

4 Flutes NON-COAT for Graphite Milling



Size $\phi 2 \sim \phi 20$

CGE

MG

45°

Sharp Corner

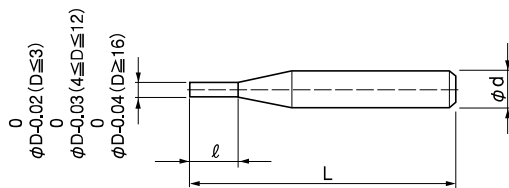
Shank Dia
0/-0.005

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 Graphite.
Specific carbide grade offers wear and abrasion resistance.
High helix angle reduces chipping of the work material.



Total 10 models

Unit (mm)

Model Number	Outside Diameter ϕD	Length of Cut l	Overall Length L	Shank Diameter ϕd	Suggested Retail Price ¥
CGE 4020	2	15	60	3	16,800
CGE 4030	3	30	80	3	16,800
CGE 4040	4	30	90	4	17,700
CGE 4050	5	35	100	6	18,900
CGE 4060	6	40	150	6	19,320
CGE 4080	8	40	150	8	24,200
CGE 4100	10	45	180	10	30,580
CGE 4120	12	55	200	12	36,850
CGE 4160	16	70	200	16	56,430
CGE 4200	20	70	200	20	87,230

- 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

Milling Conditions for CGE

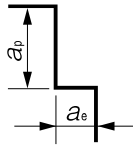
WORK MATERIAL		GRAPHITE			
		Side Milling			
Model Number	Outside Diameter (mm)	Spindle Speed (min ⁻¹)	Feed Rate (mm/min)	a_p Axial Depth (mm)	a_e Radial Depth (mm)
4020	2	15,900	300	1	0.1
4030	3	15,900	500	1.5	0.15
4040	4	15,900	650	2	0.2
4050	5	12,700	750	2.5	0.25
4060	6	10,600	850	3	0.3
4080	8	8,000	950	4	0.4
4100	10	6,400	1,000	5	0.5
4120	12	5,310	1,000	6	0.6
4160	16	3,980	1,000	8	0.8
4200	20	3,180	1,000	10	1

Milling Amount for side milling (mm)

$a_p=0.5D$

$a_e=0.05D$

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