

4 Flutes NON-COAT for Graphite Milling



Size R2~R10

CGB4000



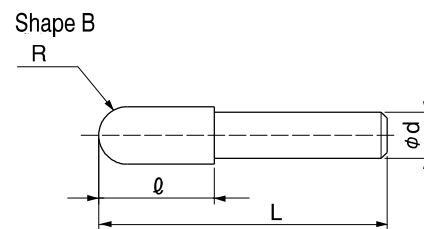
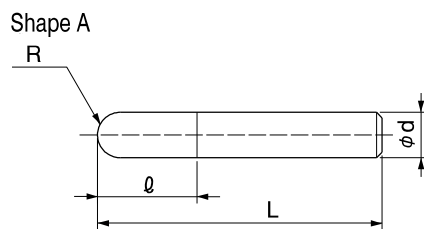
Material Applications (★ Highly Recommended ● Recommended ○ Suggested)

Work Material																	
Carbon Steels S45C S55C	Alloy Steels SK / SCM SUS	Prehardened Steels NAK HPM	Hardened Steels					Cast Iron	Aluminum Alloys	Graphite	Copper	Plastics	Glass Filled Plastics	Titanium Alloys	Heat Resistant Alloys	Cemented Carbide	Hard Brittle (Non-Metallic) Materials
			~50HRC	~55HRC	~60HRC	~65HRC	~70HRC										
									○	★	○	○	○				

Features

Designed for milling Graphite.
The chosen carbide grade offers excellent wear resistance.
Refer to page 440 for 2 flute CGB.

Actual measurement is necessary when using longer length of cut than the written length.



Total 9 models

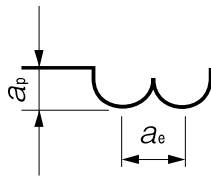
Unit (mm)

Model Number	Radius of Ball Nose R	Length of Cut ℓ	Overall Length L	Shank Diameter φd	Shape	Suggested Retail Price ¥
CGB 4040	R2	20	100	4	A	21,900
CGB 4050	R2.5	20	100	5	A	22,200
CGB 4060	R3	30	150	6	A	25,200
CGB 4070	R3.5	30	150	6	B	28,250
CGB 4080	R4	40	150	8	A	31,900
CGB 4100	R5	50	180	10	A	39,380
CGB 4120	R6	55	200	12	A	46,090
CGB 4160	R8	60	200	16	A	65,010
CGB 4200	R10	60	250	20	A	98,560

Milling Conditions for CGB (4 Flutes)

WORK MATERIAL		GRAPHITE			
Model Number	Radius of Ball Nose (mm)	Spindle Speed (min ⁻¹)	Feed Rate (mm/min)	a_p Axial Depth (mm)	a_e Radial Depth (mm)
4040	R2	15,000	1,350~1,600	1.2	2.8
4050	R2.5	15,000	1,350~1,600	1.5	3.5
4060	R3	15,000	1,900~2,300	1.8	4.2
4070	R3.5	9,000	1,900~2,300	2.1	4.9
4080	R4	8,000	1,900~2,300	2.4	5.6
4100	R5	6,500	2,000~2,500	3	7
4120	R6	5,300	2,000~2,500	3.6	8.4
4160	R8	4,000	2,000~2,500	4.8	11.2
4200	R10	3,200	2,000~2,500	6	14

For 3D milling / Finishing
Milling Amount (mm)
 $a_p = 0.3D$
 $a_e = 0.7D$
D : Outside Diameter (mm)



Note:
• Use a milling machine dedicated for Graphite.
• Recommend air blow for Graphite.

Other series for Graphite milling

Square / Long Neck Square

(★ Highly Recommended ● Recommended ○ Suggested)

Number of Flutes, Tool Type	Model Number	Appearance	Coating	Size	Aluminum Alloys	Graphite	Copper	Plastics	Glass Filled Plastics	Hard Brittle (Non-Metallic) Materials	Page
4 flutes Square	CGE		Non-coat	$\phi 2 \sim \phi 20$	○	★	○	○	○		236
2 flutes Square	DCES 2000		DIA	$\phi 0.2 \sim \phi 6$	○	★	○	○	●	○	188
4 flutes Square	DCES 4000		DIA	$\phi 3 \sim \phi 10$	○	★	○	○	●	○	234
2 flutes Long Neck Square	DCLS		DIA	$\phi 0.4 \sim \phi 6$	○	★	○	○	●	○	266

Long Neck Radius

4 flutes Long Neck Radius	DCLRS		DIA	$\phi 1 \sim \phi 6$	○	★	○	○	●	○	396
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Ball / Long Neck Ball / Taper Neck Ball

2 flutes Ball	CGB 2000		Non-coat	R0.2~R6	○	★	○	○	○		440
4 flutes Ball	CGB 4000		Non-coat	R2~R10	○	★	○	○	○		458
2 flutes Ball	DCB		DIA	R0.5~R6	○	★	○	○	●	○	438
2 flutes Long Neck Ball	DCLB		DIA	R0.2~R3	○	★	○	○	●	○	512
2 flutes Taper Neck Ball	DCTNB		DIA	R0.5~R1	○	★	○	○	●	○	556

4 Flutes

φ3mm Shank
V Series

UDC-PCD
Series

CBN
Series

Square

Long Neck
Square

Radius

Long Neck
Radius

Taper Neck
Radius

Ball / Long
Shank Ball

Long Neck
Ball

Taper Neck
Ball

Taper

Barrel

Spiral
V Cutter

Drill

Technical Data