



Size R0.1~R0.5

CBN-LB

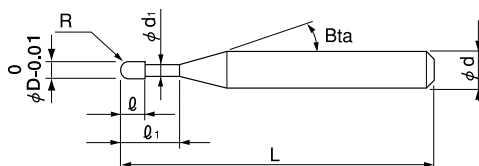


Material Applications (☆ Highly Recommended ● Recommended ○ Suggested)

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
			~55HRC	~60HRC	~70HRC										
		○	●	●	○										
					~68HRC										

Features

Offering better surface finish and longer tool life in comparison to solid carbide tools on Ultra Hard materials. Utilizing a negative rake angle and a special honing treatment, the tip is stronger and less likely to fracture. Diameter Tolerance: 0/-0.01 Ball R Tolerance: +/-0.005



The shank taper angle shown is not an exact value and to avoid contact with the work piece, we recommend the user controls the precise value of this angle. Shank taper angle should not make contact with the work piece.

Total 15 models

Unit (mm)

Model Number	Radius of Ball Nose R	Effective Length ℓ_1	Length of Cut ℓ	Neck Diameter ϕd_1	Shank Taper Angle Bta	Overall Length L	Shank Diameter ϕd	Price (¥)
CBN-LB 2002-004	R0.1	0.4	0.16	0.17	16°	45	4	34,300
CBN-LB 2002-008		0.8				45	4	34,300
CBN-LB 2002-012		1.2				45	4	36,000
CBN-LB 2003-006	R0.15	0.6	0.24	0.27	16°	45	4	34,300
CBN-LB 2003-012		1.2				45	4	34,300
CBN-LB 2003-018		1.8				45	4	36,000
CBN-LB 2004-008	R0.2	0.8	0.32	0.37	16°	45	4	31,200
CBN-LB 2004-016		1.6				45	4	31,200
CBN-LB 2004-024		2.4				45	4	32,800
CBN-LB 2005-010	R0.25	1	0.4	0.47	16°	45	4	31,200
CBN-LB 2005-020		2				45	4	31,200
CBN-LB 2006-012	R0.3	1.2	0.48	0.57	16°	45	4	30,700
CBN-LB 2006-024		2.4				45	4	30,700
CBN-LB 2008-016	R0.4	1.6	0.64	0.77	16°	45	4	28,800
CBN-LB 2010-020	R0.5	2	0.8	0.96	16°	45	4	28,800

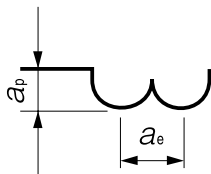
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Milling Conditions for CBN-LB

◆Finishing

WORK MATERIAL			PREHARDENED STEELS HARDENED STEELS NAK/SKD61(30HRC~45HRC)				HARDENED STEELS STAVAX/SKD61 (45HRC~55HRC)				HARDENED STEELS SKD11/YXR7/SKH51 (55HRC~68HRC)			
Model Number	Radius of Ball Nose (mm)	Effective Length (mm)	Spindle Speed (min ⁻¹)	Feed Rate (mm/min)	a_p Axial Depth (mm)	a_e Radial Depth (mm)	Spindle Speed (min ⁻¹)	Feed Rate (mm/min)	a_p Axial Depth (mm)	a_e Radial Depth (mm)	Spindle Speed (min ⁻¹)	Feed Rate (mm/min)	a_p Axial Depth (mm)	a_e Radial Depth (mm)
2002	R 0.1	0.4	50,000	326	0.006	0.006	50,000	216	0.003	0.003	50,000	120	0.003	0.003
		0.8	50,000	298	0.004	0.006	50,000	194	0.002	0.003	50,000	110	0.002	0.003
		1.2	50,000	211	0.004	0.006	50,000	158	0.002	0.003	50,000	106	0.002	0.003
2003	R 0.15	0.6	50,000	720	0.006	0.01	50,000	450	0.003	0.005	50,000	390	0.003	0.005
		1.2	50,000	650	0.006	0.01	50,000	410	0.003	0.005	50,000	350	0.003	0.005
		1.8	50,000	470	0.006	0.006	50,000	280	0.003	0.003	50,000	240	0.003	0.003
2004	R 0.2	0.8	50,000	1,070	0.01	0.01	50,000	730	0.005	0.005	50,000	610	0.005	0.005
		1.6	50,000	960	0.01	0.01	50,000	660	0.005	0.005	50,000	550	0.005	0.005
		2.4	50,000	640	0.006	0.006	50,000	430	0.003	0.003	50,000	360	0.003	0.003
2005	R 0.25	1	50,000	1,360	0.01	0.02	50,000	1,130	0.005	0.01	50,000	960	0.005	0.01
		2	50,000	1,220	0.01	0.02	50,000	1,020	0.005	0.01	50,000	850	0.005	0.01
2006	R 0.3	1.2	50,000	2,200	0.02	0.02	50,000	1,770	0.02	0.01	50,000	1,500	0.01	0.01
		2.4	40,000	1,500	0.02	0.02	40,000	1,200	0.02	0.01	40,000	1,000	0.01	0.01
2008	R 0.4	1.6	30,000	2,420	0.02	0.03	30,000	1,870	0.02	0.015	30,000	1,600	0.01	0.015
2010	R 0.5	2	30,000	2,570	0.03	0.04	30,000	2,000	0.03	0.02	30,000	1,800	0.015	0.02

a_p : Axial Depth (mm)
 a_e : Radial Depth (mm)



Note:

- Decrease both spindle speed and feed rate proportionally when the milling parameters exceed the machine's maximum spindle speed.
- Recommend oil mist to avoid tool damage.

CBN-LB Series
YXR7(65HRC)
Milling Video



Square
Square
Long Neck Square

Radius
Radius
Long Neck Radius

Ball / Long Shank Ball
Long Neck Ball
Taper Neck Ball

Taper
Taper

Spiral V Cutter

Drill Thread Mill

EURO Series

Technical Data