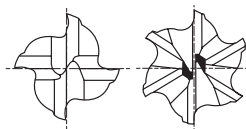
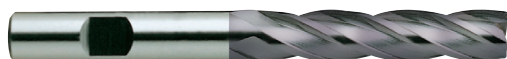


4&6 FLUTE LONG END MILLS



P.21~22

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
Non Coating	TiAIN					
ESH597020	EHC597020	2.0	6	10	54	4
ESH597030	EHC597030	3.0	6	12	56	4
ESH597040	EHC597040	4.0	6	19	63	4
ESH597050	EHC597050	5.0	6	24	68	4
ESH597060	EHC597060	6.0	6	24	68	4
ESH597070	EHC597070	7.0	10	30	80	4
ESH597080	EHC597080	8.0	10	38	88	4
ESH597090	EHC597090	9.0	10	38	88	4
ESH597100	EHC597100	10.0	10	45	95	4
ESH597110	EHC597110	11.0	12	45	102	4
ESH597120	EHC597120	12.0	12	53	110	4
ESH597130	EHC597130	13.0	12	53	110	4
ESH597140	EHC597140	14.0	12	53	110	4
ESH597150	EHC597150	15.0	12	53	110	4
ESH597160	EHC597160	16.0	16	63	123	4
ESH597170	EHC597170	17.0	16	63	123	4
ESH597180	EHC597180	18.0	16	63	123	4
ESH597190	EHC597190	19.0	16	63	123	4
ESH597200	EHC597200	20.0	20	75	141	4
ESH597220	EHC597220	22.0	20	75	141	4
ESH597240	EHC597240	24.0	25	90	166	4
ESH597250	EHC597250	25.0	25	90	166	4
ESH597260	EHC597260	26.0	25	90	166	4
ESH597280	EHC597280	28.0	25	90	166	4
ESH597300	EHC597300	30.0	25	90	166	4
ESH598220	EHC598220	22.0	20	75	141	6
ESH598240	EHC598240	24.0	25	90	166	6
ESH598250	EHC598250	25.0	25	90	166	6
ESH598260	EHC598260	26.0	25	90	166	6
ESH598280	EHC598280	28.0	25	90	166	6
ESH598300	EHC598300	30.0	25	90	166	6
ESH598320	EHC598320	32.0	32	106	186	6

Mill Dia. Tolerance(mm)		Shank Dia. Tolerance
up to $\varnothing 6$	0 ~ +0.04	
over $\varnothing 6$	0 ~ +0.05	

h6

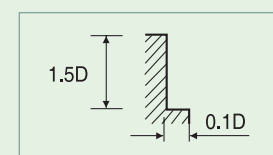
4&6 FLUTE - SIDE CUTTING

ESH595, ESH597 Series

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm ²				500 ~ 800N/mm ²				800 ~ 1000N/mm ²			
DIAMETER	RPM	FEED	V _c	f _z	RPM	FEED	V _c	f _z	RPM	FEED	V _c	f _z
2.0	5600	80	35	0.004	4500	55	30	0.003	4000	45	25	0.003
3.0	3500	110	35	0.008	3200	80	30	0.006	2500	60	25	0.006
4.0	2800	140	35	0.013	2200	100	30	0.011	1800	65	25	0.009
5.0	2200	180	35	0.020	1800	125	30	0.017	1600	90	25	0.014
6.0	1800	180	35	0.025	1600	145	30	0.023	1200	90	25	0.019
8.0	1400	200	35	0.036	1100	160	30	0.036	900	105	25	0.029
10.0	1100	200	35	0.045	900	160	30	0.044	800	120	25	0.038
12.0	900	220	35	0.061	800	180	30	0.056	630	120	25	0.048
14.0	800	220	35	0.069	700	160	30	0.057	560	120	25	0.054
16.0	700	220	35	0.079	560	160	30	0.071	450	105	25	0.058
18.0	630	200	35	0.079	500	160	30	0.080	400	105	25	0.066
20.0	560	200	35	0.089	450	160	30	0.089	400	105	25	0.066
22 (4F)	500	200	35	0.100	450	160	30	0.089	350	105	25	0.075
25 (4F)	450	180	35	0.100	400	145	30	0.091	310	90	25	0.073
28 (4F)	400	160	35	0.100	350	125	30	0.089	280	80	25	0.071
30 (4F)	350	140	35	0.100	310	110	30	0.089	250	75	25	0.075
22 (6F)	500	200	35	0.067	450	160	30	0.089	350	105	25	0.075
25 (6F)	450	180	35	0.067	400	145	30	0.091	310	90	25	0.073
28 (6F)	400	160	35	0.067	350	125	30	0.089	280	80	25	0.071
30 (6F)	350	140	35	0.067	310	110	30	0.089	250	75	25	0.075
32.0	350	140	35	0.067	280	100	30	0.089	220	65	25	0.074

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm ²							
DIAMETER	RPM	FEED	V _c	f _z	RPM	FEED	V _c	f _z
2.0	2200	20	15	0.002	12000	240	75	0.005
3.0	1600	30	15	0.005	11000	380	105	0.009
4.0	1100	45	15	0.010	8000	440	100	0.014
5.0	900	50	15	0.014	6300	470	100	0.019
6.0	800	60	15	0.019	5600	470	105	0.021
8.0	560	65	15	0.029	4000	580	100	0.036
10.0	450	65	15	0.036	3100	600	95	0.048
12.0	400	75	15	0.047	2500	570	95	0.057
14.0	350	75	15	0.054	2200	530	95	0.060
16.0	280	65	15	0.058	2000	530	100	0.066
18.0	250	65	15	0.065	1800	530	100	0.074
20.0	220	65	15	0.074	1600	480	100	0.075
22 (4F)	220	65	15	0.074	1400	450	95	0.080
25 (4F)	180	50	15	0.069	1200	420	95	0.088
28 (4F)	160	45	15	0.070	1100	400	95	0.091
30 (4F)	160	45	15	0.070	1100	400	105	0.091
22 (6F)	220	65	15	0.074	1400	450	95	0.080
25 (6F)	180	50	15	0.069	1200	420	95	0.088
28 (6F)	160	45	15	0.070	1100	400	95	0.091
30 (6F)	160	45	15	0.070	1100	400	105	0.091
32.0	140	45	15	0.080	1000	360	100	0.090

RPM = rev./min.
Feed = mm/min.
V_c = m/min.
f_z = mm/tooth



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