Amana Tool®

INDUSTRIAL

4 Flute Solid Carbide CNC AlTiN Coated Multi-Helix Square, Ball Nose & Corner Radius Router Bits / End Mills For Steel & Stainless Steel

Material	Surface Feet Per Minute (SFM)	Feed Rate: Inches Per Minute (IPM)						
		1/8"	**3/16"**	**1/4"**	**5/16"**	**3/8"**	**1/2"**	**3/4"**
		12,200 RPM*	8,200 RPM*	6,100 RPM*	5,000 RPM*	4,100 RPM*	3,100 RPM*	3,100 RPM*
Steel: Low Carbon	400"	58"	64"	56"	60"	64"	58"	58"
		7,600 RPM*	5,100 RPM*	3,800 RPM*	3,100 RPM*	2,500 RPM*	1,900 RPM*	1,900 RPM*
Steel: Medium Carbon	250"	36"	40"	36"	36"	38"	38"	38"
		6,100 RPM*	4,100 RPM*	3,100 RPM*	2,500 RPM*	2,000 RPM*	1,500 RPM*	1,500 RPM*
Tool Steel: Hardened	200"	8"	8"	8"	8"	8"	8"	8"
		10,700 RPM*	7,100 RPM*	5,300 RPM*	4,300 RPM*	3,600 RPM*	2,600 RPM*	2,600 RPM*
Stainless Steel: 301, 303, 410	350"	36"	40"	36"	36"	38"	38"	38"
		6,700 RPM*	4,100 RPM*	3,400 RPM*	2,700 RPM*	2,200 RPM*	1,700 RPM*	1,700 RPM*
Stainless Steel: 304, 316, 17-4 PH	220"	36"	40"	36"	36"	38"	38"	38"
		5,300 RPM*	4,700 RPM*	2,700 RPM*	2,100 RPM*	1,800 RPM*	1,300 RPM*	1,300 RPM*
Titanium Alloys	175"	36"	40"	36"	36"	38"	38"	38"
		10,700 RPM*	7,100 RPM*	5,300 RPM*	4,300 RPM*	3,600 RPM*	2,600 RPM*	2,600 RPM*
Cast Iron: Gray CG	350"	36"	40"	36"	36"	38"	38"	38"
		7,600 RPM*	5,100 RPM*	3,800 RPM*	3,100 RPM*	2,500 RPM*	1,900 RPM*	1,900 RPM*
Cast Iron: Ductile	250"	36"	40"	36"	36"	38"	38"	38"

***RPM:** Revolutions Per Minute

Tool Reference #'s	Dia.
Square Bottom	
51593	1/4"
51595	3/8"
51597	1/2"
51608	3/4"
Corner Radius Bottom	
51605	1/4"
51607	3/8"
51609	1/2"
Ball Nose	
51790	1/8"
51792	1/8"
51794	3/16"
51796	1/4"
51798	1/4"
51800	1/4"
51802	3/8"
51804	1/2"
51806	1/2"
51808	3/4"

Simple Machining Calculations:
To find **RPM:** (SFM x 3.82) / diameter of tool
To find **SFM:** 0.262 x diameter of tool x RPM
To find **Feed Rate IPM:** RPM x # of flutes x chip load
To find **Chip Load:** Feed Rate IPM / (RPM x # of Flutes)

Depth of Cut: 1 x D Use recommended chip load
2 x D Reduce chip load by 25%
3 x D Reduce chip load by 50%

Disclaimer: These values are based on test results. Your results may vary.
It is important to understand that these values are only recommendations.