

**2 & 3 Flute Solid Carbide Aluminum Cutting 55° Helix End Mills**  
**Depth of Cut: 1 x Tool Diameter †**

Tool No.	Material	Type of Cut	Spindle Speed SFM*	Radial Depth of Cut	Axial LOC	Feed Rate	Chip Load
						IPM** / RPM	Per Revolution
<b>#51820</b> 10mm Diameter 3 Flute	Aluminum,	Slot	600	100% of Diameter	25% of Diameter	75" / 5,800	0.004"
	Brass &	Profile	700	30% of Diameter	75% of Diameter	110" / 6,800	0.005"
	Copper	Finishing	1,200	10% of Diameter	125% of Diameter	230" / 11,600	0.006"
<b>#51821</b> 3mm Diameter 3 Flute	Aluminum,	Slot	600	100% of Diameter	25% of Diameter	117" / 19,500	0.002"
	Brass &	Profile	700	30% of Diameter	75% of Diameter	138" / 23,000	0.002"
	Copper	Finishing	1,200	10% of Diameter	125% of Diameter	175" / 39,500	0.0015"
<b>#51823</b> 6mm Diameter 3 Flute	Aluminum,	Slot	600	100% of Diameter	25% of Diameter	88" / 7,300	0.004"
	Brass &	Profile	700	30% of Diameter	75% of Diameter	91" / 7,600	0.004"
	Copper	Finishing	1,200	10% of Diameter	125% of Diameter	132" / 14,700	0.003"
<b>#51824</b> 8mm Diameter 3 Flute	Aluminum,	Slot	600	100% of Diameter	25% of Diameter	88" / 7,300	0.004"
	Brass &	Profile	700	30% of Diameter	75% of Diameter	91" / 7,600	0.004"
	Copper	Finishing	1,200	10% of Diameter	125% of Diameter	132" / 14,700	0.003"
<b>#51830</b> 1/8" Diameter 2 Flute	Aluminum,	Slot	600	100% of Diameter	25% of Diameter	78" / 19,500	0.002"
	Brass &	Profile	700	30% of Diameter	75% of Diameter	92" / 23,000	0.002"
	Copper	Finishing	1,200	10% of Diameter	125% of Diameter	117" / 39,500	0.0015"
<b>#51832</b> 1/4" Diameter 2 Flute	Aluminum,	Slot	600	100% of Diameter	25% of Diameter	74" / 9,200	0.004"
	Brass &	Profile	700	30% of Diameter	75% of Diameter	86" / 10,700	0.004"
	Copper	Finishing	1,200	10% of Diameter	125% of Diameter	110" / 18,400	0.003"
<b>#51833</b> 5/16" Diameter 2 Flute	Aluminum,	Slot	600	100% of Diameter	25% of Diameter	58" / 7,300	0.004"
	Brass &	Profile	700	30% of Diameter	75% of Diameter	61" / 7,600	0.004"
	Copper	Finishing	1,200	10% of Diameter	125% of Diameter	88" / 14,700	0.003"
<b>#51835</b> 1/2" Diameter 2 Flute	Aluminum,	Slot	600	100% of Diameter	25% of Diameter	55" / 4,600	0.006"
	Brass &	Profile	700	30% of Diameter	75% of Diameter	65" / 5,400	0.006"
	Copper	Finishing	1,200	10% of Diameter	125% of Diameter	92" / 9,200	0.005"

\* SFM Surface feet per minute

\*\* IPM Inches per minute

† **Depth of Cut:** 1 x D Use recommended feed rate  
 2 x D Reduce feed rate by 25%  
 3 x D Reduce feed rate by 50%

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)

To find **Ramp Down:** Feed Rate IPM / # of flutes