

4 & 6 FLUTE UNCOATED

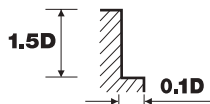
ESH595, ESH596, ESH597 & ESH598 Series

CUTTING DATA

Side Cutting

MATERIAL	CARBON STEELS, ALLOY STEELS & TOOL STEELS																ALUMINIUM & ALUMINIUM ALLOYS			
	-				~ HRc 20				HRc 20 ~ HRc 30				HRc 30 ~ HRc 40				-			
	~ 500N/mm ²				500 ~ 800N/mm ²				800 ~ 1000N/mm ²				1000 ~ 1300N/mm ²				-			
Dia.	RPM	Feed	Vc	Fz	RPM	Feed	Vc	Fz	RPM	Feed	Vc	Fz	RPM	Feed	Vc	Fz	RPM	Feed	Vc	Fz
2	5600	80	35	0.004	4500	55	30	0.003	4000	45	25	0.003	2200	20	15	0.002	12000	240	75	0.005
3	3500	110	35	0.008	3200	80	30	0.006	2500	60	25	0.006	1600	30	15	0.005	11000	380	105	0.009
4	2800	140	35	0.013	2200	100	30	0.011	1800	65	25	0.009	1100	45	15	0.01	8000	440	100	0.014
5	2200	180	35	0.02	1800	125	30	0.017	1600	90	25	0.014	900	50	15	0.014	6300	470	100	0.019
6	1800	180	35	0.025	1600	145	30	0.023	1200	90	25	0.019	800	60	15	0.019	5600	470	105	0.021
8	1400	200	35	0.036	1100	160	30	0.036	900	105	25	0.029	560	65	15	0.029	4000	580	100	0.036
10	1100	200	35	0.045	900	160	30	0.044	800	120	25	0.038	450	65	15	0.036	3100	600	95	0.048
12	900	220	35	0.061	800	180	30	0.056	630	120	25	0.048	400	75	15	0.047	2500	570	95	0.057
14	800	220	35	0.069	700	160	30	0.057	560	120	25	0.054	350	75	15	0.054	2200	530	95	0.06
16	700	220	35	0.079	560	160	30	0.071	450	105	25	0.058	280	65	15	0.058	2000	530	100	0.066
18	630	200	35	0.079	500	160	30	0.08	400	105	25	0.066	250	65	15	0.065	1800	530	100	0.074
20	560	200	35	0.089	450	160	30	0.089	400	105	25	0.066	220	65	15	0.074	1600	480	100	0.075
22 (4F)	500	200	35	0.1	450	160	30	0.089	350	105	25	0.075	220	65	15	0.074	1400	450	95	0.08
25 (4F)	450	180	35	0.1	400	145	30	0.091	310	90	25	0.073	180	50	15	0.069	1200	420	95	0.088
28 (4F)	400	160	35	0.1	350	125	30	0.089	280	80	25	0.071	160	45	15	0.07	1100	400	95	0.091
30 (4F)	350	140	35	0.1	310	110	30	0.089	250	75	25	0.075	160	45	15	0.07	1100	400	105	0.091
22 (6F)	500	200	35	0.067	450	160	30	0.089	350	105	25	0.075	220	65	15	0.074	1400	450	95	0.08
25 (6F)	450	180	35	0.067	400	145	30	0.091	310	90	25	0.073	180	50	15	0.069	1200	420	95	0.088
28 (6F)	400	160	35	0.067	350	125	30	0.089	280	80	25	0.071	160	45	15	0.07	1100	400	95	0.091
30 (6F)	350	140	35	0.067	310	110	30	0.089	250	75	25	0.075	160	45	15	0.07	1100	400	105	0.091
32	350	140	35	0.067	280	100	30	0.089	220	65	25	0.074	140	45	15	0.08	1000	360	100	0.09

NOTE: For long & extra long types the feed should be reduced by around 50%.



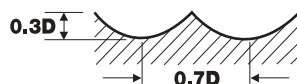
2 FLUTE BALL NOSE UNCOATED

E2492 Series

CUTTING DATA

Stepover Cutting

MATERIAL		CARBON STEELS, ALLOY STEELS & TOOL STEELS																ALUMINIUM & ALUMINIUM ALLOYS			
Hardness		-				~ HRc 20				HRc 20 ~ HRc 30				HRc 30 ~ HRc 40				-			
Strength		~ 500N/mm ²				500 ~ 800N/mm ²				800 ~ 1000N/mm ²				1000 ~ 1300N/mm ²				-			
Dia.	Rad.	RPM	Feed	Vc	Fz	RPM	Feed	Vc	Fz	RPM	Feed	Vc	Fz	RPM	Feed	Vc	Fz	RPM	Feed	Vc	Fz
3	1.5	4500	95	40	0.011	3400	70	30	0.01	2000	30	20	0.008	1400	20	15	0.007	11000	230	105	0.01
4	2	3200	115	40	0.018	2400	80	30	0.017	1400	35	20	0.013	1000	25	15	0.013	8000	260	100	0.016
6	3	2200	135	40	0.031	1700	90	30	0.026	1000	45	20	0.023	700	25	15	0.018	5600	280	105	0.025
8	4	1600	160	40	0.05	1200	105	30	0.044	700	50	20	0.036	500	30	15	0.03	4000	350	100	0.044
10	5	1300	180	40	0.069	1000	120	30	0.06	560	60	20	0.054	400	35	15	0.044	3200	360	100	0.056
12	6	1000	170	40	0.085	800	105	30	0.066	450	55	15	0.061	320	35	10	0.055	2500	340	95	0.068
16	8	800	150	40	0.094	600	100	30	0.083	350	55	20	0.079	250	35	15	0.07	2000	300	100	0.075
20	10	600	140	40	0.117	500	85	30	0.085	300	50	20	0.083	200	35	15	0.088	1600	280	100	0.088
25	12.5	500	130	40	0.13	400	70	30	0.088	220	40	15	0.091	160	30	15	0.094	1300	250	100	0.096



RPM: revolutions per minute Feed: mm per minute Vc: surface speed (metres per minute) Fz: feed per tooth