



# GP High Performance Carbide End Mills

## Recommended Cutting Data

### Performance Leader In:

- Reliability** ..... delivers the quality & performance you expect
- Durability** ..... stands up to the most extreme conditions
- Productivity** ..... attacks the most demanding application  
using variable pitch technology (GP4R)
- Longevity** ..... reduced chatter enhances tool life
- Versatility** ..... one tool for slotting, pocketing, roughing & finishing

Work Material	Type of Cut	Axial DOC	Radial DOC	Speed (SFM)	Feed (Inches Per Tooth)						
					1/8	1/4	3/8	1/2	5/8	3/4	1
Low Carbon Steels <= 38 Rc 1018, 12L14, 8620	Slotting	1 x D	1 x D	350	0.0008	0.0016	0.0024	0.0032	0.0040	0.0048	0.0064
	Peripheral - Rough	1.5 x D	.5 x D	425	0.0010	0.0020	0.0030	0.0040	0.0050	0.0060	0.0080
Medium Carbon Steels <= 38 Rc 4140, 4340	Slotting	1 x D	1 x D	325	0.0006	0.0013	0.0020	0.0027	0.0034	0.0040	0.0054
	Peripheral - Rough	1.5 x D	.5 x D	375	0.0008	0.0017	0.0026	0.0035	0.0044	0.0053	0.0070
Tool and Die Steels <= 38 Rc A2, D2, O1, S7, P20, H13	Slotting	1 x D	1 x D	325	0.0006	0.0013	0.0020	0.0027	0.0034	0.0040	0.0054
	Peripheral - Rough	1.5 x D	.5 x D	375	0.0008	0.0017	0.0026	0.0035	0.0044	0.0053	0.0070
Tool Steels 39 Rc to 48 Rc	Slotting	.75 x D	1 x D	225	0.0005	0.0010	0.0015	0.0020	0.0025	0.0030	0.0040
	Peripheral - Rough	1 x D	.5 x D	275	0.0006	0.0012	0.0017	0.0023	0.0029	0.0035	0.0046
Easy to machine stainless steel 416, 410, 302, 303	Slotting	1 x D	1 x D	300	0.0006	0.0012	0.0018	0.0025	0.0031	0.0037	0.0050
	Peripheral - Rough	1.5 x D	.5 x D	375	0.0008	0.0016	0.0024	0.0032	0.0040	0.0048	0.0064
Moderately difficult stainless steels 304, 316, Invar, Kovar	Slotting	.75 x D	1 x D	275	0.0005	0.0011	0.0016	0.0022	0.0027	0.0033	0.0044
	Peripheral - Rough	1.5 x D	.5 x D	350	0.0007	0.0015	0.0023	0.0032	0.0037	0.0045	0.0064
Difficult to machine stainless steels 316L, 17-4 PH, 15-5 PH, 13-8 PH	Slotting	.5 x D	1 x D	250	0.0004	0.0009	0.0012	0.0018	0.0022	0.0027	0.0036
	Peripheral - Rough	1 x D	.5 x D	300	0.0005	0.0011	0.0016	0.0022	0.0028	0.0033	0.0044
Cast Iron	Slotting	1 x D	1 x D	400	0.0006	0.0012	0.0019	0.0025	0.0031	0.0038	0.0050
	Peripheral - Rough	1.5 x D	.5 x D	500	0.0007	0.0015	0.0023	0.0030	0.0037	0.0046	0.0060
	Cast Iron Ductile	Slotting	1 x D	300	0.0006	0.0012	0.0018	0.0023	0.0029	0.0035	0.0046
Cast Iron Malleable	Peripheral - Rough	1.5 x D	.5 x D	400	0.0007	0.0014	0.0021	0.0028	0.0035	0.0042	0.0056
	Slotting	0.75	1 x D	250	0.0004	0.0008	0.0012	0.0015	0.0019	0.0023	0.0030
Aluminum Alloys 2024, 6061, 7075	Peripheral - Rough	1 x D	.75 x D	325	0.0005	0.0011	0.0016	0.0022	0.0027	0.0033	0.0044
	Slotting	1 x D	1 x D	800	0.0008	0.0015	0.0022	0.0030	0.0037	0.0047	0.0060
Titanium Alloys	Peripheral - Rough	1 x D	.5 x D	1000	0.0010	0.0020	0.0030	0.0040	0.0050	0.0060	0.0080
	Slotting	.5 x D	1 x D	250	0.0005	0.0010	0.0015	0.0020	0.0025	0.0030	0.0040
High Temperature Alloys Inconel, Haynes, Stellite, Hastalloy	Peripheral - Rough	1 x D	.5 x D	300	0.0006	0.0012	0.0017	0.0023	0.0029	0.0035	0.0046
	Slotting	.25 x D	1 x D	70	0.0004	0.0008	0.0012	0.0015	0.0019	0.0024	0.0030
	Peripheral - Rough	1 x D	.25 x D	95	0.0005	0.0009	0.0014	0.0018	0.0022	0.0028	0.0036



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