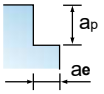
TSEE 3 Flutes/EE 4 Flutes Side Milling : HPC- Roughing, HSC- Finishing

TSEE/TEE Specification page P21
EE/EES Specification page P37-38

Work Material	SS400. AISI 1050. SCM,etc. NON-ALLOYED STEELS ALLOY STEELS TOOL STEELS		AISI H13. AISI D2,etc. ALLOY STEELS HEAT RESISTANT STEELS		AISI 304 AISI 316,etc. STAINLESS STEELS		FC250,etc. CAST IRON		Aluminum-magnesium alloy, Aluminum and aluminum alloy		TITANUM ALLOYS	
HARDNESS	~30HRC		30~45HRC		~40HRC		≧240HB					
STRENGTH	~1000 N/mm²		1000~1500 N/mm²		~950N/mm²						1300N/mm²	
Cutting Type	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing	Roughing	Finishing
Vc	260~315	415~490	235	315	100~150	145~200	170	270	400~540	610~900	100	115
Diameter (mm)	fz (mm/z)		fz (mm/z)		fz (mm/z)		fz (mm/z)		fz (mm/z)		fz (mm/z)	
3	0.015	0.013	0.013	0.011	0.013	0.011	0.015	0.013	0.018	0.017	0.012	0.010
4	0.020	0.017	0.017	0.014	0.018	0.014	0.020	0.018	0.024	0.022	0.016	0.013
5	0.025	0.021	0.021	0.018	0.022	0.018	0.025	0.022	0.030	0.028	0.020	0.017
6	0.030	0.025	0.025	0.022	0.026	0.021	0.030	0.026	0.036	0.033	0.023	0.020
7	0.035	0.029	0.029	0.025	0.031	0.025	0.035	0.031	0.042	0.039	0.027	0.023
8	0.040	0.034	0.034	0.029	0.035	0.028	0.040	0.035	0.048	0.044	0.031	0.026
9	0.055	0.048	0.051	0.043	0.051	0.040	0.055	0.048	0.067	0.059	0.045	0.038
10	0.060	0.053	0.057	0.048	0.057	0.044	0.061	0.053	0.074	0.066	0.050	0.042
12	0.072	0.064	0.068	0.058	0.068	0.053	0.073	0.064	0.089	0.079	0.060	0.050
14	0.084	0.074	0.080	0.067	0.080	0.062	0.085	0.074	0.104	0.092	0.070	0.059
16	0.096	0.085	0.091	0.077	0.091	0.070	0.098	0.085	0.118	0.106	0.080	0.067
20	0.120	0.106	0.114	0.096	0.114	0.088	0.122	0.106	0.148	0.132	0.100	0.084
	Ae: ≦0.4 D Ap: ≦1.5 D	Ae: ≦0.02 D Ap: ≦2.0 D	Ae: ≦0.32D Ap: ≦1.5 D	Ae: ≦0.02D Ap: ≦2.0 D	Ae: ≦0.28D Ap: ≦1.5 D	Ae: ≦0.02D Ap: ≦1.5 D	Ae: ≦0.4D Ap: ≦1.5 D	Ae: ≦0.02D Ap: ≦1.5 D	Ae: ≦0.4D Ap: ≦1.5 D	Ae: ≦0.02D Ap: ≦1.5 D	Ae: ≦0.32D Ap:≦ 1.5 D	Ae: ≦0.02D Ap: ≦1.5 D

TSEE 3 Flutes/EE 4 Flutes Slotting, Drilling, Ramping, Helix, Grooving

TSEE/TEE Specification page P21
EE/EES Specification page P37-38

Work Material	SS400. AISI 1050. SCM,etc. NON-ALLOYED STEELS ALLOY STEELS TOOL STEELS		AISI H13. AISI D2,etc. ALLOY STEELS HEAT RESISTANT STEELS		AISI 304 AISI 316,etc. STAINLESS STEELS		FC250,etc. CAST IRON		Aluminum-magnesium alloy, Aluminum and aluminum alloy		TITANUM ALLOYS	
HARDNESS	~30HRC		30~45HRC		~40HRC		≧240HB					
STRENGTH	~1000 N/mm²		1000~1500 N/mm²		~950N/mm²						1300N/mm²	
Cutting Type	Slotting	Ramping, Helix, Grooving	Slotting	Ramping, Helix, Grooving	Slotting	Ramping, Helix, Grooving	Slotting	Ramping, Helix, Grooving	Slotting	Ramping, Helix, Grooving	Slotting	Ramping, Helix, Grooving
Ramping max. angle		45°		30° ~45°		5° ~10°		45°		30° ~45°		10°
Vc	205~245		160		70~100		135		300~450		55	
Diameter (mm)	fz (mm/z)		fz (mm/z)		fz (mm/z)		fz (mm/z)		fz (mm/z)		fz (mm/z)	
3	0.012	0.010	0.010	0.008	0.010	0.005	0.012	0.011	0.015	0.011	0.009	0.005
4	0.016	0.013	0.013	0.010	0.013	0.007	0.016	0.014	0.020	0.014	0.012	0.006
5	0.020	0.016	0.017	0.013	0.017	0.009	0.020	0.018	0.025	0.018	0.015	0.008
6	0.023	0.019	0.020	0.015	0.020	0.010	0.024	0.021	0.030	0.021	0.018	0.009
7	0.027	0.022	0.023	0.018	0.023	0.012	0.028	0.025	0.035	0.025	0.021	0.011
8	0.031	0.026	0.026	0.020	0.026	0.014	0.032	0.028	0.040	0.028	0.024	0.012
9	0.043	0.036	0.039	0.025	0.036	0.024	0.043	0.039	0.054	0.038	0.034	0.021
10	0.048	0.040	0.043	0.028	0.040	0.027	0.048	0.043	0.060	0.043	0.038	0.023
12	0.058	0.048	0.052	0.034	0.048	0.032	0.058	0.052	0.072	0.051	0.046	0.028
14	0.067	0.056	0.060	0.039	0.056	0.038	0.067	0.060	0.084	0.060	0.053	0.032
16	0.077	0.064	0.069	0.045	0.064	0.043	0.077	0.069	0.096	0.068	0.061	0.037
20	0.096	0.080	0.086	0.056	0.080	0.054	0.096	0.086	0.120	0.085	0.076	0.046
	Ae: ≦1 .0 D Ap: ≦1.0 D	Ap: 1.0 D	Ae: ≦1 .0 D Ap: ≦1.0 D	Ap: 1.0 D	Ae: ≦1 .0 D Ap: ≦1.0 D	Ap: 1.0 D	Ae: ≦1 .0 D Ap: ≦1.0 D	Ap: 1.0 D	Ae: ≦1 .0 D Ap: ≦1.0 D	Ap: 1.0 D	Ae: ≦1 .0 D Ap: ≦1.0 D	Ap: 1.0 D

EE 4 Flutes Drilling

EE/EES Specification page P37-38

Work Material	SS400. AISI 1050. SCM,etc. NON-ALLOYED STEELS ALLOY STEELS TOOL STEELS	AISI H13. AISI D2，etc. ALLOY STEELS HEAT RESISTANT STEELS	FC250,etc. CAST IRON	Aluminum-magnesium alloy, Aluminum and aluminum alloy
HARDNESS	~30HRC	30~45HRC	≧240HB	
STRENGTH	~1000 N/mm²	1000~1500 N/mm²		
Vc	205~245	160	135	300~450
Diameter (mm)	fz (mm/z)	fz (mm/z)	fz (mm/z)	fz (mm/z)
3	0.010	0.005	0.010	0.010
4	0.013	0.007	0.013	0.013
5	0.016	0.009	0.017	0.017
6	0.019	0.011	0.020	0.020
7	0.022	0.013	0.023	0.023
8	0.026	0.014	0.027	0.026
9	0.033	0.021	0.034	0.034
10	0.037	0.023	0.038	0.038
12	0.044	0.028	0.045	0.045
14	0.052	0.032	0.053	0.053
16	0.059	0.037	0.060	0.060
20	0.074	0.046	0.075	0.075
	Ap: ≦1.5 D	Ap: ≦1.0 D	Ae: ≦1 .0 D Ap: 1.0 D	Ae: ≦1 .0 D Ap: 1.0 D

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