



HSS END MILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

E2535, E2492 SERIES

2 FLUTE BALL NOSE

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

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)									
						3.0	4.0	6.0	8.0	10.0	12.0	16.0	20.0	25.0	
P	1	Non-alloy steel	0.7D	0.3D	Vc	40	40	40	40	40	40	40	40	40	
					fz	0.011	0.018	0.031	0.05	0.069	0.085	0.094	0.117	0.13	
					RPM	4244	3183	2122	1592	1273	1061	796	637	509	
	2		0.7D	0.3D	FEED	93	115	132	159	176	180	150	149	132	
					Vc	30	30	30	30	30	30	30	30	30	
					fz	0.01	0.017	0.026	0.044	0.06	0.066	0.083	0.085	0.088	
	3-4		0.7D	0.3D	RPM	3183	2387	1592	1194	955	796	597	477	382	
					FEED	64	81	83	105	115	105	99	81	67	
					Vc	20	20	20	20	20	15	20	20	15	
	5		0.7D	0.3D	fz	0.008	0.013	0.023	0.036	0.054	0.061	0.079	0.083	0.091	
					RPM	2122	1592	1061	796	637	398	398	318	191	
					FEED	34	41	49	57	69	49	63	53	35	
	6	Low alloy steel	0.7D	0.3D	Vc	15	15	15	15	15	10	15	15	15	
					fz	0.007	0.013	0.018	0.03	0.044	0.055	0.07	0.088	0.094	
					RPM	1592	1194	796	597	477	265	298	239	191	
	7		0.7D	0.3D	FEED	22	31	29	36	42	29	42	42	36	
					Vc	30	30	30	30	30	30	30	30	30	
					fz	0.01	0.017	0.026	0.044	0.06	0.066	0.083	0.085	0.088	
	8-9		0.7D	0.3D	RPM	3183	2387	1592	1194	955	796	597	477	382	
					FEED	64	81	83	105	115	105	99	81	67	
					Vc	20	20	20	20	20	15	20	20	15	
	10		High alloyed steel, and tool steel	0.7D	0.3D	fz	0.008	0.013	0.023	0.036	0.054	0.061	0.079	0.083	0.091
						RPM	2122	1592	1061	796	637	398	398	318	191
						FEED	34	41	49	57	69	49	63	53	35
11.1	0.7D	0.3D		Vc	15	15	15	15	15	10	15	15	15		
				fz	0.007	0.013	0.018	0.03	0.044	0.055	0.07	0.088	0.094		
				RPM	1592	1194	796	597	477	265	298	239	191		
N	21-22	Aluminum-wrought alloy		0.7D	0.3D	FEED	22	31	29	36	42	29	42	42	36
						Vc	30	30	30	30	30	30	30	30	30
						fz	0.01	0.017	0.026	0.044	0.06	0.066	0.083	0.085	0.088
	23-24			0.7D	0.3D	RPM	3183	2387	1592	1194	955	796	597	477	382
						FEED	64	81	83	105	115	105	99	81	67
						Vc	15	15	15	15	15	10	15	15	15
	21-22		0.7D	0.3D	fz	0.007	0.013	0.018	0.03	0.044	0.055	0.07	0.088	0.094	
					RPM	1592	1194	796	597	477	265	298	239	191	
					FEED	22	31	29	36	42	29	42	42	36	
	23-24		0.7D	0.3D	Vc	105	100	105	100	100	95	100	100	100	
					fz	0.01	0.016	0.025	0.044	0.056	0.068	0.075	0.088	0.096	
					RPM	11141	7958	5570	3979	3183	2520	1989	1592	1273	
	21-22	0.7D	0.3D	FEED	223	255	279	350	357	343	298	280	244		
				Vc	68	65	68	65	65	62	65	65	65		
				fz	0.01	0.016	0.025	0.044	0.056	0.068	0.075	0.088	0.096		
	23-24	0.7D	0.3D	RPM	7215	5173	3608	2586	2069	1645	1293	1035	828		
				FEED	144	166	180	228	232	224	194	182	159		

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

