

HIGH SPEED STEEL END MILLS

DEPTH OF CUT EQUAL TO CUTTER DIAMETER
WIDTH OF CUT EQUAL TO HALF CUTTER DIAMETER

CUTTER DIAMETER		ALUMINIUM BRASS		STEEL 40 T.S.I./ 600 N/mm ²		CAST IRON BRONZE		STEEL 60 T.S.I./ 900 N/mm ²		STEEL 80 T.S.I./ 1250 N/mm ²		TITANIUM 90 T.S.I./ 1400 N/mm ²	
ins	mm	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.
1/8	3	6000	2.75	3000	1.375	1900	0.875	2500	1.0	1200	0.437	900	0.375
5/32	4	5000	3.125	2500	1.5	1500	1.0	2000	1.250	1000	0.5	750	0.437
3/16	5	4000	3.625	2000	1.812	1300	1.25	1600	1.5	800	0.625	600	0.5
1/4	6	3000	5.5	1500	2.75	950	1.75	1200	1.875	600	0.875	450	0.687
5/16	8	2450	7.5	1200	3.812	750	2.25	950	2.25	475	1.0	360	0.812
3/8	10	2000	8.5	1000	4.5	625	2.5	800	2.5	400	1.187	300	0.937
1/2	12	1500	10.0	750	5.0	475	3.312	600	3.75	300	1.5	230	1.0
5/8	16	1200	10.0	600	5.0	375	3.312	480	4.0	240	1.625	180	1.125
3/4	20	1000	9.0	500	4.5	300	3.0	400	4.0	200	1.625	150	1.125
1	25	750	9.0	375	4.25	250	2.875	300	3.75	150	1.5	115	1.0
1 ¼	32	625	7.5	300	3.75	200	2.5	240	3.0	120	1.25	90	0.937
1 ½	38	500	6.25	250	3.25	160	2.0	200	2.437	100	1.0	75	0.75
1 ¾	44	425	6.0	220	3.0	140	1.75	175	2.25	85	0.812	65	0.625
2	50	375	5.75	200	2.875	125	1.5	150	2.0	75	0.625	60	0.5

HIGH SPEED STEEL SLOT DRILLS

DEPTH OF CUT EQUAL TO HALF CUTTER DIAMETER

CUTTER DIAMETER		ALUMINIUM BRASS		STEEL 40 T.S.I./ 600 N/mm ²		CAST IRON BRONZE		STEEL 60 T.S.I./ 900 N/mm ²		STEEL 80 T.S.I./ 1250 N/mm ²		TITANIUM 90 T.S.I./ 1400 N/mm ²	
ins	mm	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.	Speed R.P.M.	Feed I.P.M.
1/8	3	6000	3.0	3000	1.50	2000	1.0	2500	1.25	1200	0.5	900	0.375
5/32	4	5000	3.5	2500	1.75	1700	1.25	2000	1.375	1000	0.625	750	0.5
3/16	5	4000	4.0	2000	2.0	1400	1.375	1600	1.75	800	0.75	600	0.562
1/4	6	3000	6.0	1500	3.0	1100	2.0	1200	2.125	600	1.0	456	0.75
5/16	8	2450	8.0	1200	4.0	850	2.5	950	2.375	475	1.125	360	0.812
3/8	10	2000	9.0	1000	4.5	725	2.75	800	2.5	400	1.25	300	0.875
1/2	12	1500	10.0	750	5.0	525	3.5	600	4.0	300	1.5	230	1.0
5/8	16	1200	10.0	600	5.0	425	3.5	480	4.0	240	1.5	180	1.0
3/4	20	1000	8.0	500	4.0	350	2.75	400	3.0	200	1.25	150	0.875
1	25	750	6.0	375	3.0	275	2.5	300	2.75	150	1.0	115	0.75
1 ¼	32	625	5.0	300	2.5	225	2.0	240	2.125	120	0.812	90	0.625
1 ½	38	500	4.0	250	2.0	175	1.5	200	1.625	100	0.625	75	0.5
1 ¾	44	425	3.75	220	1.875	150	1.25	175	1.375	85	0.5	65	0.375
2	50	375	3.50	200	1.75	125	1.0	180	1.25	75	0.375	60	0.312

Values are given as a starting point only, adjust feeds/speed to suite your machine

For long series cutters reduce feed rates by 50%

IPM = inches per minute, for mm per minute multiply IPM by 25.4