac{\text{Tapper threading feed amount (mm)}}{\text{Tap Pitch(mm) x Rotation (R,P,S)}} \times 2$$

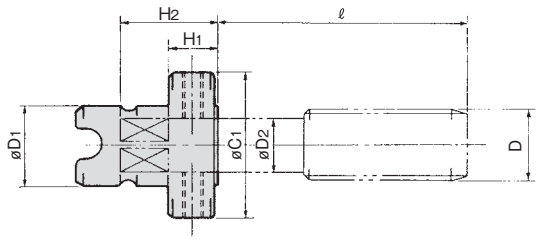
⑥Tap stop point

Stop spindle rotation, reverse spindle rotation (Dwell), and feed back (setting to the same as the rate at which the tap is fed back.).

⑦Tapping complete

TAP COLLET (Type TC)

TCD_1-L



CODE	øD1	D	øC1	H1
TC20-(D)	20	M3~M16	32	14
TC29-(D)	29	M12~M27	45	20
TC40-(D)	40	M18~M39	60	20

TC20 TAP COLLET

		TC20-(D)																	
D	M	—	※M2	M3	M4	M5	M6	—	M8	M10		M12	—	M14	—		M16		
	UNC	—	No.4	—	No.8	No.10	1/4	5/16	—	3/8	—	7/16	—	1/2	—	9/16	—	5/8	—
	PT・PF	—									P1/8		—				P1/4	—	
D2		3	4		5	5.5	6	6.1	6.2	7	8		8.5	9	10.5		11	12	12.5
H2		19.5	20.5		21.5	22		23			24			25	26		27		28
ℓ		24.5	23.5	25.5	30.5	38	40	47		52	31	56	58	60	62	64	35	68	67

TC29 TAP COLLET

		TC29-(D)																	
D	M	M12	—	M14	—			M16	M18	—		M20	—	M22	—	M24	—	M27	—
	UNC	—	1/2	—	9/16	—	5/8			3/4			7/8		—				1
	PT・PF	—				P1/4	—				P3/8	—		P1/2	—	P5/8	—		
D2		8.5	9	10.5		11	12	12.5	14			15	17	18	19		20		
H2		29	30	31		32		33	34			35	36	37	38				
ℓ		53	55	57	59	30	63	62	66	71	31	70	79	43	82	44	92	87	

TC40 TAP COLLET

		TC40-(D)																							
D	M	M18			M20	—	M22	—	M24	—	M27	—	M30	—		M33	—		M36	—	M39	—			
	UNC	—	3/4	—		7/8	—				1	1 1/8	—		—		1 3/8	—				1 1/2			
	PT・PF	—		P3/8	—		P1/2	—	P5/8	—				P3/4	—	P7/8	—		P1	—	P1 1/8	—			
D2		14		15	17		18	19		20		22	23		24		25	26		28		30			
H2		34		35	36		42	43				45			47			49				51			
ℓ		66	71	31	70	79		38	77	39	87	82	90	40	98	43	98	106	46	106	51	114	109		

NOTE : 1. For JIS standard taps only.
＊mark tap collet is manufactured to order.

ORDERING EXAMPLE

① TC ② 20 - ③ M5

① Holder's Name
② øD1
③ Tap Size

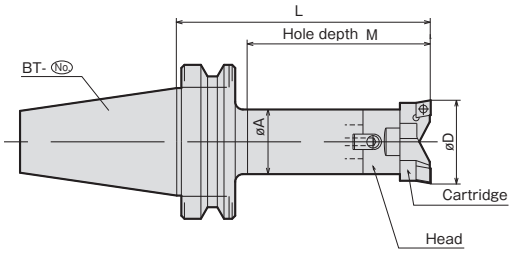
<BORING SYSTEM> TWINCUT

FEATURES P.21-26

BT№-TWCⒹMIN-Ⓛ-S

FEATURES

- Versatile modular type boring system.
- Rigidity is increased by the new coupling method and the serrated head.
- Twin blades allow heavy cutting.
- Extensions are used for deep holes.



RANGE	MODEL	CODE	SHANK	HEAD	CARTRIDGE	INSERT	L	M	ϕA	N/W (kg)
ø25~33	- TWC 25 - 120 - S	11710	- SBS1 - 120	HE25	CT25	WT25-079	120	85	24	1.3
ø32~45	- TWC 32 - 135 - S	11720	- SBS2 - 130	HE32	CT32	WT32-095	135	100	31	1.6
ø44~63	- TWC 44 - 135 - S	11730	- SBS3 - 135	HE44	CT44			100	42	2.0
ø62~89	- TWC 62 - 135 - S	11740	- SBS4 - 135	HE62	CT62	WT62-127		100	54	2.7
ø88~126	- TWC 88 - 165 - S	11750	- SBS5 - 165	HE88	CT88		165	130	64	4.4
ø25~33	- TWC 25 - 150 - S	14010	- SBS1 - 150	HE25	CT25	WT25-079	150	104	24	4.0
ø32~45	- TWC 32 - 165 - S	14020	- SBS2 - 165	HE32	CT32	WT32-095	165	119	31	4.2
ø44~63	- TWC 44 - 165 - S	14030	- SBS3 - 165	HE44	CT44			119	42	4.7
	- TWC 44 - 225 - S	14031	- SBS3 - 225				225	179		5.2
ø62~89	- TWC 62 - 165 - S	14040	- SBS4 - 165	HE62	CT62	WT62-127	165	119	54	5.5
	- TWC 62 - 240 - S	14041	- SBS4 - 240				240	194		6.7
	- TWC 62 - 285 - S	14042	- SBS4 - 285				285	239		7.4
ø88~126	- TWC 88 - 165 - S	14050	- SBS5 - 165	HE88	CT88		165	119	64	6.7
	- TWC 88 - 240 - S	14051	- SBS5 - 240				240	194		8.4
	- TWC 88 - 330 - S	14052	- SBS5 - 330				330	284		10.4
ø125~175	- TWC125 - 165 - S	14060	- SBS6 - 165	HE125	CT125		165	119	82	7.7
	- TWC125 - 240 - S	14061	- SBS6 - 240				240	194		10.6
	- TWC125 - 330 - S	14062	- SBS6 - 330				330	284		14.2

NOTE : 1. Inserts are sold separately.
2. Inserts are in phase with the drive key.
3. Thru-the-tool coolant type is manufacturered to orders.

ORDERING EXAMPLE

①	②	③	④	⑤
BT40	- TWC	25	- 120	- S

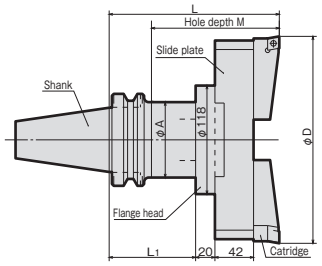
① Shank Size
② Name
③ Min. øD
④ G.L. Length
⑤ Set

ACCESSORIES P.70 INSERTS

ACCESSORIES P.74 EXTENSION · REDUCTION

FEATURES

For high stock removal with balanced blade,
for ø175~ø375mm bores.



RANGE(D)	MODEL		CODE	SHANK		FLANGE HEAD	SLIDE PLATE	CARTRIDGE	INSERT	L	M	øA	N/W (kg)
ø175~225	BT50	- TWC175 - 185 - S	14070	BT50	- SBS6 - 165	TWC - FH - 0 (TWC - FH - 90)	SP175 - 42	CT125	WT62-127	185	139	82	12.8
		- TWC175 - 260 - S	14071		- SBS6 - 240					260	214		15.8
		- TWC175 - 350 - S	14072		- SBS6 - 330					350	304		19.3
ø225~275		- TWC225 - 185 - S	14073		- SBS6 - 165		SP225 - 42			185	139		14.3
		- TWC225 - 260 - S	14074		- SBS6 - 240					260	214		17.2
		- TWC225 - 350 - S	14075		- SBS6 - 330					350	304		20.7
ø275~325		- TWC275 - 185 - S	14076		- SBS6 - 165		SP275 - 42			185	139		16.7
		- TWC275 - 260 - S	14077		- SBS6 - 240					260	214		19.7
		- TWC275 - 350 - S	14078		- SBS6 - 330					350	304		23.2
ø325~375		- TWC325 - 185 - S	14079		- SBS6 - 165		SP325 - 42			185	139		17.9
		- TWC325 - 260 - S	14080		- SBS6 - 240					260	214		20.9
		- TWC325 - 350 - S	14081		- SBS6 - 330					350	304		24.4

NOTE : 1. Inserts are sold separately.
2. Inserts are in phase with the drive key.
3. TWC-FH-90 Flange Head is used to change the phase to 90°

ORDERING EXAMPLE

① BT50 - ② TWC ③ 175 - ④ 185 - ⑤ S

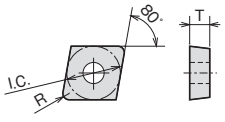
① Shank Size
② Name
③ Min. øD
④ G.L. Length
⑤ Set

ACCESSORIES for <BORING SYSTEM> TWINCUT Double-Face-Contact Shank

ACCESSORIES

INSERT for TWINCUT

TWINCUT



CODE				ISO CODE	I. C.	T	R	CARTRIDGE	SCREW	DRIVER
STEEL		CAST IRON								
WT25 - 079P	32901	WT25 - 079K	32911	CC**080304	7.94	3.18	0.4	CT25	BFTX0307	TRX10
WT32 - 095P	32902	WT32 - 095K	32912	CC**090308	9.525		0.8	CT32~44	BFTX0409N	TX215
WT62 - 127P	32903	WT62 - 127K	32913	CC**120408	12.7	4.76		CT62~125	BFTX0511N	TRX220

NOTE : 1. Inserts are available in 10 pcs boxes.

<BORING SYSTEM> FIRSTCUT

FEATURES P.21-26

NEW

BT№-FICⒹMINN-Ⓛ-S

▶▶▶ BBT Available

▶▶▶ Thru-the-tool Coolant Available

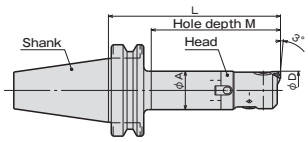


Fig. 1

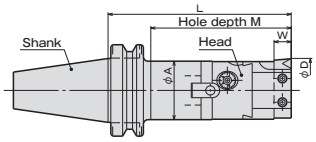


Fig. 2

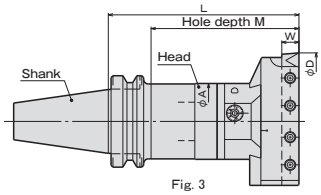


Fig. 3

RANGE D	MODEL	Fig	CODE	SHANK	HEAD	BORING TOOL	INSERT	L	M	φA	W	N/W (kg)
φ25~32	BT40 -FIC25N-130-S	1	221400	BT40 -SBS1-120	FCH25N	—	TP□□0802□□	130	95	24	—	1.2
φ32~44 6)	-FIC32N-155-S		221402	-SBS2-135	FCH32N			155	120	31		1.5
φ44~57	-FIC44N-155-S		221404	-SBS3-135	FCH44N					42		2.2
φ55~73	-FIC55N-150-S		221406	-SBS4-135	FCH55N			150	115	54		3.0
φ70~140	-FIC70N-200-S	2	221408	-SBS5-165	FCH70N	TBS119C12 SBS919 TBS919 TSBS919	CP□□1204□□ TP□□1603□□ CC□□1204□□ TC□□16T3□□	200	165	64	□19	5.2
φ90~160	-FIC90N-215-S		221410	-SBS6-165	FCH90N			215	180	83		8.2
φ25~32	BT50 -FIC25N-160-S	1	251500	BT50 -SBS1-150	FCH25N	—	TP□□0802□□	160	114	24	—	4.0
φ32~44 6)	-FIC32N-185-S		251502	-SBS2-165	FCH32N			185	139	31		4.5
φ44~57	-FIC44N-185-S		251504	-SBS3-165	FCH44N					42		5.2
	-FIC44N-245-S		251506	-SBS3-225				245	199			5.8
φ55~73	-FIC55N-180-S		251508	-SBS4-165	FCH55N			180	134	54		6.1
	-FIC55N-255-S		251510	-SBS4-240				255	209			7.3
	-FIC55N-300-S		251512	-SBS4-285				300	254			8.1
φ70~140	-FIC70N-200-S	2	251514	-SBS5-165	FCH70N	TBS119C12 SBS919 TBS919 TSBS919	CP□□1204□□ TP□□1603□□ CC□□1204□□ TC□□16T3□□	200	154	64	□19	7.7
	-FIC70N-275-S		251516	-SBS5-240				275	229			9.6
	-FIC70N-365-S		251518	-SBS5-330				365	319			11.8
φ90~160	-FIC90N-215-S		251520	-SBS6-165	FCH90N			215	169	83		10.5
	-FIC90N-290-S		251522	-SBS6-240				290	244			13.5
	-FIC90N-380-S		251524	-SBS6-330				380	334			17.2
φ150~220	-FIC150N-205-S	3	251526	-SBS6-165	FCH150N			205	159			11.3
	-FIC150N-280-S		251528	-SBS6-240				280	234			14.3
	-FIC150N-370-S		251530	-SBS6-330				370	324			18.0
φ220~290	-FIC220N-205-S		251532	-SBS6-165	FCH220N			205	159			12.6
	-FIC220N-280-S		251534	-SBS6-240				280	234			15.6
	-FIC220N-370-S		251536	-SBS6-330				370	324			19.3
φ290~360	-FIC290N-205-S		251538	-SBS6-165	FCH290N			205	159			13.9
	-FIC290N-280-S		251540	-SBS6-240				280	234			16.9
	-FIC290N-370-S		251542	-SBS6-330				370	324			20.6

FIRSTCUT HEAD

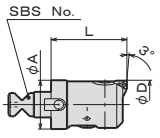


Fig. 1

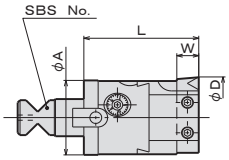


Fig. 2

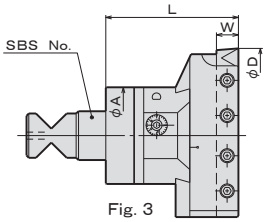


Fig. 3

RANGE D	MODEL	Fig	CODE	SLIDE DISTANCE	BORING TOOL	INSERT	SBS No.	L	φA	W	N/W (kg)
φ25~32	FCH25N	1	700130	3.5	—	TP□□0802□□	SBS1	47	24	—	0.2
φ32~44 6)	FCH32N		700131	5.0			SBS2	57	31		0.4
φ44~57	FCH44N		700132	6.5			SBS3	64	42		0.7
φ55~73	FCH55N		700133	9.0			SBS4	68	54		1.2
φ70~140	FCH70N	2	700134	20	TBS119C12 SBS919 TBS919 TSBS919	CP□□1204□□ TP□□1603□□ CC□□1204□□ TC□□16T3□□	SBS5	100	64	□19	2.6
φ90~160	FCH90N		700135				SBS6	122	83		4.7
φ150~220	FCH150N	3	700136					112			5.5
φ220~290	FCH220N		700137								6.8
φ290~360	FCH290N		700138								8.1

NOTE : 1. Adjustable in φ0.01mm per scale.
2. Insert is in face with drive key.
3. Through the tool coolant is standard.
4. Inserts over than FIC70N are square shank tools.
5. Inserts or bites are sold separately.
6. Max. machining diameter means when installed packed spacer.
Without spacer, the max machining diameter is φ42mm.

ACCESSORIES P.73 THROWAWAY SQUARE SHANK TOOLS

ACCESSORIES P.74 EXTENSION, REDUCTION

ORDERING EXAMPLE

①	②	③	④	⑤	⑥
BT50	FIC	70	N	200	S

① Shank Size
② Holder's Name
③ Min. øD
④ New Type
⑤ G.L. Length
⑥ Set

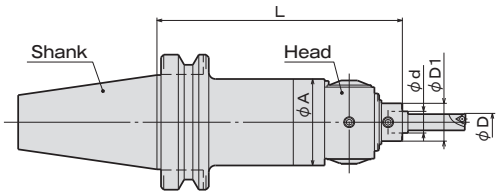
<BORING SYSTEM> FIRSTCUT
[The small diameter hole machining tool]

NEW

BT㊊-FICHEAD㊊NJ-Ⓛ-S

▶▶▶ BBT Available

▶▶▶ Thru-the-tool Coolant Available



RANGE D	MODEL		CODE	SHANK		HEAD	L	φA	φd	φ D1	DIAL CALIBRATION	COLLET	N/W (kg)
φ3~23	BT40	-FIC1NJ-151-S	221420	BT40	-SBS3-135	FCH1NJ	151	46	10	18	φ0.005	SSCP10-□	2.1
φ3~28		-FIC2NJ-180-S	221422		-SBS5-165	FCH2NJ	180	64	16	28	φ0.010	SSCP16-□	4.4
φ3~23	BT50	-FIC1NJ-181-S	251550	BT50	-SBS3-165	FCH1NJ	181	46	10	18	φ0.005	SSCP10-□	5.1
φ3~28		-FIC2NJ-180-S	251552		-SBS5-165	FCH2NJ	180	64	16	28	φ0.010	SSCP16-□	6.9

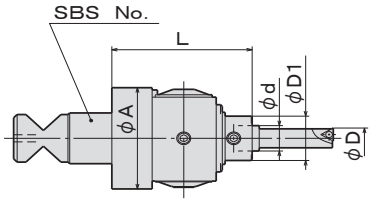
NOTE :1. Insert is in face with drive key.
2. Through the tool coolant is standard.
3. Inserts and bites and collets are sold separetely.

ORDERING EXAMPLE

① BT50 - ② FIC ③ 1 ④ NJ - ⑤ 181 - ⑥ S

① Shank Size
② Holder's Name
③ Head No.
④ New Jig Borer Type
⑤ G.L. Length
⑥ Set

FIRSTCUT HEAD [Small-hole Boring Tool]



RANGE D	MODEL	CODE	SBS No.	L	φA	φd	φD1	DIAL CALIBRATION	SLIDE DISTANCE	COLLET	N/W (kg)
φ3~23	FCH1NJ	700139	SBS3	60	46	10	18	φ0.005	2.5	SSCP10-□	0.6
φ3~28	FCH2NJ	700140	SBS5	80	64	16	28	φ0.010	3.5	SSCP16-□	1.8

NOTE : 1. Through the tool coolant is standard.
2. Inserts and bites and collets are sold separetely.

ACCESSORIES
P.73 JIG BORER TOOLS, COLLET, INSERTS

ACCESSORIES
P.74 EXTENSION, REDUCTION

THROWAWAY SQUARE SHANK TOOLS・THROWAWAY JIG BORER TOOLS

THROWAWAY SQUARE SHANK TOOLS

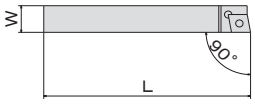


Fig. 1

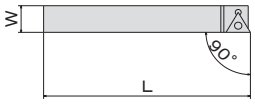
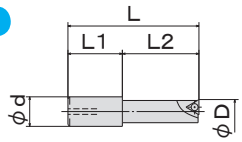


Fig. 2

MIN. RANGE D	MODEL	Fig	CODE	INSERT	W	L
70	TBS919	1	700150	CC□□1204□□	□19	140
72	TBS119C12		700152	CP□□1204□□		95
70	TSBS919	2	700154	TC□□16T3□□		140
	SBS919		700156	TP□□1603□□		

NOTE : Inserts are sold separetely.

THROWAWAY JIG BORER TOOLS

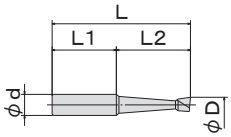


MIN. RANGE D	MODEL	CODE	L	L1	L2	φd	INSERT
8	JBM-1008	700160	50	20	30	10	CC□□03S1□□
10	-1010	700161	60		40		TP□□0802□□
12	-1012	700162	70		50		
15	-1015	700163	79	19	60		
18	-1018	700164					TP□□1102□□
8	JBM-1608	700165	65	30	35	16	CC□□0602□□
10	-1610	700166	75		45		TP□□0802□□
12	-1612	700167	85		55		
15	-1615	700168	95		65		
18	-1618	700169	96	26	70		TP□□1102□□
21	-1621	700170					

NOTE :Inserts are sold separetely.

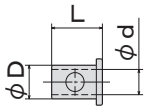
JIG BORER TOOLS・COLLET

JIG BORER TOOLS



TYPE	MIN. RANGE D	φd	L1	For Through hole MODEL	CODE	L	L1	For Blind hole MODEL	CODE	L	L1
Carbide Tool	3	8	25	101A	700341	39	14	101B	700361	39	14
	6			102A	700342	51.5	26.5	102B	700362	51.5	26.5
	10			103A	700343	65.5	40.5	103B	700363	65.5	40.5
	15			104A	700344	69	44	104B	700364	69	44
	3	12	40	151A	700345	60	20	151B	700365	60	20
	6			152A	700346	70	30	152B	700366	70	30
	10			153A	700347	75	35	153B	700367	75	35
	15			154A	700348	85	45	154B	700368	85	45

COLLET



MODEL	CODE	φd	φD	L
SCP10-6	35650	6	10	17.5
SCP10-8	35652	8		
SCP16-8	35654	8	16	25
SCP16-10	35656	10		
SCP16-12	35658	12		

THROWAWAY TIP for FIRSTCUT

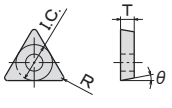


Fig. 1

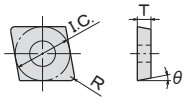


Fig. 2

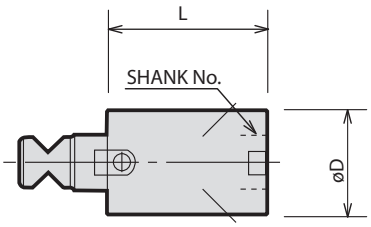
STEEL MODEL	CODE	CAST IRON MODEL	CODE	SUS MODEL	CODE	ALMINIUM MODEL	CODE	DA MODEL	CODE	CBN MODEL	CODE	Fig.	ISO CODE	I.C.	T	R	θ	BORING HEAD	SCREW	DRIVER
NFT-TC16-ST	34500	NFT-TC16-CS	34508	NFT-TC16-SU	34516							1	TC**16T304	9.525	3.97	0.4	7°	FCH70N~FCN290N	MS4011A	TRX15
NFT-CC03-ST	34501	NFT-CC03-CS	34509	NFT-CC03-SU	34517	NFT-CC03-AL	34524			NFT-CC03-BN	34532	2	CC**03X102	3.5	1.39	0.2		FCH1NJ	TS16	TRX6
NFT-CC06-ST	34502	NFT-CC06-CS	34510	NFT-CC06-SU	34518	NFT-CC06-AL	34525	NFT-CC06-DA	34528	NFT-CC06-BN	34533		CC**060202	6.35	2.38			FCH2NJ		
NFT-CC12-ST	34503	NFT-CC12-CS	34511	NFT-CC12-SU	34519								CC**120404	12.7	4.76	0.4		FCH70N~FCN290N	MS5011A	TRX20
NFT-TP08-ST	34504	NFT-TP08-CS	34512	NFT-TP08-SU	34520	NFT-TP08-AL	34526	NFT-TP08-DA	34529	NFT-TP08-BN	34534	1	TP**080204	4.76	2.38		11°	FCH25N~FCH55N、FCH1NJ、FCH2NJ	CHN-20043-R	TRX6
NFT-TP11-ST	34505	NFT-TP11-CS	34513	NFT-TP11-SU	34521	NFT-TP11-AL	34527	NFT-TP11-DA	34530	NFT-TP11-BN	34535		TP**110204	6.35				FCH1NJ、FCH2NJ	CHN-25056-R	TRX8
NFT-TP16-ST	34506	NFT-TP16-CS	34514	NFT-TP16-SU	34522			NFT-TP16-DA	34531	NFT-TP16-BN	34536		TP**160304	9.525	3.18			FCH70N~FCN290N	MS4011A	TRX15
NFT-CP12-ST	34507	NFT-CP12-CS	34515	NFT-CP12-SU	34523							2	CP**120404	12.7	4.76				M4×15L(全長)	

NOTE : 1. Inserts are available in 10 pcs boxes.

ACCESSORIES for <BORING SYSTEM> TWINCUT・FIRSTCUT

EXTENSION

For deeper holes.



MODEL	CODE	SHANK No.	øD	L
TEX1 - 40	32610	1	24	40
TEX2 - 45	32620	2	31	45
TEX3 - 50	32630	3	42	50
TEX3 - 65	32631			65
TEX4 - 65	32640	4	54	65
TEX4 - 90	32641			90
TEX5 - 75	32650	5	64	75
TEX5 - 105	32651			105
TEX6 - 75	32660	6	82	75
TEX6 - 105	32661			105

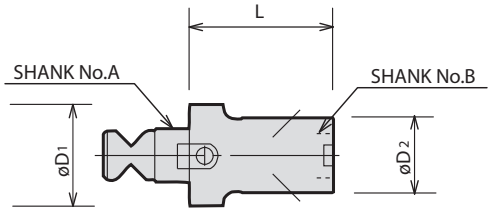
ORDERING EXAMPLE

① TEX ② 1 - ③ 40

① Name
② Shank No.
③ L

REDUCTION

For using smaller heads.



MODEL	CODE	SHANK No.A	SHANK No.B	øD1	øD2	L
RE2X1 - 60	32720	2	1	31	24	60
RE2X1 - 90	32721					90
RE3X1 - 60	32730	3		42		60
RE3X1 - 90	32731					90
RE3X2 - 60	32735		2		31	60
RE3X2 - 90	32736					90
RE4X1 - 60	32740	4	1	54	24	60
RE4X1 - 90	32741					90
RE4X2 - 60	32743		2		31	60
RE4X2 - 90	32744					90
RE4X3 - 60	32746		3		42	60
RE4X3 - 90	32747					90
RE5X2 - 60	32750	5	2	64	31	60
RE5X2 - 105	32751					105
RE5X3 - 60	32753		3		42	60
RE5X3 - 105	32754					105
RE5X4 - 60	32756		4		54	60
RE5X4 - 105	32757					105
RE6X3 - 75	32760	6	3	82	42	75
RE6X3 - 90	32761					90
RE6X4 - 75	32763		4		54	75
RE6X4 - 90	32764					90
RE6X5 - 75	32766		5		64	75

ORDERING EXAMPLE

① RE ② 2×1 - ③ 60

① Name
② Shank No. A×B
③ L

END MILL HOLDER

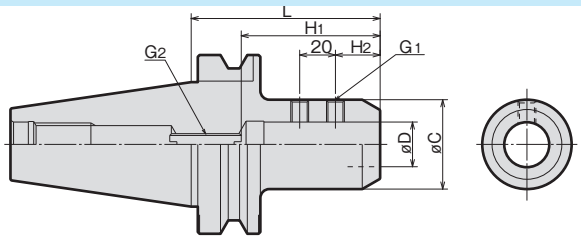
BT№-SLAⒹ-Ⓛ

▶▶▶ Thru-the-tool Coolant Available

▶▶▶ BBT Available

FEATURES

Run-out of the cutting tool is improved by the eccentric ID.



ORDERING EXAMPLE

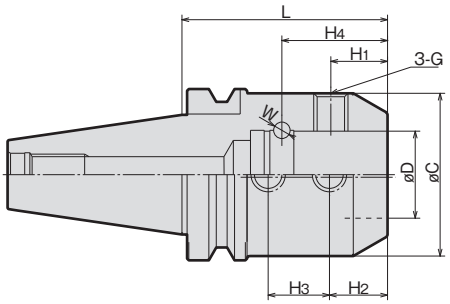
① BT30 - ② SLA ③ 20 - ④ 075

① Shank Size
② Holder's Name
③ Cutter's Shank Dia.
④ G.L. Length

MODEL		øD(H6)	L	øC	H1 MIN.	H1 MAX.	H2	G1	G2	N/W (kg)
BT30 (BBT30)	-SLA20- 075	20	75	45	55	70	25	M10	M10	0.80
	-SLA25- 085	25	85							0.85
BT40 (BBT40)	-SLA6- 090	6	90	25	30	45	12	M6	M5	1.1
	-SLA8- 090	8	90	30	35	50	12	M6	M6	1.1
	-SLA10- 090	10	90	30	45	60	12	M8	M8	1.4
	-SLA12- 090	12	90	32	45	60	10	M8	M8	1.4
	-SLA16- 090	16	90	45	45	60	15	M12	M12	1.6
	150		150							2.4
	200		200							3.2
	-SLA20- 090	20	90	50	55	70	25	M12	M12	1.6
	150		150							2.8
	200		200							3.6
	-SLA25- 090	25	90	50	55	70	25	M12	M12	1.6
	150		150							2.7
	200		200							3.5
	-SLA32- 105	32	105	60	65	80	30	M12	M12	1.3
	150		150							3.5
	200		200							4.4
	-SLA40- 120	40	120	62	65	80	20	M12	M12	2.5
	-SLA42- 120	42	120	62	65	80	32	M12	M12	2.5
BT50 (BBT50)	-SLA6- 105	6	105	25	30	45	12	M6	M5	4.1
	-SLA8- 105	8	105	30	35	50	12	M6	M6	4.3
	-SLA10- 105	10	105	30	45	60	12	M8	M8	4.2
	-SLA12- 105	12	105	32	45	60	10	M8	M8	4.2
	-SLA16- 105	16	105	45	45	60	15	M12	M12	4.5
	150		150							5.0
	200		200							5.6
	250		250							6.2
	300		300							6.8
	-SLA20- 105	20	105	50	55	70	25	M12	M12	4.6
	150		150							5.3
	200		200							6.0
	250		250							6.9
	300		300							7.6
	-SLA25- 105	25	105	50	55	70	25	M12	M12	4.6
	150		150							5.3
	200		200							6.0
	250		250							6.8
	300		300							7.6
	350		350							8.1
	-SLA32- 105	32	105	60	65	80	30	M12	M12	4.9
	150		150							5.8
	200		200							6.8
	250		250							7.9
	300		300							9.1
	350		350							10.2
	400		400							11.2
	500		500							13.5
	-SLA40- 105	40	105	70	70	85	20	M16	M12	5.0
	150		150							6.3
	200		200							7.7
	250		250							9.4
	300		300							10.9
	-SLA42- 105	42	105	90	75	90	32	M16	M12	6.0
	150		150							8.2
	200		200							10.7
	250		250							13.1
	300		300							15.8
	350		350							18.3
	400		400							20.7
	500		500							25.4
	-SLA50- 120	50	120	98	75	90	35	M20	M12	7.1
	150		150							8.9
	200		200							11.8
	250		250							14.9
	300		300							17.9

NOTE : 1. For endmill of straight shank with flat.
2. Thru-the-tool application is acceptable. Please inform it when ordering.

END MILL HOLDER (For ANSI type combination shank) BT№-SLDⒹ-Ⓛ



ORDERING EXAMPLE

① BT50 - ② SLD ③ 50.8 - ④ 120

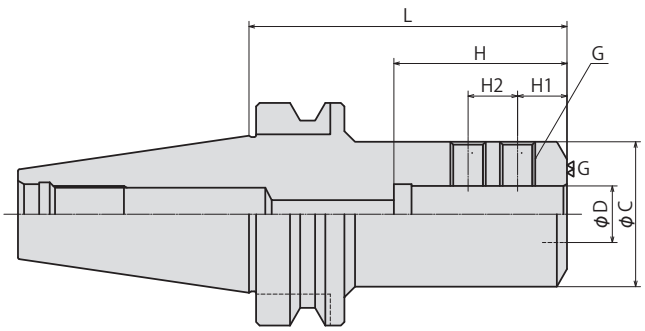
① Shank Size
② Holder's Name
③ Cutter's Shank Dia.
④ G.L. Length

MODEL		CODE	øD(H6)	L	øC	H1	H2	H3	H4	G	øW	N/W (kg)
BT50	-SLD50.8-120	13260	50.8	120	95	33.1	33.9	35.78	61.68	M20×1.5	11.18	6.6

NOTE : For ANSI combination shank endmills.

SIDE LOCK DRILL HOLDER BT№-CSLⒹ-Ⓛ

▶▶▶ Thru-the-tool Coolant Available



ORDERING EXAMPLE

① BT30 - ② CSL ③ 16 - ④ 060

① Shank Size
② Holder's Name
③ Cutter's Shank Dia.
④ G.L. Length

MODEL		øD	L	øC	H	H1	H2	G
BT30	CSL16-060	16	60	41	49	14	14	M10
	CSL20-060	20		45	51			
	CSL25-065	25	65	47	57			
BT40	CSL16-060	16	60	41	49	14	14	M10
	CSL16-090		90					
	CSL20-060	20	60	45	51			
	CSL20-090		90					
	CSL25-060	25	60	48	57			
	CSL25-090		90			15	20	M12
	CSL32-075	32	75	61	61			
	CSL32-105		105					
	CSL40-105	40		68	71		25	M14
BT50	CSL16-040	16	40	–	49	18	–	M12
	CSL16-105		105	41		14	14	M10
	CSL16-135		135					
	CSL16-165		165					
	CSL20-040	20	40	–	51	18	–	M12
	CSL20-105		105	45		14	14	M10
	CSL20-135		135					
	CSL20-165		165					
	CSL25-040	25	40	–	57	20	–	M16
	CSL25-105		105	48		15	20	M12
	CSL25-135		135					
	CSL25-165		165					
	CSL32-040	32	40	–	61	20	–	M16
	CSL32-105		105	61		15	20	M12
	CSL32-135		135					
	CSL32-165		165					
	CSL40-050	40	50	68	71	14		M14
	CSL40-105		105			15	25	
	CSL40-135		135					
	CSL40-165		165					
	CSL50-105	50	105	83	81			M16

NOTE:1.For endmill of straight shank with flat.

MORSE TAPER HOLDER (Type A)

BT㊊-MTA㊊-Ⓛ

BBT Available

FIG.1

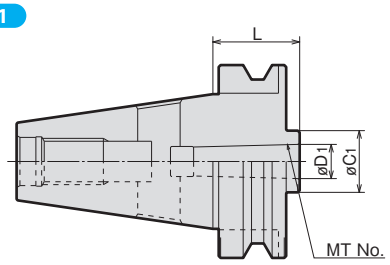
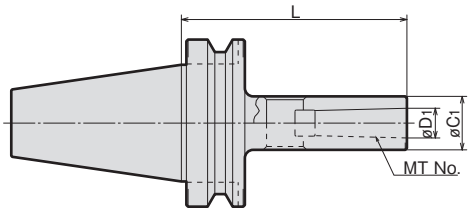


FIG.2



DRILL DIA. AND SHANK

SHANK		MT1	MT2	MT3	MT4	MT5
DRILL DIA.	以上MIN.	2.0	14.1	23.1	32.1	50.1
	以下MAX.	14.0	23.0	32.0	50.0	75.0

MODEL		FIG.	MT No.	L	øD1	øC1	N/W (kg)
BT30 (BBT30)	-MTA1-045	1	1	45	12.065	25	0.43
	-MTA2-060	1	2	60	17.780	32	0.50
	-MTA3-080	1	3	80	23.825	40	0.69
BT40 (BBT40)	-MTA1-045	1	1	45	12.065	25	1.0
	-120	2		120			1.3
	-180			180			1.6
	-MTA2-045	1	2	45	17.780	25	1.0
	-120	2		120			1.6
	-180			180			2.0
	-MTA3-075	1	3	75	23.825	25	1.0
	-135	2		135			1.7
	-180			180			2.2
	-MTA4-090	1	4	90	31.267	25	1.1
	-165	2		165			2.6
	-200			200			3.5
BT50 (BBT50)	-MTA1-045	1	1	45	12.065	25	3.7
	-120	2		120			4.0
	-180	2		180			4.3
	-200			200			4.5
	-250			250			4.7
	-300			300			4.9
	-350			350			5.1
	-MTA2-045	1	2	45	17.780	25	3.7
	-135	2		135			4.3
	-180	2		180			4.6
	-200			200			4.7
	-250			250			5.1
	-300			300			5.5
	-350			350			5.9
	-MTA3-045	1	3	45	23.825	25	3.6
	-150	2		150			4.7
	-180	2		180			4.9
	-200			200			5.2
	-250			250			5.7
	-300			300			6.2
	-350			350			6.7

MODEL		FIG.	MT No.	L	øD1	øC1	N/W (kg)
BT50 (BBT50)	-MTA4-075	1	4	75	31.267	50	3.8
	-180	2		180			5.4
	-200			200			5.7
	-250			250			6.5
	-300			300			7.3
	-350			350			8.0
	-MTA5-105	1	5	105	44.399	65	4.0
	-210	2		210			6.7
	-250			250			7.8
	-300			300			9.1
	-350			350			10.4
	-MTA6-210		6	210	63.348	90	7.0
	-278			278			10.0

NOTE : 1. For tongue type Morse taper shank cutting tools.

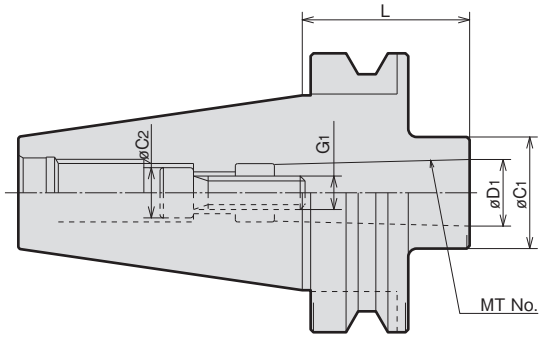
ORDERING EXAMPLE

① BT30 - ② MTA ③ 1 - ④ 045

① Shank Size
② Holder's Name
③ MT No.
④ G.L. Length

MORSE TAPER HOLDER (Type B)

BT№-MTB№-L



MODEL		CODE	MT No.	L	øD1	øC1	øC2	G1	N/W (kg)
BT40	-MTB1-045	11167	1	45	12.065	25	10	M6	1.0
	-MTB2-045	11168	2	45	17.780	32	14	M10	1.0
BT50	-MTB1-045	13332	1	45	12.065	25	10	M6	3.6
	-MTB2-045	13334	2	45	17.780	32	16	M10	3.6
	-MTB3-060	13336	3	60	23.825	40	18	M12	3.7
	-MTB4-075	13338	4	75	31.267	50	20.5	M16	3.7

NOTE : 1. For drawing thread type Morse taper shank cutting tools.

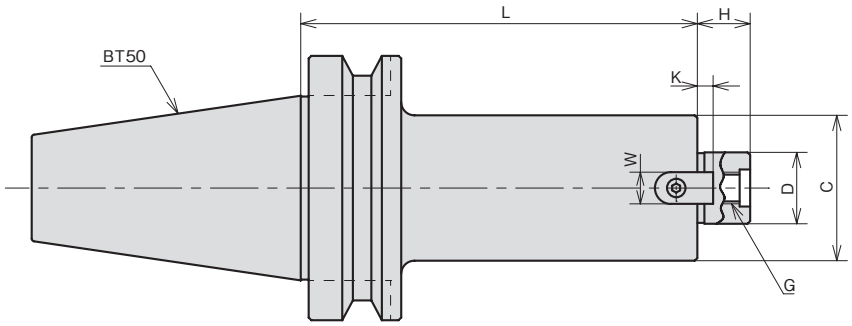
ORDERING EXAMPLE

① BT40 - ② MTB ③ 1 - ④ 045

① Shank Size
② Holder's Name
③ MT No.
④ G.L. Length

SIDE CUTTER ARBOR FOR ISCAR

BT№-FMIⒹ-Ⓛ



MODEL		D	L	C	H	W	K	G	N/W (kg)
BT50	-FMI22-105-45	22	105	45	17	10	5	M10	4.7
	-150-45		150						5.3
	-200-45		200						6.0
	-250-45		250						6.6
	-300-45		300						7.2
	-FMI27-105-55	27	105	55	20	12	6	M12	5.2
	-150-55		150						6.1
	-200-55		200						7.0
	-250-55		250						7.9
	-300-55		300						8.8
	-FMI32-105-65	32	105	65	22	14	7	M16	5.7
	-150-65		150						7.0
	-200-65		200						8.3
	-250-65		250						9.6
	-300-65		300						10.9
	-FMI40-105-80	40	105	80	26	16	8	M20	6.7
	-150-80		150						8.7
	-200-80		200						10.6
	-250-80		250						12.6
	-300-80		300						14.5

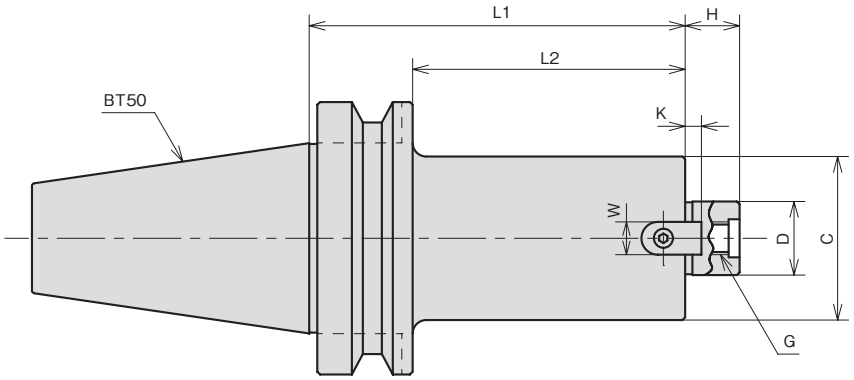
ORDERING EXAMPLE

① BT40 - ② FMI ③ 22 - ④ 105

① Shank Size
② Holder's Name
③ ΦD
④ G.L. Length

CUTTER ARBOR FOR OSG

BT№-FMOⒹ-Ⓛ



MODEL		D	L1	L2	C	H	W	K	G	N/W (kg)
BT50	-FMO25.4-138-63	25.4	138	100	60	20	9.5	5	M12	6.1
	-188-63		188	150						7.2
	-238-63		238	200						8.3
	-288-63		288	250						9.4
	-338-63		338	300						10.5
	-FMO27 -138-63	27	138	100	60	20	12	6	M12	6.1
	-188-63		188	150						7.2
	-238-63		238	200						8.3
	-288-63		288	250						9.4
	-338-63		338	300						10.5
	-FMO32 -105-80	32	105	67	77	22	14	7	M16	6.4
	-150-80		150	112						8.0
	-200-80		200	162						9.8
	-250-80		250	212						11.7
	-300-80		300	262						13.5
	-350-80		350	312						15.3
	-400-80		400	362						17.1
	-500-80		500	462						20.8

ORDERING EXAMPLE

① BT40 - ② FMO ③ 25.4 - ④ 045

① Shank Size
② Holder's Name
③ MT No.
④ G.L. Length

FACE MILL ARBOR (Type A)

BT№-FMAⒹ-Ⓛ

▶▶▶ Thru -the-tool Coolant Available (Option)

▶▶▶ BBT Available

FIG.1

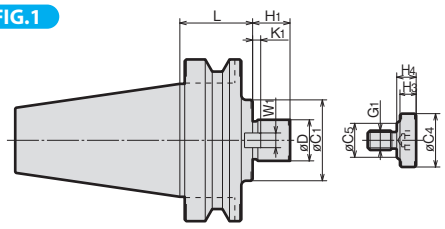


FIG.2

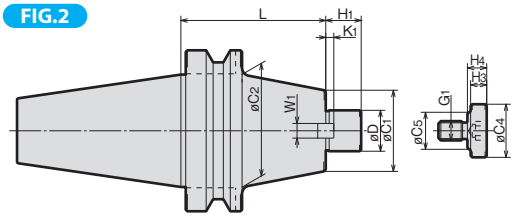


FIG.3

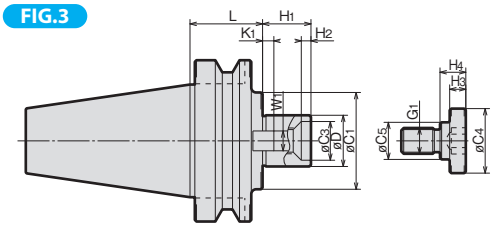


FIG.4

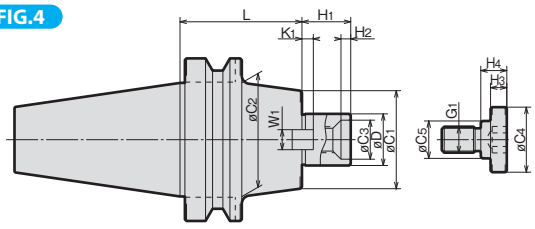


FIG.5

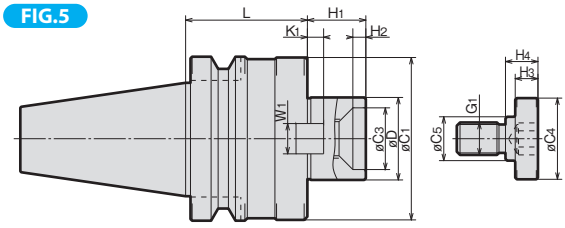
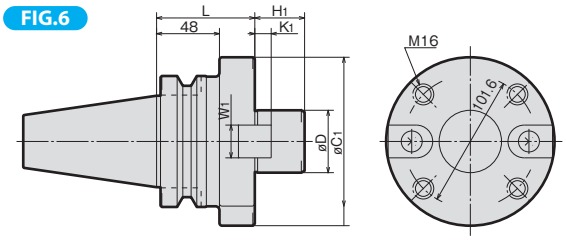


FIG.6



MODEL		FIG.	øD(h6)	L	øC1	øC2	øC3	H1	H2	KEY W1	KEY K1	G1	CLAMP BOLT øC4	CLAMP BOLT øC5	CLAMP BOLT H3	CLAMP BOLT H4	N/W (kg)
BT30 (BBT30)	-FMA22.225-035	1	22.225	35	40	—	—	18	—	8.0	4	M8	20	15	7	9	0.57
	-FMA25.4 -035		25.4	35	50	—	—	22	—	9.5	5	M12	33	23	10	12	0.72
	-045		25.4	45	50	—	—	22	—	9.5	5	M12	33	23	10	12	1.0
	-FMA31.75 -045		31.75	45	60	—	24	22	6	12.7	7	M12	40	23	10	16	1.4
BT40 (BBT40)	-FMA25.4 -045	1	25.4	45	50	—	—	22	—	9.5	5	M12	33	23	10	12	1.5
	-060			60													1.7
	-105			105													2.6
	-150			150													3.1
	-200			200													4.5
	-FMA31.75 -045	1	31.75	45	60	—	24	30	6	12.7	7	M16	40	23	10	16	1.6
	-060			60													2.0
	-090			90													2.7
	-150			150													4.0
	-FMA38.1 -045	1	38.1	45	80	—	28	34	6	15.9	9	M20	50	27	14	20	2.1
	-060			60													2.5
	-090			90													3.3
	-FMA50.8 -045	1	50.8	45	100	—	38	36	10	19.05	10	M24	65	37	14	24	3.0
	-075			75													3.6
BT50 (BBT50)	-FMA25.4 -045	1	25.4	45	50	—	—	22	—	9.5	5	M12	33	23	10	12	4.1
	-090	2		90		70											5.0
	-105			105													5.4
	-150			150													6.4
	-200			200													7.7
	-250			250													8.8
	-300			300													9.9
	-350			350													11.0
	-400			400													12.2
	-500			500													14.6

MODEL		FIG.	øD(h6)	L	øC1	øC2	øC3	H1	H2	KEY		G1	CLAMP BOLT				N/W (kg)
										W1	K1		øC4	øC5	H3	H4	
BT50 (BBT50)	-FMA31.75 -045	1	31.75	45	60	—	24	30	6	12.7	7	M16	40	23	10	16	4.2
	-075	2		75		70											5.1
	-105			105													5.6
	-150			150													6.7
	-200			200													8.3
	-250			250													9.6
	-300			300													10.9
	-350			350													12.2
	-400			400													13.5
	-500			500													16.1
	-FMA38.1 -045	1	38.1	45	80	—	28	34	6	15.9	9	M20	50	27	14	20	4.6
	-075			75													5.4
	-105			105													6.7
	-150			150													8.5
	-200			200													10.4
	-250			250													12.4
	-300			300													14.3
	-350			350													16.3
	-400			400													18.2
	-500			500													22.1
	-FMA50.8 -045	1	50.8	45	98	—	38	36	10	19.05	10	M24	65	37	14	24	5.0
	-075			75													6.7
	-105			105													8.5
	-150			150													11.2
	-200			200													14.1
	-250			250													17.2
	-300			300													16.2
	-350			350													18.8
	-400			400													21.5
	-500			500													24.6
	-FMA47.625-075	1	47.625	75	128.57	—	—	38	—	25.4	12.5	M16	—	—	—	—	8.3
	-105			105													11.2
	-150			150													11.8
	-200			200													14.1
	-250			250													15.9
	-300			300													17.7
	-400			400													19.5
	-500			500													21.4

NOTE : 1. Please instruct when ordering for thru-the-tool application.

ORDERING EXAMPLE

① BT30 - ② FMA ③ 25.4 - ④ 035

① Shank Size
② Name
③ øD
④ G.L. Length

FACE MILL ARBOR (Type B)

BT№-FMBⒹ-Ⓛ

▶▶▶ Thru -the-tool Coolant Available (Option)

▶▶▶ BBT Available

FIG.1

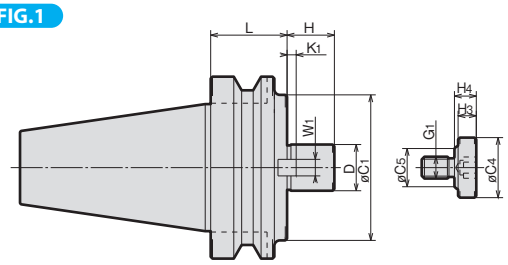


FIG.2

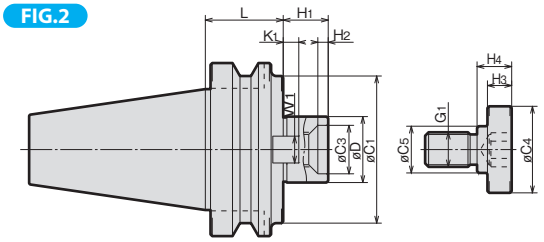


FIG.3

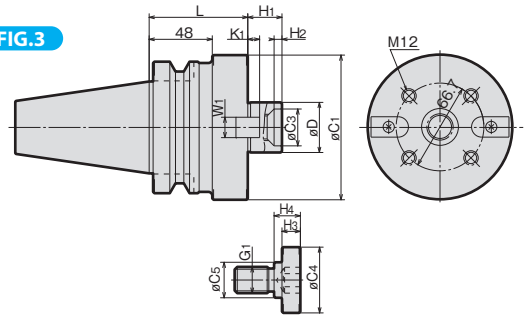
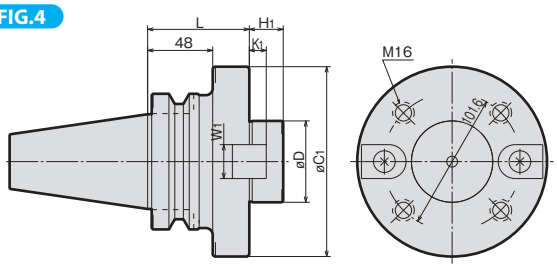


FIG.4



MODEL		FIG.	øD(h6)	L	øC1	øC3	H1	H2	KEY W1	KEY K1	G1	CLAMP BOLT øC4	CLAMP BOLT øC5	CLAMP BOLT H3	CLAMP BOLT H4	N/W (kg)
BT40 (BBT40)	-FMB25.4 - 060	1	25.4	60	80	—	26	—	9.5	5	M12	33	23	10	12	1.3
	- 105			105												3.3
	-FMB38.1 - 060	2	38.1	60	85	28	26	6	15.9	9	M20	50	27	14	20	2.6
	-FMB27 - 060	1	27	60	80	—	26	—	12	6	M12	33	23	10	12	2.3
	- 105			105												3.3
	-FMB40 - 060	2	40	60	85	28	26	6	16	8.5	M20	50	27	14	20	2.6
BT50 (BBT50)	-FMB25.4 - 045	1	25.4	45	80	—	26	—	9.5	5	M12	33	23	10	12	4.1
	- 090			90												6.1
	- 150			150												8.3
	- 200			200												10.4
	- 250			250												12.6
	- 300			300												14.8
	- 350			350												17.0
	- 400			400												18.5
	- 500			5000												20.6
	-FMB38.1 - 045	2	38.1	45	85	28	26	6	15.9	9	M20	50	27	14	20	4.4
	- 075			75												5.7
	- 105			105												7.3
	150			150												8.9
	200			200												11.2
	250			250												13.5
	300			300												15.9
	350			350												18.2
	400			400												20.3
	500			500												24.8
	-FMB38.1F - 075	3	38.1	75	110	28	26	6	15.9	9	M20	50	27	14	20	6.6
	-FMB27 - 045	1	27	45	80	—	26	—	12	6	M12	33	23	10	12	4.1
	- 090			90												6.1
	- 150			150												8.3
	200			200												10.4
	250			250												12.6
	300			300												14.5
	350			350												16.5
	400			400												18.5
	500			500												22.6

MODEL		FIG.	øD(h6)	L	øC1	øC3	H1	H2	KEY		G1	CLAMP BOLT				N/W (kg)
									W1	K1		øC4	øC5	H3	H4	
BT50 (BBT50)	-FMB40 - 045	1	40	45	85	28	26	6	16	8.5	M20	50	27	14	20	4.5
	- 075			75												5.8
	- 105			105												7.2
	150			150												9.3
	200			200												11.6
	250			250												13.8
	300			300												16.1
	350			350												18.3
	400			400												20.7
	500			500												25.1
	-FMB40F - 075	2	40	75	108	28	26	6	16	8.5	M20	50	27	14	20	6.7
	105			105												8.5
	150			150												11.1
	200			200												14.1
	-FMB60 - 075	3	60	75	140	—	25	—	25.4	12.5	—	—	—	—	—	8.5
	105			105												9.6
	150			150												12.7
	200			200												13.9
	250			250												15.3
	300			300												17.1

NOTE : For Sandvik cutters.

ORDERING EXAMPLE

① BT40 - ② FMB ③ 25.4 - ④ 060

① Shank Size
② Name
③ øD
④ G.L. Length

FACE MILL ARBOR (Type C)

BT№-FMCⒹ-Ⓛ

▶▶▶ Thru -the-tool Coolant Available (Option)

▶▶▶ BBT Available

FIG.1

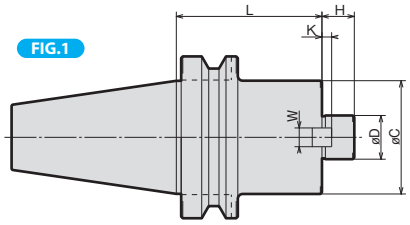
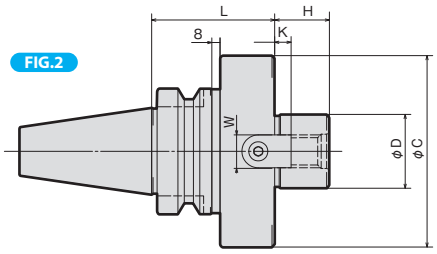


FIG.2



ORDERING EXAMPLE

① BT40 - ② FMC ③ 25.4 - ④ 060

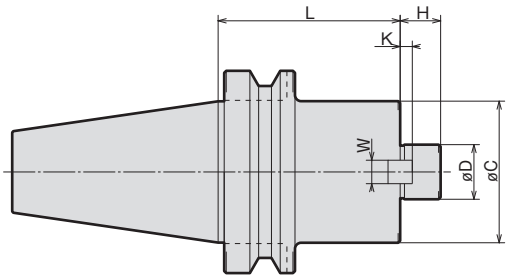
① Shank Size
② Name
③ øD
④ G.L. Length

MODEL		Fig	øD(h6)	L	øC	H	K	W	CLAMP BOLT	N/W (kg)
BT30 (BBT30)	-FMC16 -045	1	16	45	34	17	5	8	M8×25L	0.6
	-FMC22 -045		22		45	18		10	M10×30L	0.7
	-FMC27 -045	2	27		70	20	6	12	M12×35L	1.1
	-FMC32 -045		32		85	22	7	14	M16×40L	1.4
BT40 (BBT40)	-FMC25.4-060	1	25.4	60	70	20	5	9.5	M12×35L	2.0
	-105			105						3.1
	-FMC38.1-060		38.1	60	85	22	7	15.9	M16×40L	2.5
	-FMC16 -045		16	45	34	16	4	8	M8×25L	1.6
	-FMC22 -060		22	60	45	18	5	10	M10×30L	1.5
	-105			105						2.1
	-150			150						3.8
	-200			200						4.8
	-FMC27 -060	2	27	60	70	20	6	12	M12×35L	2.0
	-105			105						3.1
	-135			135						4.9
	-FMC32 -060		32	60	85	22	7	14	M16×40L	2.4
	-105			105						4.2
	-150			150						5.3
BT50 (BBT50)	-FMC25.4-045	1	25.4	45	70	20	5	9.5	M12×35L	4.1
	-090			90						5.6
	-150			150						7.3
	-200			200						9.0
	-250			250						10.3
	-300			300						12.0
	-350			350						13.6
	-FMC38.1-045		38.1	45	85	22	7	15.9	M16×40L	4.3
	-075			75						5.7
	-105			105						7.1
	-150			150						9.1
	-200			200						11.4
	-250			250						13.6
	-300			300						15.8
	-350			350						18.2
	-FMC22 -060		22	60	45	18	5	10	M10×30L	4.1
	-105			105						4.7
	-150			150						5.5
	-200			200						6.1
	-250			250						6.8
	-300			300						7.6
	-350			350						8.2
	-400			400						9.0
	-500			500						10.5
	-FMC27 -045		27	45	70	20	6	12	M12×35L	4.0
	-090			90						5.4
	-150			150						7.4
	-200			200						9.0
	-250			250						10.5
	-300			300						12.1
	-350			350						13.5
	-400			400						15.1
	-500			500						16.8
	-FMC32 -045		32	45	85	22	7	14	M16×40L	4.2
	-075			75						5.8
	-105			105						7.0
	-150			150						9.1
	-200			200						11.4
	-250			250						13.8
	-300			300						16.0
	-350			350						18.1
	-400			400						20.5
	-500			500						24.7

NOTE : For Sandvik and Seco cutters.

RADIUS MILL LONG ARBOR

BT№-FM Ⓓ-Ⓛ



	MODEL	CODE	øD(h6)	L	øC	H	K	W	CLAMP BOLT	N/W (kg)
BT50 (BBT50)	- FM22 - 200 - 050	251111	22	200	48	18	5	10	M10×30L	5.9
	- 063	251112			60					7.2
	- 250 - 050	251113		250	48					6.7
	- 063	251114			60					8.4
	- 300 - 050	251115		300	48					7.4
	- 063	251116			60					9.5
	- 350 - 050	251117		350	48					8.1
	- 063	251118			60					10.6
	- FM22.225 - 150 - 050	251141	22.23	150	47	18	4	7.6	M10×30L	5.2
	- 063	251142			60					6.1
	- 200 - 050	251143		200	47					5.9
	- 063	251144			60					7.2
	- 250 - 050	251145		250	47					6.5
	- 063	251146			60					8.4
	- 300 - 050	251147		300	47					7.2
	- 063	251148			60					9.5
	- 350 - 050	251149		350	47					7.9
	- 063	251150			60					9.5
	- FM25.4 - 200	251121	25.4	200	60	22	5	9.1	M12×35L	7.3
	- 250	251122		250						8.4
	- 300	251123		300						9.5
	- 350	251124		350						10.6
	- FM27 - 200	251161	27	200	73	20	6	12	M12×35L	9
	- 250	251162		250						10.6
	- 300	251163		300						12.3
	- FM31.75 - 150 - 080	251131	31.75	150	76	30	7	12.3	M16×35L	7.7
	- 100	251132			96					10.1
	- 200 - 080	251133		200	76					9.5
	- 100	251134			96					12.9
	- 250 - 080	251135		250	76					11.3
	- 100	251136			96					15.8
	- 300 - 080	251137		300	76					13.1
	- 100	251138			96					18.6

ORDERING EXAMPLE

①	②	③	④
BT50	- FM	22	- 200

① Shank Size
② Name
③ øD
④ G.L. Length

FACE MILL ARBOR (Type H)

NEW

BT№-FMHⒹ-Ⓒ1-L

BBT Available

FIG.1

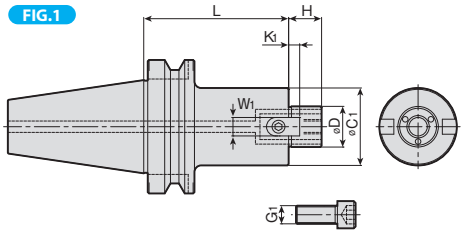
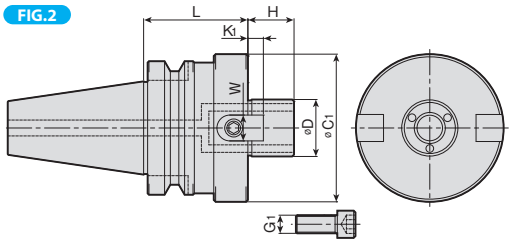


FIG.2



MODEL				CODE	FIG.	ΦD(h6)	L	ΦC1	H	W1	K1	G1	Vertical hole
BT30 (BBT30)	FMH16	-29	-35	10014	1	16	35	29	16	8	5	M8×30	3-φ2 P.C.D.φ12
		-37	-35	10016		16	35	37	16	8	5		
	FMH22	-47	-40	10018	2	22	40	47	18	10	5	M10×30	3-φ3 P.C.D.φ16
BT40 (BBT40)	FMH16	-29	-60	11940	1	16	60	37	16	8	5	M8×30	3-φ2 P.C.D.φ12
			-105	11942			105						
	FMH16	-37	-60	11944		16	60	37	16	8	5	M8×30	
			-105	11946			105						
	FMH22	-47	-60	11948		22	60	47	18	10	5	M10×30	3-φ3 P.C.D.φ16
			-105	11950			105						
	FMH22	-60	-60	11952			60	60	18	10	5	M10×30	
			-105	11954			105						
	FMH27	-60	-60	11956		27	60	60	20	12	6	M12×35	3-φ3.5 P.C.D.φ19.5
			-105	11958			105						
BT50 (BBT50)	FMH16	-29	-60	14540		16	60	29	16	8	5	M8×30	3-φ2 P.C.D.φ12
			-105	14541			105						
			-150	14542			150						
	FMH16	-37	-60	14543			60	37					
			-105	14544			105						
			-150	14545			150						
			-200	14546			200						
	FMH22	-47	-60	14547		22	60	47	18	10	5	M10×30	3-φ3 P.C.D.φ16
			-105	14548			105						
			-150	14549			150						
			-200	14550			200						
			-250	14551			250						
	FMH22	-60	-60	14552			60	60					
			-105	14553			105						
			-150	14554			150						
			-200	14555			200						
			-250	14556			250						
	FMH25.4	-60	-60	14557		25.4	60	60	22	9.5	5	M12×35	3-φ3.5 P.C.D.φ18.5
			-105	14558			105						
			-150	14559			150						
	FMH27	-60	-60	14560		27	60	60	20	12	6		3-φ3.5 P.C.D.φ19.5
			-105	14561			105						
			-150	14562			150						
			-200	14563			200						
			-250	14564			250						
	FMH27	-76	-60	14565			60	76					
			-105	14566			105						
			-150	14567			150						
			-200	14568			200						
			-250	14569			250						
	FMH31.75	-76	-60	14570		31.75	60	76	30	12.7	7	M16×35	3-φ4 P.C.D.φ24
			-105	14571			105						
			-150	14572			150						
			-200	14573			200						
			-250	14574			250						
	FMH31.75	-96	-60	14575			60	96					
			-105	14576			105						
			-150	14577			150						

NOTE :1. Face Mill Arbor for cutters with OH hole.
2. Clamp bolt for fastening cutter is included.
3. When included clamp bolt (M12, M16) does not fit, please choose suitable MBH-M12, M16 bolt from the clamp bolt list on page 84

ORDERING EXAMPLE

① BT50 - ② FMH 27 - ③ 60 - ④ 60 - ⑤

① Shank Size
② Holder's Name
③ øD
④ øC1
⑤ G.L. Length

ACCESSORIES for FACE MILL ARBOR

CLAMP BOLT FOR FACE MILL ARBOR

FIG.1

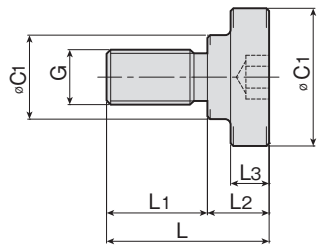
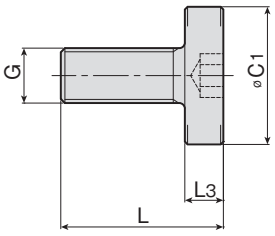


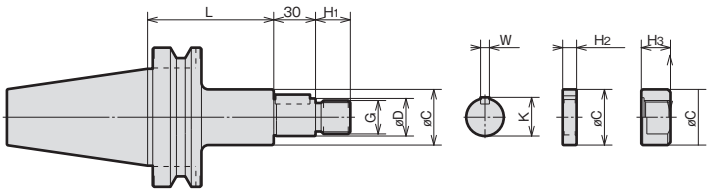
FIG.2



MODEL	CODE	FIG.	øC1	øC2	L	L1	L2	L3	G	ARBOR CODE
MBA - M 8	49771	1	20	15	23	14	9	7	M 8×P1.25	FMA22.225 SMA16
MBA - M10	49772		28	18	27	16	11	9	M10×P1.5	SMA22 SMB22.225
MBA - M12	49773		33	23	30	18	12	10	M12×P1.75	FMA,B25.4 FMB27 SMA27
MBA - M16	49774		40	23	40	24	16	10	M16×P2.0	FMA31.75 SMA32 SMB31.75
MBA - M20	49775		50	27	50	30	20	14	M20×P2.5	FMA,B38.1 FMB40 SMA40 SMB38.1
MBA - M24	49776		65	37	59	35	24	14	M24×P3.0	FMA50.8
MBH - M12	49691	2	33	—	38	—	—	10	M12×P1.75	FMH25.4 FMH27
MBH - M16	49692		40	—	45	—	—	10	M16×P2.0	FMH31.75

SIDE CUTTER ARBOR

BT№-SCAⒹ-Ⓛ



	MODEL	CODE	øD(h6)	L	øC	G	H1	H2	H3	K	W	N/W (kg)
BT40	-SCA12.7 -060	11092	12.7	60	20	M12×1.25	15	5 10 20	12	◇	◇	1.2
	-SCA15.875-075	11094	15.875	75	26	M14×1.5	16		13	17.42	3.18	1.4
	-SCA22.225-075	11098	22.225	75	34	M20×1.5	21		18	23.82		1.7
	-SCA25.4 -075	11100	25.4	75	40	M24×2	25		21	27.78	6.35	2.0
	-120	11102		120								2.5
	-SCA31.75 -090	11104	31.75	90	46	M30×2	30		26	34.92	7.92	2.6
BT50	-SCA12.7 -075	13212	12.7	75	20	M12×1.25	15	5 10 20	12	◇	◇	3.9
	-105	13214		105								4.0
	-SCA15.875-090	13216	15.875	90	26	M14×1.5	16		13	17.42	3.18	4.0
	-120	13218		120								4.2
	-SCA22.225-090	13220	22.225	90	34	M20×1.5	21		18	23.82		4.5
	-135	13222		135								4.7
	-SCA25.4 -090	13224	25.4	90	40	M24×2	25		21	27.78	6.35	4.7
	-135	13226		135								5.1
	-SCA31.75 -090	13228	31.75	90	46	M30×2	30		26	34.92	7.92	5.1
	-135	13230		135								5.7
	-SCA38.1 -090	13232	38.1	90	55	M36×3	36		31	42.06	9.52	5.8
	-135	13234		135								6.7

ORDERING EXAMPLE

① BT40 - ② SCA ③ 12.7 - ④ 060

① Shank Size
② Name
③ øD
④ G.L. Length

SHELL MILL ARBOR (Type A)

BT№-SMAⒹ-Ⓛ

FIG.1

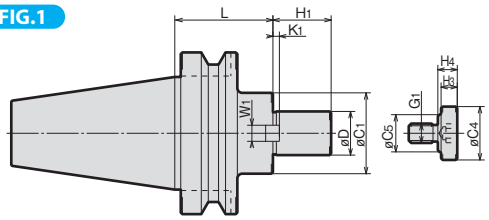


FIG.2

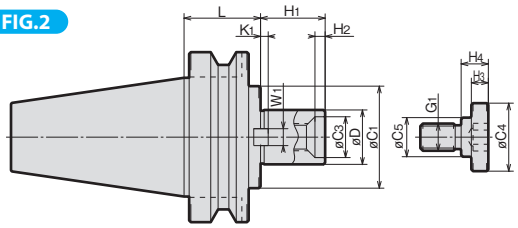


FIG.3

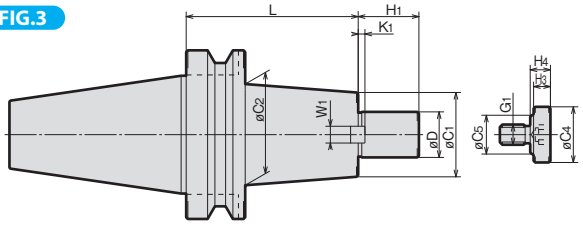
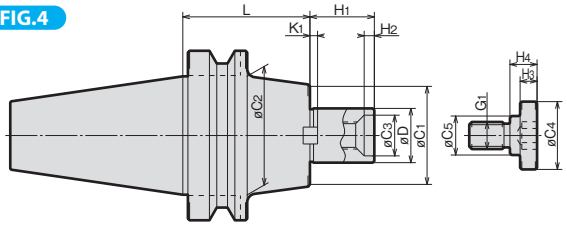


FIG.4



MODEL		FIG.	øD(h6)	L	øC1	øC2	øC3	H1	H2	KEY W1	KEY K1	G1	CLAMP BOLT øC4	CLAMP BOLT øC5	CLAMP BOLT H3	CLAMP BOLT H4	N/W (kg)
BT40	-SMA16-060	1	16 (15.875)	60	34	—	—	17	—	8	3	M8	20	15	7	9	1.3
	-120			120													1.7
	-SMA22-060	1	22 (22.225)	60	42	—	—	27	—	8	3.5	M10	28	18	9	11	1.5
	-120			120													2.1
	-SMA27-045	1	27 (25.4)	45	50	—	—	36	—	10	4	M12	33	23	10	12	1.5
	-105			105													2.4
	-SMA32-045	3	32 (31.75)	45	60	—	24	38	6	10	4.5	M16	40	23	10	16	1.7
	-090			90													2.7
BT50	-SMA16-075	1	16 (15.875)	75	34	—	—	17	—	8	3	M8	20	15	7	9	4.1
	-120			120													4.4
	-150			150													4.8
	-200			200													5.2
	-SMA22-075	1	22 (22.225)	75	42	—	—	27	—	8	3.5	M10	28	18	9	11	4.3
	-120			120													4.8
	-150			150													5.1
	-180			180													5.5
	-200			200													5.7
	-250			250													6.3
	-300			300													6.9
	-350			350													7.3
	-400			400													8.0
	-SMA27-060	1	27 (25.4)	60	50	—	—	36	—	10	4	M12	33	23	10	12	4.3
	-105	2		105		60											5.2
	-150			150													6.0
	-200			200													7.2
	-250			250													8.0
	-300			300													9.1
	-350			350													10.3
	-400			400													11.5

MODEL		FIG.	øD(h6)	L	øC1	øC2	øC3	H1	H2	KEY W1	KEY K1	G1	CLAMP BOLT øC4	CLAMP BOLT øC5	CLAMP BOLT H3	CLAMP BOLT H4	N/W (kg)
BT50	-SMA32 -045	1	32 (31.75)	45	60	—	24	38	6	10	4.5	M16	40	23	10	16	4.2
	-075	2		75		70											5.1
	-105			105													5.9
	-150			150													7.1
	-200			200													8.5
	-250			250													9.8
	-300			300													11.1
	-350			350													12.6
	-400			400													13.9
	-SMA40 -045	1	40 (38.1)	45	80	—	28	38	6	12	5	M20	50	27	14	20	4.3
	-075			75													5.5
	-SMA15.875-075	1	15.875	75	34	—	—	17	—	8	3	M8	20	15	7	9	4.2
	-120			120													5.8
	-165			165													7.4
	-SMA22.225-150	1	22.225	150	42	—	—	27	—	8	3.5	M10	28	18	9	11	5.2
	-200			200													5.8
	-250			250													6.4
	-300			300													7.0
	-350			350													7.6
	-400			400													8.2
	-SMA25.4 -060	1	25.4	60	50	—	—	36	—	10	4	M12	33	23	10	12	4.3
	-105	2		105		60											5.2
	-150			150													6.1
	-200			200													7.1
	-250			250													8.0
	-300			300													8.9
	-350			350													10.0
	-400			400													11.1
	-SMA31.75 -045	1	31.75	45	60	—	24	38	6	10	4.5	M16	40	23	10	16	4.2
	-075	2		75		70											5.2
	-105			105													5.9
	-150			150													7.2
	-200			200													7.8
	-250			250													9.8
	-300			300													11.2
	-350			350													12.5
	-400			400													13.8
	-SMA38.1 -150	1	38.1	150	80	—	28	38	6	12	5	M20	50	27	14	20	9.0
	-200			200													10.9
	-250			250													12.8
	-300			300													14.9
	-350			350													16.8
	-400			400													18.0

NOTE : Arbors in ( ) for cutters in inches are in stock.

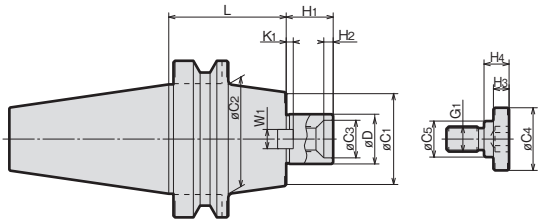
ORDERING EXAMPLE

① BT40 - ② SMA ③ 16 - ④ 060

① Shank Size
② Name
③ øD
④ G.L. Length

SHELL MILL ARBOR (Type B)

BT№-SMBⒹ-Ⓛ



MODEL		øD(h6)	L	øC1	øC2	øC3	H1	H2	KEY W1	KEY K1	G1	CLAMP BOLT øC4	CLAMP BOLT øC5	CLAMP BOLT H3	CLAMP BOLT H4	N/W (kg)
BT40	-SMB22.225-060	22.225	60	45	—	—	17	—	8	3.5	M10	28	18	9	11	1.5
	-SMB31.75 -045	31.75	45	60	—	24	30	6	12.7	4.5	M16	40	23	10	16	1.6
	-SMB38.1 -060	38.1	60	80	—	28	36	6	15.9	5	M20	50	27	14	20	2.6
BT50	-SMB22.225-060	22.225	60	45	—	—	17	—	8	3.5	M10	28	18	9	11	4.1
	-120		120													4.8
	-180		180													5.6
	-200		200													5.6
	-250		250													5.6
	-300		300													5.6
	-350		350													5.6
	-SMB31.75 -045	31.75	45	60	70	24	30	6	12.7	4.5	M16	40	23	10	16	4.1
	-075		75													4.8
	-105		105													5.6
	-150		150													5.6
	-200		200													5.6
	-250		250													5.6
	-300		300													5.6
	-350		350													5.6
	-400		400													5.6
	-SMB38.1 -045	38.1	45	80	—	28	36	6	15.9	5	M20	50	27	14	20	4.4
	-075		75													5.6
	-150		150													5.6
	-200		200													5.6
	-250		250													5.6
	-300		300													5.6
	-350		350													5.6
	-400		400													5.6

NOTE : For shell endmill with brazed T/C tips.

ORDERING EXAMPLE

① BT40 - ② SMB ③ 38.1 - ④ 060

① Shank Size
② Name
③ øD
④ G.L. Length

SHELL MILL ARBOR (Type C)

BT№-SMCⒹ-Ⓛ

FIG.1

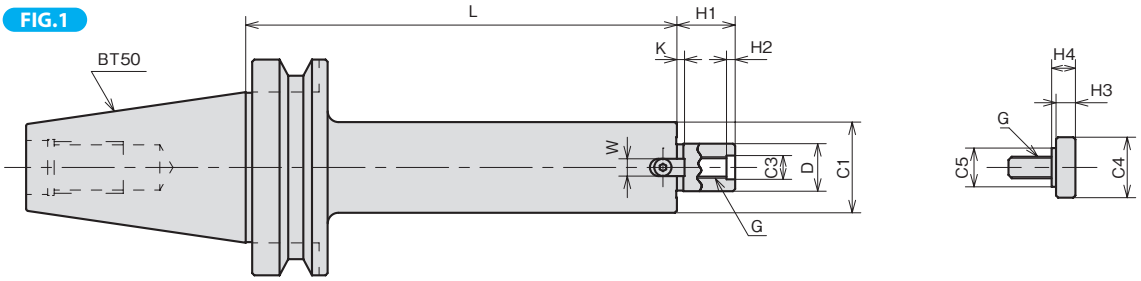
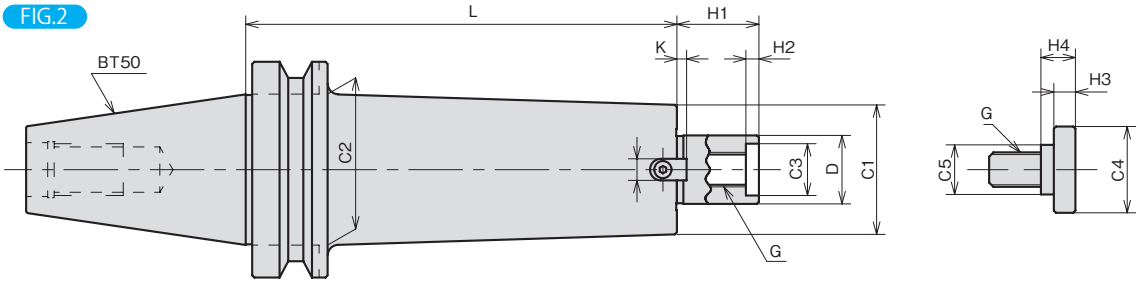


FIG.2



MODEL		øD(h6)	L	øC1	øC2	øC3	H1	H2	KEY W1	KEY K1	G1	CLAMP BOLT øC4	CLAMP BOLT øC5	CLAMP BOLT H3	CLAMP BOLT H4	N/W (kg)
BT50	-SMC19.05 -060	19.05	60	40	—	—	16	—	8	3.5	M10	28	18	9	11	4.1
	-120		120		45											4.8
	-180		180													5.6
	-SMC31.75 -045	31.75	45	60	—	24	18	6	12.7	4.5	M16	40	23	10	16	4.2
	-075		75		70											5.2
	-105		105													6.2
	-150		150													7.8
	-200		200													9.5
	-250		250													11.2
	-300		300													12.9
	-350		350													14.6
	-SMC38.1 -045	38.1	45	80	—	28	24	6	15.9	5	M20	50	27	14	20	4.3
	-075		75													5.5
	-150		150													8.5
	-200		200													10.5
	-250		250													12.6
	-300		300													14.5
	-350		350													18.6
	-400		400													18.8

NOTE : For shell endmill with brazed T/C tips.

ORDERING EXAMPLE

① BT40 - ② SMC ③ 19.05 - ④ 060

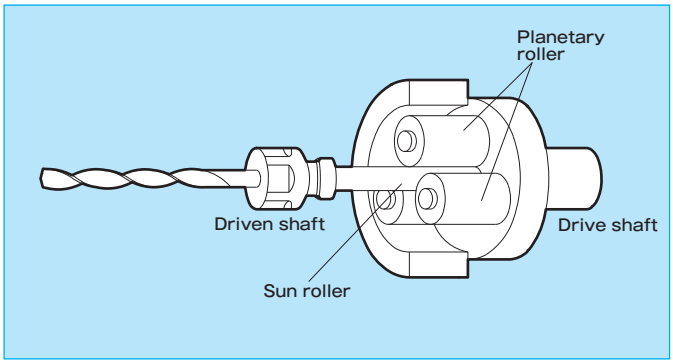
① Shank Size
② Name
③ øD
④ G.L. Length

TRACTION DRIVE SPEED ACCELERATOR

FEATURES P.15-18
BT㊊-TDU㊊

Traction drive (TD) speeder is an A.T.C. type speed accelerator, which employs planetary rollers and is co-developed and introduced to the market by Koyo Seiko and **SHOWA** for the first time in the world.

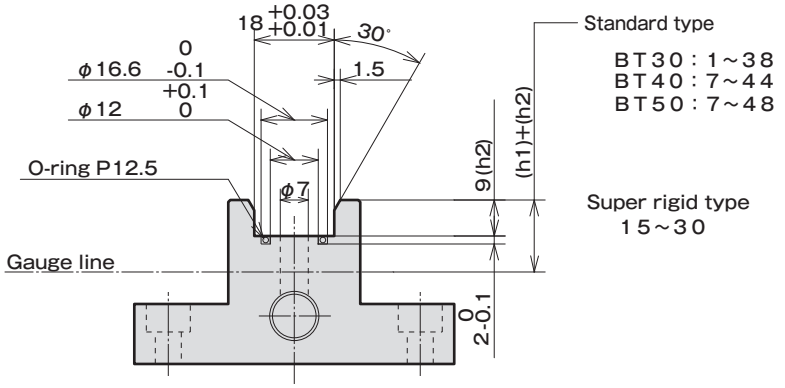
PATENTED

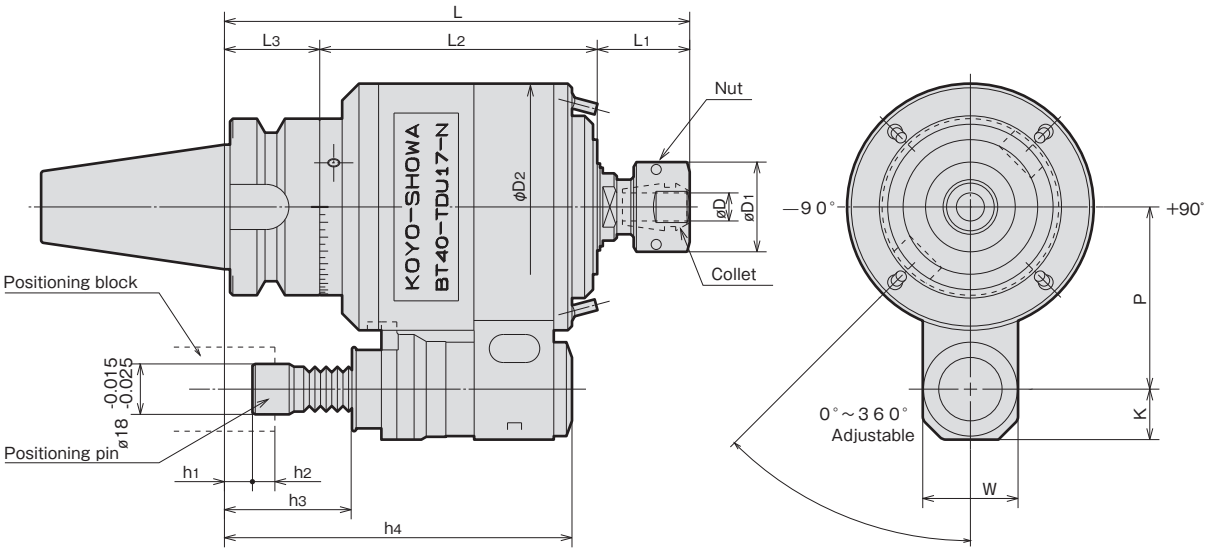


FEATURES

- 30,000min-1 is obtainable on normal M/C.
- High and stable torgue transmission enables small diameter drilling and endmilling, as well as deep grooving.
- Capable even for grinding on M/C, with minimum vibration and noise.
- Compact and light weight A.T.C. type.
- Broadly adjustment Positioning Pin "One-touch" adjustment, and a height range of 40 mm.

POSITIONING BLOCK





ORDERING EXAMPLE

① BT50 - ② TDU ③ 17-N

① Shank Size
② Name
③ Type

STANDARD TYPE

MODEL		CODE	SPEED RATIO	MAX. (min⁻¹)	L	L1	L2	L3	øD	øD1	øD2	h1	h2	h3	h4	P	K	W	N/W (kg)	MAX. POWER (kw)	STATIC RIGIDITY (N/μm)	COLLET (AA GRADE)	NUT CODE
BT30	-TDU17-N	10180	1:6	30,000	159	31	100	28	0.5 ~10	30	88	-6 ~29	7 ~9	39.5 ~ 42.5	118	65	18	34	4.3	3.1	8.8	CR10-(D)	RSN10NB
BT40	-TDU17-N	11496	1:6	30,000	165	31	100	34	0.5 ~10	30	88	-4 ~35	7 ~9	45.5 ~ 48.5	124	65	18	34	5.4	3.1	9.8	CR10-(D)	RSN10NB
BT50	-TDU17-N	13896	1:6	30,000	169	31	100	38	0.5 ~10	30	88	0 ~39	7 ~9	49.5 ~ 52.5	128	80	18	34	7.9	3.1	12.7	CR10-(D)	RSN10NB

SUPER RIGID TYPE

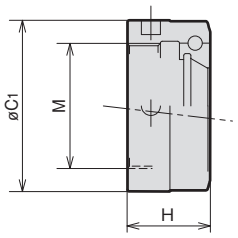
MODEL		CODE	SPEED RATIO	MAX. (min⁻¹)	L	L1	L2	L3	øD	øD1	øD2	h1	h2	h3	h4	P	K	W	N/W (kg)	MAX. POWER (kw)	STATIC RIGIDITY (N/μm)	COLLET (AA GRADE)	NUT CODE
BT50	-TDU40	13894	1:3.4	12,000	200	42	120	38	1.5 ~20	50	120	6 ~21	9	15 ~30	112	80	22	37	11.5	8.8	30.4	CR20-(D)	RSN20NB

ACCESSORIES for TRACTION DRIVE SPEED ACCELERATOR

ACCESSORIES

NUT FOR TAP HOLDER FOR SYNCHRONIZED MACHINE & TRACTION DRIVE SPEED ACCELERATOR

RSN№NB

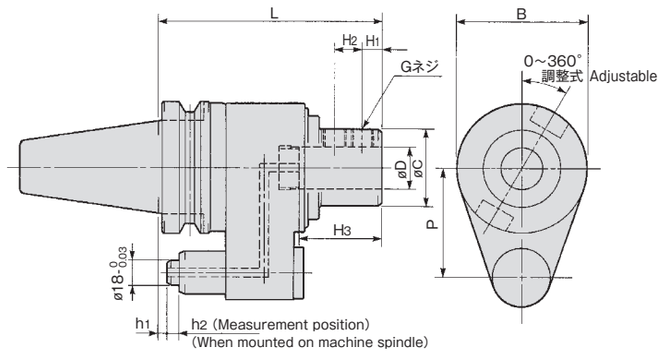


CODE		M	øC1	H	TDU No.
RSN10NB	30898	21×1.0	30	15.5	(TDU17)
RSN20NB	30899	40×1.0	50	17.5	(TDU40)

ACCESSORIES P.53 COLLETS

ACCESSORIES P.57 CHUCK WRENCH

OIL-HOLE ADAPTER (Set Screw Type) BT№-OH-SLⒹ-Ⓛ



CUTTING CONDITIONS		
	Standard (STD)	Ordered (H)
MAX.RPM	1500min^{-1}	3000min^{-1}
MAX.COOLANT PRESSURE	0.5MPa	2.0MPa

MODEL		CODE	øD	L	øC	H1	H2	H3	G	B	P
BT40	-OH-SL16-150	11426	16	150	38	25	–	45	M12×1.5	80	65
	-SL20-150	11428	20				–				
	-SL25-150	11430	25		43	15	20	55			
	-SL32-165	11432	32	165	53	13	18	60		92	
BT50	-OH-SL16-165	13842	16	165	40	25	–	45	M12×1.5	98	80
	-SL20-165	13844	20				–				
	-SL25-165	13846	25		48	15	20	55	M16×1.5		82
	-SL32-165	13848	32		58			60			85
	-SL40-165	13850	40		63					105	

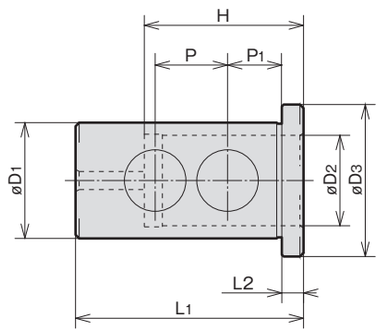
NOTE : 1. When ordering, please inform h1and h2 dimensions, which differ depending on machine maker and model.

ORDERING EXAMPLE

① BT40 - ② OH-SL ③ 16 - ④ 150

① Shank Size
② Name
③ Cutter's Shank Dia.
④ G.L. Length

STRAIGHT SLEEVE OH-SLⒹ1-Ⓓ2



CODE		øD1	øD2	øD3	L1	L2	P	P1	H	N/W (kg)
OH-SL20-16	17712	20	16	30	48	6	–	25	44	0.07
OH-SL25-16	17716	25	16	35	58	6	20	15	44	0.19
-20	17718		20							0.15
OH-SL32-16	17722	32	16	42	63	6	20	15	44	0.35
-20	17724		20							0.32
-25	17726		25						54	0.22
OH-SL40-16	17732	40	16	50	63	6	20	15	40	0.57
-20	17734		20							0.54
-25	17736		25						54	0.45
-32	17738		32							0.30

ORDERING EXAMPLE

① OH-SL ② 20 - ③ 16

① Name
② øD1
③ øD2

OIL-HOLE ADAPTER (Morse taper Type) BT№-OH-MT№-Ⓛ

FIG.1

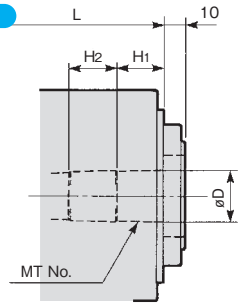
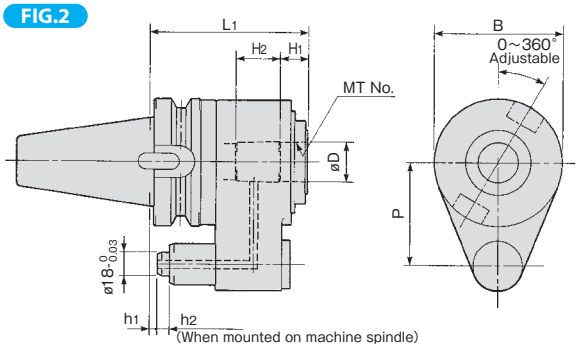


FIG.2



MODEL		CODE	FIG.	MT No.	øD	L	H1	H2	B	P
BT40	-OH-MT3-105	11422	2	MT3	23.825	105	21	22	80	65
	-MT4-120	11424	2	MT4	31.267	120	21	34		
BT50	-OH-MT3-110	13832	1	MT3	23.825	110	21	22	98	80
	-MT4-120	13834	2	MT4	31.267	120	21	34		82
	-MT5-135	13836	2	MT5	44.399	135	40	45		85

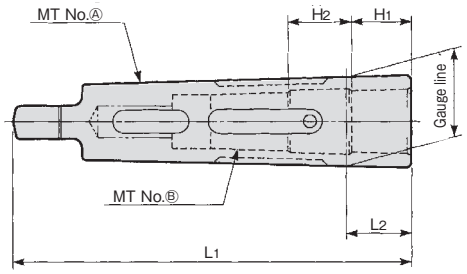
NOTE : When ordering, please inform h1and h2 dimensions, which differ depending on machine maker and model.

ORDERING EXAMPLE

① BT40 - ② OH-MT ③ 3 - ④ 105

① Shank Size
② Name
③ MT No.
④ G.L. Length

MT SLEEVE OH-MT№Ⓐ-Ⓑ



CODE		MT No. Ⓐ	MT No. Ⓑ	L1	L2	H1	H2	N/W (kg)
OH-MT4-3	17706	4	3	140	22.5	21	22	0.37
OH-MT4-2	17704		2	124	6.5	17	20	0.42
OH-MT3-2	17702	3	2	112	18	17	20	0.17

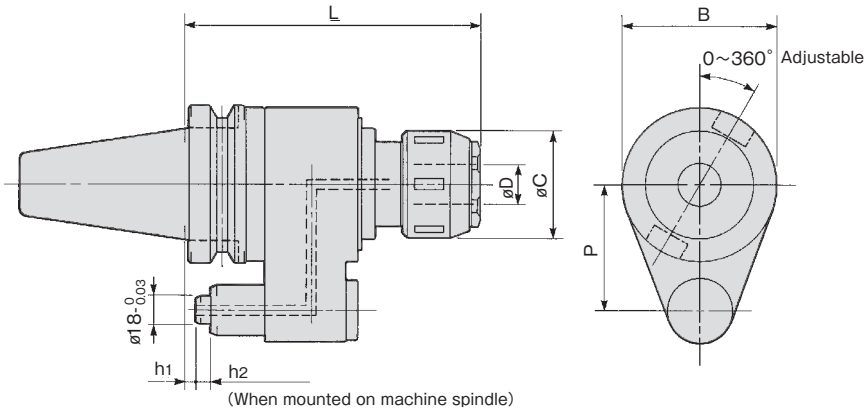
ORDERING EXAMPLE

① OH-MT ② 4 - ③ 3

① Name
② MT No.A
③ MT No.B

OIL-HOLE HARD CHUCK

BT№-OH-CTHⒹ-Ⓛ



CUTTING CONDITIONS	
MAX.RPM	3000min^{-1}
MAX.COOLANT PRESSURE	2.0MPa

MODEL		CODE	øD	øC	L	B	P
BT50	-OH-CTH16-170	13851	16	52	170	98	80
	-CTH25-185	13852	25	68	185	98	
	-CTH32-195	13854	32	83	195	120	

NOTE : When ordering, please inform h1and h2 dimensions, which differ depending on machine maker and model.

ACCESSORIES P.47 COLLETS

ACCESSORIES P.49 CHUCK WRENCH

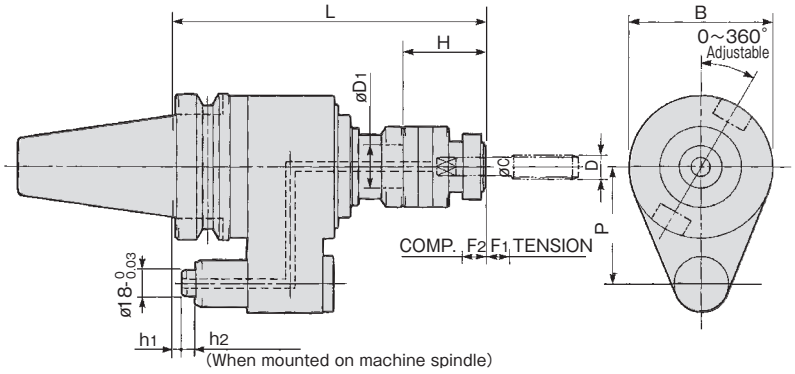
ORDERING EXAMPLE

① BT50 - ② OH-CTH ③ 16 - ④ 170

① Shank Size
② Name
③ Cutter's Shank Dia.
④ G.L. Length

OIL-HOLE TAP HOLDER

BT№-OH-TPCⒹ1-Ⓛ



CUTTING CONDITIONS	
MAX.COOLANT PRESSURE	2.0MPa

MODEL		CODE	øD1	L	H	B	P	F1	F2	D	TAP COLLET CODE
BT40	-OH-TPC20-207	11288	20	207	45	92	65	15	15	M 4~M14	OH-TCC20-Ⓓ
	-TPC29-217	11289	29	217	55					M12~M27	OH-TCC29-Ⓓ
BT50	-OH-TPC20-200	13592	20	200	45	98	80	15	15	M 4~M14	OH-TCC20-Ⓓ
	-TPC29-210	13594	29	210	55		82			M12~M27	OH-TCC29-Ⓓ
	-TPC40-260	13596	40	260	75	120	85	20	20	M18~M39	OH-TCC40-Ⓓ

NOTE : When ordering, please inform h1and h2 dimensions, which differ depending on machine maker and model.

ACCESSORIES P.66 TAP COLLETS

ORDERING EXAMPLE

① BT40 - ② OH-TPC ③ 20 - ④ 207

① Shank Size
② Name
③ øD1
④ G.L. Length

ANGLE JET（Angle Head Holder）

**With the new mechanism "the coolant unit ",
the thru-the-coolant from the spindle can be supplied
directly to the cutting edge.**

FEATURES

Perfectly suitable for spindle through coolant

"Coolant unit"has made it possible to deliver coolant internally starting from the spindle to the point of cutting tool which was impossible before.

Various applications to use

Angle-Jet can make full use of it's performance not only in drilling but in various types of machining such as tapping and milling.

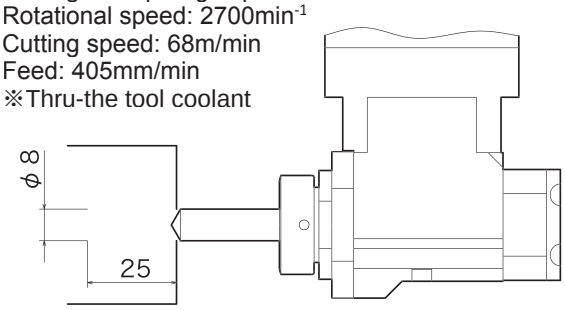
Specifications

Max.revolution：4,000min
Coolant pressure：MAX2.0Mpa
Gear raito：1:1
Allowable transmittal torque：5.8N・m
Collet systems：CR10、CR16、CR20
Run-out：4×D point 0.02mm
Universal position of 360°

Mashining Conditions

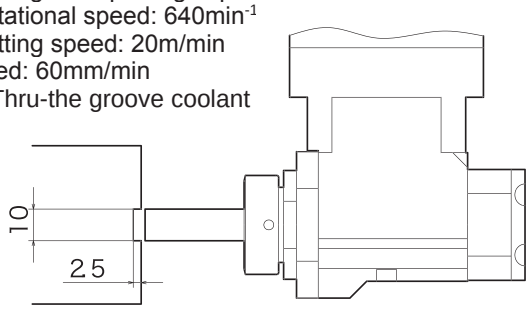
BBT40-AGCT-RSC16-190AJ

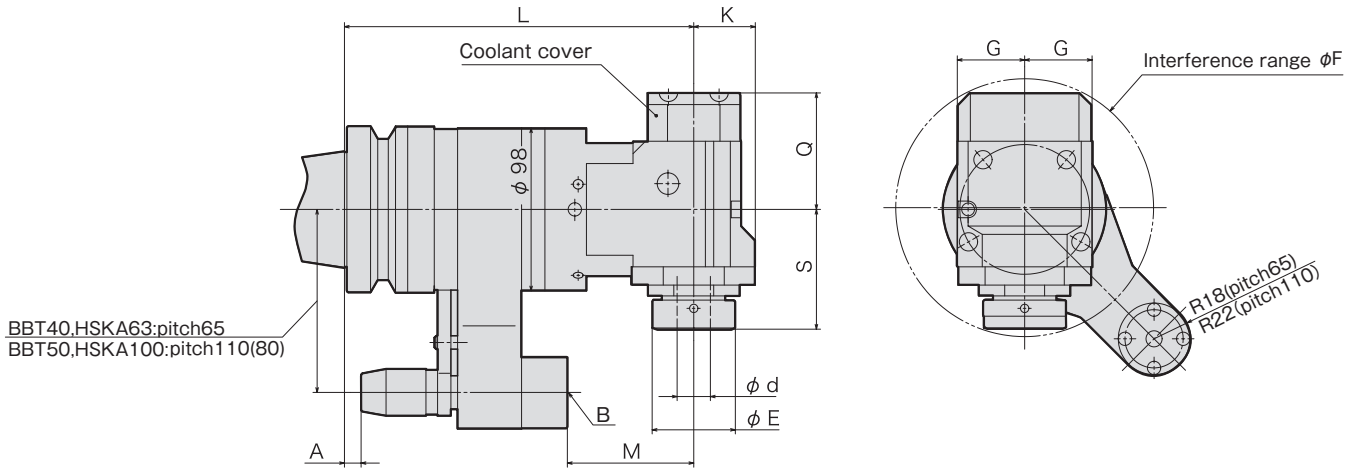
The work material: A5052
Cutting tool: φ8 high speed drill with oil hole
Rotational speed: 2700min^{-1}
Cutting speed: 68m/min
Feed: 405mm/min
※Thru-the tool coolant



BBT40-AGCT-RSC16-190AJ

The work material: S50C
Cutting tool: φ10 high speed two blade end mill
Rotational speed: 640min^{-1}
Cutting speed: 20m/min
Feed: 60mm/min
※Thru-the groove coolant





BBT SHANK

MODEL		CODE	ød	øE	L	K	M	S	G	Q	Q'	F	F'	COLLET	N/W(kg)
BBT40	-AGCT-RSC10-190AJ	240622	2.9~10	30	190	26	80	58	40.5	67	47.5	137	123	CROH10	6.0
	-AGCT-RSC16-190AJ	240624	5.5~16	42		28.5		60		70	50.5	142	128	CROH16	6.2
BBT50	-AGCT-RSC10-210AJ	270662	5.5~10	30	210	26	76	58		67	47.5	137	123	CROH10	10.4
	-AGCT-RSC20-210AJ	270664	7.5~20	50		37		72		70	50.5	155	140	CROH20	11.0

HSK SHANK

MODEL		CODE	ød	øE	L	K	M	S	G	Q	Q'	F	F'	COLLET	N/W(kg)
HSKA63	-AGCT-RSC10-200AJ	321272	2.9~10	30	200	26	80	58	40.5	67	47.5	137	123	CROH10	5.8
	-AGCT-RSC16-200AJ	321274	5.5~16	42		28.5		60		70	50.5	142	128	CROH16	6.0
HSKA100	-AGCT-RSC10-220AJ	351072	5.5~10	30	220	26	76	58		67	47.5	137	123	CROH10	9.4
	-AGCT-RSC20-220AJ	351074	7.5~20	50		37		72		70	50.5	155	140	CROH20	10.0

NOTE : 1.Rotation direction of cutting tool is reversed; speed ratio is 1:1
2.Angle of position pin, drive key groove and addendum direction can be set freely.
3.Angle-Jet can be used by thru-the tool coolant only. No Dry cutting!
4.Non-thru-the tool coolant type (AG model) is also available. Q' and F' shown in above dimension chart correnspond to AG model.
5.Wrench to clamp nut is included, but collet is not include.
6.Set length of A is 8mm(for BBT40 & HSKA63), nad 6mm(for BBT50 & HSKA100) is standard of SHOWA but other length.
7.Installation of Angle-Jet requires a positioning block.
8.Deeping on Machine type, ATC(Aoutmatic Tool Changer) may not be used.
9.Supply of coolant through positioning pin requires connecting coolant hose with B posititon(65mm:PT1/16,110mm:PT1/8)(this only is AG model).

COLLET

Body	Collet type	Grasp range
AGCT-RSC10	CROH10-**	ϕ2.9~ϕ10
AGCT-RSC16	CROH16-**	ϕ5.5~ϕ16
AGCT-RSC20	CROH20-**	ϕ7.5~ϕ20

ACCESSORIES P.54 COLLETS
ACCESSORIES P.57 CHUCK WRENCH
ACCESSORIES P.94 NUT

NUT

Body	Nut type
AGCT-RSC10	RSN10NB
AGCT-RSC16	RSN16NB
AGCT-RSC20	RSN20NB

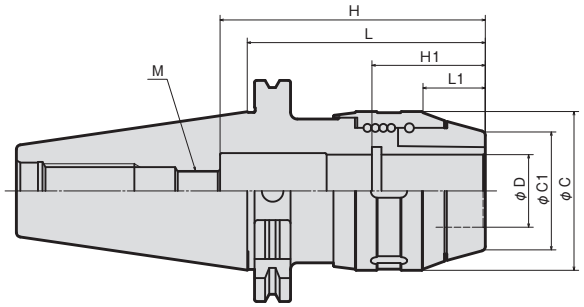
MICRON CHUCK (Milling Chuck)

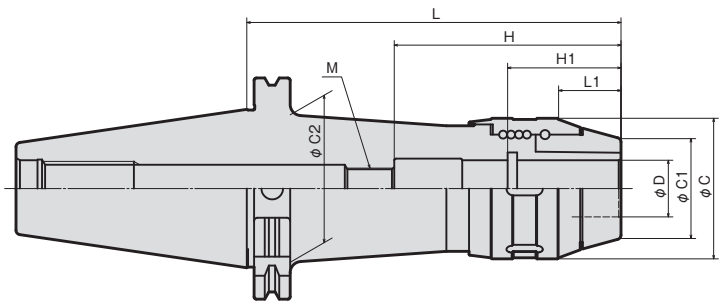
FEATURES P.1-6

SK№-HPCⒹ-Ⓛ

▶▶▶ Thru-the-tool Coolant Available

▶▶▶ Thru-the-groove Coolant Available





MODEL		A	AA	FIG	ϕD	L	H	ϕC	ϕC1	ϕC2	L1	H2	M	N/W(kg)
Max 10,000mim^{-1}														
SK30	HPC16-105	○	○	1	16	105	85	56	34	–	26	50	M10	1.4
	HPC20-105	○	○		20				38					1.3
Max 10,000mim^{-1}														
SK40	HPC16-105	○	○	1	16	105	85	56	34	–	26	50	M10	1.8
	HPC20-105	○	○		20				38					1.7
	HPC25-105	○	○		25		100	62	44		27.5		M18	2.0
	HPC25-135	○	○			135								2.5
	HPC32-105	○	○		32	105		70	52			53		2.2
	HPC32-135	○	○			135	117							2.5
Max 8,000mim^{-1}														
SK50	HPC16-105	○	○	1	16	105	85	56	34	–	26	50	M10	4.4
	HPC20-105	○	○		20				38					4.3
	HPC20-135	○	○	2		135				57				4.7
	HPC25-105	○	○	1	25	105	100	62	44	–	27.5		M18	4.4
	HPC25-135	○	○	2		135				62				4.8
	HPC25-165	○	○			165				65				5.7
	HPC32-105	○	○	1	32	105	117	70	52	–		35		4.4
	HPC32-135	○	○			135								5.0
	HPC32-165	○	○	2		165				70				5.6
	HPC42-110	○	○	1	42	110	122	82	62	–	30.5	57		4.6
	HPC42-135	○	○			135								5.3
	HPC42-165	○	○	2		165								6.2

Note1: Chuck wrench and adjust screw are sold separately.
Note2: Insert the O-ring included the box to the groove of the ID for thru-the-tool application.

ACCESSORIES P.39 STRAIGHT COLLETS

ACCESSORIES P.50 ADJUST SCREW, CHUCK WRENCH

ORDERING EXAMPLE

① SK50 - ② HPC ③ 16 - ④ 100 ⑤ A

① Shank Size
② Holder's Name
③ Cutter' s Shank Dia.
④ G.L. Length
⑤ Grade

MICRON CHUCK H series

FEATURES P.1-6

SK№-HPCⒹH-Ⓛ

▶▶▶ Thru -the-tool Coolant Available (Option)

▶▶▶ Thru-the-groove Coolant Available

H-series

FIG.1

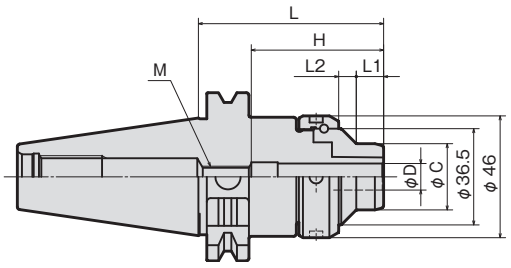
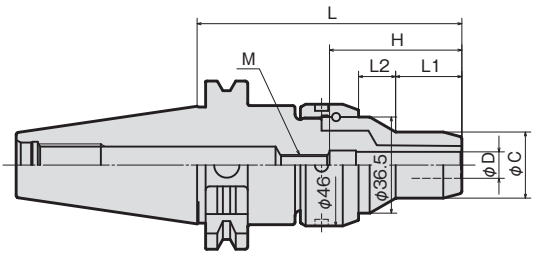


FIG.2



Cutter shank diameter should be h7 or better.

Note : When HPC03H, HPC04H and HPC05H is used through the groove coolant or through the tool coolant usage, please keep the coolant pressure within 1MPa and under.
In case those 3 kinds of tools are used in through the tool coolant at over 1MPa pressure, it requires special adjustment according to its pressure, need additional cost, please contact Showa distributor.

	MODEL	A	AA	G	FIG	ϕD	L	L1	L2	H	ϕC	MINI.INS. LENGHT	ADJUST LENGTH MIN	ADJUST LENGTH MAX	M (Ad.screw)	ST	CT	N/W(kg)
SK30	HPC03H-070	○	○	○	1	3	70	10.3	6.2	15	25	15	–	–	–			
	HPC04H-070	○	○	○		4												
	HPC06H-070	○	○	○		6				37.5		23	23	37	AS17-2-M5-CTW			
	HPC08H-070	○	○	○		8				50				49	AS22-2-M8-CTW			
	HPC10H-070	○	○	○		10												
	HPC12H-070	○	○	○		12		12.2	4.8	55	32	25	25	54	AS25-2-M10-CTW			
SK40	HPC03H-070	○	○	○	1	3	70	10.3	6.7	15	25	15	–	–	–			
	HPC03H-100	○	○	○	2		100	25	14									
	HPC04H-070	○	○	○	1	4	70	10.3	6.7									
	HPC04H-100	○	○	○	2		100	25	14									
	HPC06H-070	○	○	○	1	6	70	10.3	6.7	37.5		23	23	37	AS17-2-M5-CTW			
	HPC06H-100	○	○	○	2		100	25	14			30	30					
	HPC08H-070	○	○	○	1	8	70	10.3	6.7	50		23	28	49	AS22-2-M8-CTW			
	HPC08H-100	○	○	○	2		100	25	14			35	35					
	HPC10H-070	○	○	○	1	10	70	10.3	6.7			23	28					
	HPC10H-100	○	○	○	2		100	25	14			35	35					
	HPC12H-070	○	○	○	1	12	70	10.3	6.7	55	32	25	33	54	AS25-2-M10-CTW			
	HPC12H-100	○	○	○	2		100	25	14			40	40					
SK50	HPC03H-100	○	○	–	2	3	100	25	14	15	25	15	–	–	–			
	HPC04H-100	○	○	–		4												
	HPC06H-100	○	○	–		6				3.5		30	30	37	AS17-2-M5-CTW			
	HPC08H-100	○	○	–		8				50		35	35	49	AS22-2-M8-CTW			
	HPC10H-100	○	○	–		10												
	HPC12H-100	○	○	–		12				55	32	40	40	54	AS25-2-M10-CTW			

Note1: Chuck wrench and adjust screw are sold separately.
Note2: Please indicate when ordering for thru-the tool application.

ACCESSORIES P.42 STRAIGHT COLLETS

ACCESSORIES P.44 ADJUST SCREW, CHUCK WRENCH

ORDERING EXAMPLE

① SK50 - ② HPC ③ 03H - ④ 060 ⑤ A

① Shank Size
② Holder's Name
③ Cutter' s Shank Dia.
④ G.L. Length
⑤ Grade

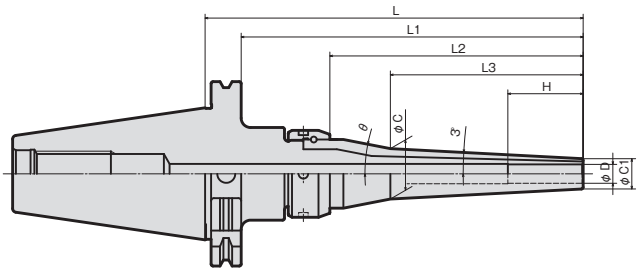
MICRON CHUCK M series

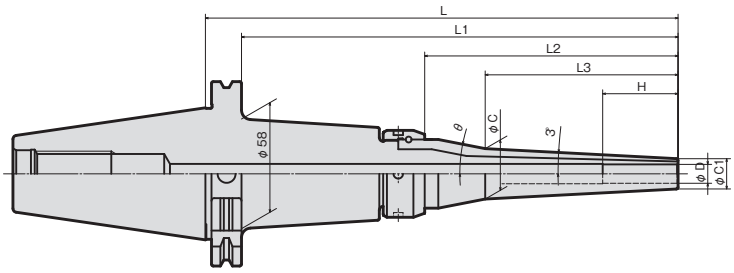
FEATURES P.1-6

SK№-HPCⒹM-Ⓛ

▶▶▶ Thru-the-tool Coolant Available

M-series





Cutter shank diameter should be h6 or better.

	MODEL	STOCK	FIG	φD	φC1	φC2	L	L1	L2	L3	H	MINI.INS. LENGHT	ADJUST LENGTH MIN	ADJUST LENGTH MAX	M	Θ°	N/W(kg)
SK40	HPC03M-145	△	1	3	9	16	145	108	84	67	18	20	–	–	–	34	1.4
	HPC03M-195	△				20	195	158	134	102						18	1.6
	HPC04M-145	△		4	10	17	145	108	84	67	20					33	1.4
	HPC04M-195	△				21	195	158	134	102						17	1.6
	HPC06M-145	△		6	12	19	145	108	84	67	36	35	35	49	M6	30	1.5
	HPC06M-195	△				23	195	158	134	102						15	1.6
	HPC08M-145	△		8	13	21	145	108	84	67	50					27	1.5
	HPC08M-195	△				25	195	158	134	102						13	1.7
	HPC10M-145	△		10	14	23	145	108	84	67					M8	24	1.5
	HPC10M-195	△				27	195	158	134	102						11	1.7
	HPC12M-145	△		12	16	25	145	108	84	67	55	40		54	M10	21	1.5
	HPC12M-195	△				29	195	158	134	102						9	1.7
SK50	HPC03M-150	△	1	3	9	16	150	112	84	67	18	20	–	–	–	34	4.2
	HPC03M-200	△				20	200	162	134	102						18	4.4
	HPC03M-250	△	2				250	212									5.3
	HPC04M-150	△	1	4	10	17	150	122	84	67	20					33	4.3
	HPC04M-200	△				21	200	162	134	102						17	4.4
	HPC04M-250	△	2				250	212									5.3
	HPC06M-150	△	1	6	12	19	150	122	84	67	36	35	35	49	M6	30	4.3
	HPC06M-200	△				23	200	162	134	102						15	4.5
	HPC06M-250	△	2				250	212									5.3
	HPC08M-150	△	1	8	14	21	150	122	84	67	50					27	4.3
	HPC08M-200	△				25	200	162	134	102						13	4.5
	HPC08M-250	△	2				250	212									5.4
	HPC10M-150	△	1	10	16	23	150	122	84	67					M8	24	4.3
	HPC10M-200	△				27	200	162	134	102						11	4.5
	HPC10M-250	△	2				250	212									5.4
	HPC12M-150	△	1	12	18	25	150	122	84	67	55	40		54	M10	21	4.3
	HPC12M-200	△				29	200	162	134	102						9	4.5
	HPC12M-250	△	2				250	212									5.4

ACCESSORIES P.42 STRAIGHT COLLETS

ACCESSORIES P.44 ADJUST SCREW, CHUCK WRENCH

ORDERING EXAMPLE

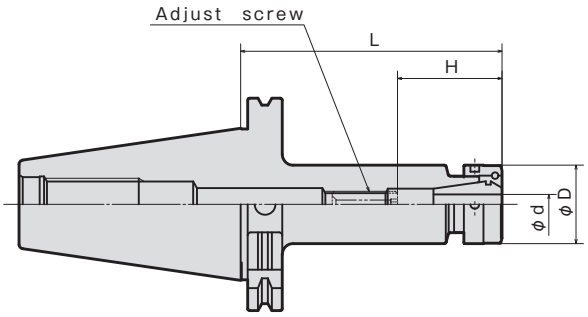
① SK50 - ② HPC ③ 03 ④ M - ⑤ 130

① Shank Size
② Holder's Name
③ Cutter' s Shank Dia.
④ M series
⑤ G.L.Length

COLLET CHUCK

FEATURES P.9-10

SK/BSK№-RSCⒹMAX-Ⓛ



MODEL		CODE	STOCK	φd (CLAMPINGRANGE)	φD	L	H	COLLET	NUT	ADJUSTMENT SCREW
Max 12,000mim^{-1}										
SK30 (BSK30)	RSC07-090	400060	△	0.5~0.7	24	90	25~40	CR07-(D)	RSN07NB	M6×20L-CTW
	RSC10-060	400062	△	0.5~10	30	60	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	RSC10-090	400064	△			90				
	RSC10-120		△			120				
	RSC13-065	400066	△	0.5~13	36	60	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	RSC13-090	400068	△			90				
	RSC13-120		△			120				
	RSC16-065	400070	△	1~16	42	60	38~50	CR16-(D)	RSN16NB	RAS16-25-5
	RSC16-090	400072	△			90	38~72			
	RSC16-120		△			120				
	RSC20-075	400076	△	1.5~20	50	75	44~56.5	CR20-(D)	RSN20NB	
	RSC20-090	400078	△			90				
	RSC20-120		△			120				
SK40 (BSK40)	RSC07-090	420180	△	0.5~7	24	90	25~40	CR07-(D)	RSN07NB	M6×20L-CTW
	RSC10-060	420182	△	0.5~10	30	60	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	RSC10-090	420183	△			90				
	RSC10-120	420184	△			120				
	RSC13-065	420185	△	0.5~13	36	60	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	RSC13-090	420186	△			90				
	RSC13-120	420188	△			120				
	RSC16-065	420190	△	1~16	42	60	38~70	CR16-(D)	RSN16NB	RAS16-25-5
	RSC16-090	420192	△			90	38~77			
	RSC16-120	420189	△			120				
	RSC20-070	420193	△	1.5~20	50	60	44~70	CR20-(D)	RSN20NB	RAS20-25-5
	RSC20-090	420194	△			90	44~72			
	RSC20-105	420196	△			90	44~82			
	RSC20-120	420198	△			120				

△:Produce per order

NOTE: 1. Collet and chuck wrench are sold separately.
2. CROH collet is used for thru-the-tool coolant application.
3. Only BT shank and ST shank is coated.

ORDERING EXAMPLE

①	②	③	④
SK30	RSC	07	90
BSK30	RSC	07	90

① Shank Size
② Holder's Name
③ Max. øD
④ Gauge length

ACCESSORIES P.57 NUT

ACCESSORIES P.53-56 COLLETS

ACCESSORIES P.57 ADJUST SCREW, CHUCK WRENCH

COLLET CHUCK

SK/BSK№-RSCⒹMAX-Ⓛ

FIG.1

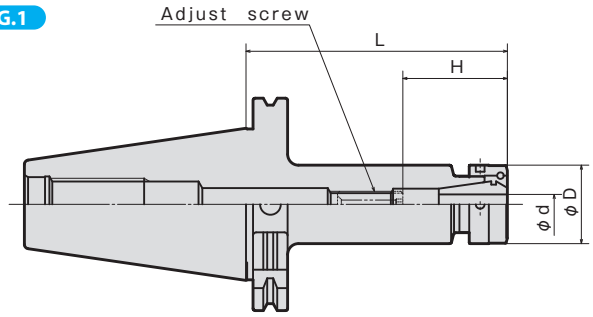
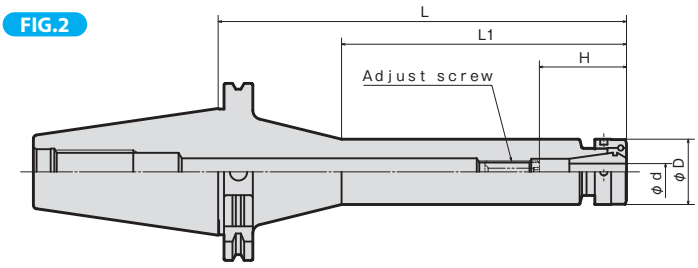


FIG.2



MODEL		CODE	FIG	ϕd (CLAMPINGRANGE)	ϕD	L	H	COLLET	NUT	ADJUSTMENT SCREW
Max 8,000min^{-1}										
SK50 (BSK50)	RSC07-090	450260	1	0.5~7	25	90	25~40	CR07-(D)	RSN07NB	(M6×20L-CTW)
	RSC10-075	450262	1	0.5~10	30	75	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	RSC10-105	450264				105				
	RSC10-135	450330				135				
	RSC10-165	450332				165				
	RSC10-195	450334				195				
	RSC10-225	450336	2			225				
	RSC10-255	450338				255				
	RSC10-285	450340				285				
	RSC13-075	450266	1	0.5~13	36	75	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	RSC13-105	450268				105				
	RSC13-135	450270				135				
	RSC13-165	450272				165				
	RSC13-195	450274				195				
	RSC13-225	240342	2			225				
	RSC13-255	450344				255				
	RSC13-285	450346				285				
	RSC16-075	450276	1	1~16	42	75	38~95	CR16-(D)	RSN16NB	RAS16-25-5
	RSC16-105	450278				105				
	RSC16-135	450280				135				
	RSC16-165	450282				165	38~77			
	RSC16-195	450284				195				
	RSC16-225	450348	2			225				
	RSC16-255	450350				255				
	RSC16-285	450352				285				
	RSC20-075	450286	1	1.5~20	50	75	44~82	CR20-(D)	RSN20NB	RAS20-25-6
	RSC20-105	450287				105				
	RSC20-135	450288				135				
	RSC20-165	450290				165				
	RSC20-195	450292				195				
	RSC20-225	450393	2			225				
	RSC20-255	450394				255				
	RSC20-285	450395				285				

△:Produce per order

NOTE: 1. Collet and chuck wrench are sold separately.
2. CROH collet is used for thru-the-tool coolant application.
3. Only BT shank and ST shank is coated.

ACCESSORIES P.57 NUT

ACCESSORIES P.53-56 COLLETS

ACCESSORIES P.57 ADJUST SCREW, CHUCK WRENCH

ORDERING EXAMPLE

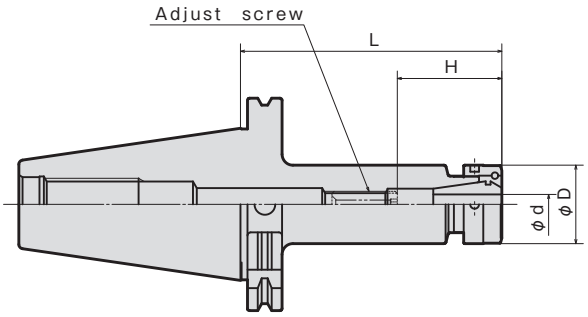
①	②	③	④
SK50	RSC	07	90
BSK50	RSC	07	90

① Shank Size
② Holder's Name
③ Max. øD
④ Gauge length

COLLET CHUCK

FEATURES P.9-10

SK/BSK№-RSCⒹ-Ⓛ



MODEL		CODE	φd (CLAMPINGRANGE)	φD	L	H	COLLET	NUT	ADJUSTMENT SCREW
Max 25,000mim^{-1}									
SK30 (BSK30)	RSC07-090G	400040	0.5~0.7	25	90	25~40	CR07-(D)	RSN07NB	(M6×20L-CTW)
	RSC10-060G	400041	0.5~10	30	60	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	RSC10-090G	400042			90				
	RSC10-120G				120				
	RSC13-065G	400043	0.5~13	36	60	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	RSC13-090G	400044			90				
	RSC13-120G				120				
	RSC16-065G	400045	1~16	42	60	38~50	CR16-(D)	RSN16NB	RAS16-25-2.5
	RSC16-090G	400046			90	38~72			
	RSC16-120G				120				
	RSC20-075G	400047	1.5~20	50	75	44~56.5	CR20-(D)	RSN20NB	
	RSC20-090G	400048			90				
	RSC20-120G				120				
SK40 (BSK40)	RSC07-090G	420130	0.5~7	25	90	25~40	CR07-(D)	RSN07NB	(M6×20L-CTW)
	RSC10-060G	420131	0.5~10	30	60	31~48	CR10-(D)	RSN10NB	RAS10-25-2.5
	RSC10-090G	420132			90				
	RSC10-120G				120				
	RSC13-065G	420133	0.5~13	36	60	35~52	CR13-(D)	RSN13NB	RAS13-25-2.5
	RSC13-090G	420134			90				
	RSC13-120G				120				
	RSC16-065G	420135	1~16	42	60	38~70	CR16-(D)	RSN16NB	RAS16-25-5
	RSC16-090G	420136			90	38~77			
	RSC16-120G				120				
	RSC20-070G	420138	1.5~20	50	60	44~70	CR20-(D)	RSN20NB	RAS20-25-6
	RSC20-090G	420170			90	44~72			
	RSC20-105G				90	44~82			
	RSC20-120G				120				

△:Produce per order

NOTE: 1. Collet and chuck wrench are sold separately.
2. CROH collet is used for thru-the-tool coolant application.
3. Only BT shank and ST shank is coated.

ORDERING EXAMPLE

①	②	③	④	⑤
SK30	RSC	07	90	G
BSK30	RSC	07	90	G

① Shank Size
② Holder's Name
③ Max. øD
④ Gauge length
⑤ G-Type

ACCESSORIES P.57 NUT

ACCESSORIES P.53-56 COLLETS

ACCESSORIES P.57 ADJUST SCREW, CHUCK WRENCH

COLLET CHUCK (SLIM TYPE)

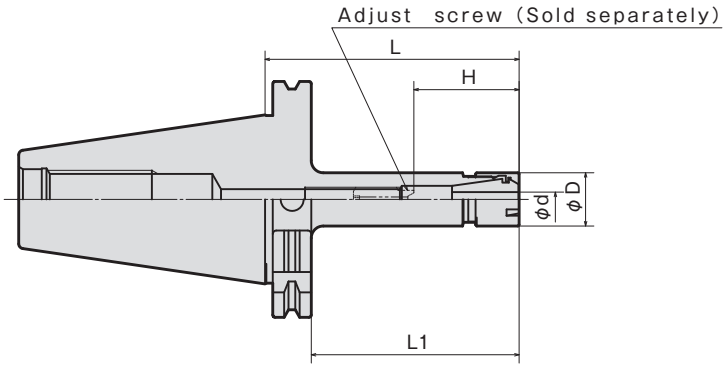
FEATURES P.13

NEW

SK№-SSCⒹMAX-Ⓛ

▶▶▶ Thru-the-tool Coolant Available

▶▶▶ Thru-the-groove Coolant Available(Option)



	MODEL	CODE	ød	øD	L	L1	H	COLLET	NUT	ADJUST SCREW
SK30	SSC07-090	400100	0.5~7	16	90	71	25~40	CR07-d	ER11MN	M6×20L-CTW
	SSC07-135	400102			135	116				
	SSC10-090	400104	0.5~10	22	90	71	31~48	CR10-d	ER16MN	RAS10-25-2.5
	SSC10-135	400106			135	116				
	SSC13-090	400108	0.5~13	28	90	71	35~52	CR13-d	ER20MN	RAS13-25-2.5
	SSC13-135	400110			135	116				
SK40	SSC07-090	420460	0.5~7	16	90	71	25~40	CR07-d	ER11MN	M6×20L-CTW
	SSC07-135	420462			135	116				
	SSC10-090	420464	0.5~10	22	90	71	31~48	CR10-d	ER16MN	RAS10-25-2.5
	SSC10-135	420466			135	116				
	SSC13-105	420468	0.5~13	28	105	86	35~52	CR13-d	ER20MN	RAS13-25-2.5
	SSC13-150	420470			150	131				
SK50	SSC07-090	450620	0.5~7	16	90	71	25~40	CR07-d	ER11MN	M6×20L-CTW
	SSC07-135	450622			135	116				
	SSC10-105	450624	0.5~10	22	105	86	31~48	CR10-d	ER16MN	RAS10-25-2.5
	SSC10-150	450626			150	131				
	SSC13-120	450628	0.5~13	28	120	101	35~52	CR13-d	ER20MN	RAS13-25-2.5
	SSC13-165	450630			165	146				
	SSC13-195	450632			195	176				

NOTE : 1. Collet and chuck wrench are sold separately.
2. CROH collet is used for thru-the-tool coolant application.

ORDERING EXAMPLE

① SK50 - ② SSC ③ 10 - ④ 105

① Shank Size
② Holder's Name
③ Max. øD
④ G.L. Length

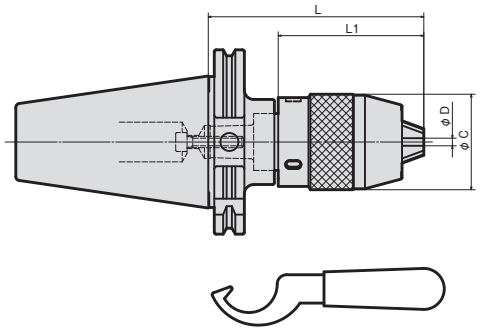
ACCESSORIES P.57 NUT

ACCESSORIES P.53-56 COLLETS

ACCESSORIES P.57 ADJUST SCREW, CHUCK WRENCH

DRILL CHUCK

SK/BT㊊-SDC㊃MAX-Ⓛ



MODEL		CODE	ϕD (CLAMPINGRANGE)	L		L1		ϕC	N/W (kg)
				OPEN	CLOSE	OPEN	CLOSE		
SK40	-SDC08-088	77090	0.5~8	87.5	95	50	57.5	37.5	1.3
	-SDC13-105	77095	1~13	103.5	116	66	78.5	50	1.8
SK50	-SDC08-087	77320	0.5~8	87.5	95	50	57.5	37.5	4.1
	-SDC13-110	77325	1~13	103.5	116	66	78.5	50	4.5
	-SDC13-160	77326		153.5	166				5.1
BT30	-SDC08-080	10036	0.5~8	83	90.5	50	57.5	37.5	0.7
	-SDC13-100	10038	1~13	99	111.5	66	78.5	50	1.3
BT40	-SDC08-080	11148	0.5~8	83	90.5	50	57.5	37.5	1.3
	-SDC13-100	11150	1~13	99	111.5	66	78.5	50	1.8
BT50	-SDC08-100	13291	0.5~8	103	110.5	50	57.5	37.5	4.1
	-SDC13-160	13293	1~13	119	131.5	66	78.5	50	4.5
	-SDC13-120	13294		159	171.5				5.1

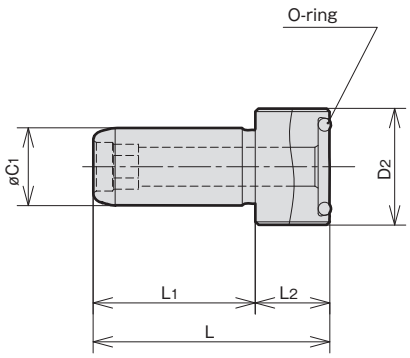
ORDERING EXAMPLE

① BT30 - ② SDC ③ 08 - ④ 080

① Shank Size
② Holder's Name
③ Max. øD
④ Gauge length

ACCESSORIES

<HSK SHANK>COOLANT PIPE



MODEL	CODE	HSK No.	D1	D2	L	L1	L2	O-ring
CLP-032	25180	HSK32	6	M10×1.0	26	20.5	5.5	P4
CLP-040	25181	HSK40	8	M12×1.0	29.5	22	7.5	P6
CLP-050	25182	HSK50	10	M16×1.0	33	23.5	9.5	P9
CLP-063	25183	HSK63	12	M18×1.0	36.5	25	11.5	P11
CLP-080	25184	HSK80	14	M20×1.5	40	26.5	13.5	P12
CLP-100	25185	HSK100	16	M24×1.5	44	28.5	15.5	P15

ORDERING EXAMPLE

① CLP - ② 032

① Name
② HSK No.