



Being the best through innovation

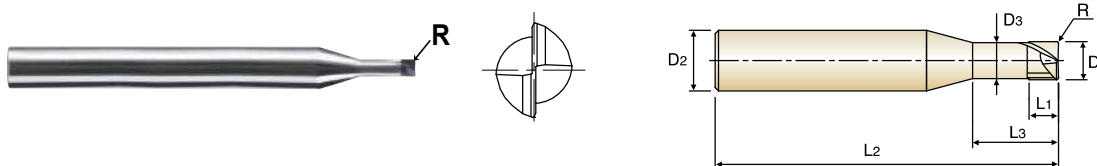


CBN (Cubic Boron Nitride) END MILLS

- Cubic Boron Nitride, Machining High Hardened Steels up to HRc70,
Mirror Finish

CBN, 2 FLUTE CORNER RADIUS

- ▶ Higher accuracy, better finishes, longer tool life.
- ▶ Special geometry improves tool rigidity at high Speed.
- ▶ Tighter radius tolerance ($\pm 0.005\text{mm}$) assures higher accuracy.



Unit : mm

EDP No.	Corner Radius R (± 0.005)	Mill Diameter		Shank Diameter D2	Length of Cut L1	Length Below Shank L3	Overall Length L2	Neck Diameter D3
		Metric D1	Inch					
ESD02005052	RO.05	0.5	.0197	4	0.3	2	50	0.46
ESD02005053	RO.05	0.5	.0197	4	0.3	3	50	0.46
ESD02010053	RO.05	1.0	.0394	4	0.7	3	50	0.95
ESD02010055	RO.05	1.0	.0394	4	0.7	5	50	0.95
ESD02010103	RO.1	1.0	.0394	4	0.7	3	50	0.95
ESD02010105	RO.1	1.0	.0394	4	0.7	5	50	0.95
ESD02015105	RO.1	1.5	.0591	4	1.0	5	50	1.45
ESD02015108	RO.1	1.5	.0591	4	1.0	8	50	1.45
ESD02015205	RO.2	1.5	.0591	4	1.0	5	50	1.45
ESD02015208	RO.2	1.5	.0591	4	1.0	8	50	1.45
ESD02020106	RO.1	2.0	.0787	4	1.2	6	50	1.95
ESD02020100	RO.1	2.0	.0787	4	1.2	10	50	1.95
ESD02020206	RO.2	2.0	.0787	4	1.2	6	50	1.95
ESD02020200	RO.2	2.0	.0787	4	1.2	10	50	1.95

Corner Radius Tolerance(mm)	Shank Dia. Tolerance
± 0.005	h5

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HRc20	HRc20~30	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
				◎	◎									

CARBIDE

HSS


**CBN
END MILLS**
RECOMMENDED CUTTING CONDITIONS

 CBN
END MILLS

 i-Xmill
END MILLS

 i-SMART
MODULAR
TYPE END MILLS

 X5070
END MILLS

 4G MILL
END MILLS

 X-POWER
END MILLS

 JET-POWER
END MILLS

 TitaNox
-POWER
END MILLS

 V7 PLUS A
END MILLS

 V7 MILL INOX
END MILLS

 ALU-POWER
HPC
END MILLS

 ALU-POWER
END MILLS

 D-POWER
GRAPHITE
END MILLS

 D-POWER
CFRP
END MILLS

 ROUTERS
CFRP

 STANDARD
CARBIDE
END MILLS

 ONLY ONE
COATED PM60
END MILLS

 SINE -POWER
END MILLS

 TANK-POWER
END MILLS

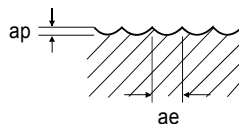
 STANDARD
COBALT & HSS
END MILLS

 TECHNICAL
DATA

CBN, 2 FLUTE BALL NOSE
ESB94 SERIES

MATERIAL	P		H	
	HARDENED STEELS		HIGH HARDENED STEELS	
	HRc50 ~ HRc60		HRc60 ~ HRc70	
HARDNESS	RPM		RPM	
DIAMETER	FEED		FEED	
R0.2 × 0.4	50,000	47.2	50,000	47.2
R0.25 × 0.5	50,000	59.1	50,000	59.1
R0.3 × 0.6	50,000	78.7	50,000	78.7
R0.4 × 0.8	50,000	78.7	50,000	78.7
R0.5 × 1.0	50,000	118.1	50,000	118.1
R0.6 × 1.2	50,000	118.1	50,000	118.1
R0.75 × 1.5	50,000	118.1	50,000	118.1
R1.0 × 2.0	40,000	126.0	32,000	98.4
R1.5 × 3.0	26,500	82.7	21,500	66.9

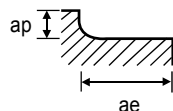
ap : R0.2 ~ R0.4 = 0.005mm
 R0.5 ~ R1.5 = 0.01mm
 ae : R0.2 ~ R0.4 = 0.005mm
 R0.5 ~ R1.5 = 0.01 mm



RPM = rev./min.
 FEED = inch/min.

CBN, 2 FLUTE CORNER RADIUS
ESD02 SERIES

MATERIAL	P				H			
	HARDENED STEELS				HIGH HARDENED STEELS			
	HRc50 ~ HRc60				HRc60 ~ HRc70			
HARDNESS	RPM				RPM			
DIAMETER	FEED				FEED			
DIAMETER	RPM	FEED	DEPTH OF CUT		RPM	FEED	DEPTH OF CUT	
			ae[mm]	ap[mm]			ae[mm]	ap[mm]
0.5	50,000	27.6	0.10	0.01	50,000	21.7	0.06	0.005
1.0	43,000	39.4	0.20	0.01	30,000	27.6	0.10	0.10
1.5	30,000	39.4	0.40	0.02	19,000	27.6	0.20	0.20
2.0	22,000	35.4	0.60	0.03	14,000	31.5	0.30	0.30



RPM = rev./min.
 FEED = inch/min.