

MSE230
2-Flute Square End Mill
Cutting Conditions

Work Material	Carbon Steel			Alloy Steel Tool Steel - Austenitic Steel 304			Prehardened Steel			Hardened Steel Tool Steel H13 (~ 52HRC)			Aluminum			Copper		
Cutting Speed	50 ~ 80 m/min			50 ~ 70 m/min			40 ~ 60 m/min			20 ~ 40 m/min			100 ~ 200 m/min			60 ~ 80 m/min		
Dia.	Spindle Speed	Feed		Spindle Speed	Feed		Spindle Speed	Feed		Spindle Speed	Feed		Spindle Speed	Feed		Spindle Speed	Feed	
		min ⁻¹	mm/min		min ⁻¹	mm/min		min ⁻¹	mm/min		min ⁻¹	mm/min		min ⁻¹	mm/min			
		Side Milling	Slotting		Side Milling	Slotting		Side Milling	Slotting		Side Milling	Slotting		Side Milling	Slotting		Side Milling	Slotting
0.1	50,000	-	25	50,000	-	15	50,000	-	20	50,000	-	15	50,000	60	25	50,000	60	25
0.2	50,000	-	40	50,000	-	25	50,000	-	30	47,700	-	20	50,000	90	35	50,000	90	35
0.3	50,000	100	50	50,000	90	35	50,000	85	40	31,800	-	20	50,000	150	60	50,000	150	60
0.4	50,000	150	75	47,700	130	50	39,800	110	55	23,900	50	25	50,000	200	80	50,000	200	80
0.5	41,400	170	85	38,200	130	50	31,800	110	55	19,100	60	30	50,000	250	100	44,600	220	90
0.8	25,900	210	100	23,900	150	55	19,900	130	65	11,900	70	35	50,000	450	180	27,900	250	95
1	20,700	210	100	19,100	150	55	15,900	130	65	9,500	75	40	47,700	570	200	22,300	270	95
1.5	13,800	210	100	12,700	150	55	10,600	130	65	6,400	75	40	31,800	640	220	14,900	300	100
2	10,300	210	100	9,500	170	60	8,000	150	75	4,800	75	40	23,900	720	250	11,100	330	120
2.5	8,300	250	120	7,600	180	65	6,400	160	80	3,800	75	40	19,100	760	270	8,900	360	120
3	6,900	280	140	6,400	190	70	5,300	170	85	3,200	80	40	15,900	800	270	7,400	370	130
3.5	5,900	300	150	5,500	190	70	4,500	170	85	2,700	85	45	13,600	820	270	6,400	380	130
4	5,200	310	160	4,800	190	70	4,000	170	85	2,400	95	50	11,900	830	270	5,600	390	130
5	4,100	330	160	3,800	230	75	3,200	210	110	1,900	95	50	9,500	860	280	4,500	410	130
6	3,400	340	170	3,200	260	85	2,700	240	120	1,600	100	50	8,000	880	290	3,700	410	130
7	3,000	330	170	2,700	240	80	2,300	230	120	1,400	100	50	6,800	820	270	3,200	380	130
8	2,600	310	160	2,400	240	80	2,000	220	110	1,200	100	50	6,000	780	260	2,800	360	120
9	2,300	300	150	2,100	230	80	1,800	220	110	1,100	100	50	5,300	740	240	2,500	350	120
10	2,100	290	150	1,900	230	75	1,600	210	100	1,000	100	50	4,800	720	240	2,200	330	110
11	1,900	290	140	1,700	220	75	1,400	200	100	900	100	50	4,300	690	230	2,000	320	110
12	1,700	270	140	1,600	220	75	1,300	200	100	800	100	50	4,000	680	220	1,900	320	110
Depth of Cut (D:Dia.)																		
Notes	<ul style="list-style-type: none"> • Use cutting fluid with a smoke retardant. • Adjust both spindle speed and feed according to cutting conditions and machine rigidity. • Speeds & Feeds in this table are intended for set-up. They are also stated with the consideration that all good machining practices have been followed in the initial set-up. • Values are to be used as a guide and may need to be adjusted until optimum set-up can be determined. • Tools, when not in use, should be stored properly to protect personnel as well as the tool. • Specifications may change without notice. 																	