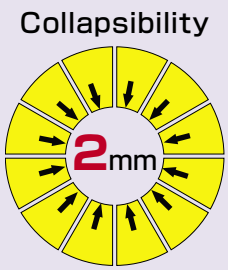
PAT.

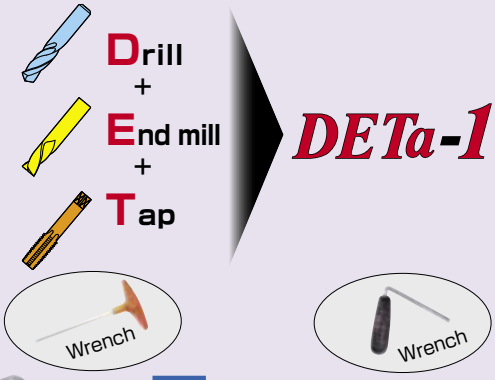
DETa-1 COLLET HOLDER

Pull collet type collet chuck

2mm collapsibility with just one collet!

- Just 6 collets is all it takes to chuck 106 sizes of drills
- Compatible with synchronous tapping
- Provides simple tooling

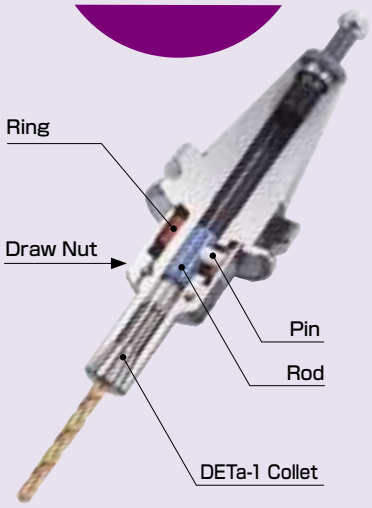




AType (DTA)

NUT-TIGHTENING TYPE

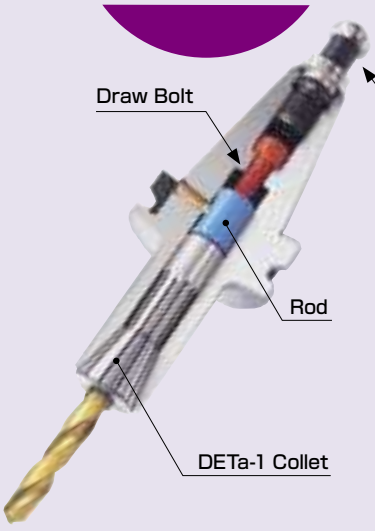
Easy operation



BType (DTB)

PULL COLLET DESIGN

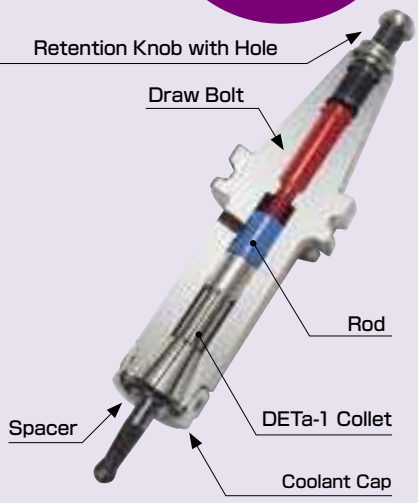
SIMPLE & SLIM · well-balanced characteristics, and highly cost-effective

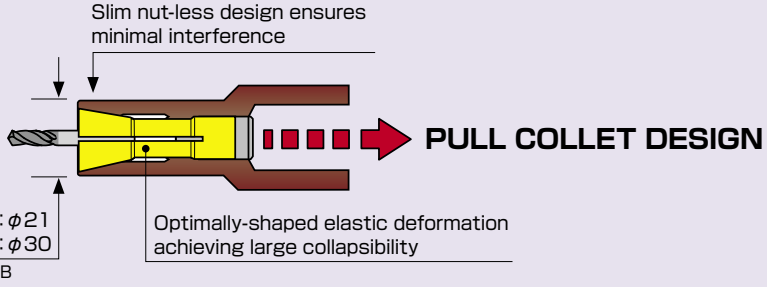


EType (DTE)

PULL COLLET DESIGN

Compatible with coolant-through 7MPa. Great for high-speed machining with its pre-balanced design and highly rigid, thick body





DETa-1 COLLET

Fewer collet types means easier collet management

φ1~φ7

φ2.5~φ13

D7 Collet

Eight sizes from 1 to 7 mm.

D12 Collet

Six sizes from 2.5 to 13 mm.

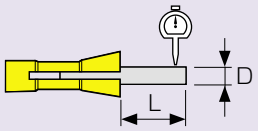
Highest Guaranteed Accuracies Throughout Entire Chucking Range

With their optimal collapsibility, these collets make it possible to reduce the number of collets you need by 90%, compared to our former products.

Run-out accuracy

Kinds	Nominal shank size	Using collapsibility
Precision collet	5μm	10μm
Standard collet	10μm	15μm

※Accuracy of collet alone



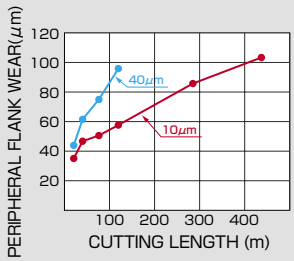
φD	L
~10	4×D
10~13	40

Size

Collet Type	Collet CODE	Chucking range(φ)	Collapsibility (φ)	Nominal shank size
7 Type	D 7– 1.5	1 ~ 1.5	0.5	1.5
	– 2	1.5~ 2		2
	– 2.5	2 ~ 2.5		2.5
	– 3	2.5~ 3		3
	– 4	3 ~ 4	1	4
	– 5	4 ~ 5		5
	– 6	5 ~ 6		6
	– 7	6 ~ 7		7
12 Type	D12– 4	2.5~ 4	1.5	4
	– 6	4 ~ 6	2	6
	– 8	6 ~ 8		8
	–10	8 ~10		10
	–12	10 ~12		12
	–13	11 ~13		13

Longer tool life

A cutter with 10μ concentricity extends cutter life up to 300% than one with 40μ concentricity



Longer cutting tool life 3 times

WORK PIECE SKD61(HRC53°)
V 300m/min
N 9,550min-1
f 0.1mm/flute
CUTTER φ10 CARBIDE BALL END-MILL

COMPARISON WITH DRILL CHUCK

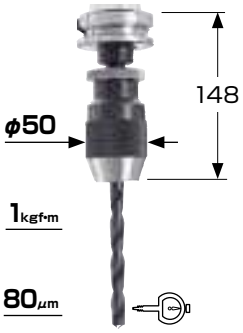
DETa-1 Collet Holder

Outer diameter

9 kgf·m — Gripping power

5 μm — Run-out

Drill chuck



1 kgf·m — Gripping power

80 μm — Run-out

COOLANT-THROUGH SYSTEM

The spindle-through feature can be utilized whether the cutting tool has oil holes or not. For more information, see page 10.

7 MAX. MPa

Coolant-Through Cutter

Intended for high-efficiency machining by using a cutting tool with oil holes. The shank of the cutting tool is sealed with an O-ring, enabling reliable coolant supply. Compatible with small-diameter cutting tools starting from 3 mm.

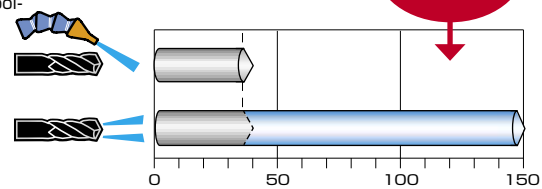
"Sukima-through" coolant-around tool

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

Coolant-Through Collet

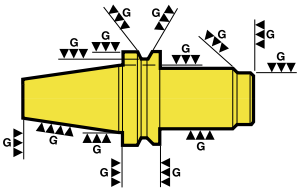
Coolant is supplied through the slits in the collet. No dedicated optional parts are required.

External coolant supply

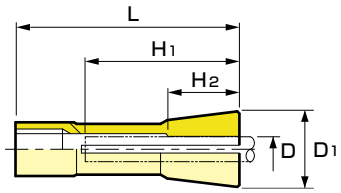


PRE-BALANCED DESIGN (DTE TYPE)

The DTE provides overall grinding around the body for improved balance characteristics to achieve high-speed operation.
When used with the precision collet, it enables stable machining during high-speed machining.



DETa-1 COLLET

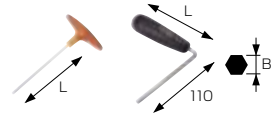


CODE		φ D	Collap-sibility	φ D1	L	H1	H2	Holder type
Precision Collet	Standard Collet							
D 7— 1.5—P	D 7— 1.5	1 ~ 1.5 (.039"~.059")	0.5 (.02")	17 (.67")	50 (1.97")	36 (1.42")	7 (.28")	DTA7 DTB7 DTE7
— 2 —P	— 2	1.5 ~ 2 (.059"~.079")					10 (.39")	
— 2.5—P	— 2.5	2 ~ 2.5 (.059"~.098")					12 (.47")	
— 3 —P	— 3	2.5 ~ 3 (.098"~.118")						
— 4 —P	— 4	3 ~ 4 (.118"~.157")	1 (.04")				14 (.55")	
— 5 —P	— 5	4 ~ 5 (.157"~.197")					16 (.63")	
— 6 —P	— 6	5 ~ 6 (.197"~.236")						
— 7 —P	— 7	6 ~ 7 (.376"~.276")						
D12— 4 —P	D12— 4	2.5 ~ 4 (.098"~.157")	1.5 (.06")	26 (1.03")	70 (2.76")	50 (1.97")	16 (.63")	DTA12 DTB12 DTE12
— 6 —P	— 6	4 ~ 6 (.157"~.236")	2 (.08")				20 (.79")	
— 8 —P	— 8	6 ~ 8 (.236"~.315")					22 (.87")	
—10 —P	—10	8 ~ 10 (.315"~.394")						
—12 —P	—12	10 ~ 12 (.394"~.472")						
—13 —P	—13	11 ~ 13 (.433"~.512")						

Spanner・Wrench

Fig.1

Fig.2 Fig.3



CODE	Holder type	Fig.	B	R	L	Tightening torque
F — 38	DTA 7	1	—	19	148.5	2~4 kgf·m
— 45	DTA12			22.5	225	7
TW— 5	DTB 7	2	5	—	153	1.4
— 6	DTB12		6		173	3.4
— 4	E32-DTB12		4		132.5	1.4
W —135DR	DTE 7 DTE12 F63M-DTB 7 F63M-DTB12	3	5		—	1.4 1.8 1.4 1.8

Adjustable torque wrench

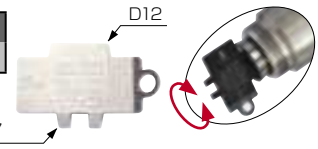
The nut-tightening torque can be adjusted more properly.

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

Collet driver

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

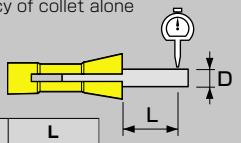
CODE
DR — 1



Run-out accuracy of DETa-1 collet

Type	Nominal shank size	Using collaps-ibility
Precision collet	5 μm	10 μm
Standard collet	10 μm	15 μm

※ Accuracy of collet alone



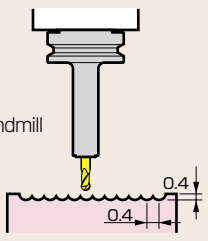
D	L
~10	4 ×D
10~13	40

CUTTING DATA

BT40—DTB7—105

N : 5000 min-1
F : 1500 mm/min
V : 94 m/min
f : 0.15 mm/flute

R3 Carbide ball endmill
2 flutes

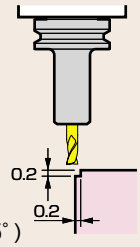


SKD61(HRC46°)

BT40—DTB12—90

N : 4500 min-1
F : 1500 mm/min
V : 141 m/min
f : 0.17 mm/flute

φ10 Carbide ball endmill
2 flutes

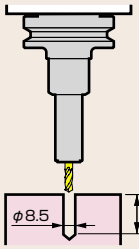


SKD61(HRC45°)

BT40—DTA12—165

N : 10000 min-1
F : 5000 mm/min
V : 267 m/min
f : 0.25 mm/flute

φ8.5 Carbide drill

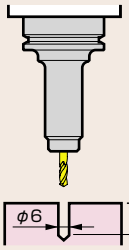


AL

A63—DTE7—105

N : 6369 min-1
F : 1592 mm/min
V : 120 m/min
f : 0.12 mm/flute

φ6 Carbide drill

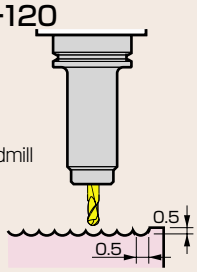


S50C

A63—DTE12—120

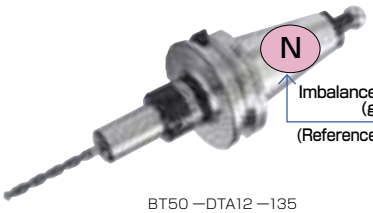
N : 20000 min-1
F : 6000 mm/min
V : 628 m/min
f : 0.15 mm/flute

R5 Carbide ball endmill
2 flutes



SKD61(HRC53°)

DETa-1 COLLET HOLDER A TYPE (DTA)



BT50 —DTA12 —135

S32 —DTA12 —100

Fig.1

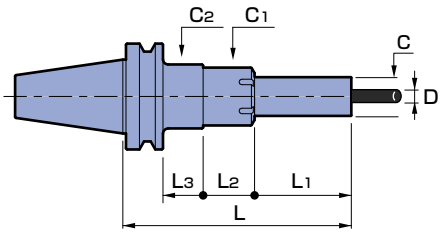


Fig.2

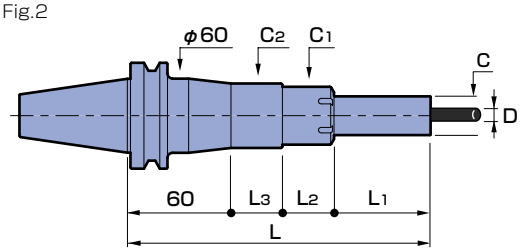


Fig.3

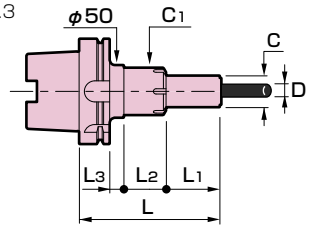
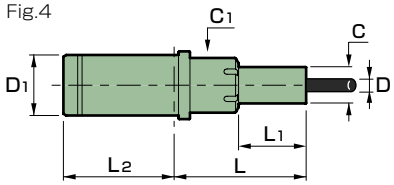


Fig.4



CODE	Fig.	φD	L	φC	L1	L2	L3	φC1	φC2	φD1	Kg	N
BT30—DTA 7— 90	1	1 ～ 7	90	21	30	37	1	38	42	—	0.7	6.7
—120			120		60						0.8	7.9
—DTA12—120		2.5 ～ 13		30	52.5	42	3.5	45	45		1.0	10.4
BT40—DTA 7—105		1 ～ 7	105	21	38	37	3	38	60		1.3	8.5
—135			135		60		11		43		1.4	9.5
—165			165				41				1.7	10.8
—195			195				71				2.1	12.1
—DTA12—120		2.5 ～ 13	120	30	52.5	40	52.5	45	58		1.5	11.6
—150			150		75		8		50		1.7	13.8
—180			180				38				2.1	15.5
—210			210				68				2.6	17.1
BT50—DTA 7—105		1 ～ 7	105	21	30	37	—	38	—		3.8	15.5
—135			135		60						3.9	16.6
—165			165				30		43		4.0	18.0
—195			195				60				4.4	19.5
—255			255				120				5.0	18.2
—315	2		315								5.9	19.1
—DTA12—135	1	2.5 ～ 13	135	30	52.5	40	4.5	45	50		4.1	19.4
—165			165		75		12				4.3	21.6
—195			195				42				4.7	23.4
—255			255				102				5.5	22.3
—315	2		315								6.6	23.3
A 63—DTA 7—105	3	1 ～ 7	105	21	30	37	12	38	50	—	1.1	17.3
—120			120		38		19				1.3	18.3
—150			150		60		27				1.7	20.3
—DTA 12—120		2.5 ～ 13	120	30	52.5	40	1.5	45			1.2	21.9
—150			150		75		9				1.4	25.2
—180			180				39				1.8	27.7
A 100—DTA 7—135		1 ～ 7	135	21	30	37		38			2.7	33.8
—165			165		60						2.8	35.5
—225			225				99				3.7	33.6
—DTA 12—135		2.5 ～ 13	135	30	52.5	40	13.5	45			2.7	37.1
—165			165		75		21				2.9	40.4
—225			225				81				3.8	39.7
DN40A—DTA 7—105	1	1 ～ 7	105	21	30	43.8	12.1	38	45	—	1.2	11.9
—135			135		60	37	18.9				1.3	14.4
—DTA12—130		2.5 ～ 13	130	30	52.5	56.9	—	45	—		1.5	18.0
—160			160		75	66.4					1.7	20.0
DN50A—DTA 7—135		1 ～ 7	135	21	60	37	3	38	50		3.4	20.1
—165			165				33		43		3.6	20.0
—195			195				63				3.9	20.6
—DTA12—135		2.5 ～ 13	135	30	52.5	40	7.5	45	50		3.6	21.5
—165			165		75		15				3.8	25.8
—195			195				45				4.2	26.4

BT

HSK

DIN Form A

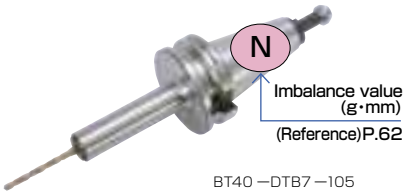
CODE	Fig.	φD	L	φC	L1	L2	L3	φC1	φC2	φD1	Kg (lbs)	N
CT40 — DTA 7 — 102	1	1 ～ 7 (.04"～.28")	102 (4.01")	21 (0.83")	30 (1.18")	37 (1.46")	15.95 (.63")	38 (1.49")	44.45 (1.75")	—	0.7 (1.54)	8.1
— 132			132 (5.19")		60 (2.36")						1.3 (2.87)	9.3
— DTA12 — 130		2.5 ～ 13 (.10"～.51")	130 (5.11")	30 (1.18")	53 (2.08")	40 (1.57")		45 (1.77")			1.5 (3.31)	11.7
— 152			152 (5.98")		75 (2.95")		15.45 (.61")				1.7 (3.75)	13.5
CT50 — DTA 7 — 102		1 ～ 7 (.04"～.28")	102 (4.01")	21 (0.83")	30 (1.18")	37 (1.46")	15.95 (.63")	38 (1.49")	69.85 (2.75")		3.2 (7.05)	11.8
— 132			132 (5.19")		60 (2.36")						3.3 (7.28)	13.0
— 152			152 (5.98")				18 (.71")			43 (1.69")	3.5 (7.72)	13.9
— 203			203 (7.87")				69 (2.71")				3.9 (8.60)	14.0
— DTA12 — 130		2.5 ～ 13 (.10"～.51")	130 (5.11")	30 (1.18")	53 (2.08")	40 (1.57")	18.45 (.73")	45 (1.77")		—	3.5 (7.72)	15.6
— 152			152 (5.98")		75 (2.95")		17.95 (.71")				3.6 (7.94)	17.5
— 203			203 (7.87")				53 (2.09")		50 (1.97")		4.2 (9.26)	18.3
ST32T — DTA 7 — 75	4	1 ～ 7	75	21	31.5	100	—	38	—	32	—	—
— 105			105		61.5							
— DTA12 — 105		2.5 ～ 13		30	52.5			45				
— 135			135		75							
S 32 — DTA 7 — 75		1 ～ 7	75	21	31.5	70		38				
— DTA12 — 100		2.5 ～ 13	100	30	52.5			45				

CAT.

ST

■Option •DETa-1 Collet •Spanner •Retention knob →P.44 •Adjustable torque wrench
■Standard Accessories •Coolant duct (HSK-A) ■Note •ATC may not be possible for some machining centers with BT30-DTA12-120.

DETa-1 COLLET HOLDER B TYPE (DTB)



BT40 —DTB7 —105

S32 —DTB7 —15

Fig.1

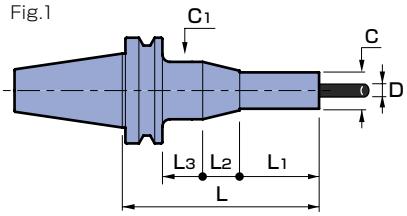


Fig.2

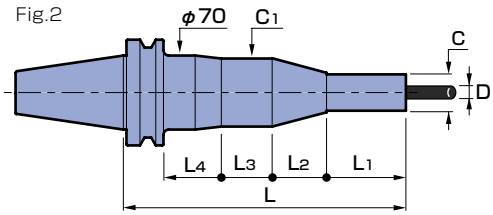


Fig.3

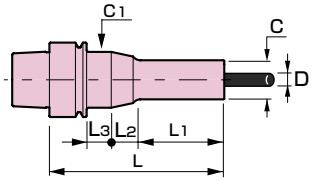
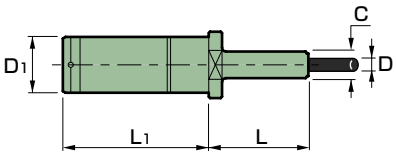


Fig.4



CODE	Fig.	φD	L	φC	L1	L2	L3	L4	φC1	φD1	Kg	N
BT30 — DTB 7 — 75	1	1 ～ 7	75	21	53	—	—	—	—	—	0.5	2.4
— 105			105		83							3.4
— DTB12 — 75			75	30	53							
— 105		2.5～13	105		83						0.7	5.6
BT40 — DTB 7 — 60		1 ～ 7	60	21	33						1.0	3.7
— 105			105		78						1.1	4.8
— 135			135		75	11.8	21.2		30		1.3	5.2
— 165			165		75.5	35.3	27.2		40		1.6	5.4
— 195			195				57.2				1.9	5.6
— DTB12 — 90		2.5～13	90	30	63	—	—		—		1.2	5.3
— 120			120		93						1.3	7.6
— 150			150		105	11.8	6.2		40		1.5	8.4
— 180			180				36.2				1.8	8.7
— 210			210				66.2				2.1	8.9

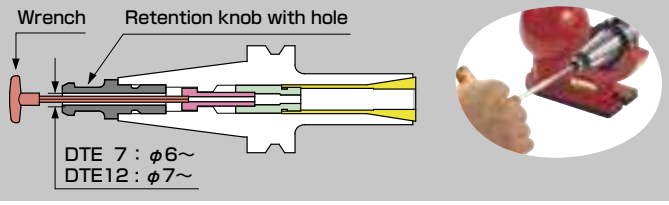
BT

CODE	Fig.	φD	L	φC	L1	L2	L3	L4	φC1	φD1	Kg (lbs)	N
BT50 – DTB 7 – 75	1	1.0～07	75	21	37	—	—	—	—	—	3.5	11.7
– 105			105		67						3.7	12.3
– 135			135		75	11.8	10.2		30		3.8	18.6
– 195			195			58.8	23.2		50		4.6	25.0
– 255			255		75.5	82.3	59.2		60		6.1	27.6
– 315	2		315		75	58.8	43.7	99.5	50		7.4	33.9
BT – DTB12 – 75	1	2.5～13	75	30	37	—	—	—	—		3.7	12.5
– 105			105		67						3.9	14.8
– 135			135		97						4.0	15.3
– 195			195		105	35.3	16.7		50		4.7	24.3
– 255			255			58.8	53.2		60		5.9	28.4
– 315	2		315				50.2	63			7.5	34.1
E 32 – DTB 7 – 65K	3	1.0～07	65	21	30	14.2	10.8	—	26	—	0.2	0.9
E 40 – DTB 7 – 95			95		50	11.8	13.2		30		0.4	1.6
HSK – DTB12 – 110		2.5～13	110	30	90	—	—		—		0.5	2.8
E 50 – DTB 7 – 100		1.0～07	100	21	50	11.8	12.2		30		0.6	3.2
– DTB12 – 115		2.5～13	115	30	89	—	—		—		0.8	4.2
F 63M – DTB 7 – 100		1.0～07	100	21	50	11.8	12.2		30		0.9	3.3
– DTB12 – 120		2.5～13	120	30	70				40		1.1	4.8
DN40AD – DTB 7 – 105	1	1.0～07	105	21	74	—	12.1	—	44.45	—	1.1	4.8
– 135			135		75	11.8	17		30		1.2	5.0
DIN Form AD – DTB12 – 105		2.5～13	105	30	74	—	12.1		44.45		1.2	5.7
– 135			135		104		12.1		44.45		1.3	8.0
DN50AD – DTB 7 – 135	2	1.0～07		21	75	11.8	13.2	15.9	30		3.3	14.9
– 195			195			58.8	26.2		50		4.1	21.5
– DTB12 – 135		2.5～13	135	30	100	—	—		—		3.5	11.7
– 195			195		105	35.3	19.7		50		4.2	20.8
CT40 – DTB 7 – 105	1	1 ～ 7 (.04"～.28")	105 (4.13")	21 (.83")	70 (2.76")	—	16 (.63")	—	44.45 (1.75")	—	1.1 (2.43)	4.6
– 135			135 (5.31")		75 (2.95")	11.8 (.46")	13.2 (.52")		30 (1.18")		1.3 (2.87)	5.2
– DTB12 – 120		2.5～13 (.10"～.51")	120 (4.72")	30 (1.18")	85 (3.34")	—	16 (.63")		44.45 (1.75")			7.5
CAT. – 150			150 (5.91")		93 (3.66")	22.2 (.88")	15.7 (.62")				1.6 (3.53)	8.5
CT50 – DTB 7 – 135		1 ～ 7 (.04"～.28")	135 (5.31")	21 (.83")	75 (2.91")	11.8 (.46")	13.2 (.52")		30 (1.18")		3.3 (7.28)	14.8
– 195			195 (7.68")			58.8 (2.31")	26.2 (1.03")		50 (1.97")		4.1 (9.04)	21.4
– DTB12 – 135		2.5～13 (.10"～.51")	135 (5.31")	30 (1.18")	100 (3.94")	—	16 (.63")		69.85 (2.75")		3.5 (7.72)	11.6
– 195			195 (7.68")		105 (4.13")	35.3 (1.39")	19.7 (.78")		50 (1.97")		4.1 (9.04)	20.8
ST25T – DTB 7 – 15	4	1.0～07	15	21	110	—	—	—	—	25	—	—
– 45			45									
– 75			75									
ST32T – DTB 7 – 15			15		92					32		
– 45			45									
– 75			75									
ST – DTB12 – 15		2.5～13	15	30								
– 45			45									
– 75			75									
S 32 – DTB 7 – 15		1.0～07	15	21	70							
– DTB12 – 40		2.5～13	40	30								

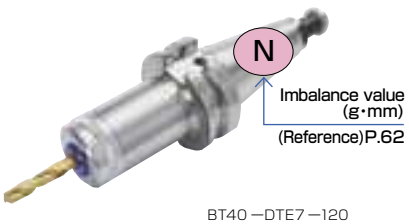
■Options •DETa-1 Collet •Wrench •Retention knob →P.44
■Standard Accessories •Coolant duct (HSK-A)
■Note •BT30-DTB12 requires the dedicated retention knob, which has the feature of draw bolt. Please order P-333 or P-334. Please use a commercially available 14mm single -ended wrench.
•For the E32-DTB7-65K, collet collapsibility is not available.
The clamping diameter applies only to nominal end-mill shank size.

Attaching a cutting tool

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



DETa-1 COLLET HOLDER E TYPE (DTE)



BT40 —DTE7 —120

Fig.1

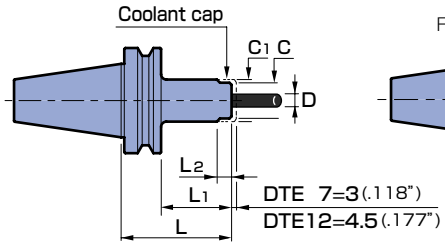
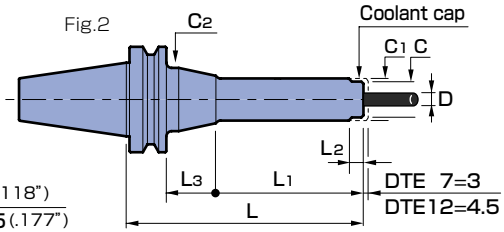


Fig.2



A63 —DTE12 —120

Fig.3

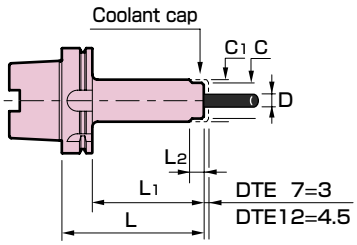
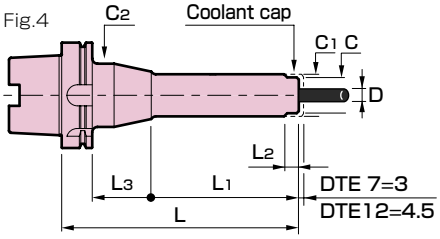


Fig.4



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

BT

HSK

DIN Form AD

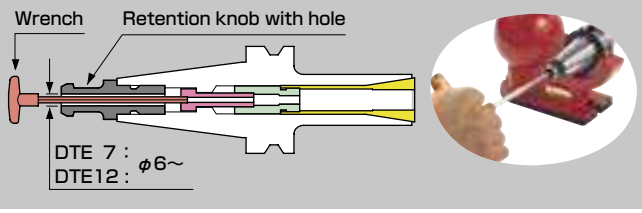
CAT.

CODE	Fig.	φ D	L	φ C	L1	L2	L3	φ C1	φ C2	Kg (lbs)	N
DN40AD—DTE 7— 90	2	1 ～ 7	90	24	58	11.5	12.9	29	45	1.2	5.4
—120			120		70		30.9			1.4	6.4
—DTE12— 90		2.5～13	90	34	58.8	14	12.1	40		1.3	6.1
—150			150		118.8					1.9	9.3
DN50AD—DTE 7—105		1 ～ 7	105	24	70	11.5	15.9	29	70	3.4	12.0
—165			165				60		50	4.2	15.1
—DTE12—105		2.5～13	105	34		14	15.9	40	70	3.6	12.6
—165			165		130					4.2	17.0
CT40 —DTE 7— 90	1	1 ～ 7 (.04"～.28")	90 (3.54")	24 (.94)	55 (2.17")	11.5 (.45")	16 (.63")	29 (1.14")	44.5 (1.75")	1.2 (2.65)	5.2
—120	2		120 (4.72")		70 (2.75")		31 (1.22")			1.5 (3.31)	6.2
—DTE12— 90	1	2.5～13 (.10"～.51")	90 (3.54")	34 (1.34)	55 (2.17")	14 (.55")	16 (.63")	40 (1.57")		1.4 (3.09)	6.1
—150			150 (5.91")		115 (4.53")					1.9 (4.19)	9.6
CT50 —DTE 7—105		1 ～ 7 (.04"～.28")	105 (4.13")	24 (.94)	70 (2.75")	11.5 (.45")		29 (1.14")	69.85 (2.75")	3.4 (7.50)	11.8
—165	2		165 (6.50")				60 (2.36")		50 (1.97")	4.1 (9.04)	15.0
—DTE12—105	1	2.5～13 (.10"～.51")	105 (4.13")	34 (1.34)		14 (.55")	16 (.63")	40 (1.57")	69.85 (2.75")	3.6 (7.94)	12.9
—165			165 (6.50")		130 (5.12")					4.2 (9.26)	17.3

■Options •DETa-1 Collet •Wrench •Retention knob →P.44
•Tap rod (DTE12)
■Standard Accessories •Coolant duct (HSK-A)
■Note •Coolant through system→P.10
■Caution • BT30-DTE12 comes with the dedicated retention knob ,which has the feature of draw bolt. Please specify whether a MAS-1 or MAS-2 retention knob is required when ordering.

Attaching a cutting tool

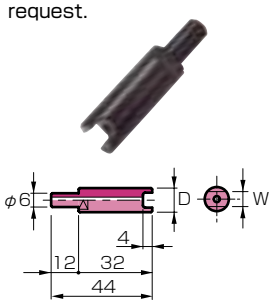
If a retention knob with hole is used, direct tightening of cutting tools is possible.

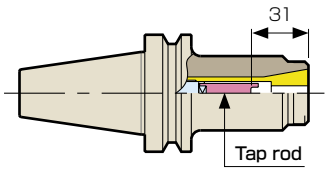


Tap rod (For DTE12)

To be used as a stopper for synchronous tapping. Available for ANSI, DIN and ISO tap sleeve upon request.

CODE	Applicable taps	φ D	W
TR—5	JIS M 8	10.5	5
—5.5	JIS M10		5.5
—6	OSG M 8		6
—6.5	JIS M12		6.5
—8	OSG M12	12	8



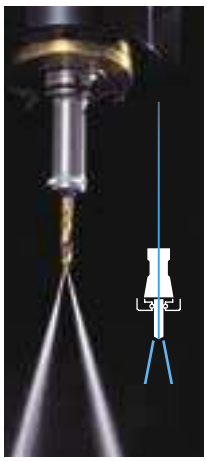


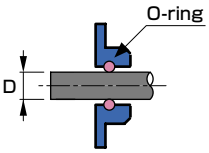
Coolant through system (DTE)

To use the coolant-through cutter or sukima through capability with the DTE, use a combination of the following parts.

Cutter with oil hole

Coolant-through Cutter



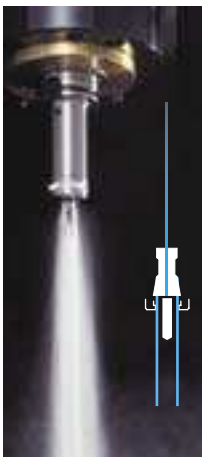


1 Spacer EA type

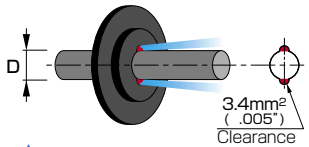
4 Coolant cap

Cutter without oil hole

"Sukima-through" coolant-around tool



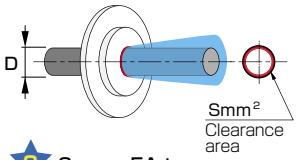
PIN POINT COOLANT SUPPLY



2 Spacer EA type

4 Coolant cap

COOLANT-AROUND TOOL



3 Spacer EA type

4 Coolant cap

1 Spacer EA type

CODE	Holder type	φ D	Q'ty
7EA— 3.5—3	DTE 7	3 ~ 3.5 (.12"~.14")	3
— 4 —3		3.5~ 4 (.14"~.16")	
— 4.5—3		4 ~ 4.5 (.16"~.18")	
— 5 —3		4.5~ 5 (.18"~.20")	
— 5.5—3		5 ~ 5.5 (.20"~.22")	
— 6 —3		5.5~ 6 (.22"~.24")	
— 6.5—3		6 ~ 6.5 (.24"~.26")	
— 7 —3		6.5~ 7 (.26"~.28")	
12EA— 3.5—3	DTE12	3 ~ 3.5 (.12"~.14")	
— 4 —3		3.5~ 4 (.14"~.16")	
— 4.5—3		4 ~ 4.5 (.16"~.18")	
— 5 —3		4.5~ 5 (.18"~.20")	
— 5.5—3		5 ~ 5.5 (.20"~.22")	
— 6 —3		5.5~ 6 (.22"~.24")	
— 6.5—3		6 ~ 6.5 (.24"~.26")	
— 7 —3		6.5~ 7 (.26"~.28")	
— 8 —3		7.0~ 8.0 (.28"~.32")	
— 9 —3		8.0~ 9.0 (.32"~.35")	
—10 —3		9.0~10.0 (.35"~.39")	
—11 —3		10.0~11.0 (.39"~.43")	
—12 —3		11.0~12.0 (.43"~.47")	
—13 —3		12.0~13.0 (.47"~.51")	

2 Spacer EBM type

CODE	Holder type	φ D	Q'ty
7EBM— 3 —3	DTE 7	3	3
— 4 —3		4	
— 6 —3		6	
12EBM— 3 —3	DTE12	3	
— 4 —3		4	
— 6 —3		6	
— 8 —3		8	
—10 —3		10	
—12 —3		12	

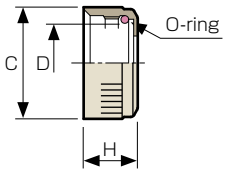
CODE	Holder type	φ D	Q'ty
7EBM— 1/8 —3	DTE 7	.125"	3
—3/16 —3		.188"	
— 1/4 —3		.250"	
12EBM— 1/8 —3	DTE12	.125"	
—3/16 —3		.188"	
— 1/4 —3		.250"	
—5/16 —3		.313"	
—3/8 —3		.375"	
—1/2 —3		.500"	

3 Spacer EBS type

CODE	Holder type	φ D	S	Q'ty
7EBS— 3.6—3	DTE 7	3	2.8	3
— 4.5—3		4	4.2	
— 6.4—3		6	4.1	
12EBS— 3.6—3	DTE12	3	2.8	
— 4.5—3		4	4.2	
— 6.4—3		6	4.1	
— 8.4—3		8	4.5	
—10.3—3		10	4.6	
—12.3—3		12	5.0	

CODE	Holder type	φ D	S	Q'ty
7EBS— 1/8—3	DTE 7	.125"	.004"	3
—3/16—3		.188"	.007"	
— 1/4—3		.250"	.006"	
12EBS— 1/8—3	DTE12	.125"	.004"	
—3/16—3		.188"	.007"	
— 1/4—3		.250"	.006"	
—5/16—3		.313"	.007"	
—3/8—3		.375"		
—1/2—3		.500"	.008"	

4 Coolant cap



CODE	Holder type	φ D	φ C	H
CLP— 7E	DTE 7	21	29	14
— 12E	DTE12	30	40	18

Spacer blank type

Depend on cutter or application, please modify.

CODE	Holder type	Q'ty
7EBF — BL — 5	DTE 7	5
12EBF — BL — 5	DTE12	

Spacer set (DTE)

CODE	Contents of set			Holder type
	Spacer	Q'ty	4 Coolant cap	
7ES — A	1 7EA —3.5~7	(1 ea.) Total 14pcs.	CLP— 7E (1pc.)	DTE 7
	2 7EBM—3,4,6			
	3 7EBS —3.6~6.4			
12ES — A	1 12EA —3.5~13	(1 ea.) Total 26pcs.	—12E (1pc.)	DTE12
	2 12EBM—3~13			
	3 12EBS —3.6~12.3			

■Standard Accessories •Collet driver

The coolant-through collet function

No additional parts are required.

Pin•Point CHUCK

Pull collet design collet holder for miniature size cutter

The best in the world

- Compact φ10
- Sturdy
- Easy to use!

Applicable for coolant-through version
(Option)

PULL COLLET DESIGN

The world's smallest body diameter φ10

φ0.5～φ3.175

Nut less edge!
||
Slim

P COLLET

Uses strong but malleable maraging steel!
Max. clamping range of 0.5mm

Very small, but strong and highly accurate

HIGH STRENGTH
Tensile strength 200kgf/mm²
Hardness HRC52°

TOUGHNESS
Proof stress 190kgf/mm²

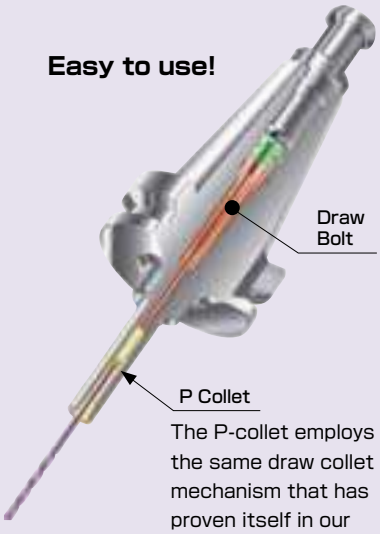
HIGH RESISTANCE

Size

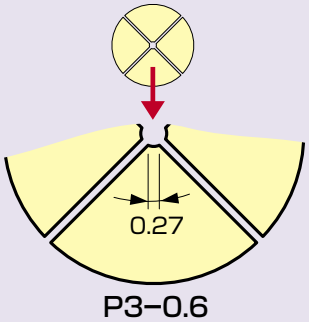
Collet / Standard collet	Chucking range(φ)	Collapsibility (φ)
P3–0.6	0.5～0.6	0.1
–0.8	0.6～0.8	0.2
–1	0.8～1	
–1.5	1 ～1.5	0.5
–2	1.5～2	
–2.5	2 ～2.5	
–3	2.5～3	
–3.175	2.7～3.175	

The difference lies in its operating life!!

Easy to use!



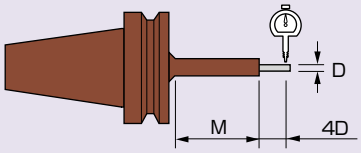
The P-collet employs the same draw collet mechanism that has proven itself in our DETa-1 collet.



P3–0.6

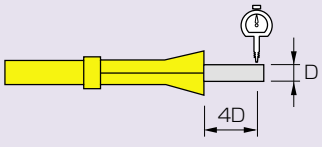
Run-out accuracy
Accuracy of main unit/ P-collet combination

M	～45mm	60mm	90mm
Precision collet	5μm	8μm	13μm
Standard collet	7μm	10μm	15μm

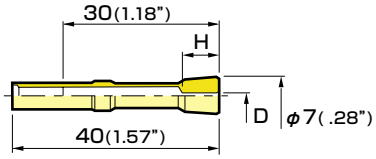


P-collet alone

Precision collet	3μm
Standard collet	5μm

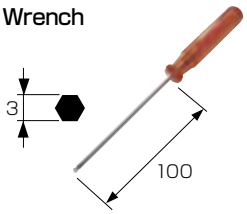


P COLLET



CODE		φD	H
Precison collet	Standard collet		
P3−0.6−P	P3−0.6	0.5～0.6 (.019"～.023")	6.9 (.271")
−0.8−P	−0.8	0.6～0.8 (.023"～.031")	
−1 −P	−1	0.8～1 (.031"～.039")	7 (.276")
−1.5−P	−1.5	1 ～1.5 (.039"～.059")	7.2 (.283")
−2 −P	−2	1.5～2 (.059"～.079")	7.3 (.287")
−2.5−P	−2.5	2 ～2.5 (.079"～.098")	7.4 (.291")
−3 −P	−3	2.5～3 (.098"～.118")	7.6 (.299")
−3 .175−P	−3 .175	2.7～3.175 (.106"～.125")	

Wrench



CODE	Clamping torque
DW−3	0.2 kgf·m

Retention knob with hole

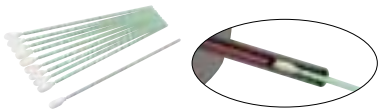
There is no need to remove a retention knob with wrench to operate.

CODE	φD	Standard	Shank type
P−493	3.7	MAS−1 base	BT30
−494		MAS−2 base	
−297	4	MAS−1 base	BT40
−339		MAS−2 base	

■Caution •When using the coolant-through version, pay attention to the hole diameter of retention knob.

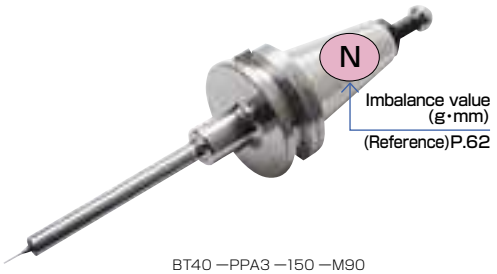
Cleaning tool

Used to clean the inside of PPchuck.



CODE	Q'ty
PCT01−10	10
−25	25

Pin • Point CHUCK (PPA)



BT40 −PPA3 −150 −M90

A63 −PPA3 −90 −M45

ST12 −PPA3 −150 −M90

CODE	Fig.	L	M	L1	L2	φD1	Kg	N
BT30−PPA3− 45−M20	1	45	20	−	−	−	0.4	1.5
− 60−M30		60	30	8				1.6
− 75−M45		75	45					
BT40−PPA3− 60−M30		60	30	−			1.0	3.2
− 90−M30		90		33				3.6
−M45			45	18				3.4
−M60			60	−				3.3
−120−M60		120		33			1.1	3.7
−M90			90	−			1.0	3.4
−150−M60		150	60	63			1.2	4.0
−M90			90	33			1.1	3.7
A40 −PPA3− 75−M30	2	75	30	25	−	−	0.3	3.8
− 90−M45		90	45					3.9
−M60			60	10				3.7
A50 −PPA3− 95−M45		95	45	24			0.5	7.5
−120−M45		120		49				8.0
A63 −PPA3− 75−M30		75	30	19			0.7	10.6
− 90−M30		90		34			0.8	10.9
−M45			45	19			0.7	10.7
−M60			60	−				10.5
−120−M60		120		34			0.8	11.0
−M90			90	−			0.7	10.7
−150−M60		150	60	64			0.8	11.6
−M90			90	34				11.2

BT

HSK

Fig.1

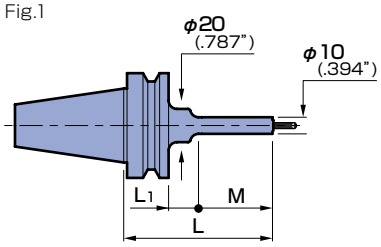
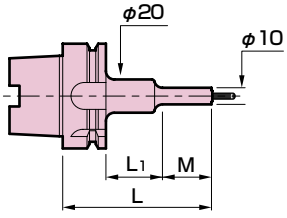
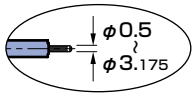


Fig.2





CODE	Fig.	L	M	L_1	L_2	ϕD_1	Kg (lbs)	N
E32 —PPA3— 65—M30	3	65	30	15	—	—	0.2	0.9
E40 —PPA3— 65—M30							0.3	1.4
— 90—M45		90	45	25				1.6
E50 —PPA3— 75—M30		75	30	19			0.5	1.5
— 90—M30		90		34				1.7
—M45			45	19				1.5
F63M—PPA3— 75—M30		75	30				0.7	1.6
— 90—M30		90		34				1.7
HSK —M45			45	19				1.6
—120—M60		120	60	34				1.8
—M90			90	—				1.6
15T —PPA3— 30—M12	4	30	12				0.1	0.4
— 45—M27		45	27					0.5
S20T —PPA3— 30—M12		30	12					0.8
— 45—M27		45	27					
DN40A—PPA3— 57—M20	1	57	20	—	—	—	1.0	3.9
— 87—M30		87	30	25.8				4.2
DIN Form A —M50			50	—				4.0
—117—M60		117	60	25.8				4.3
—147—M60		147	60	55.8			1.1	4.6
CT40 —PPA3— 57—M30	1	57 (2.24")	30 (1.18")	—	—	—	0.9 (1.98)	3.1
— 87—M30		87 (3.43")		35 (1.38")				3.5
CAT. —M60			60 (2.36")	—				3.2
—117—M60		117 (4.61")		35 (1.38")				3.6
—147—M60		147 (5.79")		65 (2.56")			1.0 (2.20)	3.9
ST12 —PPA3— 90—M30	5	90	30	57	3	12	0.1	—
—120—M60		120	60					
—150—M90		150	90					
ST16 —PPA3—100—M30		100	30	66	4	16		
—130—M60		130	60					
—160—M90		160	90					
ST20 —PPA3—100—M30		100	30	65	5	20	0.2	
—130—M60		130	60					
—160—M90		160	90					
ST —190—M60		190	60	125			0.3	
—220—M30		220	30	185			0.4	
ST25 —PPA3—100—M30		100		65		25	0.2	
—130—M60		130	60				0.3	
—160—M90		160	90					
—220—M30		220	30	185			0.7	
—250—M60		250	60					

Fig.3

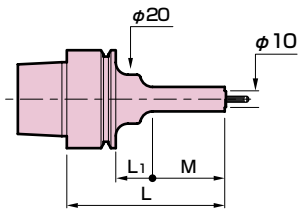


Fig.4

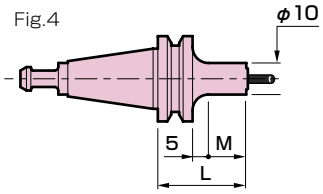
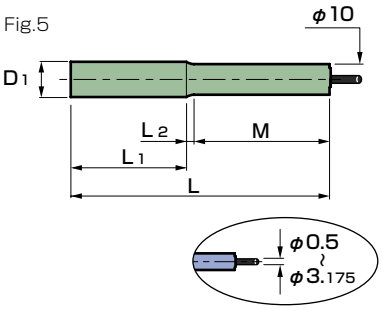


Fig.5



■Options •P Collet •Wrench •Retention knob→P.44 •Cleaning tool
■Standard accessories •Coolant duct(HSK-A) •Retention knob (15T,S20T)

Applicable for coolant-through system(Option)

Replacing the draw bolt with the through-hole makes it applicable to coolant-through. To place an order for a product having the coolant-through feature, add "-C" to the end of the product code.

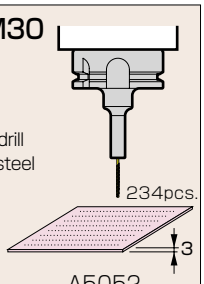
CODE (Example)
BT40—PPA3—60—M30—C

CUTTING DATA

A63-PPA3-75-M30

N : 10000 min⁻¹
F : 400 mm/min
V : 25 m/min

0.8 mm dia. straight drill made of high-speed steel

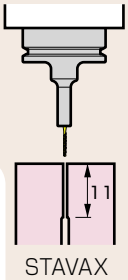


Combining an accurate holder with a high-precision drill enabled us to drill holes free of surface burrs.

F63M-PPA3-75-M30

N : 3715 min⁻¹
F : 30 mm/min
V : 7 m/min

φ0.6 Carbide straight drill

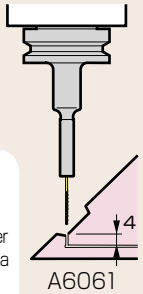


We used this product expecting higher runout precision and longer cutting tool life. The runout precision was improved without changing the machining conditions, resulting in longer life of the cutting tool.

BT40-PPA3-150-M60

N : 6000 min⁻¹
F : 60 mm/min
V : 15 m/min

0.8 mm dia. straight drill made of high-speed steel



When drilling holes on a slanted surface (45 degrees) with a 5-axial machine, interference becomes a problem. Since a holder with a smaller outer diameter is necessary in such a situation, we used this product. The interference problem was settled.

COLLET HOLDER

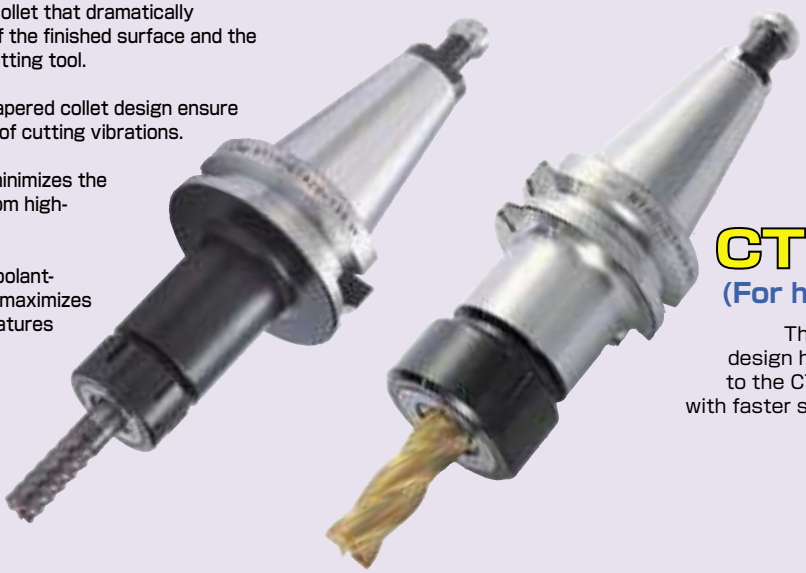
PAT.

Ultra precision taper collet chuck

The best-suited base holder applicable to all the kinds of machining

This holder meets all the requirements for high-speed cutting; i.e., precision, rigidity, balance, and coolant.

- **Accuracy** Super-precise spring collet that dramatically improves the quality of the finished surface and the operating life of the cutting tool.
- **Rigidity** Thick holder and 6° tapered collet design ensure the proper absorption of cutting vibrations.
- **Balance** Pre-balanced design minimizes the vibrations resulting from high-speed machining.
- **Coolant** Compatible with the coolant-through features that maximizes the spindle-through features



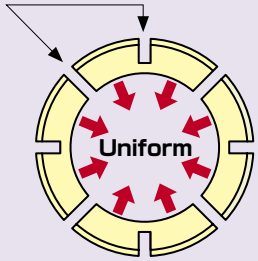
CTA Type

CTH Type
(For high-speed)

The pre-balanced design has been added to the CTA type to deal with faster spindle rotation.

SPRING COLLET (CTA/CTH type)

6 to 8 segments
HIGH ACCURACY

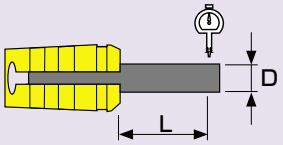


The increased number of slits ensures the uniform tightening and high accuracy of the collet.

Run-out accuracy

Runout precision	Nominal shank size
Precision collet	5 μm
Standard collet	10 μm

※ Accuracy of collet alone



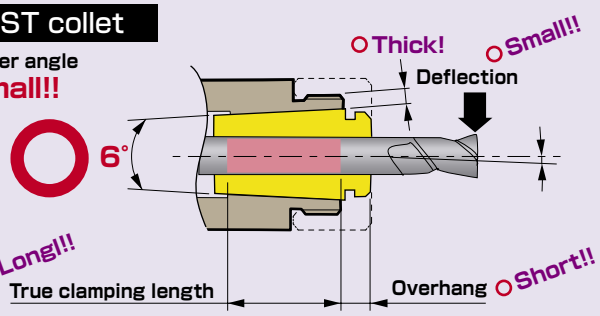
D	L
~ 10	4 ×D
10.2 ~ 20	40
20.5 ~ 42	60

IDEAL TAPER ANGLE

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

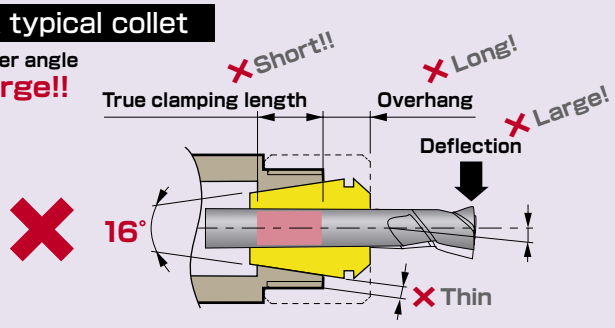
MST collet

Taper angle
Small!!



A typical collet

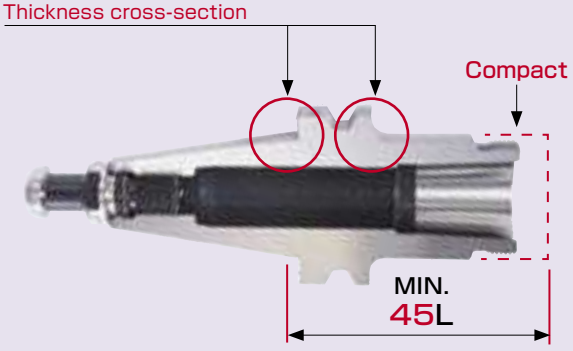
Taper angle
Large!!

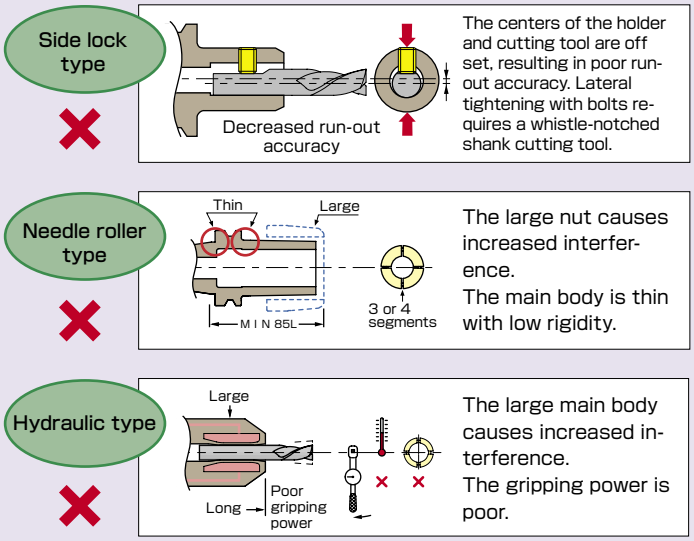


HIGH RIGIDITY

The tapered collet type allows the main body to be designed to be thick and compact.

High rigidity
Thickness cross-section

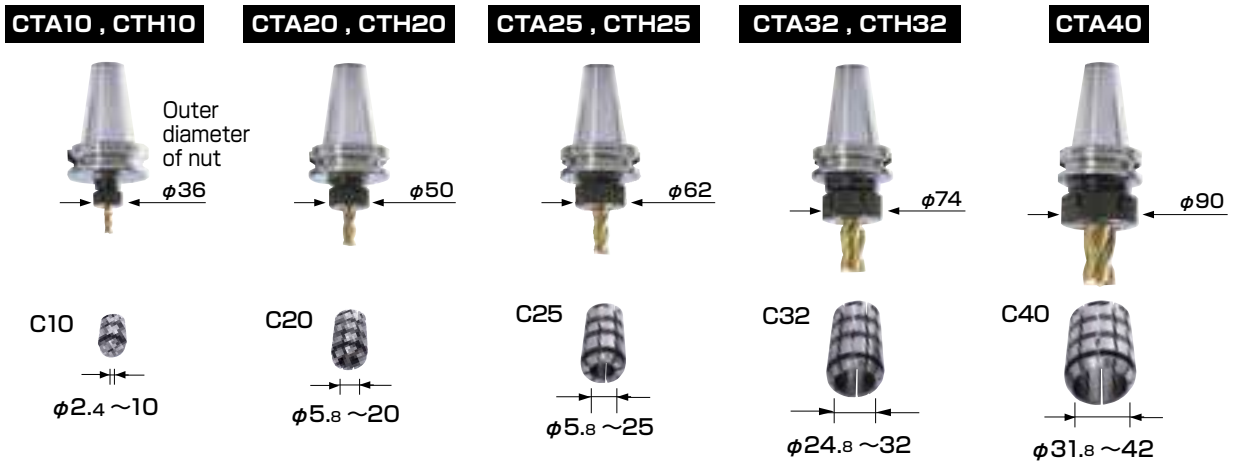




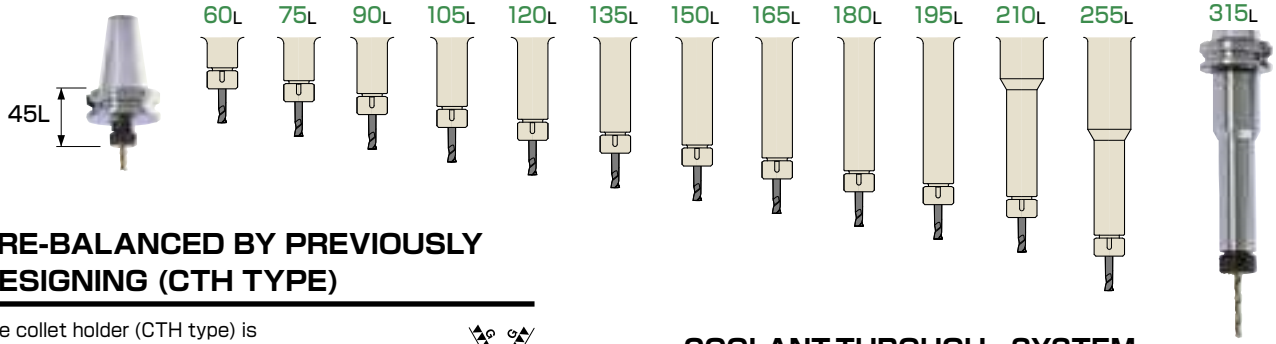
COMES IN MANY SIZES

The most suitable holder can be chosen based on cutting tool size and machining requirements, such as machining interference, coolant feed, and gripping power .

●Main body (Collet) **5** types

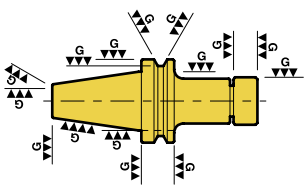


●A variety of holder lengths: 45L to 315L



PRE-BALANCED BY PREVIOUSLY DESIGNING (CTH TYPE)

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



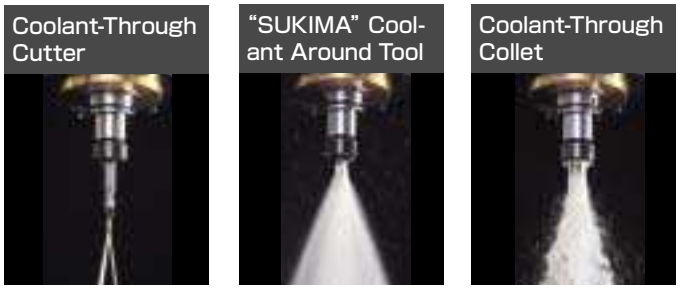
★Comparison in imbalance value

Holder code	Spring collet used	Cutter used		Imbalance value (g•cm)
		Diameter (mm)	Overhang (mm)	
BT30-CTH10-75	Precision collet C10-10-P	φ10	40	0.33
BT30-CTA10-75	Standard collet C10-10			1.31

COOLANT-THROUGH SYSTEM

The spindle-through feature can be used whether the cutting tool has oil holes or not. For more information, see page 20.

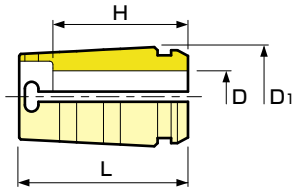
7 MAX. MPa



SPRING COLLET

mm

CODE		φD	Collapsibility	L	φD1	H	Holder type
Precison collet	Standard collet						
C10—D—P	C10—D	2.6 2.8 3 3.2 3.4 ····(0.2 Steps)···· 4.2 4.4 4.6 4.8 5	0.2	26	17.2	16	CTA10 CTH10 CTS10
		5.2 5.4 5.6 5.8				18	
		6 6.2 6.4 6.6 6.8 ····(0.2 Steps)···· 9.4 9.6 9.8 10				20	
C20—D—P	C20—D	6 6.2 6.4 6.6 6.8 ····(0.2 Steps)···· 9 9.2 9.4 9.6 9.8	0.2	50	29.5	29	CTA20 CTH20
		10 10.2 10.4 10.6 ····(0.2 Steps)···· 15.4 15.6 15.8				33	
		16 16.2 16.4 16.6 ····(0.2 Steps)···· 19.6 19.8 20				40	
C25—D—P	C25—D	6 8	0.2	68	36.5	35	CTA25 CTH25
		10 10.5 11 11.5 12 12.5 13 13.5 14 14.5 15				46	
		15.5 16 16.5 17 17.5 18 18.5 19 19.5 20				54	
		20.5 21 21.5 22 22.5 23 23.5 24 24.5 25				57	
C32—D—P	C32—D	25 28	0.2	80	46	66	CTA32 CTH32
		30 32				68	
C40—D—P	C40—D	32 40	0.2	80	56	65	CTA40
		42				70	



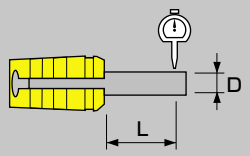
inch

CODE	φD	Collapsibility	L	φD1	H	Holder type
Standard collet						
C20—D	1/4 5/16 3/8	0.2 (.008")	50 (1.97")	29.5 (1.16")	29 (1.14")	CTA20
	7/16 1/2				33 (1.30")	
	5/8 3/4				40 (1.57")	
C25—D	1/4 5/16 3/8	0.2 (.008")	68 (2.67")	36.5 (1.44")	35 (1.38")	CTA25
	7/16 1/2				46 (1.81")	
	5/8 3/4				54 (2.12")	
	1IN				57 (2.24")	

Run-out accuracy of spring collet

Kinds	Nominal shank size
Precision collet	5 μm
Standard collet	10 μm

※Precision of collet alone



D	L
~10	4×D
10~13	40
20~42	60

Spanner・Wrench

Fig.1 Fig.2

CODE	Fig.	Holder type	R	L	Clamping torque
FC— 32	1	CTH10(E32 , A40)	16	120	4~6kgf·m
— 36		CTA10 , CTH10	18	208	
— 50		CTA20 , CTH20	25	281	12
— 55		CTH25 (A40)	27.5	284	15
— 62		CTA25 , CTH25	31	312	
— 74		CTA32 , CTH32	37	364	
— 90		CTA40	45		
RC— 26	2	CTS10	—	240	—

Adjustable torque wrench

The tightening level for a nut can be adjusted properly.

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

Collet Remover

CODE	Collet type
C10—RM	C10
C20—RM	C20

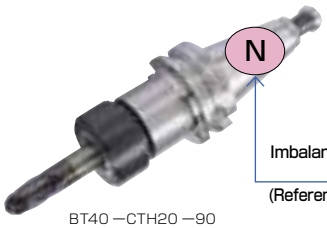
Spring collet standard set

C10-A set

CODE	Collet inner diameter	Q'ty
C10—Aset	3, 4, 5, 6, 8, 10	1 ea.
C20—Aset	6, 8, 10, 12, 16, 20	
C25—Aset	6, 8, 10, 12, 16, 20, 25	

■Standard Accessories
•Collet remover(C10—A set)

COLLET HOLDER (CTH)



BT40 —CTH20 —90


A63 —CTH20 —90


E32 —CTS10 —50

CODE	Fig.	φD	L	φC	L1	L2	Kg	N
BT30—CTH10— 45	1	2.4～10	45	36	23	—	0.5	2.6
— 75			75		53		0.6	2.7
—CTH20— 60		5.8～20	60	50	38			4.3
— 90			90		68		0.9	4.7
BT40—CTH10— 60		2.4～10	60	36	33		1.1	3.8
— 90			90		63		1.3	4.0
—120			120		93		1.4	4.4
—150			150		123		1.6	4.6
—CTH20— 60		5.8～20	60	50	33		1.2	6.4
— 90			90		63		1.4	7.0
BT —120			120		93		1.7	7.3
—150			150		123		2.0	7.6
—CTH25— 75		5.8～25	75	62	48		1.5	8.9
—105			105		78		2.0	9.8
BT50—CTH10—105		2.4～10		36	67		3.8	5.3
—135			135		97		4.0	5.7
—165			165		127		4.1	6.1
—CTH20—105		5.8～20	105	50	67		4.2	8.3
—135			135		97		4.6	9.0
—165			165		127		4.9	9.4
—CTH25— 75		5.8～25	75	62	37		3.8	10.3
—105			105		67		4.4	11.0
—CTH32— 90		24.8～32	90	74	52		4.1	14.4
A 40—CTH10— 55	2	2.4～10	55	32	35	—	0.4	3.6
— 75			75		55		0.5	3.9
— 90			90		70		0.6	4.0
—CTH20— 75		5.8～20	75	50	55		0.7	7.3
— 90			90		70		0.8	7.0
—CTH25— 95			95	55	75		0.9	10.7
A 50—CTH10— 55		2.4～10	55	36	29		0.6	6.6
— 75			75		49		0.7	6.9
A50M—CTH20— 80		5.8～20	80	50	54		0.9	10.2
—105			105		79		1.2	11.1
—CTH25—105		5.8～25		62			1.3	14.7
A 63—CTH10— 75		2.4～10	75	36	49		0.9	10.2
— 90			90		64		1.0	10.4
HSK —120			120		94		1.2	10.7
—150			150		124		1.4	11.0
—CTH20— 90		5.8～20	90	50	64		1.2	14.1
—120			120		94		1.5	14.0
—150			150		124		1.9	14.9
—CTH25—105		5.8～25	105	62	79		1.6	17.1
A100—CTH10—135		2.4～10	135	36	106		2.7	25.1
—165			165		136		2.9	25.4
—225			225		175	21	3.4	26.0
—CTH20—135		5.8～20	135	50	106	—	3.2	28.5
—165			165		136		3.6	29.5
—225			225		196		4.3	31.1
—CTH25—135		5.8～25	135	62	106		3.7	31.4
—165			165		136		4.3	32.7
—195			195		166		4.8	34.1

Fig.1

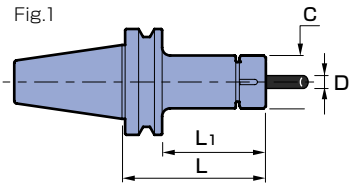


Fig.2

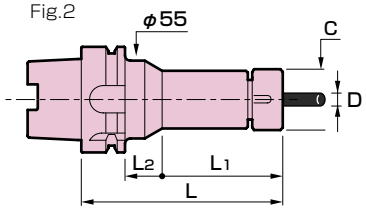
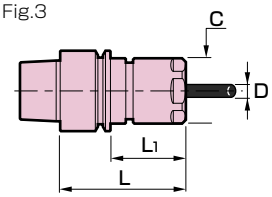


Fig.3



■Options •Spring collet(Precison collet) •Spanner •Adjustable torque wrench •Retention knob→P.44 •Coolant through system→P.20
■Standard accessories •Nut(NUA-CTH) •Coolant duct (HSK-A)
■Note •Be sure to use precision-type spring collet.
■Caution •E32-CTS10-50= Collapsibility of collet cannot use. The holding diameter applies only to nominal end-mill shank size.

HSK

CODE	Fig.	φD	L	φC	L1	L2	Kg	N
E 32—CTH10— 55	2	2.4～10	55	32	35	—	0.2	1.2
—CTS10— 50	3		50	26	30			0.9
E 40—CTH10— 55	2		55	32	34		0.4	1.4
E 50—CTH10— 60			60	36			0.7	2.1
— 90			90		64		0.9	2.3
—CTH20— 75		5.8～20	75	50	49			3.8
F 63—CTH10— 60		2.4～10	60	36	34			2.2
— 90			90		64		1.1	2.4
—CTH20— 75		5.8～20	75	50	49			3.9

DIN Form AD

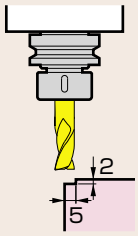
CODE	Fig.	φD	L	φC	L1	L2	Kg	N
DN40AD—CTH20— 75	1	5.8～20	75	50	56	—	1.1	5.4
—135			135		116		1.7	5.9
—CTH25— 75		5.8～25	75	62	56		1.4	7.2
DN50AD—CTH20—105	2	5.8～20	105	50	70		3.6	9.1
—165			165		130		4.4	9.9
—CTH25—105		5.8～25	105	62	70		3.8	10.9

CUTTING DATA (CTH)

BT30-CTH10-45

N : 32000 min⁻¹
F : 10000 mm/min
V : 1005 m/min
f : 0.16 mm/flute

φ10 Carbide endmill
2 flutes

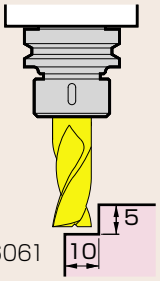


A7075

BT40-CTH20-60

N : 20000 min⁻¹
F : 16000 mm/min
V : 1256 m/min
f : 0.4 mm/flute

φ20 Carbide endmill
2 flutes

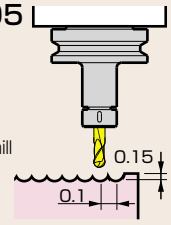


A6061

BT50-CTH10-105

N : 10000 min⁻¹
F : 3000 mm/min
V : 314 m/min
f : 0.15 mm/flute

φ10 Carbide ball endmill
2 flutes



SKD(HRC45°)

COLLET HOLDER (CTA)

BT50 —CTA20 —135

ST32T —CTA10 —90

BT

CODE	Fig.	φD	L	φC	L1	L2	φC1	Kg
BT30—CTA10— 45	1	2.4～10	45	36	23	—	—	0.5
— 75			75		53			0.7
—105			105		83			0.9
—CTA20— 60		5.8～20	60	50	38			0.6
— 90			90		68			0.9
BT40—CTA10— 60		2.4～10	60	36	33			1.1
— 90			90		63			1.3
—120			120		93			1.5
—150			150		123			1.7
—180			180		153			1.9
—210	2		210		155	28	44	2.1
—CTA20— 60	1	5.8～20	60	50	33	—	—	1.1
— 90			90		63			1.4
—120			120		93			1.7
—150			150		123			2.1
—180			180		153			2.5
—210			210		183			2.9
—CTA25— 75		5.8～25	75	62	48			1.2
—105			105		78			1.6
—135			135		108			2.0
—CTA32—105		24.8～32	105	74	78			1.8

Fig.1

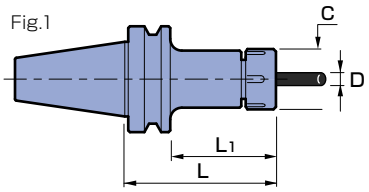


Fig.2

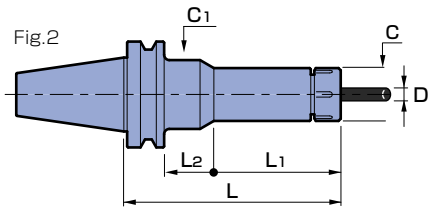


Fig.3

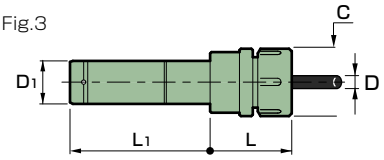


Fig.4

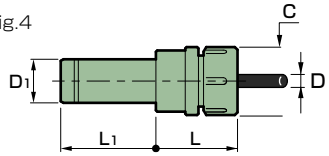
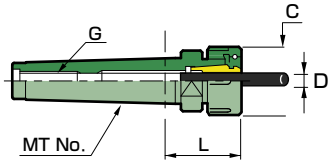


Fig.5



CODE	Fig.	φD	L	φC	L1	L2	C1	φD1	MT No.	G	Kg
BT50 —CTA10—105	1	2.4～10	105	36	67	—	—	—	—	—	3.8
—135			135		97						3.9
—165			165		127						4.0
—195			195		157						4.2
—255	2		255		155	62	55				4.9
—315			315			122					5.8
—CTA20—105	1	5.8～20	105	50	67	—	—				4.0
—135			135		97						4.4
—165			165		127						4.8
—195			195		157						5.2
—255	2		255		180	37	65				6.3
—315			315			97					7.7
—CTA25— 75	1	5.8～25	75	62	37	—	—				3.6
—105			105		67						4.2
—135			135		97						4.8
—165			165		127						5.4
—195			195		157						6.0
—255			255		217						7.2
—315	2		315		225	52	70				8.7
—CTA32— 90	1	24.8～32	90	74	52	—	—				4.0
—120			120		82						4.7
—150			150		112						5.4
—180			180		142						6.1
—CTA40— 90		31.8～42	90	90	52						4.0
—120			120		82						5.0
DN40AD—CTA20— 75	1	5.8～20	75	50	56	—	—	—	—	—	1.1
—135			135		116						1.9
—CTA25— 75		5.8～25	75	62	56						1.7
DN50AD—CTA20—105	2	5.8～20	105	50	70						2.3
—165			165		130						3.0
—CTA25—105		5.8～25	105	62	70						2.9
CT40 —CTA20— 75	1	5.8～20 (.23"～.79")	75 (2.95")	50 (1.97")	56 (2.20")	—	—	—	—	—	1.2 (2.65)
—135			135 (5.31")		116 (4.57")						1.7 (3.75)
—CTA25— 75		5.8～25 (.23"～.98")	75 (2.95")	62 (2.44")	56 (2.20")						1.4 (3.09)
CT50 —CTA20—105		5.8～20 (.23"～.79")	105 (4.13")	50 (1.97")	70 (2.68")						3.6 (7.94)
—165			165 (6.50")		130 (5.12")						4.4 (9.70)
—CTA25—105		5.8～25 (.23"～.98")	105 (4.13")	62 (2.44")	70 (2.68")						3.9 (8.60)
ST20T —CTA10	3	2.4～10	35	36	110	—	—	20	—	—	—
ST25T —CTA10								25			
—CTA20		5.8～20	60	50							
ST32T —CTA10— 30		2.4～10	30	36	100			32			
— 60			60								
— 90			90								
—120			120								
—CTA20— 60		5.8～20	60	50							
— 90			90								
—120			120								
ST42T —CTA25— 90		5.8～25	90	62	110			42			
—120			120								
S 32 —CTA10	4	2.4～10	30	36	70			32			
—CTA20		5.8～20	60	50							
S 42 —CTA10		2.4～10	30	36	80			42			
—CTA20		5.8～20	35	50							
—CTA25		5.8～25	80	62							
MT2 —CTA10	5	2.4～10	40	36	—			—	2	M10	
MT3 —CTA10									3	M12	
MT4 —CTA20		5.8～20	70	50					4	M16	
—CTA25		5.8～25	95	62							

BT
DIN Form AD
CAT.
ST

■Options
- Spring collet • Spanner
- Retention knob→P.44
- Adjust screw→P.57
- Adjustable torque wrench

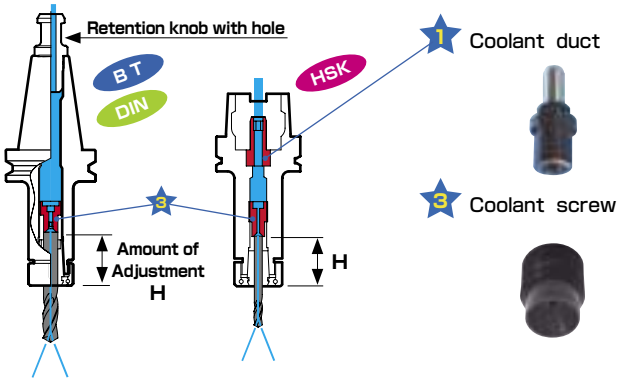
■Standard Accessories
- Nut (NUA-CTA)

■Note
- Applicable for coolant-through system→P.20

Coolant through system

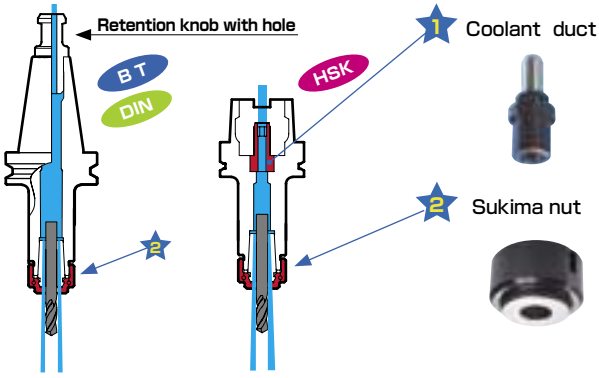
Cutter with oil hole

Coolant-Through Cutter



Cutter without oil hole

"SUKIMA" Coolant Around Tool



1 Coolant duct (HSK-A)

Fig.1

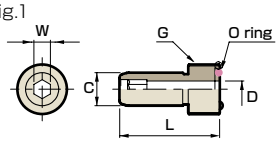


Fig.2

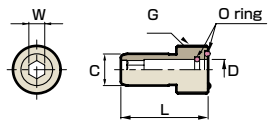
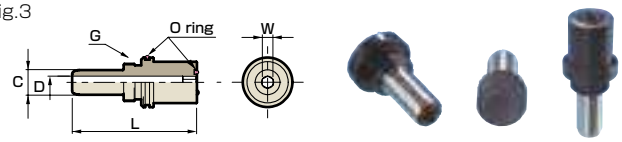


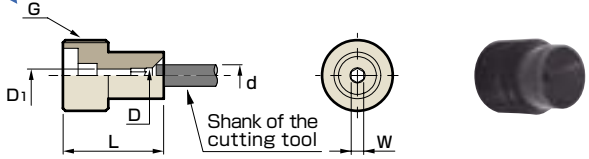
Fig.3



CODE	Fig.	φC	φD	L	G	W
CD 40–01	1	8	4	29.5	M12×1	4
–03	3			35.5		
–04				36.5		
CD 50–01	1	10	5	33	M16×1	5
–03	3			39		
–04				59		
CD 63–01	1	12	6	36.5	M18×1	6
–02	2					
–03	3			39.5		5
–04				60.5		
CD100–01	1	16	8	44	M24×1.5	8
–02	2		10.3			

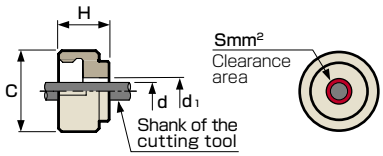
■Note •These parts are used for coolant supply exclusively for the HSK.
•The HSK holder comes standard with a coolant duct. (A40,A50,A63,A100)
※A coolant duct (Adjustable) is also available. The stationary type is standard. If the adjustable type is desired, the standard type is replaced only when the holder is shipped. For more information, see page 57.

3 Coolant screw



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

2 Sukima nut



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

CODE	φC	H	φd	φd1	S
NUB–CTH20–1/4	50 (1.97")	30 (1.18")	6.35 (.25")	6.8 (.27")	4.1 (.006")
–5/16			7.938 (.31")	8.3 (.33")	5.1 (.008")
–3/8			9.525 (.38")	9.9 (.39")	5.3 (.008")
–1/2			12.7 (.50")	13.0 (.51")	5.0 (.008")
–5/8			15.875 (.63")	16.1 (.63")	5.7 (.009")
inch –3/4			19.05 (.76")	19.2 (.76")	
–CTH25–1/4	62 (2.44")	34.5 (1.36")	6.35 (.25")	6.8 (.27")	4.1 (.006")
–5/16			7.938 (.31")	8.3 (.33")	5.1 (.008")
–3/8			9.525 (.38")	9.9 (.39")	5.3 (.008")
–1/2			12.7 (.50")	13.0 (.51")	5.0 (.008")
–5/8			15.875 (.63")	16.1 (.63")	5.7 (.009")
–3/4			19.05 (.76")	19.2 (.76")	
–1IN			25.4 (1.0 ")	25.6 (1.01")	6.0 (.009")

		Coolant-through cutter			Sukima through	
		1 Coolant screw	φd	H	2 Sukima nut	
BT	BT30	CSA—M14	φ 4～10	22～38	NUB—CTH10	
	— 75			22～68		
	—CTH20— 60	※	—	—	—CTH20	
	— 90					
	BT40 —CTH10— 60	—M14	φ 4～10	22～54	—CTH10	
	— 90			22～67		
	—120					
	—150					
	—CTH20— 60	—M24S	φ10～20	44～54	—CTH20	
		—M24L	φ 6～12	36～46		
	— 90	—M24S	φ10～20	44～79		
		—M24L	φ 6～12	36～71		
	—120	—M24S	φ10～20	44～83		
		—M24L	φ 6～12	36～75		
	—150	—M24S	φ10～20	44～89		
		—M24L	φ 6～12	36～81		
	—CTH25— 75	—M24S	φ10～20	61～73	—CTH25	
		—M24L	φ 6～12	53～65		
	—105	—M28	φ10～25	61～80		
	BT50 —CTH10—105	—M14	φ 4～10	22～49	—CTH10	
	—135			22～67		
	—165					
	—CTH20—105	—M24S	φ10～20	44～81	—CTH20	
		—M24L	φ 6～12	36～73		
	—135	—M24S	φ10～20	44～89		
		—M24L	φ 6～12	36～81		
	—165	—M24S	φ10～20	44～89		
		—M24L	φ 6～12	36～81		
	—CTH25— 75	—M28	φ10～25	61～79	—CTH25	
	—105			61～89		
	—CTH32— 90	※	—	—	—CTH32	
DIN	DN40AD—CTH20— 75	—M24S	φ10～20	44～69	—CTH20	
		—M24L	φ 6～12	36～61		
	—135	—M24S	φ10～20	44～89		
		—M24L	φ 6～12	36～81		
	—CTH25— 75	—M24S	φ10～20	61～73	—CTH25	
		—M24L	φ 6～12	53～65		
	DN50AD—CTH20—105	—M24S	φ10～20	44～89	—CTH20	
		—M24L	φ 6～12	36～81		
	—165	—M24S	φ10～20	44～89		
		—M24L	φ 6～12	36～81		
	—CTH25—105	—M28	φ10～25	61～90	—CTH25	

		Coolant-through cutter			Sukima through	Coolant duct
		1 Coolant screw	φd	H	2 Sukima nut	3
HSK	A 40—CTH10— 55	CSR— 14	φ 4 ～10	21.7	NUB—CTH10	CD 40—01
	— 75	CSA—M14		22～ 24		
	— 90			21～ 44		
	—CTH20— 75	—	φ10.5～20	53	—CTH20	—03
	— 90	CSA—M24S	φ10 ～20	41.9		—01
	—CTH25— 95	—		72	—CTH25	—04
	A 50—CTH10— 55		—	—	—CTH10	CD 50—01
	— 75	CSA—M14	φ 4 ～10	21～ 22		
	A50M—CTH20— 80	—	—	—	—CTH20	
	—105	CSA—M24S	φ10 ～20	42～ 47		
	—CTH25—105	—	φ10.5～25	80	—CTH25	—03
				60		—04
	A 63—CTH10— 75	CP — 14M	φ 7 ～10	21～ 28	—CTH10	CD 63—02
	— 90	CSA—M14	φ 4 ～10	22～ 31		—01
	—120			22～ 52		
	—150					
	—CTH20— 90	—	φ10.5～20	65	—CTH20	—03
				44		—04
	—120	CSA—M24S	φ10 ～20	44～ 54		—01
		—M24L	φ 6 ～12	36～ 46		
	—150	—M24S	φ10 ～20	44～ 77		
		—M24L	φ 6 ～12	36～ 69		
	—CTH25—105	—	φ10.5～25	80	—CTH25	—03
				59		—04
	A100—CTH10—135	CSA—M14	φ 4 ～10	22～ 67	—CTH10	CD100—01
	—165					
	—225					
	—CTH20—135	—M24S	φ10 ～20	44～ 65	—CTH20	
		—M24L	φ 6 ～12	36～ 57		
	—165	—M24S	φ10 ～20	44～ 89		
		—M24L	φ 6 ～12	36～ 81		
	—225	—M24S	φ10 ～20	44～ 89		
		—M24L	φ 6 ～12	36～ 81		
	—CTH25—135	※	—	—	—CTH25	—02
	—165	CSA—M28	φ10 ～25	61～ 75		—01
	—195			61～105		

The coolant-through collet function

No additional parts are required.

■Note •For information on the asterisked (※) coolant screw for the coolant-through cutter capability, please contact MST.

HI-ART MILLING CHUCK

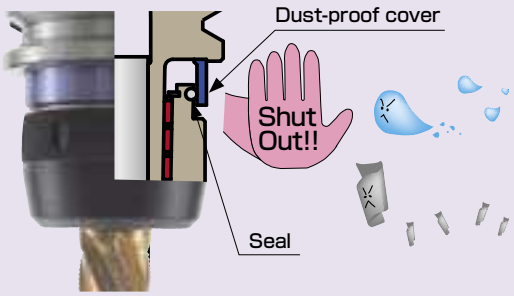
Needle-roller type chuck

The Hi-ART milling chuck offers a great combination of

- Hi Accuracy →10μ/150L
- Hi Rigidity →3.0kg/μ
- Hi Torque →500kgf·m (ART42)

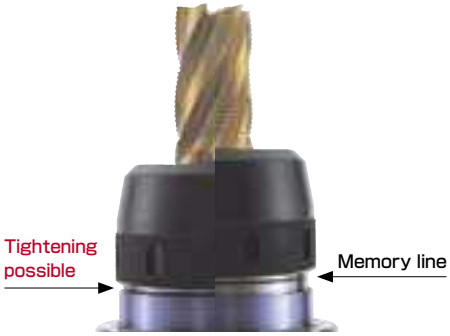
φ32 , φ42

Keeps chips and coolant out completely



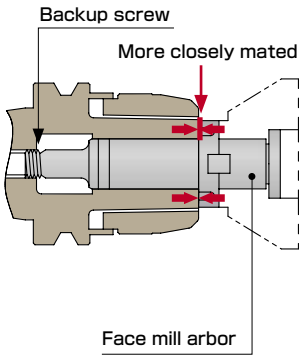
MEMORY LINE

Memory line clearly confirms tightness of the nut. (BT50,A100)

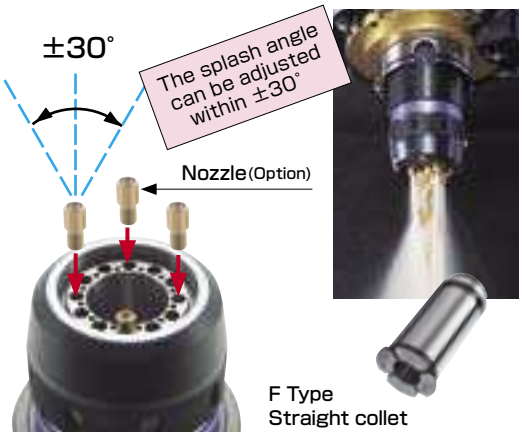


FACE LOCK SYSTEM

The face mill arbor engages with the backup screw and the chuck body assuring optimum rigidity.



APPLICABLE FOR COOLANT-THROUGH VERSION

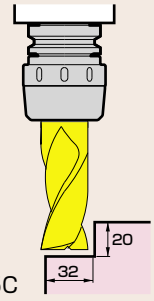


CUTTING DATA

BT40-ART32-85

N : 350 min⁻¹
F : 154 mm/min
V : 35 m/min
f : 0.11 mm/flute

φ32 roughing end mill
4 flutes

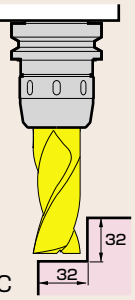


S55C

BT50-ART32-105

N : 350 min⁻¹
F : 182 mm/min
V : 35 m/min
f : 0.13 mm/flute

φ32 roughing end mill
4 flutes



S55C

HI-ART MILLING CHUCK (ART)


BT50 —ART32 —105

Fig.1

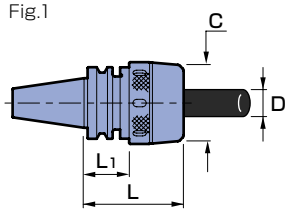


Fig.2

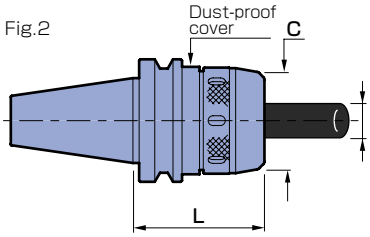
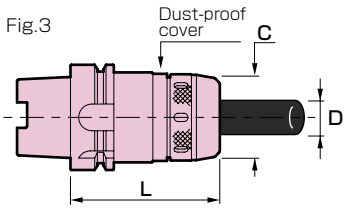


Fig.3



CODE	Fig.	φD	L	φC	L_1	Cutter insertion length	Kg	MAX. min^{-1}
BT40—ART32— 85	1	32	85	72	37	90	1.9	6,000
— 95			95		47		2.1	
—105			105		57		2.3	
—135			135		87		3.0	
BT50—ART32—105	2		105	82	—	100	5.1	5,000
—135			135				6.4	
—165			165				7.7	
—180			180				8.4	
—ART42—105		42	105	97		110	5.4	3,000
—135			135				7.1	
A50M—ART32—100	3	32	100	72	—	71	1.7	6,000
A 63—ART32—100					44		2.0	
A100—ART32—135			135	82	—	98	5.3	5,000
—ART42—135		42		97			6.1	3,000

BT

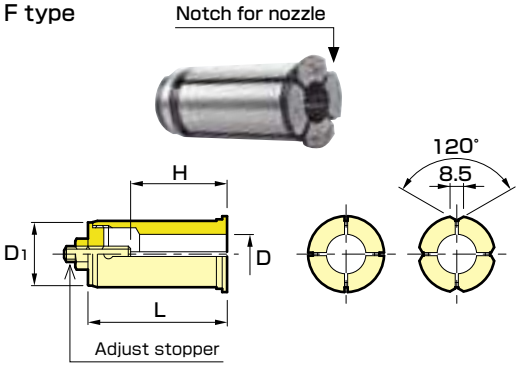
HSK

■Options •Straight collet •Spanner with ejection hook •Nozzle •Adjust screw •Retention knob→P.44
■Standard Accessories •Coolant duct (HSK-A) ■Note •To utilize the coolant-through nozzle capability, the retention knob with hole and nozzle are required.
■Caution •For BT40 type, the outer diameter of the nut is larger than that of the V-flange. Therefore, pay close attention to possible interference with the ATC arm. •Use S-type auxiliary arbor when using an arbor with BT40 type. •To utilize the coolant-through nozzle capability, coolant duct and nozzle (BT40 , A63 : NOZ - M4 , BT50 , A100 : NOZ - M6) and straight collet F-type are required.

STRAIGHT COLLET

Standard type

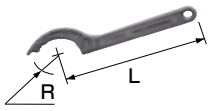
F type



CODE		φD	L	φD1	H
Standard type	F type				
S32— 6	S32— 6F	6	75	32	30~68
— 8	— 8F	8			
—10	—10F	10			40~68
—12	—12F	12			
—16	—16F	16			50~68
—20	—20F	20			
—25	—25F	25			
S42— 6	S42— 6F	6	80	42	35~73
— 8	— 8F	8			
—10	—10F	10			45~73
—12	—12F	12			
—16	—16F	16			
—20	—20F	20			
—25	—25F	25			55~73
—32	—32F	32			

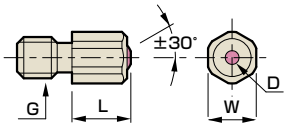
Spanner with ejecting hook

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



CODE	R	L	Holder type	Clamping torque
FM—72	36	204	ART32(BT40,A63)	6kgf·m
—82	41	234	ART32(BT50,A100)	7kgf·m
—97	48.5	239	ART42	

Nozzle

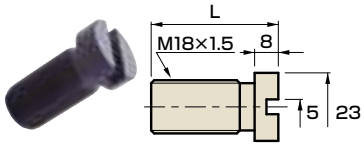


CODE	L	G	W	φD	Q'ty	Shank type
NOZ—M4—12	6.3	M4	4.5	1.2	12	BT40
—60					60	A 63
—M6—12	8.5	M6	7	1.8	12	BT50
—60					60	A100

■Standard Accessories •Wrench for attachment

Adjust screw

The overhang of the cutting tool can be adjusted.



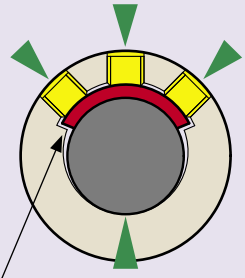
CODE	L	Shank type
AJN—M18L	38	BT40 , A 63
—M18	63	BT50 , A100

SUMMIT

Heavy milling endmill holder

The ace for heavy-duty cutting!

The greatest cause of cutting tool slippage during heavy-duty cutting is vibration.



Anti-vibration tightening pad

The cutting tool is clamped with the entire surface of the pad to absorb vibrations along the whole length of the holder during heavy cutting.

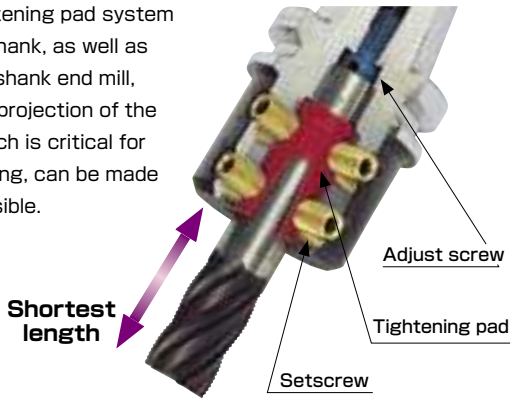
ϕ25,ϕ32,ϕ42

Straight Shank Endmill

No need to use a whistle notch end mill.

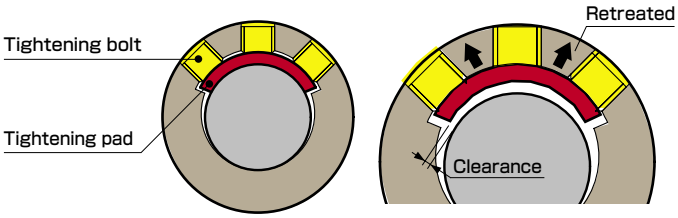
ADJUSTABLE PROJECTION OF CUTTING TOOL

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



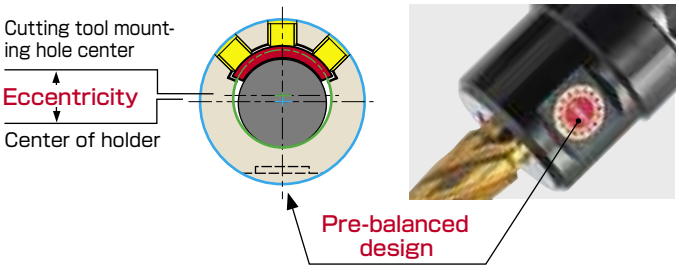
BITE PREVENTION

When the cutting tool is changed, the tightening pad is retreated to create a large opening in the radial direction. Therefore, the cutting tool can be removed easily even if fretting or biting occurs.



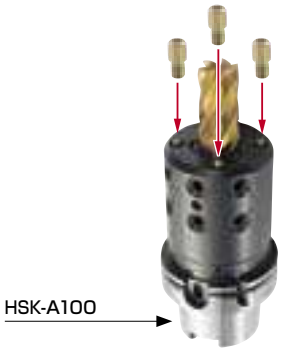
APPLICABLE TO HIGH-SPEED CUTTING

The pre-balanced design provides well-balanced characteristics and the eccentric mechanism offers high run-out accuracy, thereby enabling high-speed cutting.



APPLICABLE FOR COOLANT-THROUGH VERSION

The HSK-A type is made compatible with the nozzle-through feature by attaching the NOZ-M6 nozzle.



SUMMIT (SLZ)

BT50 —SLZ32 —105

A100 —SLZ32 —135

Fig.1

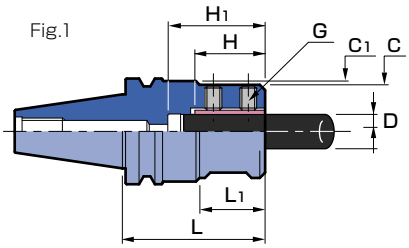


Fig.2

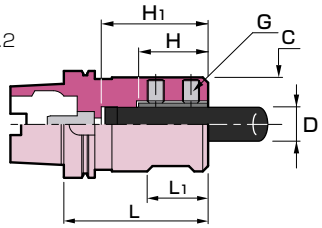
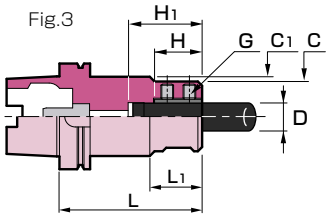


Fig.3



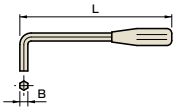
CODE	Fig.	φD	L	L1	φC	φC1	H	H1	G	Kg
BT50—SLZ25— 90	1	25	90	—	66	—	45	70	4-M12	4.6
—120			120	45		75				5.6
—150			150							6.5
—SLZ32—105		32	105	—	88	—	65	100	6-M16	5.9
—135			135	62		95				7.5
—165			165							9.1
—SLZ42—105		42	105	—	98	—	70	110		6.1
—135			135							7.8
—165			165							9.5
A100—SLZ25—135	3	25	135	66	66	75	70	45	4-M12	4.9
—SLZ32—135	2	32		88	88	—	100	65	6-M16	6.1
—SLZ42—135		42		98	98			70		6.6

BT

HSK

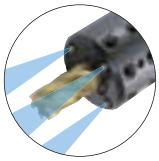
■Options •Wrench •Adjust screw (BT) •Nozzle (HSK) •Retention knob→P.44 ■Standard Accessories •Coolant duct (HSK-A)
■Caution •If the dedicated wrench is not used, use a wrench with a minimum handle length of 30 cm for the M16 or 20 cm for the M12.

Wrench

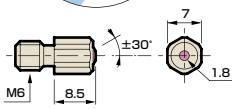


CODE	B	L	Holder type	Clamping torque (kgf・m)
W—206	6	200	SLZ25	4
—308	8	300	SLZ32 SLZ42	10

Nozzle



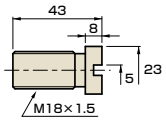
CODE
NOZ—M6—12
—20



■Packaging •12 nozzles + 1 dedicated wrench
•60 nozzles + 1 dedicated wrench
■Standard Accessories •Wrench for attachment

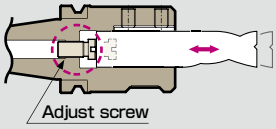
Adjust screw

The overhang of the cutting tool can be adjusted.



CODE	Shank type
AJC—M18L	BT50

The cutting tool length is adjustable

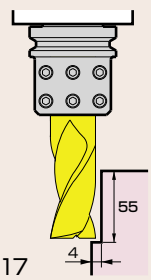


CUTTING DATA

BT50-SLZ32-105

N : 5000min-1
F : 5000mm/min
V : 502m/min
f : 0.25mm/ flute

φ32 Roughing end mill
4 flutes

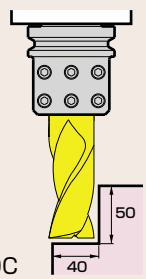


A2017

BT50-SLZ32-105

N : 280min-1
F : 168mm/min
V : 35m/min
f : 0.1mm/ flute

φ40 Roughing end mill
6 flutes

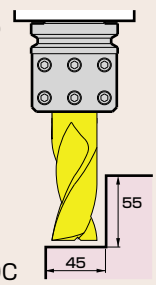


S50C

BT50-SLZ42-105

N : 190min-1
F : 114mm/min
V : 27m/min
f : 0.1mm/ flute

φ45 Roughing end mill
6 flutes

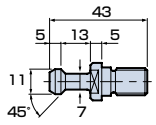


S50C

RETENTION KNOB

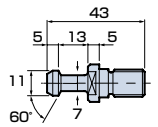
BT30

●P30T—Ⅰ(MAS)



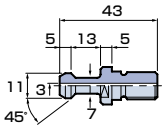
ENSHU	TOSHIBA
KITAMURA	NIPPEI TOYAMA
SHIZUOKA	FANUC
HOWA	MORI SEIKI
MORI SEIKI	

●P30T—Ⅱ(MAS)



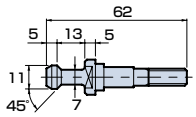
BROTHER	MIYANO
MATSUURA	SUGINO

●P445(P30T—Ⅰ base)



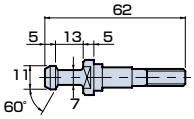
FANUC

●P—333



DTB12(P30T—Ⅰ base)

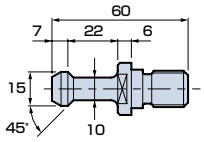
●P—334



DTB12(P30T—Ⅱ base)

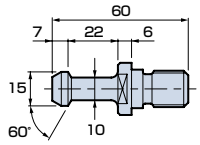
BT40

●P40T—Ⅰ(MAS)



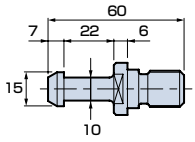
ENSHU	NIPPEI TOYAMA
OKK	HOWA
OHTORI KIKO	MAKINO
KITAMURA	MITSUBISHI
KURAKI	YASDA
SHIZUOKA	ROKU-ROKU
TAKISAWA	TOSHIBA

●P40T—Ⅱ(MAS)



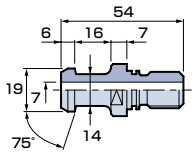
ENSHU	TSUGAMI
OKUMA	MATSUURA

●P—141



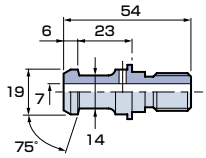
SHIZUOKA
MORI SEIKI

●P323—1(JIS40P base)



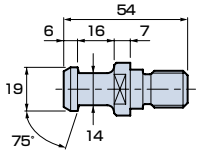
KITAMURA	MATSUURA
MAKINO	

●P—438

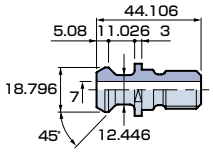


YASDA

●P—348(JIS40P)

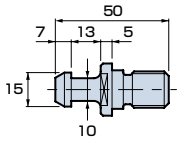


●P—227



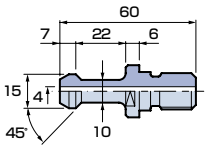
YAMAZAKI MAZAK

●P—007



MITSUI SEIKI

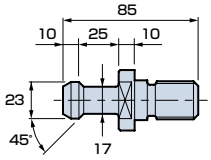
●P—297



MAKINO

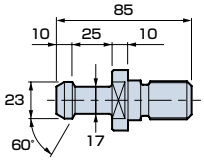
BT50

●P50T—Ⅰ(MAS)



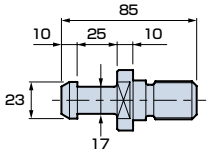
ENSHU	NIPPEI TOYAMA
OKK	NOMURA
OHTORI KIKO	HOWA
KITAMURA	MAKINO
KURAKI	YASDA
TAKISAWA	ROKU-ROKU
TOSHIBA	

●P50T—Ⅱ(MAS)



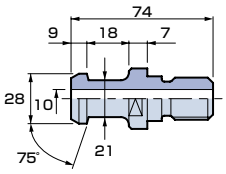
OKUMA	NISHIDA MACHINE
OKUMA & HOWA	MATSUURA
SHIN NIPPON KOKI	MITSUBISHI
NIGATA MACHINE TECHNO	YAMAZAKI GIKEN

●P—143

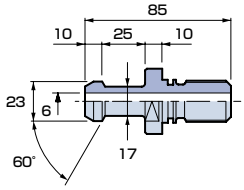


OKK	MORI SEIKI
SHIZUOKA	ROKU-ROKU

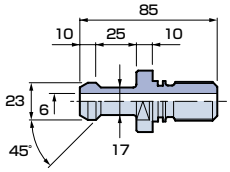
●P—400(JIS50P)



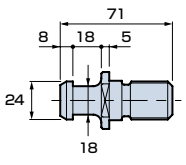
●P—419(P50T—Ⅱ base)



●P—299(P50T—Ⅰ base)

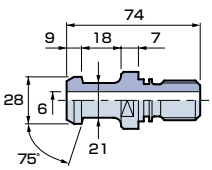


●P—008



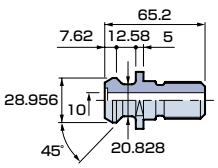
MITSUI SEIKI

●P—288—1(JIS50P base)



MAKINO

●P—514



YAMAZAKI MAZAK

Caution

- The shape and dimensions of the dedicated retention knob may differ depending upon the model, year, special operating conditions, and other factors related to the machine, so carefully check all pertinent information.
- The retention knobs listed are each machine manufacturer's representative ones, so some available retention knobs are not listed.
- Please contact the manufacturer for more detailed information.