



MG

DLC
Coating

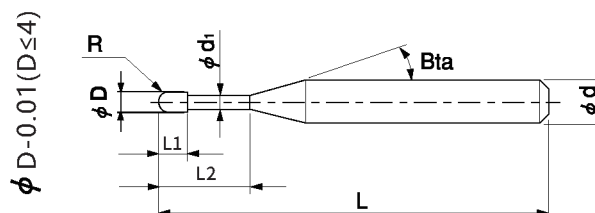
30
SD
0-0.005R
±0.005

Highly recommend ★ ○ ○
/Recommend/Suggest

DIE STEEL	Grade
Carbon steels (S45C/S55C)	
Alloy steels (SK/SCM/SUS)	
Prehardened steels (NAK/HPM)	
Hardened steels (~55/~60/~70HRC)	
SPECIAL MATERIAL	
Aluminum alloys	
Graphite	
Copper	
Plastics	
Tungsten copper	★
Carbon fiber	
Titanium alloys	
Heat resistant alloys	
Cemented carbide	
Hard brittle (non-metallic) material	

Specialty

- * Ultra-fine micro-particles tungsten steel raw materials developed for tungsten copper;
- * The special flute design and coating achieve high surface finish and ultra-long life of tungsten copper material.



Total 56 models

Unit (mm)

Model Number	D Outside Diameter	L1 Length of Cut	L2 Effective Length	BTa Shank Taper Angle	L Overall Length	T Number of Flutes	d Shank Diameter	In Stock
CGLR2-002005	R0.1	0.2	0.5	15°	50	2	4	○
CGLR2-002010	R0.1	0.2	1	15°	50	2	4	○
CGLR2-002015	R0.1	0.2	1.5	15°	50	2	4	○
CGLR2-003010	R0.15	0.3	1	15°	50	2	4	○
CGLR2-003015	R0.15	0.3	1.5	15°	50	2	4	○
CGLR2-003020	R0.15	0.3	2	15°	50	2	4	○
CGLR2-003030	R0.15	0.3	3	15°	50	2	4	○
CGLR2-004010	R0.2	0.4	1	15°	50	2	4	○
CGLR2-004020	R0.2	0.4	2	15°	50	2	4	○
CGLR2-004030	R0.2	0.4	3	15°	50	2	4	○
CGLR2-004040	R0.2	0.4	4	15°	50	2	4	○
CGLR2-005010	R0.25	0.5	1	15°	50	2	4	○
CGLR2-005020	R0.25	0.5	2	15°	50	2	4	○
CGLR2-005040	R0.25	0.5	4	15°	50	2	4	○
CGLR2-005060	R0.25	0.5	6	15°	50	2	4	○
CGLR2-005080	R0.25	0.5	8	15°	50	2	4	○
CGLR2-006020	R0.3	0.6	2	15°	50	2	4	○
CGLR2-006040	R0.3	0.6	4	15°	50	2	4	○
CGLR2-006060	R0.3	0.6	6	15°	50	2	4	○
CGLR2-006080	R0.3	0.6	8	15°	50	2	4	○
CGLR2-008020	R0.4	0.8	2	15°	50	2	4	○
CGLR2-008040	R0.4	0.8	4	15°	50	2	4	○

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2 Flutes

Long Neck
Ball

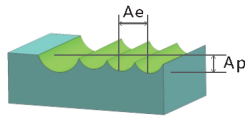
Model Number	D Outside Diameter	L1 Length of Cut	L2 Effective Length	BTa Shank Taper Angle	L Overall Length	T Number of Flutes	d Shank Diameter	In Stock
CGLR2-008060	R0.4	0.8	6	15°	50	2	4	○
CGLR2-008080	R0.4	0.8	8	15°	50	2	4	○
CGLR2-010020	R0.5	1	2	15°	50	2	4	○
CGLR2-010040	R0.5	1	4	15°	50	2	4	○
CGLR2-010060	R0.5	1	6	15°	50	2	4	○
CGLR2-010080	R0.5	1	8	15°	50	2	4	○
CGLR2-010100	R0.5	1	10	15°	50	2	4	○
CGLR2-010120	R0.5	1	12	15°	50	2	4	○
CGLR2-010140	R0.5	1	14	15°	50	2	4	○
CGLR2-010160	R0.5	1	16	15°	50	2	4	○
CGLR2-015040	R0.75	1.5	4	15°	50	2	4	○
CGLR2-015060	R0.75	1.5	6	15°	50	2	4	○
CGLR2-015080	R0.75	1.5	8	15°	50	2	4	○
CGLR2-015100	R0.75	1.5	10	15°	50	2	4	○
CGLR2-015120	R0.75	1.5	12	15°	50	2	4	○
CGLR2-015140	R0.75	1.5	14	15°	50	2	4	○
CGLR2-015160	R0.75	1.5	16	15°	50	2	4	○
CGLR2-020040	R1	2	4	15°	50	2	4	○
CGLR2-020060	R1	2	6	15°	50	2	4	○
CGLR2-020080	R1	2	8	15°	50	2	4	○
CGLR2-020100	R1	2	10	15°	50	2	4	○
CGLR2-020120	R1	2	12	15°	50	2	4	○
CGLR2-020160	R1	2	16	15°	50	2	4	○
CGLR2-030060	R1.5	3	6	15°	50	2	4	○
CGLR2-030080	R1.5	3	8	15°	50	2	4	○
CGLR2-030100	R1.5	3	10	15°	50	2	4	○
CGLR2-030120	R1.5	3	12	15°	50	2	4	○
CGLR2-030160	R1.5	3	16	15°	50	2	4	○
CGLR2-030200	R1.5	3	20	15°	50	2	4	○
CGLR2-040080	R2	4	8	--	50	2	4	○
CGLR2-040100	R2	4	10	--	50	2	4	○
CGLR2-040120	R2	4	12	--	50	2	4	○
CGLR2-040160	R2	4	16	--	50	2	4	○
CGLR2-040200	R2	4	20	-	50	2	4	○

*New size added from this series.

○ Stocked items.

2 Flutes

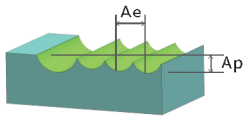
Long Neck Ball



Processing Parameters

Work Material		Tungsten Copper			
Radius of Ball Nose	(mm) Effective Length	(min-1) Speed	(mm/min) Feed	Ap (mm)	Ae (mm)
R0.1	0.5	30000	120	0.006	0.006
R0.1	1	30000	100	0.003	0.003
R0.1	1.5	30000	100	0.003	0.003
R0.15	1	26000	200	0.006	0.006
R0.15	1.5	26000	200	0.004	0.004
R0.15	2	24000	150	0.003	0.003
R0.15	3	18000	100	0.003	0.003
R0.2	1	2400	300	0.01	0.01
R0.2	2	20000	200	0.008	0.01
R0.2	3	18000	150	0.006	0.006
R0.2	4	16000	150	0.003	0.003
R0.25	1	20000	600	0.01	0.01
R0.25	2	18000	600	0.01	0.01
R0.25	4	16000	300	0.008	0.008
R0.25	6	14000	150	0.008	0.008
R0.25	8	14000	100	0.003	0.003
R0.3	2	20000	800	0.02	0.02
R0.3	4	15000	500	0.01	0.01
R0.3	6	13000	300	0.008	0.008
R0.3	8	13000	150	0.005	0.005
R0.4	2	18000	1200	0.02	0.02
R0.4	4	18000	800	0.02	0.02
R0.4	6	16000	600	0.01	0.02
R0.4	8	15000	400	0.005	0.01
R0.5	2	14000	1200	0.02	0.03
R0.5	4	14000	1000	0.02	0.03
R0.5	6	14000	800	0.02	0.03
R0.5	8	12000	500	0.01	0.02
R0.5	10	12000	400	0.01	0.02
R0.5	12	10000	300	0.01	0.02
R0.5	14	10000	200	0.008	0.01
R0.5	16	10000	200	0.005	0.01
R0.75	4	16000	1400	0.02	0.04

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Processing Parameters

Work Material		Tungsten Copper			
Radius of Ball Nose	(mm) Effective Length	(min-1) Speed	(mm/min) Feed	Ap (mm)	Ae (mm)
R0.75	6	14000	1200	0.02	0.04
R0.75	8	13000	1000	0.02	0.04
R0.75	10	12000	600	0.01	0.04
R0.75	12	11000	500	0.01	0.04
R0.75	14	10000	400	0.01	0.02
R0.75	16	9000	300	0.01	0.01
R1	4	16000	2000	0.03	0.06
R1	6	14000	1800	0.03	0.06
R1	8	14000	1800	0.03	0.06
R1	10	14000	1800	0.03	0.06
R1	12	12000	1400	0.02	0.06
R1	16	10000	1000	0.02	0.06
R1.5	6	16000	2000	0.03	0.06
R1.5	8	14000	1800	0.03	0.06
R1.5	10	14000	1800	0.03	0.06
R1.5	12	14000	1800	0.03	0.06
R1.5	16	12000	1400	0.02	0.06
R1.5	20	10000	1000	0.02	0.06
R2	8	12000	2200	0.03	0.07
R2	10	12000	2200	0.03	0.07
R2	12	12000	2200	0.03	0.07
R2	16	12000	2200	0.03	0.07
R2	20	11000	2000	0.03	0.07

Note:

*Decrease both spindle speed and feed rate proportionally when the milling parameters exceed the machine's maximum spindle speed;

*Recommend using a non-contact measuring device to avoid damaging the precision tip point.

2 Flutes

Long Neck
Ball