M904 Application Guide – Speed & Feed (inch)

ISO Code	Work Material	Type of Cut	Axial DOC	Radial DOC	Number of Flutes	Speed (SFM)	Feed (Inches per Tooth) 1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1
K	Cast Iron Gray	Slotting	1 x D	1 x D	4	325	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0024	.0030	.0036	.0048
		Peripheral - Rough	1.25 x D	.5 x D	4	400	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
		Finish	1.5 x D	.015 x D	4	475	.0008	.0010	.0012	.0014	.0017	.0021	.0025	.0029	.0033	.0041	.0050	.0066
	Cast Iron Ductile	Slotting	1 x D	1 x D	4	300	.0006	.0007	.0008	.0010	.0011	.0014	.0017	.0019	.0022	.0028	.0033	.0044
		Peripheral - Rough	1.25 x D	.5 x D	4	375	.0007	.0008	.0010	.0012	.0014	.0017	.0020	.0024	.0027	.0034	.0041	.0054
		Finish	1.5 x D	.015 x D	4	450	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
	Cast Iron Malleable	Slotting	.75 x D	1 x D	4	250	.0006	.0007	.0008	.0010	.0011	.0014	.0017	.0019	.0022	.0028	.0033	.0044
		Peripheral - Rough	1.25 x D	.5 x D	4	325	.0007	.0008	.0010	.0012	.0014	.0017	.0020	.0024	.0027	.0034	.0041	.0054
		Finish	1.5 x D	.015 x D	4	400	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
P	Low Carbon Steels 1018, 12L14, 8620	Slotting	1 x D	1 x D	4	350	.0007	.0008	.0010	.0011	.0013	.0016	.0020	.0023	.0026	.0033	.0039	.0052
		Peripheral - Rough	1.25 x D	.5 x D	4	425	.0008	.0010	.0012	.0014	.0016	.0020	.0024	.0028	.0032	.0040	.0048	.0064
		Finish	1.5 x D	.015 x D	4	500	.0009	.0011	.0014	.0016	.0018	.0023	.0027	.0032	.0036	.0045	.0054	.0072
	Medium Carbon Steels 4140, 4340	Slotting	1 x D	1 x D	4	300	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0024	.0030	.0036	.0048
		Peripheral - Rough	1.25 x D	.5 x D	4	375	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
		Finish	1.5 x D	.015 x D	4	450	.0008	.0010	.0012	.0014	.0017	.0021	.0025	.0029	.0033	.0041	.0050	.0066
	Tool & Die Steels <48 Rc A2, D2, H13, P20	Slotting	.75 x D	1 x D	4	300	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0024	.0030	.0036	.0048
		Peripheral -Rough	1.25 x D	.3 x D	4	375	.0007	.0009	.0011	.0013	.0015	.0018	.0022	.0025	.0029	.0036	.0044	.0058
		Finish	1.5 x D	.015 x D	4	450	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
M	Martensitic Stainless Steels 416, 410, 440C	Slotting	.75 x D	1 x D	4	300	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0024	.0030	.0036	.0048
		Peripheral - Rough	1.25 x D	.3 x D	4	375	.0007	.0009	.0011	.0013	.0015	.0018	.0022	.0025	.0029	.0036	.0044	.0058
		Finish	1.5 x D	.015 x D	4	450	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
	Austenitic Stainless Steels 303, 304, 316	Slotting	.75 x D	1 x D	4	275	.0007	.0008	.0010	.0011	.0013	.0016	.0020	.0023	.0026	.0033	.0039	.0052
		Peripheral - Rough	1.25 x D	.3 x D	4	325	.0008	.0010	.0012	.0014	.0016	.0020	.0024	.0028	.0032	.0040	.0048	.0064
		Finish	1.5 x D	.015 x D	4	400	.0008	.0010	.0012	.0014	.0017	.0021	.0025	.0029	.0033	.0041	.0050	.0066
	Precipitation Hardening Stainless Steel 17-4, 15-5	Slotting	.5 x D	1 x D	4	250	.0005	.0006	.0008	.0009	.0010	.0013	.0015	.0018	.0020	.0025	.0030	.0040
		Peripheral - Rough	1.25 x D	.3 x D	4	300	.0006	.0008	.0009	.0011	.0013	.0016	.0019	.0022	.0025	.0031	.0038	.0050
		Finish	1.5 x D	.015 x D	4	375	.0007	.0008	.0010	.0011	.0013	.0016	.0020	.0023	.0026	.0033	.0039	.0052
S	Titanium Alloys 6AL - 4V	Slotting	.5 x D	1 x D	4	250	.0005	.0006	.0008	.0009	.0010	.0013	.0015	.0018	.0020	.0025	.0030	.0040
		Peripheral - Rough	1.25 x D	.3 x D	4	300	.0006	.0008	.0009	.0011	.0013	.0016	.0019	.0022	.0025	.0031	.0038	.0050
		Finish	1.5 x D	.015 x D	4	375	.0007	.0008	.0010	.0011	.0013	.0016	.0020	.0023	.0026	.0033	.0039	.0052
	High Temperature Alloys Inconel, Haynes, Stellite, Hastalloy	Slotting	.25 x D	1 x D	4	60	.0005	.0007	.0008	.0009	.0011	.0013	.0016	.0018	.0021	.0026	.0032	.0042
		Peripheral - Rough	1.25 x D	.25 x D	4	90	.0007	.0008	.0010	.0012	.0014	.0017	.0020	.0024	.0027	.0034	.0041	.0054
		Finish	1.5 x D	.01 x D	4	125	.0008	.0010	.0012	.0014	.0016	.0019	.0023	.0027	.0031	.0039	.0047	.0062

D = Tool Diameter

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