



MIRANDA TOOLS

MIRANDA Solid Carbide Tools

**MIRANDA
Maxx**



PRODUCT	Dia	SH.DIA	FL	OAL
SOLID CARBIDE END MILL 2/4 FLUTE -TiAIN	1.0	3.0	3	38
	1.5	3.0	6	38
	2.0	3.0	9	38
	2.5	3.0	9	38
	3.0	3.0	12	38
	3.5	4.0	14	50
	4.0	4.0	14	50
	4.5	5.0	16	50
	5.0	5.0	20	50
	5.5	6.0	20	60
	6.0	6.0	20	60
	8.0	8.0	20	60
	10.0	10.0	25	75
	12.0	12.0	25	75
	14.0	14.0	25	75
16.0	16.0	32	89	
20.0	20.0	38	102	
SOLID CARBIDE BALL NOSE END MILL 2/4 FLUTE -TiAIN	Dia	SH.DIA	FL	OAL
	1.0	3.0	3	38
	1.5	3.0	5	38
	2.0	3.0	7	38
	2.5	3.0	7	38
	3.0	3.0	9	38
	4.0	4.0	14	50
	5.0	5.0	16	50
	6.0	6.0	20	60
	8.0	8.0	20	64
	10.0	10.0	25	75
	12.0	12.0	25	76
	16.0	16.0	32	89
	20.0	20.0	38	102
	SOLID CARBIDE 4 F LONG END MILL -TiAIN	Dia	SH.DIA	FL
3.0		3.0	20	60
4.0		4.0	20	75
5.0		5.0	25	75
6.0		6.0	30	75
8.0		8.0	40	100
10.0		10.0	40	100
10.0		10.0	75	150
12.0		12.0	50	100
12.0		12.0	75	150
16.0		16.0	75	150
20.0		20.0	75	150

-  General purpose
-  Prehardened Steels HRC30-45
-  Alloy Steel
-  Stainless Steels



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-  General purpose
-  Alloy Steel
-  Stainless Steels
- 



SUGGESTED SPEED AND FEED DATA FOR SOLID CARBIDE ENDMILLS

Application : Slotting / Key way machining

Material HRc Diameter	Carbon steel , Alloy Steel < HRc 28		Carbon steel , Alloy Steel HRc 28 - HRc 45		Stainless Steel and Super alloys		Cast Iron	
	RPM	feed/tooth	RPM	feed/tooth	RPM	feed/tooth	RPM	feed/tooth
2	6369	0.03	6369	0.024	6369	0.02	6369	0.044
3	4777	0.045	4777	0.036	4777	0.03	4777	0.066
4	3981	0.06	3981	0.048	3981	0.04	3981	0.088
5	3185	0.075	3185	0.06	3185	0.05	3185	0.11
6	2654	0.09	2654	0.072	2654	0.06	2654	0.132
8	1990	0.12	1990	0.096	1990	0.08	1990	0.176
10	1911	0.15	1911	0.12	1911	0.1	1911	0.22
12	1592	0.18	1592	0.144	1592	0.12	1592	0.264
14	1365	0.21	1365	0.168	1365	0.14	1365	0.308
16	1393	0.24	1393	0.192	1393	0.16	1393	0.352
18	1238	0.27	1238	0.216	1238	0.18	1238	0.396
20	1115	0.3	1115	0.24	1115	0.2	1115	0.44

- Reduce feed rate by around 30% in case of long types
- Increase speed and feed rate by around 25% in case of coated endmills

Application : End milling

Material HRc Diameter	Carbon steel , Alloy Steel < HRc 28		Carbon steel , Alloy Steel HRc 28 - HRc 45		Stainless Steel and Super alloys		Grey Cast Iron	
	RPM	feed/tooth	RPM	feed/tooth	RPM	feed/tooth	RPM	feed/tooth
2	6369	0.04	6369	0.03	6369	0.024	6369	0.06
3	4777	0.06	4777	0.045	4777	0.036	4777	0.09
4	3981	0.08	3981	0.06	3981	0.048	3981	0.12
5	3185	0.1	3185	0.075	3185	0.06	3185	0.15
6	2654	0.12	2654	0.09	2654	0.072	2654	0.18
8	1990	0.16	1990	0.12	1990	0.096	1990	0.24
10	1911	0.2	1911	0.15	1911	0.12	1911	0.3
12	1592	0.24	1592	0.18	1592	0.144	1592	0.36
14	1365	0.28	1365	0.21	1365	0.168	1365	0.42
16	1393	0.32	1393	0.24	1393	0.192	1393	0.48
18	1238	0.36	1238	0.27	1238	0.216	1238	0.54
20	1115	0.4	1115	0.3	1115	0.24	1115	0.6

SUGGESTED SPEED AND FEED DATA FOR SOLID CARBIDE DRILLS

Application : Drilling

Material HRc Diameter	Carbon steel , Alloy Steel < HRc 28		Carbon steel , Alloy Steel HRc 28 - HRc 45		Stainless Steel and Super alloys		Cast Iron	
	RPM	mm/rev	RPM	mm/rev	RPM	mm/rev	RPM	mm/rev
2	5100	0.04	5100	0.03	4900	0.02	5100	0.06
3	4246	0.045	4246	0.036	4246	0.03	4246	0.066
4	3583	0.06	3583	0.048	3583	0.04	3583	0.088
5	2866	0.075	2866	0.06	2866	0.05	2866	0.11
6	2389	0.09	2389	0.072	2389	0.06	2389	0.132
8	1990	0.12	1990	0.096	1990	0.08	1990	0.176
10	1592	0.15	1592	0.12	1592	0.10	1592	0.22
12	1327	0.18	1327	0.144	1327	0.12	1327	0.264
14	1251	0.21	1251	0.168	1251	0.14	1251	0.308
16	1194	0.24	1194	0.192	1194	0.16	1194	0.352
18	1062	0.27	1062	0.216	1062	0.18	1062	0.396
20	1115	0.3	1115	0.24	1115	0.2	1115	0.44

- Increase speed and feed rate by around 25% in case of coated endmills
- Reduce feed rate by around 30% in case of long types
- Increase speed and feed rate by around 25% in case of coated Drills

Technical Formulae

Cutting speed,	=	$\frac{V}{1000} \times \text{Dia of Tool} \times \text{RPM}$
Feed in mm per revolution,	=	feed in mm per tooth X no. of flutes
Feed in mm per min,	=	RPM X feed in mm per revolution,
Cutting time,	=	Cutting length / feed in mm per min



Split Point Geometry