MARITOOL

Speeds and Feeds for **1001 and 1002** series end mills. Solid carbide 4 flute finisher 30 deg helix TIALN coated. Center cutting. End Mills are made in the USA.

Material	Hardness Bhn	SFM	Feed Per Tooth 1/8"dia	¼"	3/8"	½"	¾"	1"
Aluminum 2011,2024,6061,7075	*	*	.*					
Free Machining 12L14, 1215,11L17	80-150	**500**	.0006	.0015	.0022	.004	.005	.0055
Low Carbon Steel 1008, 1018, 1020	125-175	**430**	.0006	.0014	.002	.003	.004	.0045
Medium Carbon Steel 4140, 8620	200-280	**340**	.0005	.0012	.0018	.0025	.0035	.004
Tool Steel, H.S.S A2,D2,M2,M42	300-400	**200**	.0004	.001	.0016	.0022	.0032	.0035
Cast Iron	120-175	**400**	.0005	.0014	.002	.0035	.005	.0052
Stainless Steel 300 Series	160-200	**315**	.0005	.0014	.002	.0035	.005	.0052
Stainless Steel 400 Series	180-260	**200**	.0004	.0013	.0018	.0032	.0045	.0046
Stainless Steel 15-5, 17-4	160-200	**230**	.0005	.0015	.002	.0035	.005	.0052
Titanium 6AL-4V	320-380	**300**	.0005	.001	.0016	.0022	.0035	.004
Inconel 625, 718	280-320	**60**	.0002	.0006	.0014	.0018	.0028	.0032
Copper, Bronze	120-160	**400**	.0006	.0015	.0022	.004	.005	.0055
Brass (360 half hard)	*	*	*					

* please use our 3 flute finishers series 1021 and 1020

Feed Per Tooth is based on.....

slotting depth of .2 x Cutting Diameter, for deeper slotting reduce feed and speed (generally 4 flute finishers are not recommended for slotting, use 3 flute)

profiling with Axial depth up to 2x Cutting Diameter and Radial Depth of .2 x Cutting Diameter, when profiling less than .2 cutting diameter increase feed and speed

When using long flute length finishers reduce SFM and Feed Per Tooth accordingly. Normally SFM only 10-20%, but Feed Per Tooth should be reduced 30-60%.

6 guidelines for best cutting results

keep overall gage length short	keep tool concentricity low	climb milling is generally best
workpiece rigidity is important	avoid double cutting chips	avoid thermal shock

Note: Cutting speeds, feeds, and lubrication data are given as starting values only. Parameters should be varied to suite your particular conditions. MariTool is constantly improving products, tolerances, and reliability. As such, these speeds and feeds are subject to change without prior notice. Cutting tools may shatter and or produce dangerous fumes when being used. Appropriate protection is advised.