Amana Tool®

2 & 4 Flute Solid Carbide Spiral Ball Nose for Plastics
CNC Operating Spindle Speed: 18,000 RPM / Depth of Cut: 1 x Tool Diameter †

	3mm		4mm		5mm - 3/16"		6mm - 1/4"		5/16"		10mm - 3/8"		12mm - 1/2"	
	Feed Rate IPM*	Chip Load Per Tooth	Feed Rate IPM*	Chip Load Per Tooth	Feed Rate IPM*	Chip Load Per Tooth	Feed Rate IPM*	Chip Load Per Tooth	Feed Rate IPM*	Chip Load Per Tooth	Feed Rate IPM*	Chip Load Per Tooth	Feed Rate IPM*	Chip Load Per Tooth
2 Flute	50" - 75"	0.002" - .003"	50" - 75"	0.002" - .003"	75" - 100"	0.003" - 0.004"	75" - 100"	0.003" - 0.005"	–	–	100" - 150"	0.004" - 0.006"	150" - 200"	0.006" - 0.008"
4 Flute	–	–	–	–	–	–	150" - 250"	0.003" - 0.005"	150" - 250"	0.003" - 0.005"	200" - 300"	0.004" - 0.006"	300" - 400"	0.006" - 0.008"

* 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

Tool Reference #'s		
	Dia.	Flutes
46379	1/4"	2
46381	3/8"	2
46383	1/2"	2
46385	1/8"	2
46389	3/16"	2
46424	3/16"	2
46425	3/16"	2
46426	1/4"	2
46428	1/4"	2
46440	1/4"	4
46442	5/16"	4
46444	3/8"	4
46446	1/2"	4
46450	1/4"	2
46451	1/4"	2
46453	3mm	2
46454	4mm	2
46455	5mm	2
46456	6mm	2
46457	10mm	2
46458	12mm	2
46459	1/2"	2
46463	1/4"	1

Disclaimer: It is important to understand that these values are only recommendations.