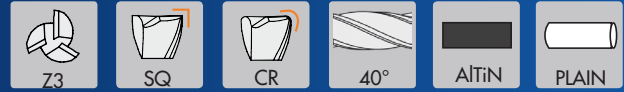
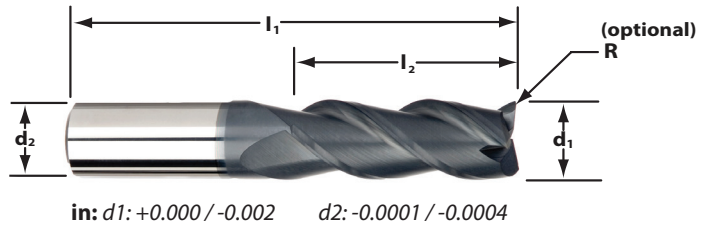


M503 enDURO



For general machining in carbon and stainless steels, as well as copper alloys. The 3-flute design of the M503 combines the strength of high-shear cutting edges and advanced AlTiN coating with the flute spacing to help evacuate gummy chips. Use with traditional machining techniques only.



Cutter Dia d1	Shank Dia d2	Length of Cut l2	Overall Length l1	Order Code SQ	Order Code by Corner Radius		
					.015 CR	.020 CR	.030 CR
1/8	1/8	1/4	1-1/2	-	62942	-	-
		1/2	1-1/2	62308	62208	-	-
3/16	3/16	5/16	2	-	62943	-	-
		9/16	2	62312	62212	-	-
1/4	1/4	3/8	2	-	-	62944	-
		3/4	2-1/2	62316	-	62216	-
3/8	3/8	1/2	2	-	-	-	62945
		1	2-1/2	62324	-	-	62224
1/2	1/2	5/8	2-1/2	-	-	-	62946
		1-1/4	3	62332	-	-	62232

M503 Application Guide – Speed & Feed (inch)

ISO Code	Work Material	Type of Cut	Axial DOC	Radial DOC	No. of Flutes	Speed (SFM)	Feed (inch per Tooth)				
							1/8	3/16	1/4	3/8	1/2
P	Low Carbon Steels 1018, 12L14, 8620	Slotting	1 x D	1 x D	3	325	.0006	.0009	.0012	.0018	.0024
		Rough	1.25 x D	.5 x D	3	375	.0008	.0011	.0015	.0023	.0030
		Finish	1.5 x D	.01 x D	3	425	.0010	.0014	.0019	.0029	.0038
	Medium Carbon Steels 4140, 4340	Slotting	.75 x D	1 x D	3	275	.0005	.0008	.0011	.0016	.0021
		Rough	1.25 x D	.3 x D	3	350	.0006	.0009	.0012	.0018	.0024
		Finish	1.5 x D	.01 x D	3	375	.0007	.0011	.0014	.0021	.0028
M	Martensitic Stainless Steels 416, 410, 440C	Slotting	.75 x D	1 x D	3	275	.0006	.0008	.0011	.0017	.0022
		Rough	1.25 x D	.3 x D	3	350	.0007	.0011	.0014	.0021	.0028
		Finish	1.5 x D	.01 x D	3	375	.0009	.0013	.0018	.0026	.0035
	Austenitic Stainless Steels 303, 304, 316	Slotting	.75 x D	1 x D	3	250	.0005	.0007	.0009	.0014	.0018
		Rough	1.25 x D	.3 x D	3	300	.0006	.0009	.0012	.0018	.0024
		Finish	1.5 x D	.01 x D	3	350	.0008	.0011	.0015	.0023	.0030
	Precipitation Hardening Stainless Steels 17-4, 15-5	Slotting	.5 x D	1 x D	3	225	.0004	.0005	.0007	.0011	.0014
		Rough	1.25 x D	.3 x D	3	275	.0004	.0006	.0009	.0013	.0017
		Finish	1.5 x D	.01 x D	3	325	.0006	.0009	.0013	.0019	.0025
N	Copper, Brass, & Bronze	Slotting	1 x D	1 x D	3	450	.0008	.0011	.0015	.0023	.0030
		Rough	1.25 x D	.5 x D	3	550	.0009	.0013	.0018	.0026	.0035
		Finish	1.5 x D	.01 x D	3	600	.0010	.0015	.0021	.0031	.0041
	Bronze & Beryllium Copper	Slotting	.5 x D	1 x D	3	275	.0005	.0008	.0010	.0015	.0020
		Rough	1.25 x D	.5 x D	3	350	.0006	.0009	.0013	.0019	.0025
		Finish	1.5 x D	.01 x D	3	375	.0007	.0011	.0015	.0022	.0029

D = Tool Diameter

Information on tips and adjustments can be found in our Technical Resources section beginning on page 129.

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

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 Diameter
- Z Number of Flutes
- RPM Revolutions per Minute
- SFM Surface Feet per Minute
- IPM Inches per Minute
- IPT Inch per Tooth
- MRR Metal Removal Rate
- RDOC Radial Depth of Cut
- ADOC Axial Depth of Cut

