BBT/BT SHANK

COLLET CHUCK

MEGA MICRO CHUCK

Clamping diameter: ø0.45 - ø8.05

Ultra-slim design with ø10mm nut outer diameter.
High speed collet chuck with minimized interference.

DUAL CONTACT
BIG-PLUS®

Center through

Max. 50,000min^{-1}

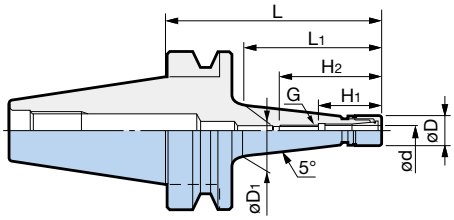
[High Rigidity Taper Type]

● Models for ultra-small endmilling are newly added!

● Model Description

BBT30 - MEGA 3 S - 45 T

- T: Taper type
- 45: L dimension
- S: MICRO CHUCK
- MEGA: MEGA CHUCK
- BBT30: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	øD1	L	L1	H1	H2	G	Collet Model	Weight (kg)
BBT30-MEGA3S- 45T	0.45 - 3.25	10	11.5	45	20	22	38	M4 P0.7	NBC3S-□	0.39
- 75T			16	75	48					0.41
- 90T			18.5	90	63					0.45
-105T			21	105	78					0.48
-MEGA4S- 60T	0.45 - 4.05	12	15	60	33	26.5	47	M5 P0.8	NBC4S-□	0.42
- 75T			17.5	75	48					0.44
- 90T			20	90	63					0.47
-105T			23	105	78					0.52
-120T			25.5	120	93					0.57
-MEGA6S- 60T	0.45 - 6.05	14	16.5	60	33	28.5	49	M7 P0.75	NBC6S-□	0.42
- 75T			19	75	48					0.44
- 90T			22	90	63					0.48
-105T			24.5	105	78					0.51
-120T			27	120	93					0.59
-MEGA8S- 75T	2.95 - 8.05	18	23	75	48	31	50.5	M9 P0.75	NBC8S-□	0.48
-105T			28	105	78					0.59
BBT40-MEGA3S- 60T	0.45 - 3.25	10	12.5	60	28	22	38	M4 P0.7	NBC3S-□	1.0
- 90T			17.5	90	58					1.1
-120T			23	120	88					1.2
-MEGA4S- 60T	0.45 - 4.05	12	14	60	28	26.5	47	M5 P0.8	NBC4S-□	1.0
- 75T			16.5	75	43					1.1
- 90T			19.5	90	58					1.1
-105T			22	105	73					1.1
-120T			24.5	120	88					1.2
-135T			27	135	103					1.2
-MEGA6S- 60T	0.45 - 6.05	14	15.5	60	28	28.5	49	M7 P0.75	NBC6S-□	1.1
- 75T			18	75	43					1.1
- 90T			21	90	58					1.1
-105T			23.5	105	73					1.1
-120T			26	120	88					1.2
-135T			29	135	103					1.3
-MEGA8S- 90T	2.95 - 8.05	18	24.5	90	58	31	50.5	M9 P0.75	NBC8S-□	1.2
-120T			30	120	88					1.2

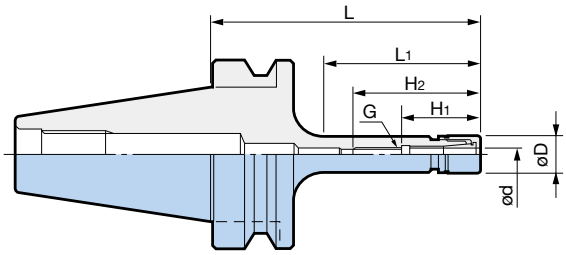
1. Nut is included. Collet and wrench must be ordered separately.
2. Weight includes the nut but not the collet.
3. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.

[Straight Type]

DUAL CONTACT
BIG-PLUS®

Center through

Max. 50,000min^{-1}



● Model Description

BBT30 - MEGA 4 S - 90

- 90 : L dimension
- S : MICRO CHUCK
- MEGA : MEGA CHUCK
- BBT30 : BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	L	L_1	H_1	H_2	G	Collet Model	Weight (kg)
BBT30-MEGA4S- 90	0.45 - 4.05	12	90	62	26.5	47	M5 P0.8	NBC4S-□	0.43
-MEGA6S- 60	0.45 - 6.05	14	60	32	28.5	49	M7 P0.75	NBC6S-□	0.42
- 90			90	62					0.44
-105			105	73					0.46
-MEGA8S- 90	2.95 - 8.05	18	90	60	31	50.5	M9 P0.75	NBC8S-□	0.48
BBT40-MEGA4S- 90	0.45 - 4.05	12	90	53	26.5	47	M5 P0.8	NBC4S-□	1.0
-MEGA6S- 90	0.45 - 6.05	14	90	53	28.5	49	M7 P0.75	NBC6S-□	1.0
-MEGA8S- 90	2.95 - 8.05	18	90	55	31	50.5	M9 P0.75	NBC8S-□	1.1

1. Nut is included. Collet and wrench must be ordered separately.
2. Weight includes the nut but not the collet.
3. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.

Standard Accessory

MEGA NUT

For Spares ☞ G6

Optional Accessories

Mega Wrench

☞ G33

Micro Collet

☞ G4

MEGA MICRO SEAL NUT (for 6S and 8S)
MEGA MICRO COOLANT NUT (for 6S)

☞ G6

Collet Case

☞ G6

Adjusting Screw

☞ G23

COLLET CHUCK

MEGA NEW BABY CHUCK

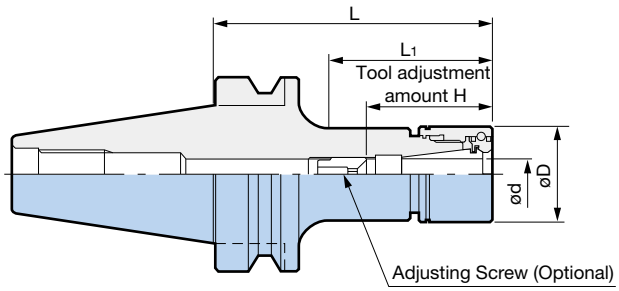
Clamping diameter: ø0.25 - ø25.4

High speed version of NEW BABY CHUCK boasting a history of results.
Makes high speed machining possible in addition to its high accuracy and versatility.

DUAL CONTACT
BIG-PLUS®

Center through

Max. 50,000min-1



● Model Description

BBT30 - MEGA 6 N - 60

- BBT30 - MEGA: BIG-PLUS BT No.
- MEGA: MEGA CHUCK
- 6: Maximum clamping diameter
- N: NEW BABY CHUCK
- 60: L dimension

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

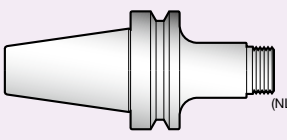
BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	L	L1	H	Collet Model	Nut Model	Weight (kg)
BBT30-MEGA 6N- 60	0.25 - 6	20	60	32	23 - 43	NBC 6-□	MGN 6	0.45
- 75			75	47				0.48
- 90			90	62				0.51
-105			105	77				0.54
-120			120	90				0.55
-MEGA 8N- 60	0.5 - 8	25	60	34	26 - 45	NBC 8-□	MGN 8	0.49
- 75			75	49				0.53
- 90			90	64				0.58
-105			105	79				0.62
-120			120	92				0.67
-MEGA10N- 60	1.5 - 10	30	60	34	38 - 48	NBC10-□	MGN10	0.52
- 75			75	49				0.57
- 90			90	64				0.66
-105			105	79				0.73
-120			120	94				0.78
-MEGA13N- 60	2.5 - 13	35	60	34	44 - 63	NBC13-□	MGN13	0.54
- 75			75	49				0.64
- 90			90	64				0.73
-105			105	79				0.82
-120			120	94				0.93
-MEGA16N- 60	2.5 - 16	42	60	37	48 - 63	NBC16-□	MGN16	0.57
- 75			75	52	48 - 68			0.70
- 90			90	67				0.85
-105			105	82				1.00
-MEGA20N- 60※	2.5 - 20	46	60	—	70	NBC20-□	MGN20	0.60
- 75			75	—	51 - 68			0.75
- 90			90	—				0.92
-105			105	—				1.10
-MEGA25N- 85※	15.5 - 25.4	60	85	—	80	NBC25-□	MGN25	0.98

1. Nut is included. Collet, wrench, and adjusting screw must be ordered separately.
2. Weight includes the nut but not the collet.
3. Center through coolant supply is available.
4. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.
5. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.

※ marked models cannot be used with Adjusting Screws.
H dimension is the max. tool shank length that can be inserted into the holder.

When ordering a MEGA PERFECT SEAL, the "Nut-Less Body" without the standard nut attached is also available.

● Example Attach /NL (Nut less) to the end of the holder model number and order the NBC Collet/MEGA PERFECT SEAL separately.



MEGA NEW BABY CHUCK Model + NL
BBT30-MEGA6N-60/NL
(NL at the end of the model number means nut not attached)

+  NBC Collet **NBC6-3AA**

+  MEGA PERFECT SEAL Model **MPS6-03035**

 MEGA NUT Flat Type Model **MGN6F**

Clamping diameter: ø0.25 - ø25.4

MEGA NEW BABY CHUCK

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

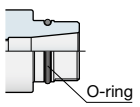
BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	L	L_1	H	Collet Model	Nut Model	Weight (kg)
BBT40-MEGA 6N- 60	0.25 - 6	20	60	27	23 - 43	NBC 6-□	MGN 6	1.0
- 75			75	38				1.1
- 90			90	53				1.1
-105			105	68				1.2
-120			120	83				1.2
-135			135	98				1.2
-165			165	128				1.2
-200			200	163				1.3
-MEGA 8N- 60	0.5 - 8	25	60	27	26 - 45	NBC 8-□	MGN 8	1.0
- 75			75	38				1.1
- 90			90	53				1.1
-105			105	68				1.2
-120			120	83				1.2
-135			135	98				1.3
-165			165	128				1.3
-200			200	163				1.4
-MEGA10N- 60	1.5 - 10	30	60	27	38 - 48	NBC10-□	MGN10	1.1
- 75			75	38				1.2
- 90			90	53				1.2
-105			105	68				1.3
-120			120	83				1.4
-135			135	98				1.4
-165			165	128				1.5
-200			200	163				1.7
-MEGA13N- 60	2.5 - 13	35	60	31	44 - 63	NBC13-□	MGN13	1.1
- 75			75	40				1.2
- 90			90	55				1.3
-105			105	70				1.4
-120			120	85				1.5
-135			135	100				1.6
-165			165	130				1.8
-200			200	165				2.0
-MEGA16N- 60	2.5 - 16	42	60	31	48 - 68	NBC16-□	MGN16	1.2
- 75			75	40				1.3
- 90			90	55				1.4
-105			105	70				1.6
-120			120	85				1.7
-135			135	100				1.8
-165			165	130				2.0
-200			200	165				2.3
-MEGA20N- 60	2.5 - 20	46	60	31	51 - 68	NBC20-□	MGN20	1.1
- 75			75	42				1.3
- 90			90	57				1.4
-105			105	72				1.6
-120			120	87				1.8
-135			135	102				1.9
-165			165	132				2.1
-200			200	167				2.5
-MEGA25N- 75	15.5 - 25.4	60	75	47	64 - 74	NBC25-□	MGN25	1.6
- 90			90	62				1.9
-105			105	77				2.2
-120			120	92				2.5

Standard Accessory

MEGA NUT

For Spares G12

O-ring



For Spares G12

Optional Accessories

MEGA NUT Flat Type

G12

Mega Wrench

G33

Collet

G7

MEGA PERFECT SEAL

G13

Adjusting Screw

G23

COLLET CHUCK

MEGA NEW BABY CHUCK

Clamping diameter: ø0.25 - ø25.4

The DUAL CONTACT BIG-PLUS system has been standardized.
The abundant variety is also ideal as reliable general-purpose holders.

DUAL CONTACT
BIG-PLUS®

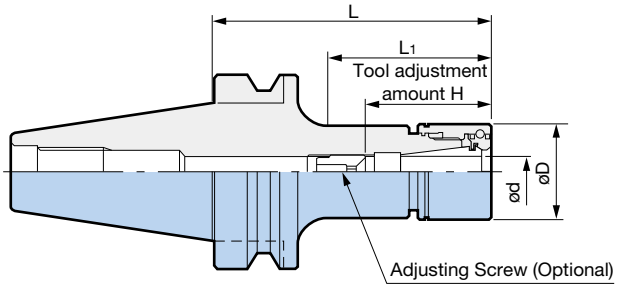
Center through

Max. 20,000min^{-1}

● Model Description

BBT50 - MEGA 6 N - 90

- 90: L dimension
- N: NEW BABY CHUCK
- 6: Maximum clamping diameter
- MEGA: MEGA CHUCK
- BBT50: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	L	L_1	H	Collet Model	Nut Model	Weight (kg)
BBT50-MEGA 6N- 90	0.25 - 6	20	90	37	23 - 43	NBC 6-□	MGN 6	3.7
-120			120	67				3.8
-165			165	112				3.9
-200			200	147				4.0
-MEGA 8N- 90	0.5 - 8	25	90	42	26 - 45	NBC 8-□	MGN 8	3.8
-120			120	67				3.9
-165			165	112				4.1
-200			200	147				4.2
-MEGA10N- 90	1.5 - 10	30	90	42	38 - 48	NBC10-□	MGN10	3.9
-120			120	67				4.0
-165			165	112				4.3
-200			200	147				4.7
-250			250	197				4.7
-300			300	247				4.9
-MEGA13N- 90	2.5 - 13	35	90	42	44 - 63	NBC13-□	MGN13	4.0
-120			120	67				4.2
-165			165	112				4.5
-200			200	147				4.7
-250			250	197				5.0
-300			300	247				5.3

1. Nut is included. Collet, wrench, and adjusting screw must be ordered separately.
2. Weight includes the nut but not the collet.
3. Center through coolant supply is available.
4. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.
5. Tool adjustment amount “H” indicates the adjustment length with an Adjusting Screw.

MEGA NEW BABY CHUCK

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles.**

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	L	L_1	H	Collet Model	Nut Model	Weight (kg)
BBT50-MEGA16N- 75	2.5 - 16	42	75	31	48 - 68	NBC16-□	MGN16	4.0
- 90			90	42				4.2
-120			120	72				4.4
-165			165	117				4.8
-200			200	152				5.1
-250			250	202				5.5
-MEGA20N- 75	2.5 - 20	46	75	31	51 - 68	NBC20-□	MGN20	4.1
- 90			90	42				4.2
-120			120	72				4.5
-165			165	117				4.9
-200			200	152				5.3
-250			250	202				5.7
-MEGA25N- 90	15.5 - 25.4	60	90	46	64 - 74	NBC25-□	MGN25	4.3
-120			120	72				4.9
-165			165	117				5.8
-200			200	152				6.4

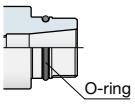
1. Nut is included. Collet, wrench, and adjusting screw must be ordered separately.
2. Weight includes the nut but not the collet.
3. Center through coolant supply is available.
4. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.
5. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.

Standard Accessory

MEGA NUT

For Spares G12

O-ring



For Spares G12

Optional Accessories

MEGA NUT Flat Type

G12

Mega Wrench

G33

Collet

G7

MEGA PERFECT SEAL

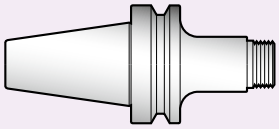
G13

Adjusting Screw

G23

When ordering a MEGA PERFECT SEAL, the "Nut-Less Body" without the standard nut attached is also available.

● Example Attach /NL (Nut less) to the end of the holder model number and order the NBC Collet/MEGA PERFECT SEAL separately.



MEGA NEW BABY CHUCK Model + NL
BBT30-MEGA6N-60/NL
(NL at the end of the model number means nut not attached)

+

NBC Collet
NBC6-3AA

+

MEGA PERFECT SEAL Model
MPS6-03035

MEGA NUT Flat Type Model
MGN6F

MEGA E CHUCK

Clamping diameter: ø3 - ø12

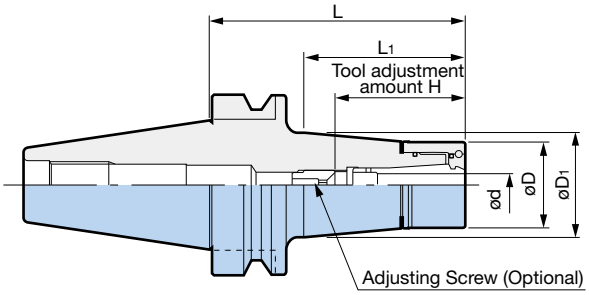
A high-precision collet chuck designed especially for high speed and powerful end milling.

- Tapered body enhances damping effect by varying vibration frequency.
- Uses the MEGA E Collet designed for endmilling, delivering optimal clamping performance.

DUAL CONTACT
BIG-PLUS®

Center through

Max. 45,000min^{-1}



● Model Description

BBT30 - MEGA 6 E - 50

- BBT30: BIG-PLUS BT No.
- MEGA: MEGA CHUCK
- 6: Maximum clamping diameter
- E: E CHUCK
- 50: L dimension

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	øD1	L	L1	H	Collet Model	Nut Model	Weight (kg)
BBT30-MEGA 6E- 50	3 - 6	25	26	50	25	37 - 45	MEC 6-□	MEN 6	0.45
- 75			30	75	50				0.58
- 90			32.5	90	65				0.67
-105			35.5	105	80				0.75
-MEGA 8E- 50	3 - 8	30	30.5	50	25	42 - 51	MEC 8-□	MEN 8	0.50
- 75			35	75	50				0.65
- 90			37.5	90	66				0.77
-105			40.5	105	81				0.90
-MEGA 10E- 50	3 - 10	35	35.5	50	25	48 - 58	MEC10-□	MEN10	0.53
- 75			40	75	51				0.73
- 90			41	90	66				0.90
-105			41.5	105	82				1.00
-MEGA 13E- 50	3 - 12	42	42.5	50	27	50 - 58	MEC13-□	MEN13	0.57
- 75			42	75	52	50 - 60			0.82
- 90			42	90	67				0.95
-105			42	105	82				1.12

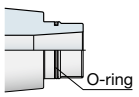
1. The nut is included but the collet, wrench and adjusting screw must be ordered separately.
2. Weight includes the nut but not the collet.
3. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance.
   When using, slowly ramp up to the appropriate speed starting from slow speeds.
4. Center through coolant supply is available.
5. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.

Standard Accessory

MEGA E Nut

For Spares G18

O-ring



For Spares G18

Optional Accessories

Mega Wrench

G33

MEGA E Collet

G18

MEGA E PERFECT SEAL

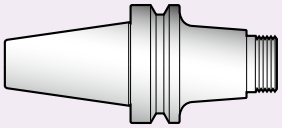
G19

Adjusting Screw

G23

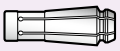
When ordering a MEGA E PERFECT SEAL, the "Nut-Less Body" without the standard nut attached is also available.

● Example Attach /NL (Nut less) to the end of the holder model number and order the MEC Collet/MEGA E PERFECT SEAL separately.



MEGA E CHUCK Model + /NL
(Nut not attached)
BBT30-MEGA6E-50/NL

+



MEC Collet
MEC6-3AA

+

MEGA E PERFECT SEAL Model
EPS6-03

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	øD1	L	L1	H	Collet Model	Nut Model	Weight (kg)
BBT40-MEGA 6E- 60	3 - 6	25	26.5	60	28	37 - 45	MEC 6-□	MEN 6	1.1
- 75			29	75	43				1.2
- 90			31.5	90	58				1.3
-105			34	105	73				1.3
-120			36.5	120	88				1.5
-135			39	135	103				1.6
-165			44.5	165	133				1.9
-200			51	200	169				2.4
-MEGA 8E- 60	3 - 8	30	31	60	28	42 - 48	MEC 8-□	MEN 8	1.2
- 75			33.5	75	43	42 - 51			1.3
- 90			36	90	58				1.3
-105			39	105	73				1.5
-120			41.5	120	88				1.7
-135			44	135	103				1.8
-165			49.5	165	133				2.1
-200			56	200	171				2.6
-MEGA 10E- 60	3 - 10	35	36	60	29	48 - 58	MEC10-□	MEN10	1.3
- 75			38.5	75	43				1.4
- 90			41	90	58				1.5
-105			44	105	73				1.7
-120			46.5	120	88				1.8
-135			49	135	103				2.0
-165			54.5	165	135				2.4
-200			55.5	200	171				3.1
-MEGA 13E- 60	3 - 12	42	43	60	29	50 - 60	MEC13-□	MEN13	1.3
- 75			45	75	43				1.5
- 90			48	90	59				1.7
-105			51	105	75				1.9
-120			53.5	120	91				2.1
-135			56	135	106				2.4
-165			57.5	165	137				2.8
-200			62.5	200	173				3.7
BBT50-MEGA 6E- 90	3 - 6	25	30.5	90	47	37 - 45	MEC 6-□	MEN 6	3.8
-120			36	120	77				4.0
-165			43.5	165	122				4.4
-200			50	200	157				4.9
-MEGA 8E- 90	3 - 8	30	35.5	90	47	42 - 51	MEC 8-□	MEN 8	3.9
-120			40.5	120	77				4.1
-165			48.5	165	122				4.6
-200			54.5	200	157				5.2
-MEGA10E- 90	3 - 10	35	40	90	47	48 - 58	MEC10-□	MEN10	4.0
-120			45.5	120	77				4.2
-165			53	165	121				4.9
-200			59.5	200	156				5.5
-MEGA13E- 90	3 - 12	42	46.5	90	47	50 - 60	MEC13-□	MEN13	4.0
-120			52	120	77				4.4
-165			59	165	121				5.2
-200			65	200	156				6.0

1. The nut is included but the collet, wrench and adjusting screw must be ordered separately.
2. Weight includes the nut but not the collet.
3. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance.
   When using, slowly ramp up to the appropriate speed starting from slow speeds.
4. Center through coolant supply is available.
5. Tool adjustment amount “H” indicates the adjustment length with an Adjusting Screw.

COLLET CHUCK

NEW BABY CHUCK

Clamping diameter: ø0.25 - ø20

A wide-ranging variety with sizes from short through long meets all the needs of high precision machining.

Center through

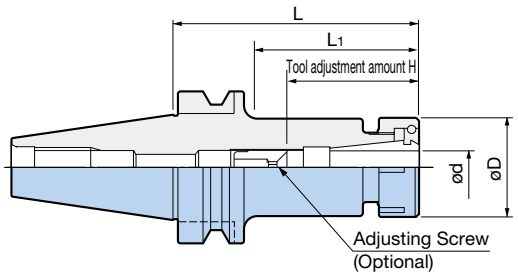
- Collet with an accuracy of 1 micron at nose enables increased productivity.
- A basic holder ideal for drilling, reaming and endmilling.

● Model Description

BT30 - NBS 6 - 45

- BT30 - BT SHANK No.
- NBS - NEW BABY CHUCK System
- 6 - Maximum clamping diameter
- 45 - L dimension

Not BIG-PLUS (DUAL CONTACT) specification



BT SHANK Model	Clamping diameter ød	øD	L	L_1	H	Collet Model	Weight (kg)
BT30-NBS 6- 45	0.25 - 6	20	45	20	20 - 40	NBC 6-□	0.42
- 60			60	32			0.45
- 75			75	47			0.47
- 90			90	62			0.49
-105			105	77			0.53
-120			120	90			0.57
-135			135	105			0.60
-NBS 8- 45	0.5 - 8	25	45	20	23 - 42	NBC 8-□	0.43
- 60			60	33			0.48
- 75			75	48			0.53
- 90			90	63			0.57
-105			105	78			0.60
-120			120	92			0.66
-135			135	107			0.71
-NBS10- 45	1.5 - 10	30	45	20	35 - 45	NBC10-□	0.44
- 60			60	34			0.51
- 75			75	49			0.56
- 90			90	64			0.65
-105			105	79			0.72
-120			120	94			0.78
-135			135	109			0.86
-NBS13- 45	2.5 - 13	35	45	21	41 - 53	NBC13-□	0.42
- 60			60	34	41 - 60		0.53
- 75			75	49			0.62
- 90			90	64			0.72
-105			105	79			0.82
-120			120	94			0.90
-135			135	109			1.02
-NBS16- 45	2.5 - 16	42	45	21	45 - 53	NBC16-□	0.40
- 60			60	37	45 - 55		0.54
- 75			75	52	45 - 65		0.69
- 90			90	67			0.83
-105			105	82			1.00
-120			120	97			1.14
-135			135	112			1.28
-NBS20- 60	2.5 - 20	46	60	38	48 - 58	NBC20-□	0.58
- 75			75	53	48 - 65		0.74
- 90			90	68			0.92
-105			105	83			1.08
-120			120	98			1.25
-135			135	113			1.46

1. The nut is included but the collet, wrench and Adjusting Screw must be ordered separately.
2. Center through coolant supply is available.
3. Weight includes the nut but not the collet.
4. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw (NBA).

[BIG-PLUS Type]

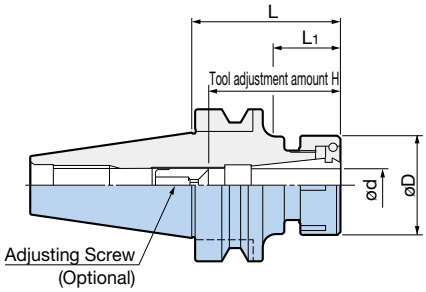
DUAL CONTACT
BIG-PLUS®

Center through

● Model Description

BBT30 - NBS 10 - 45

- BBT30 - BIG-PLUS BT No.
- NBS - NEW BABY CHUCK System
- 10 - Maximum clamping diameter
- 45 - L dimension



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	L	L1	H	Collet Model	Weight (kg)
BBT30-NBS10-45 NEW	1.5 - 10	30	45	20	35 - 45	NBC10-□	0.44
-NBS13-45 NEW	2.5 - 13	35		21	41 - 53	NBC13-□	0.42
-NBS16-45 NEW	2.5 - 16	42			45 - 53	NBC16-□	0.40

1. The nut is included but the collet, wrench and Adjusting Screw must be ordered separately.
2. Center through coolant supply is available.
3. Weight includes the nut but not the collet.
4. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw (NBA).

Standard Accessory

New Baby Nut

For Spares G15

Optional Accessories

New Baby Wrench

G36

Collet

G7

BABY PERFECT SEAL

G15

Adjusting Screw

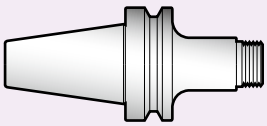
G23

Tap Adjusting Screw

G23

When ordering a BABY PERFECT SEAL, the "Nut-Less Body" without the standard nut attached is also available.

● Example Attach /NL (Nut less) to the end of the holder model number and order the NBC Collet/BABY PERFECT SEAL separately.



NEW BABY CHUCK Model + NL
BT30-NBS6-45/NL
(NL at the end of the model number means nut not attached)

+

NBC Collet
NBC6-3AA

+

BABY PERFECT SEAL Model
BPS6-03035

COLLET CHUCK

NEW BABY CHUCK

Clamping diameter: ø0.25 - ø20

A wide-ranging variety with sizes from short through long meets all the needs of high precision machining.

Center through

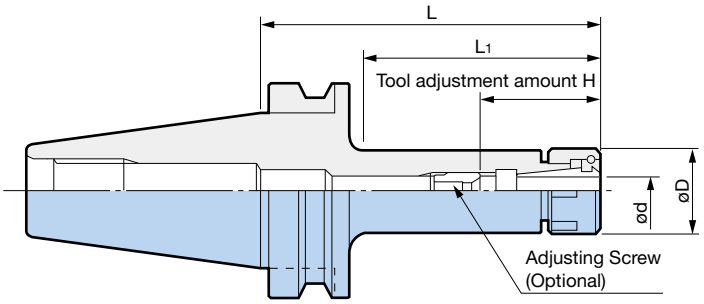
- Collet with an accuracy of 1 micron at nose enables increased productivity.
- A basic holder ideal for drilling, reaming and endmilling.

● Model Description

BT40 - NBS 6 - 60

- 60: L dimension
- 6: Maximum clamping diameter
- NBS: NEW BABY CHUCK System
- BT40: BT SHANK No.

Not BIG-PLUS (DUAL CONTACT) specification



BT SHANK Model	Clamping diameter ød	øD	L	L1	H	Collet Model	Weight (kg)
BT40-NBS 6- 60	0.25 - 6	20	60	23	20 - 40	NBC 6-□	1.1
- 75			75	38			1.2
- 90			90	53			1.2
-105			105	68			1.3
-120			120	83			1.3
-135			135	98			1.3
-165			165	128			1.4
-200			200	158			1.5
-NBS 8- 60	0.5 - 8	25	60	23	23 - 42	NBC 8-□	1.1
- 75			75	38			1.2
- 90			90	53			1.2
-105			105	68			1.3
-120			120	83			1.3
-135			135	98			1.3
-165			165	128			1.4
-200			200	158			1.5
-NBS10- 60	1.5 - 10	30	60	23	35 - 45	NBC10-□	1.1
- 75			75	38			1.2
- 90			90	53			1.2
-105			105	68			1.3
-120			120	83			1.4
-135			135	98			1.5
-165			165	128			1.7
-200			200	163			1.9

1. The nut is included but the collet, wrench and Adjusting Screw must be ordered separately.
2. Center through coolant supply is available.
3. Weight includes the nut but not the collet.
4. Tool adjustment amount “H” indicates the adjustment length with an Adjusting Screw (NBA).

BT SHANK Model	Clamping diameter ød	øD	L	L_1	H	Collet Model	Weight (kg)
BT40-NBS13- 60	2.5 - 13	35	60	28	41 - 60	NBC13-□	1.2
- 75			75	40			1.3
- 90			90	55			1.4
-105			105	70			1.5
-120			120	85			1.6
-135			135	100			1.7
-165			165	128			1.9
-200			200	163			2.2
-NBS16- 60	2.5 - 16	42	60	27	45 - 65	NBC16-□	1.2
- 75			75	40			1.4
- 90			90	55			1.5
-105			105	70			1.7
-120			120	85			1.8
-135			135	100			1.9
-165			165	130			2.2
-200			200	165			2.6
-NBS20- 60	2.5 - 20	46	60	28	48 - 65	NBC20-□	1.2
- 75			75	42			1.4
- 90			90	57			1.5
-105			105	72			1.7
-120			120	87			1.9
-135			135	102			2.1
-165			165	132			2.5
-200			200	167			3.0

1. The nut is included but the collet, wrench and Adjusting Screw must be ordered separately.
2. Center through coolant supply is available.
3. Weight includes the nut but not the collet.
4. Tool adjustment amount “H” indicates the adjustment length with an Adjusting Screw (NBA).

Standard Accessory

New Baby Nut

For Spares G15

Optional Accessories

New Baby Wrench

G36

Collet

G7

BABY PERFECT SEAL

G15

Adjusting Screw

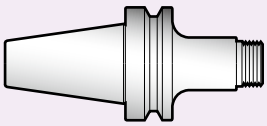
G23

Tap Adjusting Screw

G23

When ordering a BABY PERFECT SEAL, the “Nut-Less Body” without the standard nut attached is also available.

● Example Attach /NL (Nut less) to the end of the holder model number and order the NBC Collet/BABY PERFECT SEAL separately.



NEW BABY CHUCK Model + NL
BT40-NBS6-60/NL
(NL at the end of the model number means nut not attached)

+

NBC Collet
NBC6-3AA

+

BABY PERFECT SEAL Model
BPS6-03035

NEW BABY CHUCK

Clamping diameter: ø0.25 - ø20

A wide-ranging variety with sizes from short through long meets all the needs of high precision machining.

Center through

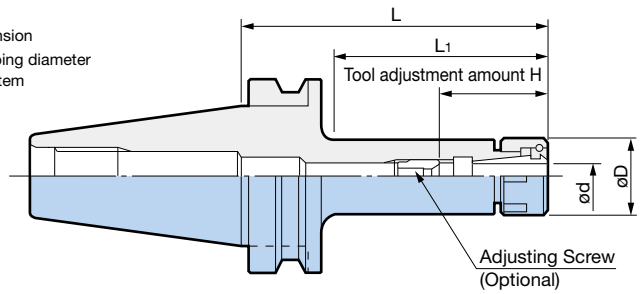
- Collet with an accuracy of 1 micron at nose enables increased productivity.
- A basic holder ideal for drilling, reaming and endmilling.

● Model Description

BT50 - NBS 6 - 90

- 90: L dimension
- 6: Maximum clamping diameter
- NBS: NEW BABY CHUCK System
- BT50: BT SHANK No.

Not BIG-PLUS (DUAL CONTACT) specification



BT SHANK Model	Clamping diameter ød	øD	L	L1	H	Collet Model	Weight (kg)
BT50-NBS 6- 90	0.25 - 6	20	90	42	20 - 40	NBC 6-□	3.9
-120			120	67			4.0
-165			165	112			4.1
-200			200	147			4.2
-NBS 8- 90	0.5 - 8	25	90	42	23 - 42	NBC 8-□	4.0
-120			120	67			4.1
-165			165	112			4.2
-200			200	147			4.3
-NBS10- 90	1.5 - 10	30	90	42	35 - 45	NBC10-□	4.0
-120			120	67			4.1
-165			165	112			4.4
-200			200	147			4.6
-250※			250	197			4.9
-300※			300	247			5.2
-NBS13- 90	2.5 - 13	35	90	42	41 - 60	NBC13-□	4.2
-120			120	67			4.4
-165			165	112			4.7
-200			200	147			5.0
-250※			250	197			5.4
-300※			300	247			5.8
-NBS16- 75	2.5 - 16	42	75	29	45 - 65	NBC16-□	4.0
- 90			90	44			4.1
-120			120	72			4.4
-165			165	117			4.8
-200			200	152			5.2
-250※			250	202			5.7
-NBS20- 75	2.5 - 20	46	75	31	48 - 65	NBC20-□	4.0
- 90			90	42			4.2
-120			120	72			4.5
-165			165	117			4.9
-200			200	152			5.3
-250※			250	202			5.9

1. The nut is included but the collet, wrench and Adjusting Screw must be ordered separately.
2. Center through coolant supply is available. However, ※ marked products do not have a through hole.
3. Weight includes the nut but not the collet.
4. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw (NBA).

- When ordering a BABY PERFECT SEAL, the "Nut-Less Body" without the standard nut attached is also available.
A12

Standard Accessory

New Baby Nut

For Spares G15

Optional Accessories

New Baby Wrench

G36

Collet

G7

BABY PERFECT SEAL

G15

Adjusting Screw

G23

Tap Adjusting Screw

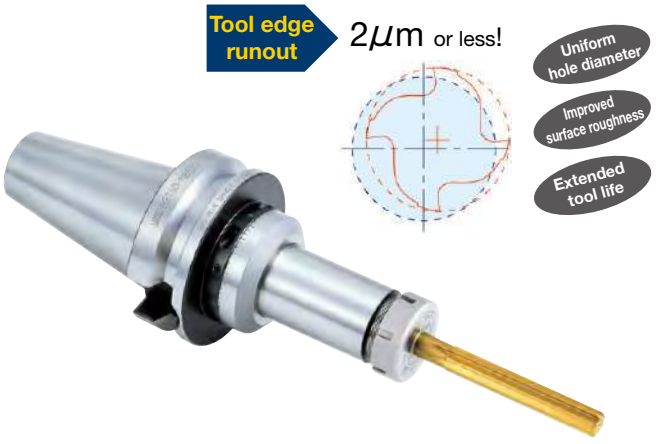
G23

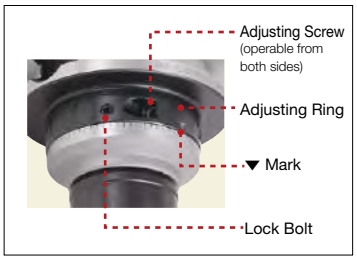
※ Tap Adjusting Screws cannot be used with RA Holders.

Compensates for increased runout of machine tool spindles caused by extended use.

DUAL CONTACT
BIG-PLUS®

Center through





Simple structure allows for easy adjustment of runout accuracy!

1. Turn the adjusting ring and line up the ▼ mark with peak runout position.
2. Adjust the lock bolts in 3 locations to fix the ring.
3. The runout amount is adjusted by tightening the adjusting screw.

● Model Description

BBT30 - NBS 8 - 75 NRA

- BBT30: BIG-PLUS BT No.
- NBS: NEW BABY CHUCK System
- 8: Maximum clamping diameter
- 75: L dimension
- NRA: Runout Adjustable Type

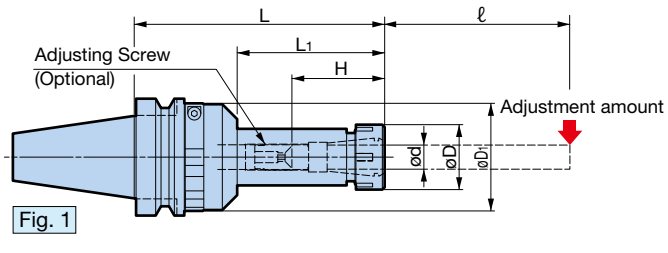


Fig. 1

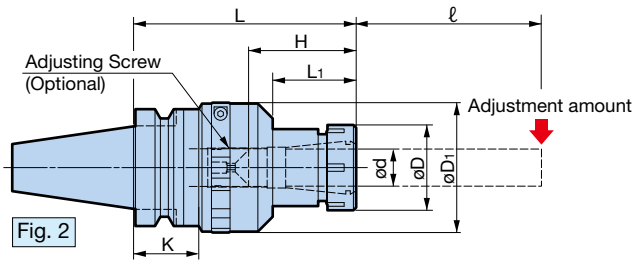


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

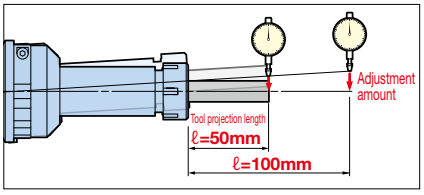
BIG-PLUS BBT SHANK Model	Fig.	ød	øD	øD1	L	L1	K	H	Collet Model	Adjustment amount ℓ=50mm	Adjustment amount ℓ=100mm	Weight (kg)
BBT30-NBS 8- 75NRA	1	0.5 - 8	25	45	75	28	—	23 - 42	NBC 8-□	20 μ m	31 μ m	0.7
-NBS13-110NRA	2	2.5 - 13	35	58	110	34	35	41 - 60	NBC13-□	18 μ m	27 μ m	1.4
BBT40-NBS 8- 90NRA	1	0.5 - 8	25	45	90	37	—	23 - 42	NBC 8-□	22 μ m	33 μ m	1.3
-NBS13- 90NRA	1	2.5 - 13	35	58	90	34	—	41 - 60	NBC13-□	18 μ m	27 μ m	1.6
-135NRA					135	79				25 μ m	34 μ m	1.9
-NBS20-120NRA	2	2.5 - 20	46	70	120	45	35	48 - 65	NBC20-□	17 μ m	25 μ m	2.5
-150NRA					150	65	45			21 μ m	29 μ m	2.7
BBT50-NBS13-105NRA	1	2.5 - 13	35	58	105	38	—	41 - 60	NBC13-□	19 μ m	28 μ m	4.2
-135NRA					135	68				24 μ m	33 μ m	4.4
-165NRA					165	98				30 μ m	39 μ m	4.5
-NBS20-120NRA	1	2.5 - 20	46	70	120	48	—	48 - 65	NBC20-□	17 μ m	25 μ m	4.7
-150NRA					150	78				22 μ m	30 μ m	5.0

1. Nut is included. Collet, wrench, and adjusting screw must be ordered separately.
2. "H" indicates the adjustment length with an Adjusting Screw (NBA).

ℓ= Tool projection length

Runout adjustment amount

The adjustment amount depends on the length of the holder and the tool projection length. The maximum adjustment amount possible for 50mm and 100mm tool projection lengths is listed in the table. The maximum adjustment amount is a reference figure available when the Adjusting Screw is tightened with the listed allowable torque.



Adjusting Screw allowable torque

NEW BABY CHUCK Type	Wrench	Allowable torque (N·m)
NBS 8-NRA	CK-T2.5	3
NBS13-NRA	CK-T3	6
NBS20-NRA		

Standard Accessory

New Baby Nut

For Spares G15

Optional Accessories

New Baby Wrench

G36

Collet

G7

BABY PERFECT SEAL

G15

Adjusting Screw

G23

MEGA DOUBLE POWER CHUCK

Clamping diameter: ø16 - ø32

Complete contact with the nut and body in conjunction with the BIG-PLUS specifications for double effect.
High rigidity equal to integration with the machine spindle.

DUAL CONTACT
BIG-PLUS®

Center through

Max. 30,000min-1

[Standard Type]

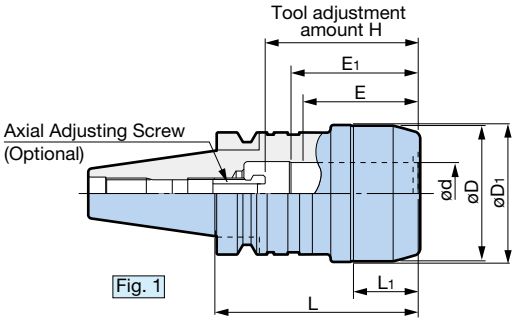


Fig. 1

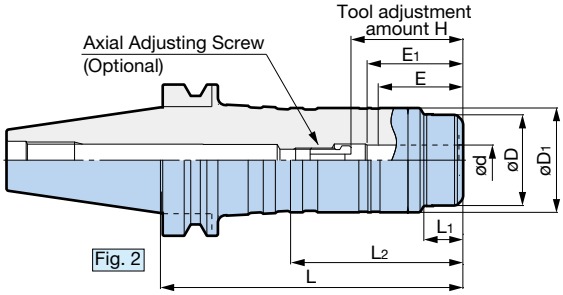


Fig. 2

● Model Description

BBT30 - MEGA 16 D - 60

- BBT30 - BIG-PLUS BT No.
- MEGA - MEGA CHUCK
- 16 - Clamping diameter
- D - DOUBLE CHUCK Standard type
- 60 - L dimension

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	L2	H	Min. clamping length E	Min. clamping length E1	Mega Wrench	Weight (kg)
BBT30-MEGA16D- 60	1	16	46	47	60	25	—	62	48	50	MGR46L	0.72
-MEGA20D- 65※		20	50	51	65	30		60	50		MGR50L	0.77
BBT40-MEGA16D- 75A	2	16	42	53	75	25	38	71	48	55	MGR42L	1.5
-105A					105							2.1
-135A					135							2.7
-165A					165							3.3
-200A					200							4.1
-MEGA20D- 75A	2	20	50	55	75	34	44	69 - 79	50	56	MGR50L	1.6
-105A					105							2.0
-120A					120							2.3
-135A					135							2.6
-165A					165							3.2
-200A					200							4.1
-MEGA25D- 75A	1	25	62	63	75	39	—	73 - 83	56	57	MGR62L	2.0
-105A					105							2.3
-135A					135			71 - 81				3.0
-165A					165							3.7
-200A					200							4.7
-MEGA32D- 90A	1	32	70	71	90	33	—	71 - 81	60	64	MGR70L	2.1
-105A					105							2.4
-135A					135			79 - 89				3.1
-165A					165							3.7
-200A					200							4.5

1. Wrench is not included. Please order separately.
2. Please note that BBT40-MEGA32D-90A, ATC arm may interfere with the nut in some machines. (36mm from gauge line to nut.)
3. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.
4. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.
5. When using center through coolant, insert a tool shank into E1 or more.

- MEGA16D requires the hex socket head screw (M8) for axial adjustment. However, please contact us if using for center through applications. H dimension is the max. tool shank length that can be inserted into the holder.
- For ※ marked models, "H" dimension is the max. insertion depth. Some Straight Collets cannot be used. Compatibility Table G24

Clamping diameter: ø16 - ø50

MEGA DOUBLE POWER CHUCK

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	L2	H	Min. clamping length E	Min. clamping length E1	Mega Wrench	Weight (kg)
BBT50-MEGA16D-105	2	16	46	55	105	23	33	71	48	50	MGR46L	4.6
-135					135							5.2
-165					165							5.7
-200					200							6.6
-MEGA20D-105	2	20	60	69	105	25	36	69 - 79	50	56	MGR60L	5.1
-135					135							6.0
-165					165							6.8
-200					200		114					7.7
-MEGA25D-105	2	25	70	77	105	32	45	76 - 86	56	65	MGR70L	5.4
-135					135							6.5
-165					165							7.6
-200					200		119					8.9
-MEGA32D- 90	2	32	80	86	92	39	54	78 - 95	60	71	MGR80L	4.8
-105					105							5.4
-135					135							7.0
-165					165							8.5
-200					200		129					9.9
-250					250		169					12.1
-MEGA42D-105	1	42	99	100	105	40	—	88 - 105	70	71	MGR99L	6.0
-135					135							7.8
-165					165							9.6
-MEGA50D-120	1	50	105	117	120	47	—	94 - 110	—	75	MGR105L	7.3

1. Wrench is not included. Please order separately.
2. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.
3. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.
4. When using center through coolant, insert a tool shank into E_1 or more.

- MEGA16D requires the hex socket head screw (M8) for axial adjustment. However, please contact us if using for center through applications. H dimension is the max. tool shank length that can be inserted into the holder.

Optional Accessories

Straight Collet

PJC Collet G25
PSC Collet G26
OCA Collet G27
C Collet G28

Mega Wrench

G33

Axial Adjusting Screw

G30

MEGA DOUBLE POWER CHUCK

Clamping diameter: ø12 - ø32

[Jet Through Type]

DUAL CONTACT
BIG-PLUS®

Center through
Coolant to tool periphery

Max. 30,000min-1

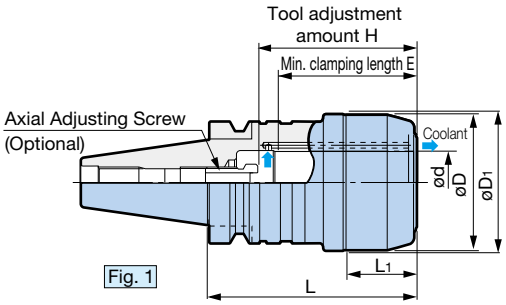


Fig. 1

● Model Description

BBT30 - MEGA 12 DS - 58

- BIG-PLUS BT No.
- MEGA CHUCK
- Clamping diameter
- DOUBLE CHUCK Jet Through Type

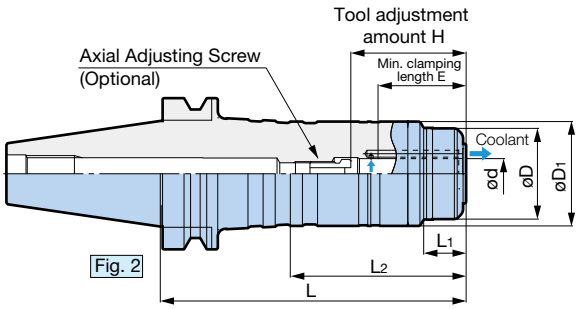


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	L2	H	E	Mega Wrench	Weight (kg)
BBT30-MEGA12DS- 58 NEW	2	12	38	43	59	25	33	61	43	MGR38	0.64
-MEGA16DS- 60	1	16	46	47	61.5	27	—	63	48	MGR46L	0.73
-MEGA20DS- 65※		20	50	51	66.5	32		61	50	MGR50L	0.78
BBT40-MEGA12DS- 75 NEW	2	12	38	43	76	25	33	65	43	MGR38	1.4
-105 NEW					106						1.8
-MEGA16DS- 75A	2	16	42	53	76	26	39	72	48	MGR42L	1.5
-105A					106						2.1
-135A					136						2.7
-165A					166						3.3
-200A					201						4.1
-MEGA20DS- 75A	2	20	50	55	76	35	45	70 - 80	50	MGR50L	1.6
-105A					106						2.0
-120A					121						2.3
-135A					136						2.6
-165A					166						3.2
-200A					201						4.1
-MEGA25DS- 75A	1	25	62	63	76	40	—	74 - 84	56	MGR62L	2.0
-105A					106						2.3
-135A					136			72 - 82			3.0
-165A					166						3.7
-200A					201						4.7
-MEGA32DS- 90A	1	32	70	71	91	34	—	72 - 82	60	MGR70L	2.1
-105A					106						2.4
-135A					136			80 - 90			3.1
-165A					166						3.7
-200A					201						4.5

1. Wrench is not included. Please order separately.
2. Please note that BBT40-MEGA32DS-90A, ATC arm may interfere with the nut in some machines. (36mm from gauge line to nut.)
3. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance.
   When using, slowly ramp up to the appropriate speed starting from slow speeds.
4. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.

- For ※ marked models, "H" dimension is the max. insertion depth. Some Straight Collets cannot be used.
  Compatibility Table ☞ G24
- MEGA12/16DS requires the hex socket head screw (M8) for axial adjustment.
  However, please contact us if using for center through applications. H dimension is the max. tool shank length that can be inserted into the holder.
- DS types have jet-through coolant supply, thus tools with oil holes cannot be used.

Clamping diameter: ø12 - ø50

MEGA DOUBLE POWER CHUCK

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	L2	H	E	Mega Wrench	Weight (kg)
BBT50-MEGA12DS-105 NEW	2	12	38	43	106	25	33	65	43	MGR38	4.2
-135 NEW					136						4.7
-165 NEW					166						5.2
-MEGA16DS-105	2	16	46	55	106.5	25	35	72	48	MGR46L	4.6
-135					136.5						5.2
-165					166.5						5.7
-200					201.5						6.6
-250					251.5						7.0
-MEGA20DS-105	2	20	60	69	106.5	27	37	70 - 80	50	MGR60L	5.1
-135					136.5						6.0
-165					166.5						6.8
-200					201.5		115				7.7
-250					251.5		137				9.1
-MEGA25DS-105	2	25	70	77	106.5	33	46	77 - 87	56	MGR70L	5.4
-135					136.5						6.5
-165					166.5						7.6
-200					201.5		120				8.9
-250					251.5		137				10.8
-MEGA32DS- 90	2	32	80	86	93.5	41	56	79 - 96	60	MGR80L	4.8
-105					106.5						5.4
-135					136.5						7.0
-165					166.5						8.5
-200					201.5		130				9.9
-250					251.5		170				12.1
-300					301.5		182				14.3
-MEGA42DS-105	1	42	99	100	106	41	—	89 - 106	70	MGR99L	6.0
-135					136						7.8
-165					166						9.6
-MEGA50DS-120	1	50	105	117	121	48	—	95 - 111	—	MGR105L	7.3

1. Wrench is not included. Please order separately.
2. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.
3. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.

- MEGA12/16DS requires the hex socket head screw (M8) for axial adjustment. However, please contact us if using for center through applications. H dimension is the max. tool shank length that can be inserted into the holder.
- DS types have jet-through coolant supply, thus tools with holes cannot be used.

Optional Accessories

Straight Collet

PJC Collet G25
PSC Collet G26
C Collet G28

Mega Wrench

G33

Axial Adjusting Screw

G30

MEGA PERFECT GRIP PAT.

Clamping diameter: ø16 - ø32

A holder equipped with tool Non-Pullout mechanism.
The unique Key Grip locking mechanism prevents the tool from slipping or pulling out during heavy machining.

DUAL CONTACT BIG-PLUS®

Center through

Flood Jet-Through Coolant

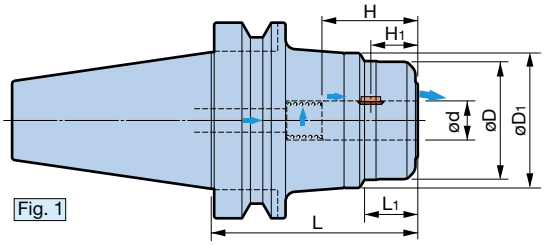


Fig. 1

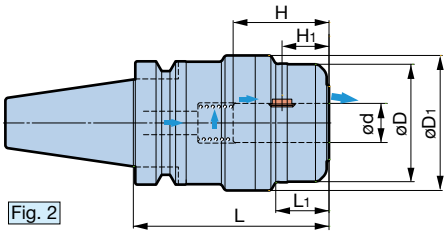


Fig. 2

● Model Description

BBT40 - MEGA 16 DPG - 75

- BBT40: BIG-PLUS BT No.
- MEGA: MEGA CHUCK
- 16: Chuck bore
- DPG: PERFECT GRIP
- 75: L dimension

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	øD	øD1	L	L1	H	H1	Mega Wrench	Weight (kg)
BBT40-MEGA16DPG- 75	1	16	46	55	75	24	47	23	MGR46L	1.7
-MEGA20DPG-100	2	20	60	69	100	27	49	24	MGR60L	2.6
BBT50-MEGA16DPG-105	1	16	46	55	105	24	47	23	MGR46L	4.6
-165					165					5.8
-MEGA20DPG-105		20	60	69	105	27	49	24	MGR60L	5.1
-165					165					6.9
-MEGA25DPG-105		25	70	77	105	33	55	23	MGR70L	5.4
-165					165					7.7
-MEGA32DPG-105		32	80	86	105	41	59	23	MGR80L	5.6
-165					165					8.4

1. Key Grip and Spring are included.
2. Wrench is not included. Please order separately.
3. H1 is the dimension from the center of the Key Grip to the front end of the chuck.

● Key Grips are consumable products. Do not use a damaged Key Grip.
● For coolant through tools, a seal bushing (optional) is required instead of a spring. Please contact us for details.

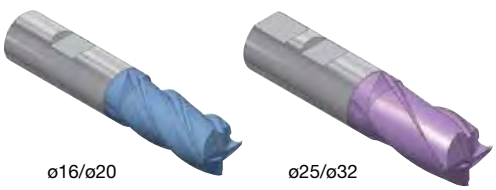
■ Standard Accessories

Chuck size	Key Grip (2 pcs)	Spring
ø16	**PKG16-2P**	**PSP1519**
ø20	**PKG20-2P**	**PSP1823**
ø25	**PKG25-2P**	**PSP2420**
ø32	**PKG32-2P**	**PSP3128**

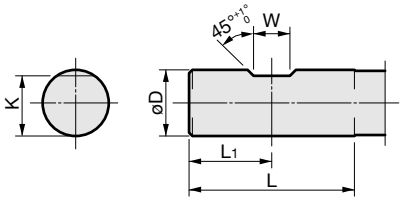
1. Key Grips are sold as 2-piece sets.

Cylindrical Shank with Flat Section JIS B 4005 (ISO3338-2)

The following standard shank is required for MEGA Perfect GRIP.



ø16/ø20 ø25/ø32



CAUTION

In case you are adding your own flat, the tool projection length in the MEGA Perfect GRIP will be decided by the flat position. Refer to H1 in the MEGA Perfect GRIP chart, decide the flat position to add, and then cut the cutter at L1 on cutter shank.

øD Nominal	øD Tolerance	L	L1	W Nominal	W Tolerance	K Nominal	K Tolerance
16	0 -0.011	48	24	10	+0.2 0	14.2	0 -0.4
20	0 -0.013	50	25	11		18.2	
25		56	32	12		23	
32	0 -0.016	60	36	14		30	

1. JIS Standards require sizes ø25 or higher to be double-flat types. The MEGA Perfect GRIP does not use a rear flat surface, but is capable of clamping double flat shanks.
2. JIS B4005 has the same dimensions as International Standard ISO3338-2 and German Standard DIN1835-1.

NEW Hi-POWER MILLING CHUCK

The BIG original slit mechanism supports high power and high-precision endmilling from heavy cuts to fine cuts.

DUAL CONTACT
BIG-PLUS®

Center through

[S Type] Slim nut to avoid interference

● Model Description

BBT30 - HMC 16 S - 70

- 70 : L dimension
- S : S Type
- 16 : Chuck bore
- HMC : NEW Hi-POWER MILLING CHUCK
- BBT30 : BIG-PLUS BT No.

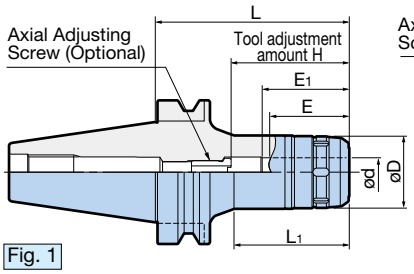


Fig. 1

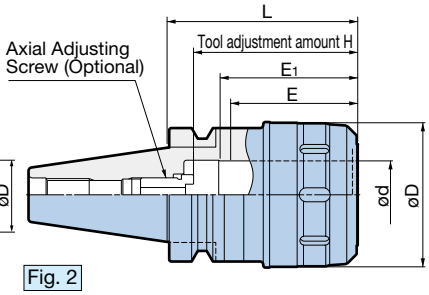


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	ød	øD	L	L1	H	Min. clamping length E	Min. clamping length E1	FK Wrench Model	MEGA WRENCH Model	Weight (kg)
BBT30-HMC16S- 70※	**BT30-HMC16S- 70※**	1	16	43	70	47	71	48	55	FK45-50L	MGR43L	0.75
-HMC20S- 75	**-HMC20S- 75**	2	20	50	75	—	56 - 66	50	56		MGR50L	0.89
-HMC25S- 90	**-HMC25S- 90**		25	55	90	—	64 - 74	56	57	FK52-55	MGR55L	1.04
-HMC32S-105	**-HMC32S-105**		32	62	105	—	70 - 80	60	58	FK58-62L	MGR62L	1.34
BBT40-HMC16S- 75※	**BT40-HMC16S- 75※**	1	16	43	75	45	71	48	55	FK45-50L	MGR43L	1.3
-120※	**-120※**				120	90						1.8
-HMC20S- 75	**-HMC20S- 75**	1	20	50	75	46	69 - 79	50	56		MGR50L	1.4
-105	**-105**				105	75						1.9
-120	**-120**				120	90						2.1
-HMC25S- 75	**-HMC25S- 75**	1	25	59	75	47	73 - 83	56	57	FK58-62L	MGR59L	1.5
-105	**-105**				105	77						2.1
-135	**-135**				135	107						2.8
-HMC32S- 90	**-HMC32S- 90**	2	32	68	90	—	71 - 81	60	64	FK68-75L	MGR68L	2.0
-105	**-105**				105	—	79 - 89					2.3
-135	**-135**				135	—						3.0

1. Wrench and Axial Adjusting Screw are not included. Please order separately.
2. When using center through coolant;
   - Set screw with sealing compound applied (standard accessory) should be used to plug an air bleeding hole.
   - Oil hole type should be chosen when Straight Collet is required.
3. Please note that BBT(BT)40-HMC32S-90, ATC arm may interfere with the nut in some machines. (36mm from gauge line to nut.)
4. Tool adjustment amount "H" indicates the adjustment length with an Axial Adjusting Screw.
5. When using center through coolant, insert a tool shank into E_1 or more.

- ※HMC16S requires the hex socket head screw (M8) for axial adjustment. However, please contact us if using for center through applications. H dimension is the max. tool shank length that can be inserted into the holder.
- MEGA WRENCH can also be used to tighten/remove tools.

Optional Accessories

Straight Collet

- PJC Collet ☞ G25
- PSC Collet ☞ G26
- OCA Collet ☞ G27
- C Collet ☞ G28

Wrench

☞ G30

Mega Wrench

☞ G33

Axial Adjusting Screw

☞ G30

NEW Hi-POWER MILLING CHUCK

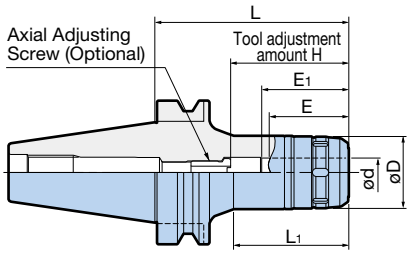
Clamping diameter: ø16 - ø42

[S Type] Slim nut to avoid interference

● Model Description

BBT50 - HMC 16 S - 105

- 105: L dimension
- S: S Type
- 16: Chuck bore
- HMC: NEW Hi-POWER MILLING CHUCK
- BBT50: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	øD	L	L1	H	Min. clamping length E	Min. clamping length E1	FK Wrench Model	MEGA WRENCH Model	Weight (kg)
BBT50-HMC16S-105※	1	16	43	105	57	71	48	55	FK45-50L	MGR43L	4.2
-135※				135	80						4.6
-165※				165	100						5.0
-200※				200	120						5.8
-250※ NEW				250	155						6.7
-HMC20S-105	1	20	50	105	57	69 - 79	50	56	FK45-50L	MGR50L	4.3
-135				135	80						4.8
-165				165	100						5.4
-200				200	125						6.0
-250 NEW				250	160						7.1
-300				300	200						8.3
-HMC25S-105	1	25	59	105	57	76 - 86	56	57	FK58-62L	MGR59L	4.5
-135				135	87						5.2
-165				165	105						5.9
-200				200	125						7.5
-250 NEW				250	160						8.1
-HMC32S-105	1	32	68	105	64	88 - 98	60	72	FK68-75L	MGR68L	4.6
-135				135	89						5.4
-165				165	105						6.4
-200				200	130						7.4
-250 NEW				250	165						9.1
-300				300	200						11.5
-350 NEW				350	240						12.1
-HMC42S-105	1	42	85	105	65	93 - 105	70	73	FK80-90L	MGR85L	5.2
-135				135	94						6.2
-165				165	123						7.4
-200				200	130						9.6
-300				300	200						14.1
-400 NEW				400	300						18.2

1. Wrench and Axial Adjusting Screw are not included. Please order separately.
2. When using center through coolant;
   - Set screw with sealing compound applied (standard accessory) should be used to plug an air bleeding hole.
   - Oil hole type should be chosen when Straight Collet is required.
3. Tool adjustment amount "H" indicates the adjustment length with an Axial Adjusting Screw.
4. When using center through coolant, insert a tool shank into E_1 or more.

- ※HMC16S requires the hex socket head screw (M8) for axial adjustment. However, please contact us if using for center through applications. H dimension is the max. tool shank length that can be inserted into the holder.
- MEGA WRENCH can also be used to tighten/remove tools.

Optional Accessories

Straight Collet

PJC Collet G25
PSC Collet G26
OCA Collet G27
C Collet G28

Wrench

G30

Mega Wrench

G33

Axial Adjusting Screw

G30

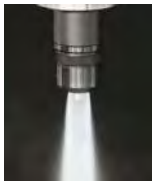
[HMC12J Type]

● A slim yet highly rigid milling chuck with ø32 outer diameter nut for reduced interference.

DUAL CONTACT BIG-PLUS®

Center through

■ Jet through coolant securely supplied from chuck nose to cutting edge.



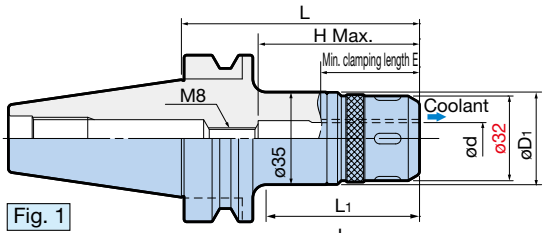


Fig. 1

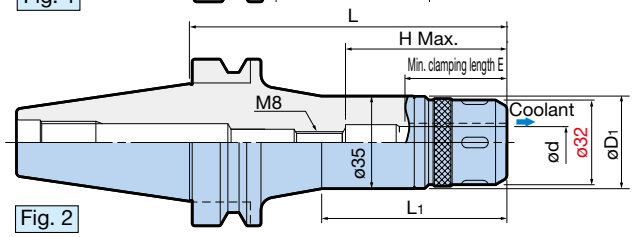


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD1	L	L1	H Max.	E	FK Wrench Model	Weight (kg)
BBT30-HMC12J- 60	1	12	35	60	38	65	43	FK31-33	0.56
BBT40-HMC12J- 90				90	63				1.40
-120	2			120	70				1.60
BBT50-HMC12J-105	1			105	67				4.00
-135	2			135	70				4.30
-165				165	90				4.70

1. Wrench is not included. Please order separately.
2. MEGA WRENCH cannot be used.

Optional Accessories

Straight Collet

PJC Collet ☞ G25

Wrench

☞ G30

MILLING CHUCK

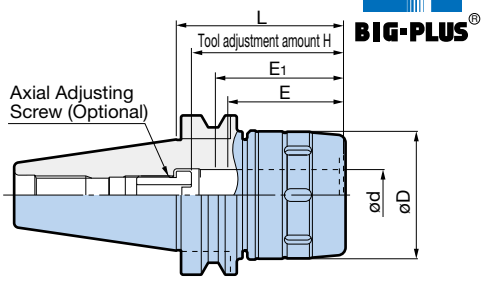
NEW Hi-POWER MILLING CHUCK

Clamping diameter: ø20 - ø42

[Standard Type]

DUAL CONTACT
BIG-PLUS®

Center through



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	ød	øD	L	H	Min. clamping length E	Min. clamping length E1	FK Wrench Model	MEGA WRENCH Model	Weight (kg)
BBT50-HMC20 -105	**BT50-HMC20 -105**	20	60	105	69 - 79	50	56	FK58-62	MGR60L	4.7
-135	**-135**			135						5.4
—	**-165**			165						6.1
-HMC25 -105	**-HMC25 -105**	25	62	105	74 - 84	56	65		MGR62L	4.6
-135	**-135**			135						5.3
—	**-165**			165						5.9
-HMC32 -105	**-HMC32 -105**	32	80	105	78 - 95	60	71	FK80-90	MGR80L	5.2
-135	**-135**			135						6.3
—	**-165**			165						7.5
-HMC42 -105	**-HMC42 -105**	42	99	105	93 - 105	70	73	FK92-100	MGR99L	6.0
-135	**-135**			135						7.5
—	**-165**			165						8.8

1. Wrench and Axial Adjusting Screw are not included. Please order separately.
2. When using center through coolant;
   • Set screw with sealing compound applied (standard accessory) should be used to plug an air bleeding hole.
   • Oil hole type should be chosen when Straight Collet is required.
3. Tool adjustment amount "H" indicates the adjustment length with an Axial Adjusting Screw.
4. When using center through coolant, insert a tool shank into E1 or more.

● MEGA WRENCH can also be used to tighten/remove tools.

Optional Accessories

Straight Collet

PJC Collet G25
PSC Collet G26
OCA Collet G27
C Collet G28

Wrench

G30

Mega Wrench

G33

Axial Adjusting Screw

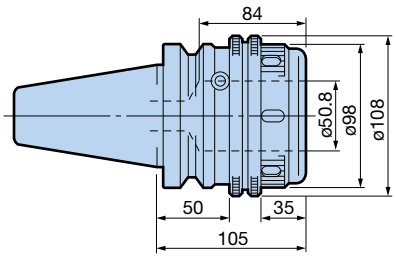
G30

DUAL CONTACT
BIG-PLUS®

[For large diameter (ø50.8) endmills]

Pin locking type which prevents tool slip by adding a special pin.

- The double nut mechanism clamps the chuck flange solidly, increasing bending rigidity. Ideal for long and large diameter endmilling. A runout accuracy unrealizable with side lock holders is achieved.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	FK Wrench Model	Weight (kg)
BBT50-HMC50.8-105	**BT50-HMC50.8-105**	FK92-100	5.9

1. Wrench is not included. Please order separately.

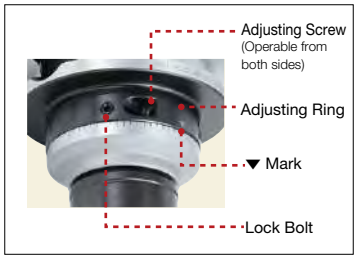
Runout Adjustable RA Holder

Clamping diameter: ø20 - ø32

Compensates for increased runout of machine tool spindles caused by extended use.

DUAL CONTACT
BIG-PLUS®

Center through



Simple structure allows for easy adjustment of runout accuracy!

1. Turn the adjusting ring and line up the ▼ mark with peak runout position.
2. Adjust the lock bolts in 3 locations to fix the ring.
3. The runout amount is adjusted by tightening the adjusting screw.

● Model Description

BBT40 - HMC 20 S - 130 NRA

- BBT40: BIG-PLUS BT No.
- HMC: NEW Hi-POWER MILLING CHUCK
- 20: Chuck bore
- S: S Type
- 130: L dimension
- NRA: Runout Adjustable Type

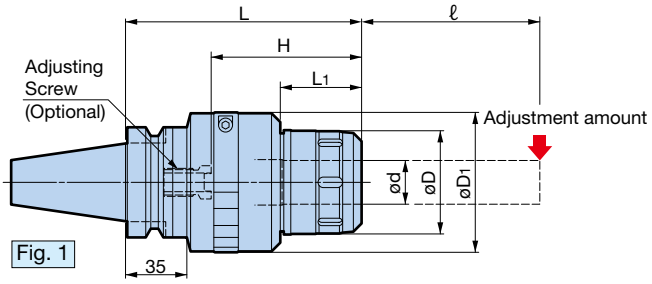


Fig. 1

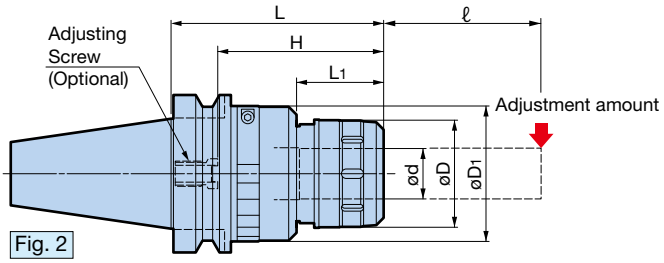


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	øD	øD1	L	L1	H	H Max.	Min. clamping length	Adjustment amount ℓ=50mm	Adjustment amount ℓ=100mm	FK Wrench Model	MEGA WRENCH Model	Weight (kg)
BBT40-HMC20S-130NRA	1	20	50	72	130	46	69 - 79	85	45	23 μ m	33 μ m	FK45-50L	MGR50L	2.9
-HMC25S-135NRA		25	59	80	135	46	75 - 85	90	45	21 μ m	30 μ m	FK58-62L	MGR59L	3.5
-HMC32S-145NRA		32	68	86	145	55	85 - 95	105	55	20 μ m	28 μ m	FK68-75L	MGR68L	3.8
BBT50-HMC20S-125NRA	2	20	50	72	125	46	69 - 79	85	45	23 μ m	33 μ m	FK45-50L	MGR50L	5.2
-HMC25S-125NRA		25	59	80	125	46	75 - 85	90	45	21 μ m	30 μ m	FK58-62L	MGR59L	5.6
-HMC32S-135NRA		32	68	86	135	55	85 - 95	105	55	20 μ m	28 μ m	FK68-75L	MGR68L	6.0

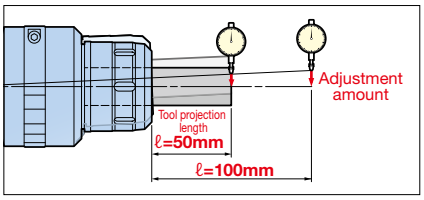
1. Wrench and Axial Adjusting Screw are not included. Please order separately.
2. Tool adjustment amount "H" indicates the adjustment length with an Axial Adjusting Screw (HMA).
3. H max. is the maximum tool insertion length when the Adjusting Screw is removed.

ℓ= Tool projection length

● MEGA WRENCH can also be used to tighten/remove tools.

Runout adjustment amount

The adjustment amount depends on the length of the holder and the tool projection length. The maximum adjustment amount possible for 50mm and 100mm tool projection lengths is listed in the table. The maximum adjustment amount is a reference figure available when the Adjusting Screw is tightened with the listed allowable torque.



Adjusting Screw allowable torque

NEW Hi-POWER MILLING CHUCK Type	Wrench	Allowable torque (N·m)
HMC20S-NRA	CK-T4	8
HMC25S-NRA		
HMC32S-NRA		

Optional Accessories

Straight Collet	Wrench	Mega Wrench	Axial Adjusting Screw
 PJC Collet G25 PSC Collet G26 C Collet G28	 G30	 G33	 G30

For versatile high-precision machining including molds and automotive components.

● Slim design minimizes workpiece interference, ideal for mold making.

DUAL CONTACT BIG-PLUS®

Center through

[SUPER SLIM Type PAT.]

● Model Description

BBT30 - HDC 3 S - 60

- 60: L dimension
- S: SUPER SLIM Type
- 3: Clamping diameter
- HDC: HYDRAULIC CHUCK
- BBT30: BIG-PLUS BT No.

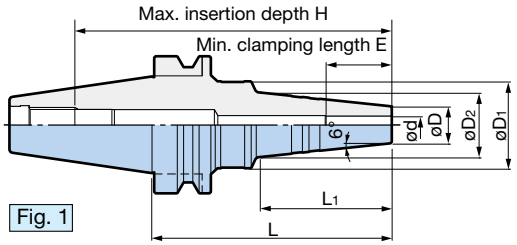


Fig. 1

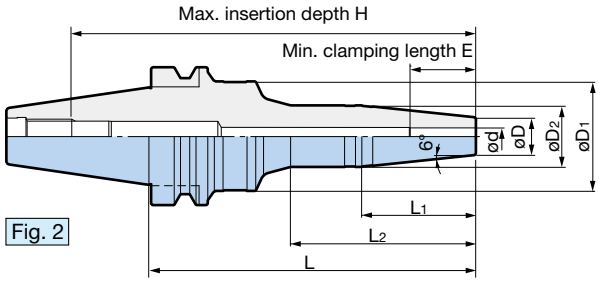


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	øD2	L	L1	L2	H	E	Weight (kg)
BBT30-HDC 3S- 60※ NEW	1	3	14	42	18	60	19	—	(84)	16	0.54
- 90※					25	90	50		(113)		0.62
-HDC3.175S- 60※ NEW		3.175		41.4	18	60	19		(84)		0.54
-HDC 4S- 60		4		46	20	60	28		(84)	19	0.48
- 90				42	25	90	50		(113)		0.62
-HDC 5S- 90		5								22	0.63
-HDC 6S- 60 NEW		6			19	60	19		(84)	25	0.54
- 90					25	90	50		(113)		0.62
-HDC 8S- 90		8	17		28					31	0.65
-HDC10S- 90		10	19	44	30					33	0.67
-HDC12S- 90		12	21	46	32				113	36	0.69
BBT40-HDC 3S- 90※	1	3	14	38	24	90	44	—	(125)	16	1.3
-135※ NEW	2			44	26	135	57	84	(170)		1.4
-HDC 4S- 60	1	4	14	38	19	60	22	—	(95)	19	1.2
- 90					24	90	45		(125)		1.3
-135	2			44	26	135	57	84	(170)		1.4
-HDC 5S- 90 NEW	1	5	14	38	24	90	46	—	(125)	22	1.3
-HDC 6S-110	1	6	14	38	27	110	60		(145)	25	1.3
-150	2			48	26	150	57	85	(185)		1.6
-HDC 8S-110	1	8	17	40	30	110	60	—	(145)	31	1.4
-150	2			50	28	150	52	85	(185)		1.7
-HDC10S-110	1	10	19	42	32	110	60	—	(145)	33	1.4
-150	2			50	30	150	52	85	(185)		1.7
-HDC12S-110	1	12	21	44	34	110	60	—	(145)	36	1.4
-150	2			50	32	150	52	85	(185)		1.8

1. Adjusting Screw cannot be used.
2. H dimensions in ( ) are reference length up to the PULLSTUD BOLT.
3. When using coolant with models marked with ※, some coolant may leak from the inner diameter slits.

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

HYDRAULIC CHUCK

Clamping diameter: ø4 - ø12

[SUPER SLIM Type PAT.]

● Model Description

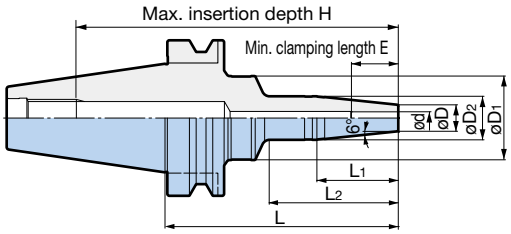
BBT50 - HDC 4 S - 150

- BBT50 - BIG-PLUS BT No.
- HDC - HYDRAULIC CHUCK
- 4 - Clamping diameter
- S - SUPER SLIM Type
- 150 - L dimension

DUAL CONTACT

BIG-PLUS®

Center through



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	øD1	øD2	L	L1	L2	H	E	Weight (kg)
BBT50-HDC 4S-150 NEW	4	14	52	26	150	57	83	(207)	19	4.2
-200 NEW			56		200		100	(257)		4.6
-HDC 6S-150	6	14	52		150		83	(207)	25	4.2
-200			56		200		100	(257)		4.6
-HDC 8S-150	8	17	54	28	150	52	83	(207)	31	4.3
-200			58		200		100	(257)		4.7
-HDC10S-150	10	19	56	30	150		83	(207)	33	4.3
-200			60		200		100	(257)		4.8
-HDC12S-150	12	21	58	32	150		83	(207)	36	4.4
-200			62		200		100	(257)		4.8

1. Adjusting Screw cannot be used.
2. H dimensions in ( ) are reference length up to the PULLSTUD BOLT.

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

[Jet Through Type PAT.]

DUAL CONTACT BIG-PLUS®

● Model Description

BBT30 - HDC 4 J - 60

- 60: L dimension
- J: Jet Through Type
- 4: Clamping diameter
- HDC: HYDRAULIC CHUCK
- BBT30: BIG-PLUS BT No.

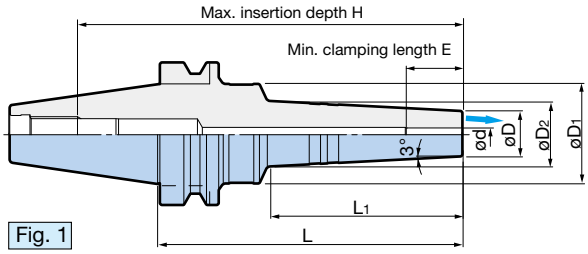


Fig. 1

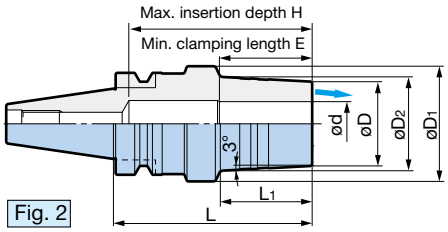


Fig. 2

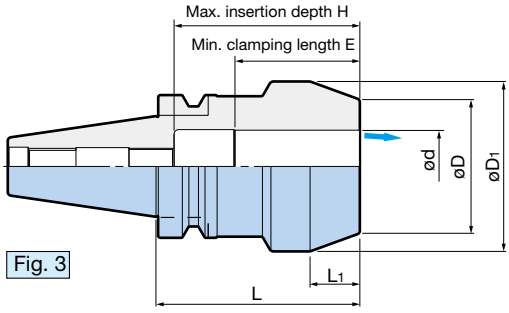


Fig. 3

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	øD2	L	L1	H	E	Weight (kg)
BBT30-HDC 4J- 60	1	4	20	46	23	60	28	(84)	19	0.50
- 90				42	26	90	50	(113)		0.66
-HDC 6J- 90		6							25	0.66
-HDC 8J- 90		8	22		28				31	0.68
-HDC10J- 90		10	24	44	30				33	0.70
-HDC12J- 90		12	26	46	32			113	36	0.72
-HDC16J- 90		16	34		40		49	100	43	0.83
-HDC20J- 90	2	20	38	52	43		40	83		0.92
BBT40-HDC 4J- 90	1	4	20	38	25	90	45	(125)	19	1.3
-135				44	30	135	85	(170)		1.5
-HDC 6J- 90		6	20	38	25	90	45	(125)	25	1.3
-135				44	29	135	85	(170)		1.5
-HDC 8J- 90		8	22	40	27	90	45	(125)	31	1.3
-135				46	31	135	85	(170)		1.6
-HDC10J- 90		10	24	42	29	90	45	(125)	33	1.3
-135				48	33	135	85	(170)		1.6
-HDC12J- 90		12	26	44	31	90	45	(125)	36	1.3
-135				50	35	135	85	(170)		1.7
-HDC16J- 90		16	34	46	40	90	46	125	43	1.4
-135				50	44	135	89	170		1.9
-HDC20J- 90		20	38	48	44	90	47	110	43	1.5
-135				53	48	135	90	155		2.0
-HDC25J- 90		25	51	63	56	90	41	105	49	1.9
-HDC32J- 90	3	32	59	75	—		20	82	56	2.3

1. Adjusting Screw cannot be used.
2. H dimensions in ( ) are reference length up to the PULLSTUD BOLT.
3. HDC4J to 12J models allow jet through to be switched to center through by assembling the accessory plug.

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. ☞ G30

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

[Jet Through Type PAT.]

DUAL CONTACT
BIG-PLUS®

● Model Description

BBT50 - HDC 6 J - 120
- 120: L dimension
- J: Jet Through Type
- 6: Clamping diameter
- HDC: HYDRAULIC CHUCK
- BBT50: BIG-PLUS BT No.

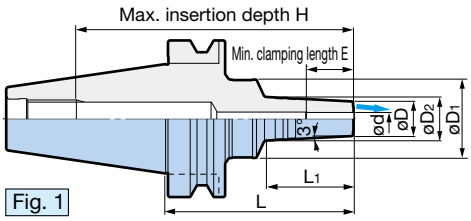


Fig. 1

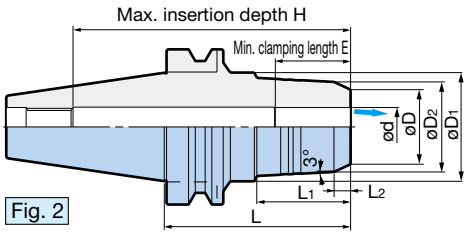


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	øD2	L	L1	L2	H	E	Weight (kg)
BBT50-HDC 6J-120	1	6	20	48	26	120	55	–	(177)	25	4.1
-HDC 8J-120		8	22	50	28					31	4.1
-HDC10J-120		10	24	52	30					33	4.2
-HDC12J-120		12	26	54	32					36	4.2
-HDC16J-120		16	34	58	41		56			43	4.4
-HDC20J-120		20	38	62	45						4.5
-HDC25J-120	2	25	48	70	58		59	10	177	49	5.2
-HDC32J-120		32	58	78	67		60	9		56	5.6

1. Adjusting Screw cannot be used.
2. H dimensions in ( ) are reference length up to the PULLSTUD BOLT.
3. HDC6J to 12J models allow jet through to be switched to center through by assembling the accessory plug.

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. ☞ G30

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

[Standard Type]

DUAL CONTACT

BIG-PLUS®

Center through

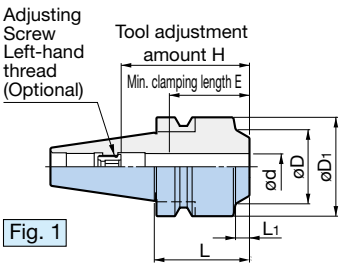


Fig. 1

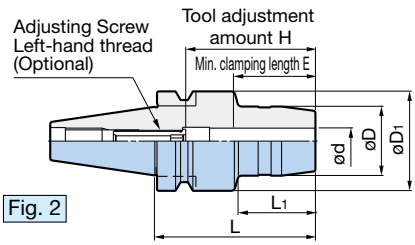


Fig. 2

● Model Description

BBT30 - HDC 6 - 45

- 45: L dimension
- 6: Clamping diameter
- HDC: HYDRAULIC CHUCK
- BBT30: BIG-PLUS BT No.

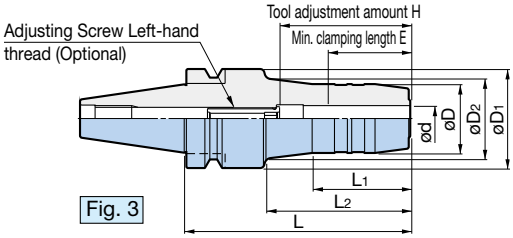


Fig. 3

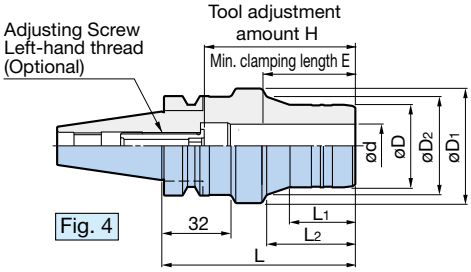


Fig. 4

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	øD2	L	L1	L2	H	E	Adjusting Screw (Optional)	Weight (kg)
BBT30-HDC 6- 45	1	6	30	46	—	45	7	—	35 - 50	28	HDA 6-05020	0.58
- 75	2		26			75	40		28 - 50		HDA 6-05032	0.64
- 90	3				31	90	43	57				0.71
-105						105		72				0.78
-HDC 7- 75	2	7	27	46	—	75	41	—	28 - 50	28	HDA 6-05032	0.65
-HDC 8- 45	1	8	32	46	—	45	7	—	35 - 50	28	HDA 8-06020	0.58
- 75	2		28			75	41		28 - 50		HDA 8-06032	0.65
- 90	3				33	90	44	57				0.73
-105						105		72				0.81
-HDC 9- 75	2	9	29	46	—	75	41	—	28 - 50	28	HDA 8-06032	0.66
-HDC10- 45	1	10	34	46	—	45	7	—	45 - 55	33	HDA10-08015	0.57
- 75	2		30			75	36		33 - 55		HDA10-08032	0.71
- 90	3				33	90	45	51				0.79
-105					36	105		66				0.88
-HDC11- 90	3	11	31	46	34	90	51	45	33 - 55	33	HDA10-08032	0.80
-HDC12- 45	1	12	36	46	—	45	7	—	55 - 60	38	HDA12-10010 ○	0.58
- 75	2		32			75	36		38 - 60		HDA12-10032	0.72
- 90	3				35	90	45	51				0.80
-105					38	105		67				0.90
-HDC13- 90	3	13	33	46	36	90	45	51	38 - 60	38	HDA12-10032	0.81
-HDC14- 90	3	14	34	46	37	90	46	52	38 - 60	38	HDA12-10032	0.82
-HDC15- 90	2	15	37	46	—	90	47	—	43 - 70	43	HDA16-12037	0.86
-HDC16- 45▲	1	16	42	46	—	45	7	—	70	43	—	0.52
- 75	2		38			75	35		43 - 70		HDA16-12030	0.74
- 90	3					90	47				HDA16-12037	0.86
-105						105						1.02
-HDC18- 90	4	18	36	51	44	90	31	41	43 - 70	43	HDA16-12037	0.90
-HDC20- 60※	4	20	38	53	—	60	—	14	43 - 54	43	HDA16-12030	0.74
- 75					46	75	16	26	46 - 70			0.81
- 90						90	31	41	43 - 70		HDA16-12037	0.93
-105	3			46	—	105	40	—				1.02
-HDC25-105	4	25	55	63	—	105	44	—	52 - 80	52	HDA25-16039	1.55
-HDC32-105	4	32	60	75	—	105	39	—	56 - 80	56	HDA25-16039	1.70

1. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.
2. ▲ marked model cannot be used with an Adjusting Screw.
3. Adjusting screw **with hexagon sockets on both sides** is also available, allowing adjustment from the shank side as well.
   Add the letter **"W"** at the end of the model number when ordering. (e.g. HDA6-05020W)
   The above type is not available for the HDA12-10010 marked with ○.

- ※ marked models cannot be used with a Straight Collet.
- It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

Straight Collets G25

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

HYDRAULIC CHUCK

[Standard Type]

DUAL CONTACT
BIG-PLUS®

Center through

● Model Description

BBT40 - HDC 6 - 60
- 60: L dimension
- 6: Clamping diameter
- HDC: HYDRAULIC CHUCK
- BBT40: BIG-PLUS BT No.

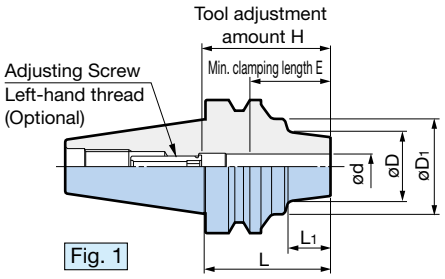


Fig. 1

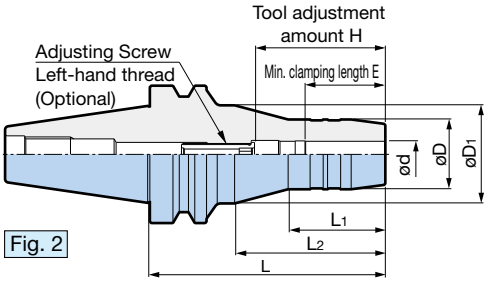


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	L2	H	E	Adjusting Screw (Optional)	Weight (kg)
BBT40-HDC 6- 60	1	6	27	45	60	19	—	28 - 50	28	HDA 6-05032	1.2
- 90	2		26		90	44	50				1.4
-110					110		70				1.5
-135					135		95				1.7
-165					165		119				1.9
-HDC 7- 90	2	7	27	45	90	44	50	28 - 50	28	HDA 6-05032	1.3
-HDC 8- 60	1	8	29	45	60	19	—	28 - 50	28	HDA 8-06032	1.2
- 90	2		28		90	44	50				1.4
-110					110		70				1.5
-135					135		95				1.7
-165					165		119				2.0
-HDC 9- 90	2	9	29	45	90	45	50	28 - 50	28	HDA 8-06032	1.4
-HDC10- 60	1	10	31	45	60	20	—	33 - 55	33	HDA10-08032	1.2
- 90	2		30		90	45	50				1.4
-110					110		70				1.5
-135					135		95				1.7
-165					165		119				2.0
-HDC11- 90	2	11	31	45	90	45	50	33 - 55	33	HDA10-08032	1.4

1. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.
2. Adjusting Screw **with hexagon sockets on both sides** is also available, allowing adjustment from the shank side as well. Add the letter **"W"** at the end of the model number when ordering. (Example: HDA6-05032W)

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

ød = 19, 22, 24, 28, 31 A74

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	L2	H	E	Adjusting Screw (Optional)	Weight (kg)
BBT40-HDC12- 60	1	12	33	45	60	20	—	38 - 60	38	HDA12-10032	1.2
- 90	2		32		90	45	49				1.4
-110					110		69				1.6
-135					135		94				1.8
-165					165		119				2.0
-HDC13- 90	2	13	33	45	90	45	49	38 - 60	38	HDA12-10032	1.4
-HDC14- 90	2	14	34	45	90	46	49	38 - 60	38	HDA12-10032	1.4
-110					110		69				1.6
-135					135		94				1.8
-HDC15- 90	2	15	37	45	90	47	49	43 - 70	43	HDA16-12037	1.4
-HDC16- 75	2	16	38	45	75	35	36	43 - 70	43	HDA16-12037	1.3
- 90					90	47	49				1.4
-110					110		69				1.6
-135					135		94				1.9
-165				50	165		119				2.3
-HDC18- 90	2	18	40	45	90	48	49	43 - 70	43	HDA16-12037	1.5
-110					110		69				1.6
-135					135		94				1.9
-HDC20- 90	2	20	42	45	90	48	50	43 - 70	43	HDA16-12037	1.4
-110				50	110		70				1.7
-135					135		95				2.0
-165					165		119				2.4

1. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.
2. Adjusting Screw **with hexagon sockets on both sides** is also available, allowing adjustment from the shank side as well. Add the letter **"W"** at the end of the model number when ordering. (Example: HDA6-05032W)

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

ød = 19, 22, 24, 28, 31 A74

Straight Collets G25

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

[Standard Type]

DUAL CONTACT
BIG-PLUS®

Center through

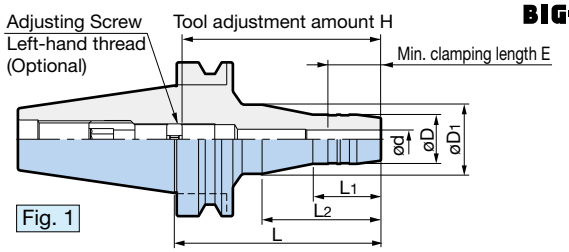


Fig. 1

● Model Description

BBT50 - HDC 6 L - 105

- 105: L dimension
- 6: Clamping diameter
- HDC: HYDRAULIC CHUCK
- BBT50: BIG-PLUS BT No.

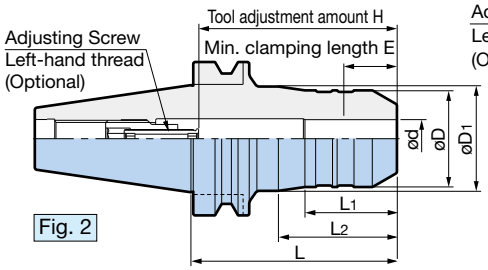


Fig. 2

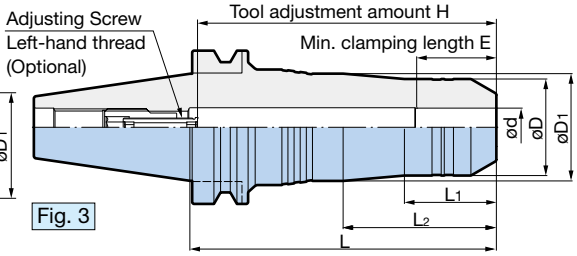


Fig. 3

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	L2	H	E	Maximum insertion depth	Adjusting Screw (Optional)	Weight (kg)
BBT50-HDC 6L-105	1	6	26	45	105	44	48	80 - 120	28	165	HDA6-20010	4.2
-135					135		78	110 - 150		195		4.3
-150					150		93	125 - 165		210		4.4
-165					165		108	140 - 180		225		4.5
-HDC 8L-105	1	8	28	45	105	45	48	80 - 120	28	165	HDA6-20010	4.2
-135					135		78	110 - 150		195		4.4
-150					150		93	125 - 165		210		4.5
-165					165		108	140 - 180		225		4.6
-HDC10L-105	1	10	30	45	105	45	48	80 - 120	33	165	HDA6-20010	4.2
-135					135		78	110 - 150		195		4.4
-150					150		93	125 - 165		210		4.5
-165					165		108	140 - 180		225		4.7
-HDC12L-105	1	12	32	45	105	45	48	80 - 120	38	165	HDA6-20010	4.2
-135					135		78	110 - 150		195		4.4
-150					150		93	125 - 165		210		4.6
-165					165		108	140 - 180		225		4.7
-HDC16L- 90	2	16	38	47	90	40	43	56 - 96	43	150	HDA20-12047	4.1
-105	1				105	47	48	80 - 120		165	HDA6-20010	4.3
-135					135	48	78	110 - 150		195		4.6
-150					150		93	125 - 165		210		4.7

1. In the use of the Adjusting Screw in BBT50 series, please contact BIG agent because a guide screw needs to be set separately.
2. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.
3. Maximum insertion depth is the depth when Adjusting Screw is not used.

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

Straight Collets G25

ød = 19, 22, 24, 28, 31 A74

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	L2	H	E	Maximum insertion depth	Adjusting Screw (Optional)	Weight (kg)
BBT50-HDC20L- 90	2	20	42	50	90	45	—	56 - 96	43	150	HDA20-12047	4.2
-105					105	47	48	71 - 111		165		4.4
-135					135	48	78	101 - 141		195		4.7
-150					150		93	116 - 156		210		4.8
-200	3				200	48	102	166 - 206		260		5.5
-250					250			216 - 256		310		6.0
-HDC25L- 90	2	25	63	—	90	45	—	56 - 96	52	113	HDA20-12047	4.7
-105					105	60		71 - 111		128		5.0
-135				68	135		78	101 - 141		158		5.7
-150				70	150		92	116 - 156		173		6.1
-200	3				200	60	100	166 - 200		200		7.5
-250※					250			—			—	9.1
-HDC32L- 90	2	32	72	—	90	47	—	56 - 96	56	112	HDA20-12047	4.7
-105					105	62		71 - 111		127		5.1
-135				78	135	60	78	101 - 141		157		6.0
-165				80	165		108	131 - 171		187		6.9
-200	3				200	60	100	166 - 200		200		8.4
-250※					250			—			—	10.8
-HDC42L-110	2	42	96	—	110	72	—	76 - 116	65	132	HDA20-12047	6.1

1. In the use of the Adjusting Screw in BBT50 series, please contact BIG agent because a guide screw needs to be set separately.
   ※ marked models cannot be used with Adjusting Screws.
2. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.
3. Maximum insertion depth is the depth when Adjusting Screw is not used.

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

Straight Collets G25

ød = 19, 22, 24, 28, 31 A74

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (i.e.: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

HYDRAULIC CHUCK

[High Rigidity Type]

● Substantial body design to allow high-feed endmilling, achieving highly reliable machining.

DUAL CONTACT
BIG-PLUS®

Center through

● Model Description

BBT40 - HDC 20 E - 75

- 75: L dimension
- E: High Rigidity Type
- 20: Clamping diameter
- HDC: HYDRAULIC CHUCK
- BBT40: BIG-PLUS BT No.

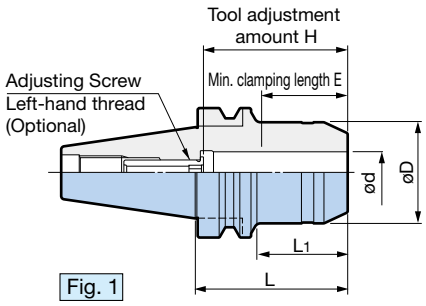


Fig. 1

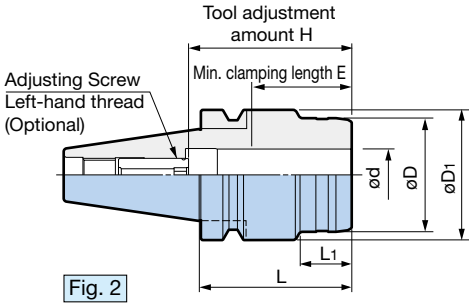


Fig. 2

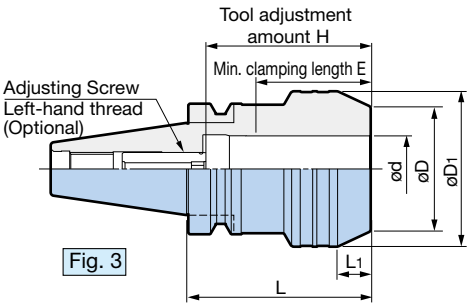


Fig. 3

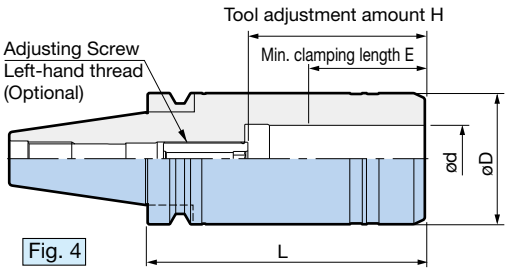


Fig. 4

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	H	E	Adjusting Screw (Optional)	Weight (kg)
BBT40-HDC20E- 75	1	20	49.2	—	75	45	43 - 70	43	HDA16-12037	1.4
-HDC25E- 75	2	25	55	63	75	25	52 - 80	52	HDA25-16033	1.8
-110					110				HDA25-16039	2.4
-135					135					3.0
-165					165					3.6
-HDC32E- 90	3	32	60	75	90	16	56 - 80.5	56	HDA25-16039	2.2
-110	2		63		110	34	56 - 85			2.6
-135	4		62.9	—	135	—				2.8
-165					165					3.4

1. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.
2. Adjusting Screw **with hexagon sockets on both sides** is also available, allowing adjustment from the shank side as well. Add the letter **"W"** at the end of the model number when ordering. (Example: HDA16-12037W)

Straight Collets G25

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

Optimal operation with eliminated workpiece/jig interference is achieved in deep endmilling, wall machining and precision mold machining.

DUAL CONTACT
BIG-PLUS®

Center through

Holder material
Tool steel

[Slim Type]

Clamping diameter ø6-

● Model Description

BBT30 - SRC 6 S - 105

- 105: L dimension
- S: Slim Type
- 6: Clamping diameter
- SRC: SHRINK CHUCK
- BBT30: BIG-PLUS BT No.

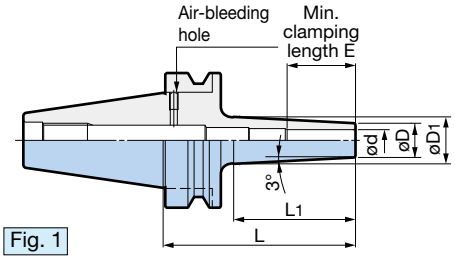


Fig. 1

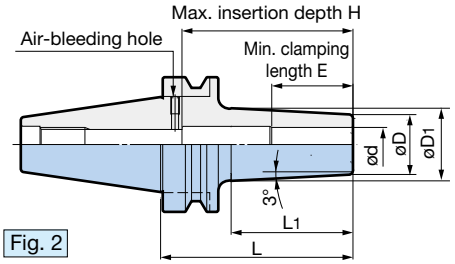


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD[1]	L	L1	H	E	Weight (kg)
BBT30 -SRC 6S -105	1	6	10	18	105	77	(129)	26	0.45
-SRC 8S -105		8	13	21					0.48
-SRC10S -105	2	10	16	24			62	32	0.53
-SRC12S -105		12	19	27			72	36	0.60
BBT40 -SRC 6S -120	1	6	10	19	120	86	(155)	26	1.1
-165				23.5	165	127	(200)		1.3
-SRC 8S -120		8	13	22	120	86	(155)		1.2
-165				26.5	165	129	(200)		1.3
-SRC10S -120		10	16	25	120	86	(155)	32	1.2
-165				29.5	165	129	(200)		1.4
-SRC12S -120		12	19	28	120	87	(155)	36	1.3
-165				33	165	131	(200)		1.5

1. Use a carbide shank cutter within a tolerance of h6.
2. Center through coolant supply is available with tools with oil holes.
3. H dimensions in ( ) are reference length up to the PULLSTUD BOLT.

<Some shrink fit machines may not be compatible with the Shrink Chuck. Please refer to the shrink fit machine operation manual.>

SHRINK FIT HOLDER

SHRINK CHUCK SRC type

Clamping diameter: ø6 - ø12

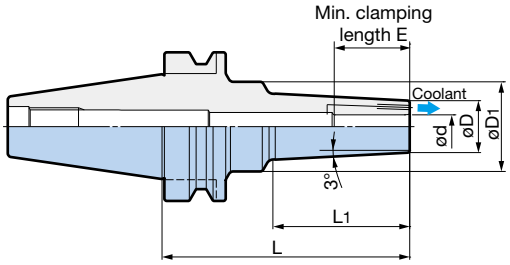
[Jet Through Type]

● Coolant is securely supplied to cutting edge periphery from chuck nose.

DUAL CONTACT
BIG-PLUS®

Center through

Holder material
Tool steel



● Model Description

BBT40 - SRC 6 J - 105

- BBT40 - BIG-PLUS BT No.
- SRC - SHRINK CHUCK
- 6 - Clamping diameter
- J - Jet Through Type
- 105 - L dimension

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	øD1	L	L1	E	Weight (kg)
BBT40-SRC 6J-105	6	16	32	105	55	26	1.3
-SRC 8J-105	8	19	35				1.3
-SRC10J-105	10	22	38		58	32	1.4
-SRC12J-105	12	24	40		63	36	1.4
BBT50-SRC 6J-165	6	16	42	165	93	26	4.1
-SRC 8J-165	8	19	45		99		4.2
-SRC10J-165	10	22	48		103	32	4.3
-SRC12J-165	12	24	50		108	36	4.3

1. Use a carbide shank cutter within a tolerance of h6.

<Some shrink fit machines may not be compatible with the Shrink Chuck. Please refer to the shrink fit machine operation manual.>

[Standard type]

Clamping diameter ø4-

DUAL CONTACT
BIG-PLUS®

Center through

Holder material
Tool steel

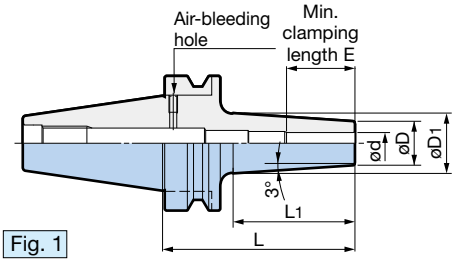


Fig. 1

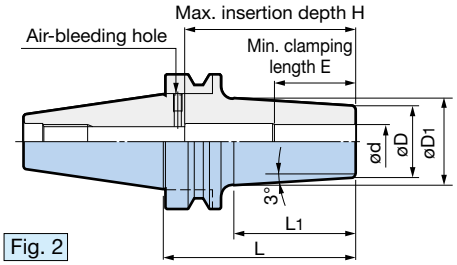


Fig. 2

● Model Description

BBT30 - SRC 4 - 75

- 75 : L dimension
- 4 : Clamping diameter
- SRC : SHRINK CHUCK
- BBT30 : BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter ød	øD	øD1	L	L1	H	E	Weight (kg)
BBT30 -SRC 4 - 75※	1	4	10	15	75	44	—	16	0.42
-SRC 6 - 75		6	14	19		47		26	0.45
-SRC 8 - 75		8	18	23					0.48
-SRC10 - 75	2	10	22	27			62	32	0.53
-SRC12 - 75		12	24	29			72	36	0.52
-SRC16 - 75		16	28	33		48	80	38	0.56
BBT40 -SRC 4 - 90※	1	4	10	15.5	90	52	—	16	1.1
-SRC 6 - 90		6	14	20		57		26	1.1
-150				26	150	114			1.3
-SRC 8 - 90		8	18	24	90	57			1.2
-150				30	150	114			1.4
-SRC10 - 90		10	22	28	90	57		32	1.2
-150				34	150	116			1.5
-SRC12 - 90		12	24	30	90	57		36	1.2
-150				36	150	116			1.6
-SRC16 - 90	2	16	28	34	90	57	80	38	1.3
-165				42	165	132			1.9
-SRC20 - 90		20	34	40	90	57	100	42	1.4
-165				48	165	132			2.1

1. Use a carbide shank cutter within a tolerance of h6.
   For ※ models, use a carbide shank with a tolerance within h5.
2. Center through coolant supply is available with tools with oil holes.

<Some shrink fit machines may not be compatible with the Shrink Chuck. Please refer to the shrink fit machine operation manual.>

SHRINK FIT HOLDER

SHRINK CHUCK SRC type

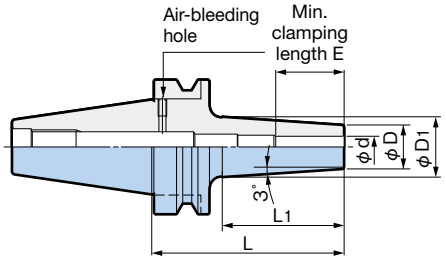
Clamping diameter: ø6 - ø20

[Standard type]

DUAL CONTACT
BIG-PLUS®

Center through

Holder material
Tool steel



● Model Description

BBT50 - SRC 6 - 105

- 105: L dimension
- 6: Clamping diameter
- SRC: SHRINK CHUCK
- BBT50: BIG-PLUS BT No.

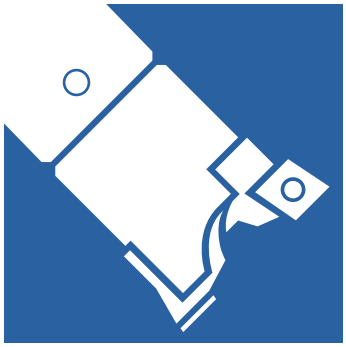
BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	øD	øD1	L	L1	H	E	Weight (kg)
BBT50 -SRC 6 -105	6	14	20.5	105	61	26	3.7
-165			26	165	116		3.9
-SRC 8 -105	8	18	24.5	105	61		3.8
-165			30	165	116		4.0
-SRC10 -105	10	22	28.5	105	61	32	3.8
-165			34	165	116		4.2
-SRC12 -105	12	24	30.5	105	61	36	3.9
-165			36	165	116		4.2
-SRC16 -105	16	28	34.5	105	61	38	3.9
-165			40	165	116		4.3
-SRC20 -105	20	34	40.5	105	61	42	4.0
-165			46	165	116		4.6

1. Use a carbide shank cutter within a tolerance of h6.
2. Center through coolant supply is available with tools with oil holes.

<Some shrink fit machines may not be compatible with the Shrink Chuck. Please refer to the shrink fit machine operation manual.>

BORING SYSTEM



BIG DAISHOWA + KAISER CK BORING SYSTEM

SW BORING HEAD
SMART DAMPER SW BORING HEAD
A41

For roughing

RW BORING HEAD
A47

For roughing

MW BORING HEAD
A49

For roughing

EWN BORING HEAD
SMART DAMPER EWN BORING HEAD
A53

For finishing

EWB BORING HEAD
A57

For finishing

TW/EWN Boring Head for High-Speed Large-Diameter Boring

For roughing
A51
For finishing
A59

EWE DIGITAL BORING HEAD
For finishing
A55·A64

EWN BORING HEAD
(Cylindrical Tool Type)
A61·A63

For finishing

EWB BORING HEAD
(Cylindrical Tool Type)
A65

For finishing

EW MICRO HEAD
A71

For finishing

CK Carbide Cylindrical Shank
A73

For finishing

PIN TURNING
A75

BBT SHANK A77
DV SHANK B13
HSK SHANK C25·C66
ST SHANK A78
BIG CAPTO SHANK E52

SMART DAMPER
A80

Extension Reduction
A81

Other accessories
A82

CK Presetter
A89

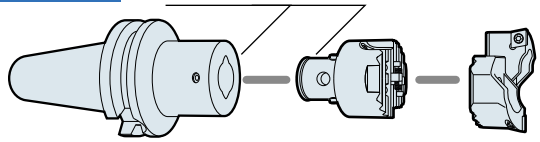
INSERT
A91

Cutting Condition Chart
A105

SW BORING HEAD (High Rigidity type for Roughing) PAT.

For roughing | Center through

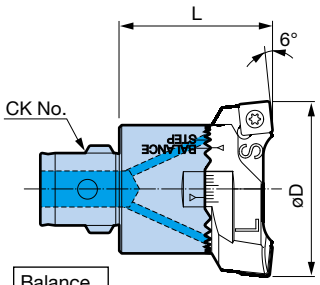
Set up example



CK SHANK (BBT BT DV ST HSK BIG CAPTO)	SW HEAD	SW CARTRIDGE
BBT40-CKB3-44	SW32-51 CKB3	SW3242A

● Head Model Description

SW | 20-31 | CKB1
- CK No.
- Diameter range
- ROUGH BORING HEAD



Balance cutting — Balance cutting only.

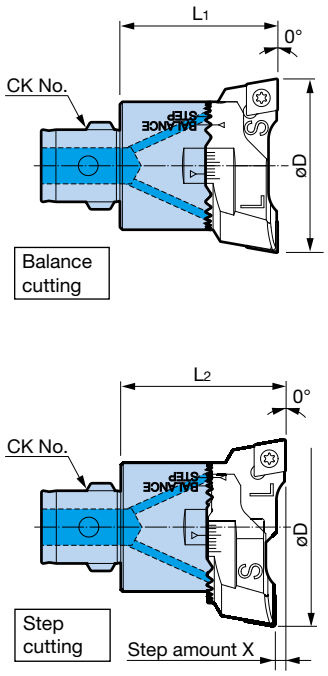
A Type for Through-Holes

[A Type for Through-Holes] 4 corners of the insert can be used

Diameter øD	Head Model	CK No.	Cartridge	L	Clamp Bolt Set (spare)	Belleville Spring Set (spare)	Weight (kg)
20 - 26	SW 20- 31CKB1	CK1	SW2026A	32.5	SW20SS	SW20BS	0.1
25 - 31			SW2531A				0.1
25 - 33	SW 25- 40CKB2	CK2	SW2533A	35.5	SW25SS	SW25BS	0.2
32 - 40			SW3240A				0.2
32 - 42	SW 32- 51CKB3	CK3	SW3242A	40	SW32SS	SW32BS	0.3
41 - 51			SW4151A				0.3
41 - 54	SW 41- 66CKB4	CK4	SW4154A	47	SW41SS	SW41BS	0.5
53 - 66			SW5366A				0.5
53 - 70	SW 53- 86CKB5	CK5	SW5370A	57	SW53SS	SW53BS	0.8
69 - 86			SW6986A				0.9
68 - 90	SW 68-110CKB6	CK6	SW6890A	71	SW68SS		1.6
88 - 110			SW88110A				1.8
98 - 126	SW 98-153CKB6	CK6	SW98126A	71	SW98SS	SW98BS	2.8
125 - 153			SW125153A				3.0
98 - 126	SW 98-153CKB7	CK7	SW98126A	87			3.8
125 - 153			SW125153A				4.1
148 - 176	SW148-203CKB6	CK6	SW148176A	71			3.6
175 - 203			SW175203A				3.8
148 - 176	SW148-203CKB7	CK7	SW148176A	117			6.4
175 - 203			SW175203A				6.6

1. Clamping screws and belleville springs are included.
2. Compatible set items in the table are not included but must be ordered separately if required.
3. Cartridges and inserts must be ordered separately.
4. Coolant through is standard for all the SW heads.
5. The diameter range is the value when nose radius 0.4 is used for insert SC/CC06, and nose radius 0.8 for insert SC/CC09 and SC/CC12.

SW Cartridges A45
Holders A77
Spare parts A101



E Type for Blind Holes

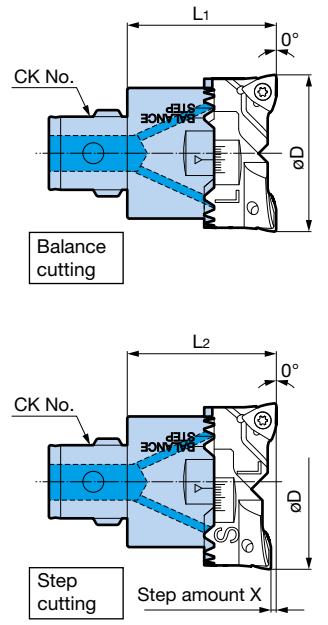
[E Type for Blind Holes] To shape flat surfaces

Diameter øD	Head Model	CK No.	Cartridge	L1	L2	X	Clamp Bolt Set (spare)	Belleville Spring Set (spare)	Weight (kg)
20 - 26	SW 20- 31CKB1	CK1	SW2026E	32.5	32.6	0.2	SW20SS	SW20BS	0.1
25 - 31			SW2531E						0.1
25 - 33	SW 25- 40CKB2	CK2	SW2533E	35.5	35.6		SW25SS	SW25BS	0.2
32 - 40			SW3240E						0.2
32 - 42	SW 32- 51CKB3	CK3	SW3242E	40	40.1		SW32SS	SW32BS	0.3
41 - 51			SW4151E						0.3
41 - 54	SW 41- 66CKB4	CK4	SW4154E	47	47.2	0.4	SW41SS	SW41BS	0.5
53 - 66			SW5366E						0.5
53 - 70	SW 53- 86CKB5	CK5	SW5370E	57	57.2		SW53SS	SW53BS	0.8
69 - 86			SW6986E						0.9
68 - 90	SW 68-110CKB6	CK6	SW6890E※	71	71.2		SW68SS		1.6
88 - 110			SW88110E※						1.8
98 - 126	SW 98-153CKB6	CK6	SW98126E※	71	71.2		SW98SS	SW98BS	2.8
125 - 153			SW125153E※						3.0
98 - 126	SW 98-153CKB7	CK7	SW98126E※	87	87.2				3.8
125 - 153			SW125153E※						4.1
148 - 176	SW148-203CKB6	CK6	SW148176E※	71	71.2				3.6
175 - 203			SW175203E※						3.8
148 - 176	SW148-203CKB7	CK7	SW148176E※	117	117.2				6.4
175 - 203			SW175203E※						6.6

1. Clamping screws and belleville springs are included.
2. Compatible set items in the table are not included but must be ordered separately if required.
3. Cartridges and inserts must be ordered separately.
4. Coolant through is standard for all the SW heads.
5. The diameter range is the value when nose radius 0.4 is used for insert SC/CC06, and nose radius 0.8 for insert SC/CC09 and SC/CC12.

●Cartridge models with ※ are also available for longer cutting edge inserts.
Change the end of the model number from E to EL when ordering. For details, A46

SW Cartridges A46
Holders A77
Spare parts A101



[N Type for Blind Holes] 6 corners of the insert can be used NEW

Diameter øD	Head Model	CK No.	Cartridge	L1	L2	X	Clamp Bolt Set (spare)	Belleville Spring Set (spare)	Weight (kg)
32 - 42	SW 32- 51CKB3	CK3	SW3242N	40	40.1	0.2	SW32SS	SW32BS	0.3
41 - 51			SW4151N						0.4
41 - 54	SW 41- 66CKB4	CK4	SW4154N	47	47.2	0.4	SW41SS	SW41BS	0.5
53 - 66			SW5366N						0.5
53 - 70	SW 53- 86CKB5	CK5	SW5370N	57	57.2		SW53SS	SW53BS	0.9
69 - 86			SW6986N						1
68 - 90	SW 68-110CKB6	CK6	SW6890N	71	71.2		SW68SS		1.7
88 - 110			SW88110N						1.9
98 - 126	SW 98-153CKB6	CK6	SW98126N	71	71.2		SW98SS	SW98BS	2.9
125 - 153			SW125153N						3.1
98 - 126	SW 98-153CKB7	CK7	SW98126N	87	87.2				3.9
125 - 153			SW125153N						4.2
148 - 176	SW148-203CKB6	CK6	SW148176N	71	71.2				3.7
175 - 203			SW175203N						3.9
148 - 176	SW148-203CKB7	CK7	SW148176N	117	117.2				6.5
175 - 203			SW175203N						6.7

1. Clamping screws and belleville springs are included.
2. Compatible set items in the table are not included but must be ordered separately if required.
3. Cartridges and inserts must be ordered separately.
4. Coolant through is standard for all the SW heads.
5. The diameter range is the value when nose radius 0.8 is used for insert ZN05, and ZN08.

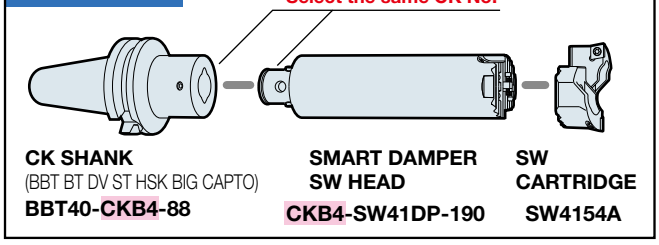
SW Cartridges A46
Holders A77
Spare parts A101

Built-In Damper
SMART DAMPER SW BORING HEAD (For Roughing) PAT.

For roughing | Center through

SW rough boring head integrated with the Smart Damper.

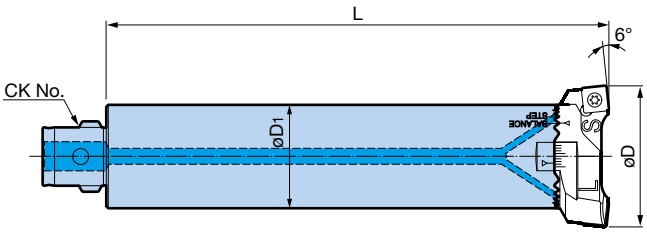
Set up example



CK SHANK (BBT BT DV ST HSK BIG CAPTO)	SMART DAMPER SW HEAD	SW CARTRIDGE
BBT40-CKB4-88	CKB4-SW41DP-190	SW4154A

● Head Model Description

CKB4 - SW 41 DP - 190
- 190: L dimension
- DP: Built-in damper type
- 41: Min. diameter
- SW: ROUGH BORING HEAD
- CKB4: CK No.



A Type for Through-Holes

Balance cutting

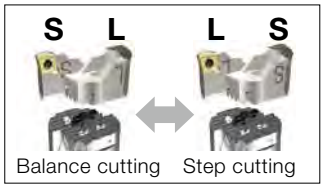
Balance cutting only.

[A Type for Through-Holes] 4 corners of the insert can be used

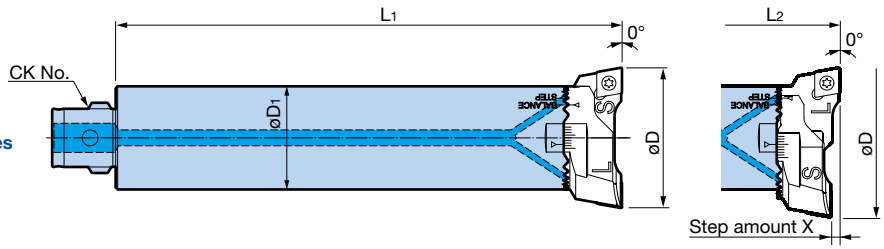
Diameter øD	Head Model	CK No.	Cartridge Model	Insert Model	øD1	L	Clamp Screw Set (spare)	Belleville Spring Set (spare)	Weight (kg)
41 - 54	CKB4-SW 41DP-190	CK4	SW4154A	SC09	39	190	SW41SS	SW41BS	2.4
53 - 66			SW5366A						
53 - 70	CKB5-SW 53DP-220	CK5	SW5370A	SC12	50	220	SW53SS	SW53BS	4.5
69 - 86			SW6986A						
68 - 90	CKB6-SW 68DP-245	CK6	SW6890A		64	245	SW68SS		8.3
88 - 110			SW88110A						
98 - 126	CKB6-SW 98DP-260 NEW		SW98126A			260	SW98SS	SW98BS	8.8
125 - 153			SW125153A						
98 - 126	CKB7-SW 98DP-260 NEW	CK7	SW98126A		90				16.4
125 - 153			SW125153A						
148 - 176	CKB6-SW148DP-260 NEW	CK6	SW148176A		64				9.3
175 - 203			SW175203A						
148 - 176	CKB7-SW148DP-260 NEW	CK7	SW148176A		90				16.9
175 - 203			SW175203A						

1. Clamp screws and belleville springs are included.
2. Compatible set items in the table are not included but must be ordered separately if required.
3. Cartridges and inserts must be ordered separately.
4. Coolant through is standard for all the SW heads.
5. The diameter range is the value when inserts with nose radius 0.8 are used.

SW Cartridges A45
Holders A77
Spare parts A101



Adapted for both balance and step cutting by simple replacement of standard cartridges (for blind holes).



E Type for Blind Holes | **Balance cutting** | **Step cutting**

[E Type for Blind Holes] To shape flat surfaces

Diameter øD	Head Model	CK No.	Cartridge Model	Insert Model	øD1	L1	L2	Step Amount X	Clamp Screw Set (spare)	Belleville Spring Set (spare)	Weight (kg)
41 - 54	**CKB4-SW 41DP-190**	CK4	SW4154E	CC09	39	190	190.2	0.4	SW41SS	SW41BS	2.4
53 - 66			SW5366E								
53 - 70	**CKB5-SW 53DP-220**	CK5	SW5370E	CC12	50	220	220.2		SW53SS	SW53BS	4.5
69 - 86			SW6986E								
68 - 90	**CKB6-SW 68DP-245**	CK6	SW6890E		64	245	245.2		SW68SS		8.3
88 - 110			SW88110E								
98 - 126	**CKB6-SW 98DP-260** NEW		SW98126E			260	260.2		SW98SS	SW98BS	8.8
125 - 153			SW125153E								
98 - 126	**CKB7-SW 98DP-260** NEW	CK7	SW98126E		90						16.4
125 - 153			SW125153E								
148 - 176	**CKB6-SW148DP-260** NEW	CK6	SW148176E		64						9.3
175 - 203			SW175203E								
148 - 176	**CKB7-SW148DP-260** NEW	CK7	SW148176E		90						16.9
175 - 203			SW175203E								

1. Clamp screws and belleville springs are included.
2. Compatible set items in the table are not included but must be ordered separately if required.
3. Cartridges and inserts must be ordered separately.
4. Coolant through is standard for all the SW heads.
5. The diameter range is the value when inserts with nose radius 0.8 are used.

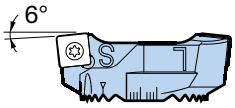
SW cartridges A46
Holders A77
Spare parts A101

■ SW CARTRIDGE PAT.

For roughing

● Cartridge Model Description

SW 2026 A
- A Type for Through-Holes
- Diameter range ø20 - ø26
- ROUGH BORING HEAD



[A Type for Through-Holes] 4 corners of the insert can be used

Diameter øD	Cartridge Model	Head Model	Insert	Insert Clamping Screw Set
20 - 26	**SW2026A**	SW 20- 31CKB1	SC06	S2.5S-7IP
25 - 31	**SW2531A**			
25 - 33	**SW2533A**	SW 25- 40CKB2		
32 - 40	**SW3240A**			
32 - 42	**SW3242A**	SW 32- 51CKB3	SC09	S4S-15IP
41 - 51	**SW4151A**			
41 - 54	**SW4154A**	SW 41- 66CKB4		
53 - 66	**SW5366A**			
53 - 70	**SW5370A**	SW 53- 86CKB5	SC12	S5S-20IP
69 - 86	**SW6986A**			
68 - 90	**SW6890A**	SW 68-110CKB6		
88 - 110	**SW88110A**			
98 - 126	**SW98126A**	SW 98-153CKB6 SW 98-153CKB7		
125 - 153	**SW125153A**			
148 - 176	**SW148176A**	SW148-203CKB6 SW148-203CKB7		
175 - 203	**SW175203A**			

Each Cartridge model consists of a pair of cartridges and an insert clamping wrench.

A94 A99

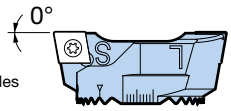
Spare parts A101

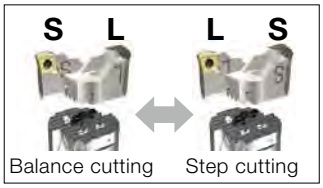
1. Inserts must be ordered separately.
2. Step cutting is not available.
3. The diameter range is the value when nose radius 0.4 is used for insert SC06, and nose radius 0.8 for insert SC09 and SC12.
4. The insert clamping screw set (optional) contains 10 screws and 1 wrench.

CK BORING SYSTEM

● Cartridge Model Description

SW 2026 E
- E Type for Blind Holes
- Diameter range ø20 - ø26
- ROUGH BORING HEAD





Adapted for both balance and step cutting by simple replacement of standard Cartridges. (for blind holes)

[E Type for Blind Holes] To shape flat surfaces

Diameter øD	Cartridge Model	Head Model	Insert	Insert Clamping Screw Set
20 - 26	**SW2026E**	SW 20- 31CKB1	CC06	S2.5S-7IP
25 - 31	**SW2531E**			
25 - 33	**SW2533E**	SW 25- 40CKB2		
32 - 40	**SW3240E**			
32 - 42	**SW3242E**	SW 32- 51CKB3	CC09	S4S-15IP
41 - 51	**SW4151E**			
41 - 54	**SW4154E**	SW 41- 66CKB4		
53 - 66	**SW5366E**			
53 - 70	**SW5370E**	SW 53- 86CKB5	CC12	S5S-20IP
69 - 86	**SW6986E**			
68 - 90	**SW6890E**	SW 68-110CKB6		
	SW6890EL		CC16	
88 - 110	**SW88110E**		CC12	
	SW88110EL		CC16	
98 - 126	**SW98126E**	SW 98-153CKB6 SW 98-153CKB7	CC12	
	SW98126EL		CC16	
125 - 153	**SW125153E**		CC12	
	SW125153EL		CC16	
148 - 176	**SW148176E**	SW148-203CKB6 SW148-203CKB7	CC12	
	SW148176EL		CC16	
175 - 203	**SW175203E**		CC12	
	SW175203EL		CC16	

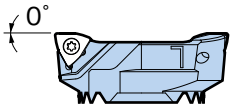
Each Cartridge model consists of a pair of cartridges and an insert clamping wrench.

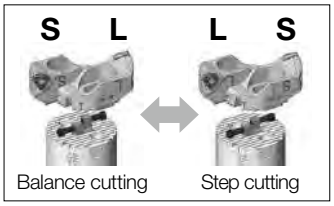
A95-A96 A99

1. Inserts must be ordered separately.
2. The diameter range is the value when nose radius 0.4 is used for insert CC06, and nose radius 0.8 for insert CC09 and CC12.
3. The insert clamping screw set (optional) contains 10 screws and 1 wrench.
4. EL type Cartridge with long cutting edge cannot be used with the #30 shank holder.

● Cartridge Model Description

SW 3242 N
- N Type for Blind Holes
- Diameter range ø20 - ø26
- ROUGH BORING HEAD





Adapted for both balance and step cutting by simple replacement of standard Cartridges.

[N Type for Blind Holes] 6 corners of the insert can be used NEW

Diameter øD	Cartridge Model	Head Model	Insert	Insert Clamping Screw Set
32 - 42	**SW3242N**	SW 32- 51CKB3	ZN05	S2.508S-7IP
41 - 51	**SW4151N**			
41 - 54	**SW4154N**	SW 41- 66CKB4		
53 - 66	**SW5366N**			
53 - 70	**SW5370N**	SW 53- 86CKB5	ZN08	S412S-15IP
69 - 86	**SW6986N**			
68 - 90	**SW6890N**	SW 68-110CKB6		
88 - 110	**SW88110N**			
98 - 126	**SW98126N**	SW 98-153CKB6		
125 - 153	**SW125153N**	SW 98-153CKB7		
148 - 176	**SW148176N**	SW148-203CKB6		
175 - 203	**SW175203N**	SW148-203CKB7		

Each Cartridge model consists of a pair of cartridges and an insert clamping wrench.

A96 A99

1. Inserts must be ordered separately.
2. The insert clamping screw set (optional) contains 10 screws and 1 wrench.

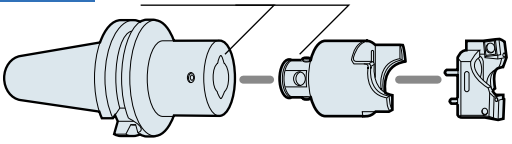
RW BORING HEAD (for roughing)

For roughing | Center through

Balance cutting allows powerful boring.

- Axial adjustment mechanism achieves “perfect balance cutting”.
- The “step cutting method” can reduce the number of passes in the applications with large stock allowance. (E Type for Blind Holes)

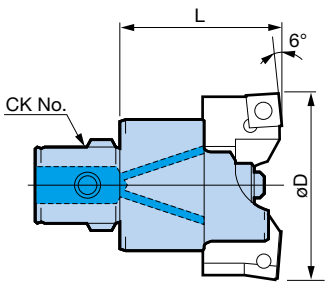
Set up example



CK SHANK (BBT BT DV ST HSK BIGCAPTO)	RW HEAD	RW CARTRIDGE
BBT30-CKB2-38	RW25-33 CKB2	RW2533A

- Head Model Description

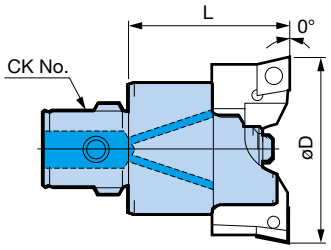
RW 25-33 CKB2
- CK No.
- Diameter range
- ROUGH BORING HEAD



A Type for Through-Holes

[A Type for Through-Holes] 4 corners of the insert can be used

Diameter øD	Head Model	CK No.	Cartridge	L	Differential Screw (spare)	Weight (kg)
25 - 33	RW 25- 33CKB2	CK2	RW2533A	35.5	DS25	0.1
32 - 42	RW 32- 42CKB3	CK3	RW3242A	40	DS32	0.2
41 - 54	RW 41- 54CKB4	CK4	RW4154A	47	DS41	0.4
53 - 70	RW 53- 70CKB5	CK5	RW5370A	57	DS53	0.8
68 - 88	RW 68-100CKB6	CK6	RW6888A	71	DS68	1.6
86 - 106			RW86106A			
100 - 125	RW100-150CKB6		RW100125A			2.3
125 - 150			RW125150A			



E Type for Blind Holes

[E Type for Blind Holes] To shape flat surfaces

Diameter øD	Head Model	CK No.	Cartridge	L	Differential Screw (spare)	Weight (kg)
25 - 33	RW 25- 33CKB2	CK2	RW2533E	35.5	DS25	0.1
30 - 37			RW3037E			
32 - 42	RW 32- 42CKB3	CK3	RW3242E	40	DS32	0.2
40 - 48			RW4048E			
41 - 54	RW 41- 54CKB4	CK4	RW4154E	47	DS41	0.4
51 - 62			RW5162E			
53 - 70	RW 53- 70CKB5	CK5	RW5370E	57	DS53	0.8
66 - 81			RW6681E			
68 - 88	RW 68-100CKB6	CK6	RW6888E	71	DS68	1.6
86 - 106			RW86106E			
100 - 125	RW100-150CKB6		RW100125E			2.3
125 - 150			RW125150E			

1. Differential screws are included.
2. Cartridges and inserts must be ordered separately.
3. Coolant through is standard for all the RW heads.
4. The diameter range is the value when nose radius 0.4 is used for SC/CC07, and nose radius 0.8 for SC/CC09,SC/CC12 inserts.

Holders A77
Spare parts A101

Caution

Ensure the Axial Adjusting Screws do not protrude from the Cartridges when assembled.

■ RW CARTRIDGE

For roughing

A Type for Through-Holes

● Cartridge Model Description

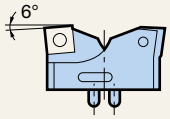
RW 2533 A
- A Type for Through-Holes
- Diameter range
- For RW BORING HEAD

E Type for Blind Holes

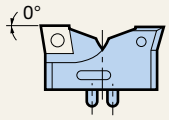
● Cartridge Model Description

RW 2533 E
- E Type for Blind Holes
- Diameter range
- For RW BORING HEAD

[A Type for Through-Holes] 4 corners of the insert can be used

Diameter øD	Cartridge Model	Figure	CK Boring Head Model	Insert	Insert Clamping Screw Set
25 - 33	**RW2533A**		RW 25- 33CKB2	SC07	S3S
32 - 42	**RW3242A**		RW 32- 42CKB3	SC09	S4S
41 - 54	**RW4154A**		RW 41- 54CKB4		
53 - 70	**RW5370A**		RW 53- 70CKB5	SC12	S5S
68 - 88	**RW6888A**		RW 68-100CKB6		
86 - 106	**RW86106A**				
100 - 125	**RW100125A**		RW100-150CKB6		
125 - 150	**RW125150A**				

[E Type for Blind Holes] 2 corners of the 80° CC insert can be used

Diameter øD	Cartridge Model	Figure	CK Boring Head Model	Insert	Insert Clamping Screw Set
25 - 33	**RW2533E**		RW 25- 33CKB2	CC07	S3S
30 - 37	**RW3037E**				
32 - 42	**RW3242E**		RW 32- 42CKB3	CC09	S4S
40 - 48	**RW4048E**				
41 - 54	**RW4154E**		RW 41- 54CKB4		
51 - 62	**RW5162E**				
53 - 70	**RW5370E**		RW 53- 70CKB5	CC12	S5S
66 - 81	**RW6681E**				
68 - 88	**RW6888E**		RW 68-100CKB6		
86 - 106	**RW86106E**				
100 - 125	**RW100125E**		RW100-150CKB6		
125 - 150	**RW125150E**				

Each Cartridge model consists of a pair of cartridges and an insert clamping wrench.

A94-A96 A99

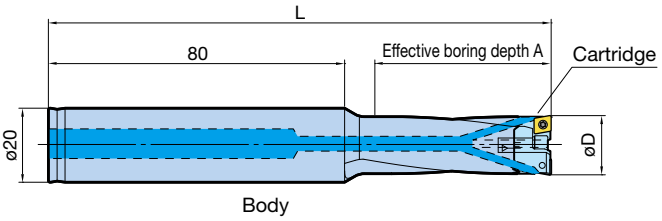
1. Inserts must be ordered separately.
2. The insert clamping screw set (optional) contains 10 screws and 1 wrench.
3. The diameter range is the value when nose radius 0.4 is used for SC/CC07, and nose radius 0.8 for SC/CC09, SC/CC12 inserts.

MW BORING HEAD PAT. (for roughing)

For roughing

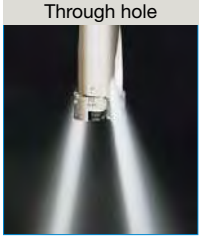
Center through

Achieves high efficiency small diameter rough boring with 2 inserts.



Blind hole

Through hole



Threads for plug screws are prepared in the coolant holes to change the coolant directions.

Diameter øD	Model	Cartridge Model	L	A	Spare Clamp Bolt Set	Spare Belleville Spring(4pcs)	Weight (kg)
16 - 19	**ST20-MW1619-45**	**MW1619E**	136	45	MW16SS	MW16BS	0.24
	-60		151	60			0.26
18 - 21	**-MW1821-50**	**MW1821E**	141	50			0.26
	-65		156	65			0.28

Cartridge models are a 2-piece set.

Spare parts A101

1. Clamp Bolts and Belleville Springs are included with the body. However, cartridges are not included and must be ordered separately.
2. Cartridge includes insert clamping screws and wrench.
3. The weight is that of the body and cartridge combined.
4. Inserts must be ordered separately.
5. The spare Clamp Screw Set contains two clamping screws and two washers.

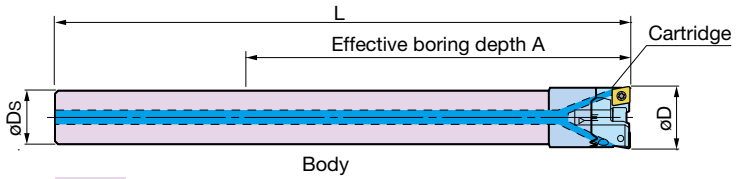
MW BORING HEAD Cutting Conditions Table

Workpiece Material	Cutting speed Vc (m/min)	Feed rate f (mm/rev)	Cutting depth (mm/ø)
Carbon Steel	130 - 180	0.10 - 0.20	2.0 - 3.0
Stainless Steel	100 - 140	0.15 - 0.25	1.5 - 2.5
Cast Iron	120 - 200	0.10 - 0.30	1.0 - 4.0
Aluminum	180 - 280	0.20 - 0.30	1.5 - 4.0

- Generally for use with center through coolant.
  Cutting speed must be lowered for external oil supply.
- Blind hole processing may damage inserts and tools, as cutting chips clog at the back of the hole.
- Remove cutting chips at the small bottom of the hole several times for processing.

[Carbide shank type] NEW

● Carbide shank for enhanced deep hole boring performance (for through-hole)



is made of carbide.

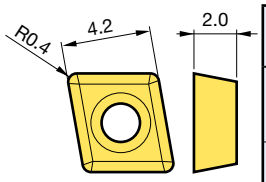
Diameter øD	Model	Cartridge Model	øDs	L	A	Spare Clamp Bolt Set	Spare Belleville Spring(4pcs)	Weight (kg)
16 - 19	**ST14W-MW16-110**	**MW1619E**	14	151	110	MW16SS	MW16BS	0.36
18 - 21	**ST16W-MW18-115**	**MW1821E**	16	172	115			0.54

Cartridge models are a 2-piece set.

Spare parts A101

1. Clamp Bolts and Belleville Springs are included with the body. However, cartridges are not included and must be ordered separately.
2. Cartridge includes insert clamping screws and wrench.
3. The weight is that of the body and cartridge combined.
4. Inserts must be ordered separately.
5. The carbide shank and boring head are integrated and cannot be sold separately.
6. Exclusive for use with through holes. Do not use it with blind holes.
7. The spare Clamp Screw Set contains two clamping screws and two washers.

■Insert (optional)



Workpiece material	Insert Model	Materials
Steel/Stainless steel	**MW0404F Z30P**	P30 equivalent carbide substrate TiAlN + AlCrN coating
Cast iron/ Ductile	**MW0404S Z30K**	K20 equivalent carbide substrate TiAlN + AlCrN coating
Non-ferrous metal/ Aluminum	**MW0404E D15N**	K15 equivalent carbide substrate DLC coating

1. Inserts sold in packets of 10 pcs.

Example: MW0404F Z30P... 10 pcs

■Insert Clamping Screw Set (optional)

Set Model	Thread size	Wrench
S1.6S-T6	M1.6 x 4.2	FA-T6

1. The set contains ten screws and a wrench.

※ Wrenches are also sold individually.

TW BORING HEAD (for roughing/large diameter)

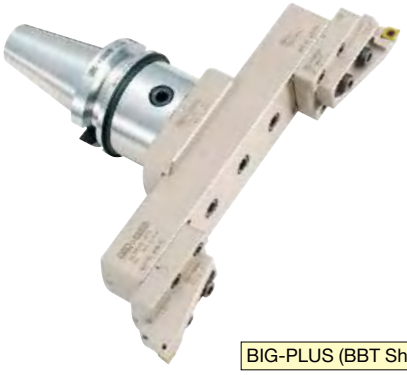
DUAL CONTACT BIG-PLUS®

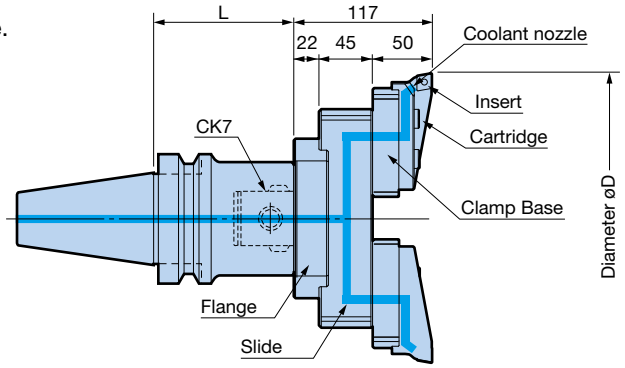
For roughing | Center through | Vc Max. 1,000 m/min

CK7 large-diameter boring series compatible with high-speed.

- Each component is securely fastened for safety.
- Coolant nozzles for secure coolant supply to the cutting edge.

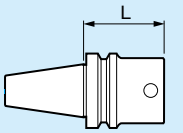
[Standard type]





BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

CK SHANK (BBT BT DV HSK BIGCAPTO) CK7 Model	Weight (kg)		Diameter øD	Flange CK7 Model	Weight (kg)	Slide Model	Weight (kg)	Clamp Base (2-piece set) Model	Weight (kg)	Cartridge (2-piece set) Model	Weight (kg)	Insert
BBT50-CKB7- 93 (BT50)	5.6	A Type for Through-Holes	200 - 270	**FLN135 (FLN135/90)**	2.76	**SLN200-270**	3.8	**CB-TW200**	1.80	**TW200A** 6°	0.72	SC12
-183	9.9		270 - 340			**SLN270-340**	5.5					
-243	12.7		340 - 410			**SLN340-410**	7.2					
			410 - 480			**SLN410-480**	8.9					
			480 - 550			**SLN480-550**	10.6					
			550 - 620	**FLN220 (FLN220/90)**	4.00	**SLN550-620※**	12.3					
			620 - 690			**SLN620-690※**	14.0					
			690 - 760			**SLN690-760※**	15.7					
			760 - 830			**SLN760-830※**	17.4					
		E/EL Type for Blind Holes	200 - 270	**FLN135 (FLN135/90)**	2.76	**SLN200-270**	3.8	**CB-TW200**	1.80	**TW200E** 0°	0.72	CC12
			270 - 340			**SLN270-340**	5.5					
			340 - 410			**SLN340-410**	7.2					
			410 - 480			**SLN410-480**	8.9					
			480 - 550			**SLN480-550**	10.6					
			550 - 620	**FLN220 (FLN220/90)**	4.00	**SLN550-620※**	12.3					
			620 - 690			**SLN620-690※**	14.0					
			690 - 760			**SLN690-760※**	15.7					
			760 - 830			**SLN760-830※**	17.4					
			200 - 270	**FLN135 (FLN135/90)**	2.76	**SLN200-270**	3.8	**CB-TW200**	1.80	**TW200EL** 0°	0.72	CC16
			270 - 340			**SLN270-340**	5.5					
			340 - 410			**SLN340-410**	7.2					
			410 - 480			**SLN410-480**	8.9					
			480 - 550			**SLN480-550**	10.6					
			550 - 620	**FLN220 (FLN220/90)**	4.00	**SLN550-620※**	12.3					
			620 - 690			**SLN620-690※**	14.0					
			690 - 760			**SLN690-760※**	15.7					
			760 - 830			**SLN760-830※**	17.4					



	L
CKB7- 93	93
-183	183
-243	243

1. Clamp Bases and Cartridges are sold as a two-piece set. The weight in the table is that of 2 pieces.
2. Inserts must be ordered separately.
3. Center through coolant supply is available, except for ※ marked models.
4. Cutting edge and drive keys are aligned in the same direction.
   (It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.)

A94 · A96 | A99
Holders A77
Spare parts A104

■ SQUARE TOOLHOLDER

・□25 square tool for lathe is clamped.

Model	Diameter ø	Slide model	Square size	Weight (kg)
BFN95	250 - 830	SLN200-270(AL) or longer	□25	2.5

1. Square tools are not included.
2. The diameter varies according to the tool and slide used.
3. Use an SLN type slide. Cannot be mounted on the conventional SL type.
4. Slide models with AL at the end are made of aluminum for lighter weight.

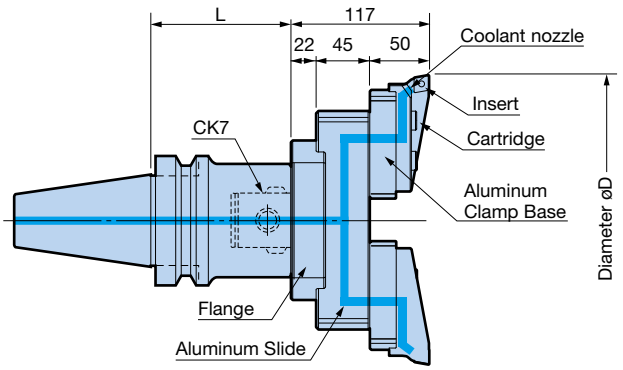
[High speed type]

Lightweight

● Tool weight is reduced by combining an Aluminum Slide and Clamp Base.

DUAL CONTACT BIG-PLUS®

For roughing | Center through | Vc Max. 2,000 m/min



Models with AL at the end are made of aluminum.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

CK SHANK (BBT BT DV HSK BIGCAPTO) CK7 Model	Weight (kg)		Diameter øD	Flange CK7 Model	Weight (kg)	Aluminum Slide Model	Weight (kg)	Aluminum Clamp Base (2-piece set) Model	Weight (kg)	Cartridge (2-piece set) Model	Weight (kg)	Insert
BBT50-CKB7- 93 (BT50)	5.6	A Type for Through-Holes	200 - 270	FLN135 (FLN135/90)	2.76	SLN200-270AL	1.44	CB-TW200-AL	0.80	TW200A 6°	0.72	SC12
-183	9.9		270 - 340			SLN270-340AL	2.04					
-243	12.7		340 - 410			SLN340-410AL	2.64					
			410 - 480			SLN410-480AL	3.24					
			480 - 550			SLN480-550AL	3.84					
			550 - 620	FLN220 (FLN220/90)	4.00	SLN550-620AL ※	4.44					
			620 - 690			SLN620-690AL ※	5.04					
			690 - 760			SLN690-760AL ※	5.64					
			760 - 830			SLN760-830AL ※	6.24					
		E/EL Type for Blind Holes	200 - 270	FLN135 (FLN135/90)	2.76	SLN200-270AL	1.44	CB-TW200-AL	0.80	TW200E 0°	0.72	CC12
			270 - 340			SLN270-340AL	2.04					
			340 - 410			SLN340-410AL	2.64					
			410 - 480			SLN410-480AL	3.24					
			480 - 550			SLN480-550AL	3.84					
			550 - 620	FLN220 (FLN220/90)	4.00	SLN550-620AL ※	4.44					
			620 - 690			SLN620-690AL ※	5.04					
			690 - 760			SLN690-760AL ※	5.64					
			760 - 830			SLN760-830AL ※	6.24					
			200 - 270	FLN135 (FLN135/90)	2.76	SLN200-270AL	1.44	CB-TW200-AL	0.80	TW200EL 0°	0.72	CC16
			270 - 340			SLN270-340AL	2.04					
			340 - 410			SLN340-410AL	2.64					
			410 - 480			SLN410-480AL	3.24					
			480 - 550			SLN480-550AL	3.84					
			550 - 620	FLN220 (FLN220/90)	4.00	SLN550-620AL ※	4.44					
			620 - 690			SLN620-690AL ※	5.04					
			690 - 760			SLN690-760AL ※	5.64					
			760 - 830			SLN760-830AL ※	6.24					

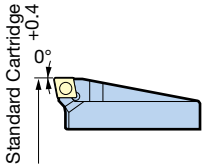
L

	L
CKB7- 93	93
-183	183
-243	243

1. Clamp Bases and Cartridges are sold as a two-piece set. The weight in the table is that of 2 pieces.
2. Inserts must be ordered separately.
3. Center through coolant supply is available, except for ※ marked models.
4. Cutting edge and drive keys are aligned in the same direction.
   (It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.)

A94 · A96 | A99
Holders A77
Spare parts A104

■ E Type Cartridge for Step Cutting



・0.4mm higher cartridge enables larger depth of cut.

Model
TW200E -SC
TW200EL-SC

Offered by 1 pce.

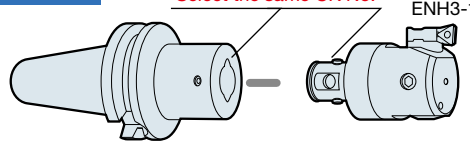
EWN BORING HEAD (for finishing)

For finishing | Center through | Vc Max. 1,200 m/min

1 μm vernier is added to the easy-to-read scale of 0.01mm/ø increments.

- The pre-balance design achieves stable machining accuracy.
- Back boring available as standard, expanding versatility.

Set up example

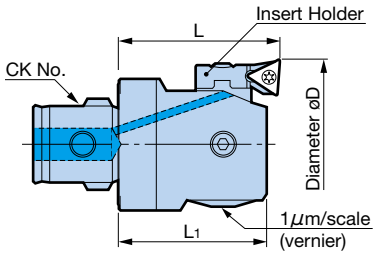


CK SHANK (BBT BT DV ST HSK BIGCAPTO) — BBT40-CKB3-44

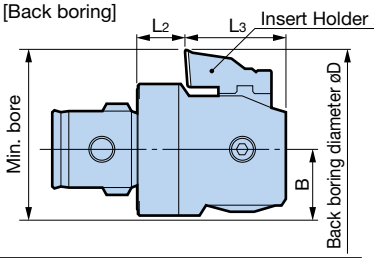
EWN BORING HEAD — EWN32-60CKB3

● Model Description

EWN 20-36 CKB1
- CKB1: CK No.
- 20-36: Diameter
- EWN: Finish Head



[Back boring]



Min. bore = B + (back boring diameter / 2)

Model	CK No.	Insert Holder	Boring			Back Boring				Weight (kg)	Insert
			Diameter øD	L	L1	Diameter øD	L2	L3	B		
EWN 20- 36CKB1	CK1	ENH1-1	20 - 26	32.5	29.5	—	10.5	19	10	0.07	TP08
		ENH1-2	25 - 31			30 - 31					
		ENH1-3	30 - 36			30 - 36					
EWN 25- 47CKB2	CK2	ENH2-1	25 - 33	35.5	32.5	—	11.5	21	12.5	0.12	
		ENH2-2	32 - 40			36 - 40					
		ENH2-3	39 - 47			39 - 47					
EWN 32- 60CKB3	CK3	ENH3-1	32 - 42	40	35	—	10	25	16	0.21	
		ENH3-2	41 - 51			46 - 51					
		ENH3-3	50 - 60			50 - 60					
EWN 41- 74CKB4	CK4	ENH4-1	41 - 54	47	43	—	14	29	20	0.40	TC11
		ENH4-2	50 - 63			53 - 63					
		ENH4-3	61 - 74			61 - 74					
EWN 53- 95CKB5	CK5	ENH5-1	53 - 70	57	53	62 - 70	19	34	25.5	1.10	
		ENH5-2	65 - 82			69 - 82					
		ENH5-3	78 - 95			78 - 95					
EWN 68-150CKB6	CK6	ENH6-1	68 - 100	71	67.2	80 - 100	22	45.2	32.5	1.74	
		ENH6-2	94 - 126			94 - 126					
		ENH6-3	118 - 150			118 - 150					
EWN100-203CKB6	CK6	ENH6-1	100 - 153	71	67.2	112 - 153	22	45.2	45.5	2.46	
		ENH6-2	126 - 179			126 - 179					
		ENH6-3	150 - 203			150 - 203					
EWN100-203CKB7	CK7	ENH6-1	100 - 153	87	83.2	112 - 153	38	45.2	45.5	3.98	
		ENH6-2	126 - 179			126 - 179					
		ENH6-3	150 - 203			150 - 203					

1. The diameter range is the values when nose radius 0.2 is used for insert TP08, and nose radius 0.4 for insert TC11.
2. ENH○-1 Insert Holder is included. ENH○-2 and 3 must be ordered separately if required.
3. During back boring, the rotation direction will be reversed.
4. Inserts must be ordered separately.

Caution

Although the maximum allowable cutting speed Vc of the EWN BORING HEAD is 1,200 m/min, conditions differ according to the projection length of the holder and the rigidity of the machine. Set the spindle speed low and gradually increase until the optimum conditions are reached.

A92-A93 | A99
Holders A77 | Insert Holders A56
Spare parts A102

Built-In Damper
SMART DAMPER EWN BORING HEAD (for finishing)

For finishing | Center through

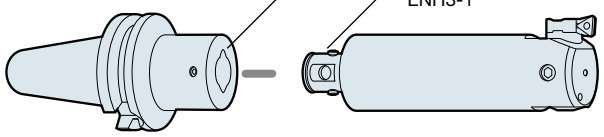
Combination of the popular EWN boring head with the Smart Damper.

● New EWN20DP/25DP (CK1/CK2) products with min. diameters starting from ø20 are now available.
Capable of even deeper hole boring when combined with a low-deflection CK Carbide Cylindrical Shank.

● Model Description

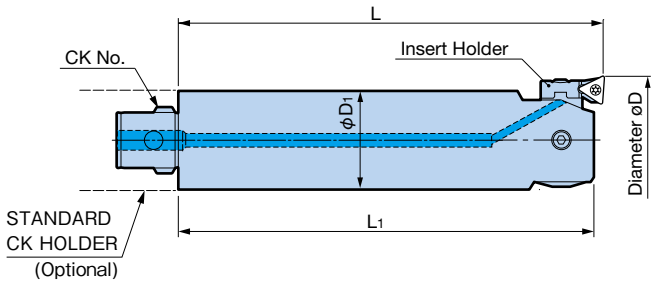
CK1 - EWN 20 DP - 100
- 100: L dimension
- DP: Built-in damper type
- 20: Min. diameter
- EWN: Finish Head
- CK1: CK No.

Set up example

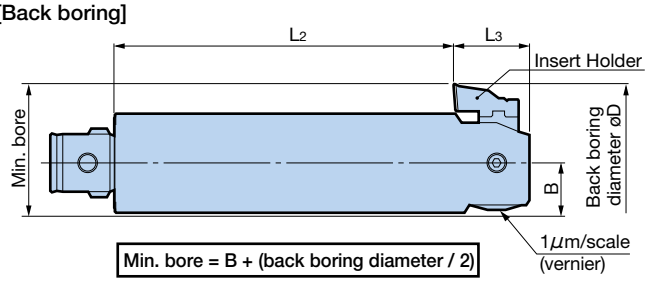


CK SHANK
(BBT BT DV ST HSK BIGCAPTO)
BBT40-CKB3-44

SMART DAMPER EWN BORING HEAD
CKB3-EWN32DP-160



[Back boring]



Min. bore = B + (back boring diameter / 2)

Model	CK No.	Insert Holder	Boring			Back Boring				øD1	Weight (kg)	Insert
			Diameter øD	L	L1	Diameter øD	L2	L3	B			
CK1 -EWN 20DP-100 ※ NEW	CK1	ENH1-1	20 - 26	100	97	—	78	19	10	19	0.3	TP08
		ENH1-2	25 - 31			—						
		ENH1-3	30 - 36			36						
CK2 -EWN 25DP-125 ※ NEW	CK2	ENH2-1	25 - 33	125	122	—	101	21	12.5	24	0.6	
		ENH2-2	32 - 40			—						
		ENH2-3	39 - 47			42 - 47						
CKB3-EWN 32DP-160	CK3	ENH3-1	32 - 42	160	155	—	130	25	16	31	1.2	
		ENH3-2	41 - 51			—						
		ENH3-3	50 - 60			57 - 60						
CKB4-EWN 41DP-185	CK4	ENH4-1	41 - 54	185	181	—	152	29	20	39	2.3	TC11
		ENH4-2	50 - 63			61 - 63						
		ENH4-3	61 - 74			67 - 74						
CKB5-EWN 53DP-210	CK5	ENH5-1	53 - 70	210	206	—	172	34	25.5	50	4.4	
		ENH5-2	65 - 82			74 - 82						
		ENH5-3	78 - 95			78 - 95						
CKB6-EWN 68DP-240	CK6	ENH6-1	68 - 100	240	236.2	90 - 100	191	45.2	32.5	64	8.3	
		ENH6-2	94 - 126			94 - 126						
		ENH6-3	118 - 150			118 - 150						
CKB6-EWN100DP-240	CK6	ENH6-1	100 - 153	240	236.2	107 - 153	191	45.2	45.5	64	8.8	
		ENH6-2	126 - 179			126 - 179						
		ENH6-3	150 - 203			150 - 203						
CKB7-EWN100DP-240	CK7	ENH6-1	100 - 153	240	236.2	116 - 153	191	45.2	45.5	90	16.4	
		ENH6-2	126 - 179			126 - 179						
		ENH6-3	150 - 203			150 - 203						

1. The diameter range is the values when nose radius 0.2 is used for insert TP08, and radius 0.4 for insert TC11.
2. ENH○-1 Insert Holder is included. ENH○-2 and 3 must be ordered separately if required.
3. During back boring, the rotation direction will be reversed.
4. Inserts are not included.
5. ※ marked models do not require a CKB pin.

A92-A93 | A99
Holders A77 | Insert Holders A56 | Spare parts A102

Wide variety of Insert Holders offers versatility.

Example: CKB3-EWN32DP-160

In addition to the products shown to the right, various insert holders for EWN BORING HEAD such as the "Insert Holder to undercut corners" can be used. A56

Standard Accessory	Optional Accessory	
ENH3-1	**ENH3-2**	**ENH3-3**
		
ø32 - ø42	ø41 - ø51	ø50 - ø60

EWE DIGITAL BORING HEAD (for finishing)

For finishing | Center through | Vc Max. 1,200 m/min

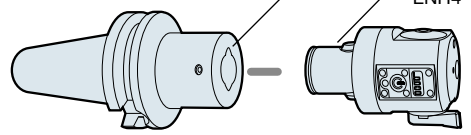
The advanced digital boring head born from ultra-precision technology.

- Digital display allows the adjustment amount to be read instantaneously.
- Fully waterproof and dustproof structure (IP69K equivalent).

Employs a system that directly measures the stroke of the adjustment quill. Accurately displays the actual movement amount.

Simple operation that allows ON and zero reset with a single button.

Set up example



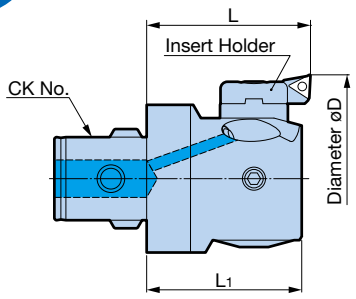
CK SHANK (BBT BT DV ST HSK BIGCAPTO) **BBT40-CKB4-43**

EWE DIGITAL HEAD **EWE41-74 CKB4**

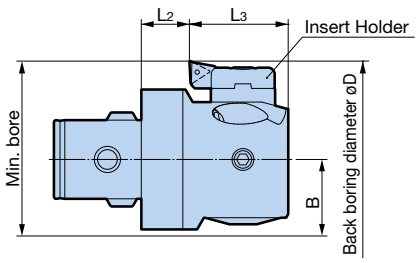
Display Resolution 0.001mm/ø

● Model Description

EWE | 41-74 | CKB4
- CKB4: CK No.
- 41-74: Diameter
- EWE: DIGITAL FINISH BORING HEAD



[Back boring]



Min. bore = B + (back boring diameter / 2)

Model	CK No.	Insert Holder	Boring			Back Boring				Weight (kg)	Insert
			Diameter øD	L	L1	Diameter øD	L2	L3	B		
EWE 41- 74CKB4	CK4	ENH4-1	41 - 54	47	43	—	14	29	20	0.4	TC11
		ENH4-2	50 - 63			53 - 63					
		ENH4-3	61 - 74			61 - 74					
EWE 53- 95CKB5	CK5	ENH5-1	53 - 70	57	53	62 - 70	19	34	25.5	0.7	
		ENH5-2	65 - 82			65 - 82					
		ENH5-3	78 - 95			78 - 95					
EWE 68-150CKB6	CK6	ENH6-1	68 - 100	71	67.2	80 - 100	22	45.2	32.5	1.7	
		ENH6-2	94 - 126			94 - 126					
		ENH6-3	118 - 150			118 - 150					
EWE100-203CKB6	CK6	ENH6-1	100 - 153	71	67.2	112 - 153	22	45.2	45.5	2.5	
		ENH6-2	126 - 179			126 - 179					
		ENH6-3	150 - 203			150 - 203					
EWE100-203CKB7	CK7	ENH6-1	100 - 153	87	83.2	112 - 153	38	45.2	45.5	4.0	
		ENH6-2	126 - 179			126 - 179					
		ENH6-3	150 - 203			150 - 203					

Battery: CR1025 .... 1 pc (Standard accessory)

1. The diameter range is the values when an insert with nose radius 0.4 is used.
2. ENH○-1 Insert Holder is included. ENH○-2 and 3 must be ordered separately if required.
3. Inserts must be ordered separately.
4. Center through coolant pressure should not exceed 4MPa.

Caution

Although the maximum allowable cutting speed Vc of the EWE BORING HEAD is 1,200 m/min, conditions differ according to the projection length of the holder and the rigidity of the machine. Set the spindle speed low and gradually increase until the optimum conditions are reached.

Wide variety of Insert Holders offers versatility.

Example: For EWE41-74CKB4

Standard Accessory	Optional Accessory	
ENH4-1	ENH4-2	ENH4-3
		
ø41 - ø54	ø50 - ø63	ø61 - ø74

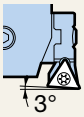
In addition to the above, various insert holders for EWN BORING HEAD such as the "Insert Holder to Undercut Corners" can be used. A56

A93 A99

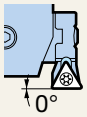
Holders A77

■ Insert Holder (optional accessory)

Insert Holder for TP/TC Insert

Model	Figure	Head
ENH1-1	 3° Insert TP08	EWN20-36CKB1
ENH1-2		
ENH1-3		
ENH2-1		EWN25-47CKB2
ENH2-2		
ENH2-3		
ENH3-1		EWN32-60CKB3
ENH3-2		
ENH3-3		

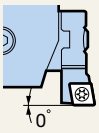
Model	Figure	Head
ENH4-1	 3° Insert TC11	EWN41-74CKB4 EWE41-74CKB4
ENH4-2		
ENH4-3		
ENH5-1		EWN53-95CKB5 EWE53-95CKB5
ENH5-2		
ENH5-3		
ENH6-1		EWN 68-150CKB6 EWN100-203CKB6(7) EWE 68-150CKB6 EWE100-203CKB6(7)
ENH6-2		
ENH6-3		

Model	Figure	Head
ENH4-1E	 0° Insert TC11	EWN41-74CKB4 EWE41-74CKB4
ENH4-2E		
ENH4-3E		
ENH5-1E		EWN53-95CKB5 EWE53-95CKB5
ENH5-2E		
ENH5-3E		
ENH6-1E		EWN 68-150CKB6 EWN100-203CKB6(7) EWE 68-150CKB6 EWE100-203CKB6(7)
ENH6-2E		
ENH6-3E		

1. Inserts must be ordered separately.

A99

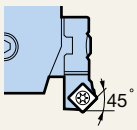
Insert Holder for CC Insert

Model	Figure	Head	Insert
ENH4-1F	 0°	EWN 41- 74CKB4 EWE 41- 74CKB4	CC06
ENH4-2F			
ENH4-3F			
ENH5-1F		EWN 53- 95CKB5 EWE 53- 95CKB5	
ENH5-2F			
ENH5-3F			
ENH6-1F		EWN 68-150CKB6 EWN100-203CKB6 (7) EWE 68-150CKB6 EWE100-203CKB6 (7)	CC07
ENH6-2F			
ENH6-3F			

1. Inserts must be ordered separately.

A99

Insert Holder for SC Insert

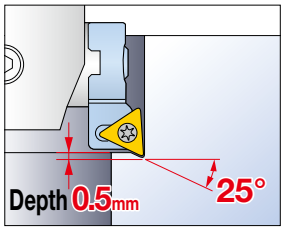
Model	Figure	Head	Insert
ENH4-1S	 45°	EWN 41- 74CKB4 EWE 41- 74CKB4	SC06
ENH4-2S			
ENH4-3S			
ENH5-1S		EWN 53- 95CKB5 EWE 53- 95CKB5	
ENH5-2S			
ENH5-3S			
ENH6-1S		EWN 68-150CKB6 EWN100-203CKB6 (7) EWE 68-150CKB6 EWE100-203CKB6 (7)	SC07
ENH6-2S			
ENH6-3S			

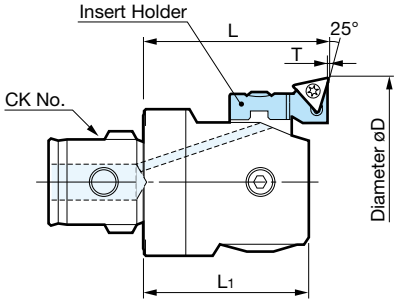
1. Inserts must be ordered separately.

A99

■ Insert Holder to undercut corners
(optional accessory)

- Insert Holder capable of boring and grooving (recessing)





Diameter øD	Model	Figure	Head	CK No.	L	L_1	Max. depth T Max.	Insert
32 - 42	**ENH3-1J**	 25°	EWN 32- 60CKB3	3	40	35	0.6	TP08
41 - 51	**ENH3-2J**							
50 - 60	**ENH3-3J**							
41 - 54	**ENH4-1J**		EWN(E)41- 74CKB4	4	47	43		
53 - 70	**ENH5-1J**		EWN(E)53- 95CKB5	5	57	53		
65 - 82	**ENH5-2J**							
78 - 95	**ENH5-3J**							
68 - 100	**ENH6-1J**		EWN(E) 68-150CKB6	6	71	67.2		TC11
100 - 153			EWN(E)100-203CKB6					
			EWN(E)100-203CKB7	7	87	83.2		
94 - 126	**ENH6-2J**		EWN(E) 68-150CKB6	6	71	67.2		
126 - 179			EWN(E)100-203CKB6					
			EWN(E)100-203CKB7	7	87	83.2		
118 - 150	**ENH6-3J**		EWN(E) 68-150CKB6	6	71	67.2		
150 - 203			EWN(E)100-203CKB6					
			EWN(E)100-203CKB7	7	87	83.2		

1. T Max. and L are the values when nose radius 0.2 is used for insert TP08, and nose radius 0.4 for insert TC11.
2. Inserts must be ordered separately.

A99

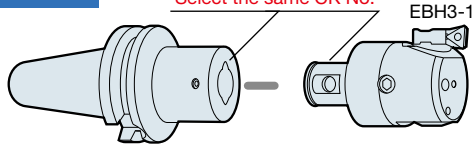
EWB BORING HEAD (For high-speed finishing/ Built-in automatic precision balancing)

Automatic precision balancing. High speed machining supported.

For finishing | Center through | Vc Max. 2,000 m/min

- Excellent dynamic balance performance, achieves high-speed machining and stable accuracy.
- Ultra-precision boring head with ø0.01mm increment scale.

Set up example

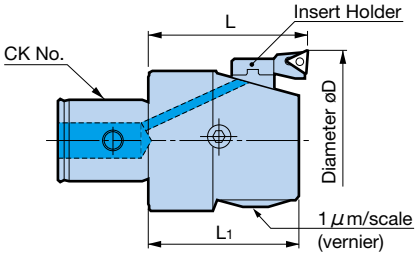


CK SHANK
(BBT BT DV ST HSK BIGCAPTO)
BBT40-CKB3-44

EWB BORING HEAD
EWB32-42CK3

● Model Description

EWB | 32-42 | CK3
- CK No.
- Diameter
- Finish Head



Diameter øD	Model	CK No.	L	L1	Weight (kg)	Insert Holder (Optional accessory)	Insert
32 - 42	**EWB32- 42CK3**	CK3	40	37	0.20	EBH3-1	TP08
41 - 54	**EWB41- 54CK4**	CK4	47	43	0.38	EBH4-1	TC11
53 - 70	**EWB53- 70CK5**	CK5	57	53	0.78	EBH5-1	
68 - 88	**EWB68- 88CK6**	CK6	71	67	1.65	EBH6-1	
85 - 105	**EWB85-105CK6**				1.69		

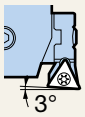
1. The diameter range is the values when nose radius 0.2 is used for insert TP08, and nose radius 0.4 for insert TC11.
2. Insert Holder is included, insert is not included.

A92-A93 | A99

Caution Although the maximum allowable cutting speed Vc of the EWB BORING HEAD is 2,000 m/min, conditions differ according to the projection length of the holder and the rigidity of the machine. Set the spindle speed low and gradually increase until the optimum conditions are reached.

Holders A77
Spare parts A104

■ Insert Holder (Optional accessory)

Model	Figure	Head	Insert	Insert Clamping Screw Set
EBH3-1		EWB 32- 42CK3	TP08	S2S-T6
EBH4-1		EWB 41- 54CK4	TC11	S2.5S-T7
EBH5-1		EWB 53- 70CK5		
EBH6-1		EWB 68- 88CK6 EWB 85-105CK6 EWB100-153CK□AL EWB150-203CK□AL		

· EWB Boring Heads are provided with an Insert Holder.
For replacement, order using the above model numbers.

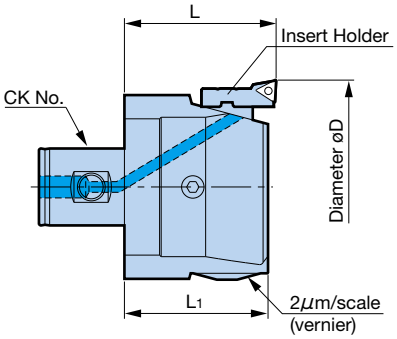
EWB ALUMINUM BORING HEAD (for finishing)

Automatic precision balancing. High-speed capability is ideal for aluminum machining.

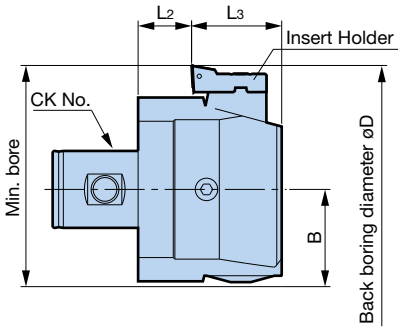
For finishing | Center through | Vc Max. 2,000 m/min

- Lightweight aluminum head made of high-tension aluminum with hard coating.
- Ideal for small machining centers with ATC weight limit.

Weight
600g -



<Boring>



<Back boring>

Min. bore = B + (back boring diameter / 2)

● Model Description

EWB | 100-153 | CK6 | AL
- AL: ALUMINUM BORING HEAD
- CK6: CK No.
- 100-153: Diameter
- EWB: Finish Head

Model	CK No.	L	L1	Boring Diameter øD	L2	L3	Back Boring Diameter øD	Back Boring B	Weight (kg)	Insert Holder (spare)	Insert
EWB100-153CK6AL	CK6	71	67	100 - 153	25	43	112 - 153	45.5	0.6	EBH6-1	TC11
EWB150-203CK6AL				150 - 203			150 - 203	63.5	0.8		
EWB100-153CK7AL	CK7	87	83	100 - 153	41	42	112 - 153	45.5	0.9		
EWB150-203CK7AL				150 - 203			150 - 203	63.5	1.2		

1. The diameter range is the values when an insert with nose radius 0.4 is used.
2. Insert Holder is included, insert is not included.
3. During back boring, the rotation direction will be reversed.

A93 A99

Caution Although the maximum allowable cutting speed Vc of the EWB BORING HEAD is 2,000 m/min, conditions differ according to the projection length of the holder and the rigidity of the machine. Set the spindle speed low and gradually increase until the optimum conditions are reached.

Holders A77
Spare parts A104

(Diameters up to ø880 can be used when using Insert Holder **ENH7-3**.)

EWN200 BORING HEAD (for finishing and large diameters)

DUAL CONTACT BIG-PLUS®

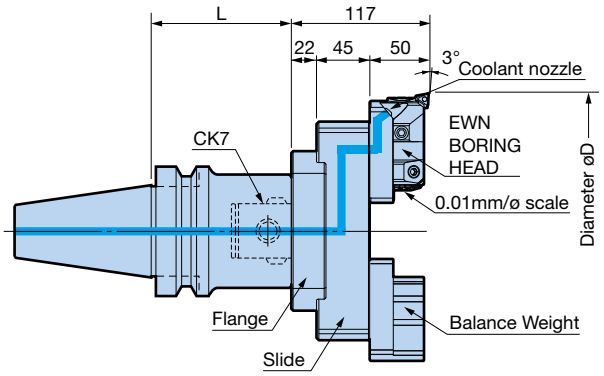
For finishing

Center through

Vc Max. 1,000m/min

- Each component is securely fastened for safety.
- Coolant nozzles for secure coolant supply to the cutting edge.

[Standard type]



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

CK SHANK (BBT BT DV HSK BIG CAPTO)			Diameter øD	Flange		Slide		EWN BORING HEAD		Balance Weight		Insert
Model	L	Weight (kg)		Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	
BBT50-CKB7- 93 (BT50)	93	5.6	200 - 270	**FLN135 (FLN135/90)**	2.76	**SLN200-270**	3.8	**EWN200** With ENH7-1 Insert Holder	1.44	**BWN200FB**	1.44	TC11
-183	183	9.9	270 - 340			**SLN270-340**	5.5					
-243	243	12.7	340 - 410			**SLN340-410**	7.2					
			410 - 480			**SLN410-480**	8.9					
			480 - 550			**SLN480-550**	10.6					
			550 - 620	**FLN220 (FLN220/90)**	4.00	**SLN550-620** ※	12.3					
			620 - 690			**SLN620-690** ※	14.0					
			690 - 760			**SLN690-760** ※	15.7					
			760 - 830			**SLN760-830** ※	17.4					

1. ENH7-1 Insert Holder is included.
2. Inserts must be ordered separately.
3. Center through coolant supply is available, except for ※ marked models.
4. Cutting edge and drive keys are aligned in the same direction.
   (It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.)

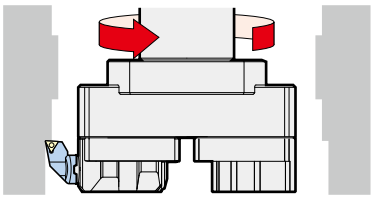
A93 A99
Holders A77
Spare parts A104

Wide variety of Insert Holders offers versatility.

Standard Accessory	Optional Accessories				
ENH7-1	**ENH7-2**	**ENH7-3**	**ENH7-1J** (for recessing)	**ENH7-1F** (for diamond inserts)	**ENH7-1S** (for square inserts)
	+25/ø	+50/ø	25° Max. depth Max.0.6	0°	45°
Insert TC11				Insert CC07	Insert SC07

Back boring available

Reverse

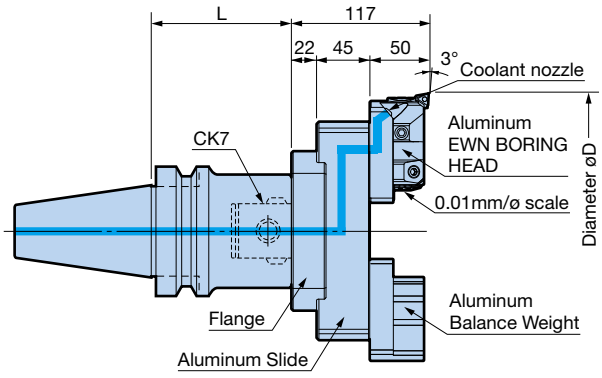


※ **ENH7-2, 7-3** only can be used.

DUAL CONTACT
BIG-PLUS®
For finishing
Center through
Vc Max. 2,000m/min

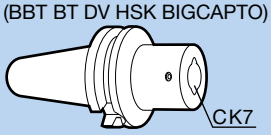
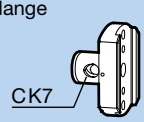
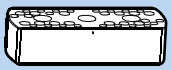
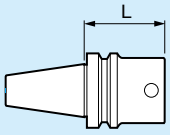
[High speed type] Lightweight

●Tool weight is reduced by combining an aluminum slide, EWN BORING HEAD, and balance weight.



Models with AL at the end are made of aluminum.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

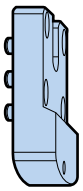
CK SHANK (BBT BT DV HSK BIGCAPTO) 			Diameter øD	Flange 		Aluminum Slide 		Aluminum EWN BORING HEAD 		Aluminum Balance Weight  Weights can be adjusted according to the diameter.		Insert
Model	L	Weight (kg)		Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	Model	Weight (kg)	
BBT50-CKB7- 93 (BT50) **-183** **-243** 	93 183 243	5.6 9.9 12.7	200 - 270	**FLN135 (FLN135/90)**	2.76	**SLN200-270AL**	1.44	**EWN200AL** With ENH7-1 Insert Holder	0.8	**BWN200FB-AL**	0.8	TC11
			270 - 340			**SLN270-340AL**	2.04					
			340 - 410			**SLN340-410AL**	2.64					
			410 - 480			**SLN410-480AL**	3.24					
			480 - 550			**SLN480-550AL**	3.84					
			550 - 620	**FLN220 (FLN220/90)**	4.00	**SLN550-620AL** ※	4.44					
			620 - 690			**SLN620-690AL** ※	5.04					
			690 - 760			**SLN690-760AL** ※	5.64					
			760 - 830			**SLN760-830AL** ※	6.24					

1. ENH7-1 Insert Holder is included
2. Inserts must be ordered separately.
3. Center through coolant supply is available, except for ※ marked models.
4. Cutting edge and drive keys are aligned in the same direction.
   (It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.)

A93 A99
Holders A77
Spare parts A104

■ Simple Balance Weight

・Low-cost balance weights are also available.
Use under V=800m/min.



Model	Weight (kg)	Head
BWN200PB	1.44	EWN200 (Standard type)
BWN200PB-AL	0.80	EWN200AL (High speed type)

Weights cannot be adjusted.

EWN04-7/EWN04-15 BORING HEAD

For finishing | Center through | Max. 30,000min^{-1}

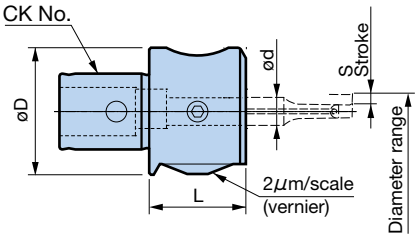
- Micro-boring head with outer diameter of ø18.5mm (EWN04-7).
- 0.01mm/scale/ø2 μm ultra-precision vernier.

EWN04-7CK1


EWN04-15CK3

● Model Description

EWN 04 - 7 CK1
- CK1 → CK No.
- 7 → Diameter
- 04 → FINISH BORING HEAD
- EWN



Model	Diameter range	CK No.	øD	ød	L	S	Max. speed	Weight (kg)
EWN04- 7CK1	1.0 - 7	CK1	18.5	4	14	-0.1 - +1.05	30,000	0.03
EWN04-15CK3	1.0 - 15	CK3	30	7	22	-0.2 - +2.0	20,000	0.12

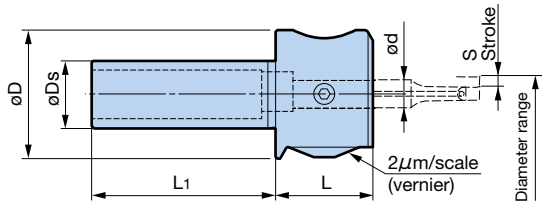
1. Cylindrical tool must be ordered separately.

Holders A77
Spare parts A103

[Cylindrical shank type]

● Model Description

EWN 04 - 7 ST10
- ST10 → Cylindrical shank
- 7 → Diameter
- 04 → FINISH BORING HEAD
- EWN



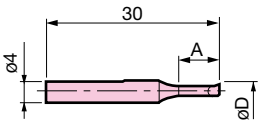
Model	Diameter range	øD	øDs	ød	L	L1	S	Max. speed	Weight (kg)
EWN04- 7ST10	1.0- 7	18.5	10	4	14	25	-0.1 - +1.05	30,000	0.04
EWN04-15ST16	1.0-15	30	16	7	22	34	-0.2 - +2.0	20,000	0.13

1. Cylindrical tool must be ordered separately.

Spare parts A103

■ EWN04-7 Cylindrical Tool

is made of carbide.



Diameter øD	Model	Engraved number	A	Insert
1.0 - 1.5	**ST4W-EB 1 - 3**	615.542	3	Integrated Carbide Shank
1.4 - 2.0	**-EB 1.5- 5**	615.543	5	
1.9 - 3.0	**-EB 2 - 6**	615.544	6	
2.9 - 4.0	**-EB 3 -10**	615.545	10	
3.9 - 5.0	**-EB 4 -13**	615.546	13	
4.9 - 7.0	**-EB 5 -16**	615.547	16	

■ EWN04-15 Cylindrical Tool

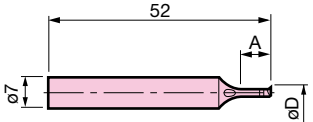


Fig. 1

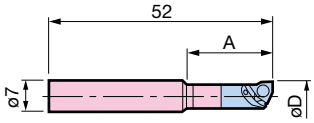


Fig. 2 (With coolant hole)

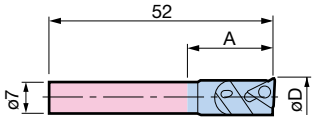


Fig. 3 (With coolant hole)

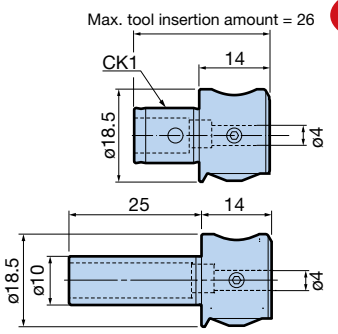
Diameter øD	Fig.	Model	Engraved number	A	Insert
1.0 - 1.5	1	**ST7W-EB 1 - 3**	615.524	3	Integrated Carbide Shank
1.4 - 2.0		**-EB 1.5- 5**	615.525	5	
1.9 - 3.0		**-EB 2 - 7**	615.501	6	
2.9 - 4.0		**-EB 3 - 10**	615.502	10	
3.9 - 5.0		**-EB 4 - 13**	615.503	13	
4.9 - 6.0		**-EB 5 - 16**	615.504	16	
5.8 - 7.0	2	**-EB 6 - 20**	615.505	20	WC02
6.8 - 8.0		**-EB 7 - 20**	615.506		
7.8 - 9.0	3	**-EB 8 - 20**	615.507	30	TP07
8.8 - 10.0		**-EB 9 - 20**	615.508		
9.8 - 12.0		**-EB10 - 20**	615.509		
11.8 - 15.0		**-EB12 - 30**	615.511		

1. Inserts must be ordered separately.

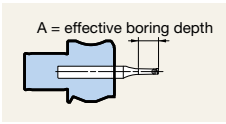
A91 A99

EWN04-7 (cylindrical tool series for finishing)

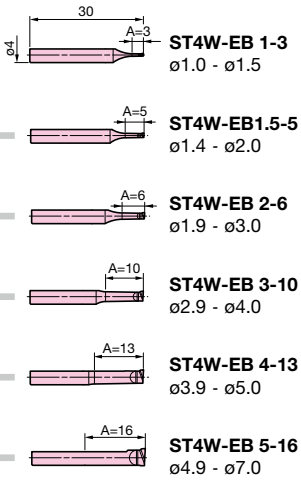
For finishing | Center through | Ideal for small machines



Head EWN04-7
Stroke -0.1 - +1.05mm



BORING BIT



ST4W-EB 1-3
ø1.0 - ø1.5

ST4W-EB1.5-5
ø1.4 - ø2.0

ST4W-EB 2-6
ø1.9 - ø3.0

ST4W-EB 3-10
ø2.9 - ø4.0

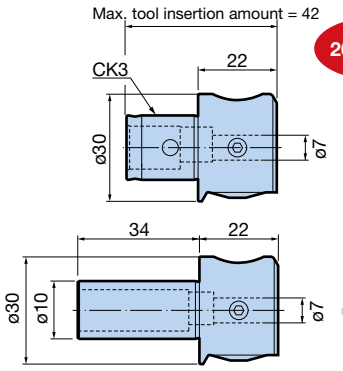
ST4W-EB 4-13
ø3.9 - ø5.0

ST4W-EB 5-16
ø4.9 - ø7.0

※ Cylindrical Tools are made of carbide.

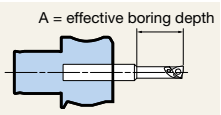
Holders A77

EWN04-15 (cylindrical tool series for finishing)

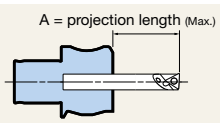


Head EWN04-15
Stroke -0.2 - +2.0mm

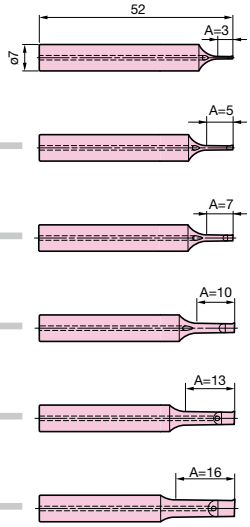
ST7W-EB 1 - EB 7
ST7-REB



ST7W-EB 8 - EB12



BORING BIT



ST7W-EB 1-3
ø1.0 - ø1.5

ST7W-EB1.5-5
ø1.4 - ø2.0

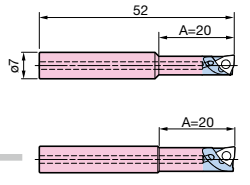
ST7W-EB 2-7
ø1.9 - ø3.0

ST7W-EB 3-10
ø2.9 - ø4.0

ST7W-EB 4-13
ø3.9 - ø5.0

ST7W-EB 5-16
ø4.9 - ø6.0

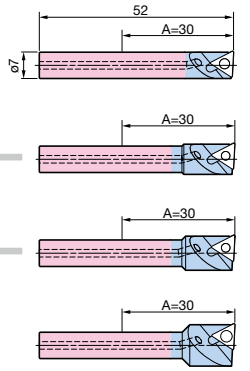
WC 02 insert type



ST7W-EB 6-20
ø5.8 - ø7.0

ST7W-EB 7-20
ø6.8 - ø8.0

TP 07 insert type



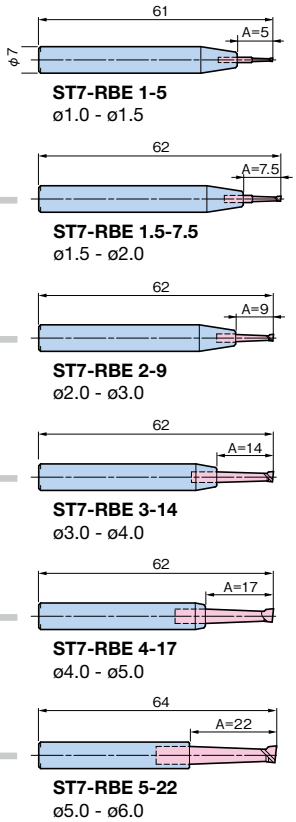
ST7W-EB 8-20
ø7.8 - ø9.0

ST7W-EB 9-20
ø8.8 - ø10.0

ST7W-EB10-20
ø9.8 - ø12.0

ST7W-EB12-30
ø11.8 - ø15.0

JIG BORING BIT



ST7-RBE 1-5
ø1.0 - ø1.5

ST7-RBE 1.5-7.5
ø1.5 - ø2.0

ST7-RBE 2-9
ø2.0 - ø3.0

ST7-RBE 3-14
ø3.0 - ø4.0

ST7-RBE 4-17
ø4.0 - ø5.0

ST7-RBE 5-22
ø5.0 - ø6.0

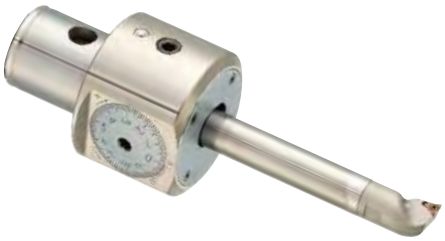
A91
A99

EWN BORING HEAD (cylindrical tool type for finishing)

For finishing | Center through

3 models available for the optimal selection to meet applications.

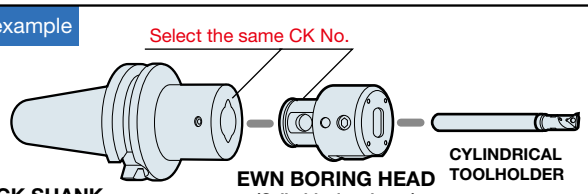
- Ultra precision head with an adjustable amount of microns.
- The enhanced carbide tool series immediately supports small-diameter deep-hole drilling.
- Precision diameter adjustment function for the vernier with 0.01mm/ø +1µm scale.



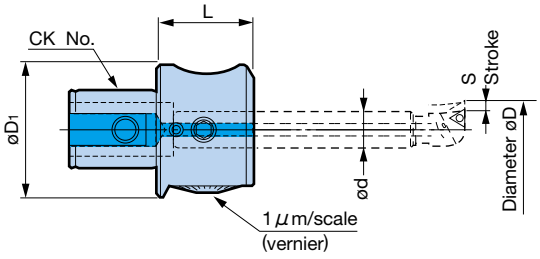
● Model Description

EWN 2 - 22 CK4
- CK No.
- FINISH BORING HEAD

Set up example



BBT30-CKB4-38 EWN2-22CK4



Refer to the following page for the tool system of each head.
EWN2-22CK4...A67
EWN2-32CK5...A68
EWN2-50CK6...A69

Diameter øD	Model	CK No.	ød	øD1	L	S	Weight (kg)
1 - 22	**EWN2-22CK4**	CK4	10	39	28.5	2.0	0.25
1 - 32	**EWN2-32CK5**	CK5	12	50	36	3.5	0.5
1 - 54	**EWN2-50CK6**	CK6	16	63.5	45	4.5	1.1

1. EWN BORING HEAD does not come with cylindrical tool.
2. Center through coolant supply is available.
3. Inserts must be ordered separately.

Tool systems A67
Holders A77
Spare parts A103

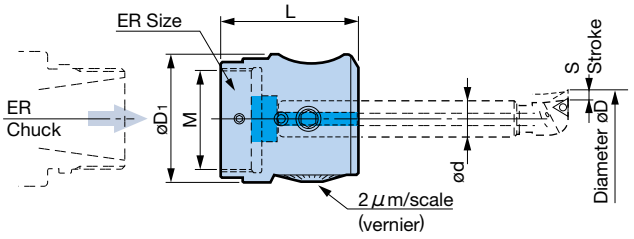
For turning center

[ER Chuck Type]

To be mounted on the ER collet chuck live tooling for lathe in place of the clamping nut.

● Model Description

EWN 2 - 22 ER25
- ER No.
- MAX. diameter
- FINISH BORING HEAD



Center through

Diameter øD	Model	ER size	ød	øD1	L	S	M	Weight (kg)
1 - 22	**EWN2-22ER25**	ER25	10	39	40.5	2.0	M32 x 1.5	0.25
1 - 32	**EWN2-32ER32**	ER32	12	50	51	3.5	M40 x 1.5	0.5

1. EWN BORING HEAD does not come with cylindrical tool.
2. Center through coolant supply is available.
3. Inserts must be ordered separately.

Tool systems A67
Spare parts A103

EWE DIGITAL BORING HEAD (cylindrical tool type for finishing)

Advanced digital boring head created by ultra-precision technology.

- Digital display allows the adjustment amount to be read at a glance.
- Fully waterproof and dustproof structure (IP69K equivalent).

For finishing | Center through | Max. 16,000 min^{-1} (EWE2-32)

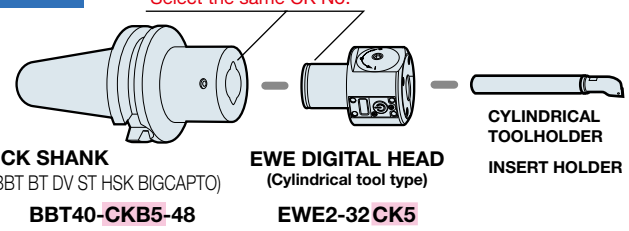
※ Center through coolant pressure should not exceed 4MPa.

Display Resolution 0.001mm/ø

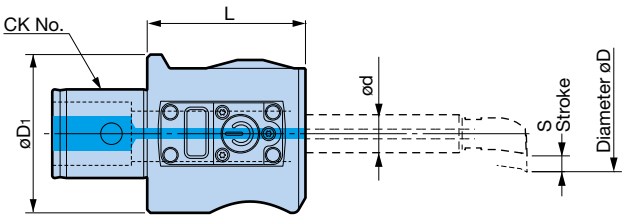
● Model Description

EWE | 2-32 | CK5
- CK5: CK No.
- EWE: DIGITAL BORING HEAD

Set up example



CK SHANK	EWE DIGITAL HEAD	
(BBT BT DV ST HSK BIGCAPTO)	(Cylindrical tool type)	
BBT40-CKB5-48	EWE2-32CK5	



Refer to the following page for the tool system of each head.
EWE2-32CK5...A68
EWE2-54CK6...A69

Diameter øD	Model	CK No.	ød	øD1	L	S	Weight (kg)
1 - 32	**EWE2-32CK5**	CK5	12	50	50	-0.5 - 2.0	0.65
1 - 54	**EWE2-54CK6**	CK6	16	63.5	45	-0.5 - 2.5	1.35

Battery: CR1025 .... 1 pc (Standard accessory)

1. Cylindrical toolholder must be ordered separately.
2. Center through coolant supply is available.
3. Inserts must be ordered separately.

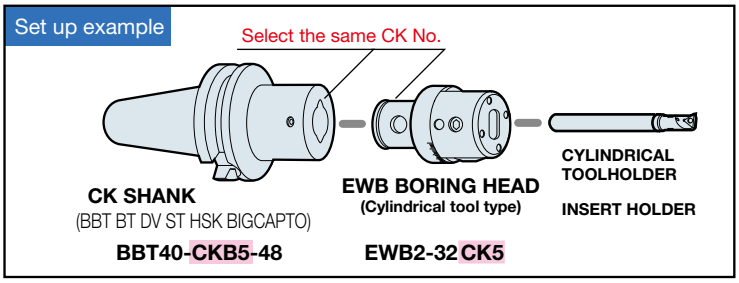
Tool systems A68
Holders A77
Spare parts A103

EWB BORING Head Cylindrical Toolholder Type (For high speed finishing/ Built-in manual balance adjustment function)

Manual balance adjustment mechanism.

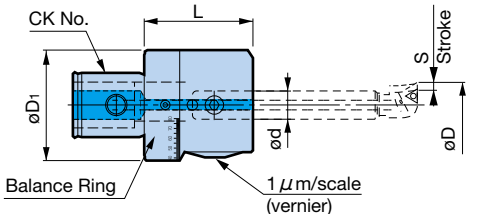
- Turning the balance ring allows manual adjustment of internal weights.
- 5 μm/ø scale +1 μm vernier precision diameter adjustment mechanism. (EWB2-50 only)

For finishing | Center through | Max. 16,000 min^{-1} (EWB2-32)



● Model Description

EWB | 2 - 32 | CK5
- CK5 ● CK No.
- 32 ● MAX. diameter
- 2 ● FINISH BORING HEAD
- EWB



Diameter øD	Model	CK No.	ød	øD1	L	S	Weight (kg)
1 - 32	**EWB2-32CK5**	CK5	12	50	49	3.5	0.65
1 - 50	**EWB2-50CK6**	CK6	16	63.5	62	4.5	1.32

1. Cylindrical toolholder must be ordered separately.
   ※ The setting value for the balance ring is listed in the operation manual.
   As incorrect settings may lead to serious imbalances, be sure to read the operation manual thoroughly before use.
2. Center through coolant supply is available.

Tool systems A68
Holders A77
Spare parts A104

Caution

- The max. spindle speed of the EWB BORING HEAD depends on the projection length of the tool and the rigidity of the machine. Set the spindle speed low and gradually increase until the optimum conditions are reached, upon reference to the operation manual.
- Use a head stroke within 1mm in order to achieve the best possible balance performance.
- This boring head should be used only with BIG + KAISER original cylindrical tool series.

■ Jig Boring Bit Diameter: ø1 - ø9

- The sharp cutting edge is ideal for ultra-small diameter boring.
- New ø1 and ø1.5 diameter models available for even smaller diameter boring.

From diameter ø1

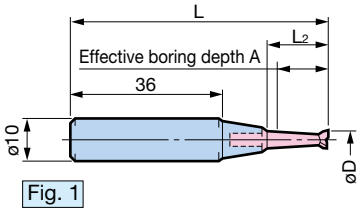


Fig. 1

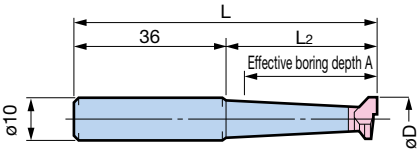


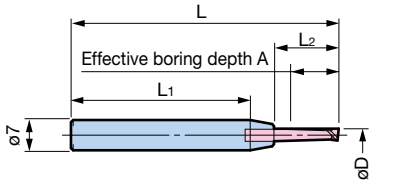
Fig. 2

is made of carbide.

● ø10 cylindrical shank type

Model	Fig.	øD	A	L	L2
RBE 1	1	1	4	61	5
1.5		1.5	6	62	7.5
2		2	8		9
3		3	12		14
4		4	16		17
5		5	20	64	22
7	2	7	24	65	28
9		9	30	75	37

1. No oil holes. 2. Cutting edge is TiN coated carbide.



is made of carbide.

● ø7 cylindrical shank type

Model	øD	A	L	L1	L2
ST7-RBE 1 - 5	1	4	61	42	5
-RBE 1.5- 7.5	1.5	6	62		7.5
-RBE 2 - 9	2	8			9
-RBE 3 -14	3	12		41	14
-RBE 4 -17	4	16			17
-RBE 5 -22	5	20	64		22

1. No oil holes. 2. Cutting edge is TiN coated carbide.

■ Carbide Cylindrical Insert Holder Diameter: ø4 - ø9

Carbide Center through

- Stable ø4 ultra small boring is achieved with an indexable type insert type of solid carbide bar.
- Exclusive insert with a large rake angle to prevent chatter.

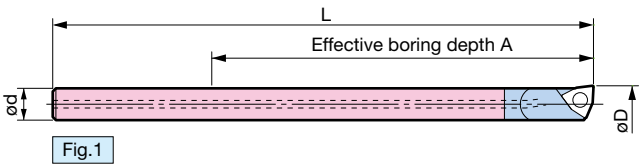


Fig.1

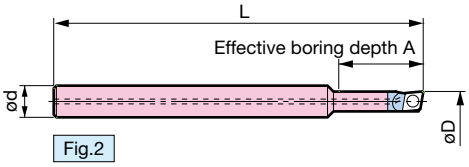
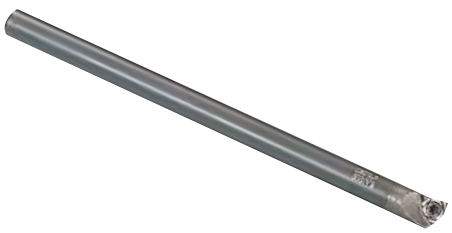


Fig.2

is made of carbide.



<Carbide Cylindrical Insert Holder>

Model	Fig.	ød	øD	A	L	Insert	Insert Clamping Screw Set
ST05W-EB6 -60	1	5	6.0 - 7.5	60	85	WC02	S2S-A
ST06W-EB4 -16	2	6	4.0 - 5.0	16	70	EC03	S1.6S-T3-S
-EB5 -20			5.0 - 6.0	20	75		S1.6S-T3
-EB7.5-65	1		7.5 - 9.0	65	95	WC02	S2S-A

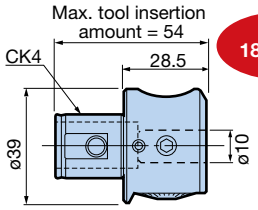
1. Inserts are not included.
2. An exclusive straight collet is required when used with a boring head. A67

A91 A99

EWN2-22 (cylindrical tool series for finishing)

Compact head reduces interference.

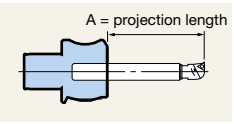
For finishing | Ideal for small machines | Center through



Max. 18,000min-1

Head **EWN2-22CK4**
Stroke 0 - 2mm

※ EWN BORING HEAD for turning centers (ER type) is also available.
See A63 for details.



Always observe the projection length range and tool insertion limit. Use out of these ranges may result in damage to the boring head or slip of the bar shank.

JIG BORING BIT, 8 models
A66
ø1 - ø9

STRAIGHT COLLET
Spare parts A102

EC1005 (ø10, ø5)
EC1006 (ø10, ø6)
EC1008 (ø10, ø8)

CARBIDE CYLINDRICAL INSERT HOLDER
A66

ST05W-EB6-60 ø6 - ø7.5	85, A = 20 - 60	WC02
ST06W-EB4-16 ø4 - ø5	70, A = 16	EC03
ST06W-EB5-20 ø5 - ø6	75, A = 20	
ST06W-EB7.5-65 ø7.5 - ø9	95, A = 27 - 65	WC02

CYLINDRICAL TOOLHOLDER

ST08-M5-40	65, A = 20 - 40
ST08W-M5-65	90, A = 36 - 65
ST08W-M5-80	105, A = 51 - 80
ST10-M6-50	75, A = 26 - 50
ST10W-M6-75	100, A = 46 - 75
ST10W-M6-95	120, A = 66 - 95
ST10-M10-58	85, A = 35 - 60

INSERT HOLDER
TP08

EB09N	ø9 - ø10.5	18
EB10.5N	ø10.5 - ø12	
EB12N	ø12 - ø14	23
EB14N	ø14 - ø16	
EB16N	ø16 - ø18	
EB18N	ø18 - ø20	27
EB20N	ø20 - ø22	

※ Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide.
A is the projection length.

A91-A92 | A99
Holders A77

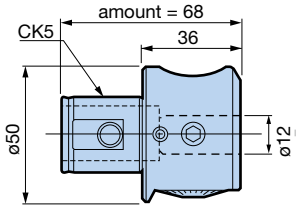
EWN2-32/EWE2-32/EWB2-32 (cylindrical tool series for finishing)

For finishing | Center through

Flexible tool layout with versatile CK5 type.

Max. 14,000min⁻¹

Max. tool insertion amount = 68

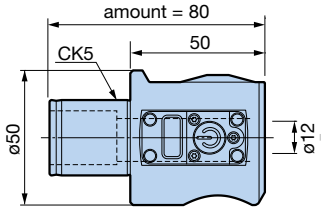


Head EWN2-32CK5
Stroke 0 - 3.5mm

※ EWN BORING HEAD for turning centers (ER type) is also available.
See A63 for details.

Max. 16,000min⁻¹

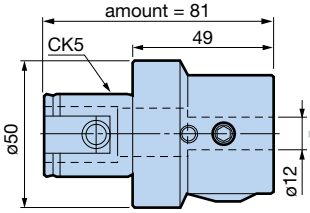
Max. tool insertion amount = 80



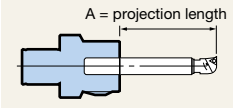
Head EWE2-32CK5
Stroke -0.5 - 2.0mm

Max. 16,000min⁻¹

Max. tool insertion amount = 81



Head EWB2-32CK5
Stroke 0 - 3.5mm
For high speed

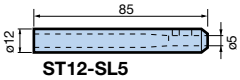


Always observe the projection length range and tool insertion limit. Use out of these ranges may result in damage to the boring head or slip of the bar shank.

● Straight Collet EC1210

JIG BORING BIT, 8 models A66

SIDE LOCK CYLINDRICAL TOOLHOLDER Spare parts A102



ST12-SL5

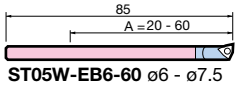
STRAIGHT COLLET Spare parts A102

EC1206

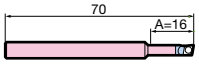
EC1208

EC1210

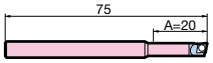
CARBIDE CYLINDRICAL INSERT HOLDER A66



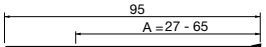
ST05W-EB6-60 ø6 - ø7.5 — WC02



ST06W-EB4-16 ø4 - ø5 — EC03

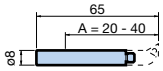


ST06W-EB5-20 ø5 - ø6

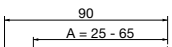


ST06W-EB7.5-65 ø7.5 - ø9 — WC02

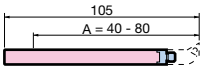
CYLINDRICAL TOOLHOLDER



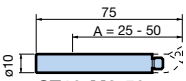
ST08-M5-40



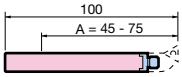
ST08W-M5-65



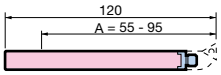
ST08W-M5-80



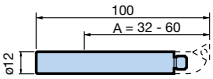
ST10-M6-50



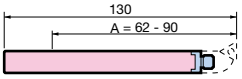
ST10W-M6-75



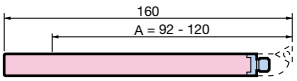
ST10W-M6-95



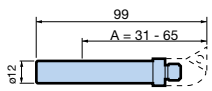
ST12-M6-60



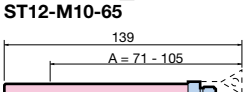
ST12W-M6-90



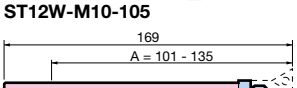
ST12W-M6-120



ST12-M10-65



ST12W-M10-105



ST12W-M10-135

INSERT HOLDER TP08

EB09N ø9 - ø10.5

EB10.5N ø10.5 - ø12

EB12N ø12 - ø14

EB14N ø14 - ø16

EB16N ø16 - ø18

EB18N ø18 - ø20

EB20N ø20 - ø22

EB22N ø22 - ø24

EB24N ø24 - ø26

EB26N ø26 - ø28

EB28N ø28 - ø30

EB30N ø30 - ø32

※ Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide.
A is the projection length.

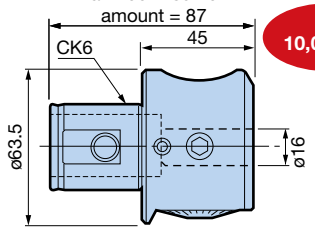
A91-A92 | A99
Holders A77

EWN2-50/EWE2-54/EWB2-50 (cylindrical tool series for finishing)

For finishing | Center through

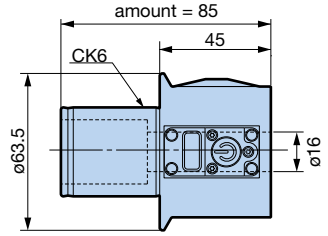
Features abundant range of tools capable of small-diameter deep boring.

Max. tool insertion amount = 87
Max. 10,000min-1



Head EWN2-50CK6
Stroke 0 - 4.5mm

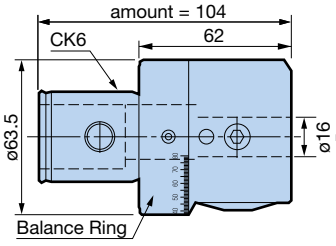
Max. 14,000min-1
Max. tool insertion amount = 85



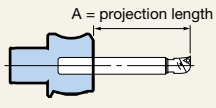
Head EWE2-54CK6
Stroke -0.5 - 2.5mm

※ Center through coolant pressure should not exceed 4MPa.

Max. 12,000min-1
Max. tool insertion amount = 104



Head EWB2-50CK6
Stroke 0 - 4.5mm
For high speed

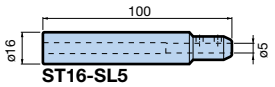


Always observe the projection length range and tool insertion limit. Use out of these ranges may result in damage to the boring head or slip of the bar shank.

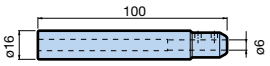
STRAIGHT COLLET
Spare parts A102

EC1605

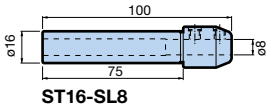
SIDE LOCK CYLINDRICAL TOOLHOLDER
Spare parts A102



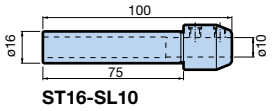
ST16-SL5



ST16-SL6

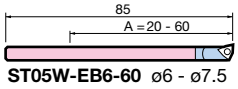


ST16-SL8

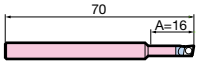


ST16-SL10

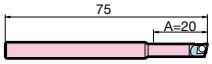
CARBIDE CYLINDRICAL INSERT HOLDER
A66



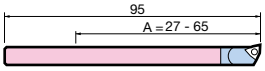
ST05W-EB6-60 ø6 - ø7.5 — WC02



ST06W-EB4-16 ø4 - ø5 — EC03



ST06W-EB5-20 ø5 - ø6



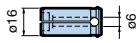
ST06W-EB7.5-65 ø7.5 - ø9 — WC02

With a Side Lock Cylindrical Toolholder
With a Straight Collet

JIG BORING BIT, 8 models
A66

ø1 - ø9

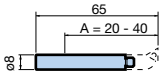
STRAIGHT COLLET



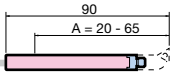
EC1606
Spare parts A102

EC1608

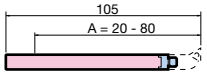
CYLINDRICAL TOOLHOLDER



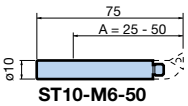
ST08-M5-40



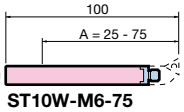
ST08W-M5-65



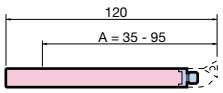
ST08W-M5-80



ST10-M6-50



ST10W-M6-75



ST10W-M6-95

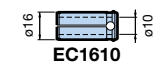
INSERT HOLDER
TP08

EB09N ø9 - ø10.5

EB10.5N ø10.5 - ø12

EB12N ø12 - ø14

CK BORING SYSTEM



EC1610

※ Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide.
A is the projection length.

A91-A92 A99
Holders A77

CK BORING SYSTEM

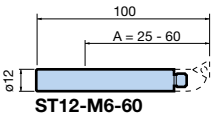
CYLINDRICAL TOOLHOLDER

STRAIGHT COLLET

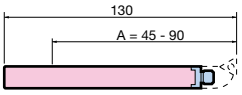
Spare parts A102

EC1612

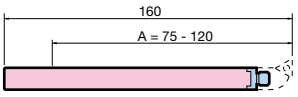
EC1614



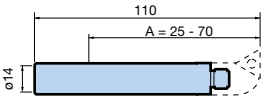
ST12-M6-60



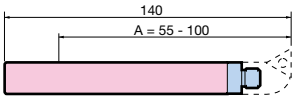
ST12W-M6-90



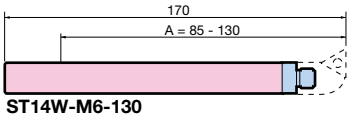
ST12W-M6-120



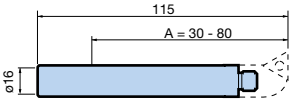
ST14-M6-70



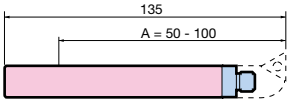
ST14W-M6-100



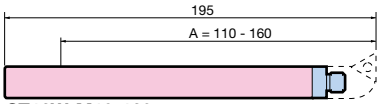
ST14W-M6-130



ST16-M10-80



ST16W-M10-100



ST16W-M10-160

INSERT HOLDER TP08

EB14N
ø14 - ø16

TP08

EB16N
ø16 - ø18

EB18N
ø18 - ø20

EB20N
ø20 - ø22

EB22N
ø22 - ø24

EB24N
ø24 - ø26

EB26N
ø26 - ø28

EB28N
ø28 - ø30

EB30N
ø30 - ø32

EB32N
ø32 - ø34

EB34N
ø34 - ø36

EB36N
ø36 - ø38

EB38N
ø38 - ø40

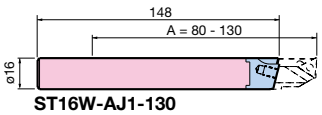
EB40N
ø40 - ø42

EB42N
ø42 - ø46

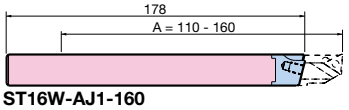
EB46N
ø46 - ø50

AJ Series is to be used with EWN / EWE heads.

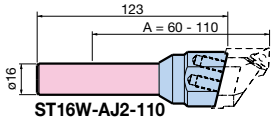
TC11



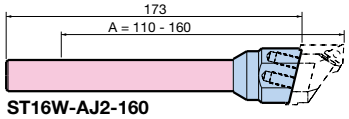
ST16W-AJ1-130



ST16W-AJ1-160



ST16W-AJ2-110



ST16W-AJ2-160

EB17AJ
ø16.8 - ø22

EB22AJ
ø21.8 - ø27

EB27AJ
ø26.8 - ø33

EB32AJ
ø31.8 - ø40

EB40AJ
ø39.8 - ø54

※ Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide.

A92-A93
A99
Holders A77

With Carbide Shank

EW MICRO HEAD

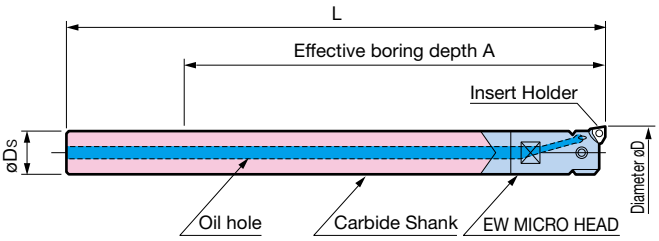
For finishing | Carbide | Center through

Smaller head while maintaining popular ø0.01mm/div. adjusting mechanism.

- Adjustment with only micro-quill eccentricity preserves high speed capability.
- The solid carbide cylindrical shank allows high-rigidity boring.

EW15 Type

EW18 Type



is made of carbide.

● Model Description

ST14 W - EW 15 - 110

- 110: Effective boring depth
- 15: Min. diameter
- EW: FINISH HEAD
- W: Carbide
- ST14: Cylindrical shank diameter

Model	øDs	Diameter øD	L	A	Insert Holder	Insert	Insert Clamping Screw Set	Weight (kg)
ST14W-EW15-110	14	15 - 18	151	110	**EN15**	**WC02**	**S2S-B**	0.10
-140			181	140				0.29
ST16W-EW18-100	16	18 - 22	144	100				0.28
-160			204	160				0.43

1. The carbide shank and micro head are integrated and cannot be sold separately.
2. Inserts must be ordered separately.

Spare parts A102

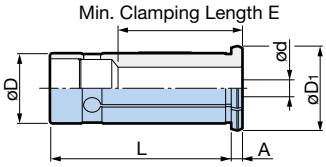
A91 A99

Caution

The maximum boring depth differs depending on the workpiece material.

For NEW Hi-POWER MILLING CHUCKS

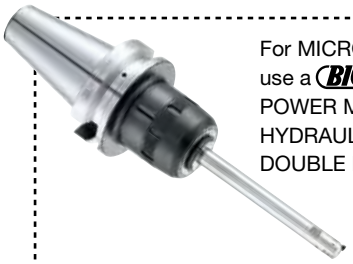
■ Straight Collet



Model	ød	øD	øD1	A	L	E	Body Model
C20-14	14	20	25	4	60	40	HMC20
-16	16					46	
C25-14	14	25	30	4	68.5	45	HMC25
-16	16					46	
C32-14	14	32	37	5.5	74	40	HMC32
-16	16					46	
-19	19					50	
-22	22					52	
-24	24					55	
C42-16	16	42	48	7	89	46	HMC42
-31	31					62	

1. Use Straight Collet with BIG NEW Hi-POWER MILLING CHUCK.

The Oil Hole Straight Collet (OCA) below is required for use with center through coolant.



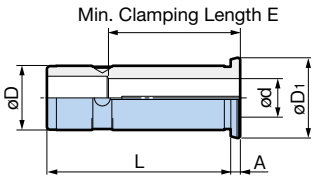
For MICRO HEAD chucking, use a BIG NEW Hi-POWER MILLING CHUCK, HYDRAULIC CHUCK or MEGA DOUBLE POWER CHUCK.

Oil Hole

■ Straight Collet

Center through

・For center through coolant.



Model	ød	øD	øD1	A	L	E	Body Model
OCA20-14	14	20	25	3	58	42	HMC20
-16	16					52	
OCA25-14	14	25	30	3.5	68	44	HMC25
-16	16					52	
OCA32-14	14	32	37	4.5	75	48	HMC32
-16	16					52	
-19	19			3.5			
-22	22						
-24	24						
-28	28						
OCA42-16	16	42	48	4.5	75	52	HMC42
-19	19						
-24	24			3.5		55	
-31	31					58	

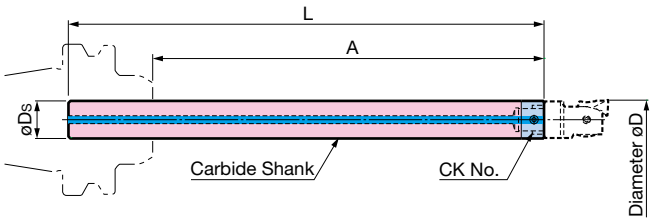
CK Carbide Cylindrical Shank

Carbide | Center through

- The solid carbide bar realizes efficient deep hole boring which was conventionally impossible.

● Model Description

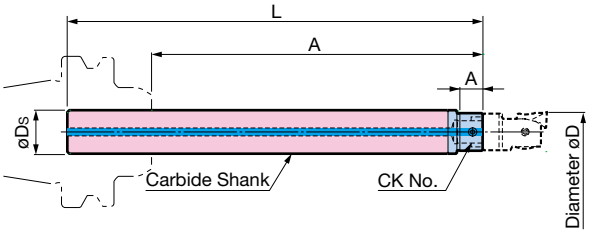
ST19 W - CKB1 - 140
- 140: L dimension
- CKB1: CK No.
- W: Carbide
- ST19: Cylindrical shank diameter



Model	CK No.	øDs	Diameter øD	L	A	Weight (kg)
ST19W-CKB1-140	CK1	19	20 - 36	140	97	0.5
-190				190	147	0.7
-240				240	197	0.9
ST24W-CKB2-160	CK2	24	25 - 47	160	114	0.9
-220				220	174	1.3
-290				290	244	1.7
ST31W-CKB3-200	CK3	31	32 - 60	200	144	1.8
-280				280	224	2.6
-350				350	294	3.3

1. The A dimension in the table is the reference value when used with Hydraulic Chuck.
2. Head and inserts are not included.

[Stepped type]



is made of carbide.

Model	CK No.	øDs	Diameter øD	L	A	Weight (kg)
ST22W-CKB1-210	CK1	22	20 - 22	210	12	1.1
			22 - 36		167	
ST28W-CKB2-245	CK2	28	25 - 28	245	19	1.9
			28 - 47		199	

1. The A dimension in the table is the reference value when used with Hydraulic Chuck.
2. Head and inserts are not included.

Heads A41

Caution
The maximum boring depth differs depending on the workpiece material.

For CK CARBIDE CYLINDRICAL SHANK

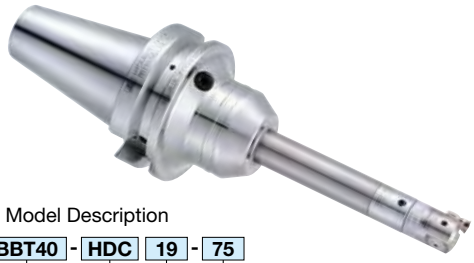
HYDRAULIC CHUCK

DUAL CONTACT BIG-PLUS®

Center through

●Designed for short projection length and large insertion depth. Hydraulics increase the damping effect.

[BBT Type]



● Model Description

BBT40 - HDC 19 - 75

- 75: L dimension
- 19: Clamping diameter
- HDC: HYDRAULIC CHUCK
- BBT40: BIG-PLUS BT No.

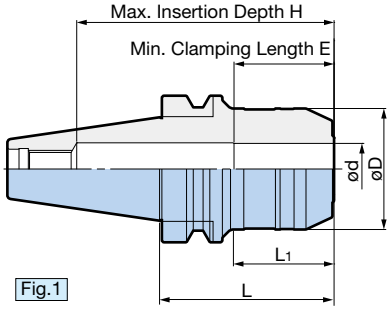


Fig.1

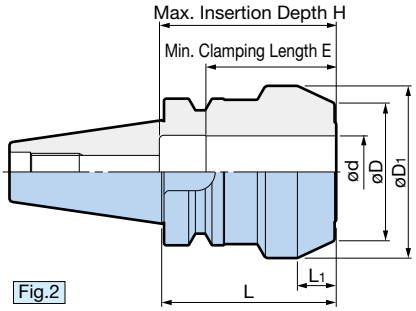


Fig.2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

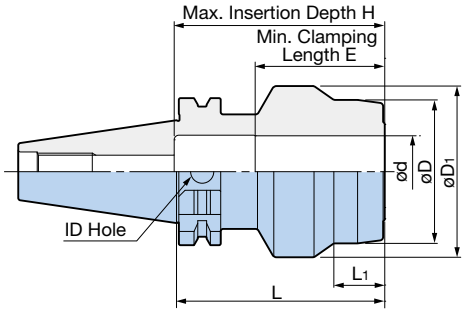
Model	Fig.	ød	øD	øD1	L	L1	H	E	Weight (kg)
BBT40-HDC19 -75	1	19	49.5	—	75	43	111	43	1.4
-HDC22 -75		22	52			44.5	110		1.5
-HDC24 -75		24	63			47	104	45	1.6
-HDC28 -75	2	28	56	71		16	93		1.8
-HDC31 -75		31	59	74		16	76	56	1.8
BBT50-HDC19L-90	1	19	49.5	—	90	45	149	43	4.2
-HDC22L-90		22	52			45	149		4.2
-HDC24L-90		24	63			41	149	45	4.5
-HDC28L-90		28	69			44	148		4.5
-HDC31L-90		31	72			45	147	56	4.5

1. Adjusting Screw cannot be used.

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

Caution
· Do not clamp without a tool.
· Always insert the cutting tool into the holder beyond min. clamping length E.

[BDV Type]



DUAL CONTACT BIG-PLUS®

Center through

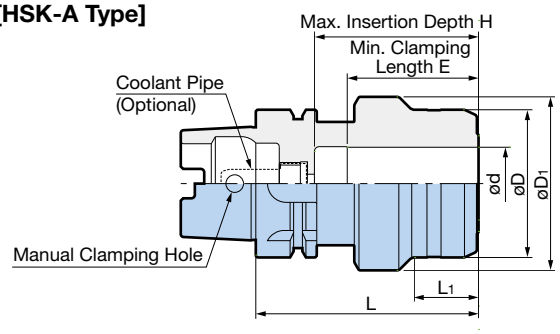
BIG-PLUS (BDV Shank) tools can be used on both BIG-PLUS spindles and conventional **DV spindles**.

Model	ød	øD	øD1	L	L1	H	E	Weight (kg)
BDV40-HDC31-90	31	62	74	90	22	91	56	1.9

● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

Caution
· Do not clamp without a tool.
· Always insert the cutting tool into the holder beyond min. clamping length E.

[HSK-A Type]



Center through

Model	ød	øD	øD1	L	L1	H	E	Weight (kg)
HSK-A63-HDC31-95	31	63	74	95	27	70	56	1.7

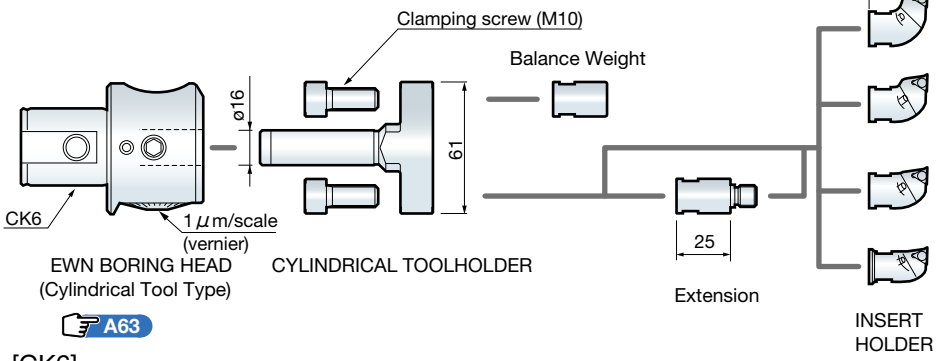
● It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. G30

Caution
· Do not clamp without a tool.
· Always insert the cutting tool into the holder beyond min. clamping length E.

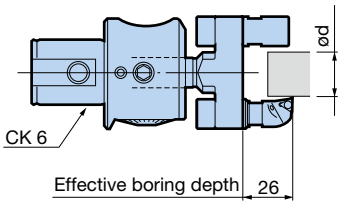
PIN TURNING SERIES

Solves all the issues in contouring operations, such as roundness, surface roughness and dimensional accuracy.

[S Type] Diameter: ø0.5 - ø27



A63



[CK6]

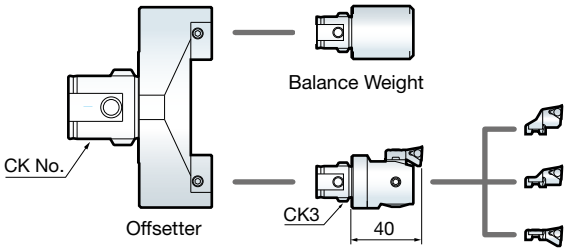
Diameter ød	EWN BORING HEAD	CYLINDRICAL TOOLHOLDER	Balance Weight	Extension	INSERT HOLDER	Insert
0.5 - 9	EWN2-50CK6 (1.1kg)	ST16-SL27-55 (0.2kg)	BW-M10 (0.02kg)	M1010-25 (0.02kg)	EB36N	TP08
9 - 17					EB28N	
17 - 23					EB22N	
23 - 27					EB18N	

1. Max. and min. diameters are the values when an insert with nose radius 0.2 is used.
2. Inserts must be ordered separately.
3. **Rotation should be reverse.**
4. The min. access bore may differ depending on the offset amount.
5. Contact us regarding chamfering.

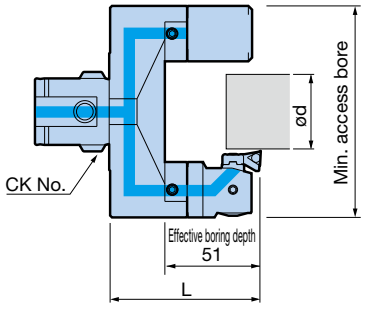
A92 A99
Holders A77

[M Type] Diameter: ø25 - ø152

Center through



A53



Internal boring is enabled by changing the EWN BORING HEAD mounting direction.
(Diameter: ø117 - ø244)
※ Use **in forward** for internal boring.
Pay attention to the rotation direction.

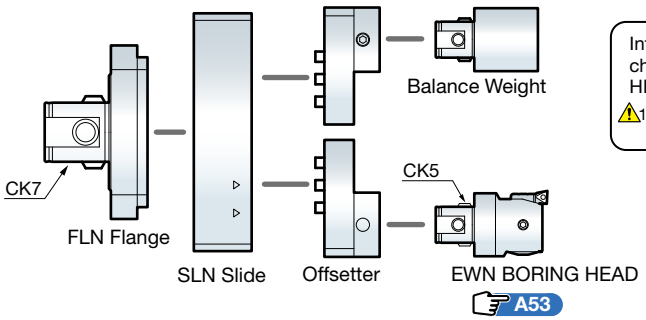
[CK6/CK7]

Diameter ød	Offsetter	CK No.	EWN BORING HEAD	Balance Weight	Insert Holder	Insert	L
25 - 34	CKB63-SL 2552-42 (1.4kg) Min. access bore ø117	CK6	EWN32-60CKB3 (0.21kg)	BW-CKB3-EWN (0.2kg)	ENH3-3	TP08	82
34 - 43					ENH3-2		
43 - 52					ENH3-1		
50 - 59	CKB63-SL 5077-42 (1.6kg) Min. access bore ø142				ENH3-3		
59 - 68					ENH3-2		
68 - 77					ENH3-1		
75 - 84	CKB63-SL 75102-42 (1.9kg) Min. access bore ø167				ENH3-3		
84 - 93					ENH3-2		
93 - 102					ENH3-1		
100 - 109	CKB73-SL100127-47 (3.8kg) Min. access bore ø192	CK7			ENH3-3		87
109 - 118					ENH3-2		
118 - 127					ENH3-1		
125 - 134	CKB73-SL125152-47 (4.2kg) Min. access bore ø217				ENH3-3		
134 - 143					ENH3-2		
143 - 152					ENH3-1		

1. Max. and min. diameters are the values when an insert with nose radius 0.2 is used.
2. Inserts must be ordered separately.
3. Insert Holder (**ENH3-1**) is included with the EWN Boring Head.
4. **Rotation should be reverse.**
5. Contact us regarding chamfering.

A92 A99
Holders A77

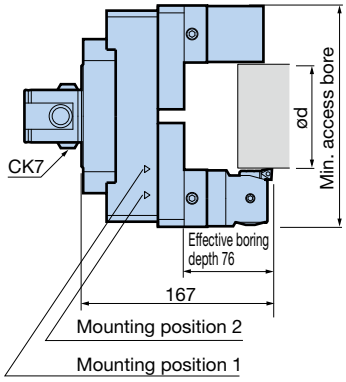
[L Type] Diameter: ø49 - ø686



A53

Internal boring is enabled by changing the EWN BORING HEAD mounting direction.

⚠1. Use in **forward** for internal boring. Pay attention to the rotation direction.



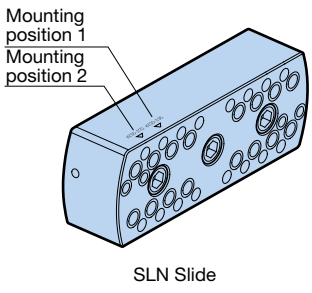
[CK7]

Diameter ød	FLN Flange ※	SLN Slide Model	SLN Slide Weight (kg)	Min. access bore Mounting position 1	Min. access bore Mounting position 2	Offsetter (2 pcs./set)	EWN BORING HEAD	Balance Weight
49 - 126	**FLN135/ FLN135/90** (2.76kg)	**SLN200-270**	3.8	196	231	**CBN91-CKB5-20** (1.2kg/1 pc)	**EWN53-95CKB5** (1.1kg) Insert **TC11**	**BW-CKB5-EWN** (0.9kg)
119 - 196		**SLN270-340**	5.5	266	301			
189 - 266		**SLN340-410**	7.2	336	371			
259 - 336		**SLN410-480**	8.9	406	441			
329 - 406		**SLN480-550**	10.6	476	511			
399 - 476	**FLN220/ FLN220/90** (4.0kg)	**SLN550-620**	12.3	546	581			
469 - 546		**SLN620-690**	14.0	616	651			
539 - 616		**SLN690-760**	15.7	686	721			
609 - 686		**SLN760-830**	17.4	756	791			

1. Inserts must be ordered separately.
2. Insert Holder (ENH5-1) is included with EWN Boring Head. ENH5-2 or ENH5-3 may be required depending on the diameter. Order separately if required.
3. ※ Cutting edge and drive keys are aligned in the same direction. It becomes 90° offset when the FLN135/90 or FLN220/90 flange is used.
4. **Rotation should be reverse.**
5. Lightweight aluminum slides are also available as standard.
6. Center through coolant supply. (SLN550-620 and larger models are not supported.)

A93 A99
Holders A77

Boring range



SLN Slide

Diameter ød	Slide Model	Mounting position	Insert Holder ENH5-3	Insert Holder ENH5-2	Insert Holder ENH5-1
49 - 126	**SLN200-270**	1	49 - 66	62 - 79	74 - 91
		2	84 - 101	97 - 114	109 - 126
119 - 196	**SLN270-340**	1	119 - 136	132 - 149	144 - 161
		2	154 - 171	167 - 184	179 - 196
189 - 266	**SLN340-410**	1	189 - 206	202 - 219	214 - 231
		2	224 - 241	237 - 254	249 - 266
259 - 336	**SLN410-480**	1	259 - 276	272 - 289	284 - 301
		2	294 - 311	307 - 324	319 - 336
329 - 406	**SLN480-550**	1	329 - 346	342 - 359	354 - 371
		2	364 - 381	377 - 394	389 - 406
399 - 476	**SLN550-620**	1	399 - 416	412 - 429	424 - 441
		2	434 - 451	447 - 464	459 - 476
469 - 546	**SLN620-690**	1	469 - 486	482 - 499	494 - 511
		2	504 - 521	517 - 534	529 - 546
539 - 616	**SLN690-760**	1	539 - 556	552 - 569	564 - 581
		2	574 - 591	587 - 604	599 - 616
609 - 686	**SLN760-830**	1	609 - 626	622 - 639	634 - 651
		2	644 - 661	657 - 674	669 - 686

CK SHANK

DUAL CONTACT
BIG-PLUS®

Center through

● Model Description

BBT30 - CKB1 - 72

- BBT30 - BIG-PLUS BT No.
- CKB1 - CK No.
- 72 - L dimension

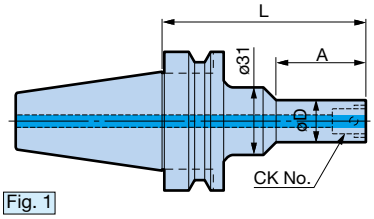


Fig. 1

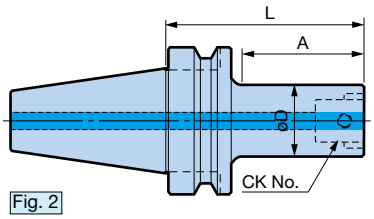


Fig. 2

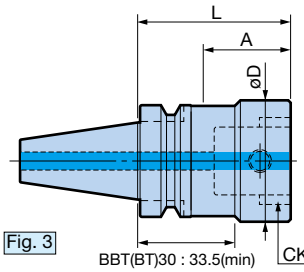


Fig. 3

BBT(BT)30 : 33.5(min)
BBT(BT)40 : 40

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	CK No.	øD	L	A	Weight (kg)
BBT30-CKB1- 72	**BT30-CKB1- 72**	1	CK1	19	72	40	0.48
-CKB2- 38	**-CKB2- 38**	2	CK2	24	37.5	11	0.41
- 83	**- 83**				82.5	55	0.56
-CKB3- 39	**-CKB3- 39**		CK3	31	39	13	0.44
- 79	**- 79**				79	52	0.64
-CKB4- 38	**-CKB4- 38**		CK4	39	38	13	0.44
- 73	**- 73**				73	48	0.76
-CKB5- 63	**-CKB5- 63**	3	CK5	50	63	(41)	0.78
-CKB6- 64	**-CKB6- 64**		CK6	64	64	(42)	0.90
BBT40-CKB1- 72	**BT40-CKB1- 72**	2	CK1	19	72	40	1.1
-CKB2- 43	**-CKB2- 43**		CK2	24	42.5	10.5	1.0
- 83	**- 83**				82.5	50.5	1.2
-CKB3- 44	**-CKB3- 44**		CK3	31	44	12	1.1
- 94	**- 94**				94	62	1.3
-124	—				124	92	1.5
-CKB4- 43	**-CKB4- 43**		CK4	39	43	11	1.2
- 88	**- 88**				88	56	1.5
-118	—				118	86	1.8
-148	—				148	116	2.1
-CKB5- 48	**-CKB5- 48**		CK5	50	48	16	1.2
- 78	**- 78**				78	46	1.6
-108	—				108	76	2.1
-138	—				138	106	2.5
-CKB6- 64	**-CKB6- 64**	3	CK6	64	64	(37)	1.6
- 64/90※	—						
- 94	—				94	(67)	2.3
-124	—				124	(97)	3.1

The "-" in the shank model indicates it is unavailable as standard and a BBT shank should be used.

1. Cutting edges and drive keys are aligned with boring heads mounted.
2. Head and inserts must be ordered separately.
3. ※ marked models have cutting edge and drive key offset by 90°.

Heads A41

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	CK No.	øD	L	A	Weight (kg)
BBT50-CKB1- 72 NEW	—	1	CK1	19	72	12	3.7
-102	**BT50-CKB1-102**				102	39	4.0
-CKB2- 53	**-CKB2- 53**	2	CK2	24	52.5	9	3.8
-113	**-113**				112.5	69	4.0
-CKB3- 54	**-CKB3- 54**		CK3	31	54	11	3.9
-124	**-124**				124	81	4.2
-154	—				154	111	4.3
-CKB4- 58	**-CKB4- 58**		CK4	39	58	15	4.3
-118	**-118**				118	75	4.5
-178	**-178**				178	135	4.9
-208	—				208	165	5.1
-CKB5- 63	**-CKB5- 63**		CK5	50	63	20	4.0
-108	**-108**				108	65	4.7
-183	**-183**				183	140	5.9
-228	**-228**				228	185	6.5
-263	—				263	220	7.0
-CKB6- 94	**-CKB6- 94**		CK6	64	94	51	4.8
-169	**-169**				169	126	6.7
-229	**-229**				229	186	8.2
-289	—				289	246	9.7
-CKB7- 93	**-CKB7- 93**		CK7	90	93	52	5.6
-183	**-183**				183	142	9.9
-243	**-243**				243	202	12.7

The "-" in the shank model indicates it is unavailable as standard and a BBT shank should be used.

1. Cutting edges and drive keys are aligned with boring heads mounted.
2. Head and inserts must be ordered separately.

Heads A41

CK Cylindrical Shank

● Model Description

ST32 - CKB1 - 77
- 77: L dimension
- CKB1: CK No.
- ST32: Cylindrical shank No.

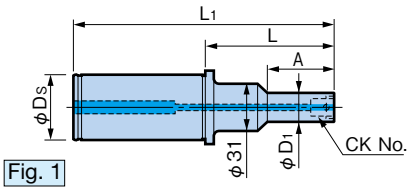


Fig. 1

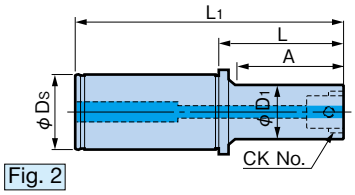


Fig. 2

Center through

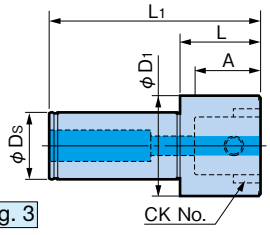


Fig. 3

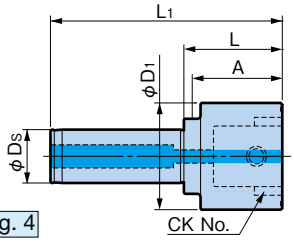


Fig. 4

Model	Fig.	CK No.	øD1	øDs	L	L1	A	Weight (kg)
ST32-CKB1- 77	1	CK1	19	32	77	157	41	0.7
-CKB2- 73	2	CK2	24		72.5	152.5	64	0.7
-CKB3- 69		CK3	31		69	149	63	0.8
-CKB4- 58	3	CK4	39		58	138	(53)	0.9
-CKB5- 48	4	CK5	50		48	128	(43)	0.9
-CKB6- 59		CK6	64		59	139	(54)	1.5
ST42-CKB1- 77	1	CK1	19	42	77	157	40	1.0
-CKB2- 73	2	CK2	24		72.5	152.5	62	1.0
-CKB3- 69		CK3	31		69	149	59	1.1
-CKB4- 63		CK4	39		63	143	57	1.2
-CKB5- 48	3	CK5	50		48	128	(43)	1.3
-CKB6- 59	4	CK6	64		59	139	(54)	1.8

1. Head and insert must be ordered separately.

Heads A41

For chucking

When using a cylindrical shank tool, we recommend

BIG DAISHOWA **NEW Hi-POWER MILLING CHUCK** for its high accuracy and rigidity.

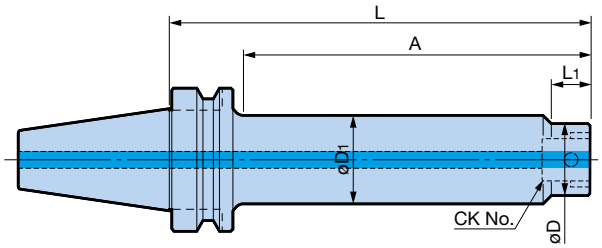
For details, A20

CK Long Shank (rigid type)

DUAL CONTACT
BIG-PLUS®

Center through

● Long shank type for deeper boring.
A highly rigid type with larger shank diameter to avoid deflection.



● Model Description

BBT50 - CKB4 - 48 - 193

- 193: L dimension
- 48: øD1 dimension
- CKB4: CK No.
- BBT50: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	CK No.	Diameter	øD	øD1	L	L1	A	Weight (kg)
BBT50-CKB4-48-193	CK4	50 - 74	39	48	193	19	150	5.5
-238					238		195	6.1
-CKB5-62-243	CK5	65 - 95	50	62	243	24	200	8.1
-303					303		260	9.5
-CKB6-72-259	CK6	75 - 203	64	72	259	29	216	10.3
-314					314		271	12.0
-CKB6-80-289		85 - 203		80	289		246	12.9
-349					349		306	15.2

1. The diameter range is a reference value when using an EWN Boring Head. Note that due to interference with øD1, this differs from the EWN range.
2. Cutting edges and drive keys are aligned with boring heads mounted.
3. Head and inserts must be ordered separately.

Heads A41

Built-in Damper SMART DAMPER PAT.

- Built-in damper eliminates chatter in deep hole boring.

DUAL CONTACT
BIG-PLUS®

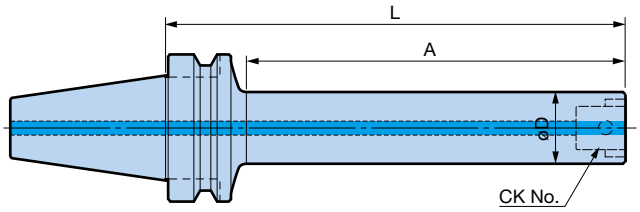
Center through

[BBT Shank Type]

- Model Description

BBT50 - CKB4 DP - 252

- 252: L dimension
- DP: Built-in damper type
- CKB4: CK No.
- BBT50: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	CK No.	øD	L	A	Weight (kg)
BBT50-CKB4DP-252	CK4	39	252	199	5.7
-CKB5DP-314	CK5	50	314	261	7.8
-CKB6DP-380	CK6	64	380	337	12.3

1. Cutting edges and drive keys are aligned with boring heads mounted.
2. Head and inserts must be ordered separately.
3. Extension should not be used due to possible chatter.

Heads A41

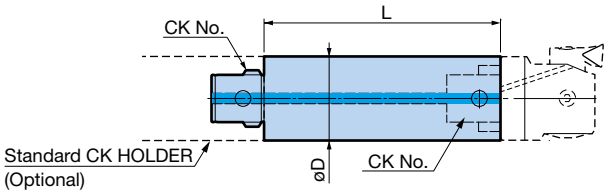
[Extension Type]

Center through

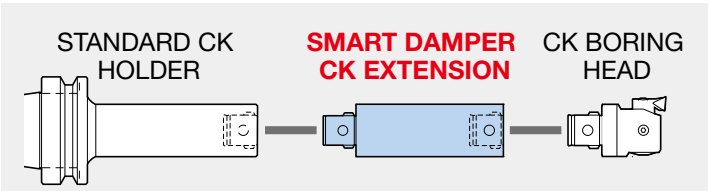
- Model Description

CKB44 DP - 120

- 120: Extension length L
- DP: Built-in damper type
- CKB44: Connection of CK4 and CK4



Standard CK holders can be used.



Model	CK No.	øD	L	Weight (kg)
CKB44DP-120	CK4	39	120	1.3
CKB55DP-150	CK5	50	150	2.6
CKB66DP-180	CK6	64	180	5.3

1. Center through coolant supply is available.
2. Should not be used with a conventional extension due to possible chatter.

Heads A41

SMART DAMPER
integrated with boring head **is also available**.

EWN BORING HEAD A54
SW BORING HEAD A43

CK BORING SYSTEM ACCESSORIES

Extension

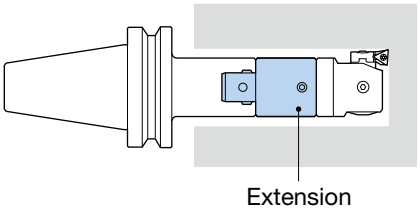
Center through

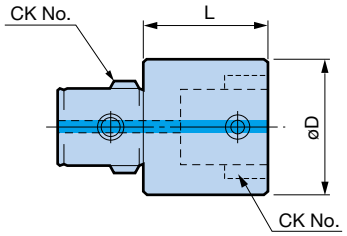
● Extends projection length by insertion between the head and shank.

● Model Description

CKB11 - 20

- 20: Extension length
- CKB11: Connection of CK1 and CK1





Model	CK No.	øD	L	Weight (kg)
CKB11- 20	CK1	19	20	0.05
- 30			30	0.07
CKB22- 30	CK2	24	30	0.10
- 45			45	0.15
CKB33- 30	CK3	31	30	0.17
- 45			45	0.25
CKB44- 45	CK4	39	45	0.40
- 60			60	0.53
CKB55- 60	CK5	50	60	0.87
- 90			90	1.29
CKB66- 60	CK6	64	60	1.38
-100			100	2.31
CKB77-105	CK7	90	105	5.26

1. Center through coolant supply is available.
2. Note that using an extension to increase the length may cause chatter, depending on the L/D ratio.

Reduction

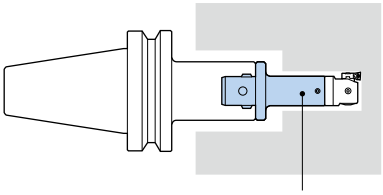
Center through

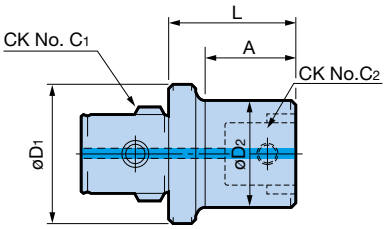
● Reduces CK connection sizes to use smaller boring heads.

● Model Description

CKB21 - 36

- 36: L dimension
- CKB21: Reduced from CK2 to CK1



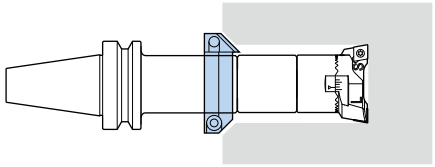


Model	CK No. C_1	CK No. C_2	øD_1	øD_2	L	A	Weight (kg)
CKB21- 36	CK2	CK1	24	19	36	27	0.10
CKB31- 41	CK3		31		40.5	29	0.14
CKB32- 35		CK2		24	34.5	23	0.16
CKB41- 58	CK4	CK1	39	19	57.5	44	0.25
CKB42- 52		CK2		24	51.5	38	0.28
CKB43- 47		CK3		31	47	34	0.32
CKB51- 58	CK5	CK1	50	19	57.5	40	0.38
CKB52- 52		CK2		24	51.5	34	0.40
- 82					81.5	64	0.51
CKB53- 47		CK3		31	47	30	0.54
- 77					77	60	0.64
CKB54- 40		CK4		39	40	23	0.47
- 70					70	53	0.82
CKB61- 67	CK6	CK1	64	19	66.5	35	0.84
CKB62- 61		CK2		24	60.5	43	0.69
- 96					95.5	78	0.98
CKB63- 56		CK3		31	56	39	0.75
- 91					91	74	1.12
CKB64- 49		CK4		39	49	32	0.80
- 84					84	67	1.28
CKB65- 39		CK5		50	39	22	0.92
- 74					74	57	1.33
CKB76-106	CK7	CK6	90	64	106	89	3.10

1. Center through coolant supply is available.

CK Chamfering Tool

● Mount to the CK Shank body
for easy composite chamfering and boring.



● Model Description

CR 1 - 35
- 35: Max. chamfering diameter
- 1: CK No.
- CR: Chamfering ring

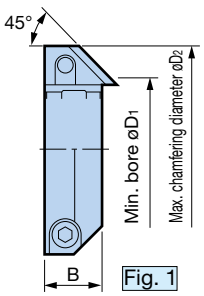


Fig. 1

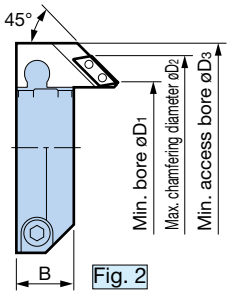


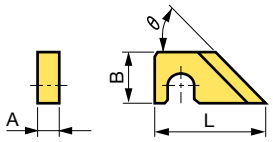
Fig. 2

Model	CK No.	Blade Model	Fig.	øD1	øD2	øD3	B	Weight (kg)
CR1- 35	CK1	CB1-45	1	20	35	-	13	0.06
CR2- 42	CK2			25	42		15	0.08
CR3- 49	CK3			32	49			0.10
CR4- 57	CK4			41	57			0.12
CR5- 90	CK5	CB2-45	1	53	90	-	25	0.55
		CB2-45CW12A	2	55	75	88		
		CB2-45CW12B		70	90	97		
CR6-104	CK6	CB2-45	1	68	104	-		0.67
		CB2-45CW12A	2	69	89	100		
		CB2-45CW12B		84	104	111		
-138		CB2-45	1	98	138	-		1.80
		CB2-45CW12A	2	103	123	135		
		CB2-45CW12B		118	138	145		
-160		CB2-45	1	120	160	-		2.50
		CB2-45CW12A	2	125	145	157		
		CB2-45CW12B		140	160	167		

1. A 45° blade (carbide integrated type) is included with the CK Chamfering Tool.
2. Specify the blade model number when spare blades are required.

■ Blade

[Carbide Integrated Type]



Model	L	A	B	θ	Tool
CB1-45	23.5	4	9	45°	CR1 - 4
CB2-45	43	8	20		CR5 - 6
CB1-30	27.5	4	9	30°	CR1 - 4
CB2-30	52	8	20		CR5 - 6

Tip material is M-class carbide.

[Indexable type] (optional accessory)

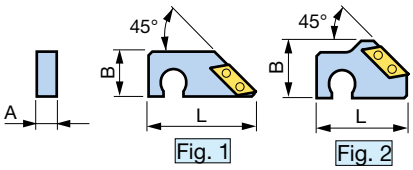
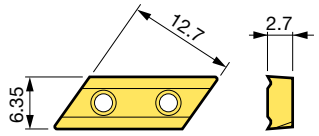


Fig. 1 Fig. 2

Model	Fig.	L	A	B	Insert Model	Tool
CB2-45CW12A	1	43	8	18	CW1206A	CR5 - 6
CB2-45CW12B	2	36		22.5		

1. A wrench and screws are included. Inserts must be ordered separately.

■ Insert (optional accessory)



Model		
Non-coating	ZX Coating	DLC Coating
CW1206A	**CW1206A(ZX)**	**CW1206A(DLC)**

1. Insert is available from 1 pc.

※ For details about 10-piece insert sets and coating, A83

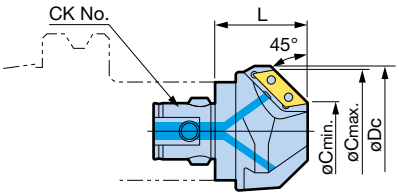
C-Cutter

Center through

● Covers a wide range of chamfering diameters and reduces the number of tools and ATC required.

● Model Description

CKB2 - C 05 25 C
- C: Chamfering
- 05: Min. bore
- 25: Max. chamfering diameter
- C: Center through
- CKB2: CK No.



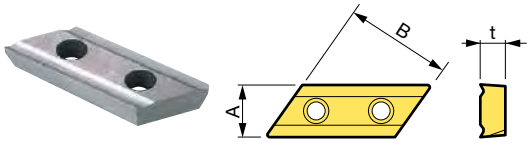
Model	CK No.	Min. bore øCmin.	Max. chamfer diameter øCmax.	Outer Diameter øDc	L	Number of inserts	Insert	Clamping Screw Set	Weight (kg)
CKB2-C0525C	CK2	5	25	28.5	25	1	CW1206A	S2S-B	0.08
CKB4-C1040C	CK4	10	40	45	35	2	CW1909A	S3S	0.27
CKB5-C3060C	CK5	30	60	65	40	3			0.70
CKB6-C50100C	CK6	50	100	106	65		CW3115A	S5S	2.80

1. Inserts must be ordered separately.
2. Insert wrench and screws are included.
3. The screw set (optional) contains 10 insert clamp screws and 1 wrench.

Holders A77

For C-Cutter

■ Insert (optional accessory)



1 pcs

Model			A	B	t
Non-coating	ZX Coating	DLC Coating			
CW1206A	**CW1206A(ZX)**	**CW1206A(DLC)**	6.35	12.7	2.7
CW1909A	**CW1909A(ZX)**	**CW1909A(DLC)**	9.525	19.05	4.5
CW3115A	**CW3115A(ZX)**	**CW3115A(DLC)**	15.875	31.75	7.0

10 pcs

Model		A	B	t
Non-coating	ZX Coating			
CW1206A-10P	**CW1206A(ZX)-10P**	6.35	12.7	2.7
CW1909A-10P	**CW1909A(ZX)-10P**	9.525	19.05	4.5
CW3115A-10P	**CW3115A(ZX)-10P**	15.875	31.75	7.0

Non-coating	Adopts P30-equivalent carbide material with emphasis on toughness for versatile use with materials from steel to aluminum.
ZX Coating	TiN and AlN multilayer coating increases speeds and extends insert life in chamfering of steel or cast iron.
DLC Coating	The exclusive substrate is treated with a thin DLC coating to prevent welding during aluminum machining. It retains sharpness and achieves a clean surface finish.

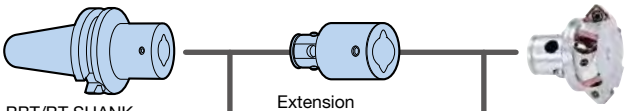
Chamfering Tool
C-CUTTER MINI Front and back chamfering

● Modular system allows front and back chamfering of deep holes.

● Model Description

CKB1 - C 22 32 - 45 B - 20
- CK No.
- Chamfering
- Min. chamfer diameter
- Max. chamfer diameter
- Chamfering angle
- L dimension

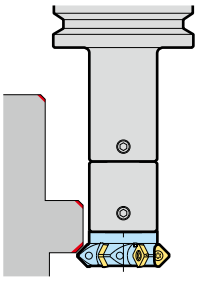
BIG DAISHOWA + KAISER
CK BORING SYSTEM



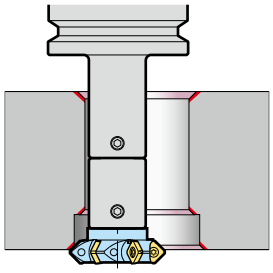
BBT/BT SHANK
DV SHANK
HSK SHANK
BIG CAPTO SHANK

Extension
Used when extending the projection length.

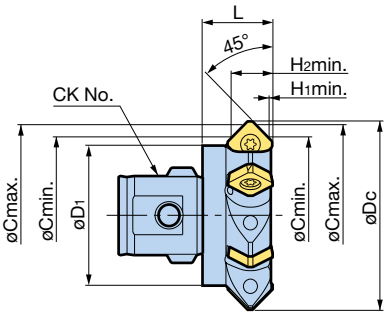
C-CUTTER MINI
CKB Type



Front and back chamfering of grooves and steps located at a distance.



Front and back chamfering of deep holes



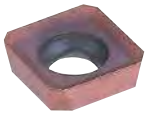
Front and back chamfering

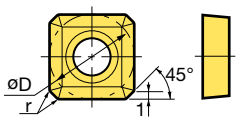
Model	CK No.	Face Mill Cutter	øDc	øD1	L	Chamfering diameter		H1min.	H2min.	Insert Model	Number of inserts	Weight (kg)
						øCmin.	øCmax.					
CKB1-C2232-45B-20	CK1	○	32.7	19	20	22	32	0.3	12.4	CM10...	4	0.05
CKB3-C3242-45B-20	CK3		42.7	31		32	42					0.14
-C5262-45B-20			62.7	31		52	62				6	0.24
CKB4-C4252-45B-20	CK4		52.7	39		42	52					0.24
CKB5-C5262-45B-20	CK5		62.7	51		52	62					0.40

1. A wrench and screws are included. Inserts must be ordered separately.
2. In case of chatter in plunge cutting, it is recommended to reduce the number of insert to 1 or 2 pcs.

Holders A77

For C-CUTTER MINI
■ Insert (optional accessory)





Suffix **SE** model designates a sharp cutting edge insert.

Model	Inscribed circle øD	r	Insert grade					Insert Clamping Screw Set Model
			ACP200	CWS20A NEW	ACM250F	NF15KA	DS20	
CM10C1	10	0.2	○	○	○	○	○	**S4S-T15**
CM10C1SE			○	—	—	—	—	

1. Inserts are in packets of 10 pcs. Please specify the insert model number and grade when ordering.
   Example: **CM10C1 ACP200**.....10 Pcs
2. The insert clamping screw set contains 10 screws and 1 wrench.
3. Insert Clamp Screws and tightening wrench are consumables. Order periodically for replacement or spares.

● Model Description

CM 10 C1 ACP200
- Material type
- Insert size
- C-CUTTER MINI

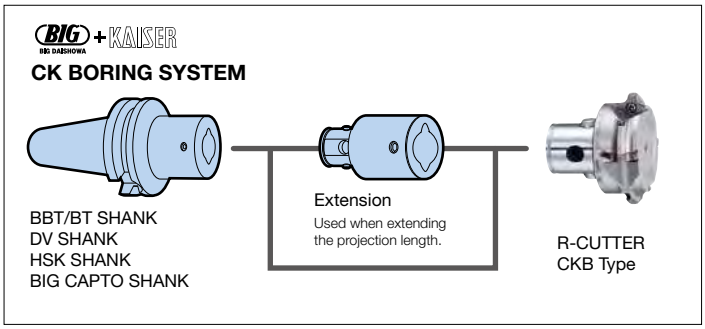
Insert Grade Description

ACP200	CWS20A NEW	ACM250F	NF15KA	DS20
for Steel	For hardened steel	for Stainless Steel	For cast iron	for Aluminum/Non-Ferrous Metal
PVD-coated carbide with superior wear resistance due to its nanometer-level thickness ultra-multilayered TiAlN and AlCrN film.	New carbide sub-strate with drastically improved toughness while maintaining high hardness. PVD-coated carbide with excellent wear resistance due to the ultra-multilayered thin film structure made of AlTiSiN.	PVD-coated carbide with excellent smoothness and resistance to welding and chipping, due to the ultra-multilayered thin film structure made of AlTiN and TiAlCrN.	New carbide substrate with drastically improved toughness while maintaining high hardness. This non-coated carbide provides both high wear and chipping resistance.	DLC-coated carbide exclusive for aluminum and non-ferrous metals, ultra-smooth with a low wear coefficient and superior welding resistance.

CK BORING SYSTEM ACCESSORIES

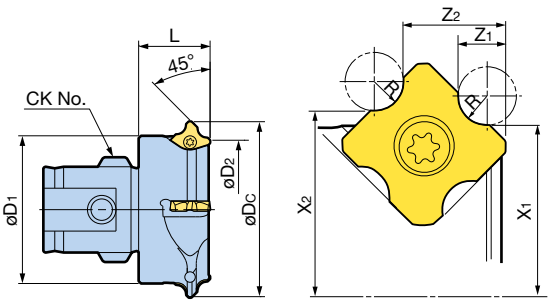
R-CUTTER PAT. Front and back chamfering

●Automated rounded chamfering.



● Model Description

CKB3 - RC 06 4 B - 15
- 15: Projection length (L)
- B: Double chamfering
- 4: Number of flutes
- 06: Compatible insert size
- RC: R-CUTTER
- CKB3: CK No.



Model	CK No.	øDc	øD1	øD2	L	Number of flutes	R	X1	Z1	X2	Z2	Insert Model	Weight (kg)
CKB3-RC064B-15	CK3	37	31	29.2	15	4	0.5	15.86	1.93	16.56	5.78	RC06...	0.12
							1	15.61	2.18	16.31	5.53		
							1.5	15.36	2.43	16.06	5.28		
							2	15.11	2.68	15.81	5.03		
CKB5-RC124B-25	CK5	62	50	46.3	25	4	1	25.81	3.79	27.22	11.63	RC12...	0.50
							2	25.31	4.29	26.72	11.13		
							3	24.80	4.79	26.21	10.63		
							4	24.30	5.29	25.71	10.13		

1. Inserts must be ordered separately.
2. Insert clamping screws and wrench are included.
3. Values in the table are reference only. Measure accurate values with a presetter.

Holders A77

For R-CUTTER

■Insert (Optional Accessory)

Uses 4 corners

● Model Description

RC 06 050 (ACP300)
- (ACP300): Grade
- 050: R Size
- 06: Insert size
- RC: R-CUTTER

Type	Insert Model	R Size	Insert Clamping Screw Set Model
RC06	**RC06050 (ACP300)**	R0.5	**S2TS-T6**
	RC06100 (ACP300)	R1.0	
	RC06150 (ACP300)	R1.5	
	RC06200 (ACP300)	R2.0	
RC12	**RC12100 (ACP300)**	R1.0	**S4S-T15**
	RC12200 (ACP300)	R2.0	
	RC12300 (ACP300)	R3.0	
	RC12400 (ACP300)	R4.0	

1. Inserts are available in packets of 10 pcs.
2. Insert is coated carbide.
3. The insert clamping screw set contains 10 screws and 1 wrench.
4. Insert clamp screws and tightening wrench are consumables. Order periodically for replacement or spares.

Insert set in a packet of 2 pcs. is also available. Please add **-2P** before each model number when ordering.

Example: **RC06050-2P(ACP300)**

CK NEW Hi-POWER MILLING CHUCK

Model	CK No.	Clamping diameter	L	Nut outer diameter	FK Wrench Model	MEGA WRENCH Model	Weight (kg)
CKB5-HMC20S ※	CK5	ø20	57	50	FK45-50L	MGR50L	0.8
CKB6-HMC20 ※	CK6	ø20	56	60	FK58-62	MGR60L	1.3
CKB7-HMC32	CK7	ø32	102	80	FK80-90	MGR80L	4.1

1. FK Wrench is included. MEGA WRENCH can also be used. (order separately)

Holders A77

- ※ marked models are not compatible with some Straight Collets. Compatibility Table G24

CK Boring Adapter

BSA Type

BSB Type

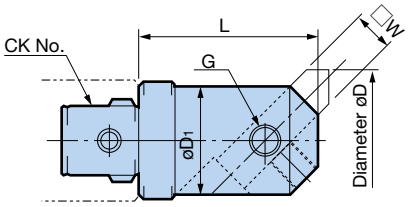


Fig. 1 BSA Type

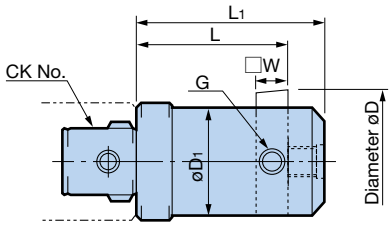


Fig. 2 BSB Type

øD	Fig.	Model	CK No.	L	L1	øD1	G	□W
25 - 38	1	**CKB1-BSA 25- 33**	CK1	32	–	19	M 6	8
30 - 42		**CKB2-BSA 30- 37.5**	CK2	35.9		24		
38 - 52		**CKB3-BSA 38- 56**	CK3	53.4		30	M 8	10
50 - 65		**CKB4-BSA 50- 62**	CK4	59		39	M10	13
62 - 90		**CKB5-BSA 62- 72**	CK5	70		50		16
90 - 125		**CKB6-BSA 90-101**	CK6	97		75	M12	19
105 - 160		**CKB7-BSA105-132**	CK7	129		90		25
20 - 40	2	**CKB1-BSB 20- 33**	CK1	33	43	17	M 6	6
25 - 52		**CKB2-BSB 25- 37.5**	CK2	37.5	52.5	20	M 8	8
38 - 70		**CKB3-BSB 38- 41**	CK3	41	56	30	M10	10
50 - 90		**CKB4-BSB 50- 47**	CK4	47	62	39		13
62 - 115		**CKB5-BSB 62- 57**	CK5	57	72	50		16
90 - 150		**CKB6-BSB 90- 71**	CK6	71	86	75	M12	19
105 - 190		**CKB7-BSB105-117**	CK7	117	132	90		25

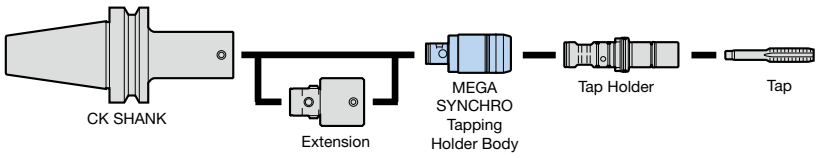
1. Boring bit is not included. Please use commercial products.

Holders A77

MEGA SYNCHRO TAPPING HOLDER PAT. Tapping range: M2 - M20

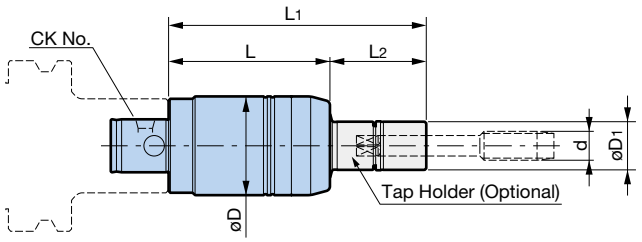
Center through

- Improves thread quality and tap life by reducing thrust loads caused by synchronization errors up to 90%.



- Model Description (Body)

CKB4 - MGT6 - 62
- 62: L dimension
- MGT6: MEGA SYNCHRO No.
- CKB4: CK No.



Model	CK No.	Tap Holder Model	Tapping range d	øD	øD1	L	L1	L2	Body weight (kg)
CKB4-MGT 6-62	CK4	MGT 6-□- 30	M2 - M6 No.3 - U1/4	36	16	62	92	30	0.5
		- 70					132	70	
		-100					162	100	
		-150					212	150	
		-200					262	200	
CKB4-MGT12-67		MGT12-□- 30	M6 - M12 U1/4 - U7/16 P1/8	41	20	67	97	30	0.6
		- 70					137	70	
		-100					167	100	
		-150					217	150	
		-200					267	200	
CKB5-MGT20-87	CK5	MGT20-□- 35	M12 - M20 U1/2 - U3/4 P1/4 - P3/8	54	30	87	122	35	1.2
		- 85					172	85	
		-115					202	115	
		-150					237	150	

1. MGT Set Screw is included.
2. Tap holder must be ordered separately.

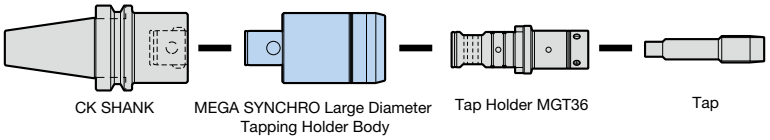
Cannot be used with machining center without synchronized tapping function.

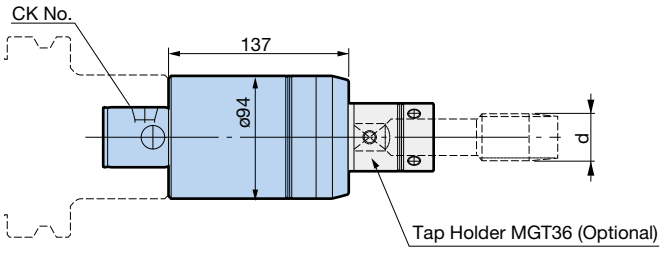
Tap holders A134 Accessories G31 Holders A77

[Large Diameter Tap MGT36] Tapping range: M20 - M36

Center through

- Functions smoothly under high cutting torque of large diameter tapping.





Model	CK No.	Tapping range d	Body weight (kg)
CKB7-MGT36-137	CK7	M20 - M36 P1/2 - P1	6.8

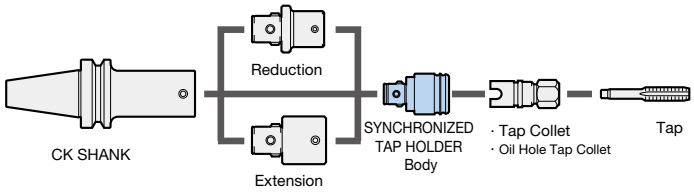
1. MGT Set Screw is included.
2. Tap holder is not included. Please order separately.

Cannot be used with machining center without synchronized tapping function.

Large-diameter tap holders A139 Holders A77
MGT36 Optional Accessories G32

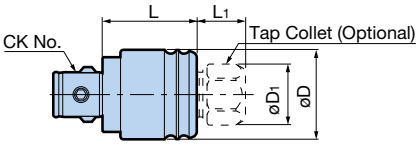
SYNCHRONIZED TAP HOLDER (STC Type) M2 - M30

● Tap Collet type enables quick tap change.
Flexible tool layout in combination with the CK Shanks.



● Model Description

CKB2 - STC 8 - 47.5
- 47.5: Tapping range
- STC: SYNCHRONIZED TAP HOLDER
- CKB2: CK No.



Model	Tapping range	CK No.	øD	øD1	L	L1	Body weight (kg)	Tap Collet
CKB2-STC 8-47.5	M 2 - M 4	CK2	25.5	15.8	30.5	17	0.10	TC 8-□
	M 5 - M 8			19				
CKB3-STC12-66	M 3 - M12	CK3	32	22	36	30	0.18	TC12-□
CKB4-STC20-72	M 7 - M12	CK4	44	22	47	25	0.42	TC20-□
	M14 - M20			31				
CKB5-STC30-92	M20 - M30	CK5	55	41	54	38	0.72	TC30-□

1. Tap collet must be ordered separately.
2. Cannot be used with machining center without synchronized tapping function.
3. The L1 dimension is 5mm longer with oil hole tap collets.

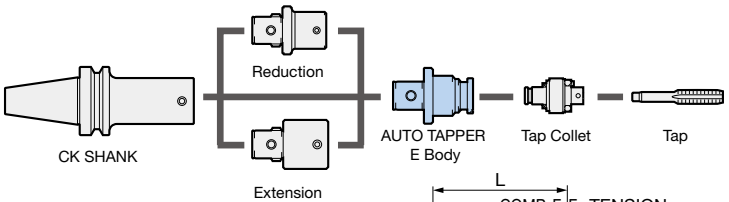
Holders A77

Tap Collet TC Type (optional product)

Tap Collets A144
Oil Hole Tap Collets A145

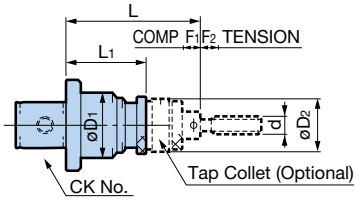
CK AUTO TAPPER E TYPE M3 - M24

● Combination with a long type CK Shank is convenient when long tapper is required.



● Model Description

CK6 - ATE 12
- 12: Tapping range
- ATE: AUTO TAPPER E
- CK6: CK No.



Model	Tapping range	CK No.	øD1	øD2	L	L1	F1	F2	Weight (kg)	Tap Collet
CK6-ATE12	M3 - M12	CK6	47	38.5	90	50	5	10	0.9	TCE12-□
-ATE24	M9 - M24		64	58.5	135	80	7	15	1.8	TCE24-□

1. Torque limiter is built into the tap collet.
2. The extension can be used to allow tapping inside deep holes.
3. Tap collet must be ordered separately.

Holders A77

Tap Collet TCE Type (optional accessory)

Tap Collets A147

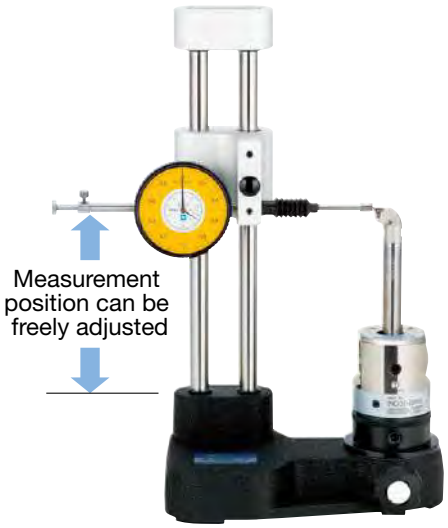
CK Presetter

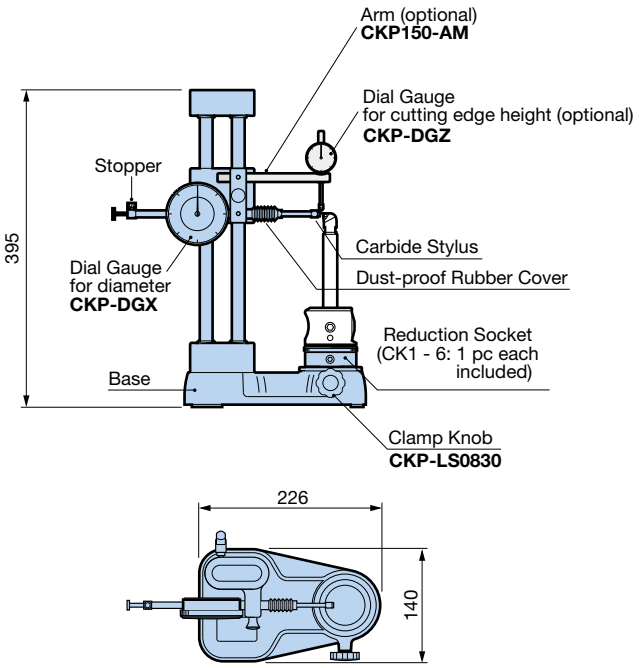
Fully utilizes the merits of a modular system.

- Low-cost, exclusive presetter allows easy presetting of the boring head alone.
- Compact design enables operations in the limited space beside the machine.

[CKP150ZA] (for CK1-6)

One unit allows easy presetting of various lengths of insert holders as well as roughing and finishing heads.



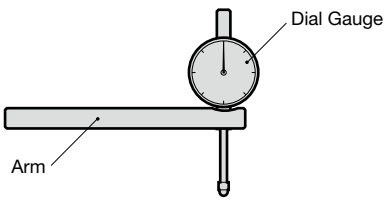


The optional "Dial Gauge for Edge Height" enables balance and step cutting setup for RW Boring Head.

Model	CKP150ZA
Measuring capacity	Radial direction: 0 - ø150mm (CK1 - CK6)
Min. scale	Radial direction: 0.02mm/ø
CK No.	CK1 - CK6 (Reduction socket compatible)
Max. tool height	Max. 227mm (When using CK6 reduction socket)
MASTER GAUGE	ø50±0.005
Reading method	Diameter direct reading method
Weight	6.5kg

1. Use within 0.02mm/ø measuring accuracy range.
2. Note that the maximum measuring diameter is 150mm.
3. Tool lengths cannot be measured.
4. For finishing with EWN Boring Head, first set to a smaller diameter than the target. After trial cutting, adjust the diameter by reading the scale on the head against the measured value on the machine.

■ Edge Height Measuring Dial Gauge Set (optional accessory)

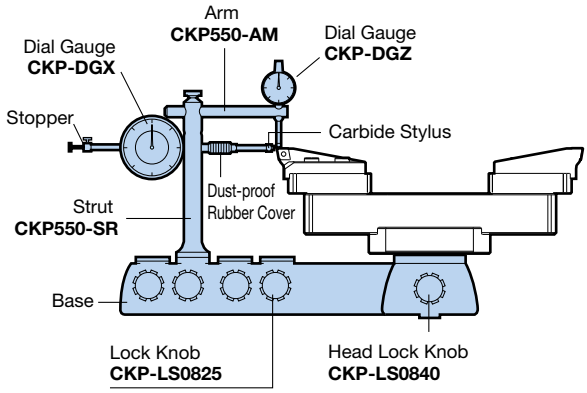


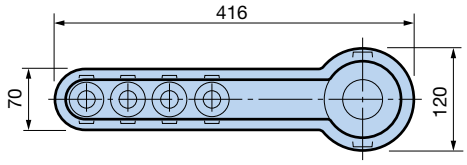
Min. scale: 0.01mm

Set Model	Set contents	
	Dial Gauge	Arm
CKP-DGZS	CKP-DGZ	CKP150-AM

Dial gauge and arm are also available individually.

[CKP550] (For CK7)





Model	CKP550
Measuring capacity	ø100 - 550 (CK7)
CK No.	For CK7 only
Min. scale	Radial direction: 0.02mm/ø
	Axial direction: 0.01mm
MASTER GAUGE	ø120±0.005
Reading method	Diameter addition reading method
Weight	9.0kg

1. EWN100-203CKB7, SW98-153CKB7, EWB100-153CK7AL and EWB150-203CK7AL cannot be used due to position of the stylus.

Tool Presetters to measure the assembled boring head with a shank are also available. See I11 for details.

TOOL PRESETTER TPS

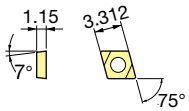
High accuracy 2D edge sensor enables measurement in two directions.
#40, #50, HSK-A40, A50, A63, A100 and BIG CAPTO C5, C6, C8 are supported.
Simple, compact and economical TPS-30E/40E models for BT(BBT)30 and 40 taper tools are also available.

TPS-30E/40E

CK BORING SYSTEM INSERT

● BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

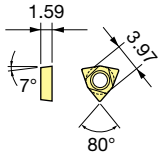
<EC03>



Cylindrical Tool ●**Carbide Cylindrical Insert Holder**/EB04, EB05

No.	Insert Model	Nose Radius	Corner	Workpiece	Grade	Material
1	**ECGM03X102ELA**	0.2	2	General Steels	T1500A	Cermet
2	**ECGM03X102ELA**		2	Aluminum/ Cast Iron	H1	Carbide (K10 Equivalent)
3	**ECGM03X102FN** NEW		2	Hardened Steel	NB10HA	cBN

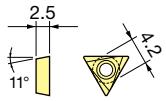
<WC02>



Head Cylindrical Tool ●**EW MICRO HEAD**/EW15, 18 ●**Carbide Cylindrical Insert Holder**/EB06, EB7.5
●**Cylindrical Tool for EWN04-15**/ST7W-EB6 - EB7

No.	Insert Model	Nose Radius	Corner	Workpiece	Grade	Material
1	**WCGT020102ELA**	0.2	3	General Steels	T1200A	Cermet
2	**WCGT020102ELA**			Aluminum/Cast Iron	H1	Carbide (K10 Equivalent)
3	**WCGT020102FN**		1	Aluminum	DA2200	Diamond
4	**WCGT020102FN**			Hardened Steel	BNX20	cBN
5	**WCGT020102FN**			Ductile	BN7000	

<TP07>



Head Cylindrical Tool ●**Cylindrical Tool for EWN04-15**/ST7W-EB8 - EB12

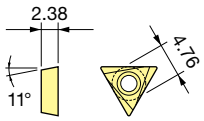
No.	Insert Model	Nose Radius	Corner	Workpiece	Grade	Material
1	**TPGP070202EL**	0.2	3	General Steels	T1500A	Cermet
2	**TPGD070202FN**			Cast Iron	H1	Carbide (K10 Equivalent)
3	**TPGD070202FN**		1	Hardened Steel	BN2000	cBN
4	**TPGP070202FLA**		3	Aluminum	H1	Carbide (K10 Equivalent)
5	**TPGD070202FN**		1	Aluminum	DA2200	Diamond

[Remarks (All Inserts)]

1. Inserts are available in a packet of 10 pcs except diamond and cBN inserts.
2. Diamond and cBN inserts are available from 1 pc.
3. Please specify the insert model number and grade when ordering.
   Example: **ECGM03X102ELA** **(T1500A)**... 10 pcs
   (Insert Model / Grade)

● BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

<TP08>



Head Insert Holder

● **For EWB**/EBH3-1 ● **For EWN/EWE**/ENH1 - 3, ENH3-1J - ENH5-3J
● **Insert Holder**/EB09N - EB46N

No.	Insert Model	Nose Radius	Corner	Workpiece	Grade	Material
1	**TPMT080202EFM**	0.2	3	General Steels 3D Breaker	T1500A	Cermet (M-class)
2	**TPMT080204EFM**	0.4	3			
3	**TPMT080202EFM**	0.2	3		T2000Z	Coated Cermet
4	**TPMT080204EFM**	0.4	3			
5	**TPGP080202ELM**	0.2	3		T2500A	Cermet (G-class)
6	**TPGP080204ELM** NEW	0.4	3			
7	**TPGP080202ELM**	0.2	3		T2500F	Coated Cermet
8	**TPGP080204ELM** NEW	0.4	3			
9	**TPGP080202EL**	0.2	3	General Steels	T1500A	Cermet (G-class)
10	**TPGP080204EL**	0.4	3			
11	**TPGP080202EL**	0.2	3		T2000Z	Coated Cermet
12	**TPGP080204EL**	0.4	3			
13	**TPGP080202EL**	0.2	3	General Steels Interrupted Cutting	T130A	Cermet (G-class)
14	**TPGP080204EL**	0.4	3			
15	**TPGP080202EL**	0.2	3		T130ZX	Coated Cermet
16	**TPGP080204EL**	0.4	3			
17	**TPGD080202FN**	0.2	1	Hardened Steel	BN2000	cBN
18	**TPGD080204FN**	0.4	1			
19	**TPGD080202FN**	0.2	1		BNC200	Coated cBN
20	**TPGD080204FN**	0.4	1			
21	**TPGP080202L**	0.2	3	Inconel Titanium	AC520U	Coated Carbide
22	**TPGP080204L**	0.4	3			
23	**TPGD080202FN**	0.2	3	Cast Iron	H1	Carbide (K10 Equivalent)
24	**TPGD080204FN**	0.4	3			
25	**TPGD080202FN**	0.2	3	Cast Iron/Ductile	H1ZX	Coated Carbide
26	**TPGD080204FN**	0.4	3			
27	**TPGD080202FN**	0.2	1	Cast Iron	BN7000	cBN
28	**TPGD080204FN**	0.4	1			
29	**TPGD080202FN**	0.2	1	Ductile	BN500	
30	**TPGD080204FN**	0.4	1			
31	**TPGD080202FN**	0.2	1		BNC500	Coated cBN
32	**TPGD080204FN**	0.4	1			
33	**TPGD080204FN3**	0.4	3			
34	**TPGP080202FLA**	0.2	3	Aluminum	H1	Carbide (K10 Equivalent)
35	**TPGP080204FLA**	0.4	3			
36	**TPGD080202FN**	0.2	1		DA2200	Diamond
37	**TPGD080204FN**	0.4	1			
38	**TPGD080202FLM**	0.2	1	Aluminum 3D Breaker	DA1000	
39	**TPGD080204FLM**	0.4	1			
40	**TPGP080201FLA**	0.1	3	Chatter Resistant	A1	Micro-Grained Carbide

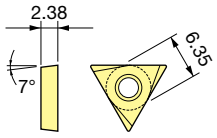
[Remarks (All Inserts)]

1. Inserts are available in a packet of 10 pcs except diamond and cBN inserts.
2. Diamond and cBN inserts are available from 1 pc.
3. Please specify the insert model number and grade when ordering.
   Example: **TPMT080202EFM** (Insert Model) **(T1500A)** (Grade)... 10 pcs

CK BORING SYSTEM INSERT

● BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

<TC11>



Head
Insert Holder

● **For EWB**/EBH4 - 6
● **For EWN/EWE**/ENH4 - 7, ENH6-1J - ENH6-3J, ENH7-1J
● **Insert Holder**/EB17AJ - 40AJ

No.	Insert Model	Nose Radius	Corner	Workpiece	Grade	Material
1	**TCMT110204EFM**	0.4	3	General Steels 3D Breaker	T1500A	Cermet (M-class)
2	**TCMT110208EFM**	0.8	3			
3	**TCMT110204EFM**	0.4	3		T2000Z	Coated Cermet
4	**TCMT110208EFM**	0.8	3			
5	**TCGT110202ELM**	0.2	3		T2500A	Cermet (G-class)
6	**TCGT110204ELM** NEW	0.4	3			
7	**TCGT110202ELM**	0.2	3		T2500F	Coated Cermet
8	**TCGT110204ELM** NEW	0.4	3			
9	**TCGT110202EL**	0.2	3	General Steels	T1500A	Cermet (G-class)
10	**TCGT110204EL**	0.4	3			
11	**TCGT110208EL**	0.8	3			
12	**TCGT110202EL**	0.2	3		T2000Z	Coated Cermet
13	**TCGT110204EL**	0.4	3			
14	**TCGT110208EL**	0.8	3			
15	**TCGT110202FN**	0.2	1	Hardened Steel	BN2000	cBN
16	**TCGT110204FN**	0.4	1			
17	**TCGT110202FN**	0.2	1		BNC200	Coated cBN
18	**TCGT110204FN**	0.4	1			
19	**TCGT110202L**	0.2	3	Inconel Titanium	AC520U	Coated Carbide
20	**TCGT110204L**	0.4	3			
21	**TCGT110202FN**	0.2	3	Cast Iron	H1	Carbide (K10 Equivalent)
22	**TCGT110204FN**	0.4	3			
23	**TCGT110208FN**	0.8	3			
24	**TCGT110202FN**	0.2	3	Cast Iron/Ductile	H1ZX	Coated Carbide
25	**TCGT110204FN**	0.4	3			
26	**TCGT110208FN** NEW	0.8	3			
27	**TCGT110202FN**	0.2	1	Cast Iron	BN7000	cBN
28	**TCGT110204FN**	0.4	1			
29	**TCGT110208FN**	0.8	1			
30	**TCGT110202FN**	0.2	1	Ductile	BN500	
31	**TCGT110204FN**	0.4	1			
32	**TCGT110202FN**	0.2	1		BNC500	Coated cBN
33	**TCGT110204FN**	0.4	1			
34	**TCGT110208FN**	0.8	1			
35	**TCGT110204FN3**	0.4	3			
36	**TCGT110208FN3**	0.8	3			
37	**TCGT110202FLA**	0.2	3	Aluminum	H1	Carbide (K10 Equivalent)
38	**TCGT110204FLA**	0.4	3			
39	**TCGT110208FLA**	0.8	3			
40	**TCGT110202FN**	0.2	1		DA2200	Diamond
41	**TCGT110204FN**	0.4	1			
42	**TCGT110208FN**	0.8	1			
43	**TCGT110202FLM**	0.2	1	Aluminum 3D Breaker	DA1000	
44	**TCGT110204FLM**	0.4	1			
45	**TCGT110208FLM**	0.8	1			

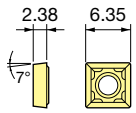
[Remarks (All Inserts)]

1. Inserts are available in a packet of 10 pcs except diamond and cBN inserts.
2. Diamond and cBN inserts are available from 1 pc.
3. Please specify the insert model number and grade when ordering.
   Example: **TCMT110204EFM** (Insert Model) **(T1500A)** (Grade)... 10 pcs

CK BORING SYSTEM INSERT

● BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

<SC06>

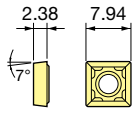


Insert Holder Cartridge

●**For EWN/EWE**/ENH4-1S - ENH5-3S
●**For SW**/SW2026A, SW2531A, SW2533A, SW3240A

No.	Insert Model	Nose Radius	Workpiece	Grade	Material
1	**SCMP060204EFM**	0.4	General Steels	T1500A	Cermet (P10)
2	**SCMP060204EFM**			CW20PA	Coated Carbide (P20)
3	**SCMP060204EFM**			CW30PA	Coated Carbide (P30)
4	**SCMP060204ESM**		SS/SUS	AC630M	Coated Carbide (M30)
5	**SCMP060204EFM**		Cast Iron	CW15KA	Coated Carbide (K10)
6	**SCMP060204EFM**			CW20KA	Coated Carbide (K20)
7	**SCGA060204FN**			H1	Carbide (K10 Equivalent)
8	**SCGP060204FLA**		Aluminum	H1	Carbide + Breakers for Aluminum

<SC07>

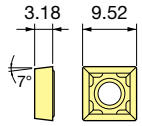


Insert Holder Cartridge

●**For EWN/EWE**/ENH6-1S - ENH6-3S, ENH7-1S
●**For RW**/RW2533A

No.	Insert Model	Nose Radius	Workpiece	Grade	Material
1	**SCGP070204EFM**	0.4	General Steels	T1500A	Cermet (P10)
2	**SCMP070204EFM**			CW20PA	Coated Carbide (P20)
3	**SCMP070204EFM**			CW30PA	Coated Carbide (P30)
4	**SCMP070204ESM**		SS/SUS	AC630M	Coated Carbide (M30)
5	**SCMP070204EFM**		Cast Iron	CW15KA	Coated Carbide (K10)
6	**SCMP070204EFM**			CW20KA	Coated Carbide (K20)
7	**SCGA070204FN**			H1	Carbide (K10 Equivalent)
8	**SCGP070204FLA**		Aluminum	H1	Carbide + Breakers for Aluminum

<SC09>

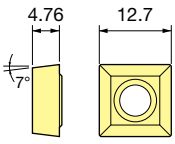


Cartridge

●**For SW**/SW3242A, SW4151A, SW4154A, SW5366A
●**For RW**/RW3242A, RW4154A

No.	Insert Model	Nose Radius	Workpiece	Grade	Material
1	**SCGM090304EFM**	0.4	General Steels	T1500A	Cermet (P10)
2	**SCGM090308EFM**	0.8			
3	**SCMM090304EFM**	0.4		CW20PA	Coated Carbide (P20)
4	**SCMM090308EFM**	0.8			
5	**SCMM090308EFM**	0.8		CW30PA	Coated Carbide (P30)
6	**SCMM090308ESM**	0.8	SS/SUS	AC630M	Coated Carbide (M30)
7	**SCMM090308EFM**	0.8	Cast Iron	CW15KA	Coated Carbide (K10)
8	**SCMM090308EFM**	0.8		CW20KA	Coated Carbide (K20)
9	**SCGA090304FN**	0.4		H1	Carbide (K10 Equivalent)
10	**SCGM090308FLA**	0.8	Aluminum	H1	Carbide + Breakers for Aluminum

<SC12>



Cartridge

●**For SW**/SW5370A, SW6986A, SW6890A, SW88110A, SW98126A, SW125153A, SW148176A, SW175203A
●**For TW**/TW200A
●**For RW**/RW5370A, RW6888A, RW86106A, RW100125A, RW125150A

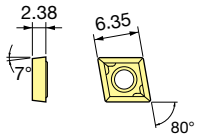
No.	Insert Model	Nose Radius	Workpiece	Grade	Material
1	**SCGM120404EFM**	0.4	General Steels	T1500A	Cermet (P10)
2	**SCGM120408EFM**	0.8			
3	**SCMM120404EFM**	0.4		CW20PA	Coated Carbide (P20)
4	**SCMM120408EFM**	0.8			
5	**SCMM120408EFM**	0.8		CW30PA	Coated Carbide (P30)
6	**SCMM120408ESM**	0.8	SS/SUS	AC630M	Coated Carbide (M30)
7	**SCMM120408EFM**	0.8	Cast Iron	CW15KA	Coated Carbide (K10)
8	**SCMM120408EFM**	0.8		CW20KA	Coated Carbide (K20)
9	**SCGA120404FN**	0.4		H1	Carbide (K10 Equivalent)
10	**SCGM120408FLA**	0.8	Aluminum	H1	Carbide + Breakers for Aluminum

[Remarks]
1. Inserts are available in packets of 10 pcs.
2. Please specify the insert model number and grade when ordering.
Example: **SCMP060204EFM** **(T1500A)**... 10 pcs
Insert Model / Grade

CK BORING SYSTEM INSERT

● BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

<CC06>

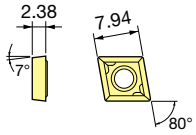


Insert Holder Cartridge

●**For EWN/EWE**/ENH4-1F - ENH5-3F
●**For SW**/SW2026E, SW2531E, SW2533E, SW3240E

No.	Insert Model	Nose Radius	Workpiece	Grade	Material
1	**CCMP060204EFM**	0.4	General Steels	T1500A	Cermet (P10)
2	**CCMP060204EFM**			CW20PA	Coated Carbide (P20)
3	**CCMP060204EFM**			CW30PA	Coated Carbide (P30)
4	**CCMP060204ESM**		SS/SUS	AC630M	Coated Carbide (M30)
5	**CCMP060204EFM**		Cast Iron	CW15KA	Coated Carbide (K10)
6	**CCMP060204EFM**			CW20KA	Coated Carbide (K20)
7	**CCGA060204FN**			H1	Carbide (K10 Equivalent)
8	**CCGP060204FLA**		Aluminum	H1	Carbide + Breakers for Aluminum

<CC07>

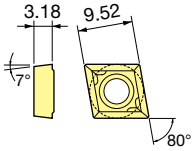


Insert Holder Cartridge

●**For EWN/EWE**/ENH6-1F - ENH6-3F, ENH7-1F
●**For RW**/RW2533E, RW3037E

No.	Insert Model	Nose Radius	Workpiece	Grade	Material
1	**CCGP070204EFM**	0.4	General Steels	T1500A	Cermet (P10)
2	**CCMP070204EFM**			CW20PA	Coated Carbide (P20)
3	**CCMP070204EFM**			CW30PA	Coated Carbide (P30)
4	**CCMP070204ESM**		SS/SUS	AC630M	Coated Carbide (M30)
5	**CCMM070204ESS**		SS	CW30PA	(Breakers for SS)
6	**CCMP070204EFM**		Cast Iron	CW15KA	Coated Carbide (K10)
7	**CCMP070204EFM**			CW20KA	Coated Carbide (K20)
8	**CCGA070204FN**			H1	Carbide (K10 Equivalent)
9	**CCGP070204FLA**		Aluminum	H1	Carbide + Breakers for Aluminum

<CC09>



Cartridge

●**For SW**/SW3242E, SW4151E, SW4154E, SW5366E
●**For RW**/RW3242E, RW4048E, RW4154E, RW5162E

No.	Insert Model	Nose Radius	Workpiece	Grade	Material
1	**CCGM090304EFM**	0.4	General Steels	T1500A	Cermet (P10)
2	**CCGM090308EFM**	0.8			
3	**CCMM090304EFM**	0.4		CW20PA	Coated Carbide (P20)
4	**CCMM090308EFM**	0.8			
5	**CCMM090308EFM**	0.8		CW30PA	Coated Carbide (P30)
6	**CCMM090308ESM**	0.8	SS/SUS	AC630M	Coated Carbide (M30)
7	**CCMM090308ESS**	0.8	SS	CW30PA	(Breakers for SS)
8	**CCMM090308EFM**	0.8	Cast Iron	CW15KA	Coated Carbide (K10)
9	**CCMM090304EFM** NEW	0.4		CW20KA	Coated Carbide (K20)
10	**CCMM090308EFM**	0.8			
11	**CCGA090304FN**	0.4		H1	Carbide (K10 Equivalent)
12	**CCGM090308FLA**	0.8	Aluminum	H1	Carbide + Breakers for Aluminum

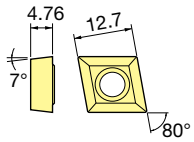
[Remarks]
1. Inserts are available in packets of 10 pcs.
2. Please specify the insert model number and grade when ordering.
Example: **CCMP060204EFM** **(T1500A)**... 10 pcs
(Insert Model) (Grade)

CK BORING SYSTEM INSERT

● BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

<CC12>

Cartridge



●**For SW**/SW5370E, SW6986E, SW6890E, SW88110E, SW98126E, SW125153E, SW148176E, SW175203E

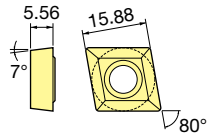
●**For TW**/TW200E

●**For RW**/RW5370E, RW6681E, RW6888E, RW86106E, RW100125E, RW125150E

No.	Insert Model	Nose radius	Workpiece	Grade	Material
1	**CCGM120404EFM**	0.4	General Steels	T1500A	Cermet (P10)
2	**CCGM120408EFM**	0.8			
3	**CCMM120404EFM**	0.4		CW20PA	Coated Carbide (P20)
4	**CCMM120408EFM**	0.8			
5	**CCMM120408EFM**	0.8		CW30PA	Coated Carbide (P30)
6	**CCMM120408ESM**	0.8	SS/SUS	AC630M	Coated Carbide (M30)
7	**CCMM120408ESS**	0.8	SS	CW30PA	(Breakers for SS)
8	**CCMM120408EFM**	0.8	Cast Iron	CW15KA	Coated Carbide (K10)
9	**CCMM120404EFM** NEW	0.4		CW20KA	Coated Carbide (K20)
10	**CCMM120408EFM**	0.8			
11	**CCGA120404FN**	0.4		H1	Carbide (K10 Equivalent)
12	**CCGM120408FLA**	0.8	Aluminum	H1	Carbide + Breakers for Aluminum

<CC16>

Cartridge



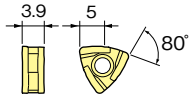
●**For SW**/SW6890EL, SW88110EL, SW98126EL, SW125153EL, SW148176EL, SW175203EL

●**For TW**/TW200EL

No.	Insert Model	Nose radius	Workpiece	Grade	Material
1	**CCMM160508EFM**	0.8	General Steels	CW20PA	Coated Carbide (P20)
2	**CCMM160508EFM**			CW30PA	Coated Carbide (P30)
3	**CCMM160508ESS**		SS	CW30PA	(Breakers for SS)
4	**CCMM160508EFM**		Cast Iron	CW20KA	Coated Carbide (K20)

<ZN05> Registered Design

Cartridge

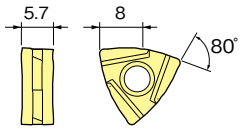


●**For SW**/SW3242N, SW4151N, SW4154N, SW5366N

No.	Insert Model	Nose radius	Corner	Workpiece	Grade	Material
1	**ZNMU050308EM** NEW	0.8	6	General Steels	CW20PA	Coated Carbide
2	**ZNMU050308EM** NEW			Cast Iron	CW15KA	

<ZN08> Registered Design

Cartridge



●**For SW**/SW5370N, SW6986N, SW6890N, SW88110N, SW98126N, SW125153N, SW148176N, SW175203N

No.	Insert Model	Nose radius	Corner	Workpiece	Grade	Material
1	**ZNMU080508EM** NEW	0.8	6	General Steels	CW20PA	Coated Carbide
2	**ZNMU080508EM** NEW			Cast Iron	CW15KA	

[Remarks]

1. Inserts are available in packets of 10 pcs.

2. Please specify the insert model number and grade when ordering.
Example: **CCGM120404EFM** (Insert Model) **(T1500A)** (Grade)... 10 pcs

Insert Grade Introduction

T1500A

General purpose cermet from finishing to roughing.
Special technology improves the material's resistance to thermal shock, allowing safe use even for wet machining.

Grade	Cermet P10 Grade
T R S	2.1 (GPa)
Hardness	92.0 (HRA)

T2000Z

Cermet is coated with newly developed PVD film for smooth surface and good adhesion. The material easily doubles tool life compared to non-coated cermet, and enables a high-quality finished surface.

Grade	Cermet P10-20 Grade
Coating film	TiN/AℓN
T R S	2.1 (GPa)
Hardness	92.0 (HRA)

T2500A

Cermet with fine and uniform grain structure, achieving improved toughness and high hardness. Excellent thermal shock resistance helps enable stable finishing.

Grade	Cermet P30 Grade
T R S	2.4 (GPa)
Hardness	91.8 (HRA)

T2500F

Cermet insert is coated with smooth PVD film. This material has superior welding and chipping resistance compared to non-coated inserts.

Grade	Cermet P30 Grade
Coating film	AℓTiCrN base
T R S	2.4 (GPa)
Hardness	91.8 (HRA)

T130A

The unique production process of this tough cermet achieves a fine and uniform structure that has excellent chipping resistance. Achieves longer tool life than T1500A when used for interrupted cutting finishing.

Grade	Cermet P10 Grade
T R S	2.1 (GPa)
Hardness	91.8 (HRA)

T130ZX

The cermet is treated further with a layer of ceramic kept uniform with the new PVD method.
This doubles the tool life while maintaining the toughness of the material.

Grade	Cermet Tough Grade
Coating film	TiN/AℓN
T R S	2.0 (GPa)
Hardness	91.9 (HRA)

AC520U

The tough substrate is coated with multiple layers of nanometer-level thickness to create a material suitable for cutting difficult materials such as titanium with excellent wear resistance and notch wear resistance.

Grade	Carbide S20 Grade
Coating film	TiAℓN/AℓCrN
T R S	2.5 (GPa)
Hardness	91.7 (HRA)

H1

With slightly higher wear resistance than K10 material, this material is a best selling type of carbide that can be used across a wide range from roughing to finishing.

Grade	Fine Carbide K10 Grade
T R S	2.1 (GPa)
Hardness	92.9 (HRA)

H1ZX

For stable machining of ductile cast iron we recommend this material, made by coating carbide H1 with alumina for increased wear resistance.

Grade	Carbide K10 Grade
Coating film	TiN/Aℓ$_2$O$_3$/TiCN
T R S	2.1 (GPa)
Hardness	92.9 (HRA)

A1

Even among ultra-fine particle alloy steels, this material is notably tough; it also boasts excellent welding resistance at low to medium speeds, has a sharp cutting edge, and handles chatter suitably for fine diameter machining.

Grade	Ultra-Fine Particles Z20 Grade
T R S	3.3 (GPa)
Hardness	91.5 (HRA)

CW20PA

Suppressing abnormal damage through a smoother surface, this grade provides highly stable tool life in diverse conditions.

Grade	Coated Carbide P20 Grade
Coating film	TiN base/Al$_2$O$_3$/TiCN
T R S	2.3(GPa)
Hardness	90.1(HRA)

CW30PA

Excellent chipping resistance ensures stable tool life even in interrupted cutting.

Grade	Coated Carbide P30 Grade
Coating film	TiN base/Al$_2$O$_3$/TiCN
T R S	2.6(GPa)
Hardness	89.4(HRA)

AC630M

The extremely smooth thin film coating gives this material great sharpness. Ideal for stainless steel or other materials that are easily work hardened.

Grade	Carbide M30 Grade
Coating film	TiAℓN/AℓCrN
T R S	2.7 (GPa)
Hardness	89.5 (HRA)

CW15KA

This cast iron grade has excellent wear resistance in high-speed cutting due to its high-adhesion, high-strength coating.

Grade	Coated Carbide K10 Grade
Coating film	Al$_2$O$_3$/TiCN
T R S	2.5(GPa)
Hardness	91.1(HRA)

CW20KA

This grade has excellent chipping resistance, enabling stable machining of castings in various cutting conditions.

Grade	Coated Carbide K20 Grade
Coating film	Al$_2$O$_3$/TiCN
T R S	2.5(GPa)
Hardness	91.1(HRA)

BNX20

Crater resistant cBN grade. Cutting edge is arranged to suit small diameter boring of hardened materials.

BNC200

A combination of exclusive cBN substrate, selected for its strength, and special wear resistant TiAlN coating achieves a long and stable tool life across a wide range from low to high speed cutting, interrupted cutting, and high-efficiency cutting of hardened steel.

BNC500

By combining a ceramic coating with excellent heat resistance and a substrate with excellent wear resistance, stable long life can be achieved even when finishing difficult-to-cut cast iron materials.

BN2000

A cBN material with an excellent balance of wear resistant and chipping resistant properties. Reliable performance is achieved in a wide range of cutting conditions in continuous and medium-heavy interrupted cutting.

NB10HA

The use of a newly developed ceramic binder balances chipping resistance with wear resistance in this general-purpose grade, supporting machining of hardened steel across the board.

BN500/BN7000

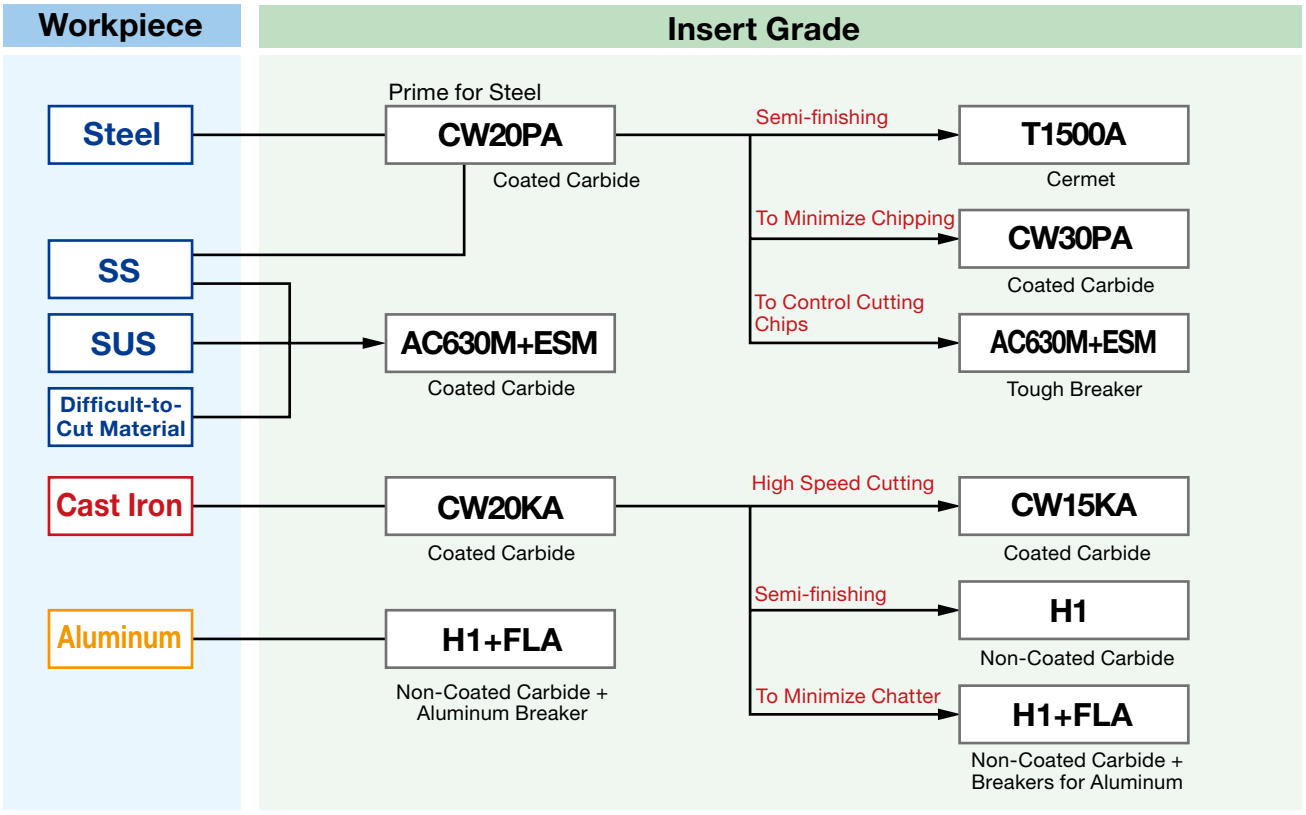
A cBN material with Co binder developed for cast iron. BN7000 is a material with excellent wear resistant and chipping resistant properties. BN7000 is recommended for high speed cutting of cast iron. If not satisfied with the wear resistance, use BN500.

DA2200/DA1000

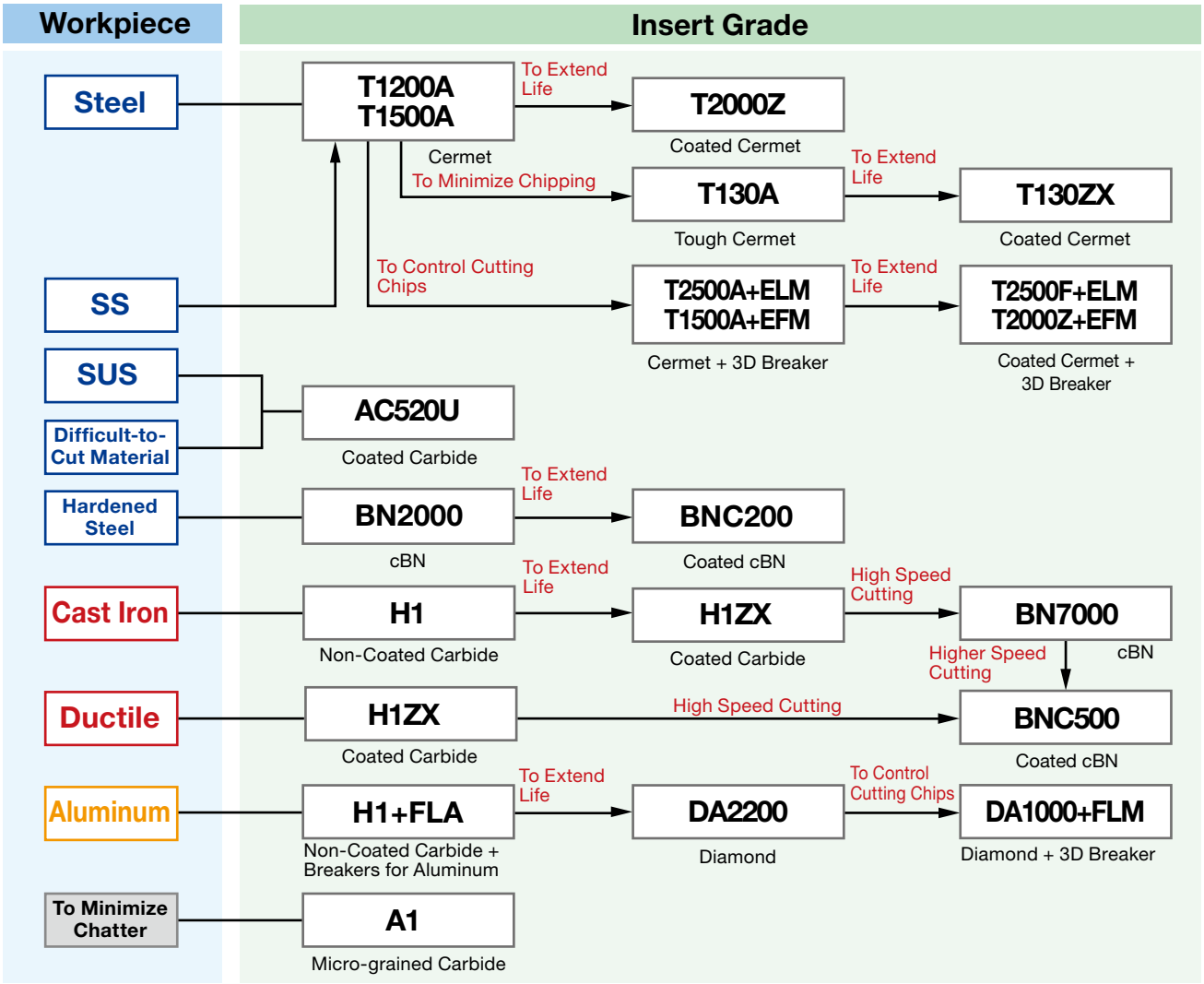
Ultra-precise sintering of ultra-fine diamond particles drastically improves the material's chipping resistance. With strength comparable to that of carbide (K10 type), it achieves a stable long tool life in interrupted cutting of aluminum alloys. Furthermore, the material boasts great cutting edge efficiency and achieves a good finish surface.

CK BORING SYSTEM Insert Selection Chart

For Roughing

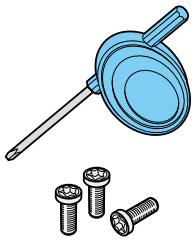


For Finishing



Wrenches/Others

■ Insert Clamping Screw Set (Contains 10 screws and 1 wrench)

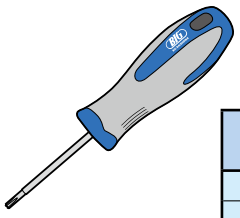


Set Model	Insert size	Shank/Insert Holder/Cartridge	Insert Clamp Screw	
			Thread	Wrench Model
S1.6S-T3-S	EC03	EB04	M1.6F×2	DA-T3
S1.6S-T3		EB05	M1.6F×2.5	
S2S-A	WC02	ST05W-EB6-60 ST06W-EB7.5-65	M2×3	FA-T6
S2S-B		EN15	M2S×4	FLR-13S
694.101-2P※	WC02	ST7W-EB6/EB7	M2×3.5	FW-6IP
694.102-2P※	TP07	ST7W-EB8/EB9	M2×4.1	
694.103-2P※		ST7W-EB10/12	M2×4.8	
S2S-S	TP08	EB09N EB10.5N EB12N	M2×4	FLR-13S
S2S		EB14N - EB46N	M2×5.5	
S2S-T6		ENH1 - ENH3 ENH3J - ENH5J EBH3	M2×5.5	FA-T6
694.122-2P※	TC11	EB17AJ - EB40AJ	M2.5×6.5	FW-7IP
S2.5S-7IP	SC06 CC06	SW2026 SW2531 SW2533 SW3240	M2.5×6.5	FS-7IP
S2.5S-T7	TC11 SC06 CC06	ENH4 - ENH7 ENH4E - ENH6E ENH6J - ENH7J ENH4F - ENH5F ENH4S - ENH5S EBH4 - EBH6	M2.5×6.5	FA-T7
S2.508S-7IP	ZN05	SW3242N SW4151N SW4154N SW5366N	M2.5×8	FS-7IP
S3S	SC07 CC07	ENH6F - ENH7F ENH6S - ENH7S RW2533 RW3037	M3×7	FLR-20S
S4S-15IP	SC09 CC09	SW3242 SW4151 SW4154 SW5366	M4×8	FS-15IP
S4S	SC09 CC09	RW3242 RW4154 RW4048 RW5162	M4×8	FLR-20S
S412S-15IP	ZN08	SW5370N SW6986N SW6890N SW88110N SW98126N SW125153N SW148176N SW175203N	M4×12	FS-15IP
S5S-20IP	SC12 CC12 CC16	SW5370 SW6986 SW6890 SW88110 SW98126 SW125153 SW148176 SW175203	M5×12	FS-20IP
S5S-T20	SC12 CC12 CC16	TW200	M5×12	FA-T20
S5S	SC12 CC12	RW5370 RW6681 RW6888 RW86106 RW100125 RW125150	M5×12	FLR-28S
S1.6S-T6	MW04	MW1619 - MW1821	M1.6×4.2	FA-T6

· Wrenches are also sold individually. Please order the wrench model.
· ※ marked models consist of 2 screws. Wrench is not included.

Wrenches/Others

■ Driver-Type Wrench



・A Torx wrench using tough material and a grip that fits the hand well. Use for secure insert tightening.

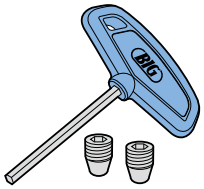
Wrench Model	Torx size
DA-T3	Torx-T 3
DA-T5	Torx-T 5
DA-T6	Torx-T 6
DA-T7	Torx-T 7
DA-T8	Torx-T 8
DA-T10	Torx-T 10
DA-T15	Torx-T 15
DA-T20	Torx-T 20

※ Insert Clamp Screw Wrench Models with a T indicate Torx size.

■ CK Set Screw

(Contains 2 screws and 1 exclusive T-wrench)

・Key element of the CK Connection. Periodical replacement is recommended in order to maintain accurate clamping.



Set Model	CK No.	Thread size	T Wrench Model
CK1S	CK1	M4xP0.5	CK-T2
CK2S	CK2	M5xP0.5	CK-T2.5
CK3S	CK3	M6xP0.75	CK-T3
CK4S	CK4	M8xP0.75	CK-T4
CK5S	CK5	M10xP1.0	CK-T5
CK6S	CK6	M12xP1.0	CK-T6
CK7S	CK7	M20xP1.5	—

※ Wrenches are also sold individually. Please order the wrench model.
("T" in the wrench model indicates T-shape of the wrench. This has nothing to do with Torx.)
※ An L wrench is included with CK7S.

■ Grease Gun

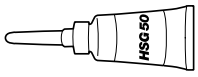
Model **GRG-02**

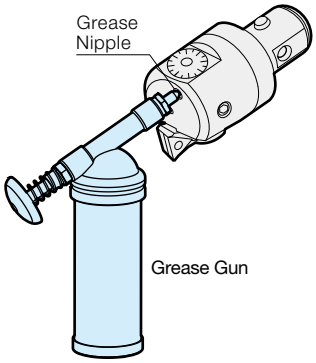
Essential for maintenance!
Can be used with all types of finishing heads.
(Grease not included.)

・The grease is effective for removing coolant and particles.
We recommend injecting grease into the grease nipple as required.

Grease (50g)

Model **HSG50**

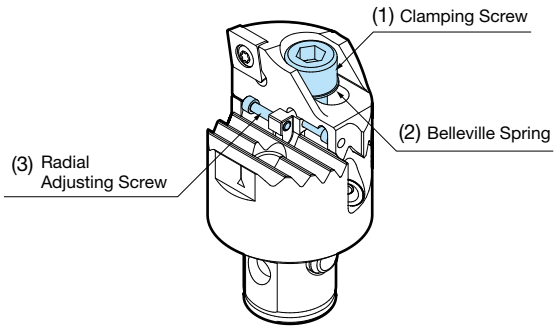




Screws for Boring Head

SW BORING HEAD

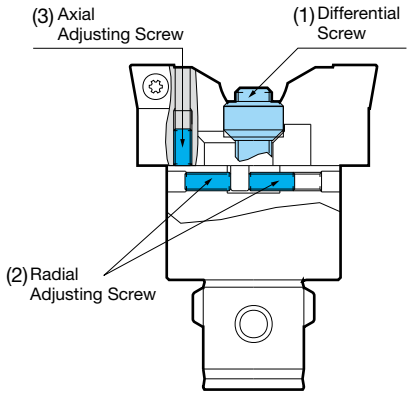
Common for A/E Types



Head Model	(1) Clamping Screw x 2, Belleville Spring x 2	(2) 4 pcs	(3) 2 pcs
SW 20- 31CKB1	**SW20SS**	**SW20BS**	**SW20RS**
SW 25- 40CKB2	**SW25SS**	**SW25BS**	**SW25RS**
SW 32- 51CKB3	**SW32SS**	**SW32BS**	**SW32RS**
SW 41- 66CKB4	**SW41SS**	**SW41BS**	**SW41RS**
CKB4-SW41DP-190			
SW 53- 86CKB5	**SW53SS**	**SW53BS**	**SW53RS**
CKB5-SW53DP-220			
SW 68-110CKB6	**SW68SS**		**SW68RS**
CKB6-SW68DP-245			
SW 98-153CKB□	**SW98SS**	**SW98BS**	**SW98RS**
CKB□-SW98DP			
SW148-203CKB□			
CKB□-SW148DP			

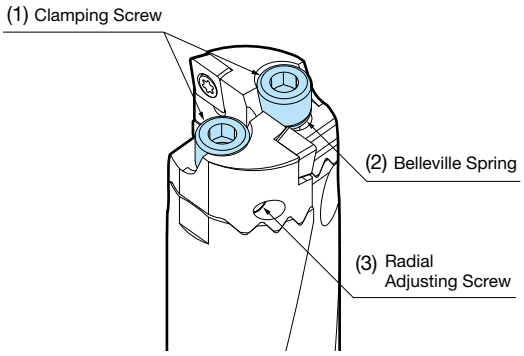
RW BORING HEAD

Common for A/E Types



Head Model	(1) 1 pc	(2) 5 pcs	(3) 5 pcs
RW 25- 33CKB2	**DS25**	**H0306/R-5P**	**H0206-5P**
RW 32- 42CKB3	**DS32**	**H0308/R-5P**	**H0308-5P**
RW 41- 54CKB4	**DS41**	**H0410/R-5P**	**H0410-5P**
RW 53- 70CKB5	**DS53**	**H0515/R-5P**	**H0512-5P**
RW 68-100CKB6	**DS68**	**H0515/R-5P**	
RW100-150CKB6		**H0520/R-5P**	

MW BORING HEAD



Head Model	(1) Clamping Screw x 2, Belleville Spring x 2	(2) 4 pcs	(3) 5 pcs
ST20-MW1619-45	**MW16SS**	**MW16BS**	**H02503-5P**
ST20-MW1619-60			
ST14W-MW16-110			
ST20-MW1821-50			**H02504-5P**
ST20-MW1821-65			
ST16W-MW18-115			

Screws for Boring Head

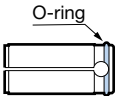
EWN/EWE/EWB BORING HEAD (Cylindrical Tool Type) SIDE LOCK HOLDER

■ Lock Screw

Model	Model (5 pcs)
ST12-SL 5	**H0403-5P**
ST16-SL 5	
ST16-SL 6	**H0404-5P**
ST16-SL 8	**H0606-5P**
ST16-SL10	

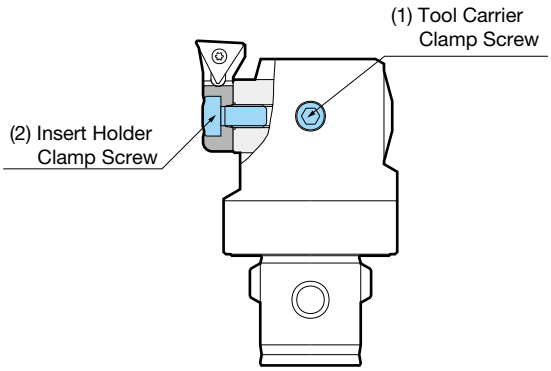
EWN/EWE/EWB BORING HEAD (Cylindrical Tool Type) STRAIGHT COLLET

■ O-ring



Collet Model	Model (2 pcs)
EC1004～EC1008	**OR-S 8-2P**
EC1206～EC1210	**OR-S10-2P**
EC1606～EC1614	**OR-S14-2P**

EWN BORING HEAD EW MICRO HEAD

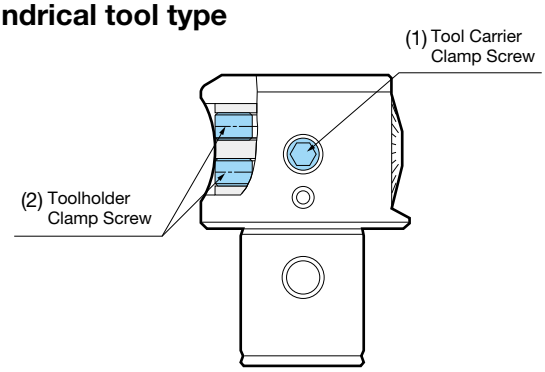


Head Model	(1) 1 pc	(2) 1 pc
EWN 20- 36CKB1	**K0405**	**B0304-1**
CK1-EWN20DP-100		
EWN 25- 47CKB2	**K0406**	**B0306-1**
CK2-EWN25DP-125		
EWN 32- 60CKB3	**K0509**	**B0408-2**
CKB3-EWN32DP-160		
EWN 41- 74CKB4	**K0610**	**B0510-3**
CKB4-EWN41DP-185		
EWN 53- 95CKB5	**K0814**	**B0510-4**
CKB5-EWN53DP-210		
EWN 68-150CKB6	**K1016**	**B0816-5**
CKB6-EWN68DP-240		
EWN100-203CKB6		
CKB6-EWN100DP-240		
EWN100-203CKB7		
CKB7-EWN100DP-240		
EW15	**H0303-2P** (2pcs)	**M2552T6-2P** (2pcs)
EW18	**H0304-2P** (2pcs)	

1. Screws marked with ※ are Torx screws. (size T-6)

Screws for Boring Head

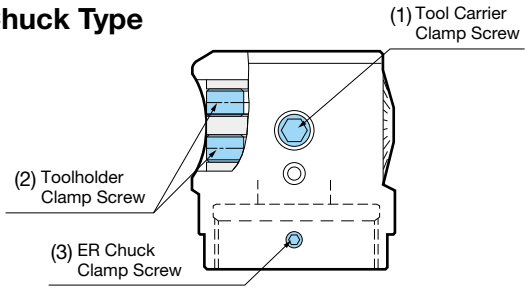
EWN BORING HEAD
Cylindrical tool type



EWN04 Series

Head Model	(1) 1 pc	(2) 5 pcs
EWN04-7CK1	**H0303KS** (1pc)	**H0306/R-5P**
EWN04-7ST10		
EWN04-15CK3	**H0505-5P** (5pcs)	**H0504-5P**
EWN04-15ST16		

ER Chuck Type

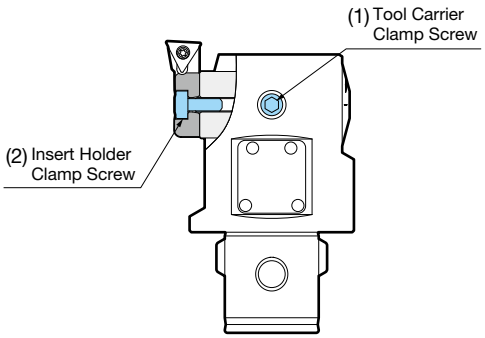


EWN2-22 - 50 Series

Head Model	(1) 1 pc	(2) 5 pcs	(3)
EWN2-22CK4	**K0606**	**H0605-5P**	—
EWN2-22ER25			**H0404-5P** (5pcs)
EWN2-32CK5	**K0809**	**H0806-5P**	—
EWN2-32ER32			**K0406KS** (1pc)
EWN2-50CK6	**K1011**	**H1008-5P**	—

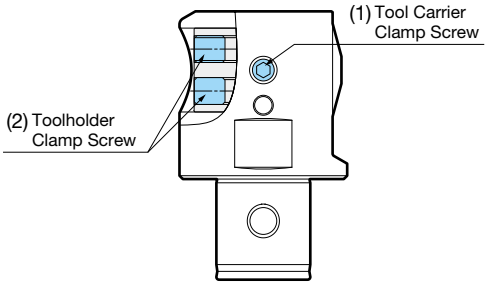
For (3), use only ER Chuck Type

EWE DIGITAL BORING HEAD



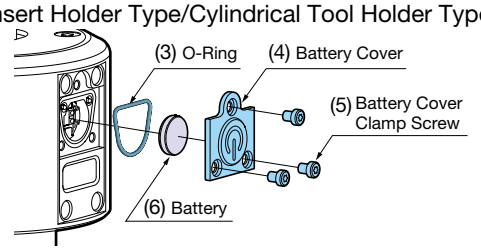
Head Model	(1) 1 pc	(2) 1 pc
EWE 41- 74CKB4	**K0608**	**B0510-3**
EWE 53- 93CKB5	**K0809**	**B0510-4**
EWE 68-105CKB6	**K1013**	**B0816-5**
EWE100-203CKB□	**K1016**	

EWE DIGITAL BORING HEAD
Cylindrical tool type



Head Model	(1) 1 pc	(2) 5 pcs
EWE2-32CK5	**K0809**	**H0806-5P**
EWE2-54CK6	**K1011**	**H1008-5P**

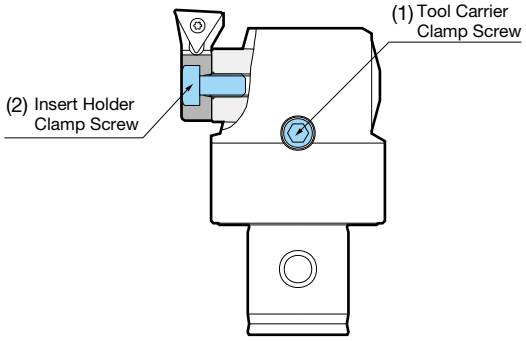
EWE Insert Holder Type/Cylindrical Tool Holder Type Common Parts



Part Name	Part Model
(3) O-Ring	**EWE-OR** (1 pc)
(4) Battery Cover	**EWE-BC** (1 pc)
(5) Battery Cover Clamp Screw	**EWE-S2.5FS-8IP** (3 pcs, Wrench × 1 pc included)
(6) Battery	**CR1025** (1 pc)

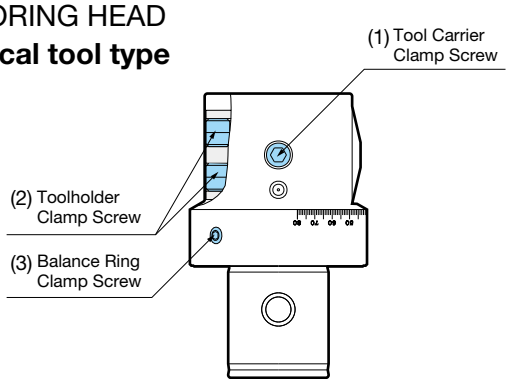
Screws for Boring Head

EWB BORING HEAD



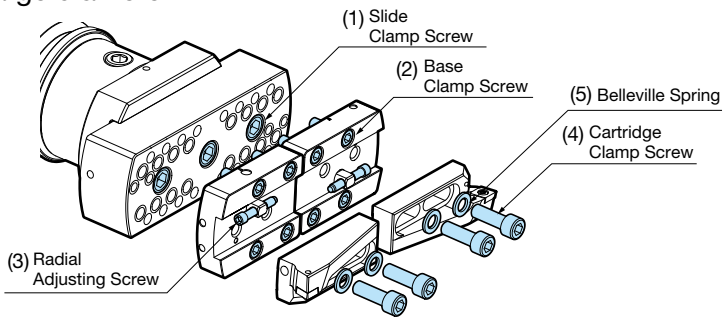
Head Model	(1) 1 pc	(2) 1 pc
EWB 32- 42CK3	**S0705**	**B0408-2**
EWB 41- 54CK4	**S0706**	**B0510-3**
EWB 53- 70CK5	**S0808**	**B0510-4**
EWB 68- 88CK6	**S1012**	**B0612-5**
EWB 85-105CK6		
EWB100-153CK6AL		
EWB100-153CK7AL		
EWB150-203CK6AL		
EWB150-203CK7AL		

EWB BORING HEAD
Cylindrical tool type



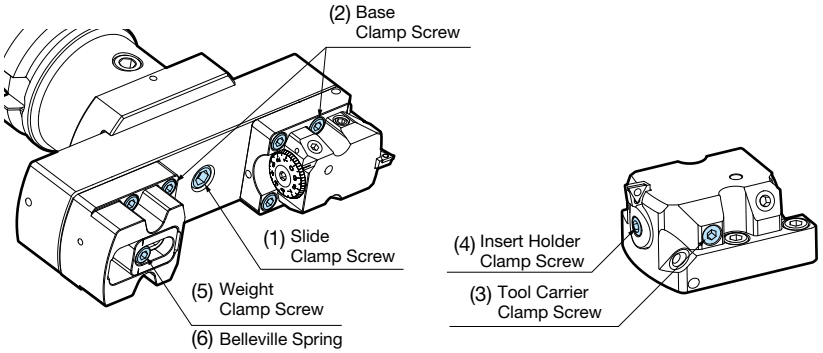
Head Model	(1) 1 pc	(2) 5 pcs	(3) 1 pc
EWB2-32CK5	**K0809**	**H0806-5P**	**BR232**
EWB2-50CK6	**K1011**	**H1008-5P**	**BR250**

For TW BORING HEAD large diameter



Clamp Base Model	(1) 1 pc	(2) 1 pc	(3) 1 pc	(4) 1 pc	(5) 4 pcs
CB-TW200 **CB-TW200AL**	**C1250**	**C0825**	**TW200RS**	**C1030**	**TW53BS**

For EWN200 BORING HEAD large diameter

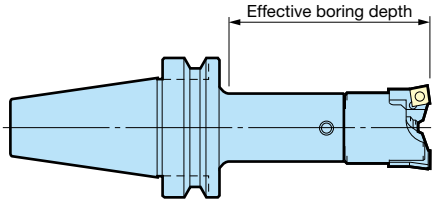


Head/Balance Weight Model	(1) 1 pc	(2) 1 pc	(3) 1 pc	(4) 1 pc	(5) 1 pc	(6) 4 pcs
EWN200(AL)	**C1250**	**C0825**	**K1016**	**B0612-5**	—	—
BWN200FB(AL)			—	—	**C0830**	**TW41BS**
BWN200PB(AL)			—	—	—	—

CK BORING SYSTEM Cutting Conditions Table

<SW/TW/RW BORING HEAD>

1. This table is a guideline for selecting cutting parameters.
   The effective boring depth is the length with boring head mounted on the CK Shank.
   When using extensions or reductions, adjust the cutting conditions accordingly.
   Also, adjust them as needed according to the machine and workpiece conditions.
2. For blind holes, adjust the parameters by observing the chip evacuation.
3. Cermet T1500A is recommended for good surface finish for light roughing of steel.
4. CW30PA is recommended for interrupted cutting of steel.
5. CW20PA is recommended for interrupted cutting of ductile cast iron.
6. For step cutting, it is recommended to increase the depth of cut by 1.6 times and reduce the feed rate by 60%.



[BBT40]

●SW/RW E Type/A Type

Head Model	Workpiece Material	Effective boring depth	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)		Feed f (mm/rev)	
			Nose Radius	Grade		Recommended	Max.	Recommended	Max.
SW20	Carbon Steel	73	0.4	CW20PA	150	2.0	2.5	0.20	0.25
	Alloy Steel			CW20PA	130	1.5	2.0	0.20	0.25
	Stainless Steel			AC630M	80	1.5	2.0	0.20	0.25
	Cast Iron			CW20KA	130	2.5	3.0	0.25	0.30
	Ductile			CW15KA	80	2.0	2.5	0.20	0.25
	Aluminum			H1	200	2.5	3.0	0.25	0.30
SW25 RW25	Carbon Steel	88	0.4	CW20PA	160	2.5	3.0	0.25	0.30
	Alloy Steel			CW20PA	140	2.0	3.0	0.20	0.25
	Stainless Steel			AC630M	90	2.0	3.0	0.20	0.25
	Cast Iron			CW20KA	140	3.0	4.0	0.25	0.30
	Ductile			CW15KA	90	2.5	3.0	0.20	0.25
	Aluminum			H1	200	3.0	4.0	0.30	0.35
SW32 RW32	Carbon Steel	103	0.8	CW20PA	200	3.5	4.5	0.30	0.40
	Alloy Steel			CW20PA	180	3.0	4.0	0.25	0.35
	Stainless Steel			AC630M	100	3.0	4.0	0.25	0.35
	Cast Iron			CW20KA	180	4.0	5.5	0.30	0.40
	Ductile			CW15KA	100	3.5	4.5	0.25	0.35
	Aluminum			H1	220	4.0	5.0	0.30	0.40
SW41 RW41	Carbon Steel	103	0.8	CW20PA	200	4.5	5.5	0.35	0.45
	Alloy Steel			CW20PA	180	4.0	5.0	0.30	0.40
	Stainless Steel			AC630M	100	4.0	5.0	0.30	0.40
	Cast Iron			CW20KA	180	5.0	7.0	0.35	0.45
	Ductile			CW15KA	100	4.0	6.0	0.30	0.40
	Aluminum			H1	220	5.0	7.0	0.35	0.45
SW53 RW53	Carbon Steel	103	0.8	CW20PA	220	6.0	8.0	0.40	0.50
	Alloy Steel			CW20PA	200	5.0	6.0	0.35	0.45
	Stainless Steel			AC630M	120	5.0	6.0	0.35	0.45
	Cast Iron			CW20KA	200	8.0	10.0	0.40	0.50
	Ductile			CW15KA	100	6.0	8.0	0.35	0.45
	Aluminum			H1	250	8.0	10.0	0.45	0.55
SW68 SW98 RW68 RW100	Carbon Steel	103	0.8	CW20PA	220	8.0	10.0	0.40	0.50
	Alloy Steel			CW20PA	200	7.0	9.0	0.35	0.45
	Stainless Steel			AC630M	120	7.0	9.0	0.35	0.45
	Cast Iron			CW20KA	200	9.0	12.0	0.40	0.50
	Ductile			CW15KA	100	8.0	10.0	0.35	0.45
	Aluminum			H1	250	9.0	12.0	0.45	0.55

Spindle Speed Calculation

$$N = \frac{Vc}{\pi D} \times 1{,}000$$

N : Spindle speed [min-1]
Vc : Cutting speed [m/min]
D : Diameter [mm]

CK BORING SYSTEM Cutting Conditions Table

●SW N Type

Head Model	Workpiece Material	Effective boring depth	Grade	Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)		Feed f (mm/rev)	
					Recommended	Max.	Recommended	Max.
SW32	Carbon Steel	103	CW20PA	180	3.0	4.0	0.30	0.40
	Stainless Steel		CW20PA	160	2.5	3.5	0.25	0.35
	Alloy Steel		CW15KA	160	3.5	5.0	0.30	0.40
	Ductile		CW15KA	100	3.0	4.0	0.25	0.35
SW41	Carbon Steel	103	CW20PA	200	3.5	5.0	0.30	0.40
	Stainless Steel		CW20PA	180	3.0	4.5	0.25	0.35
	Alloy Steel		CW15KA	180	4.0	6.5	0.35	0.45
	Ductile		CW15KA	100	3.0	5.5	0.30	0.40
SW53	Carbon Steel	103	CW20PA	220	6.0	8.0	0.40	0.50
	Stainless Steel		CW20PA	200	5.0	6.0	0.35	0.45
	Alloy Steel		CW15KA	200	8.0	10.0	0.40	0.50
	Ductile		CW15KA	100	6.0	8.0	0.35	0.45
SW68 **SW98** **SW148**	Carbon Steel	103	CW20PA	220	8.0	10.0	0.40	0.50
	Stainless Steel		CW20PA	200	5.0	8.0	0.35	0.45
	Alloy Steel		CW15KA	200	9.0	12.0	0.40	0.50
	Ductile		CW15KA	100	8.0	10.0	0.35	0.45

CK BORING SYSTEM Cutting Conditions Table

[BBT50]

●SW/RW E Type/A Type

Head Model		Workpiece Material	Effective boring depth	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)		Feed f (mm/rev)	
				Nose Radius	Grade		Recommended	Max.	Recommended	Max.
SW20		Carbon Steel	73	0.4	CW20PA	150	2.0	2.5	0.20	0.25
		Alloy Steel			CW20PA	130	1.5	2.0	0.20	0.25
		Stainless Steel			AC630M	80	1.5	2.0	0.20	0.25
		Cast Iron			CW20KA	130	2.5	3.0	0.25	0.30
		Ductile			CW15KA	80	2.0	2.5	0.20	0.25
		Aluminum			H1	200	2.5	3.0	0.25	0.30
SW25 **RW25**		Carbon Steel	107	0.4	CW20PA	150	2.5	3.5	0.25	0.30
		Alloy Steel			CW20PA	130	2.0	3.0	0.20	0.25
		Stainless Steel			AC630M	80	2.0	3.0	0.20	0.25
		Cast Iron			CW20KA	130	3.0	4.0	0.25	0.30
		Ductile			CW15KA	80	2.5	3.0	0.20	0.25
		Aluminum			H1	200	3.0	4.0	0.30	0.35
SW32 **RW32**		Carbon Steel	122	0.8	CW20PA	180	3.5	4.5	0.30	0.40
		Alloy Steel			CW20PA	160	3.0	4.0	0.25	0.35
		Stainless Steel			AC630M	100	3.0	4.0	0.25	0.35
		Cast Iron			CW20KA	160	4.0	5.5	0.30	0.40
		Ductile			CW15KA	100	3.5	4.5	0.25	0.35
		Aluminum			H1	200	4.0	5.0	0.30	0.40
SW41 **RW41**		Carbon Steel	122	0.8	CW20PA	200	4.5	5.5	0.35	0.45
		Alloy Steel			CW20PA	180	4.0	5.0	0.30	0.40
		Stainless Steel			AC630M	100	4.0	5.0	0.30	0.40
		Cast Iron			CW20KA	180	5.0	7.0	0.35	0.45
		Ductile			CW15KA	100	4.0	6.0	0.30	0.40
		Aluminum			H1	220	5.0	7.0	0.35	0.45
SW53 **RW53**		Carbon Steel	122	0.8	CW20PA	220	7.0	9.0	0.40	0.55
		Alloy Steel			CW20PA	200	6.0	8.0	0.35	0.50
		Stainless Steel			AC630M	120	6.0	8.0	0.35	0.50
		Cast Iron			CW20KA	200	9.0	12.0	0.45	0.55
		Ductile			CW15KA	120	7.0	10.0	0.35	0.50
		Aluminum			H1	250	9.0	12.0	0.45	0.55
SW68 **RW68**		Carbon Steel	122	0.8	CW20PA	220	10.0	12.0	0.40	0.60
		Alloy Steel			CW20PA	200	8.0	12.0	0.35	0.55
		Stainless Steel			AC630M	120	8.0	10.0	0.35	0.55
		Cast Iron			CW20KA	200	10.0	14.0	0.45	0.60
		Ductile			CW15KA	120	9.0	12.0	0.35	0.55
		Aluminum			H1	250	10.0	12.0	0.45	0.60
SW98 **RW100**		Carbon Steel	122	0.8	CW20PA	220	10.0	12.0	0.40	0.60
		Alloy Steel			CW20PA	200	8.0	12.0	0.35	0.55
		Stainless Steel			AC630M	120	8.0	10.0	0.35	0.55
		Cast Iron			CW20KA	200	10.0	14.0	0.45	0.60
		Ductile			CW15KA	120	9.0	12.0	0.35	0.55
		Aluminum			H1	250	10.0	12.0	0.45	0.60
TW200 **(CK7)**	≤ ø340	Carbon Steel	172	0.8	CW20PA	220	10.0	12.0	0.40	0.60
		Alloy Steel			CW20PA	200	8.0	12.0	0.35	0.55
		Stainless Steel			AC630M	120	8.0	10.0	0.35	0.55
		Cast Iron			CW20KA	200	10.0	14.0	0.45	0.60
		Ductile			CW20KA	120	9.0	12.0	0.35	0.55
		Aluminum			H1	250	10.0	12.0	0.45	0.60
	> ø340	Carbon Steel			CW20PA	220	7.0	9.0	0.40	0.60
		Alloy Steel			CW20PA	200	6.0	8.0	0.35	0.55
		Stainless Steel			AC630M	120	6.0	8.0	0.35	0.55
		Cast Iron			CW20KA	200	7.0	10.0	0.45	0.60
		Ductile			CW20KA	120	6.0	8.0	0.35	0.55
		Aluminum			H1	250	7.0	9.0	0.45	0.60

CK BORING SYSTEM Cutting Conditions Table

●SW N Type

Head Mode	Workpiece Material	Effective boring depth	Grade	Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)		Feed f (mm/rev)	
					Recommended	Max.	Recommended	Max.
SW32	Carbon Steel	122	CW20PA	180	3.0	4.0	0.30	0.40
	Stainless Steel		CW20PA	160	2.5	3.5	0.25	0.35
	Cast Iron		CW15KA	160	4.0	5.0	0.30	0.40
	Ductile		CW15KA	100	3.0	4.0	0.25	0.35
SW41	Carbon Steel	122	CW20PA	200	3.5	5.0	0.30	0.40
	Stainless Steel		CW20PA	180	3.0	4.5	0.25	0.35
	Cast Iron		CW15KA	180	4.0	6.5	0.35	0.45
	Ductile		CW15KA	100	3.0	5.5	0.30	0.40
SW53	Carbon Steel	122	CW20PA	220	6.0	8.0	0.40	0.55
	Stainless Steel		CW20PA	200	5.0	7.0	0.35	0.50
	Cast Iron		CW15KA	200	9.0	12.0	0.40	0.55
	Ductile		CW15KA	120	7.0	10.0	0.35	0.50
SW68 SW98 SW148	Carbon Steel	122	CW20PA	220	8.0	10.0	0.40	0.60
	Stainless Steel		CW20PA	200	6.0	10.0	0.35	0.55
	Cast Iron		CW15KA	200	10.0	14.0	0.40	0.60
	Ductile		CW15KA	120	9.0	12.0	0.35	0.55

APPLICATION EXAMPLES

■Rough Boring of Carbon Steel (S55C) Using SMART DAMPER SW Head

Machine		Horizontal MC (BBT50)
Insert	E Type	CCMM120404EFM
	A Type	SCMM120404EFM
Workpiece Material		S55C
Cutting Speed Vc (m/min)		150
Feed f (mm/rev)		0.4
Cutting Depth (mm/ø)		7
Coolant		Water-soluble (center through)

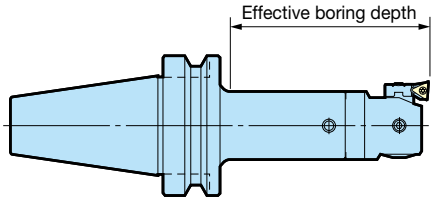
Head	Holder	Extension	Effective boring depth (mm)	Cartridge	
				E Type	A Type
CKB5-SW53DP-220	BBT50-CKB5-228	None	405	○	○
	BBT50-CKB5-263	None	440	○	Chatter
		CKB55-60	500	○	Chatter

The use of the SMART DAMPER SW Head enabled stable rough boring without chatter even at lengths of L/D=6 and above.
As well, stable machining was possible at even longer lengths through selection of an E type cartridge (approach angle 0°).

CK BORING SYSTEM Cutting Conditions Table

<EWN/EWE/EWB BORING HEAD>

1. This table is a guideline for selecting cutting parameters.
   The effective boring depth is the length with boring head mounted on the CK Shank.
   When using extensions or reductions, adjust the cutting conditions accordingly.
   Also, adjust them as needed according to the machine and workpiece conditions.
2. Internal high pressure coolant may cause deflection of the holder.
   Lower the pressure when close tolerance is required.
3. Coated cermet T2000Z or T2500F is recommended to reduce wear when machining steel.
4. Dry cutting is recommended for cBN BN2000, BNC200, BNC500 and BN7000 inserts.



[BBT40]

Head Model	Workpiece Material	Effective boring depth	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)	Feed f (mm/rev)	
			Nose Radius	Grade			Recommended	Max.
EWN20	Carbon Steel/Alloy Steel	73	0.2	T1500A	160	0.15	0.06	0.12
	Stainless Steel		0.2	AC520U	120	0.15	0.06	0.10
	Hardened Steel		0.2	BN2000	70	0.10	0.06	0.10
	Cast Iron		0.2	H1	120	0.20	0.06	0.12
	Ductile		0.2	H1ZX	100	0.15	0.06	0.10
	Ductile		0.2	BNC500	120	0.15	0.06	0.10
	Aluminum		0.2	H1	200	0.20	0.06	0.12
	Aluminum		0.2	DA2200	300	0.20	0.06	0.12
EWN25	Carbon Steel/Alloy Steel	88	0.2	T1500A	180	0.15	0.06	0.12
	Stainless Steel		0.2	AC520U	140	0.15	0.06	0.12
	Hardened Steel		0.2	BN2000	80	0.10	0.06	0.10
	Cast Iron		0.2	H1	140	0.20	0.06	0.12
	Ductile		0.2	H1ZX	120	0.15	0.06	0.12
	Ductile		0.2	BNC500	180	0.15	0.06	0.10
	Aluminum		0.2	H1	200	0.20	0.06	0.12
	Aluminum		0.2	DA2200	400	0.20	0.06	0.12
EWN32 **EWB32**	Carbon Steel/Alloy Steel	103	0.2	T1500A	200	0.20	0.06	0.12
	Stainless Steel		0.2	AC520U	160	0.20	0.06	0.12
	Hardened Steel		0.2	BN2000	100	0.10	0.06	0.10
	Cast Iron		0.2	H1	160	0.20	0.06	0.12
	Ductile		0.2	H1ZX	120	0.15	0.06	0.12
	Ductile		0.2	BNC500	200	0.15	0.06	0.10
	Aluminum		0.4	H1	300	0.20	0.10	0.20
	Aluminum		0.4	DA2200	800	0.20	0.10	0.20
EWN41 **EWE41** **EWB41**	Carbon Steel/Alloy Steel	103	0.2	T1500A	200	0.20	0.06	0.12
	Stainless Steel		0.2	AC520U	160	0.20	0.06	0.12
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	160	0.20	0.10	0.20
	Ductile		0.4	H1ZX	120	0.15	0.10	0.15
	Ductile		0.4	BNC500	200	0.15	0.10	0.15
	Aluminum		0.4	H1	300	0.20	0.12	0.20
	Aluminum		0.4	DA2200	800	0.20	0.12	0.20
EWN53 **EWN68** **EWN100** **EWE53** **EWE68** **EWE100** **EWB53** **EWB68** **EWB85**	Carbon Steel/Alloy Steel	103	0.4	T1500A	250	0.25	0.10	0.20
	Stainless Steel		0.4	AC520U	180	0.25	0.10	0.20
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	180	0.25	0.10	0.20
	Ductile		0.4	H1ZX	120	0.20	0.10	0.20
	Ductile		0.4	BNC500	200	0.20	0.10	0.20
	Aluminum		0.8	H1	300	0.25	0.16	0.30
	Aluminum		0.4	DA2200	800	0.25	0.12	0.20

CK BORING SYSTEM Cutting Conditions Table

[BBT50]

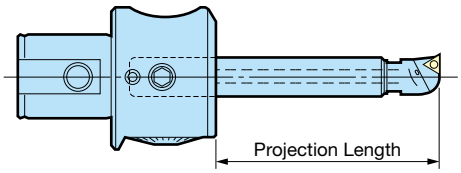
Head Model	Workpiece Material	Effective boring depth	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)	Feed f (mm/rev)	
			Nose Radius	Grade			Recommended	Max.
EWN20	Carbon Steel/Alloy Steel	73	0.2	T1500A	160	0.15	0.06	0.12
	Stainless Steel		0.2	AC520U	120	0.15	0.06	0.10
	Hardened Steel		0.2	BN2000	70	0.10	0.06	0.10
	Cast Iron		0.2	H1	120	0.20	0.06	0.12
	Ductile		0.2	H1ZX	100	0.15	0.06	0.10
	Ductile		0.2	BNC500	120	0.15	0.06	0.10
	Aluminum		0.2	H1	200	0.20	0.06	0.12
	Aluminum		0.2	DA2200	300	0.20	0.06	0.12
EWN25	Carbon Steel/Alloy Steel	107	0.2	T1500A	180	0.15	0.06	0.12
	Stainless Steel		0.2	AC520U	140	0.15	0.06	0.12
	Hardened Steel		0.2	BN2000	80	0.10	0.06	0.10
	Cast Iron		0.2	H1	140	0.20	0.06	0.12
	Ductile		0.2	H1ZX	120	0.15	0.06	0.12
	Ductile		0.2	BNC500	180	0.15	0.06	0.10
	Aluminum		0.2	H1	200	0.20	0.06	0.12
	Aluminum		0.2	DA2200	400	0.20	0.06	0.12
EWN32 EWB32	Carbon Steel/Alloy Steel	122	0.2	T1500A	200	0.20	0.06	0.12
	Stainless Steel		0.2	AC520U	160	0.20	0.06	0.12
	Hardened Steel		0.2	BN2000	100	0.10	0.06	0.10
	Cast Iron		0.2	H1	160	0.20	0.06	0.12
	Ductile		0.2	H1ZX	120	0.15	0.06	0.12
	Ductile		0.2	BNC500	200	0.15	0.06	0.10
	Aluminum		0.4	H1	300	0.20	0.10	0.20
	Aluminum		0.4	DA2200	800	0.20	0.10	0.20
EWN41 EWE41 EWB41	Carbon Steel/Alloy Steel	122	0.2	T1500A	200	0.20	0.06	0.12
	Stainless Steel		0.2	AC520U	160	0.20	0.06	0.12
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	160	0.20	0.10	0.20
	Ductile		0.4	H1ZX	120	0.15	0.10	0.15
	Ductile		0.4	BNC500	200	0.15	0.10	0.15
	Aluminum		0.4	H1	300	0.20	0.12	0.20
	Aluminum		0.4	DA2200	800	0.20	0.12	0.20
EWN53 EWE53 EWB53	Carbon Steel/Alloy Steel	122	0.4	T1500A	250	0.25	0.10	0.20
	Stainless Steel		0.4	AC520U	180	0.25	0.10	0.20
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	180	0.25	0.10	0.20
	Ductile		0.4	H1ZX	120	0.20	0.10	0.20
	Ductile		0.4	BNC500	200	0.20	0.10	0.20
	Aluminum		0.8	H1	300	0.25	0.16	0.30
	Aluminum		0.4	DA2200	800	0.25	0.12	0.20
EWN68 EWN100 EWE68 EWE100 EWB68 EWB85	Carbon Steel/Alloy Steel	122	0.4	T1500A	250	0.25	0.10	0.20
	Stainless Steel		0.4	AC520U	180	0.25	0.10	0.20
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	180	0.25	0.10	0.20
	Ductile		0.4	H1ZX	120	0.20	0.10	0.20
	Ductile		0.4	BNC500	200	0.20	0.10	0.20
	Aluminum		0.8	H1	300	0.25	0.16	0.30
	Aluminum		0.8	DA2200	800	0.25	0.16	0.30
EWN200 (CK7)	Carbon Steel/Alloy Steel	172	0.4	T1500A	250	0.25	0.10	0.20
	Stainless Steel		0.4	AC520U	180	0.25	0.10	0.20
	Hardened Steel		0.4	BN2000	100	0.10	0.08	0.12
	Cast Iron		0.4	H1	180	0.25	0.10	0.20
	Ductile		0.4	H1ZX	120	0.20	0.10	0.20
	Ductile		0.4	BNC500	200	0.20	0.10	0.20
	Aluminum		0.8	H1	300	0.25	0.16	0.30
	Aluminum		0.8	DA2200	800	0.25	0.16	0.30

CK BORING SYSTEM Cutting Conditions Table

<Cylindrical Tool Type>

Recommended Cutting Conditions

1) This table is a guideline for selecting cutting parameters.
   Adjust them as needed according to the machine and workpiece conditions.
2) If chatter occurs, either lower the cutting speed or use an insert with a smaller nose radius.
3) Internal high pressure coolant may cause deflection of the cylindrical tool holder.
   Lower the pressure when close tolerance is required.
4) Coated cermet T2000Z or T2500F is recommended to reduce wear when machining steel.
5) Dry cutting is recommended for cBN BN2000, BNC200, BNC500 and BN7000 inserts.



Max. Spindle Speed for Cylindrical Tool Type

Head Model	Max. Spindle Speed n
EWN04- 7CK1	30,000min^{-1}
EWN04-15CK3	20,000min^{-1}
EWN 2-22CK4	18,000min^{-1}
EWB 2-32CK5	16,000min^{-1}
EWE 2-32CK5	16,000min^{-1}
EWN 2-32CK5	14,000min^{-1}
EWB 2-50CK6	12,000min^{-1}
EWE 2-54CK6	14,000min^{-1}
EWN 2-50CK6	10,000min^{-1}

The max. spindle speeds listed in this table are the speeds allowable for safe use of the boring head only.
Note that these values differ depending on the cylindrical tools used, machine rigidity, etc.

● Jig Boring Bit

Workpiece	Model	Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)	Feed f (mm/rev)
Carbon Steel Alloy Steel	RBE 1	25	0.03	0.02
	RBE 1.5			
	RBE 2	50	0.04	
	RBE 3		0.05	
	RBE 4	60	0.06	
	RBE 5		0.08	
	RBE 7	80	0.10	
	RBE 9		0.12	
Aluminum	RBE 1	30	0.03	0.02
	RBE 1.5			
	RBE 2	60	0.04	
	RBE 3		0.05	
	RBE 4	80	0.06	
	RBE 5		0.08	
	RBE 7	100	0.10	
	RBE 9		0.12	

● Cylindrical Tool Type/ST05, ST06 (Diameter ø4 - 9)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	20	0.2	T1500A T1200A	100	0.2
	40			70	0.2
	50			50	0.2
	60			30	0.1
Stainless Steel	20	0.2	T1500A T1200A	90	0.2
	40			60	0.2
	50			40	0.2
	60			30	0.1
Hardened Steel	20	0.2	NB10HA NBX20	60	0.1
	30			40	0.1
Cast Iron	20	0.2	H1	100	0.2
	40			70	0.2
	50			50	0.2
	60			30	0.1
Aluminum	20	0.2	H1	120	0.2
	40			100	0.2
	50			80	0.2
	60			60	0.2

1.Red figures are achievable with cylindrical tools made of carbide.

● Cylindrical Tool Type/ST08 (Diameter ø9 - 12)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	20	0.2	T1500A	100	0.20
	30			120	0.20
	40			90	0.20
	50			75	0.15
	60	0.1	A1	50	0.10
Stainless Steel	20	0.2	AC520U	100	0.20
	30			120	0.20
	40			90	0.20
	50			75	0.15
	60	0.1	A1	50	0.10
Hardened Steel	20	0.2	BN2000	70	0.10
	30			50	0.10
	40			20	0.10
Cast Iron	20	0.2	H1 (FN)	100	0.20
	30			120	0.20
	40			90	0.20
	50			75	0.15
	60	0.1	A1	40	0.10
Aluminum	20	0.2	H1 (FLA)	150	0.20
	30			165	0.25
	40			150	0.20
	50			125	0.15
	60	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

CK BORING SYSTEM Cutting Conditions Table

● Cylindrical Tool Type/ST10 (Diameter ø12 - 14)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	30	0.2	T1500A	120	0.20
	45			140	0.20
	60			100	0.20
	70			75	0.15
	80	0.1	A1	50	0.10
Stainless Steel	30	0.2	AC520U	120	0.20
	45			130	0.20
	60			90	0.20
	70			55	0.15
	80	0.1	A1	40	0.10
Hardened Steel	30	0.2	BN2000	80	0.10
	45			60	0.10
	60			30	0.10
Cast Iron	30	0.2	H1 (FN)	120	0.20
	45			130	0.20
	60			90	0.15
	75			60	0.15
	90	0.1	A1	30	0.10
Aluminum	30	0.2	H1 (FLA)	150	0.25
	45			180	0.25
	60			150	0.20
	75			90	0.20
	90	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

● Cylindrical Tool Type/ST12 (Diameter ø14 - 16)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	40	0.2	T1500A	120	0.20
	60			180	0.20
	80			150	0.20
	95			90	0.15
	110	0.1	A1	50	0.10
Stainless Steel	40	0.2	AC520U	120	0.20
	60			130	0.20
	80			100	0.20
	95			70	0.15
	110	0.1	A1	40	0.10
Hardened Steel	40	0.2	BN2000	80	0.10
	50			60	0.10
	65			30	0.10
Cast Iron	40	0.2	H1 (FN)	120	0.20
	60			130	0.20
	80			100	0.15
	95			70	0.15
	110	0.1	A1	40	0.10
Aluminum	40	0.2	H1 (FLA)	150	0.25
	60			200	0.25
	80			180	0.20
	100			130	0.20
	120	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

● Cylindrical Tool Type/ST14 (Diameter ø16 - 18)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	45	0.2	T1500A	130	0.20
	65			180	0.20
	80			150	0.20
	100			90	0.15
	120	0.1	A1	50	0.10
Stainless Steel	45	0.2	AC520U	120	0.20
	65			130	0.20
	80			120	0.20
	100			80	0.15
	120	0.1	A1	40	0.10
Hardened Steel	45	0.2	BN2000	80	0.10
	60			60	0.10
	75			30	0.10
Cast Iron	45	0.2	H1 (FN)	120	0.20
	65			130	0.20
	80			120	0.15
	100			80	0.15
	120	0.1	A1	40	0.10
Aluminum	45	0.4	H1 (FLA)	150	0.25
	65			200	0.25
	80	0.2		180	0.20
	100			120	0.20
	120	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

● Cylindrical Tool Type/ST16 (Diameter ø18 - 50)

Workpiece	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)
		Nose Radius	Grade		
Carbon Steel Alloy Steel	45	0.4	T1500A	130	0.20
	60			180	0.20
	80	0.2		150	0.20
	110			90	0.15
	140	0.1	A1	50	0.10
Stainless Steel	45	0.4	AC520U	120	0.20
	60			130	0.20
	80	0.2		120	0.20
	110			80	0.15
	140	0.1	A1	40	0.10
Hardened Steel	45	0.2	BN2000	80	0.10
	60			60	0.10
	80			30	0.10
Cast Iron	45	0.4	H1 (FN)	120	0.20
	60			130	0.20
	80	0.2		120	0.15
	110			80	0.15
	140	0.1	A1	40	0.10
Aluminum	45	0.4	H1 (FLA)	150	0.25
	60			200	0.25
	80	0.2		180	0.20
	110			120	0.20
	140	0.1	A1	60	0.15

Red figures are achievable with cylindrical tools made of carbide.

Feed Rate Selection

Suitable feed rate varies depending on the desired accuracy.
Refer to the following formula and determine the best parameters.

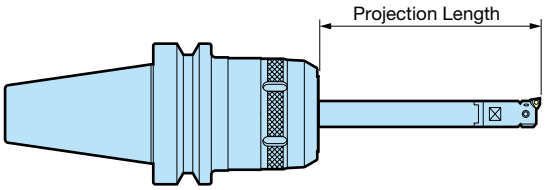
●In general, nose radius 0.2 should be used with f = 0.06
and radius 0.4 with f = 0.10

These values are reference only.

$$\text{Theoretical surface roughness Rz } [\mu m] = \frac{(\text{Feed rate})^2}{8 \times \text{Nose radius}} \times 1{,}000$$

CK BORING SYSTEM Cutting Conditions Table

<EW MICRO HEAD>

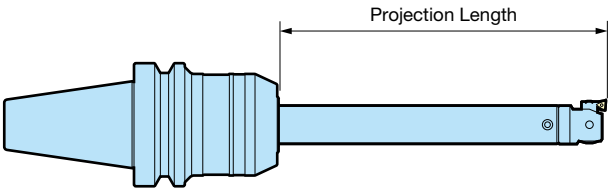


1. This table is a guideline for selecting cutting parameters.
   Adjust them as needed according to the machine and workpiece conditions.
2. Internal high pressure coolant may cause deflection of the holder.
   Lower the pressure when close tolerance is required.
3. These conditions are determined when the cylindrical tool is mounted on the BIG NEW Hi-POWER MILLING CHUCK or NEW BABY CHUCK.

Workpiece	Projection Length	Diameter: ø15 - 18 ST14W-EW15-110. (140)				Diameter ø18 - 22 ST16W-EW18-100. (160)			
		Insert		Cutting Speed Vc	Cutting Depth	Insert		Cutting Speed Vc	Cutting Depth
		Nose Radius	Grade	m/min	mm/ø	Nose Radius	Grade	m/min	mm/ø
Carbon Steel Alloy Steel	20	0.2	T1200A	200	0.20	0.2	T1200A	200	0.20
	40			200	0.20			200	0.20
	60			180	0.20			200	0.20
	80			160	0.15			180	0.18
	100			120	0.15			150	0.15
	120			70	0.10			100	0.10
	140			30	0.10			60	0.10
	160			—	—			30	0.10
Stainless Steel	20	0.2	T1200A	150	0.20	0.2	T1200A	150	0.20
	40			150	0.20			150	0.20
	60			150	0.20			150	0.20
	80			130	0.15			140	0.18
	100			100	0.15			120	0.15
	120			70	0.10			100	0.10
	140			30	0.10			60	0.10
	160			—	—			30	0.10
Cast Iron	20	0.2	H1	150	0.20	0.2	H1	150	0.20
	40			150	0.20			150	0.20
	60			140	0.20			150	0.20
	80			120	0.15			140	0.18
	100			100	0.15			120	0.15
	120			60	0.10			100	0.10
	140			30	0.10			60	0.10
	160			—	—			30	0.10
Aluminum	20	0.2	H1	280	0.20	0.2	H1	320	0.20
	40			280	0.20			320	0.20
	60			280	0.20			320	0.20
	80			250	0.20			280	0.20
	100			180	0.15			220	0.15
	120			100	0.12			160	0.12
	140			60	0.12			100	0.12
	160			—	—			60	0.10

CK BORING SYSTEM Cutting Conditions Table

<CK Carbide Cylindrical Shank>



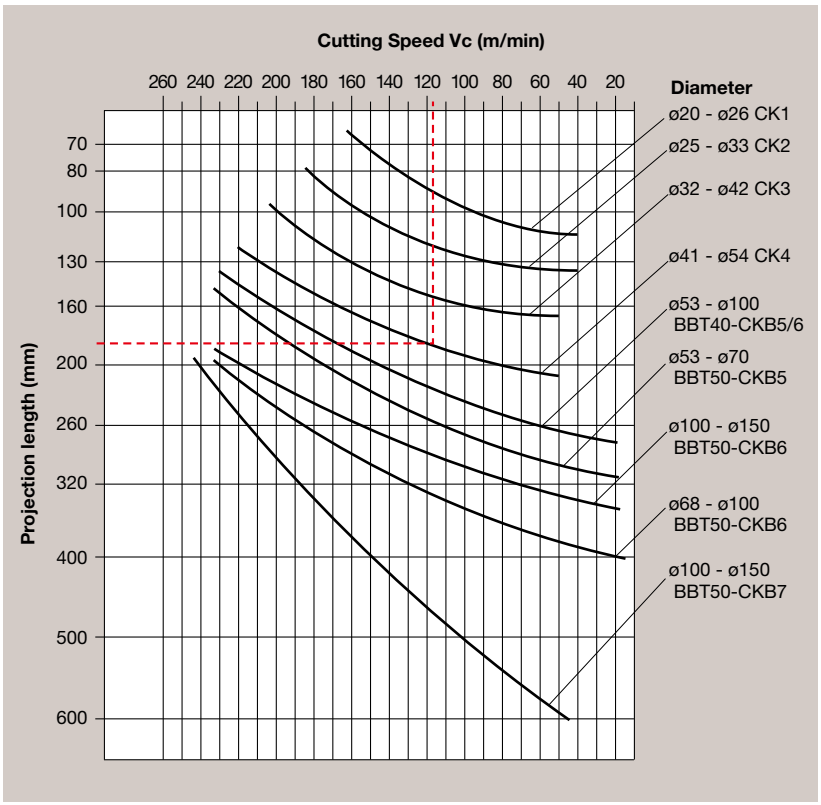
1. This table is a guideline for selecting cutting parameters.
   Adjust them as needed according to the machine and workpiece conditions.
2. Internal high pressure coolant may cause deflection of the holder.
   Lower the pressure when close tolerance is required.
3. Coated cermet T2000Z or T2500F is recommended to reduce wear when machining steel.
4. T130A is recommended to prevent edge chipping for interrupted cutting of steel.
5. These conditions are determined when the cylindrical tool is mounted on the BIG HYDRAULIC CHUCK.

Head Model	Workpiece Material	Projection Length	Insert		Cutting Speed Vc (m/min)	Cutting Depth (mm/ø)	Feed f (mm/rev)	
			Nose Radius	Grade			Recommended	Max.
EWN20	Carbon Steel	90	0.2	T1500A	200	0.20	0.06	0.12
		150	0.2	T1500A	120	0.20	0.06	0.12
		175	0.2	T1500A	60	0.15	0.06	0.10
		200	0.2	T1500A	25	0.15	0.06	0.10
	Cast Iron	90	0.2	H1 (FN)	180	0.20	0.06	0.12
		150	0.2	H1 (FN)	120	0.20	0.06	0.12
		175	0.2	H1 (FN)	60	0.15	0.06	0.10
		200	0.2	H1 (FN)	25	0.15	0.06	0.10
	Aluminum	90	0.2	DA2200	400	0.20	0.06	0.12
		150	0.2	H1 (FLA)	200	0.20	0.06	0.12
		175	0.2	H1 (FLA)	100	0.20	0.06	0.10
		200	0.2	H1 (FLA)	40	0.15	0.06	0.10
		230	0.1	A1 (FLA)	25	0.15	0.04	0.08
EWN25	Carbon Steel	125	0.4	T1500A	200	0.25	0.08	0.15
		175	0.2	T1500A	120	0.20	0.06	0.12
		200	0.2	T1500A	60	0.20	0.06	0.10
		250	0.2	T1500A	25	0.15	0.06	0.10
	Cast Iron	125	0.4	H1 (FN)	180	0.25	0.08	0.15
		175	0.2	H1 (FN)	120	0.20	0.06	0.12
		200	0.2	H1 (FN)	60	0.20	0.06	0.10
		250	0.2	H1 (FN)	25	0.15	0.06	0.10
	Aluminum	125	0.4	DA2200	500	0.25	0.08	0.15
		175	0.4	H1 (FLA)	200	0.25	0.08	0.15
		200	0.2	H1 (FLA)	100	0.20	0.06	0.10
		250	0.2	H1 (FLA)	40	0.20	0.06	0.10
		285	0.1	A1 (FLA)	25	0.15	0.04	0.08
EWN32 EWB32	Carbon Steel	135	0.4	T1500A	200	0.25	0.08	0.15
		160	0.2	T1500A	130	0.20	0.06	0.12
		200	0.2	T1500A	80	0.20	0.06	0.10
		250	0.2	T1500A	25	0.15	0.06	0.10
	Cast Iron	135	0.4	H1 (FN)	180	0.25	0.08	0.15
		160	0.2	H1 (FN)	130	0.20	0.06	0.12
		200	0.2	H1 (FN)	80	0.20	0.06	0.10
		250	0.2	H1 (FN)	25	0.15	0.06	0.10
	Aluminum	135	0.4	DA2200	500	0.25	0.08	0.15
		160	0.4	H1 (FLA)	220	0.25	0.08	0.15
		200	0.2	H1 (FLA)	120	0.20	0.06	0.10
		250	0.2	H1 (FLA)	40	0.20	0.06	0.10
		310	0.1	A1 (FLA)	25	0.15	0.04	0.08

CK BORING SYSTEM Cutting Conditions Table

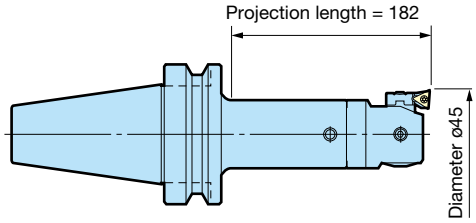
Cutting Speed Selection Graph for Cutting Steel

Chatter is always an issue in boring. The figure at right shows how the cutting speed (rotational speed) inevitably decreases as the bar becomes longer. Refer to the cutting conditions listed in this graph and on the previous pages when selecting the optimum cutting conditions.
For cast iron, 10-20% longer projection length is generally permissible.



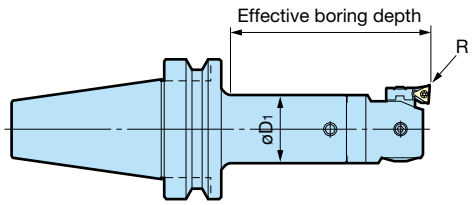
[Reference Example]
Indicated by - - - - - - in the graph at right

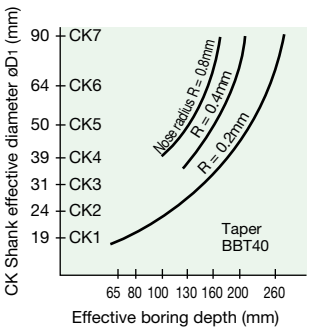
Example below shows the projection length of 182mm; and the diameter of ø45mm (ø41 - ø54 CK4).
The recommended cutting speed is 118m/min.
Select an appropriate cutting speed based on this reference example.

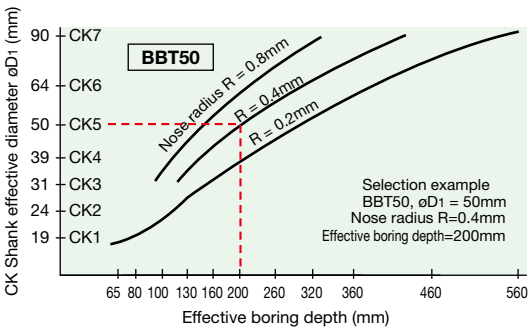


Relationship between Nose Radius and Effective Boring Depth

The insert nose radius and boring bar length (machining depth limit) are closely related. Refer to the graph below when selecting a CK Shank. Depths 1.1 - 1.3 times greater than listed in the graph are possible for cast iron (FC). Refer to the Cutting Conditions table on the previous page for information about cutting conditions. The cutting speed, in particular, inevitably decreases when the bar tool projection length increases. Refer to the above graph for details.







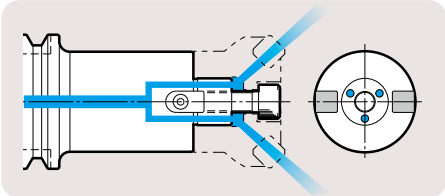
FACE MILL ARBOR TYPE H

● Face mill arbor capable of securely supplying coolant/air to cutting edges through oil holes of cutters.

DUAL CONTACT BIG-PLUS®

Center through

Securely supplies coolant/air to the cutting edge



● Model Description

BBT30 - FMH 25.4 - 46 - 35

- BBT30: BIG-PLUS BT No.
- FMH: FACE MILL ARBOR TYPE H
- 25.4: Spigot diameter
- 46: D1 dimension
- 35: L dimension

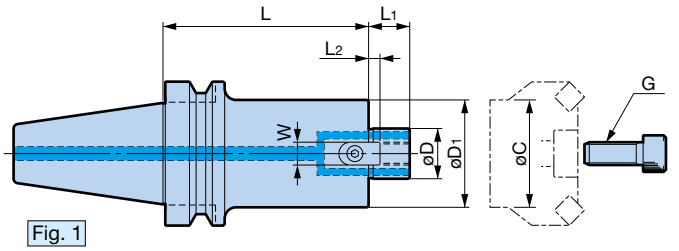


Fig. 1

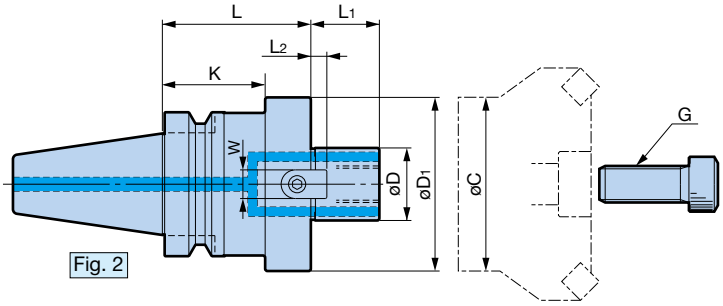


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	øD (h6)	øD1	L	L1	Drive Key L2	Drive Key W	G	Weight (kg)	Min. flange diameter øC
BBT30-FMH25.4 -46- 35 NEW	1	25.4	46	35	22	5	9.5	M12	0.64	36
-FMH25.4 -50- 45 ○	2	25.4	50	45	22	5	9.5	M12	0.80	36
-FMH31.75 -60- 45 ○	2	31.75	60	45	30	7	12.7	M16	0.91	58
-FMH16 -37- 35	1	16	37	35	16	5	8	M 8	0.52	28
-FMH22 -47- 45 ○	2	22	47	45	18	5	10	M10	0.73	38
-FMH22 -60- 45 ○	2	22	60	45	18	5	10	M10	0.87	38
-FMH27 -60- 45 ○	2	27	60	45	20	6	12	M12	0.91	46
BBT40-FMH22.225-47- 60	1	22.225	47	60	17	3.5	8	M10	1.5	39
- 90				90					1.9	
-FMH25.4 -70- 60 ○	2	25.4	70	60	22	5	9.5	M12	2.0	46
- 90				90					2.7	
-105				105					3.1	
-FMH31.75 -76- 60 ○	2	31.75	76	60	30	7	12.7	M16	2.2	56
- 90				90					2.9	
-FMH31.75 -96- 60 ○	2	31.75	96	60	30	7	12.7	M16	2.5	
-FMH16 -37- 40	1	16	37	40	16	5	8	M 8	1.1	28
-FMH22 -47- 45	1	22	47	45	18	5	10	M10	1.3	38
- 60				60					1.5	36
- 90				90					1.9	
-150				150					2.7	
-FMH22 -60- 45	1	22	60	45	18	5	10	M10	1.5	38
- 60				60					1.8	
- 90				90					2.5	
-FMH27 -60- 45	1	27	60	45	20	6	12	M12	1.5	46
- 60				60					1.8	
- 90				90					2.5	
-FMH27 -76- 60 ○	2	27	76	60	20	6	12	M12	2.1	48
- 90				90					2.8	
-FMH32 -96- 60 ○	2	32	96	60	22	7	14	M16	2.4	58

1. The weight does not include the cutter.
2. Cutter clamping screw is included.
   If the standard clamping screw does not fit the cutter, select the suitable one from the clamping screw table and order it separetely. A121
3. When using a cutter without oil holes, an optional clamp screw with an oil hole allows coolant supply.
4. øC indicates the smallest mounting surface diameter of the cutter that can be mounted on the arbor.
   Be careful when using a cutter with the mounting diameter considerably smaller than the cutting diameter, as it may not fit.
5. The ATC arm interference zone K of model numbers with ○ is 30mm for BBT30 and 45mm for BBT40.

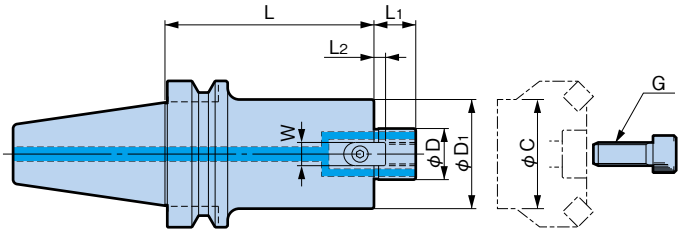
GENERAL TOOLHOLDER

FACE MILL ARBOR TYPE H

● Face mill arbor capable of securely supplying coolant/air to cutting edges through oil holes of cutters.

DUAL CONTACT
BIG-PLUS®

Center through



● Model Description

BBT50 - FMH 22.225 - 47 - 60

- 60 : L dimension
- 47 : D1 dimension
- 22.225 : Spigot diameter
- FMH : FACE MILL ARBOR TYPE H
- BBT50 : BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	øD (h6)	øD1	L	L1	Drive Key		G	Weight (kg)	Min. flange diameter øC
					L2	W			
BBT50-FMH22.225- 47- 60	22.225	47	60	17	3.5	8	M10	4.1	39
-105			105					4.7	
-150			150					5.3	
-200			200					6.0	
-FMH25.4 - 70- 45	25.4	70	45	22	5	9.5	M12	4.0	46
- 60			60					4.5	
- 90			90					5.4	
-150			150					7.2	
-200			200					8.7	
-FMH31.75 - 76- 45	31.75	76	45	30	7	12.7	M16	4.1	56
- 75			75					5.2	
-105			105					6.3	
-150			150					7.9	
-200			200					9.7	
-FMH31.75 - 96- 45	31.75	96	45	30	7	12.7	M16	4.3	56
- 75			75					6.0	
-105			105					7.7	
-150			150					10.3	
-200			200					13.1	
-FMH38.1 -100- 45	38.1	100	45	34	9	15.9	M20 (MBA-M20H)	4.4	70
- 75			75					6.3	
-105			105					8.1	
-150			150					10.9	
-200			200					14.5	

1. The weight does not include the cutter.
2. Cutter clamping screw is included.
   If the standard clamping screw does not fit the cutter, select the suitable one from the clamping screw table and order it separetely. A121
3. When using a cutter without oil holes, an optional clamp screw with an oil hole allows coolant supply.
4. Detailed dimensions of clamping screw MBA-M20H. A121
5. øC indicates the smallest mounting surface diameter of the cutter that can be mounted on the arbor.
   Be careful when using a cutter with the mounting diameter considerably smaller than the cutting diameter, as it may not fit.

FACE MILL ARBOR TYPE H

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	øD (h6)	øD1	L	L1	Drive Key L2	Drive Key W	G	Weight (kg)	Min. flange diameter øC
BBT50-FMH16 - 37- 60	16	37	60	16	5	8	M8	3.8	28
-105			105					4.1	
-150			150					4.5	
-200			200					4.9	
-FMH22 - 47- 60	22	47	60	18	5	10	M10	4.1	38
-105			105					4.7	36
-150			150					5.3	
-200			200					6.0	
-250			250					6.7	
-300			300					7.8	
-350			350					8.9	
-FMH22 - 60- 60	22	60	60	18	5	10	M10	4.2	38
-105			105					5.2	
-150			150					5.2	
-200			200					7.4	
-250			250					8.5	
-300			300					9.6	
-350			350					10.7	
-FMH27 - 60- 45	27	60	45	20	6	12	M12	3.9	46
- 90			90					5.0	
-150			150					6.3	
-200			200					7.4	
-250			250					8.5	
-300			300					9.6	
-FMH27 - 76- 45	27	76	45	20	6	12	M12	4.0	48
- 90			90					5.6	
-150			150					7.8	
-200			200					9.7	
-250			250					11.4	
-300			300					13.2	
-FMH32 - 96- 45	32	96	45	22	7	14	M16	4.2	58
- 90			90					6.8	
-150			150					10.2	
-200			200					13.3	
-250			250					16.1	
-300			300					19.0	
-FMH40 -100- 45	40	100	45	26	8.5	16	M20 (MBA-M20H)	4.4	70
- 75			75					6.2	
-105			105					8.1	

1. The weight does not include the cutter.
2. Cutter clamping screw is included.
   If the standard clamping screw does not fit the cutter, select the suitable one from the clamping screw table and order it separetely. A121
3. When using a cutter without oil holes, an optional clamp screw with an oil hole allows coolant supply.
4. Detailed dimensions of clamping screw MBA-M20H. A121
5. øC indicates the smallest mounting surface diameter of the cutter that can be mounted on the arbor.
   Be careful when using a cutter with the mounting diameter considerably smaller than the cutting diameter, as it may not fit.

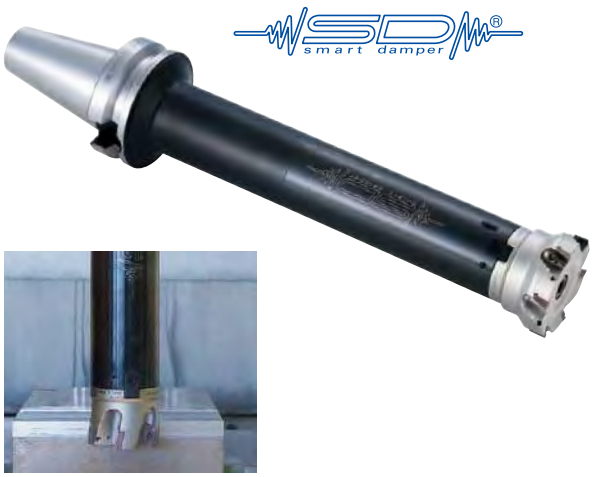
FACE MILL ARBOR TYPE H

Built-in Damper SMART DAMPER

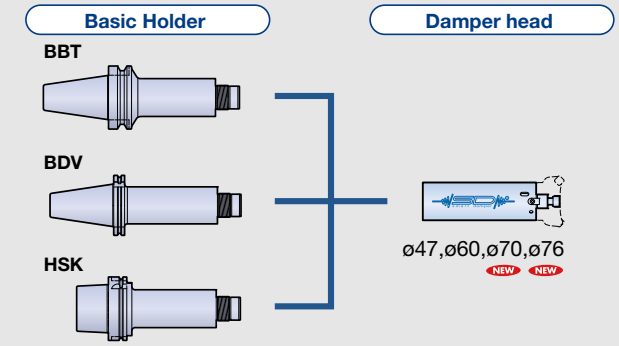
DUAL CONTACT
BIG-PLUS®

Center through

● Dynamic damper eliminates chatter.



System layout diagram



Caution

Damper head becomes unremovable from the basic holder once they are used for machining after assembled.

■Basic Holder

DUAL CONTACT
BIG-PLUS®

● Model Description

BBT50 - SDF36 - 47 - 70

- 70: L1 dimension
- 47: D1 dimension
- SDF36: Connection size
- BBT50: BIG-PLUS BT No.

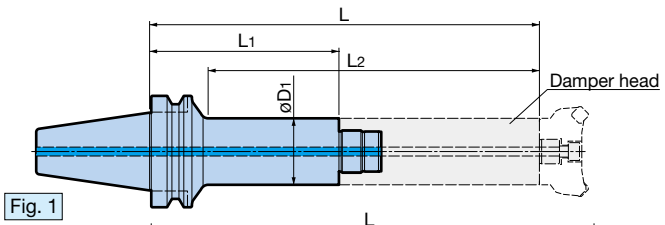


Fig. 1

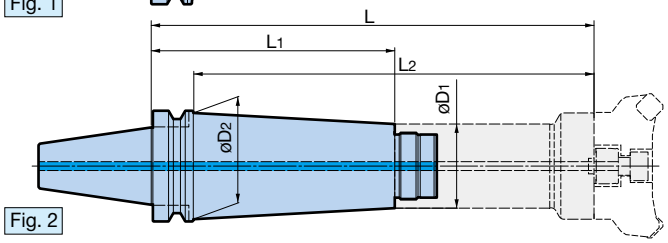


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	øD1	øD2	L	L1	L2	Weight (kg)	Applicable damper head
BBT50-SDF36-47- 70	1	47	—	250	70	197	4.3	SDF36-FMH22DP-47
-47-120				300	120	247	5.0	
-47-170				350	170	297	5.6	
-47-220				400	220	347	6.3	
-SDF36-60- 70	1	60	—	250	70	197	4.6	SDF36-FMH22DP-60 -FMH27DP-60
-60-120				300	120	247	5.7	
-60-170				350	170	297	6.7	
-60-220				400	220	347	7.8	
-SDF51-70-170 NEW	1	70	—	350	170	307	8.0	SDF51-FMH25.4DP-70
-70-220 NEW				400	220	357	9.7	
-SDF57-76- 70	1	76	—	250	70	207	5.3	SDF57-FMH27DP-76 -FMH32DP-96
-76-120				300	120	257	7.0	
-76-170				350	170	307	8.8	
-76-220				400	220	357	10.5	
-SDF57-76-220T NEW	2	76	96	400	220	360	12.5	SDF57-FMH27DP-76 -FMH32DP-96

FACE MILL ARBOR TYPE H

■Damper Head

● Model Description

SDF36 - FMH 22 DP - 47 - 180

- SDF36: Connection size
- FMH: FACE MILL ARBOR TYPE H
- 22: Spigot diameter
- DP: Built-in damper type
- 47: D3 dimension
- 180: L dimension

Fig. 1

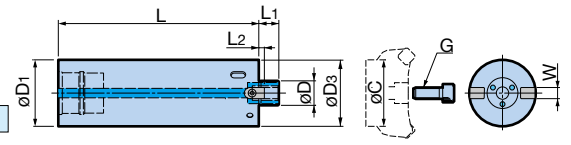
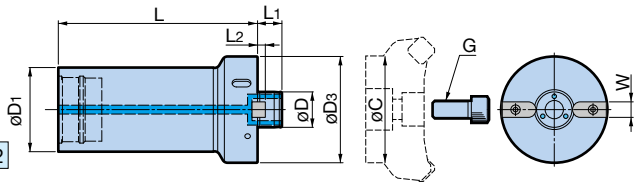


Fig. 2



Model	Fig.	øD	øD1	øD3	L	L1	L2	W	G	Weight (kg)	Wrench Model	Min. flange diameter øC
SDF36-FMH22 DP-47-180	1	22	47	47	180	18	5	10	M10	3.0	FK45-50L	36
-60-180		22	60	60	180	18	5	10	M10	4.5	FK58-62L	49
-FMH27 DP-60-180		27	60	60	180	20	6	12	M12	4.5		46
SDF51-FMH25.4DP-70-180 NEW	1	25.4	70	70	180	22	5	9.5	M12	6.6	FK68-75L	46
SDF57-FMH27 DP-76-180 NEW	1	27	76	76	180	20	6	12	M12	8.1	FK68-75L	48
-FMH32 DP-96-180 NEW	2	32	76	96	180	22	7	14	M16	8.7	FK92-100	58

1. Refer to the operation manual for the basic holder mounting method.
2. The weight does not include the cutter.
3. Hook wrench and cutter clamping screw are included.
4. If the standard clamping screw does not fit the cutter, select the suitable one from the clamping screw table and order it separetely. A121
5. øC indicates the smallest mounting surface diameter of the cutter that can be mounted on the arbor.
   Be careful when using a cutter with the mounting diameter considerably smaller than the cutting diameter, as it may not fit.

FACE MILL ARBOR TYPE A

DUAL CONTACT
BIG-PLUS®

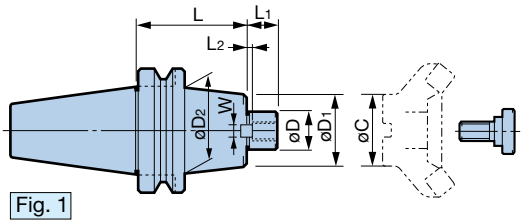


Fig. 1

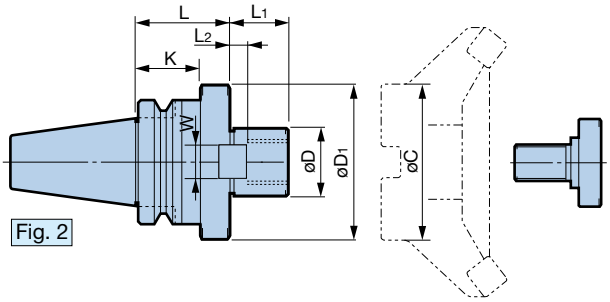


Fig. 2

● Model Description

BBT30 - FMA 22.225 - 45
- 45 : L dimension
- 22.225 : Spigot diameter
- FMA : FACE MILL ARBOR TYPE A
- BBT30 : BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

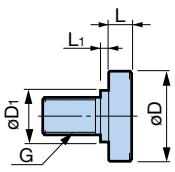
BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	øD (h6)	øD1	øD2	L	L1	Drive Key L2	Drive Key W	K	Clamping Screw	Weight (kg)	Min. flange diameter øC
BBT30-FMA22.225- 45	—	1	22.225	42	—	45	18	4	8.3	—	M10-40L	0.69	33
-FMA25.4 - 45		2	25.4	50	—	45	22	5	9.5	35	MBA-M12	0.82	36
—	**BT30-FMA31.75 - 45**	2	31.75	60	—	45	30	7	12.7	32	MBA-M16	1.04	58
BBT40-FMA25.4 - 45	**BT40-FMA25.4 - 45**	1	25.4	50	—	45	22	5	9.5	—	MBA-M12	1.5	36
- 90	**- 90**				60	90						2.3	
-150 ※	—					150						3.4	
-FMA31.75 - 45	**-FMA31.75 - 45**		31.75	60	—	45	30	7	12.7	—	MBA-M16	1.7	47
- 75	**- 75**					75						2.4	
-105 ※	—					105						3.0	
-150 ※						150						4.0	
-FMA38.1 - 60 ○	**-FMA38.1 - 60 ○**	2	38.1	80	—	60	34	9	15.9	45	MBA-M20	2.5	75

BT shank models with "-" are not standard products.
Models with ※ do not have a through hole.

If there is no compatible model: FACE MILL ARBOR TYPE H A116

1. These arbors are compatible with the JIS B4113 (1970) face milling cutters.
2. The weight does not include the cutter.
3. The model, dimensions and accuracy conform to TMT standards.
4. Cutter clamp screw is included.
5. Depending on the cutter, a hex socket head screw may be required for clamping.
6. A clamp screw with oil hole must be ordered separately for use with center through coolant/air.
7. The ATC arm interference zone K of the model with "○" is 45mm.

■Clamping Screw



Clamping Screw	Clamping screw with oil hole 					
Model	Model	øD	øD1	L	L1	G
MBA-M12	**TMBA-M12**	33	23	10	2	12
-M12H	—		—		—	
-M16	**-M16**	40	23	10	6	16
-M16H	—		—		—	
-M20	**-M20**	50	27	14	6	20
-M20H	—		—		—	
-M24	**-M24**	65	37		10	24

FACE MILL ARBOR TYPE A

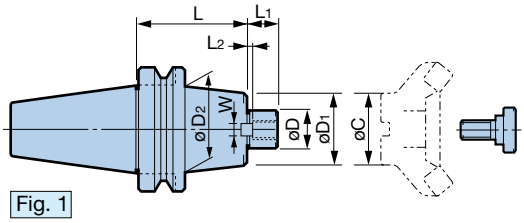


Fig. 1

DUAL CONTACT
BIG-PLUS®

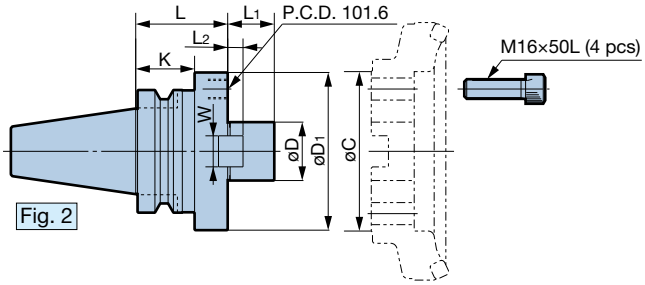


Fig. 2

● Model Description

BBT50 - FMA 25.4 - 45

- 45: L dimension
- 25.4: Spigot diameter
- FMA: FACE MILL ARBOR TYPE A
- BBT50: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	øD (h6)	øD1	øD2	L	L1	Drive Key L2	Drive Key W	Clamping Screw	Weight (kg)	Min. flange diameter øC
BBT50-FMA25.4 - 45	BT50-FMA25.4 - 45	1	25.4	50	—	45	22	5	9.5	MBA-M12	4.1	45
- 90	- 90				70	90					5.0	36
-150 ※	-150 ※					150					6.4	
-200 ※	—					200					7.7	
-250 ※						250					8.8	
-300 ※						300					9.9	
-350 ※						350					11.0	
-FMA31.75 - 45	-FMA31.75 - 45	1	31.75	60	—	45	30	7	12.7	MBA-M16	4.2	58
- 75	- 75				70	75					5.1	47
-105	-105					105					5.6	
-150 ※	-150 ※					150					6.7	
-200 ※	—					200					8.3	
-250 ※					80	250					9.6	
-300 ※						300					10.9	
-350 ※						350					12.2	
-FMA38.1 - 45	-FMA38.1 - 45	1	38.1	80	—	45	34	9	15.9	MBA-M20	4.6	75
- 75	- 75					75					5.4	70
-105	-105					105					6.7	
-150 ※	-150 ※					150					8.5	
-200 ※	—					200					10.4	
-250 ※						250					12.4	
-300 ※						300					14.3	
-350 ※						350					16.3	
-FMA47.625- 75 ※○	—	2	47.625	128.57	—	75	38	12.5	25.3	M16-50L (4 pcs)	8.1	128.57
-100 ※						100					9.6	
-150 ※						150					12.7	
-FMA50.8 - 45	-FMA50.8 - 45	1	50.8	100	—	45	36	10	19	MBA-M24	4.8	95
- 75	- 75					75					6.6	85
-105	-105					105					8.5	
-150 ※	—					150					11.2	
-200 ※						200					14.3	
-250 ※						250					17.4	
-300 ※						300					20.4	
-350 ※						350					23.5	

BT shank models with "-" are not available. Please choose BBT shank models.
Models with ※ do not have a through hole.

Clamping screws A121

If there is no compatible model: FACE MILL ARBOR TYPE H A117

1. These arbors are compatible with the JIS B4113 (1970) face milling cutters.
2. The weight does not include the cutter.
3. The model, dimensions and accuracy conform to TMT standards.
4. Cutter clamp screw is included.
5. Depending on the cutter, a hex socket head screw may be required for clamping.
6. A clamp screw with oil hole must be ordered separately for use with center through coolant/air.
7. The ATC arm interference zone K of the model with "○" is 48mm.

GENERAL TOOLHOLDER

FACE MILL ARBOR TYPE B

● Model Description

BBT40 - FMB 38.1 - 60

- 60 — L dimension
- 38.1 — Spigot diameter
- FMB — FACE MILL ARBOR TYPE B
- BBT40 — BIG-PLUS BT No.

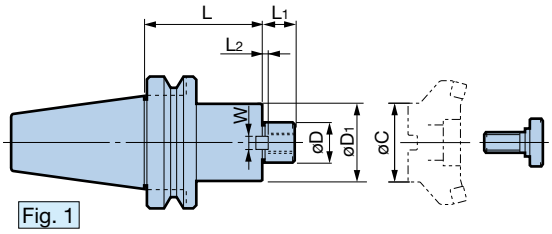


Fig. 1

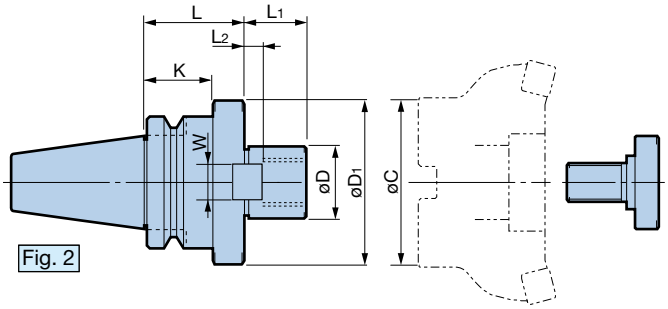


Fig. 2

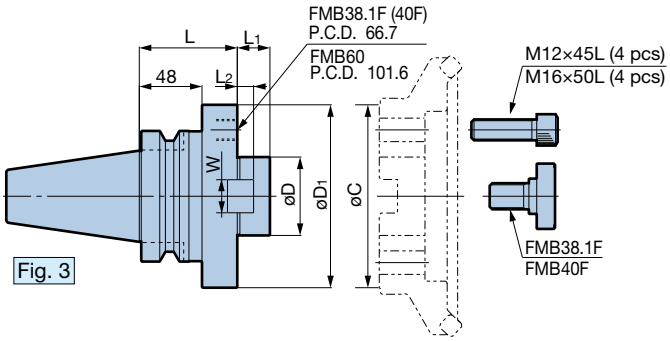


Fig. 3

Figures and shapes may be different depending on the dimension L.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	øD (h6)	øD1	L	L1	Drive Key L2	Drive Key W	Clamping Screw	Weight (kg)	Min. flange diameter øC
BBT40-FMB38.1 - 60 ○	2	38.1	85	60	26	9	15.9	MBA-M20	2.3	71
- 75				75					2.9	
-105				105					3.4	
-FMB40 - 60 ○		40	85	60		8.5	16	MBA-M20	2.3	70
- 75				75					2.7	
BBT50-FMB38.1 -105	1	38.1	85	105	26	9	15.9	MBA-M20	6.7	71
-150				150					8.9	
-FMB38.1F- 75	3	38.1	110	75		9	15.9	MBA-M20 or M12-45L(4 pcs)	6.6	103
-FMB40 - 45	1	40	85	45		8.5	16	MBA-M20	4.2	70
- 75				75					5.6	
-105				105					6.9	
-150				150					8.9	
-FMB40F - 75	3	40	110	75		8.5	16	MBA-M20 or M12-45L(4 pcs)	6.6	96
-FMB60 - 75		60	140	75	25	12.5	25.4	M16-50L(4 pcs)	8.5	130

No through holes.

1. The weight does not include the cutter.
2. The model, dimensions and accuracy conform to TMT standards.
3. Cutter clamp screw is included.
4. Depending on the cutter, a hex socket head screw may be required for clamping.
5. The ATC arm interference zone K of the model with "○" is 45mm.

Clamping screws A121
If there is no compatible model: FACE MILL ARBOR TYPE H A116

FACE MILL ARBOR TYPE C

DUAL CONTACT BIG-PLUS®

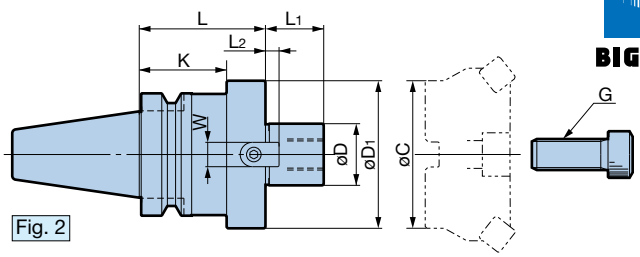


Fig. 2

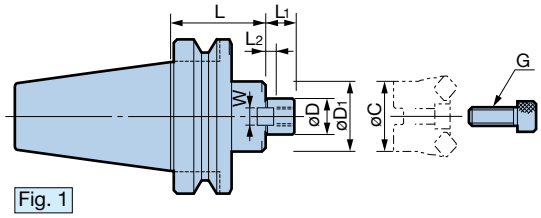


Fig. 1

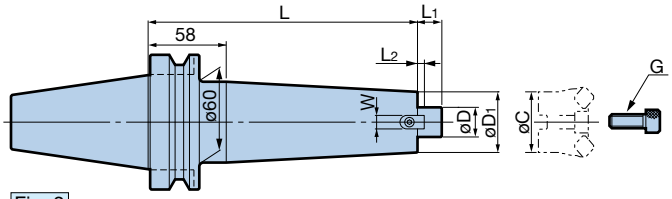


Fig. 3

Figures and shapes may be different depending on the dimension L.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	øD (h6)	øD1	L	L1	Drive Key L2	Drive Key W	G	Weight (kg)	Min. flange diameter øC
BBT30-FMC16 - 45		1	16	32		16	5	8	M 8	0.56	28
-FMC22 - 45	—	1	22	45	45	18	5	10	M10	0.72	34
-FMC27 - 45		2	27	70		20	6	12	M12	1.00	56
BBT40-FMC22 - 45	**BT40-FMC22 - 45**				45					1.3	
- 90	**- 90**	1	22	45	90	18	5	10	M10	1.7	34
-150 ※	—				150					2.5	
-FMC27 - 60 ○					60					2.0	
- 90	—	2	27	70	90	20	6	12	M12	2.6	56
-150 ※					150					4.1	
-FMC32 - 60 ○					60					2.1	
- 75	—	2	32	85	75	22	7	14	M16	2.5	70
-105					105					3.3	
BBT50-FMC22 - 60	**BT50-FMC22 - 60**				60					4.1	
-105	**-105**	1			105					4.6	
-150 ※	**-150 ※**		22	45	150	18	5	10	M10	4.9	34
-200 ※	—	3			200					6.5	
-250 ※					250					7.3	
-FMC32 - 45					45					4.3	64
- 75					75					5.6	
-105	—				105					7.0	
-150 ※		1	32	85	150	22	7	14	M16	8.7	70
-200 ※					200					10.9	
-250 ※					250					13.1	

BT shank models with "-" are not available. Please choose BBT shank models.
Models with ※ do not have a through hole.

1. The weight does not include the cutter.
2. The model, dimensions and accuracy conform to TMT standards.
3. Cutter clamp screw is included.
4. The ATC arm interference zone K of the model with "○" is 45mm.

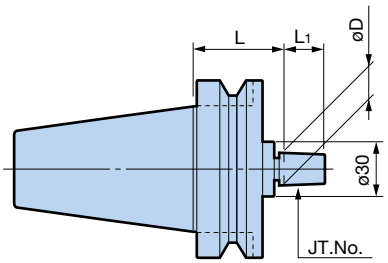
If there is no compatible model: FACE MILL ARBOR TYPE H A116

DUAL CONTACT
BBT/BT
SHANK

GENERAL TOOLHOLDER

JACOBS TAPER ARBOR

● Holder for mounting keyless chuck or rubber chuck.



DUAL CONTACT
BIG-PLUS®

● Model Description

BBT30 - JTA 1 - 30
- 30 : L dimension
- 1 : JTNo.
- JTA : JACOBS TAPER ARBOR
- BBT30 : BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	JT.No.	øD	L	L1	Weight (kg)
BBT30- JTA1 - 30	1	9.754	30	15	0.40
- JTA6 - 30	6	17.17		24	0.45
BBT40- JTA1 - 45	1	9.754	45	15	1.2
-105			105		1.5
- JTA6 - 45	6	17.17	45	24	1.2
-105			105		1.6
BBT50- JTA6 - 45	6	17.17	45	24	4.0
-105			105		4.2

1. The model, dimensions and accuracy conform to TMT standards.
2. Drill chuck is not included.

DUAL CONTACT
BBT/BT
SHANK

GENERAL TOOLHOLDER

SUPER KEYLESS CHUCK

Clamping diameter: ø0.5 - ø13

● Securely chucks the drill with simple operation.

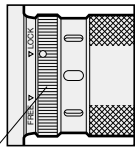
DUAL CONTACT
BIG-PLUS®

Integral holder type keyless chuck

Reverse lock mechanism (SKL13)

· No loosening even when the main spindle suddenly stops, by the reverse lock mechanism using a lock ring.

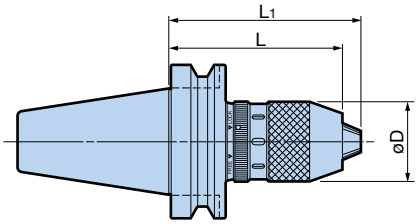
· Runout accuracy within 0.05mm



Lock Ring

● Model Description

BBT30 - SKL 13 - 110
- 110 : L dimension
- 13 : Max. tool diameter
- SKL : Chuck type
- BBT30 : BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter	øD	L	L1	Weight (kg)	Wrench (Standard Accessory)
BBT30-SKL13 -110	ø0.5 - ø13	51	110	122.5	1.4	**FS13LC**
BBT40-SKL13 -105			106	118.5	1.9	
BBT50-SKL13 -115			115	127.5	4.4	
BBT30-KLC6.5- 70	ø0.5 - ø6.5	34	70	76.5	0.63	**FS6.5LC**
BBT40-KLC6.5- 75			75	81.5	1.20	

1. Hook wrench is included.
2. KLC type does not have the reverse lock mechanism.

MORSE TAPER HOLDER TYPE A (Tang Type)

● Precise finish of the Morse taper bore provides stable runout accuracy.

DUAL CONTACT BIG-PLUS®

● Model Description

BBT30 - MTA 1 - 60
- 60: L dimension
- 1: MT.No.
- MTA: MORSE TAPER HOLDER TYPE A
- BBT30: BIG-PLUS BT No.

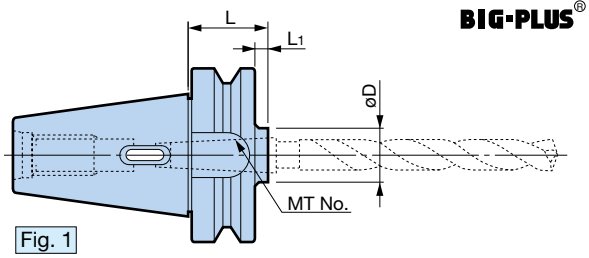


Fig. 1

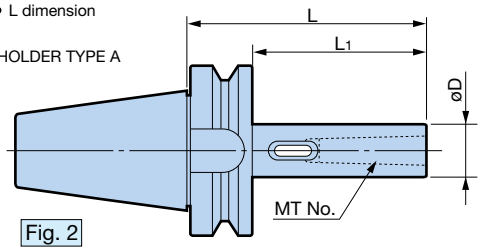


Fig. 2

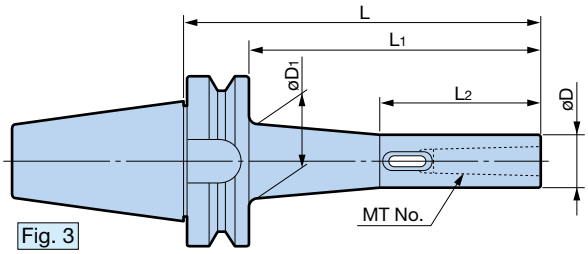


Fig. 3

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	MT. No.	øD	øD1	L	L1	L2	Weight (kg)	Reference drill diameter (※ JIS B4302 1)
BBT30-MTA1- 60	BT30-MTA1- 60	1	1	25	—	60	38	—	0.48	ø 3 - ø14
-MTA2- 60	-MTA2- 60		2	32		60	38		0.50	ø14.5 - ø23
-MTA3- 80	-MTA3- 80		3	40		80	58		0.68	ø23.5 - ø31.5
BBT40-MTA1- 45	BT40-MTA1- 45	1	1	25	—	45	18	—	1.0	ø 3 - ø14
-120	-120	2				120	93		1.3	
-MTA2- 45	-MTA2- 45	1	2	32	—	45	18	—	1.0	ø14.5 - ø23
-120	-120	2				120	93		1.6	
-MTA3- 75	-MTA3- 75	1	3	40	—	75	48	—	1.0	ø23.5 - ø31.5
-135	-135	2				135	108		1.7	
-MTA4- 90	-MTA4- 90	1	4	50	—	90	63	—	1.6	ø32 - ø50
BBT50-MTA1- 45	BT50-MTA1- 45	1	1	25	—	45	7	—	3.9	ø 3 - ø14
-120	-120	2				120	82		4.2	
-180	-180					180	142		4.3	
-210	—	3			41	210	172	85	4.4	
-250					43	250	212		4.8	
-MTA2- 45	-MTA2- 45	1	2	32	—	45	7	—	3.9	ø14.5 - ø23
-135	-135	2				135	97		4.3	
-180	-180					180	142		4.6	
-210	—	3			45.5	210	172	95	4.8	
-250					48.5	250	212		5.2	
-300					49.5	300	262		5.8	
-MTA3- 45	-MTA3- 45	1	3	40	—	45	7	—	3.8	ø23.5 - ø31.5
- 75	—					75	37		3.9	
-150	-150	2				150	112		4.6	
-180	-180					180	142		4.9	
-210	—					210	172		5.1	
-250		3			50.5	250	212	115	5.6	
-300						300	262		6.3	
-MTA4- 75	-MTA4- 75	1	4	50	—	75	37	—	3.9	ø32 - ø50
-180	-180	2				180	142		5.4	
-210	—					210	172		5.6	
-250						250	212		6.2	
-300						300	262		7.0	
-MTA5-105	-MTA5-105	1	5	65	—	105	67	—	4.5	ø51 - ø76
-210	-210	2				210	172		7.2	

BT shank models with "-" are not available. Please choose BBT shank models.

1. The model, dimensions and accuracy conform to TMT standards.

SIDE LOCK DRILL HOLDER

Clamping diameter: ø16 - ø50

DUAL CONTACT
BIG-PLUS®

Center through

● Model Description

BBT30 - T - SL - 16 - 75

- BBT30: BIG-PLUS BT No.
- T: Center through
- SL: SIDE LOCK HOLDER
- 16: Clamping diameter
- 75: L dimension

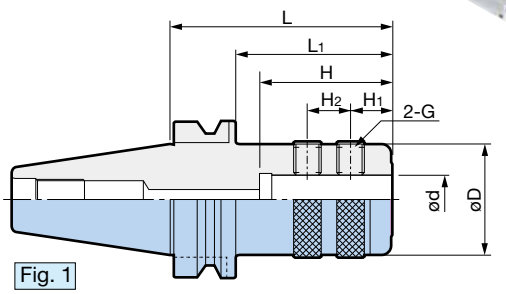


Fig. 1

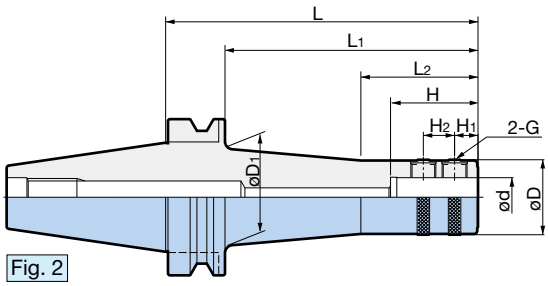


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	ød	øD	øD1	L	L1	L2	H	H1	H2	G	Weight (kg)
BBT30-TSL16- 75			16			75			48	14	14	M10	1.00
-TSL20- 75	—	1	20	48	—		—	—	50				0.95
-TSL25- 80			25			80			56	15	20	M16	0.93
-TSL32- 85			32	63		85			60				1.34
BBT40-TSL16- 90	**BT40-TSL16- 90**		16	48		90	63		48	14	14	M10	1.7
-105	—					105	78						1.9
-TSL20- 90	**-TSL20- 90**		20	48		90	63		50	14	14	M10	1.7
-105	—					105	78						1.9
-TSL25- 90	**-TSL25- 90**	1	25	48	—	90	63	—	56	15	20	M16	1.6
-105	**-105**					105	78						1.8
-TSL32-105	**-TSL32-105**		32	63		105	78		60	15	20	M16	2.4
-135	—					135	108						3.0
-TSL40-105	**-TSL40-105**		40	68		105	—		70	15	25	M16	2.4
BBT50-TSL16- 90	**BT50-TSL16- 90**					90	52						4.2
-135		1	16	48	—	135	97	—	48	14	14	M10	4.8
-165	—					165	127						5.2
-200		2			62.5	200	162	75					6.1
-TSL20- 90	**-TSL20- 90**					90	52						4.2
-135	**-135**	1			—	135	97	—					4.8
-165	**-165**		20	48		165	127		50	14	14	M10	5.2
-200	—	2			62.5	200	162	75					6.0
-250					64	250	212	90					6.8
-TSL25-105	**-TSL25-105**					105	67						4.3
-135	**-135**	1			—	135	97	—					4.7
-165	**-165**		25	48		165	127		56	15	20	M16	5.1
-200	—	2			62.5	200	162	75					5.9
-250					64	250	212	90					6.7
-TSL32-105	**-TSL32-105**					105	67						4.8
-135	**-135**					135	97						5.5
-165	**-165**	1	32	63	—	165	127	—	60	15	20	M16	6.2
-200	—					200	162						6.9
-250						250	212						8.0
-TSL40-105	**-TSL40-105**					105	67						4.8
-135	**-135**					135	97						5.6
-165	**-165**	1	40	68	—	165	127	—	70	15	25	M16	6.4
-200	—					200	162						7.3
-250						250	212						8.6
-TSL50-105	**-TSL50-105**	1	50	84	—	105	67	—	70	15	25	M16	5.4
-150	—					150	112						7.2

• BT shank models with "-" are not available. Please choose BBT shank models.
Not compatible with Weldon DIN 1835B.

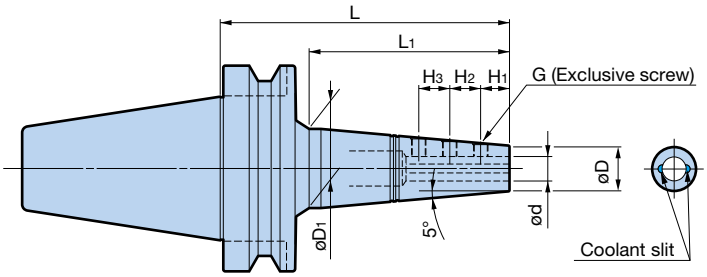
SL Sleeve A173

Slim design eliminates interference problems!

DUAL CONTACT
BIG-PLUS®

Center through

Max.
15,000min-1



● Model Description

BBT40 - SSL 3 - 135

- 135: L dimension
- 3: Clamping diameter
- SSL: MOLD CHUCK
- BBT40: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles.**

BIG-PLUS BBT SHANK Model	ød	øD	øD1	L	L1	H1	H2	H3	G	Weight (kg)
BBT40-SSL 3-135	3	10	27.5	135	100	6	6	—	M3	1.2
-SSL 4-135	4	11	28.5				7		M4	1.2
-SSL 6-135	6	13	30			12	13		M6	1.3
-SSL 8-135	8	15	32			13.5	18			1.3
-SSL10-150	10	17	36.5	150	115	15	20			1.5
-SSL12-150	12	22	41.5				16	16	M8	1.7
BBT50-SSL 6-150	6	13	31	150	104	12	13	—	M6	3.9
-200			39.5	200	154					4.4
-SSL 8-150	8	15	32.5	150	104	13.5	18			3.9
-200			41.5	200	154					4.4
-SSL10-150	10	17	34.5	150	104	15	20			4.0
-200			43.5	200	154					4.4
-SSL12-150	12	22	39.5	150	104		16	16	M8	4.2
-200			48	200	154					4.9
-SSL16-150	16	26	43	150	104		20	22		4.5
-200			52	200	154					5.0
-SSL20-150	20	30	47	150	104			25		4.6
-200			56	200	154					5.2

1. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.
2. Ensure the tip of the ball endmill is in 90° phase to the clamping bolt when clamping.
3. Exclusive screw is included.

● BIG original side lock screws must be used as they are made to an exclusive design and different from other screws on the market.

MOLD CHUCK

■Side Lock Screw Set (Spare parts)

Model	Thread size	Screw length / quantity	Body Model
H0304FS-2P	M3 P0.5	4mm x 2pcs	SSL3
H0404FS-2P	M4 P0.5	4mm x 2pcs	SSL4
H06FSA	M6 P0.75	4.5, 5mm x 1pc each	SSL6
H06FSB		4.5, 6mm x 1pc each	SSL8, 10
H08FSA	M8 P0.75	6mm x 2pcs, 8mm x 1pc	SSL12
H08FSB		6, 8, 10mm x 1pc each	SSL16, 20

1. Each model consists of one set of screws required for each holder.

GENERAL TOOLHOLDER

SIDE LOCK ENDMILL HOLDER

Clamping diameter: ø6 - ø50

● Substantial Side Lock Holder allows high cross feed of endmilling.

DUAL CONTACT
BIG-PLUS®

Center through

● Model Description

BBT30 - ISL 6 - 60

- 60: L dimension
- 6: Clamping diameter
- ISL: SIDE LOCK ENDMILL HOLDER
- BBT30: BT SHANK No.

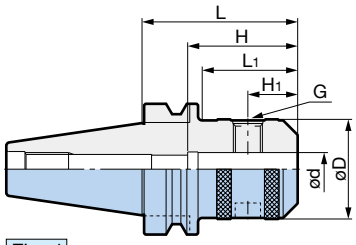


Fig. 1

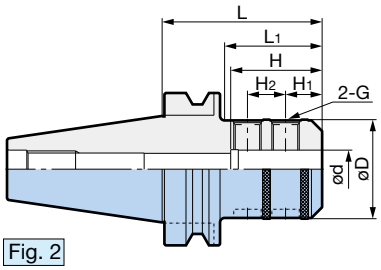


Fig. 2

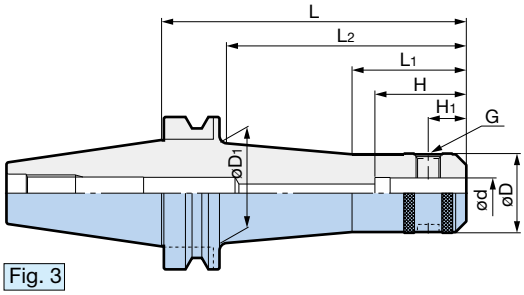


Fig. 3

Endmill holder in accordance with ISO5414

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	ød (H5)	øD	øD1	L	L1	L2	H	H1	H2	G	Weight (kg)
BBT30-ISL 6- 60			6	25								M 6	0.50
-ISL 8- 60			8	28			35		(85)	18		M 8	0.52
-ISL10- 60	—	1	10	35	—	60		—	45	20	—	M10	0.61
-ISL12- 60			12	42			37		48	22.5		M12	0.71
-ISL16- 60			16	48			38		53	24		M14	0.78
BBT40-ISL 6- 75			6	25						18		M 6	1.2
-ISL 8- 75			8	28			38		(110)			M 8	
-ISL10- 75	—	1	10	35		75				20	—	M10	1.3
-ISL12- 75			12	42	—		45	—		22.5		M12	1.5
-ISL16- 75			16	48			46		53	24		M14	
-ISL20- 75	**BT40-ISL20- 75**		20	52			45		55	25		M16	1.6
-ISL25- 90	**-ISL25- 90**	2	25	63.5		90	63		60	24	25	M18xP2	2.1
-ISL32-105	**-ISL32-105**		32	72		105	—		82		28	M20xP2	2.9
BBT50-ISL16- 90	—	1	16	48	—	90	49	—	(145)	24	—	M14	4.4
-150		3			56.5	150	60	107	(205)				5.0
-ISL20- 90	**BT50-ISL20- 90**	1	20	52	—	90	49	—	(145)	25	—	M16	4.5
-150	—	3			60.5	150	60	107	60				5.3
-ISL25-105	**-ISL25-105**	2	25	65	—	105	64	—	60	24	25	M18xP2	4.6
-150	—					150	107						5.3
-ISL32-105	**-ISL32-105**	2	32	72	—	105	62	—	90	24	28	M20xP2	5.3
-150	—					150	107						6.1
-ISL40-120	**-ISL40-120**	2	40	90	—	120	79	—	90	30	32	M20xP2	6.5
-150	—					150	109						8.1
-ISL42-120	**-ISL42-120**	2	42	90	—	120	79	—	90	30	32	M20xP2	6.5
-150	—					150	109						8.0
-ISL50-121	**-ISL50-121**	2	50	99.5	—	121	83	—	90	35	35	M24xP2	7.2

BT shank models with "-" are not available. Please choose BBT shank models.

1. Although a through hole is provided, the air-bleeding hole needs to be plugged for use with center through coolant.
2. For use with center through coolant in drilling, use the SIDE LOCK DRILL HOLDER. A127
3. H dimensions in ( ) are reference length up to the PULLSTUD BOLT.

SIDE LOCK ENDMILL HOLDER

DUAL CONTACT BBT/BT SHANK

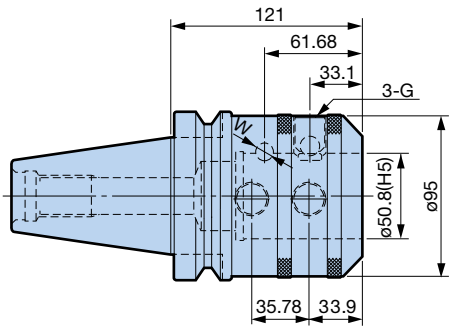
● Pin lock type holder for endmill.

[Pin Lock Type] BIG original standard product

DUAL CONTACT BIG-PLUS®

● Model Description

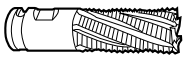
BBT50 - SL 50.8 - 121
- 121: L dimension
- 50.8: Clamping diameter
- SL: SIDE LOCK ENDMILL HOLDER
- BBT50: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	G	Clamping screw	W	Weight (kg)
BBT50-SL50.8-121	**BT50-SL50.8-121**	M20	K2025F-2P	ø11.1	6.2

1. This holder is compatible with pin lock type endmill.
2. Clamping screws are included.



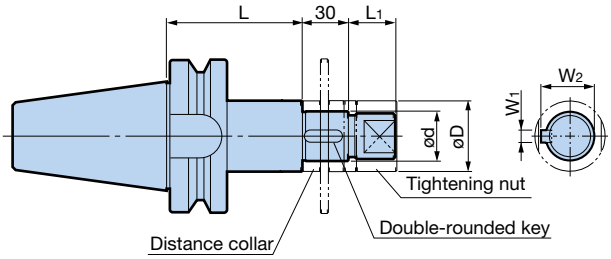
SIDE CUTTER ARBOR

GENERAL TOOLHOLDER

DUAL CONTACT BBT/BT SHANK

● Arbor for JIS standard side cutters and slitting saws.

DUAL CONTACT BIG-PLUS®



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

● Model Description

BBT40 - SCA 25.4 - 75
- 75: L dimension
- 25.4: Spigot diameter
- SCA: SIDE CUTTER ARBOR A
- BBT40: BIG-PLUS BT No.

1. Nut and key are included.
2. One collar each of thickness 5, 8, 10 and 12 is included.
3. The model, dimensions and accuracy conform to TMT standards.

BIG-PLUS BBT SHANK Model	øD (h6)	øD1	W2	W1	L	L1	Weight (kg)
BBT40-SCA25.4 - 75	25.4	40	27.78	6.35	75	25	1.9
-120					120		2.3
-SCA31.75- 75	31.75	46	34.92	7.92	75	30	2.4
BBT50-SCA25.4 - 90	25.4	40	27.78	6.35	90	25	4.7
-135					135		5.1
-SCA31.75- 90	31.75	46	34.92	7.92	90	30	5.1
-135					135		5.7
-SCA38.1 - 90	38.1	55	42.06	9.52	90	36	5.8
-135					135		6.8

■ Distance Collar

Body Model	SCA25.4	SCA31.75	SCA38.1
Thickness	Distance collar model		
5	**SC254C 5**	**SC3175C 5**	**SC381C 5**
8	**SC254C 8**	**SC3175C 8**	**SC381C 8**
10	**SC254C10**	**SC3175C10**	**SC381C10**
12	**SC254C12**	**SC3175C12**	**SC381C12**

■ Tightening nut

Model	Body Model
SC254NUT	SCA 25.4
SC3175NUT	SCA 31.75
SC381NUT	SCA 38.1

■ Double-rounded key

Model	Body Model
KY6.35-25PA	SCA 25.4
KY7.92-25PA	SCA 31.75
KY9.52-25PA	SCA 38.1

SCREW-ON HOLDER

DUAL CONTACT
BIG-PLUS®

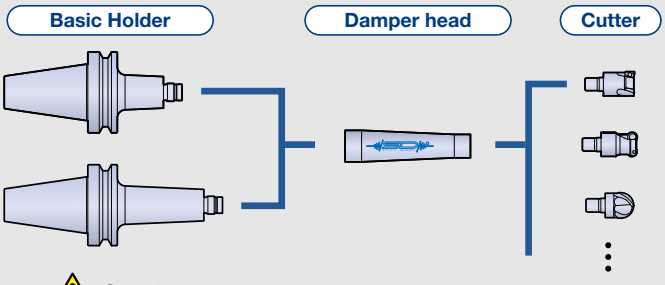
Center through

Built-in Damper SMART DAMPER NEW

Achieves stable damping performance even with Head Interchangeable Holder.

- Unique dynamic damper eliminates chatter.

System layout diagram



Caution

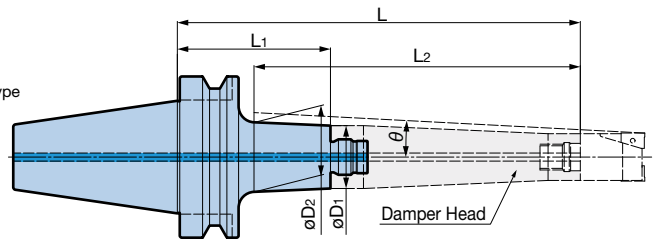
Damper head becomes unremovable from the basic holder once they are used for machining after assembled.

■Basic Holder

● Model Description

BBT50 - SDF20 - 39 - 95 T

- BBT50: BIG-PLUS BT No.
- SDF20: Connection size
- 39: Tip Diameter
- 95: L1 dimension
- T: Taper type



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	øD1	øD2	L	L1	L2	θ	Weight (kg)	Applicable damper head
BBT50-SDF20-39-95T	39	43.1	250	95	202.4	2°	4.2	SDF20-M16DP-29-155T
-145T		47.5	300	145	252.4		4.8	
BBT50-SDF28-50-70T	50	52.1	250	70	204.3	2°	4.2	SDF28-M16DP-38-180T
-120T		56.3	300	120	252.4		5.1	
-170T		60.7	350	170	302.4		6.2	

■Damper Head

● Model Description

SDF20 - M16 DP - 29 - 155 T

- SDF20: Connection size
- M16: Thread Size
- DP: Built-in damper type
- 29: Tip Diameter
- 155: L dimension
- T: Taper type

Fig. 1

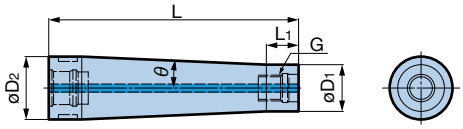
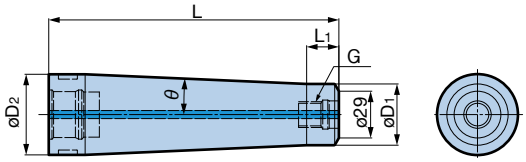


Fig. 2



Model	Fig.	øD1	øD2	L	L1	θ	G	Weight (kg)
SDF20-M16DP-29-155T	1	29	39	155	20	2.5°	M16	1.2
SDF28-M16DP-38-180T	2	38	50	180	20	2.5°	M16	2.5

1. Refer to the operation manual for the basic holder mounting method.
2. The weight does not include the cutter.
3. Select a cutter with an outer diameter at least 1mm larger than the øD1 dimension in the table.
4. Hook wrench for damper head tightening is included.
5. Single-ended wrench for cutter tightening is not included. Use a commercial product.

SCREW-ON HOLDER NEW

DUAL CONTACT BIG-PLUS®

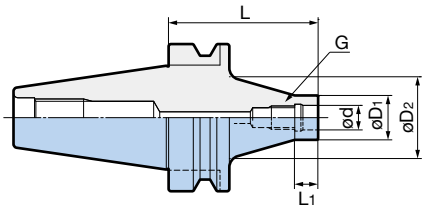
Center through

●Base Holders for Screw-On Cutter.

● Model Description

BBT30 - M8 - 15 - 50

- 50: L dimension
- 15: Tip Diameter
- M8: Thread Size
- BBT30: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	ød	øD1	øD2	L	L1	G	Weight (kg)
BBT30-M 8-15- 50	8.5	15	30	50	10	M 8	0.44
-M10-19- 45	10.5	19	35	45		M10	0.45
-M12-24- 40	12.5	24	40	40		M12	0.45
-M16-29- 35	17	29		35		M16	0.41
BBT40-M 8-15- 70	8.5	15	30	70	10	M 8	1.1
-115			32	115			1.3
-M10-19- 65	10.5	19	35	65		M10	1.1
-110				110			1.3
-M12-24- 60	12.5	24	40	60		M12	1.1
-105				105			1.4
-M16-29- 55	17	29	45	55		M16	1.2
-100				100			1.5

TAPPER

MEGA SYNCHRO TAPPING HOLDER PAT.

M2 - M20

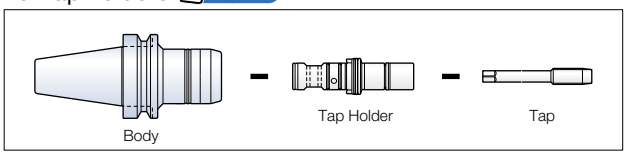
Improves thread quality and tap life by reducing thrust loads caused by synchronization errors up to 90%.

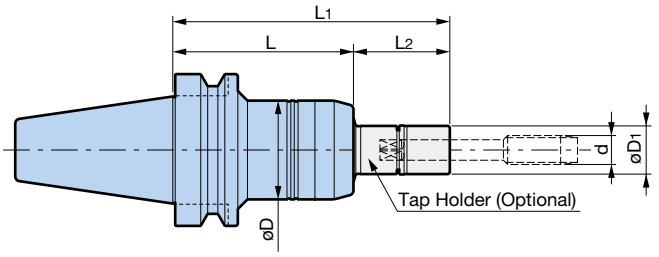
- Long tap holder now available as standard in addition to various tap sizes.

DUAL CONTACT BIG-PLUS®

Center through

For tap holders A134.





- Model Description (Body)

BBT30 - MGT6 - 70

- 70: L dimension
- MGT6: MEGA SYNCHRO No.
- BBT30: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Tap Holder Model	Tapping range d	øD	øD1	L	L1	L2	Body weight (kg)
BBT30-MGT 6- 70	MGT 6-□- 30	M2 - M6 No.3 - U1/4	36	16	70	100	30	0.67
	- 70					140	70	
	-100					170	100	
-MGT12- 70	MGT12-□- 30	M6 - M12 U1/4 - U7/16 P1/8	41	20	70	100	30	0.70
	- 70					140	70	
	-100					170	100	
-MGT20-110	MGT20-□- 35	M12 - M20 U1/2 - U3/4 P1/4 - P3/8	54	30	110	145	35	1.45
	- 85					195	85	
	-115					225	115	
BBT40-MGT 6- 75	MGT 6-□- 30	M2 - M6 No.3 - U1/4	36	16	75	105	30	1.3
	- 70					145	70	
	-100					175	100	
-MGT12- 75	MGT12-□- 30	M6 - M12 U1/4 - U7/16 P1/8	41	20	75	105	30	1.4
	- 70					145	70	
	-100					175	100	
-MGT20- 95	MGT20-□- 35	M12 - M20 U1/2 - U3/4 P1/4 - P3/8	54	30	95	130	35	1.8
	- 85					180	85	
	-115					210	115	
BBT50-MGT 6- 90	MGT 6-□- 30	M2 - M6 No.3 - U1/4	36	16	90	120	30	3.9
	- 70					160	70	
	-100					190	100	
-MGT12- 90	MGT12-□- 30	M6 - M12 U1/4 - U7/16 P1/8	41	20	90	120	30	4.0
	- 70					160	70	
	-100					190	100	
-MGT20-105	MGT20-□- 35	M12 - M20 U1/2 - U3/4 P1/4 - P3/8	54	30	105	140	35	4.4
	- 85					190	85	
	-115					220	115	

1. MGT Set Screw is included.
2. Tap holder must be ordered separately.

Cannot be used with machining center without synchronized tapping function.

Tap holders A134
Accesories G31

L2=**150,200**mm long tap holders are also available. For details, A134 - A135

BIG + KAISER
CK BORING SYSTEM
MEGA SYNCHRO TAPPING HOLDER
CK Shank Type

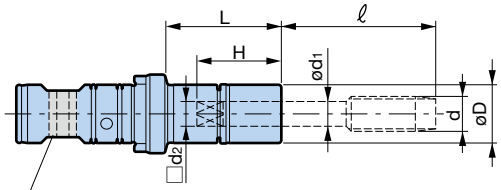
CK Shank type for versatile tool layout is also available.

A87

■Tap Holder PAT. (MGT6, MGT12) for JIS

・From short to long (150mm, 200mm)... Abundant Tap Holders avoid workpiece interference flexibly.

Long type has also been standardized



Synchro Adjuster Soft Type (Standard accessory)

● Model Description (Tap Holder)

MGT6 - M2 - 30
- 30 ● L dimension
- M2 ● Tap size
- MGT6 ● MEGA SYNCHRO No.

MGT6 (Tapping range: M2 - M6)

Tap Holder Model	Tapping range d Metric	ℓ	Pipe	ℓ	Unify	ℓ	ød1	□d2	H	L	øD	Weight (kg)
MGT6-M 2 - 30	M2 - M2.6	21			No.3 No.4	21	3	2.5	19	30	16	0.12
- 70										70		0.18
-100										100		0.23
-150										150		0.31
-M 3 - 30	M3	25			No.5 No.6	25	4	3.2	21	30		0.12
- 70										70		0.18
-100										100		0.23
-150										150		0.31
-M 4 - 30	M4	27			No.8	27	5	4	25	30		0.12
- 70										70		0.18
-100										100		0.22
-150										150		0.3
-200										200		0.37
-M 5 - 30	M5	35			No.10 No.12	35	5.5	4.5	25	30		0.12
- 70										70		0.18
-100										100		0.22
-150										150		0.3
-200										200		0.37
-M6 U1/4- 30	M6	37			U1/4	37	6	4.5	25	30		0.12
- 70										70		0.17
-100										100		0.22
-150										150		0.3
-200										200		0.37

Refer to the remarks in the table below.

MGT12 (Tapping range: M6 - M12)

Tap Holder Model	Tapping range d Metric	ℓ	Pipe	ℓ	Unify	ℓ	ød1	□d2	H	L	øD	Weight (kg)
MGT12-M 6 U1/4- 30	M6	35			U1/4	35	6	4.5	27	30	20	0.19
- 70										70		0.29
-100										100		0.36
-150										150		0.48
-200										200		0.6
-U5/16 - 30					U5/16	42	6.1	5	28	30		0.19
- 70										70		0.29
-100										100		0.36
-150										150		0.48
-200										200		0.6
-M 8 - 30	M7, M8	42					6.2	5	28	30		0.19
- 70										70		0.29
-100										100		0.36
-150										150		0.48
-200										200		0.6
-M10 U3/8- 30	M9, M10	47			U3/8	47	7	5.5	28	30		0.19
- 70										70		0.28
-100										100		0.35
-150										150		0.47
-200										200		0.59
-U7/16 P1/8- 30			P1/8	26	U7/16	51	8	6	29	30		0.18
- 70										70		0.28
-100										100		0.35
-150										150		0.46
-200										200		0.58
-M12 - 30	M12	53					8.5	6.5	29	30		0.18
- 70										70		0.27
-100										100		0.34
-150										150		0.46
-200										200		0.58

1. Nut is included. Wrench must be ordered separately.
2. Tap projection length ℓ is a reference figure in accordance with JIS standards.

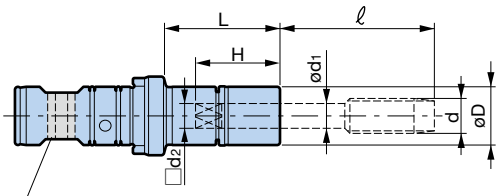
Caution
Refer to the precautionary notes on A135 for tap types.

Mega Wrench G33
Accesories G31

MEGA SYNCHRO TAPPING HOLDER PAT.

■Tap Holder PAT. (MGT20) for JIS

Long type has also been standardized



Synchro Adjuster Soft Type (Standard accessory)

MGT20 (Tapping range: M12 - M20)

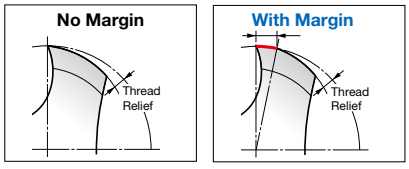
Tap Holder Model	Tapping range d						ød1	□ d2	H	L	øD	Weight (kg)
	Metric	ℓ	Pipe	ℓ	Unify	ℓ						
MGT20-M12 - 35	M12	53					8.5	6.5	29	35	30	0.55
- 85										85		0.82
-115										115		0.98
-150										150		1.17
-U1/2 - 35					U1/2	55	9	7	30	35		0.55
- 85										85		0.82
-115										115		0.98
-150										150		1.17
-M14 U9/16- 35	M14	55			U9/16	57	10.5	8	33	35		0.53
- 85										85		0.79
-115										115		0.95
-150										150		1.14
-P1/4 - 35			P1/4	31			11	9	31	35		0.53
- 85										85		0.79
-115										115		0.95
-150										150		1.14
-U5/8 - 35					U5/8	61	12	9	34	35		0.52
- 85										85		0.78
-115										115		0.94
-150										150		1.13
-M16 - 35	M16	60					12.5	10	35	35		0.52
- 85										85		0.77
-115										115		0.93
-150										150		1.11
-M18 U3/4- 35	M18	64			U3/4	69	14	11	36	35		0.51
- 85										85		0.76
-115										115		0.92
-150										150		1.1
-P3/8 - 35			P3/8	32			14	11	33	35		0.51
- 85										85		0.76
-115										115		0.92
-150										150		1.1
-M20 - 35	M20	68					15	12	37	35		0.49
- 85										85		0.74
-115										115		0.89
-150										150		1.06

1. Nuts are included, but wrench must be ordered separately.
2. Tap projection length ℓ is a reference figure in accordance with JIS standards.

Mega Wrench G33
Accesories G31

Cautions: Tap Types

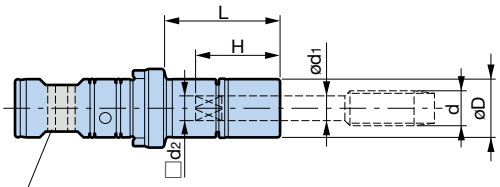
Threads are more likely to expand when using a tap which has no margin on the periphery and low self-guiding properties, as with eccentric thread relief.
In this case, change to the separately sold Synchro Adjuster (hard type) or use a collet chuck.



Eccentric Thread Relief | Con-Eccentric Thread Relief

Synchro Adjuster G31

■Tap Holder PAT. (MGT6, MGT12) for DIN / ISO



Synchro Adjuster Soft Type (Standard accessory)

MGT6 (Tapping range: DIN: M3 - M8 ISO: M3 - M5)

Tap Holder Model	Tapping range d (DIN)			Tapping range d (ISO)		ød1	□ d2	H	L	øD	Weight (kg)
	DIN371	DIN376	DIN353	ISO529	ISO2284						
MGT6-031025- 30									30		0.12
- 70									70		0.18
-100				M3		3.15	2.5	20	100		0.23
-150									150		0.31
-035027- 30									30		0.12
- 70	M3	M5				3.5	2.7	21	70		0.18
-100									100		0.23
-150									150		0.31
-040032- 30									30		0.12
- 70				M4		4.0	3.15	21	70		0.18
-100									100		0.23
-150									150		0.31
-045034- 30									30	16	0.12
- 70	M4	M6				4.5	3.4	21	70		0.18
-100									100		0.22
-150									150		0.30
-050040- 30									30		0.12
- 70									70		0.18
-100				M5		5.0	4.0	25	100		0.22
-150									150		0.30
-200									200		0.37
-060049- 30									30		0.12
- 70									70		0.17
-100	M5, M6	M8				6.0	4.9	26	100		0.22
-150									150		0.30
-200									200		0.37

1. Nuts are included, but wrench must be ordered separately.

MGT12 (Tapping range: DIN: M5 - M12 ISO: M6 - M12)

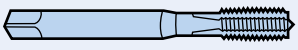
Tap Holder Model	Tapping range d (DIN)			Tapping range d (ISO)		ød1	□ d2	H	L	øD	Weight (kg)
	DIN371	DIN376	DIN353	ISO529	ISO2284						
MGT12-060049- 30									30		0.19
- 70									70		0.29
-100	M5, M6	M8				6.0	4.9	28	100		0.36
-150									150		0.48
-200									200		0.60
-063050- 30									30		0.19
- 70									70		0.29
-100				M6		6.3	5.0	28	100		0.36
-150									150		0.48
-200									200		0.60
-070055- 30									30		0.19
- 70									70		0.28
-100		M10	1/8			7.0	5.5	28	100	20	0.35
-150									150		0.47
-200									200		0.59
-080063- 30									30		0.18
- 70									70		0.28
-100	M8			M8	1/8	8.0	6.3	29	100		0.35
-150									150		0.46
-200									200		0.58
-090071- 30									30		0.18
- 70									70		0.27
-100		M12		M12		9.0	7.1	30	100		0.34
-150									150		0.46
-200									200		0.58
-100080- 35									35		0.28
- 85	M10			M10	1/4	10.0	8.0	33	85	30	0.49
-115									115		0.61
-150									150		0.76

1. Nuts are included, but wrench must be ordered separately.

Mega Wrench G33

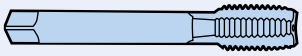
DIN Tap

DIN 371



Machine tap with reinforced shank

DIN 376



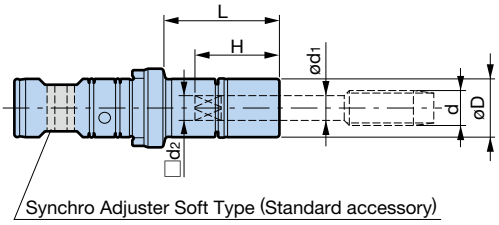
Machine tap with slender shank

Caution

Refer to the precautionary notes on A135 when selecting a tap.

MEGA SYNCHRO TAPPING HOLDER PAT.

■Tap Holder PAT. (MGT20) for DIN / ISO



Synchro Adjuster Soft Type (Standard accessory)

MGT20 (Tapping range: DIN: M10 - M20 ISO: M10 - M20)

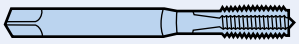
Tap Holder Model	Tapping range d (DIN)			Tapping range d (ISO)		ød1	□ d2	H	L	øD	Weight (kg)
	DIN371	DIN376	DIN353	ISO529	ISO2284						
MGT20-090071- 35									35		0.55
- 85		M12		M12		9.0	7.1	30	85		0.82
-115									115		0.98
-150									150		1.17
-100080- 35									35		0.54
- 85	M10			M10	1/4	10.0	8.0	33	85		0.80
-115									115		0.96
-150									150		1.15
-110090- 35									35		0.53
- 85		M14	1/4			11.0	9.0	34	85		0.79
-115									115		0.95
-150									150		1.14
-112090- 35									35		0.53
- 85				M14		11.2	9.0	34	85		0.79
-115									115		0.95
-150									150		1.14
-120090- 35									35	30	0.52
- 85		M16	3/8			12.0	9.0	34	85		0.78
-115									115		0.94
-150									150		1.13
-125100- 35									35		0.52
- 85				M16	3/8	12.5	10.0	35	85		0.77
-115									115		0.93
-150									150		1.11
-140110- 35									35		0.51
- 85		M18				14.0	11.0	36	85		0.76
-115									115		0.92
-150									150		1.10
-140112- 35									35		0.51
- 85				M18, M20		14.0	11.2	36	85		0.76
-115									115		0.92
-150									150		1.10
-160120- 35		M20	1/2			16.0	12.0	37	35		0.51
-150									150		1.10

1. Nuts are included, but wrench must be ordered separately.

Mega Wrench G33

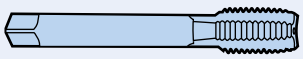
DIN Tap

DIN 371



Machine tap with reinforced shank

DIN 376



Machine tap with slender shank

Caution

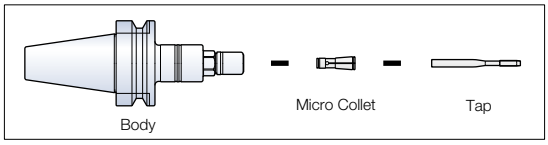
Refer to the precautionary notes on A135 when selecting a tap.

[Small Diameter Tap MGT3 Type PAT.] M1 - M3

Stable small diameter tapping is achieved by the synchronization error compensation mechanism and minimized dynamic runout.

DUAL CONTACT BIG-PLUS®

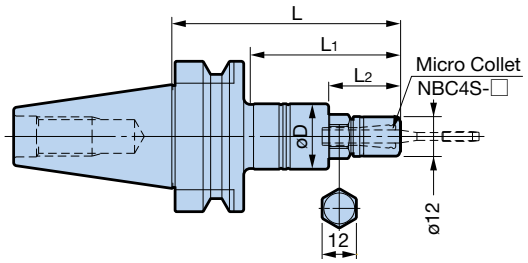
BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.



BIG-PLUS BBT SHANK Model	Tapping range	øD	L	L_1	L_2	Weight (kg)
BBT30-MGT3-70	M1 - M3	20	70	46	22	0.46
BBT40-MGT3-90			90	61		1.20

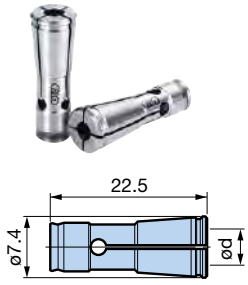
1. Nut is included. Wrench and collet must be ordered separately.
2. When attaching or detaching the tap, a commercially available flat wrench (12mm width) is also required. Prepare this on your own.

· Cannot be used with machining center without synchronized tapping function.
· Cannot be used with center through.



Mega Wrench G33

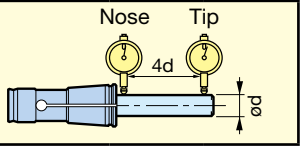
■Micro Collet



Model	Tapping range			Tap shank diameter ød
	JIS-M	JIS-U	DIN371	
NBC4S - 2.5AA			M1-M1.8	2.5
2.8AA			M2-M2.6	2.8
3.0AA	M1 - M2.6	No.0 - 4		3.0
3.5AA			M3	3.5
4.0AA	M3	No.5, 6		4.0

● Collet accuracy

Collet class	Runout accuracy	
	Nose	4D
AA	Within 1 μm	Within 3 μm



MEGA SYNCHRO TAPPING HOLDER PAT.

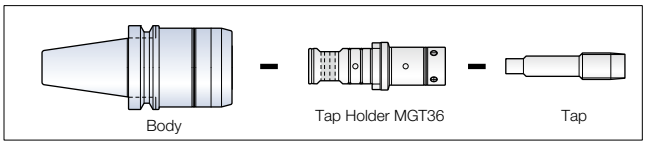
[Large Diameter Tap MGT36 Type PAT.]

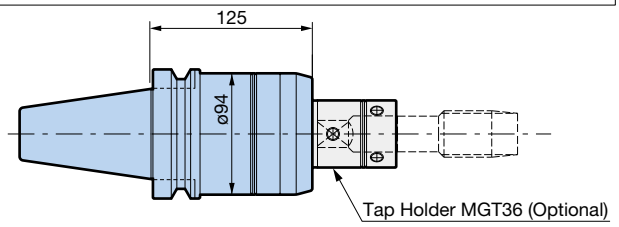
With a structure that smoothly tracks under high cutting torque of large diameter tapping, it compensates for axial deviation due to synchronization error, greatly reducing load during tapping.

DUAL CONTACT BIG-PLUS®

Center through

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.





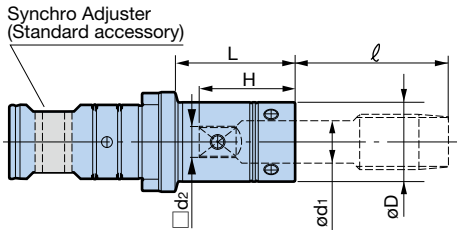
BIG-PLUS BBT SHANK Model	Body weight (kg)
BBT50-MGT36-125	7.2

1. MGT Set Screw is included.
2. Tap holder must be ordered separately.

Cannot be used with machining center without synchronized tapping function.

Accessories for MGT36 G32

■Large Diameter Tap Holder MGT36 PAT.



●For JIS

Tap holder model	Tap		ød1	□d2	H	øD	L	Weight (kg)
	Size	ℓ						
MGT36-M20- 65	M20	65 - 68	15	12	40	32	65	1.2
-150							150	1.6
-M22 U7/8- 65	M22,U7/8	71 - 74	17	13	44	34	65	1.3
-150							150	1.7
-M24- 65	M24	74 - 77	19	15	46	39	65	1.4
-150							150	2.0
-M27 U1- 65	M27,U1	80 - 83(M27) 75 - 78(U1)	20	15	50	40	65	1.4
-150							150	2.1
-M30- 65	M30	83 - 86	23	17	52	43	65	1.5
-150							150	2.3
-M33- 65	M33	88 - 91	25	19	57	49	65	1.6
-150							150	2.7
-M36- 65	M36	94 - 97	28	21	61	52	65	1.6
-150							150	2.9
-P1/2- 65	P1/2	38 - 41	18	14	42	35	65	1.3
-150							150	1.8
-P3/4- 65	P3/4	38 - 41	23	17	47	43	65	1.5
-150							150	2.3
-P1 - 65	P1	49 - 52	26	21	46	50	65	1.7
-150							150	2.8

1. Tap projection length ℓ is a reference figure in accordance with JIS standards.
2. Adjusting Screw is included.

●For DIN

Tap holder model	Tap size		ød1	□d2	H	øD	L	Weight (kg)
	DIN376	DIN353						
MGT36-180145-65	M22,24	P5/8	18	14.5	45	38	65	1.4
-200160-65	M27	P3/4	20	16	51	40		1.4
-220180-65	M30	P7/8	22	18	53	42		1.5
-250200-65	M33	P1	25	20	58	49		1.6
-280220-65	M36		28	22	62	52		1.6

1. Adjusting Screw is included.

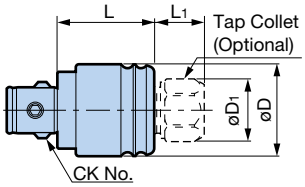
SYNCHRONIZED TAP HOLDER

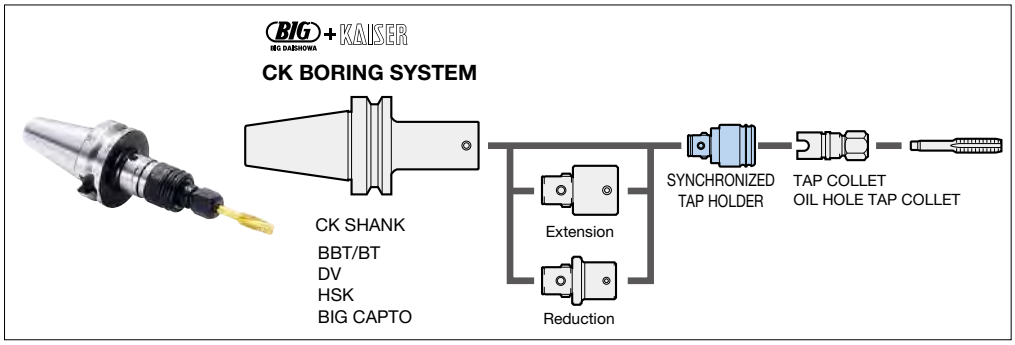
[STC] M2 - M30

● Tap Collet type enables quick tap change.
Flexible tool layout in combination with the CK Shanks.

● Model Description

CKB2 - STC 8 - 47.5
- 8: Tapping range
- STC: SYNCHRONIZED TAP HOLDER
- CKB2: CK No.





Model	Tapping range	CK No.	øD	øD1	L	L1	Weight (kg)	Tap Collet
CKB2-STC 8-47.5	M 2 - M 4	CK2	25.5	15.8	30.5	17	0.10	TC 8-□
	M 5 - M 8			19				
CKB3-STC12-66	M 3 - M12	CK3	32	22	36	30	0.18	TC12-□
CKB4-STC20-72	M 7 - M12	CK4	44	22	47	25	0.42	TC20-□
	M14 - M20			31				
CKB5-STC30-92	M20 - M30	CK5	55	41	54	38	0.72	TC30-□

1. Tap collet must be ordered separately.
2. The L1 dimension is 5mm longer with oil hole tap collets.

Holders A77

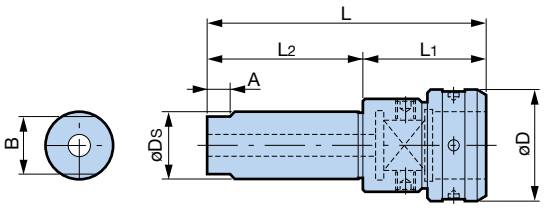
●Cannot be used with machining center without synchronized tapping function.

Tap Collet TC Type [Optional accessory]

Tap Collets A144
Oil Hole Tap Collets A145

[STD52] M39 - M52

● M39 to M52 large-diameter SYNCHRONIZED TAP HOLDER.



● Model Description

ST42 - STD 52 - M39
- M39: Tap size
- 52: Class number
- STD: SYNCHRONIZED TAP HOLDER
- ST42: Shank diameter

Model	øDs	øD	L	L1	L2	A	B	Tap size
ST42-STD52-M39	42	63	173	73	100	15	36	M39
-M42								M42
-M45								M45
-M48		70	178	78				M48
-M52								M52

1. Tap chucking dimensions are designed suitable for shank diameters and square sizes of the JIS standard taps.
2. Please contact us regarding sizes other than the above.
3. T52 wrench is not included. Please order separately. (The same wrench used for the tap holder for the DT52 Drill Tapper.)

Ordering example for T52 wrench
Nut OD øD = 63 → Hook wrench DT52 (for ø60)
70 → Hook wrench DT52 (for ø70)

TAPPER SERIES

■ Table of tap compatibility (JIS Standard)

Tap dimensions		Tap type			Tapper			
Shank diameter	Square size	Metric	Unify	Pipe	AUTO TAPPER	M/C DRILL TAPPER	MEGA SYNCHRO	SYNCHRONIZED TAP HOLDER
3	2.5	M1 - M1.8	No.0,1,2				MGT3	
3	2.5	M2 - M2.6	No.3,4					
4	3.2	M3, M3.5	No.5,6		B80		MGT6	STC8
5	4	M4, M4.5	No.8					
5.5	4.5	M5	No.10,12					
6	4.5	M6	U1/4				MGT12	
6.1	5		U5/16		B120			STC12
6.2	5	M7, M8						
7	5.5	M9, M10	U3/8					
8	6	M11	U7/16	P1/8			MGT20	
8.5	6.5	M12						
9	7		U1/2					STC20
10.5	8	M14	U9/16		E12			
11	9			P1/4	B200			
12	9		U5/8					
12.5	10	M16						
14	11	M18	U3/4	P3/8			MGT36	
15	12	M20						
17	13	M22	U7/8		E24			
18	14			P1/2				
19	15	M24		P5/8	B300			STC30
20	15	M27	U1					
22	17		$U1^{1}/_{8}$					
23	17	M30		P3/4				
24	19		$U1^{1}/_{4}$	P7/8				
25	19	M33						
26	21		$U1^{3}/_{8}$	P1				
28	21	M36		$P1^{1}/_{8}$	E36			
30	23	M39	$U1^{1}/_{2}$					
32	26	M42		$P1^{1}/_{4}$		DT52		STD52
35	26	M45	$U1^{3}/_{4}$					
38	29	M48		$P1^{1}/_{2}$				
40	32		U2					
42	32	M52		$P1^{3}/_{4}$				

1. BIG tapping head products are designed suitable for industry standard taps such as JIS. Some taps are produced based on manufacturers' standard. Be aware of this when selecting tools.
2. See each product page for the standard dimensions.
3. Even with the taps out of standard, tapping attachments are compatible as far as both the shank diameter and the square size are identical.
(When using a pipe tap, the use of an exclusive Tap Collet is recommended.)

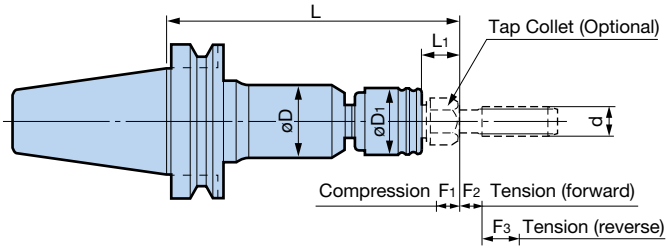
DUAL CONTACT
BIG-PLUS®

Automatic depth control

AUTO TAPPER B

Simple and compact tapper with automatic depth control.

- Reduces variation of tap depth to ±0.15mm, making it ideal for pipe tapping and blind hole tapping.
- Best-selling auto tapper series with a simple structure and affordable prices.



● Model Description

BBT30 - AUTO-B 80 - 125

- BBT30: BIG-PLUS BT No.
- AUTO-B: AUTO TAPPER B
- 80: Tapping range
- 125: L dimension

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Tapping range d	øD	øD1	L	L1	F1	F2	F3	Tap Collet	Weight (kg)
BBT30-AUTO-B 80-125	M 3 - M 8	30	25.5	125	17	5	5	10.5	TC 8-□	0.70
-AUTO-B120-150	M 3 - M12	35	32	150	30	6	6	12.5	TC12-□	0.86
BBT40-AUTO-B 80-130	M 3 - M 8	30	25.5	130	17	5	5	10.5	TC 8-□	1.4
-AUTO-B120-155	M 3 - M12	35	32	155	30	6	6	12.5	TC12-□	1.6
-AUTO-B200-185	M 7 - M20	48	44	185	25	6.5	6.5	13	TC20-□	2.3
-AUTO-B300-220	M20 - M30	58	55	220	38	7.5	7.5	14.5	TC30-□	3.2
BBT50-AUTO-B 80-140	M 3 - M 8	30	25.5	140	17	5	5	10.5	TC 8-□	4.2
-AUTO-B120-165	M 3 - M12	35	32	165	30	6	6	12.5	TC12-□	4.4
-AUTO-B200-195	M 7 - M20	48	44	195	25	6.5	6.5	13	TC20-□	5.1
-AUTO-B300-220	M20 - M30	58	55	220	38	7.5	7.5	14.5	TC30-□	6.0

1. Tap Collet is not included. TC Tap Collet is ordered separately.
2. Cannot be used in left-hand thread tapping.
3. Be sure to include the approach amount (distance between the tap tip and workpiece) when programming the starting point of tapping.
4. F_2 in the table is the tension amount until it reaches neutral. Be sure to perform test tapping when accurate tapping depth is required, as it may fluctuate slightly depending on the tap size and cutting conditions.

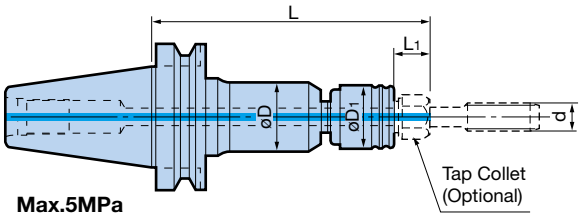
Tap Collets A144

[Center Through Type]

Automatic depth control

Center through

Not BIG-PLUS (DUAL CONTACT) specification



Max.5MPa

BT SHANK Model	Tapping range d	øD	øD1	L	L1	Weight (kg)	Tap Collet
BT40-TTB120-155	M 3 - M12	35	32	155	30	1.6	TC12
-TTB200-185	M 7 - M20	48	44	185	25	2.3	TC20
-TTB300-220	M20 - M30	58	55	220	38	3.2	TC30
BT50-TTB120-165	M 3 - M12	35	32	165	30	4.4	TC12
-TTB200-195	M 7 - M20	48	44	195	25	5.1	TC20
-TTB300-220	M20 - M30	58	55	220	38	6.0	TC30

1. Tap Collet is not included.
2. Cannot be used in left-hand thread tapping.
3. When using the depth control, be sure to include the approach amount for programming.
4. Compression is 3mm for all models.
5. The tension is the same as for AUTO TAPPER B.
6. Please contact us if higher pressure coolant than 5MPa is required.

Oil Hole Tap Collets A145
Tap Collets A144

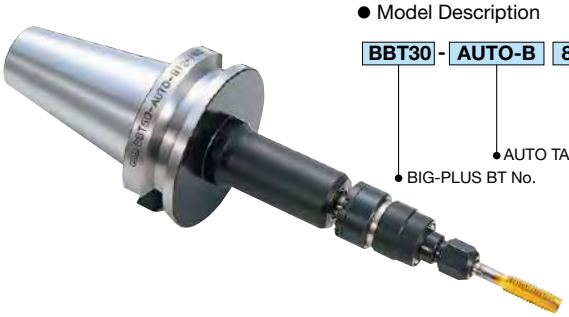
AUTO TAPPER R

DUAL CONTACT BIG-PLUS®

Radial float
Automatic
depth control

Tapper with built-in radial float mechanism that absorbs misalignment with starting holes.

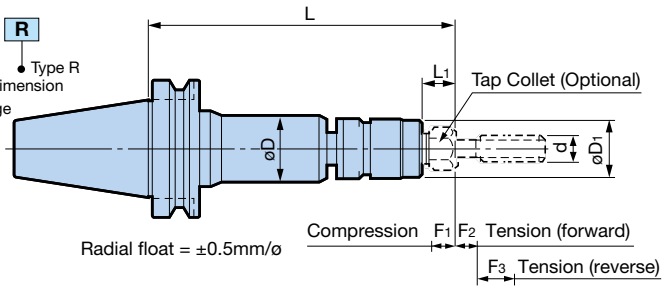
- Ideal for die-cast workpieces or those with separately processed starting holes.
- The radial float amount of ±0.5mm not only prevents the tap from breaking due to misalignment, but also improves the thread accuracy.



● Model Description

BBT30 - AUTO-B 80 - 145 R

- BBT30: BIG-PLUS BT No.
- AUTO-B: AUTO TAPPER
- 80: Tapping range
- 145: L dimension
- R: Type R



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Tapping range d	øD	øD1	L	L1	F1	F2	F3	Tap Collet	Weight (kg)
BBT30-AUTO-B 80-145R	M3 - M 8	30	25.5	145	17	5	5	10.5	TC 8-□	0.8
-B120-170R	M3 - M12	35	32	170	30	6	6	12.5	TC12-□	1.0
BBT40-AUTO-B 80-150R	M3 - M 8	30	25.5	150	17	5	5	10.5	TC 8-□	1.5
-B120-175R	M3 - M12	35	32	175	30	6	6	12.5	TC12-□	1.8
-B200-205R	M7 - M20	48	44	205	25	6.5	6.5	13	TC20-□	2.5
BBT50-AUTO-B120-185R	M3 - M12	35	32	185	30	6	6	12.5	TC12-□	4.6
-B200-215R	M7 - M20	48	44	215	25	6.5	6.5	13	TC20-□	5.3

1. Tap Collet is not included.
2. Cannot be used in left-hand thread tapping.
3. When using the depth control, be sure to include the following approach amount for programming.

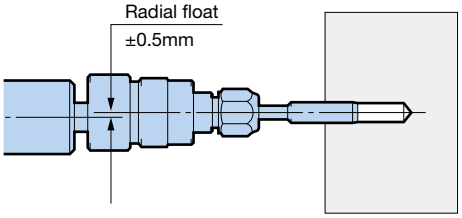
Tap Collets A144

Tapper type	Approach amount
B 80-R	12mm
B120-R	13mm
B200-R	14mm

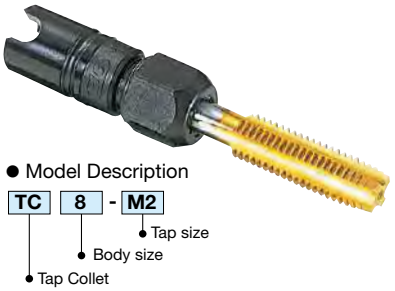
4. F_2 in the table is the tension amount until it reaches neutral.

Secure radial float function

The smooth radial float absorbs the misalignment when processing aluminum die-cast workpieces with existing starting holes or workpieces with separately processed starting holes, enabling stable tapping.



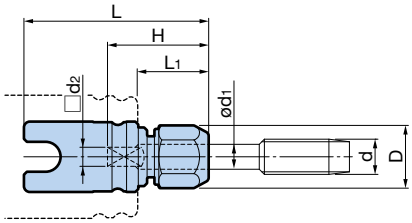
■TAP COLLET TC (for Auto Tapper B / R Type and Synchronized Tap Holder STC Type)



● Model Description

TC 8 - M2

- Tap size
- Body size
- Tap Collet



● TC Mate
Convenient for attaching and removing Tap Collets
TC Mate H4

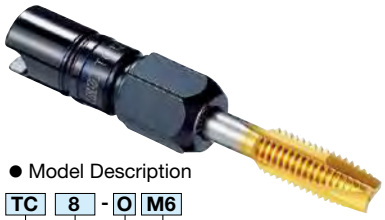
Model	Tapping range d			ød1	□d2	H	L	L1	D	Weight (kg)	Tapper
	Metric	Unify	Pipe								
TC 8-M 2	M2 - M2.6	No.3,No.4		3	2.5	21					STC8
-M 3	M 3	No.5,No.6		4	3.2	23			16		
-M 4	M 4	No.8		5	4	27					AUTO-B80
-M 5	M 5	No.10,No.12	—	5.5	4.5	29	40.5	17		0.05	AUTO-B80-R
-M 6 U1/4	M 6	U1/4		6					19		STC8
-U5/16	—	U5/16		6.1	5	30					ATB8
-M 8	M 7,M 8	—		6.2							
TC12-M 3	M 3	No.5,No.6		4	3.2	24					
-M 4	M 4	No.8		5	4	29					
-M 5	M 5	No.10,No.12		5.5	4.5						AUTO-B120
-M 6 U1/4	M 6	U1/4	—	6							AUTO-B120-R
-U5/16	—	U5/16		6.1	5	30					TTB120
-M 8	M 7,M 8	—		6.2			55	30	22	0.1	STC12
-M10 U3/8	M 9,M10	U3/8		7	5.5						ATB12
-U7/16 P1/8	—	U7/16	P1/8	8	6	31					ATS12R
-M12	M12	—	—	8.5	6.5						
-U1/2	—	U1/2		9	7	32					
TC20-M 8	M 7,M 8	—	—	6.2	5	33					
-M10 U3/8	M 9,M10	U3/8		7	5.5						
-U7/16 P1/8	—	U7/16	P1/8	8	6				22		
-M12	M12	—		8.5	6.5	34					
-U1/2	—	U1/2	—	9	7	35					AUTO-B200
-M14 U9/16	M14	U9/16		10.5	8	36					AUTO-B200-R
-P1/4	—	—	P1/4	11	9	31	63	25		0.2	TTB200
-U5/8		U5/8		12		37					STC20
-M16	M16	—	—	12.5	10	38			31		ATB20
-M18 U3/4	M18	U3/4		14	11	39					ATS20R
-P3/8	—	—	P3/8			34					
-M20	M20		—	15	12	40					
TC30-M20	M20	—	—	15	12	40				0.5	
-M22 U7/8	M22	U7/8		17	13	41					
-P1/2	—	—	P1/2	18	14	42					
-M24 P5/8	M24		P5/8	19	15	43	83	38	41		AUTO-B300
-M27 U1	M27	U1	—	20						0.4	TTB300
-U1 1/8	—	U1 1/8		22	17	45					STC30
-M30 P3/4	M30	—	P3/4	23							
-P1	—		P1	26	21				47		

Model symbol description

M = Metric Thread
U = Unify Thread
P = Pipe Thread

■OIL HOLE TAP COLLET TC (For Center Through AUTO TAPPER B Type, SYNCHRONIZED TAP HOLDER STC Type)

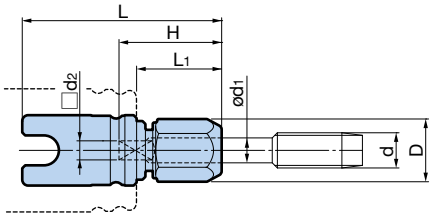
・Oil Hole Tap Collet that can feed coolant without waste.



● Model Description

TC 8 - O M6

- M6: Tap size
- O: Through Tool
- 8: Body size
- TC: Tap Collet



● TC Mate
Convenient for attaching and removing Tap Collets
TC Mate H4

Model	Tapping range d			ød1	□d2	H	L	L1	D	Weight (kg)	Tapper
	Metric	Unify	Pipe								
TC 8-OM 6 OU1/4	M 6	U1/4	—	6	4.5	34	45.5	22	19	0.05	STC8
-OM 8	M 7,M 8	—		6.2	5	35					
TC12-OM 6 OU1/4	M 6	U1/4	—	6	4.5	34	60	35	22	0.1	TTB120 STC12
-OM 8	M 7,M 8	—		6.2	5	35					
-OM10 OU3/8	M 9,M10	U3/8		7	5.5						
-OU7/16 OP1/8	—	U7/16	P1/8	8	6	36					
-OM12	M12	—	—	8.5	6.5						
-OU1/2	—	U1/2		9	7	37					
TC20-OM 8	M 7,M 8	—	—	6.2	5	38	68	30	22	0.2	TTB200 STC20
-OM10 OU3/8	M 9,M10	U3/8		7	5.5						
-OU7/16 OP1/8	—	U7/16	P1/8	8	6						
-OM12	M12	—	—	8.5	6.5	39					
-OU1/2	—	U1/2		9	7	40					
-OM14 OU9/16	M14	U9/16		10.5	8	41			31		
-OP1/4	—	—	P1/4	11	9	36					
-OU5/8		U5/8	—	12		42					
-OM16	M16	—		12.5	10	43					
-OM18 OU3/4	M18	U3/4		14	11	44					
-OP3/8	—	—	P3/8			39					
-OM20	M20		—	15	12	45					
TC30-OM20	M20	—	—	15	12	45	88	42	41	0.5	TTB300 STC30
-OM22 OU7/8	M22	U7/8		17	13	46					
-OP1/2	—	—	P1/2	18	14	47					
-OM24	M24		—	19	15	48					
-OM27 OU1	M27	U1		20							
-OU1 1/8	—	U1 1/8		22	17	50				0.4	
-OM30 OP3/4	M30	—	P3/4	23							

Model symbol description

M = Metric Thread
U = Unify Thread
P = Pipe Thread

AUTO TAPPER E M3 - M36

DUAL CONTACT
BIG-PLUS®

Torque limiter

Smoother axial float function and built-in torque limiter.

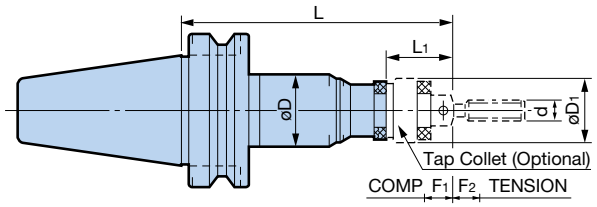
- Ideal for machining center tapping cycles.

- Model Description

BBT40 - AUTO-E 12 - 165
- 165: L dimension
- 12: Tapping range
- AUTO-E: AUTO TAPPER E
- BBT40: BIG-PLUS BT No.

Original one-way torque limiter

If the torque limiter is activated with the tap in reverse, tap breakage may occur, which is very dangerous. The BIG AUTO TAPPER series uses a unique one-way torque limiter that does not work while in reverse, allowing safe tapping.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Tapping range d	øD	øD1	L	L1	F1	F2	Tap Collet	Weight (kg)
BBT40-AUTO-E12-165	M 3 - M12	46	38.5	165	40	15	20	TCE12-□	1.8
-AUTO-E24-195	M 9 - M24	64	58.5	195	55	15	20	TCE24-□	3.4
BBT50-AUTO-E12-165	M 3 - M12	46	38.5	165	40	15	20	TCE12-□	4.2
-195				195					4.8
-AUTO-E24-195	M 9 - M24	64	58.5	195	55	15	20	TCE24-□	5.7
-240				240					6.5
-AUTO-E36-255	M20 - M36	94	78.5	255	65	20	20	TCE36-□	11.0

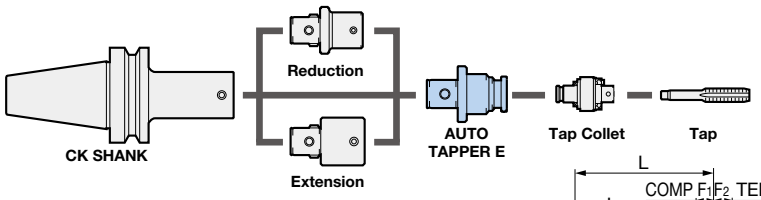
1. Tap collet must be ordered separately.
2. Torque limiter is built into the Tap Collet.
3. The torque limiter of the Tap Collet is set for high-carbon steel upon delivery.
4. As the reverse torque is set to 3x, it cannot be used for the left-hand thread.

Tap Collets A147

BIG + KAISER
[CK AUTO TAPPER E] M3 - M24

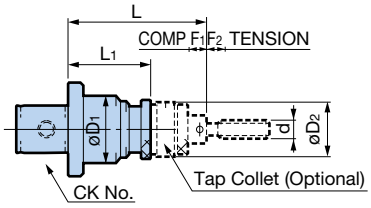
Torque limiter

- Combination with a long type CK Shank is convenient when long tapper is required.



- Model Description

CK6 - ATE 12
- 12: Tapping range
- ATE: AUTO TAPPER E
- CK6: CK No.



Model	Tapping range d	CK No.	øD1	øD2	L	L1	F1	F2	Weight (kg)	Tap Collet
CK6-ATE12	M3 - M12	CK6	47	38.5	90	50	5	10	0.9	TCE12-□
CK6-ATE24	M9 - M24		64	58.5	135	80	7	15	1.8	TCE24-□

1. Tap collet must be ordered separately.
2. Torque limiter is built into the Tap Collet.
3. The torque limiter of the Tap Collet is set for high-carbon steel upon delivery.
4. As the reverse torque is set to 3x, it cannot be used for the left-hand thread.

Tap Collets A147
Shanks A77

■TAP COLLET TCE (for Auto Tapper E)

Standard type

Long type
(L_2 is 50mm longer than the standard type.)

● Model Description

TCE12 - M3
- M3: Tap size
- TCE12: Tap Collet model

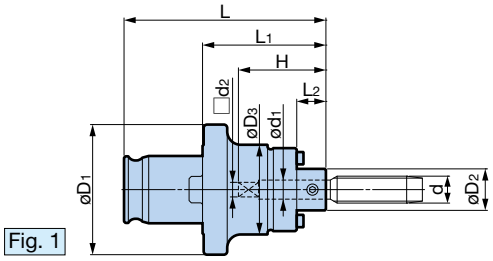


Fig. 1

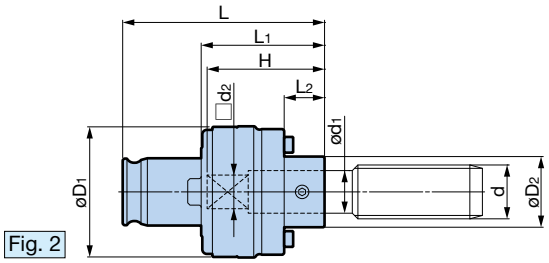


Fig. 2

※Models with (L) are the long type. L_2 is 50mm longer than the standard type. Example: TCE12-M3L

Model	Fig.	Tapping range d			ød1	□d2	H	L		L1		L2		øD1	øD2	øD3	Weight (kg)		Tapper
		Metric	Unify	Pipe				Standard	Long	Standard	Long	Standard	Long				Standard	Long	
TCE12-M 3(L)	1	M 3	No.5,No.6	–	4	3.2	23	62	112	40	90	10	60	38	13	26	0.2	0.25	AUTO-E12 ATE12
-M 4(L)		M 4	No.8		5	4	29												
-M 5(L)		M 5	No.10,No.12		5.5	4.5	32												
-M 6 U1/4(L)		M 6	U1/4		6														
-U5/16	2	–	U5/16		6.1	5	33					13	63	38.5	19	–	0.3	0.4	
-M 8(L)		M 7,M 8	–		6.2														
-M10 U3/8(L)		M 9,M10	U3/8		7	5.5	35												
-U7/16		–	U7/16		8	6	36												
-P1/8			–	P1/8			33												
-M12(L)		M12		–	8.5	6.5	36												
-U1/2		–	U1/2		9	7	37												
TCE24-M10 U3/8(L)	1	M 9,M10	U3/8	–	7	5.5	38	90	140	55	105	13	63	58	19	40	0.7	0.8	AUTO-E24 ATE24
-U7/16		–	U7/16		8	6	39												
-P1/8			–	P1/8			33												
-M12(L)		M12		–	8.5	6.5	39												
-U1/2		–	U1/2		9	7	40												
-M14 U9/16(L)	2	M14	U9/16		10.5	8	41					18	68	58.5	32	–	0.9	1.0	
-P1/4		–	–	P1/4	11	9	31												
-U5/8			U5/8	–	12		42												
-M16(L)		M16	–		12.5	10	43												
-M18 U3/4(L)		M18	U3/4		14	11	44												
-P3/8		–	–	P3/8			34												
-M20(L)		M20		–	15	12	45												
-M22 U7/8(L)		M22	U7/8		17	13	51												
-P1/2		–	–	P1/2	18	14	42												
-M24(L)		M24		–	19	15	53												
TCE36-M20	1	M20	–	–	15	12	48	116	–	65	–	18	–	78	32	60	1.8	–	AUTO-E36
-M22 U7/8		M22	U7/8		17	13	49												
-P1/2		–	–	P1/2	18	14	42												
-M24		M24		–	19	15	51												
-M27 U1	2	M27	U1	–	20	15	58					21	–	78.5	45	–	2.0		
-U1 1/8		–	U1 1/8		22	17	60												
-M30		M30	–		23														
-P3/4		–		P3/4			47												
-U1 1/4			U1 1/4	–	24	19	62												
-P7/8			–	P7/8			47												
-M33		M33		–	25		62												
-U1 3/8		–	U1 3/8		26	21	69												
-P1			–	P1			47												
-M36		M36		–	28		69												
-P1 1/8		–		P1 1/8			52												

Built-in torque limiter mechanism, ideal for large-diameter tapping.

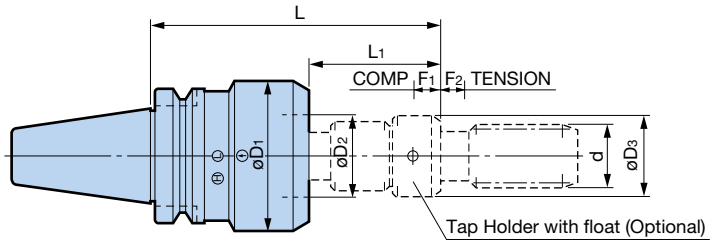
●Torque limiter with a proven track record, highly reliable and maintainable.

● Model Description

BT50 - DT 52 T

- 52: Tapping range
- DT: DRILL TAPPER
- BT50: BT SHANK No.

Not BIG-PLUS (DUAL CONTACT) specification



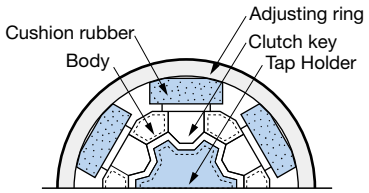
BT SHANK Model	Tapping range d	øD1	øD2	D3	L	L1	F1	F2	Tap Holder with float	Weight (kg)
BT50-DT52T	M30 - M33	113	58	58	165	50	20	20	T52- ⓓ TCD	9.5
	M36 - M52			58 - 70	210	95				10.0

1. The torque limiter can be adjusted into 2 steps, for steel or hard steel.
2. Tap holder is not included.

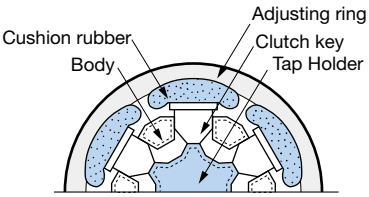
Tap holders A149

Safety clutch

(at normal torque transmission)



(over-torqued)



- Stable tapping is achieved in combination with a Tap Holder designed with optimum torque and spring pressure for each tap size.
- The adjusting ring allows the torque to be set to either high or low.

DRILL TAPPER

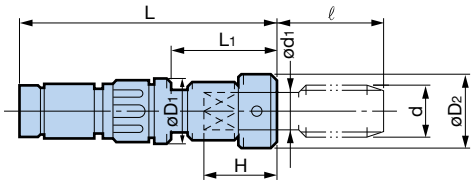
■TAP HOLDER WITH FLOAT (for Drill Tapper for machining centers)

・Tap holders with optimal float amount and spring pressure for each tap size.

● Model Description

T52 - **M30** **TCD**

- With float
- Tap size
- Tap holder model



● Enter the required tap size in ⓓ to order.

Model	Tapping range d	øD1	L1	L	Weight (kg)
T52- ⓓ TCD	M30 - M33	58	49	182	3.5
	M36 - M52		94	227	4.0

1. Wrench is not included. Please order the T52 wrench separately. (See lower right of table)

T52 Tap Holder with float

Model		**T52- ⓓ TCD**							
d	**M**	M30	M33	M36	M39	M42	M45	M48	M52
	UNC	—	—	—	U1 1/2	—	U1 3/4	—	—
ød1		23	25	28	30	32	35	38	42
H		54			65			67	
øD2		58			63			70	
ℓ		83	91	96	104 (M39) 109 (U1 1/2)	110	115 (M45) 122 (U1 3/4)	118	128

1. The tool projection length ℓ above is a reference figure in accordance with JIS standards.

Ordering example for T52 wrench

Nut OD øD2 =58, 63 → Hook wrench for DT52 (for ø60)
70 → Hook wrench for DT52 (for ø70)

Significantly reduces work time through systematized multilateral machining.
BIG-PLUS DUAL CONTACT equipped as standard to further improve rigidity.

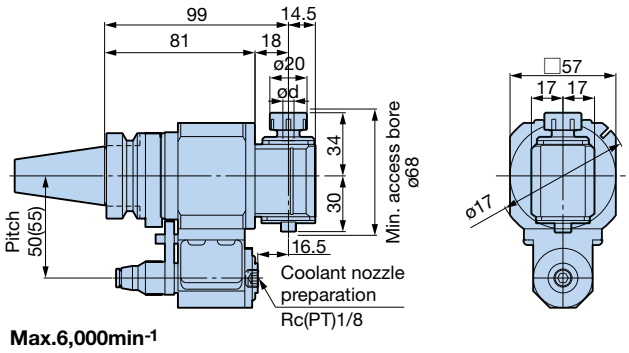
DUAL CONTACT
BIG-PLUS®

Spindle angle
90°

BBT30 Lightweight Type NEW

●Clears the high-speed ATC weight limit of the #30 machining center.

[NEW BABY CHUCK Type]



Max.6,000min-1

● Model Description

BBT30 - AG90 - 6 - 99
- 99: L dimension
- 6: Maximum clamping diameter
- AG90: 90° Head type
- BBT30: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping Diameter ød	Collet Model	Speed ratio Input:output	Weight (kg)
BBT30-AG90-6-99	0.25 - 6	NBC6	1:1	1.79

1. **The tool rotates in reverse to the machine spindle.**
2. Nut and wrench are included. Collet is not included. Please order separately.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. A tapped hole (Rc(PT)1/8) is prepared at the bottom cover of the Locating Pin housing so that a pipe for coolant can be connected.
6. Automatic tool change may not be available depending on machine tool models.
7. Endmill collets cannot be used.

Collets G7
Insertion Length List A154
Stop Blocks A170

BBT30 Lightweight Type

● Clears the high-speed ATC weight limit of the #30 machining center.

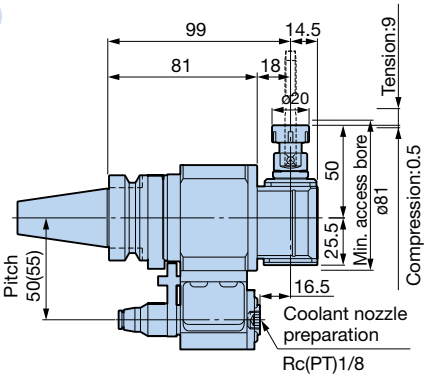
[TAPPER Type] NEW

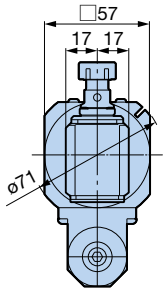
DUAL CONTACT
BIG-PLUS®

Spindle angle 90°

Compact and lightweight High-speed ATC enabled

Lightweight under 2kg





Max.2,000min-1

● Model Description

BBT30 - AG90 - FT 6 - 99

- 99: L dimension
- 6: Tapping range
- FT: Tapper with float mechanism
- AG90: 90° Head type
- BBT30: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Tapping range ød	Collet Model	Speed ratio Input:output	Weight (kg)
BBT30-AG90-FT6-99	M2 - M6	NBC6	1:1	1.81

1. **The tool rotates in reverse to the machine spindle.**
2. Nut and wrench are included. Collet is not included. Please order separately.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. A tapped hole (Rc(PT)1/8) is prepared at the bottom cover of the Locating Pin housing so that a pipe for coolant can be connected.
6. Automatic tool change may not be available depending on machine tool models.

Collets G7
Stop Blocks A170

[Small Bore Type]

DUAL CONTACT
BIG-PLUS®

Spindle angle 90°

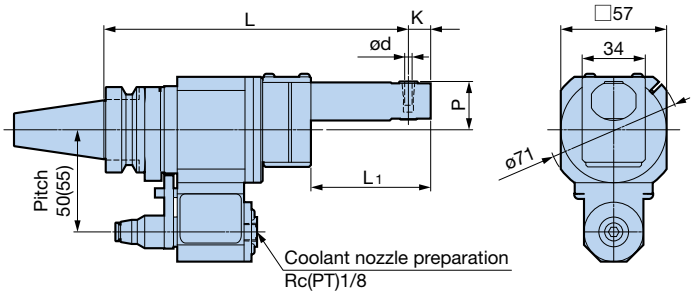
Compact and lightweight High-speed ATC enabled

Lightweight under 2kg

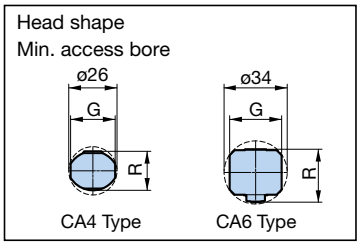
● Model Description

BBT30 - AG90 - CA 4 SG - 164

- 164: L dimension
- SG: For inner-diameter machining
- 4: Maximum clamping diameter
- CA: Collet type
- AG90: 90° Head type
- BBT30: BIG-PLUS BT No.



Max.2,000min^{-1}



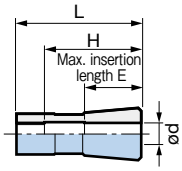
BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	ød	L	L1	K	P	G	R	Speed ratio Input:output	Weight (kg)
BBT30-AG90-CA4SG-164	3 - 4	164	64.5	12	26	24	21	1:1.13 (acceleration)	1.90
-CA6SG-164	3 - 6	164	67	14.5	28	28	28.5	1:0.91 (deceleration)	1.98

1. **The cutting tool rotates in forward to the machine spindle.**
2. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
3. A Stop Block is required when mounting on machines. Please order separately.
4. A tapped hole Rc(PT)1/8 is prepared at the bottom cover of the Locating Pin housing so that a pipe for coolant can be connected.

Stop Blocks A170

■Exclusive collet



● Model Description

CA 4 - 3

- 3: Clamping diameter
- 4: Body size
- CA: Collet type

Model	Clamping diameter ød	H	E	L
CA4-3	3	12.8	7.5	16.5
-3.5	3.5			
-4	4			

1. Use only cutting tools that have a shank tolerance within h7.

Model	Clamping diameter ød	H	E	L
CA6-3	3	16	7.5	22
-4	4			
-5	5			
-6	6			

ANGLE HEAD AG90 SERIES

Clamping diameter: ø2.5 - ø13

Compact type

●Compact and lightweight while fully equipped with the functions and accuracy required in drilling!

For drilling/tapping

DUAL CONTACT BIG-PLUS®

Spindle angle 90°

Lightweight and compact

● Model Description

BBT40 - AG90 - 13 - 120

- BBT40 - BIG-PLUS BT No.
- AG90 - 90° Head type
- 13 - Maximum clamping diameter
- 120 - L dimension

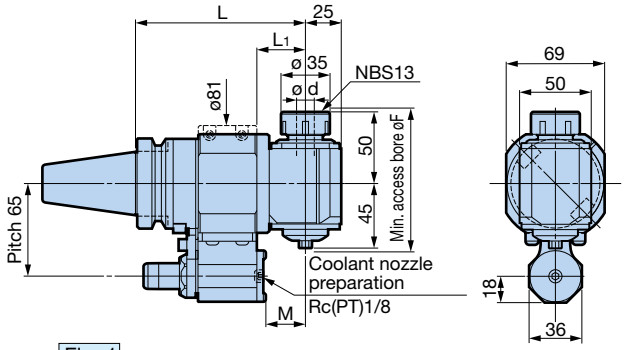


Fig. 1 **Max.5,000min-1**

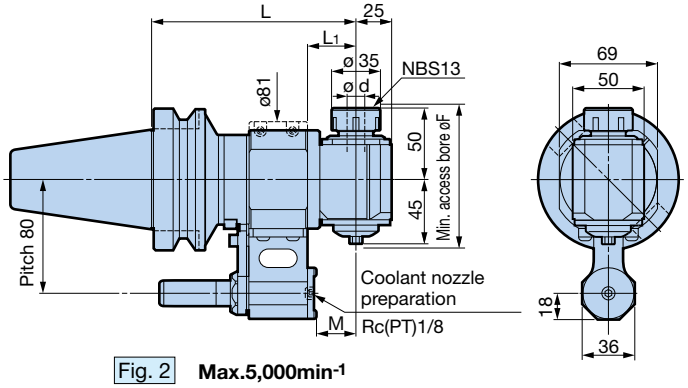


Fig. 2 **Max.5,000min-1**

●Tap Collet with tension mechanism can also be used to perform tapping.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	L	L1	M	øF	Collet Model	Speed ratio Input:output	Weight (kg)
BBT40-AG90-13-120	1	2.5 - 13	120	34	27.85	99	NBC13	1:1	4.5
-170			170	84	77.85				5.5
BBT50-AG90-13-145	2	2.5 - 13	145	34	27.85	99	NBC13	1:1	7.6
-195			195	84	77.85				8.6

1. **The cutting tool rotates in reverse to the machine spindle.**
2. Nut and wrench are included. Collet is not included.
3. New Baby Endmill Collet cannot be used.
4. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
5. A Stop Block is required when mounting on machines. Please order separately.
6. A tapped hole Rc(PT)1/8 is prepared at the bottom cover of the Locating Pin housing so that a pipe for coolant can be connected.
7. Automatic tool change may not be available depending on machine tool models.

Collets G7
Tap Collets G17
Insertion Length List A154
Stop Blocks A170

Application example

Compact yet with high rigidity and runout accuracy, allowing stable machining.

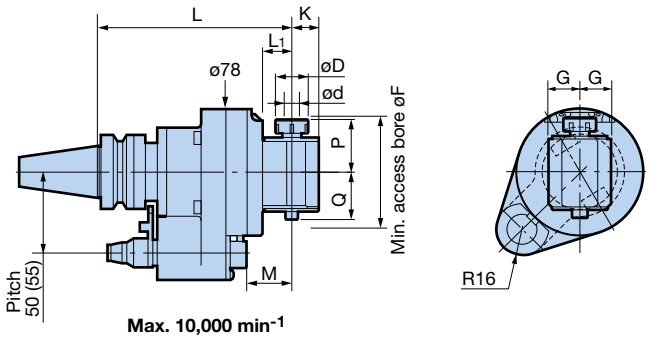
	Drilling	Tapping
Tools used	ø12 carbide drill	M5 Tap
Workpiece material	S50C	A2017
Cutting speed	70m/min	7.5m/min
Feed	372mm/min	384mm/min
	0.2mm/rev	
Spindle speed	1,860min-1	450min-1

NEW BABY CHUCK Type

- High runout accuracy is achieved through the adoption of the high-accuracy New Baby Chuck.

DUAL CONTACT
BIG-PLUS®

Spindle angle 90°



Max. 10,000 min^{-1}

- Model Description

BBT30 - AG90 - 6 - 120
- 120: L dimension
- 6: Maximum clamping diameter
- AG90: 90° Head type
- BBT30: BIG-PLUS BT No.

- Tap Collet with tension mechanism can also be used to enable tapping. (NBS10 or larger)

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	ød	øD	G	K	L	L_1	M	P	Q	øF	Collet Model	Speed ratio Input:output	Weight (kg)
BBT30-AG90- 6-120	0.25 - 6	20	19.5	17	120	18.5	28.5	33	29	65	NBC 6	1:1	2.3
- 8-125	0.5 - 8	25	21.5	21	125	23.5	33.5	42	41	87	NBC 8		2.5
-10-125	1.5 - 10	30	24.5	25				45	43	92	NBC10		2.6
-13-125	2.5 - 13	35						52	45	102	NBC13		2.7

1. **The cutting tool rotates in reverse to the machine spindle.**
2. Nut and wrench are included. Collet is not included.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. When supplied through the Stop Block, coolant can be ejected from the housing.
6. Automatic tool change may not be available depending on machine tool models.
7. New Baby Endmill Collets cannot be used.

Collets G7
Tap Collets G17
Stop Blocks A170

NEW BABY CHUCK Insertion Length List

Model	Tool adjustment amount	Max. insertion length	Adjust Screw	Model	Tool adjustment amount	Max. insertion length	Adjust Screw
BBT30-AG90-6-99	—	33	—	**AG35-NBS10**	35 - 45	72	**NBA10B**
BBT30-AG90-6-120				**AG35-NBS13**	41 - 60	80	**NBA13B**
BBT30-AG90-8-125		40		**AG35-NBS16**	45 - 60	82	**NBA16B**
BBT30-AG90-10-125		45		**AG35-NBS20**	48 - 60		**NBA20B**
BBT30-AG90-13-125		52		**AG35-ONBS13N**	—	73	—
BBT40-AG90/NBS6	—	33	—	**AG35-ONBS20N**		78	
BBT40-AG90/NBS10		45		**BBT50-AG90/NBS6**	—	33	—
BBT40-AG90/NBS13		52		**BBT50-AG90/NBS10**		45	
BBT40-AG90/NBS20-185□		70		**BBT50-AG90/NBS13**		52	
BBT40-AG90/NBS20S-165S				**BBT50-AG90/NBS20-230□**		70	
BBT40-AG90/NBS10W-185□		60		**BBT50-AG90/NBS16H-215□**		98	
BBT40-AG45/NBS10-215□		45		**BBT50-AG90/NBS10W-230□**		60	
BBT40-AG45/NBS13-220□		52		**BBT50-AG45/NBS10-260□**		45	
BBT40-AGU/NBS13-270		50		**BBT50-AG45/NBS13-265□**		52	
BBT40-AGU30/NBS13-240	41 - 53	73	**NBA13B**	**BBT50-AGU/NBS20-315**		50	
BBT40-AG90-13-120	—	50	—	**BBT50-AGU30/NBS20-295**	48 - 65	85	**NBA20B**
BBT40-AG90-13-170				**BBT50-AG90-13-145**	—	50	—
BBT40-OAG90-13-170	36 - 40	60	**NBA13B**	**BBT50-AG90-13-195**			
				BBT50-OAG90-13-195	36 - 40	60	**NBA13B**

Adjusting Screws G23

NEW BABY CHUCK Type

- High runout accuracy is achieved through the adoption of the high-precision New Baby Chuck.

DUAL CONTACT
BIG-PLUS®

Spindle angle 90°

- Model Description

BBT40 - AG90 / NBS 6 - 170

- BBT40 - BIG-PLUS BT No.
- AG90 - 90° Head type
- NBS - NEW BABY CHUCK System
- 6 - Maximum clamping diameter
- 170 - L dimension

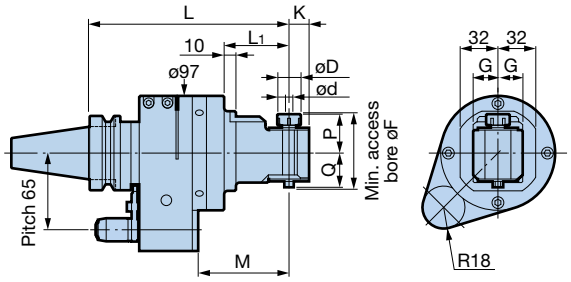


Fig. 1 **Max.6,000min-1**

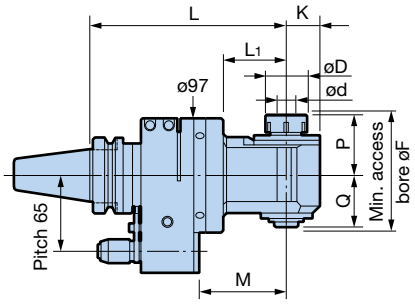


Fig. 2 **Max.6,000min-1**

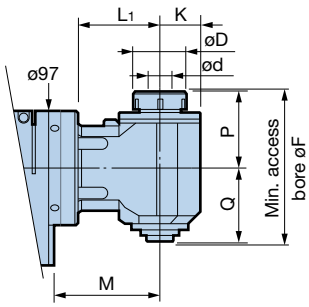


Fig. 3 **Max.3,000min-1**

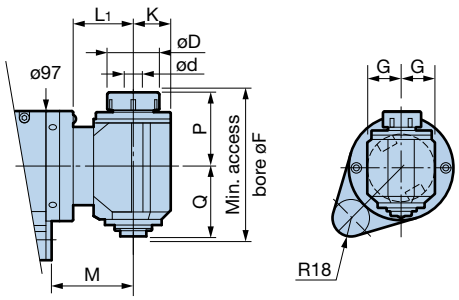


Fig. 4 High Rigidity Type **Max.3,000min-1**

- High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.
- Tap Collet with tension mechanism can also be used to perform tapping. (NBS10 or larger)

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	øD	G	K	L	L1	M	P	Q	øF	Collet Model	Speed ratio Input:output	Weight (kg) Standard Type	Weight (kg) High Rigidity Type
BBT40-AG90/NBS 6 -170 □	1	0.25 - 6	20	21	17	170	55	77	33	29	67	NBC 6	1:1	5.1	6.0
-200 □						200	85	107						5.3	6.2
-230 □						230	115	137						5.5	6.4
-260 □						260	145	167						5.7	6.6
-AG90/NBS10 -170 □	2	1.5 - 10	30	30	25	170	55	77	45	43	91	NBC10		5.5	6.4
-200 □						200	85	107						5.9	6.8
-230 □						230	115	137						6.2	7.1
-AG90/NBS13 -170 □	2	2.5 - 13	35	31	28	170	55	77	52	45	101	NBC13		5.6	6.5
-200 □						200	85	107						6.0	6.9
-230 □						230	115	137						6.3	7.2
-AG90/NBS20 -185 □	3	2.5 - 20	46	35	35	185	70	92	65	62	132	NBC20		6.7	7.6
-AG90/NBS20S -165 S	4	2.5 - 20	46	35	33	165	53	72	65	62	132	NBC20		—	8.0

1. **The cutting tool rotates in reverse to the machine spindle.**
2. Nut and wrench are included. Collet is not included.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. When supplied through the Stop Block, coolant can be ejected from the housing.
6. Automatic tool change may not be available depending on machine tool models.
7. New Baby Endmill Collets cannot be used.

Collets G7
Tap Collets G17
Insertion Length List A154
Stop Blocks A170

DUAL CONTACT
BIG-PLUS®

Spindle angle
90°

● Model Description

BBT50 - AG90 / NBS 6 - 215

- 215: L dimension
- 6: Maximum clamping diameter
- NBS: NEW BABY CHUCK System
- AG90: 90° Head type
- BBT50: BIG-PLUS BT No.

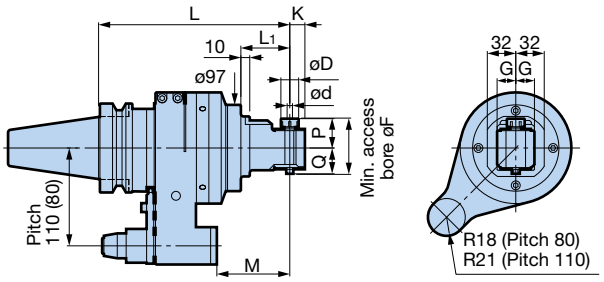


Fig. 1 **Max.6,000min-1**

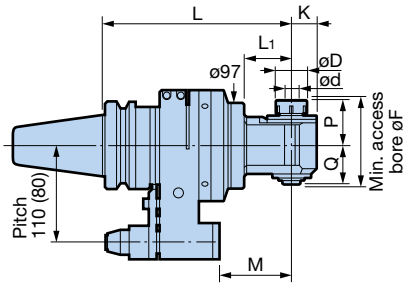


Fig. 2 **Max.6,000min-1**

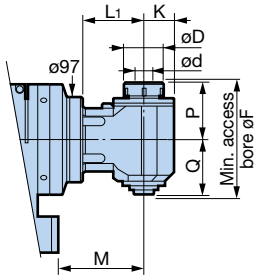


Fig. 3 **Max.3,000 min-1**

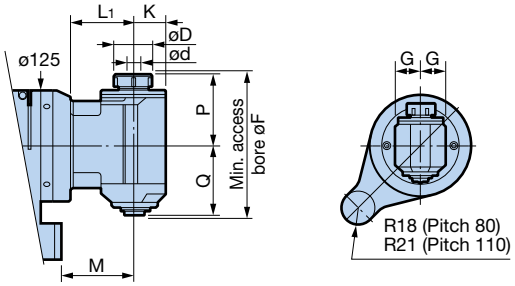


Fig. 4 Double-speed Type **Max.8,000min-1**

● High rigidity S type with reinforced Locating Pin part is also available.
Add the letter S at the end when ordering.
● Tap Collet with tension mechanism can also be used to perform tapping. (NBS10 or larger)

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	øD	G	K	L	L1	M	P	Q	øF	Collet Model	Speed ratio Input:output	Weight (kg) Standard Type (Pitch 110)	Weight (kg) High Rigidity Type (Pitch 110)	Weight (kg) High Rigidity Type (Pitch 80)
BBT50-AG90/NBS6 -215 ☐	1	0.25 - 6	20	21	17	215	55	82	33	29	67	NBC 6	1:1	12.6	13.9	13.2
-245 ☐						245	85	112						12.8	14.1	13.4
-275 ☐						275	115	142						13.0	14.3	13.6
-305 ☐						305	145	172						13.2	14.5	13.8
-AG90/NBS10 -215 ☐	2	1.5 - 10	30	30	25	215	55	82	45	43	91	NBC10		13.0	14.3	13.6
-245 ☐						245	85	112						13.4	14.7	14.0
-275 ☐						275	115	142						13.7	15.0	14.3
-AG90/NBS13 -215 ☐	2	2.5 - 13	35	31	28	215	55	82	52	45	101	NBC13		13.1	14.4	13.7
-245 ☐						245	85	112						13.5	14.8	14.1
-275 ☐						275	115	142						13.8	15.1	14.4
-AG90/NBS20 -230 ☐	3	2.5 - 20	46	35	35	230	70	97	65	62	132	NBC20		14.2	15.5	14.8
-AG90/NBS16H-215 ☐	4	2.5 - 16	42	45	35	215	71	82	80	80	163	NBC16	1:2 (Acceleration)	14.6	15.9	15.2

1. **The cutting tool rotates in reverse to the machine spindle.**
2. Nut and wrench are included. Collet is not included.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. When supplied through the Stop Block, coolant can be ejected from the housing.
6. Automatic tool change may not be available depending on machine tool models.
7. New Baby Endmill Collets cannot be used.

Collets G7
Tap Collets G17
Insertion Length List A154
Stop Blocks A170

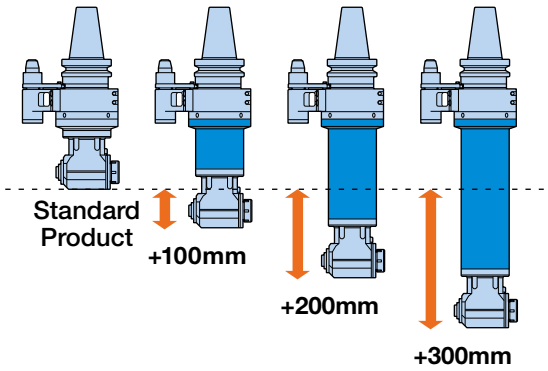
NEW BABY CHUCK Type

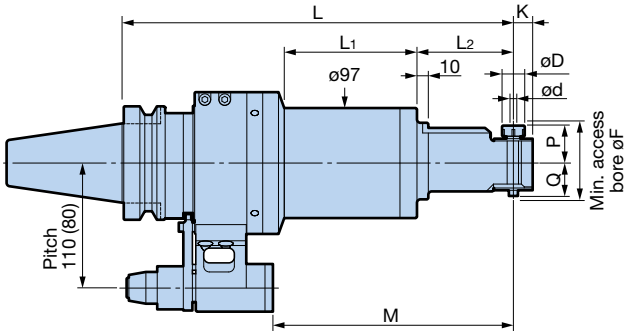
[Long Type]

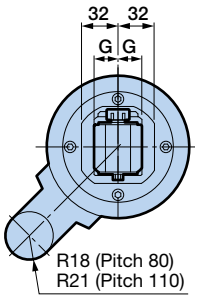
DUAL CONTACT
BIG-PLUS®

Spindle angle
90°

- Ideal for inner-diameter lateral drilling and keyway grooving of large workpieces. Long type with +100mm, +200mm or +300mm additional length compared to BIG standard units.







● Model Description

BBT50	-	AG90	/	NBS	6	-	315	LS

- LS: Long
- 315: L dimension
- 6: Maximum clamping diameter
- NBS: NEW BABY CHUCK System
- AG90: 90° Head type
- BBT50: BIG-PLUS BT No.

Fig. 1 **Max.6,000min-1**

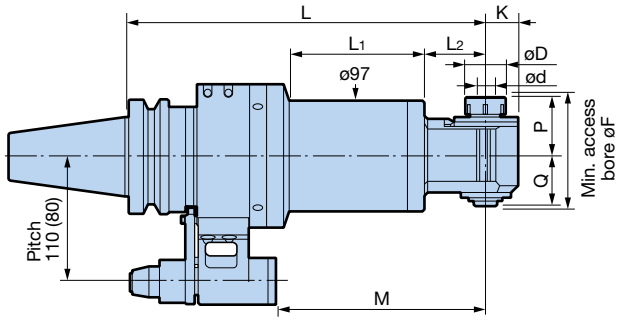
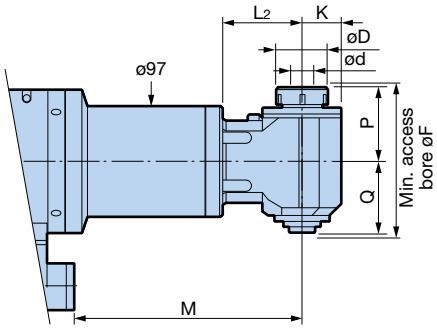


Fig. 2 **Max.6,000min-1**



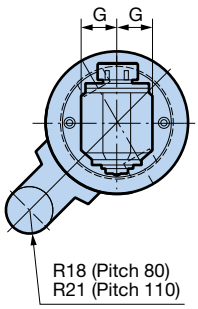
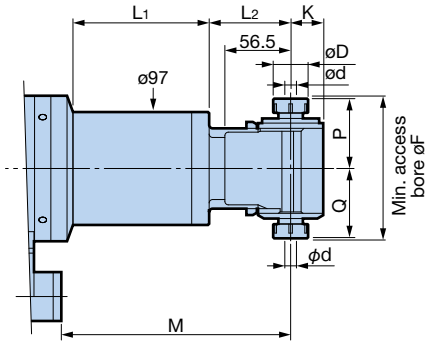


Fig. 3 **Max.3,000min-1**



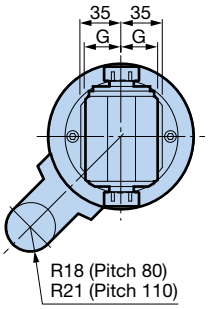


Fig. 4 Twin head (180° diagonal) **Max.6,000min-1**

●Tap Collet with tension mechanism can also be used to perform tapping. (NBS10 or larger)

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	øD	G	K	L	L_1	L_2	M	P	Q	øF	Collet Model	Speed ratio Input:output	Weight (kg)
BBT50-AG90/NBS 6 -315LS	1	0.25 - 6	20	21	17	315	117	55	182	33	29	67	NBC 6	1:1	18.9
-345LS						345		85	212						19.1
-375LS						375		115	242						19.3
-405LS						405		145	272						19.5
-AG90/NBS10 -315LS	2	1.5 - 10	30	30	25	315	117	55	182	45	43	91	NBC10		19.3
-345LS						345		85	212						19.7
-375LS						375		115	242						20.0
-AG90/NBS13 -315LS	2	2.5 - 13	35	31	28	315	117	55	182	52	45	101	NBC13		19.4
-345LS						345		85	212						19.8
-375LS						375		115	242						20.1
-AG90/NBS20 -330LS	3	2.5 - 20	46	35	35	330	117	70	197	65	62	132	NBC20		20.5
-AG90/NBS10W-330LS	4	1.5 - 10	30	31	28	330	117	70	197	60	60	124	NBC10		20.1
BBT50-AG90/NBS 6 -415LS	1	0.25 - 6	20	21	17	415	217	55	282	33	29	67	NBC 6	1:1	23.3
-445LS						445		85	312						23.5
-475LS						475		115	342						23.7
-505LS						505		145	372						23.9
-AG90/NBS10 -415LS	2	1.5 - 10	30	30	25	415	217	55	282	45	43	91	NBC10		23.7
-445LS						445		85	312						24.1
-475LS						475		115	342						24.4
-AG90/NBS13 -415LS	2	2.5 - 13	35	31	28	415	217	55	282	52	45	101	NBC13		23.8
-445LS						445		85	312						24.2
-475LS						475		115	342						24.5
-AG90/NBS20 -430LS	3	2.5 - 20	46	35	35	430	217	70	297	65	62	132	NBC20		24.9
-AG90/NBS10W-430LS	4	1.5 - 10	30	31	28	430	217	70	297	60	60	124	NBC10		24.5
BBT50-AG90/NBS 6 -515LS	1	0.25 - 6	20	21	17	515	317	55	382	33	29	67	NBC 6	1:1	27.7
-545LS						545		85	412						27.9
-575LS						575		115	442						28.1
-605LS						605		145	472						28.3
-AG90/NBS10 -515LS	2	1.5 - 10	30	30	25	515	317	55	382	45	43	91	NBC10		28.1
-545LS						545		85	412						28.5
-575LS						575		115	442						28.8
-AG90/NBS13 -515LS	2	2.5 - 13	35	31	28	515	317	55	382	52	45	101	NBC13		28.2
-545LS						545		85	412						28.6
-575LS						575		115	442						28.9
-AG90/NBS20 -530LS	3	2.5 - 20	46	35	35	530	317	70	397	65	62	132	NBC20		29.3
-AG90/NBS10W-530LS	4	1.5 - 10	30	31	28	530	317	70	397	60	60	124	NBC10		28.9

1. **The cutting tool rotates in reverse to the machine spindle.**
2. Nut and wrench are included. Collet is not included.
3. Output spindles of Twin Head do not rotate in forward direction simultaneously.
4. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
5. New Baby Endmill Collets cannot be used.
6. A Stop Block is required when mounting on machines. Please order separately.
7. Automatic tool change may not be available depending on machine tool models.
8. When supplied through the Stop Block, coolant can be ejected from the housing.

Collets G7
Tap Collet G17
Insertion Length List A154
Stop Blocks A170

ANGLE HEAD AG90 SERIES

Clamping diameter: ø1.5 - ø10

DUAL CONTACT
BIG-PLUS®

Spindle angle 90°

NEW BABY CHUCK Type

[TWIN HEAD] (180° diagonal)

- Twin spindle head with a compact design. Symmetrical machining can be performed using one unit, contributing to the reduction of the number of magazines.

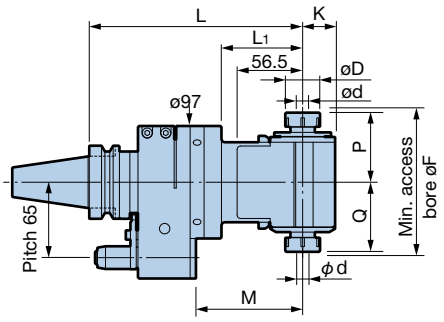


Fig. 1 **Max.6,000 min-1**

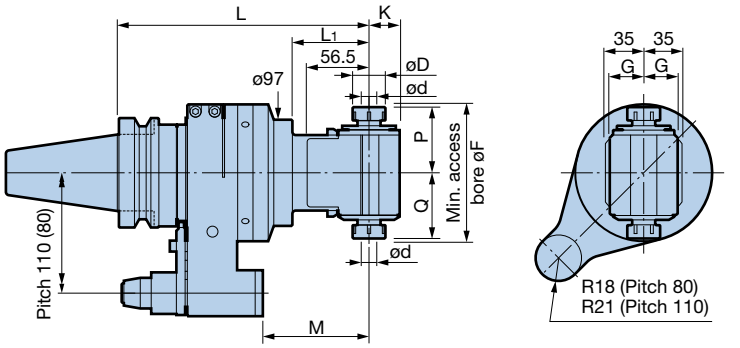


Fig. 2 **Max.6,000 min-1**

● Model Description

BBT40 - AG90 / NBS 10 W - 185

- 185: L dimension
- W: TWIN HEAD
- 10: Maximum clamping diameter
- NBS: NEW BABY CHUCK System
- AG90: 90° Head type
- BBT40: BIG-PLUS BT No.

- High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.
- Tap Collet with tension mechanism can also be used to perform tapping.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	øD	G	K	L	L1	M	P	Q	øF	Collet Model	Speed ratio Input:output	Weight (kg) Standard Type	Weight (kg) High Rigidity Type
BBT40-AG90/NBS10W-185 □	1	1.5 - 10	30	31	28	185	70	92	60	60	124	NBC10	1:1	6.3 (pitch 65)	7.2 (pitch 65)
BBT50-AG90/NBS10W-230 □	2	1.5 - 10	30	31	28	230	70	97	60	60	124	NBC10	1:1	13.8(pitch 110)	15.1 (pitch 110) / 14.4 (pitch 80)

1. **Output spindles do not rotate in forward direction simultaneously.**
2. Nut and wrench are included. Collet is not included.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. When supplied through the Stop Block, coolant can be ejected from the housing.
6. Automatic tool change may not be available depending on machine tool models.
7. New Baby Endmill Collets cannot be used.

Collets G7
Tap Collets G17
Insertion Length List A154
Stop Blocks A170

Oil Hole Type

●Feeds coolant through the cutting tool via Stop Block!

DUAL CONTACT BIG-PLUS®

Spindle angle 90°

For drilling

Coolant through tool

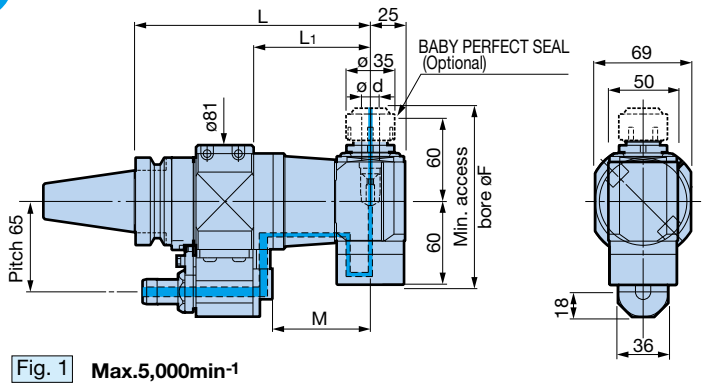
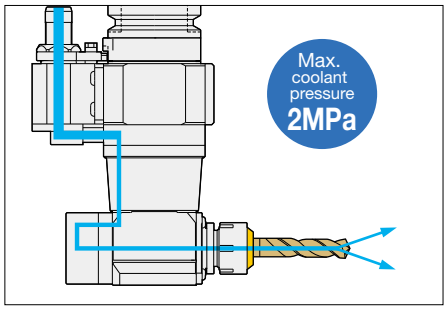


Fig. 1 **Max.5,000min-1**



Feeds coolant from the cutting edge via Stop Block

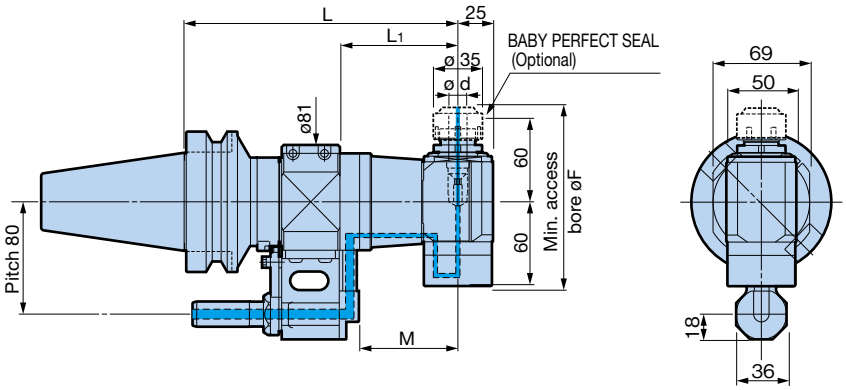


Fig. 2 **Max.5,000min-1**

● Model Description

BBT40 - O AG90 - 13 - 170

- 170: L dimension
- 13: Maximum clamping diameter
- AG90: 90° Head type
- O: Oil Hole
- BBT40: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	L	L1	M	øF	Collet Model	Speed Ratio Input:output	Weight (kg)
BBT40-OAG90-13-170	1	2.5 - 13	170	84	70.5	133	NBC13	1:1	6.0
BBT50-OAG90-13-195	2	2.5 - 13	195	84	70.5	133	NBC13	1:1	9.2

1. **The cutting tool rotates in reverse to the machine spindle.**
2. For use with an oil hole drill only. Never run without supplying coolant through the unit.
3. Baby Perfect Seal nut with sealing mechanism is required. Please order separately.
4. Collet is ordered separately.
5. Wrench and adjust screw are included.
6. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
7. A Stop Block is required when mounting on machines. Please order separately.
8. Automatic tool change may not be available depending on machine tool models.

Perfect Seal G15
Collets G7
Insertion Length List A154
Stop Blocks A170

ANGLE HEAD AG90 SERIES

Face Milling type

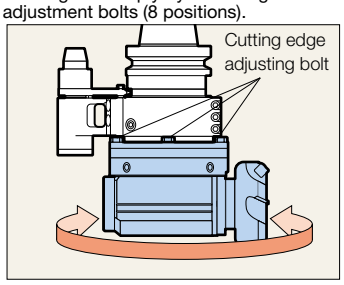
- Tool life is improved by high-rigidity bearings and optimum spindle dimensions!
- Series' highest rotation transmission force of 20kw (at 1,500min^{-1})
- 90° indexing mechanism is used to allow index of 90° increments after adjustment. (Indexing accuracy ±5')

DUAL CONTACT
BIG-PLUS®

Spindle angle 90°

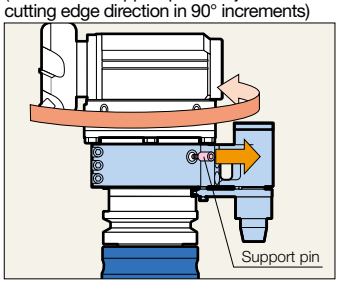
■ Cutting edge direction freely adjustable in 360°

・The cutting edge direction can be easily set at any angle through 360 degrees simply by loosening its adjustment bolts (8 positions).



■ Cutting edge direction indexable in 90° increments

・Indexing can be done in 90° increments after the cutting edge direction is adjusted. (Remove the support pin to adjust the cutting edge direction in 90° increments)

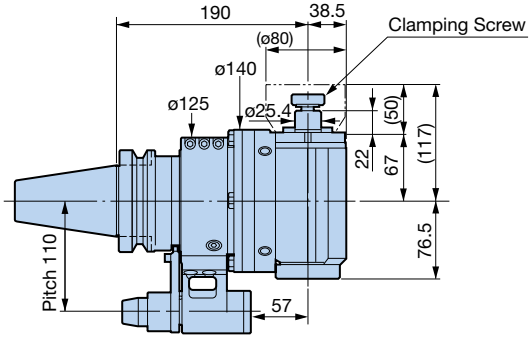


⚠ Note: Be sure to remove from the machine before setting in 90° increments.

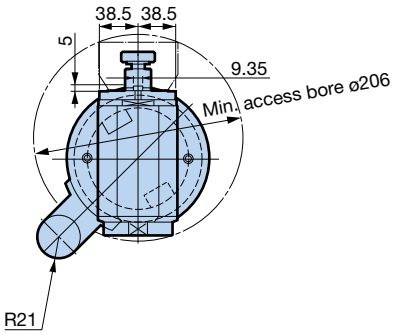
● Model Description

BBT50 - AG90 - FMA 25.4 S - 190 S

- S: High rigidity S type
- 190: L dimension
- S: Rigid Type
- 25.4: Spigot diameter
- FMA: FACE MILL ARBOR TYPE A
- AG90: 90° Head type
- BBT50: BIG-PLUS BT No.



Max. 1,500min^{-1}



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Speed ratio Input:output	Weight (kg)
BBT50-AG90-FMA25.4S-190S	1:1	19.2

Figures in ( ) indicate dimensions when 80mm diameter and 50mm high face mill cutter is mounted.

1. **The cutting tool rotates in reverse to the machine spindle.**
2. A Stop Block is required when mounting on machines. Please order separately.
3. Coolant cannot be supplied through the Locating Pin.
4. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
5. Automatic tool change may not be available depending on machine tool models.

Stop Blocks A170

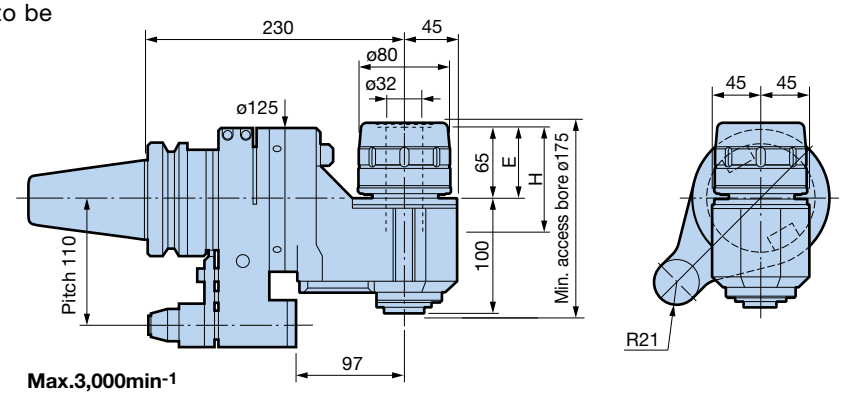
Highly versatile ø32 milling chuck is used.
Straight Collets allow the use of tools with various diameters.

DUAL CONTACT
BIG-PLUS®

Spindle angle
90°

HMC32 Type
[Standard type]

●High-rigidity milling chuck type that allows the most commonly used cylindrical shanks to be mounted.



Max.3,000min-1

● Model Description

BBT50 - AG90 / HMC 32 - 230
- 230: L dimension
- 32: Chuck bore
- HMC: Hi-POWER MILLING CHUCK
- AG90: 90° Head type
- BBT50: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

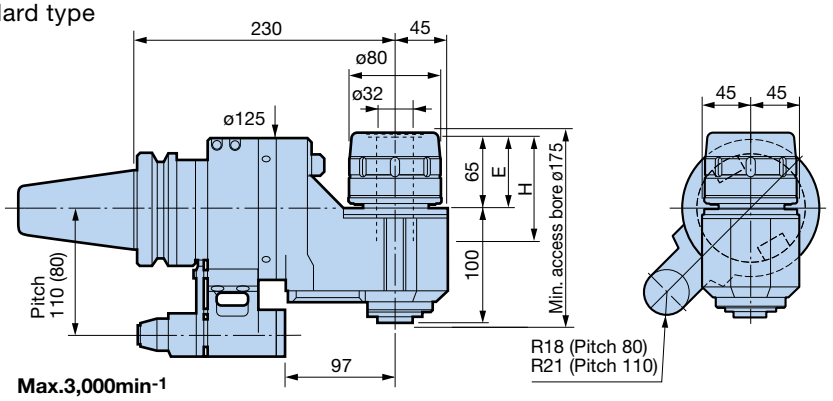
BIG-PLUS BBT SHANK Model	Max. insertion depth H	Min. clamping length E	Speed ratio Input:output	Weight (kg)
BBT50-AG90/HMC32-230	95	65	1:1	16.8

1. **The cutting tool rotates in forward to the machine spindle.**
2. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
3. A Stop Block is required when mounting on machines. Please order separately.
4. When supplied through the Stop Block, coolant can be ejected from the housing.
5. Automatic tool change may not be available depending on machine tool models.
6. Wrench is included. (Model: **FK80-90**)

Straight Collets G28
Stop Blocks A170

[High rigidity S type]

●About 30% higher rigidity compared to standard type



Max.3,000min-1

● Model Description

BBT50 - AG90 / HMC 32 - 230 S
- S: High rigidity S type
- 230: L dimension
- 32: Chuck bore
- HMC: Hi-POWER MILLING CHUCK
- AG90: 90° Head type
- BBT50: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Max. insertion depth H	Min. clamping length E	Speed ratio Input:output	Weight (kg)	
				pitch 110	pitch 80
BBT50-AG90/HMC32-230S	95	65	1:1	18.1	17.4

1. **The cutting tool rotates in forward to the machine spindle.**
2. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
3. A Stop Block is required when mounting on machines. Please order separately.
4. When supplied through the Stop Block, coolant can be ejected from the housing.
5. Automatic tool change may not be available depending on machine tool models.
6. Wrench is included. (Model: **FK80-90**)

Straight Collets G28
Stop Blocks A170

ANGLE HEAD AG90 SERIES

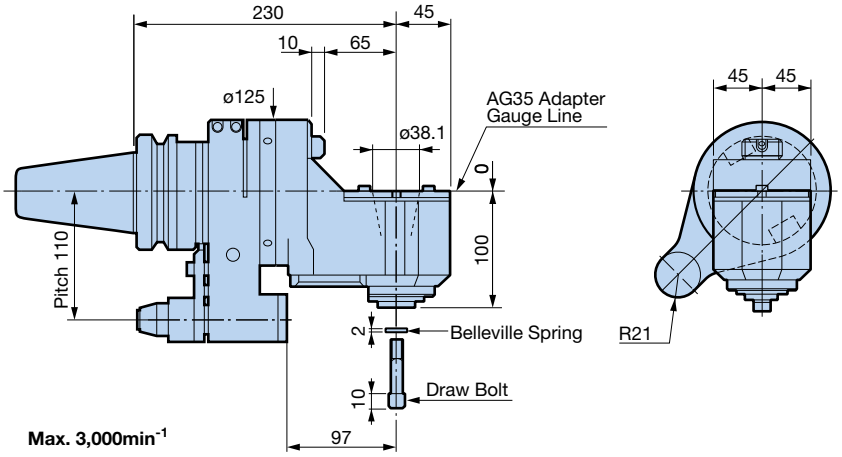
Offset design provides optimum tool projection with each adapter.

DUAL CONTACT
BIG-PLUS®

Spindle angle 90°

BUILD-UP Type

[Standard type]



Max. 3,000min^{-1}

● Model Description

BBT50 - AG90 / AGH35 - 230

- 230: L dimension
- AGH35: For AG35 Adapter
- AG90: 90° Head type
- BBT50: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

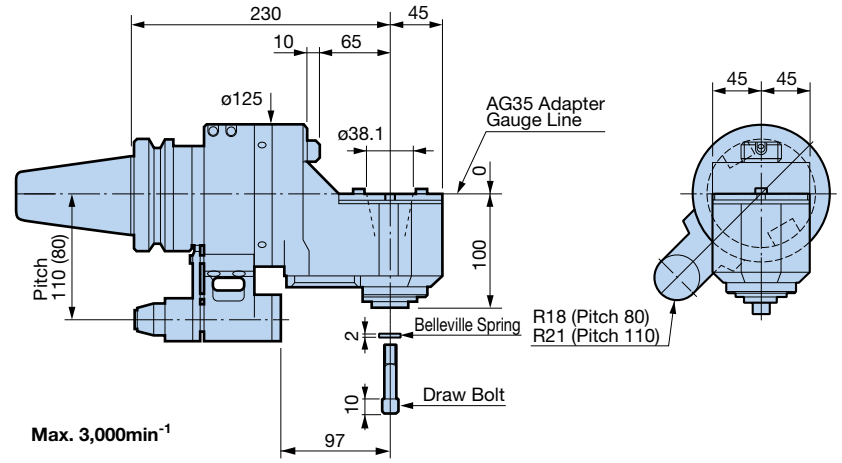
BIG-PLUS BBT SHANK Model	Speed ratio Input:output	Weight (kg)
BBT50-AG90/AGH35-230	1:1	15.0

1. **The cutting tool rotates in forward to the machine spindle.**
2. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
3. A Stop Block is required when mounting on machines. Please order separately.
4. When supplied through the Stop Block, coolant can be ejected from the housing.
5. Automatic tool change may not be available depending on machine tool models.
6. Wrench is included. (Model: FK80-90)

Stop Blocks A170

[High rigidity S type]

●About 30% higher rigidity compared to standard type



Max. 3,000min^{-1}

● Model Description

BBT50 - AG90 / AGH35 - 230 S

- S: High rigidity S type
- 230: L dimension
- AGH35: For AG35 Adapter
- AG90: 90° Head type
- BBT50: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Speed ratio Input:output	Weight (kg)	
		pitch 110	pitch 80
BBT50-AG90/AGH35-230S	1:1	16.3	15.6

1. **The cutting tool rotates in forward to the machine spindle.**
2. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
3. A Stop Block is required when mounting on machines. Please order separately.
4. When supplied through the Stop Block, coolant can be ejected from the housing.
5. Automatic tool change may not be available depending on machine tool models.
6. Wrench is included. (Model: FK80-90)

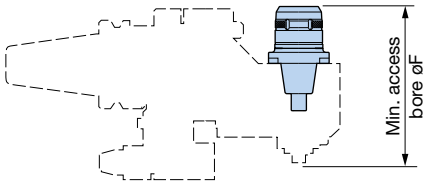
Stop Blocks A170

■AG35 ADAPTER

- Abundant adapters support various machining applications.

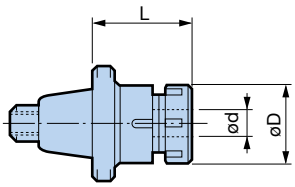
Spindle angle 90°

● Min. access bore when mounted on the Angle Head



●Tap Collet with tension mechanism can also be used to perform tapping.

NEW BABY CHUCK

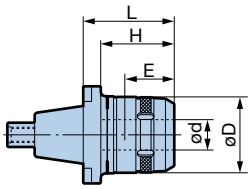


Model	ød	øD	L	øF	Weight (kg)
AG35-NBS10	1.5 - 10	30	47	162	0.6
-NBS13	2.5 - 13	35	54	168	0.7
-NBS16	2.5 - 16	42		170	0.8
-NBS20	2.5 - 20	46			0.9

1. Collet and wrench must be ordered separately. (See wrench **G36**)
2. Adjusting Screw is included.

Collets G7
Insertion Length List A154
Tap Collets G17

NEW Hi-POWER MILLING CHUCK



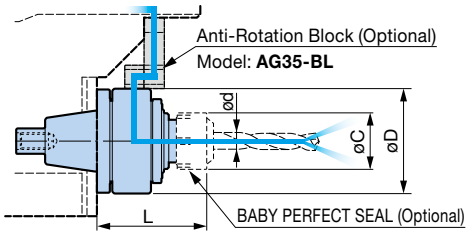
Model	ød	øD	L	øF	H	Min. clamping length E	Weight (kg)
AG35-HMC20S	20	50	60	176	71.5	49	1.5

1. Wrench is included. (Model: **FK45-50L**)

Straight Collets G28

Hi-JET HOLDER

Through Tools

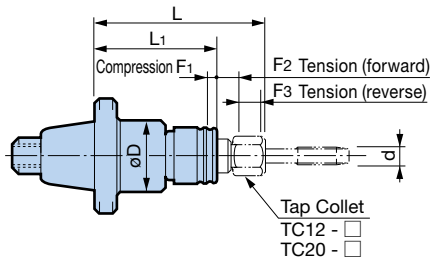


Model	ød	øC	øD	L	øF	Weight (kg)
AG35-ONBS13N	3 - 13	35	65	68	186	1.1
-ONBS20N	3 - 20	46			188	1.2

1. Baby Perfect Seal nut with sealing mechanism is required. (optional accessory)
2. Collet and wrench must be ordered separately.
3. Anti-rotation block set must be ordered separately. (Model: **AG35-BL**)

Baby Perfect Seal G15
Collets G7
Insertion Length List A154
Wrenches G36

AUTO TAPPER B (with Tap Depth Control)

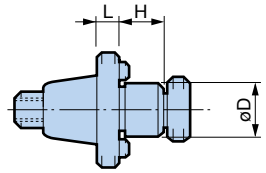


Model	d	øD	L	L_1	F_1	F_2	F_3	Weight (kg)
AG35-ATB12	M3 - M12	40	95	65	0.5	5	4	0.8
-ATB20	M7 - M20	54	125	100		6.5	5	1.5

1. Tap Collet must be ordered separately.

TC Tap Collets A144

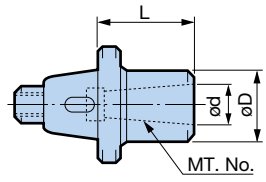
FACE MILL ARBOR



Model	øD	L	H	Weight (kg)
AG35-FMA25.4-20	25.4	20	22	1.0
-30		30		
AG35-FMH22 -30	22	30	18	1.0
-FMH27 -20	27	20	20	

※ Cutter face protrudes by 7.5mm from the 125mm diameter housing with the following combinations; AG35-FMA25.4-20 + 50mm thick tool, AG35-FMA25.4-30/AG35-FMH22-30 + 40mm thick tool and AG35-FMH27-20 + 50mm thick tool.

MORSE TAPER ADAPTER



Model	ød	MT.No.	øD	L	øF	Weight (kg)
AG35-MT1	12.065	1	25	50	164	0.6
-MT2	17.78	2	32	60	175	0.7

Tapper Type

DUAL CONTACT
BIG-PLUS®

Spindle angle 90°

● Tapping depth is adjusted with automatic depth control.
Spindle speed is reduced by half to achieve increased transmission torque (excluding BBT30 type).

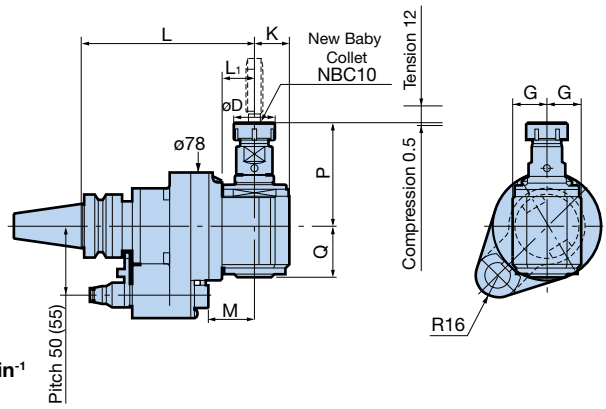


Fig. 1
Max. 2,000min-1

● Model Description

BBT40 - AG90 / TC 12 - 185

- 185: L dimension
- 12: Tapping capacity type
- TC: Tapper type with depth control mechanism
- AG90: 90° Head type
- BBT40: BIG-PLUS BT No.

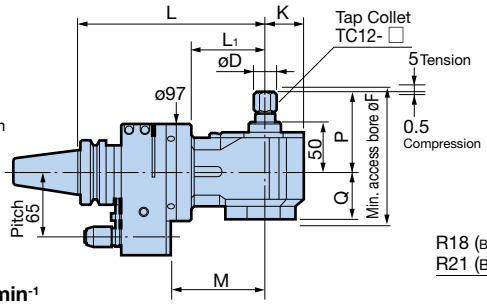
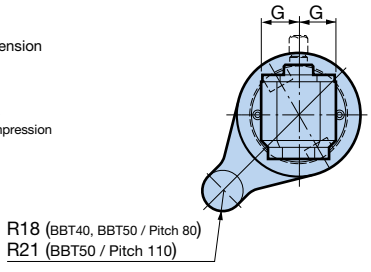


Fig. 2
Max. 2,000min-1



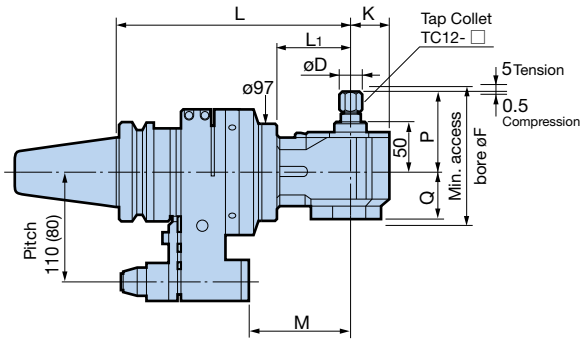


Fig. 3
Max. 2,000min-1

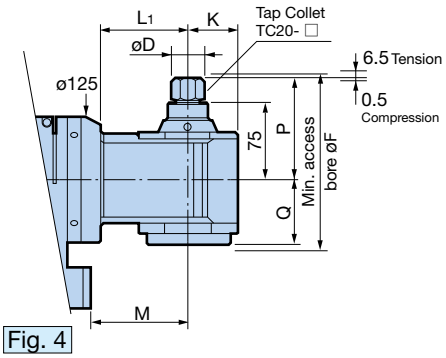


Fig. 4
Max. 1,000min-1

● High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering (except BBT30).

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Tapping range d	øD	G	K	L	L1	M	P	Q	øF	Collet Model	Speed ratio Input:output	Weight (kg) Standard Type (Pitch)	High Rigidity Type (Pitch)	High Rigidity Type (Pitch 80)
BBT30-AG90-FT12-125	1	M4 - M12	30	24.5	25	125	23.5	33.5	75	37	117	NBC10	1:1	2.7	—	—
BBT40-AG90/TC12-185 □	2	M3 - M12	22	38	39	185	70	92	80	46	135	TC12-□	2:1 (Deceleration)	7.0 (65)	7.9 (65)	—
BBT50-AG90/TC12-230 □	3	M3 - M12	22	38	39	230	70	97	80	46	135	TC12-□		14.5 (110)	15.8 (110)	15.1
-AG90/TC20-230 □	4	M7 - M20	22/31	49	49		86		100	66.5	178	TC20-□		16.3 (110)	17.6 (110)	16.9

1. **The cutting tool rotates in reverse to the machine spindle.**
2. TC Tap Collet and NBC Collet are not included. Please order separately.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. Note that tap rotation is reduced to half the speed of the machine spindle (except BBT30).
5. A Stop Block is required when mounting on machines. Please order separately.
6. The BBT30 Type does not provide depth control.
7. When supplied through the Stop Block, coolant can be ejected from the housing.
8. Automatic tool change may not be available depending on machine tool models.

TC Tap Collets A144
Collets G7
Stop Blocks A170

45° exclusive fixing housing realizes secure diagonal machining.

● Highly versatile NEW BABY CHUCK enables high-accuracy machining.

DUAL CONTACT
BIG-PLUS®

Spindle angle
45°

NEW BABY CHUCK Type

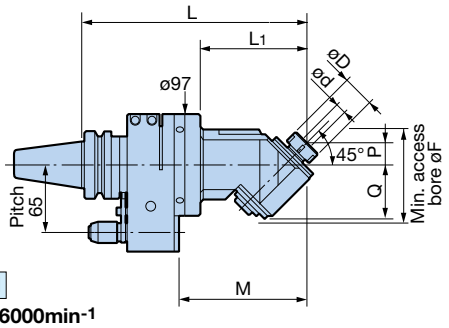


Fig. 1
Max. 6000min-1

● Model Description

BBT40 - AG45 / NBS 10 - 215

- BBT40 - BIG-PLUS BT No.
- AG45 - 45° Head type
- NBS - NEW BABY CHUCK system
- 10 - Maximum clamping diameter
- 215 - L dimension

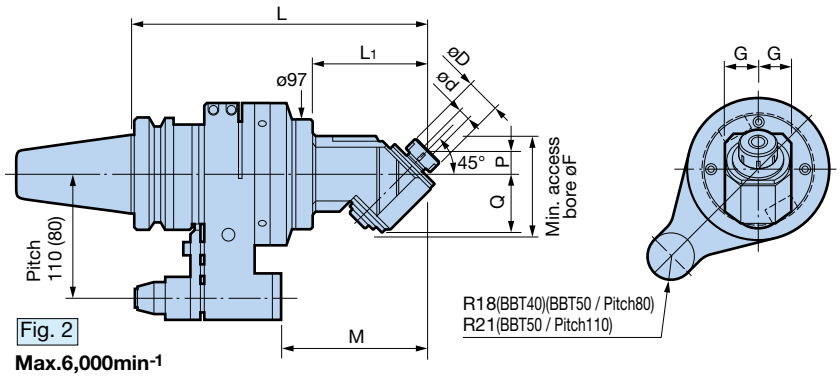


Fig. 2
Max.6,000min-1

● High rigidity S type with reinforced Locating Pin part is also available.
Add the letter S at the end when ordering.
● Tap Collet with tension mechanism can also be used to perform tapping.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	ød	øD	G	L	L1	M	P	Q	øF	Collet Model	Speed ratio Input:output	Weight (kg) Standard Type (Pitch)	High Rigidity Type (Pitch)	High Rigidity Type (Pitch 80)
BBT40-AG45/NBS10-215 □	1	1.5 - 10	30	30	215	100	122	20	51.5	90	NBC10	1:1	5.7 (65)	6.6 (65)	—
-AG45/NBS13-220 □		2.5 - 13	35		220	105	127	25			NBC13		5.8 (65)	6.7 (65)	—
BBT50-AG45/NBS10-260 □	2	1.5 - 10	30	30	260	100	127	20	51.5	90	NBC10	1:1	13.2 (110)	14.5 (110)	13.8
-AG45/NBS13-265 □		2.5 - 13	35		265	105	132	25			NBC13		13.3 (110)	14.6 (110)	13.9

1. **The cutting tool rotates in reverse to the machine spindle.**
2. Nut and wrench are included. Collet is not included.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. When supplied through the Stop Block, coolant can be ejected from the housing.
6. Automatic tool change may not be available depending on machine tool models.
7. New Baby Endmill Collets cannot be used.

Collets G7
Tap Collets G17
Insertion Length List A154
Stop Blocks A170

ANGLE HEAD

ANGLE HEAD AGU SERIES

Clamping diameter: ø2.5 - ø20

The cutting edge angle can be freely adjusted, making it ideal for machining the corners of molds in deep areas.

- The original 1° indexing mechanism allows easy angle adjustment.
- Robust clamping mechanism allows secure endmilling.

DUAL CONTACT
BIG-PLUS®

Spindle angle
0° - 90°

Universal Type

Indexing mechanism in 1° increments

Accurate angle adjustment is possible simply by tightening the angle setting pin.

The spindle angle can be adjusted in the range of 0° to 90°

The 1° angle indexing mechanism allows the angle to be easily set. (Indexing accuracy ±5')

● Model Description

BBT40 - AGU / NBS 13 - 270

- 270: L dimension
- 13: Maximum clamping diameter
- NBS: NEW BABY CHUCK System
- AGU: Universal type
- BBT40: BIG-PLUS BT No.

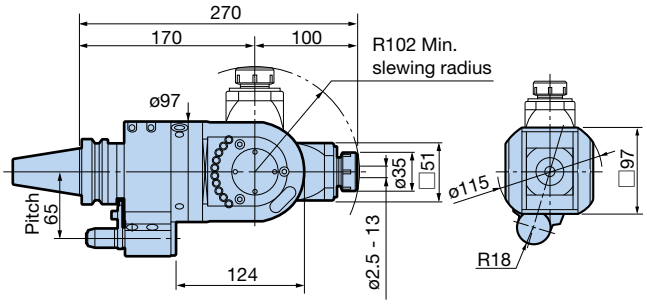


Fig. 1 **Max. 6,000min-1**

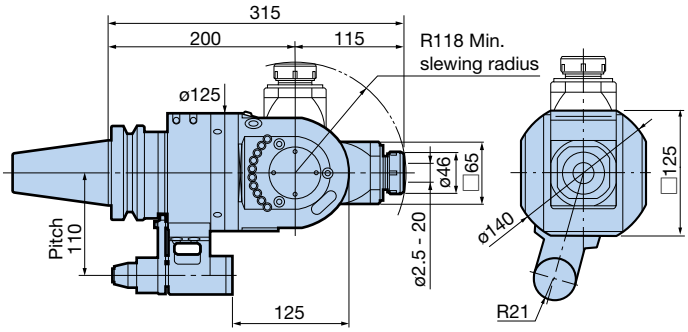


Fig. 2 **Max. 4,000min-1**

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Collet Model	Speed ratio Input:output	Weight (kg)
BBT40-AGU/NBS13-270	1	NBC13	1:1	9.7
BBT50-AGU/NBS20-315	2	NBC20	1:1	20.8

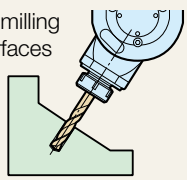
1. **The cutting tool rotates in reverse to the machine spindle.**
2. Nut and wrench are included. Collet is not included.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. Automatic tool change may not be available depending on machine tool models.

●Tap Collet with tension mechanism can also be used to perform tapping.

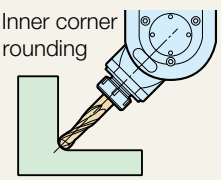
Collets G7
Tap Collets G17
Insertion Length List A154
Stop Blocks A170

Machining examples Easy angle setup

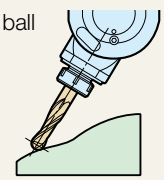
- Drilling or endmilling on angled surfaces



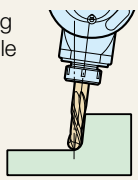
- Inner corner rounding



- Profiling with ball endmill



- Machining draft angle of molds

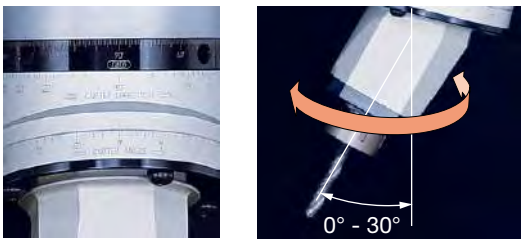


AGU30 type

DUAL CONTACT
BIG-PLUS®

Spindle angle
0° - 30°

- Spindle angle adjustable 0°- 30°.
- Rigidity is improved by the flange coupling in the swivel!
- The new drive system achieves high transmission torque, low vibration and noise.



Angle adjustment by scale alignment

The angle spindle can be easily adjusted between 0° and 30° just by aligning to the scale provided on the swivel.

● Model Description

BBT40 - **AGU30** / **NBS** **13** - **240**

- 240: L dimension
- 13: Maximum clamping diameter
- NBS: NEW BABY CHUCK System
- AGU30: AGU30 Type
- BBT40: BIG-PLUS BT No.

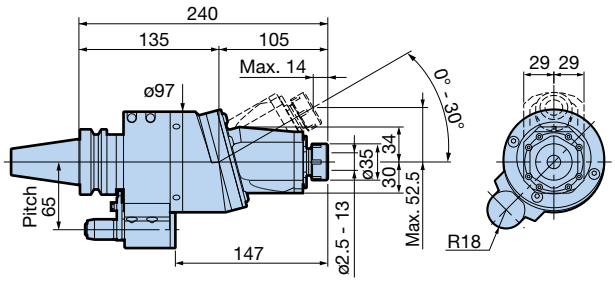


Fig. 1 **Max. 6,000min-1**

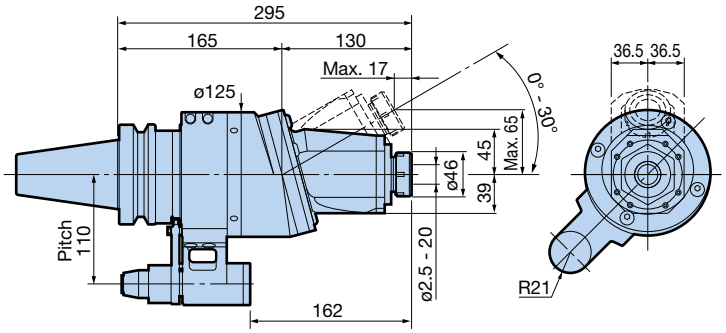


Fig. 2 **Max. 4,000min-1**

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Collet Model	Speed ratio Input:output	Weight (kg)
BBT40-AGU30/NBS13-240	1	NBC13	1:1	6.9
BBT50-AGU30/NBS20-295	2	NBC20	1:1	16.1

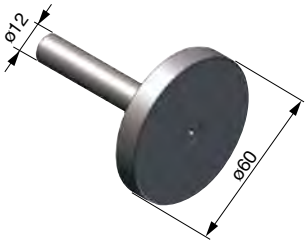
1. **The cutting tool rotates in forward to the machine spindle.**
2. Nut and wrench are included. Collet and Adjust Screw are not included.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. Automatic tool change may not be available depending on machine tool models.
6. When supplied through the Stop Block, coolant can be ejected from the housing.

●Tap Collet with tension mechanism can also be used to perform tapping.

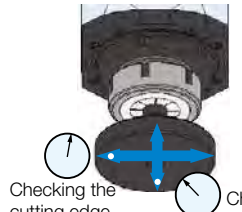
Collets **G7**
Tap Collets **G17**
Insertion Length List **A154**
Stop Blocks **A170**

■SETTING DISK (Standard accessory)

・Use when accurate angle setting or fine adjustment of the cutting edge direction is required.



The angle and cutting edge direction can be adjusted using the setting disk.



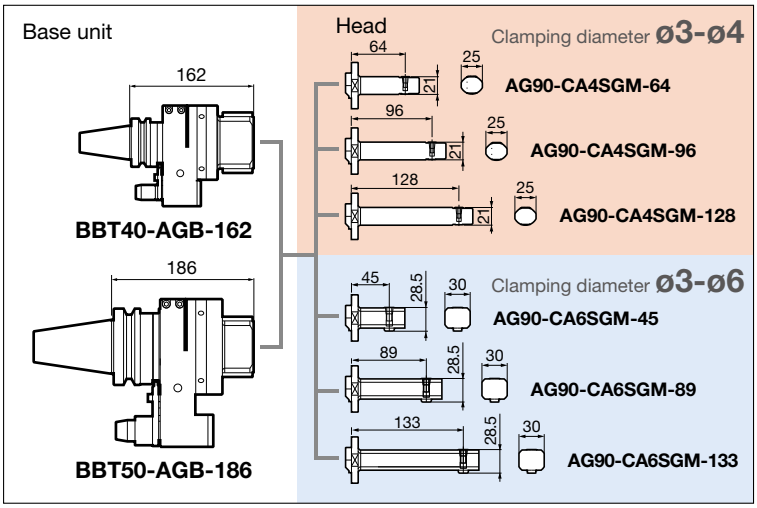
ANGLE HEAD Small Bore Type

Clamping diameter: ø3 - ø6

DUAL CONTACT
BIG-PLUS®

Small bore type

- Achieves inner-diameter lateral drilling with minimum access bore of ø30. (For CA6SGM, min. access bore ø40)
- Prevents interference through flexible combination of base units and heads.
- The head is positioned at the center of the spindle, enabling easy programming.



● Model Description

BBT40 - AG90 - CA 4 SG M - 226

- 226: L dimension
- M: Modular system
- SG: For inner-diameter machining
- 4: Maximum clamping diameter
- CA: Collet type
- AG90: 90° Head type
- BBT40: BIG-PLUS BT No.

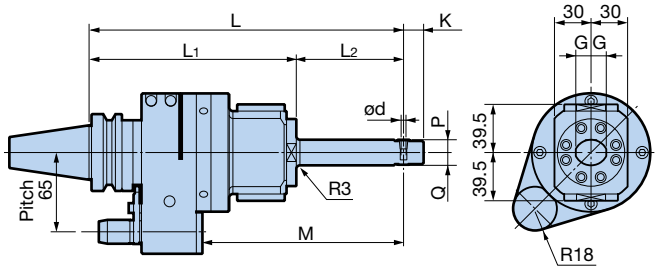


Fig. 1 **Max. 2,000min-1**

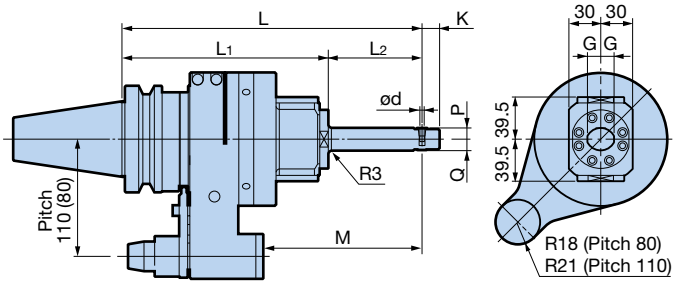


Fig. 2 **Max. 2,000min-1**

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

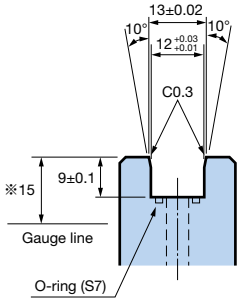
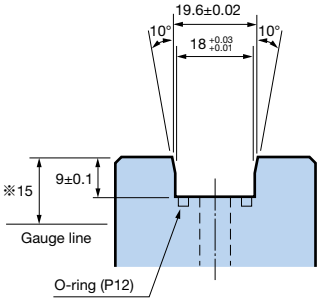
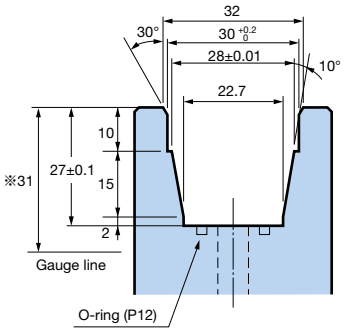
BIG-PLUS BBT SHANK Set Model	Base Model	Head Model	Fig.	ød	G	K	L	L1	L2	M	P	Q	Speed ratio Input:output	Weight (kg) Pitch 65	Pitch 80	Pitch 110
BBT40-AG90-CA4SGM-226	BBT40-AGB-162	AG90-CA4SGM- 64	1	3 - 4	12.5	16.5	226	170	56	133	10.5	10.5	1:1.06 (Acceleration)	5.6	—	—
-258		- 96					258		88	165				5.7		
-290		-128					290		120	197				5.8		
-CA6SGM-207		AG90-CA6SGM- 45		3 - 6	15	20	207		37	114	12.5	16	1:0.77 (Deceleration)	5.7		
-251		- 89					251		81	158				5.9		
-295		-133					295		125	202				6.1		
BBT50-AG90-CA4SGM-250□	BBT50-AGB-186 □	AG90-CA4SGM- 64	2	3 - 4	12.5	16.5	250	194	56	117	10.5	10.5	1:1.06 (Acceleration)	—	12.5	11.9
-282□		- 96					282		88	149					12.6	12
-314□		-128					314		120	181					12.7	12.1
-CA6SGM-231□		AG90-CA6SGM- 45		3 - 6	15	20	231		37	98	12.5	16	1:0.77 (Deceleration)	—	12.6	12
-275□		- 89					275		81	142					12.8	12.2
-319□		-133					319		125	186					13	12.4

1. **The cutting tool rotates in forward to the machine spindle.**
2. Models with pitch 80 carry "S" at the end of the model number.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. Automatic tool change may not be available depending on machine tool models.
6. Wrench is included. Exclusive collet is not included. Please order separately.
7. Coolant cannot be supplied through the Locating Pin.

Exclusive collet A152
Stop Blocks A170

Stop Block

The Stop Block must be installed on the spindle cover when using a BIG product with a locating pin. The mounting dimensions vary depending on machine tool models, specifications, etc.

Product		Page	For BBT 30	For BBT 40, BBT 50 (pitch 80) BDV (DV) 40, BDV (DV) 50 (pitch 80) HSK-A63, A100 (pitch 80)	For BBT50 (pitch 110) BDV50 (pitch 110) HSK-A100 (pitch 110)
					
BBT/DV/BDV	ANGLE HEAD	A150·B19	BBT30	BBT40, BBT50 (pitch 80) BDV40, BDV50 (pitch 80)	BBT50 (pitch 110) BDV50 (pitch 110)
	Hi-JET HOLDER	A171·B28	BBT30	BBT40,BBT50 BDV40,BDV50 DV40,DV50	—
	HIGH SPINDLE	A179·B27			
	AIR TURBINE ▲	A176·B26			
HSK	ANGLE HEAD	C38	—	HSK-A63, A100 (pitch 80)	HSK-A100 (pitch 110)
	AIR TURBINE ▲	C52		HSK-A63,A100	—

1. When ordering, provide us with the manufacturer, model and specifications of the machine tool, as well as the BIG product model number.
2. Consult us regarding Stop Block and mounting dimensions.
3. Check with the machine tool manufacturer for the shape of the Stop Block, as it will vary for each machine tool model.
4. The dimension from the spindle gauge line to the top of the Stop Block (※) is our default length.

▲ As the Air Turbine requires clean air, do not share the same Stop Block with other products.

For further details:
Angle Heads G41
Others G43

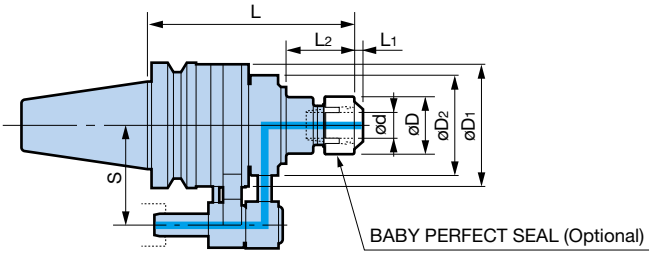
Hi-JET HOLDER

Unique separate sealing structure extends service life.

- Independent bearing and sealing sections eliminate infiltration of coolant into bearings.
- The seal replacement system allows maintenance and thus helps reduce costs.

DUAL CONTACT BIG-PLUS®

NEW BABY CHUCK Type



- Model Description

BBT30 - ONBS 10 N - 135

- 135: Hi-JET TYPE
- 10: Maximum clamping diameter
- ONBS: OIL HOLE NEW BABY CHUCK
- BBT30: BIG-PLUS BT No.

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	ød	øD	øD1	øD2	L	L2	Max. min-1	Merit Set (spare)	Weight (kg)	BABY PERFECT SEAL	Collet Model
BBT30-ONBS10N-135	3 - 10	30	66	65	138	18	10,000	MES-40	2.7	BPS10	NBC10
-ONBS13N-140	3 - 13	35			143	23			2.7	BPS13	NBC13
-ONBS16N-140	3 - 16	42				24			2.6	BPS16	NBC16
-ONBS20N-140	3 - 20	46				24			2.6	BPS20	NBC20
BBT40-ONBS10N-165	3 - 10	30	81.6	73	168	46	10,000	MES-40	3.9	BPS10	NBC10
-200					203	82	8,000		4.1		
-ONBS13N-165	3 - 13	35			168	47	10,000		4.0	BPS13	NBC13
-200					203	82	8,000		4.2		
-ONBS16N-165	3 - 16	42		80	168	47	8,000	MES-50	4.3	BPS16	NBC16
-200					203	82	6,000		4.6		
-ONBS20N-165	3 - 20	46			168	48	8,000		4.3	BPS20	NBC20
-200					203	83	6,000		4.7		

1. Max. coolant pressure is 2MPa.
2. Wrench, nut (BPS), collet and adjusting screw are sold separately. BBT30 models include adjusting screw. Order together with a BABY Perfect Seal of appropriate size.
3. For L1, refer to the BABY PERFECT SEAL on G15
4. The standard S pitch is BBT40 = 65 and BBT50 = 80. For BBT30, it depends on the machine model.
5. A Stop Block is required when mounting on machines. Please order separately.

Stop Blocks A170

Using neat oil coolant carries a risk of fire due to excessive heat generation or ignition of the holder.

Optional Accessories

Collet	BABY PERFECT SEAL	Adjusting Screw
 G7	 G15	 G23

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	ød	øD	øD1	øD2	L	L2	Max. min-1	Merit Set (spare)	Weight (kg)	BABY PERFECT SEAL	Collet Model
BBT50-ONBS10N-165	3 - 10	30	99.6	80	168	47	8,000	MES-50	7.2	BPS10	NBC10
-200					203	82	6,000		7.4		
-250					253	132	4,000		7.6		
-ONBS13N-165	3 - 13	35			168	47	8,000		7.3	BPS13	NBC13
-200					203	82	6,000		7.5		
-250					253	132	4,000		7.8		
-ONBS16N-165	3 - 16	42			168	50	8,000		7.5	BPS16	NBC16
-200					203	85	6,000		7.8		
-250					253	135	4,000		8.2		
-ONBS20N-165	3 - 20	46			168	51	8,000		7.5	BPS20	NBC20
-200					203	86	6,000		7.9		
-250					253	136	4,000		8.2		

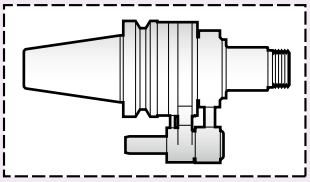
1. Max. coolant pressure is 2MPa.
2. Wrench, nut (BPS), collet and adjusting screw are sold separately.
   Order together with a BABY Perfect Seal of appropriate size.
3. For L_1, refer to Baby Perfect Seal on G15
4. The standard S pitch is BBT50 = 80.
5. A Stop Block is required when mounting on machines. Please order separately.

Stop Blocks A170

Using neat oil coolant carries a risk of fire due to excessive heat generation or ignition of the holder.

Example

Order together with a holder model and
BABY PERFECT SEAL of appropriate size



NEW BABY CHUCK TYPE MODEL (nut not included)
BBT40-ONBS10N-165

Optional Accessory
(Please order separately.)

New Baby Collet
G7

Optional Accessory
(Please order separately.)

OIL HOLE SEAL NUT
BABY PERFECT SEAL MODEL
BPS10-03035
G15

For quotations or orders, please specify the machine tool manufacturer and model.

Wrenches G36

SIDE LOCK TYPE

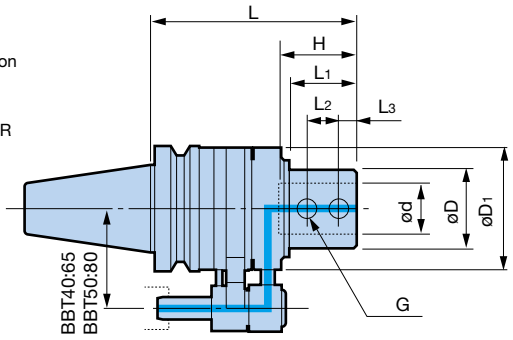
●For cylindrical shank oil hole drills.

DUAL CONTACT
BIG-PLUS®

● Model Description

BBT40 - OSL 16 N - 150

- 150: L dimension
- N: Hi-JET TYPE
- 16: Inner diameter
- OSL: OIL HOLE SIDE LOCK HOLDER
- BBT40: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	ød	øD	øD1	L	L1	L2	L3	G	H	Max. (min-1)	Merit Set	Weight (kg)
BBT40-OSL16N-150	16	48	81.6	150	35	14	14	M10	48	8,000	MES-50	4.4
-OSL20N-150	20	48		150	35				50			4.3
-OSL25N-165	25	48		165	50	20	15	M16	56			4.4
-OSL32N-165	32	58	99.6	165	45				60	6,000	MES-65	5.7
BBT50-OSL16N-150	16	48	99.6	150	38	14	14	M10	48	8,000	MES-50	7.5
-OSL20N-150	20	48		150	38				50			7.4
-OSL25N-165	25	48		165	53	20	15	M16	56			7.5
-OSL32N-165	32	58		165	53				60	6,000	MES-65	7.9
-OSL40N-165	40	64		165	53	25			70			8.0
-OSL50N-185	50	84	129.6	185	54.5					4,000	MES-90	11.9

1. Max. coolant pressure is 2MPa.
2. A Stop Block is required when mounting on machines. Please order separately.

Using neat oil coolant carries a risk of fire due to excessive heat generation or ignition of the holder.

Stop Blocks A170

For Side Lock type

■SL Sleeve

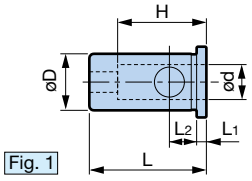


Fig. 1

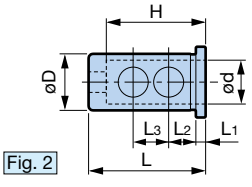


Fig. 2

Model	Fig.	ød	øD	L	L1	L2	L3	H
OSL25-16	1	16	25	62	5.5	15.5	—	48
-20		20						50
OSL32-16	1	16	32	66	5.5	15.5	—	48
-20		20						50
-25	2	25					20	56
OSL40-16	1	16	40	76	5.5	15.5	—	48
-20		20						50
-25		25						56
-32	2	32					25	60

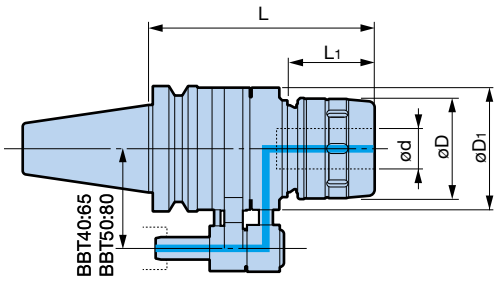
MILLING CHUCK TYPE

●High gripping force is ideal for endmilling.

DUAL CONTACT
BIG-PLUS®

● Model Description

BBT40 - OMC 20 N - 170
- 170: L dimension
- N: Hi-JET TYPE
- 20: Clamping diameter
- OMC: OIL HOLE MILLING CHUCK
- BBT40: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	ød	øD	øD1	L	L1	Max. (min-1)	Merit Set	Weight (kg)
BBT40-OMC20N-170	20	60	81.6	170	55	8,000	MES-50	4.8
-OMC32N-190	32	80	99.6	190	69	6,000	MES-65	6.5
BBT50-OMC20N-165	20	60	99.6	165	53	8,000	MES-50	6.8
-OMC32N-180	32	80		180	68	6,000	MES-65	8.5
-OMC42N-200	42	99	129.6	200	69	4,000	MES-90	13.5

1. Max. coolant pressure is 2MPa.
2. Contact a BIG agent for replacement of the Merit Set, as the clamping nut needs to be disassembled.
3. For the collet, use the Oil Hole Straight Collet (OCA).
4. A Stop Block is required when mounting on machines. Please order separately.
5. Wrench included.

OCA Collets G27
Stop Blocks A170

Using neat oil coolant carries a risk of fire due to excessive heat generation or ignition of the holder.

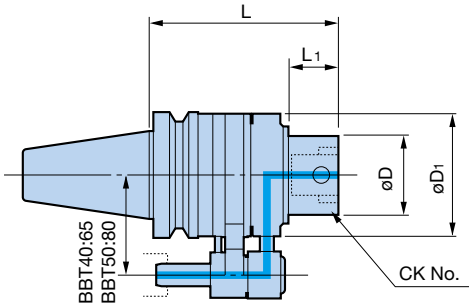
BIG+KAISER CK SHANK TYPE

●Improves boring accuracy, insert life and chip evacuation.

DUAL CONTACT
BIG-PLUS®

● Model Description

BBT40 - OCKB 5 N - 138
- 138: L dimension
- N: Hi-JET TYPE
- 5: CK No.
- OCKB: OIL HOLE CK TYPE
- BBT40: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	CK No.	øD	øD1	L	L1	Max. (min-1)	Merit Set	Weight (kg)
BBT40-OCKB5N-138	CK5	50	81.6	138	23	8,000	MES-50	4.2
-OCKB6N-149	CK6	64	99.6	149	28	6,000	MES-65	5.4
BBT50-OCKB6N-139	CK6	64	99.6	139	27	6,000	MES-65	7.2
-OCKB7N-165	CK7	90	129.6	165	34.5	4,000	MES-90	12.3

1. Max. coolant pressure is 2MPa.
2. For boring heads, use the BIG+KAISER CK Boring System.
3. A Stop Block is required when mounting on machines. Please order separately.

Heads A41
Stop Blocks A170

Using neat oil coolant carries a risk of fire due to excessive heat generation or ignition of the holder.

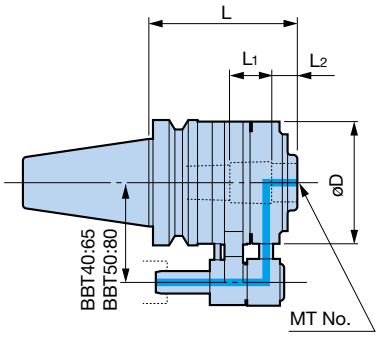
MORSE TAPER TYPE

DUAL CONTACT BIG-PLUS®

●Ideal for improving the life of Morse taper drills and accuracy of reaming.

● Model Description

BBT40 - OMT 3 N - 120
- 120: L dimension
- N: Hi-JET TYPE
- 3: Morse Taper No.
- OMT: OIL HOLE MORSE TAPER
- BBT40: BIG-PLUS BT No.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	MT No.	øD	L	L1	L2	Max. (min-1)	Merit Set	Weight (kg)
BBT40-OMT3N-120	MT3	81.6	120	23	18	8,000	MES-50	3.7
-OMT4N-120	MT4		120	35	20			3.3
BBT50-OMT3N-115	MT3	99.6	115	23	18	8,000	MES-50	6.9
-OMT4N-120	MT4		120	34	21			6.6
-OMT5N-120	MT5		120	40	28	6,000	MES-65	6.4

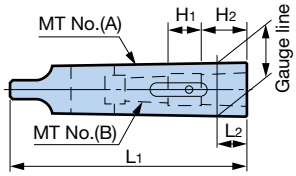
1. Max. coolant pressure is 2MPa.
2. A Stop Block is required when mounting on machines. Please order separately.

Using neat oil coolant carries a risk of fire due to excessive heat generation or ignition of the holder.

Stop Blocks A170

For Morse Taper type

■MT Sleeve



Model	MT No. (A)	MT No. (B)	L1	L2	H1	H2
OMT3-2	3	2	109	15	20	17
OMT4-2	4	2	122	4.5	20	17
-3		3	140	22.5	22	21

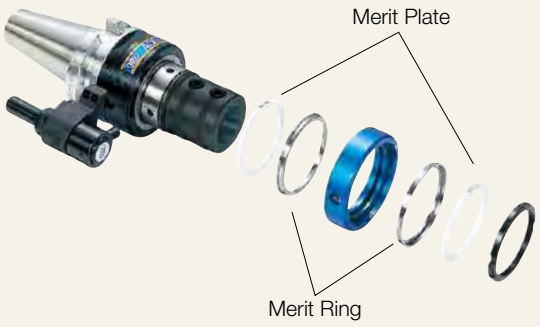
1. The OMT sleeve is an exclusive product for the BIG Hi-JET holder.

Maintenance parts for seal

Merit Set

If excessive coolant leak occurs while using the Hi-JET holder due to wear of the seal, purchase the seal replacement part “Merit Set”.
The model number is indicated in the dimension table for each Hi-JET Holder type.

<Merit Set contents>
● Merit Ring ● Merit Plate ● O-rings for Merit Case, 2 pcs each



1. Merit Set replacement at BIG is also available. Please feel free to contact us.
2. For replacement of the Merit Set of the Milling Chuck Type, contact a BIG agent, as the clamping nut needs to be replaced (paid service).

The ultra-precision spindle enables challenging micromachining!

Machine spindle rotation **zero**

DUAL CONTACT BIG-PLUS®

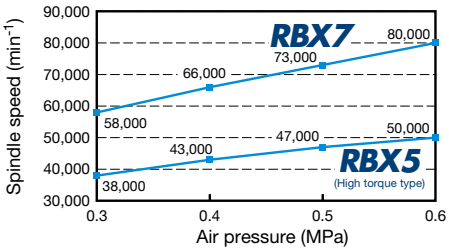
Max. **80,000min^{-1}**

Ceramic ball bearing type
RBX Series

- Achieves efficient and accurate micromachining with excellent runout accuracy in the max. spindle speed range.

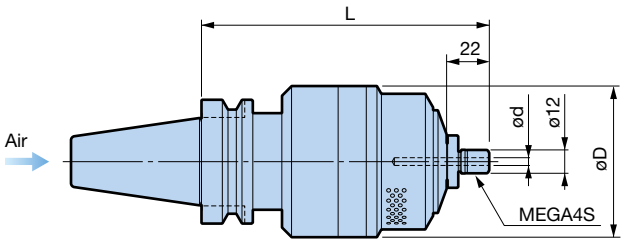
	RBX5 (High torque type)	RBX7
Operating spindle speed (min^{-1})	40,000 - 50,000	60,000 - 80,000
Clamping diameter	ø0.45 - 4.05mm (MEGA4S)	
Spindle nose runout accuracy	Within 1 μm	
Air pressure	0.3 - 0.6MPa	
Air flow rate	300L/min [ANR] (at 0.6MPa)	

Spindle speed against air pressure (reference)



[Center through type]

ATC compatible



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Operating spindle speed (min^{-1})	Clamping diameter ød	Usable tool diameter	øD	L	Mega Nut	Collet Model	Weight (kg)
BBT40-RBX5C-4S-150	40,000 - 50,000	0.45 - 4.05	ø1.5 or smaller	96	150	MGN4S	NBC4S	4.1
-RBX7C-4S-150	60,000 - 80,000		ø1.0 or smaller	78				3.1
BBT50-RBX5C-4S-160	40,000 - 50,000	0.45 - 4.05	ø1.5 or smaller	96	160	MGN4S	NBC4S	7.3
-RBX7C-4S-160	60,000 - 80,000		ø1.0 or smaller	78				6.3

1. Nut, exclusive wrench (RBX5,7 → **XW27**) and Mega Wrench (**MGR12**) are included, but collet must be ordered separately.
2. Air filter regulator (XF1) is required. A178

Micro Collets G4

Caution

· Clean air is an essential condition for the use of this product. Therefore, coolant should never be supplied through the spindle of the machine using the Air Turbine Spindle.

HIGH-SPEED AIR SPINDLE

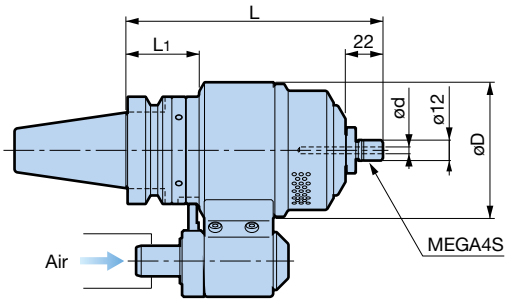
AIR TURBINE SPINDLE

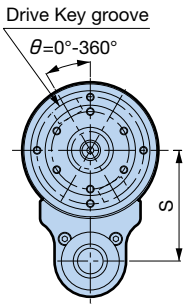
DUAL CONTACT
BIG-PLUS®

Max. 80,000min^{-1}

[Side through type]

- ATC is available by supplying air via Stop Block. This enables unmanned operation.





ATC compatible

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

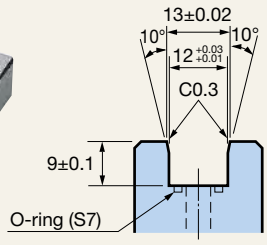
BIG-PLUS BBT SHANK Model	Operating spindle speed (min^{-1})	Clamping diameter ød	Usable tool diameter	L	L1	øD	S	Mega Nut	Collet Model	Weight (kg)
BBT30-RBX7-4S-152-55	60,000 - 80,000	0.45 - 4.05	ø1.0mm or less	152	28	80	55	MGN4S	NBC4S	2.7
BBT40-RBX5-4S-151-65	40,000 - 50,000	0.45 - 4.05	ø1.5mm or less	151	43	96	65	MGN4S	NBC4S	5.0
-RBX7-4S-151-65	60,000 - 80,000		ø1.0mm or less			80				4.0
BBT50-RBX5-4S-166-80	40,000 - 50,000	0.45 - 4.05	ø1.5mm or less	166	58	100	80	MGN4S	NBC4S	9.7
-RBX7-4S-166-80	60,000 - 80,000		ø1.0mm or less							8.7

1. Nut, exclusive wrench (RBX5,7 → **XW27**) and Mega Wrench (**MGR12**) are included, but collet must be ordered separately.
2. Air filter regulator (XF1) is required. A178
3. A Stop Block is required when mounting on machines. Please order separately.

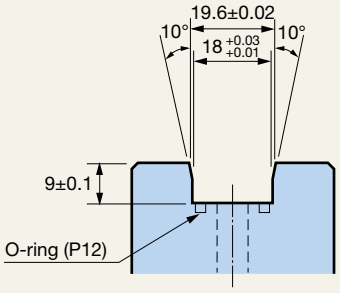
Micro Collets G4

Stop Block

For BBT30



For BBT40/50
BDV40/50
HSK-A63/100



1. When ordering, provide us with the manufacturer, model and specifications of the machine tool, as well as the BIG product model number.
2. Consult us regarding Stop Block and mounting dimensions.
3. Check with the machine tool manufacturer for the shape of the Stop Block, as it will vary for each machine tool model. Although the Stop Block dimensions are compatible with other products such as Hi-Jet Holder or High Spindle, do not share the same Stop Block with them, as Air Turbine Spindle needs clean air.

Ceramic ball bearing type

RBX Series

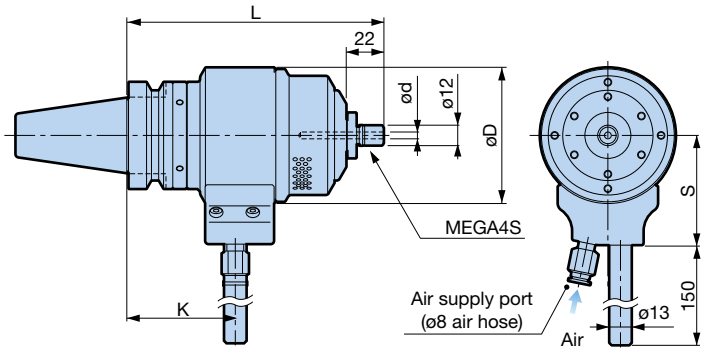
[Manual tool change type]

● Easy installation as Stop Block is not needed.

Machine spindle rotation **zero**

DUAL CONTACT BIG-PLUS®

Max. **80,000min^{-1}**



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

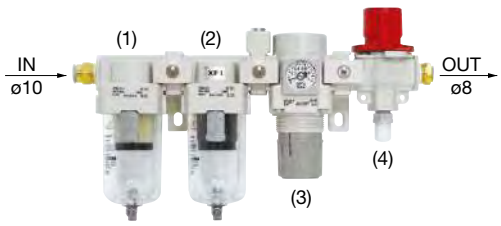
BIG-PLUS BBT SHANK Model	Operating spindle speed (min^{-1})	Clamping diameter ød	Usable tool diameter	L	øD	K	S	Mega Nut	Collet Model	Weight (kg)
BBT30-RBX7-4S-152H	60,000 - 80,000	0.45 - 4.05	ø1.0mm or less	152	80	64.5	65	MGN4S	NBC4S	2.7
BBT40-RBX5-4S-151H	40,000 - 50,000	0.45 - 4.05	ø1.5mm or less	151	96	63	71	MGN4S	NBC4S	5.0
-RBX7-4S-151H	60,000 - 80,000		ø1.0mm or less		80		65			4.0
BBT50-RBX5-4S-166H	40,000 - 50,000	0.45 - 4.05	ø1.5mm or less	166	100	78	80	MGN4S	NBC4S	9.7
-RBX7-4S-166H	60,000 - 80,000		ø1.0mm or less							8.7

1. Nut, exclusive wrench (RBX5,7 → **XW27**) and Mega Wrench (**MGR12**) are included, but collet must be ordered separately.
2. Air filter regulator (XF1) is required.

Micro Collets G4
RBX5 and RBX7 nuts G6

■Air filter regulator

・Regulator that cleans the air used in driving the turbine.



(1) Mist separator (filtration: 0.3 μm)

(2) Micro mist separator (filtration: 0.01 μm)

(3) Regulator

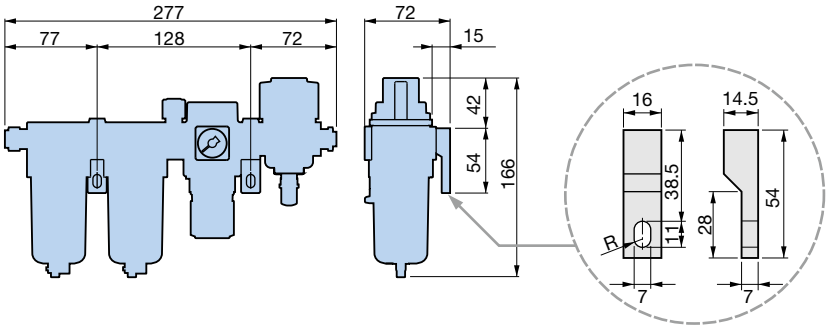
(4) Three ports valves for extracting residual pressure (non-grease type)

(Required for both the RBX and RSX models)

Model	XF1

[Accessories]
・ø10 air tube (3m)
・ø8 air tube (3m)

● Dimensions



HIGH SPINDLE

Accelerates the machine spindle. Improves productivity for machines with low spindle speeds.

- BIG's gear drive with a long track record is used for the drive system. High torque and low heat generation are achieved.

DUAL CONTACT
BIG-PLUS®

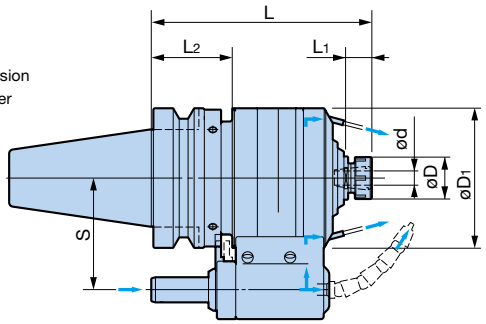
Max. 20,000min^{-1}

GTG type

- Model Description

BBT40 - GTG 5 - 8 - 139

- BBT40: BIG-PLUS BT No.
- GTG: HIGH SPINDLE
- 5: 5x speed increase ratio
- 8: Clamping diameter
- 139: L dimension



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	øD	øD1	L	L1	L2	S	Collet Model	Speed ratio	Max. (min^{-1})	Allowable torque N·m	Weight (kg)
BBT40-GTG5- 8-139	0.5 - 8	25	80	139	19	43	65	NBC8	4.67	20,000	7.8	4.8
- 8-180				180	60							4.9
-10-140	1.5 - 10	30		140	20			NBC10				4.8
-10-180				180	60							4.9
BBT50-GTG6- 8-157	0.5 - 8	25	100	157	19	58	80	NBC8	5.67	20,000	8.0	8.8
- 8-200				200	62							8.9
-10-158	1.5 - 10	30		158	20			NBC10				8.8
-10-200				200	62							9.0
-GTG4-16-177	2.5 - 16	42	110	177	25.5			NBC16	3.8	15,000	27.7	10.6
-16-220				220	68.5							11.0

1. The allowable torque is a calculated value of the drive system, and not the actual torque in cutting.
2. The maximum diameter when using an endmill is ø8 (GTG5, GTG6) and ø12 (GTG4).
3. A Stop Block is required when mounting on machines.
4. For continuous rotation of over 30 minutes, the spindle speed should be set within 80% of the maximum speed.
5. 1 pce. of the New Baby Collet in the table on the right is included.
6. Nut and 2 tightening wrenches are included.

Body Model	Included Collet Model
GTG5- 8	NBC 8- 8AA
GTG5-10	NBC10-10AA
GTG6- 8	NBC 8- 8AA
GTG6-10	NBC10-10AA
GTG4-16	NBC16-16AA

Collets G7
Stop Blocks A170

Please contact us if using neat oil coolant that may cause fire, or grinding or machining materials that generate powdery chips such as carbide.

GTX Type

- Bending rigidity is significantly improved.
- Long nose design ideal for mold machining.

DUAL CONTACT
BIG-PLUS®

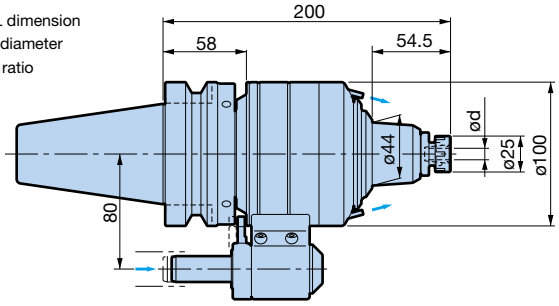
Max. 24,000min^{-1}

Ideal for mold machining!

● Model Description

BBT50 - GTX 6 - 8 - 200

- BIG-PLUS BT No.
- HIGH SPINDLE
- 6x speed increase ratio
- Clamping diameter
- L dimension



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Clamping diameter ød	Speed ratio	Collet Model	Max. speed (30 min) min^{-1}	Continuous speed min^{-1}	Allowable torque N·m	Weight (kg)
BBT50-GTX6-8-200	0.5 - 8	5.67	NBC8	24,000	20,000	8.0	9.3

1. The allowable torque is a calculated value of the drive system, and not the actual torque in cutting.
2. The maximum clamping diameter when using a drill is ø4mm.
3. A Stop Block is required when mounting on machines.
4. For continuous operation of over 30 minutes, the continuous speed listed in the table is recommended.
5. Collet is not included. Please order separately.
6. Nut and 2 tightening wrenches are included.

Collets G7
Stop Blocks A170

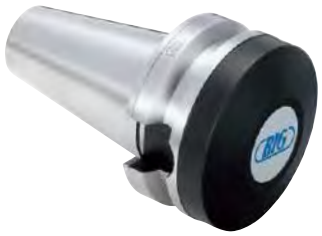
Please contact us if using neat oil coolant that may cause fire, or grinding or machining materials that generate powdery chips such as carbide.

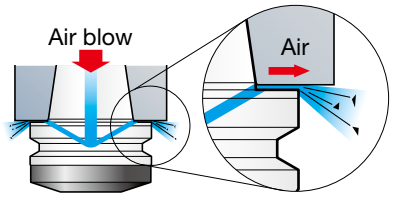
BIG-PLUS SPINDLE

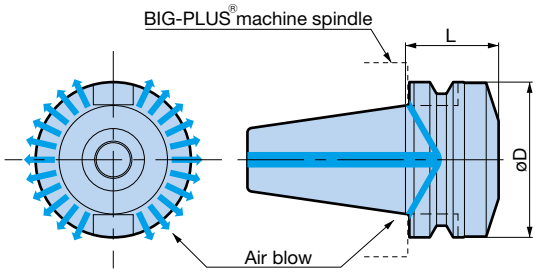
FLANGE FACE CLEANER

Blowing air cleans the spindle flange face of BIG-PLUS machines.

● Removes oil and chips on the spindle flange face.







● Model Description

SBT30 - ASC - 30T
- 30T: L dimension
- ASC: FLANGE FACE CLEANER
- SBT30: Shank No.

Side through type for which air is supplied via a Stop Block is also available.
Please contact us for details.

Model	øD	L
SBT30-ASC- 30T	46	30
SBT40-ASC- 40T	63	40
SBT50-ASC- 60T	100	60

1. When the Flange Face Cleaner is mounted on the BIG-PLUS machine tool spindle, a 1mm gap exists between the flanges of the spindle and the cleaner.

High-Precision Test Bar

DynaTest DYNA TEST

See I13 for details.

Test bar with the highest quality and accuracy.
Periodic inspection of the machine spindle runout prevents problems

- A high-precision test bar developed by BIG's precise machining technology.
- Periodic accuracy evaluation eliminates machining defects.
- Calibration certificate and traceability diagram available upon request (with charge).