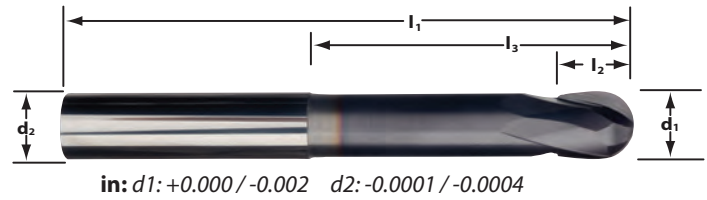


# E520B truCORE



For contouring in carbon and tool steels. The E520B is designed for contouring applications in pre-hard and hardened steels. Added length and necked shank provide for stability when machining in deeper cavities. The AlTiN coating offers superior heat resistance and hardness for increased tool life.



Cutter Dia d1	Shank Dia d2	Length of Cut I2	Reach LBS I3	Overall Length I1	Order Code BN
1/8	1/4	1/8	3/8	3	34288
3/16	1/4	3/16	9/16	3	34289
1/4	1/4	1/4	1-5/8	3	34290
3/8	3/8	3/8	2-1/4	4	34292
1/2	1/2	1/2	2-1/4	4	34293

## E520B Application Guide – Speed & Feed (inch)

ISO Code	Work Material Hardness	Type of Cut	Axial DOC	Radial DOC	No. of Flutes	Speed (SFM)	Feed (Inches per Tooth)			
							1/8	1/4	3/8	1/2
P	≤ 48 HRC	Rough	.2 x D	.2 x D	2	400	.0013	.0025	.0038	.0050
		Finish	.02 x D	.02 x D	2	275	.0015	.0030	.0045	.0060
H	49 to 57 HRC	Rough	.2 x D	.2 x D	2	375	.0008	.0017	.0025	.0033
		Finish	.02 x D	.02 x D	2	250	.0010	.0020	.0030	.0040
	58 to 62 HRC	Rough	.1 x D	.1 x D	2	250	.0007	.0014	.0021	.0028
		Finish	.01 x D	.01 x D	2	150	.0005	.0011	.0016	.0021

≈ Approximately Equals  
 ≤ Less Than or Equal To  
 ≥ Greater Than or Equal To  
 × Multiply  
 < Less Than  
 > Greater Than  
 = Equals

## Common Machining Formulas

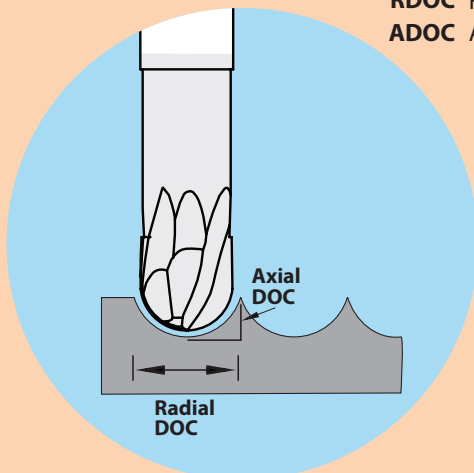
$$RPM = \frac{SFM \times 3.82}{D}$$

$$SFM = RPM \times D \times .262$$

$$IPM = RPM \times IPT \times Z$$

$$MRR = RDOC \times ADOC \times IPM$$

- D** Tool Cutting Diameter
- Z** Number of Flutes
- RPM** Revolutions per Minute
- SFM** Surface Feet per Minute
- IPM** Inches per Minute
- MRR** Metal Removal Rate
- RDOC** Radial Depth of Cut
- ADOC** Axial Depth of Cut



## Technical Resources

Information on tips and adjustments for the following milling operations can be found in our Technical Resources section beginning on page 125.

- HEM slotting
- Face milling
- Helical entry ramping
- Straight line ramping
- Long tool projection adjustments
- Ball nose milling adjustments
- Other helpful tips and calculations