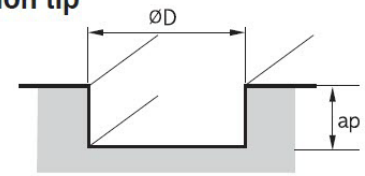
Speeds and Feeds

HSSCo8, Multi-Flute Roughing (TiAlN Coated)

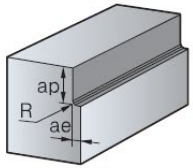
Side Milling

ISO	Material Description	Width of Cut (ae)	Depth of Cut (ap)	Parameter	Diameter (inch)								
					0.250	0.3125	0.375	0.500	0.625	0.750	1.000	1.250	2.000
				Number of Flutes	3	3	4	4	4	4	5	6	8
P	Carbon Steels Alloy Steels Tool Steels < 180 HB	0.5xD	1.5xD	SFM	120	115	110	120	115	115	120	115	115
				RPM	1834	1406	1121	917	703	586	458	351	220
				IPT	.0006	.0010	.0014	.0020	.0025	.0030	.0039	.0039	.0045
				IPM	3.30	4.22	6.27	7.33	7.03	7.03	8.94	8.22	7.91
	Carbon Steels Alloy Steels Tool Steels < 20 HRc	0.5xD	1.5xD	SFM	105	90	90	105	90	100	105	90	95
				RPM	1604	1100	917	802	550	509	401	275	181
				IPT	.0005	.0009	.0013	.0017	.0025	.0030	.0034	.0038	.0047
				IPM	2.41	2.97	4.77	5.45	5.50	6.11	6.82	6.27	6.82
	Carbon Steels Alloy Steels Tool Steels 20 HRc - 30 HRc	0.5xD	1.5xD	SFM	80	75	80	80	75	80	80	70	85
				RPM	1222	917	815	611	458	407	306	214	162
				IPT	.0006	.0010	.0013	.0017	.0024	.0030	.0035	.0039	.0043
				IPM	2.20	2.75	4.24	4.16	4.40	4.89	5.35	5.01	5.58
	Carbon Steels Alloy Steels Tool Steels 30 HRc - 40 HRc	0.5xD	1.5xD	SFM	50	45	45	50	45	45	45	45	45
				RPM	764	550	458	382	275	229	172	138	86
				IPT	.0005	.0008	.0013	.0018	.0025	.0030	.0038	.0040	.0043
				IPM	1.15	1.32	2.38	2.75	2.75	2.75	3.27	3.30	2.96
N	Aluminum alloys	0.5xD	1.5xD	SFM	295	255	245	260	260	260	260	260	260
				RPM	4508	3117	2496	1986	1589	1324	993	795	497
				IPT	.0006	.0010	.0014	.0020	.0028	.0033	.0035	.0041	.0035
				IPM	8.11	9.35	13.98	15.89	17.80	17.48	17.38	19.55	13.90

Application tip



■ **Slotting depth (ap)**
- ap: ≤ 1.0D



■ **Shouldering depth (ap)**
- ap: ≤ 1.5D (All dia.)
- ae: ≤ 0.5D (All dia.)

※ Workpiece should be clamped rigidly. In case of vibrations, reduce R.P.M and feed rate by the same ratio

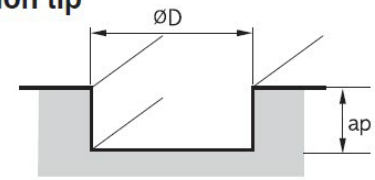
Speeds and Feeds

HSSCo8, Multi-Flute Roughing (TiAlN Coated)

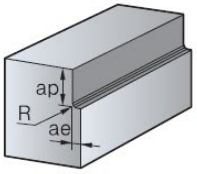
Slot Milling

ISO	Material Description	Width of Cut (ae)	Depth of Cut (ap)	Parameter	Diameter (inch)								
					0.250	0.3125	0.375	0.500	0.625	0.750	1.000	1.250	2.000
				Number of Flutes	3	3	4	4	4	4	5	6	8
P	Carbon Steels Alloy Steels Tool Steels < 180 HB	1.0xD	1.0xD (> 6 Flute =0.5D)	SFM	85	80	75	85	80	80	85	80	80
				RPM	1299	978	764	649	489	407	325	244	153
				IPT	.0005	.0008	.0011	.0016	.0020	.0025	.0031	.0031	.0036
				IPM	1.95	2.35	3.36	4.16	3.91	4.07	5.03	4.55	4.40
	Carbon Steels Alloy Steels Tool Steels < 20 HRc	1.0xD	1.0xD (> 6 Flute =0.5D)	SFM	75	65	65	75	65	70	75	65	65
				RPM	1146	795	662	573	397	357	287	199	124
				IPT	.0004	.0007	.0010	.0014	.0020	.0023	.0027	.0030	.0038
				IPM	1.38	1.67	2.65	3.21	3.18	3.28	3.87	3.58	3.77
	Carbon Steels Alloy Steels Tool Steels 20 HRc - 30 HRc	1.0xD	1.0xD (> 6 Flute =0.5D)	SFM	50	45	50	50	45	45	50	50	50
				RPM	764	550	509	382	275	229	191	153	96
				IPT	.0005	.0008	.0010	.0014	.0019	.0023	.0028	.0031	.0034
				IPM	1.15	1.32	2.04	2.14	2.09	2.11	2.67	2.84	2.60
	Carbon Steels Alloy Steels Tool Steels 30 HRc - 40 HRc	1.0xD	1.0xD (> 6 Flute =0.5D)	SFM	30	25	25	30	25	25	25	25	25
				RPM	458	306	255	229	153	127	96	76	48
				IPT	.0004	.0006	.0010	.0014	.0020	.0024	.0028	.0032	.0034
				IPM	0.55	0.55	1.02	1.28	1.22	1.22	1.34	1.47	1.30
N	Aluminum alloys	1.0xD	1.0xD (> 6 Flute =0.5D)	SFM	205	180	170	180	180	175	180	180	180
				RPM	3132	2200	1732	1375	1100	891	688	550	344
				IPT	.0005	.0008	.0011	.0016	.0022	.0027	.0028	.0035	.0028
				IPM	4.70	5.28	7.62	8.80	9.68	9.63	9.63	11.55	7.70

Application tip



■ **Slotting depth (ap)**
- ap: ≤ 1.0D



■ **Shouldering depth (ap)**
- ap: ≤ 1.5D (All dia.)
- ae: ≤ 0.5D (All dia.)

※ Workpiece should be clamped rigidly. In case of vibrations, reduce R.P.M and feed rate by the same ratio