

RECOMMENDED CUTTING CONDITIONS

G9F45, G9F46 SERIES

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

4&6 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Mill Diameter (Ø)										
						3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
P	1-4	Non-alloy steel	0.05D	1.5D	Vc	82	83	98	98	97	97	99	98	98	97	97
					fz	0.024	0.033	0.025	0.03	0.045	0.045	0.053	0.058	0.062	0.065	0.069
					RPM	8700	6605	6239	5199	3860	3088	2626	2228	1950	1715	1544
					FEED	835	872	936	936	1042	834	835	775	725	669	639
	5	Non-alloy steel	0.03D	1.5D	Vc	54	55	65	65	65	64	66	66	65	65	64
					fz	0.024	0.033	0.027	0.03	0.038	0.045	0.053	0.057	0.062	0.066	0.07
					RPM	5730	4377	4138	3448	2586	2037	1751	1501	1293	1149	1019
					FEED	550	578	670	621	590	550	557	513	481	455	428
	6-7	Low alloy steel	0.05D	1.5D	Vc	82	83	98	98	97	97	99	98	98	97	97
					fz	0.024	0.033	0.025	0.03	0.045	0.045	0.053	0.058	0.062	0.065	0.069
					RPM	8700	6605	6239	5199	3860	3088	2626	2228	1950	1715	1544
					FEED	835	872	936	936	1042	834	835	775	725	669	639
	8-9	Low alloy steel	0.03D	1.5D	Vc	54	55	65	65	65	64	66	66	65	65	64
					fz	0.024	0.033	0.027	0.03	0.038	0.045	0.053	0.057	0.062	0.066	0.07
					RPM	5730	4377	4138	3448	2586	2037	1751	1501	1293	1149	1019
					FEED	550	578	670	621	590	550	557	513	481	455	428
	10	High alloyed steel, and tool steel	0.05D	1.5D	Vc	82	83	98	98	97	97	99	98	98	97	97
					fz	0.024	0.033	0.025	0.03	0.045	0.045	0.053	0.058	0.062	0.065	0.069
					RPM	8700	6605	6239	5199	3860	3088	2626	2228	1950	1715	1544
					FEED	835	872	936	936	1042	834	835	775	725	669	639
	11.1 - 11.2	High alloyed steel, and tool steel	0.03D	1.5D	Vc	54	55	65	65	65	64	66	66	65	65	64
					fz	0.024	0.033	0.027	0.03	0.038	0.045	0.053	0.057	0.062	0.066	0.07
					RPM	5730	4377	4138	3448	2586	2037	1751	1501	1293	1149	1019
					FEED	550	578	670	621	590	550	557	513	481	455	428
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	1.5D	Vc	82	83	98	98	97	97	99	98	98	97	97
					fz	0.024	0.033	0.025	0.03	0.045	0.045	0.053	0.058	0.062	0.065	0.069
					RPM	8700	6605	6239	5199	3860	3088	2626	2228	1950	1715	1544
					FEED	835	872	936	936	1042	834	835	775	725	669	639
H	38.1	Hardened steel	0.03D	1.5D	Vc	54	55	65	65	65	64	66	66	65	65	64
					fz	0.024	0.033	0.027	0.03	0.038	0.045	0.053	0.057	0.062	0.066	0.07
					RPM	5730	4377	4138	3448	2586	2037	1751	1501	1293	1149	1019
					FEED	550	578	670	621	590	550	557	513	481	455	428
	38.2 ~ 39.1	Hardened steel	0.03D	1.5D	Vc	45	45	50	50	50	50	50	50	50	50	50
					fz	0.018	0.025	0.02	0.023	0.029	0.033	0.029	0.041	0.046	0.05	0.052
					RPM	4775	3581	3183	2653	1989	1592	1326	1137	995	884	796
					FEED	344	358	382	366	346	315	231	280	275	265	248
	39.2	Hardened steel	0.02D	1D	Vc	35	35	40	40	40	40	40	40	40	40	41
					fz	0.014	0.02	0.016	0.018	0.023	0.027	0.031	0.034	0.037	0.039	0.042
					RPM	3714	2785	2546	2122	1592	1273	1061	909	796	707	653
					FEED	208	223	244	229	220	206	197	186	177	166	164
	40	Chilled Cast Iron	0.03D	1.5D	Vc	54	55	65	65	65	64	66	66	65	65	64
					fz	0.024	0.033	0.027	0.03	0.038	0.045	0.053	0.057	0.062	0.066	0.07
					RPM	5730	4377	4138	3448	2586	2037	1751	1501	1293	1149	1019
					FEED	550	578	670	621	590	550	557	513	481	455	428
	41	Hardened Cast Iron	0.03D	1.5D	Vc	45	45	50	50	50	50	50	50	50	50	50
					fz	0.018	0.025	0.02	0.023	0.029	0.033	0.029	0.041	0.046	0.05	0.052
					RPM	4775	3581	3183	2653	1989	1592	1326	1137	995	884	796
					FEED	344	358	382	366	346	315	231	280	275	265	248

※ The FEED, in long & extra long types, should be reduced by around 50%

