

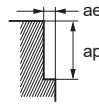
Recommended Cutting Conditions

Side Milling

(inch)

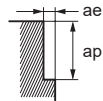
Workpiece Material		Carbon steel, Cast iron, Alloy steel (—30HRC)				Alloy steel, Tool steel, Pre-hardened steel				Austenitic stainless steel, Titanium alloy			
		AISI 1050, AISI No 35 B, AISI P20				AISI H13, AISI W1-10, AISI P21				AISI 304, AISI 306, Ti-6Al-4V			
Dia. DC		Revolution	Feed rate	Depth of Cut	Width of Cut	Revolution	Feed rate	Depth of Cut	Width of Cut	Revolution	Feed rate	Depth of Cut	Width of Cut
(mm)	(inch)	(min ⁻¹)	(IPM)	ap	ae	(min ⁻¹)	(IPM)	ap	ae	(min ⁻¹)	(IPM)	ap	ae
3	.118	10000	35.4	.118	.024	7000	23.6	.118	.024	6000	17.7	.118	.024
3.5	.138	8500	35.4	.138	.024	6000	23.6	.138	.024	5100	17.7	.138	.024
4	.157	7500	35.4	.157	.024	5200	23.6	.157	.024	4500	17.7	.157	.024
5	.197	6000	35.4	.197	.024	4200	23.6	.197	.024	3600	17.7	.197	.024
6	.236	5000	35.4	.236	.024	3500	23.6	.236	.024	3000	17.7	.236	.024
7	.276	4500	33.1	.276	.024	3200	21.3	.276	.024	2700	16.5	.276	.024
8	.315	4000	30.7	.315	.024	2800	20.5	.315	.024	2400	15.4	.315	.024
9	.354	3500	28.3	.354	.024	2500	18.9	.354	.024	2100	14.2	.354	.024
10	.394	3200	26.8	.394	.024	2200	17.7	.394	.024	1900	13.4	.394	.024
12	.472	2700	24.4	.472	.024	1900	16.1	.472	.024	1600	12.2	.472	.024
14	.551	2300	21.7	.551	.024	1600	13.8	.551	.024	1400	11.0	.551	.024

Depth of cut



Workpiece Material		Hardened steel (45—55HRC)				Copper, Copper Alloy			
		AISI H13							
Dia. DC		Revolution	Feed rate	Depth of Cut	Width of Cut	Revolution	Feed rate	Depth of Cut	Width of Cut
(mm)	(inch)	(min ⁻¹)	(IPM)	ap	ae	(min ⁻¹)	(IPM)	ap	ae
3	.118	5000	7.1	.118	.008	13000	47.2	.118	.024
3.5	.138	4500	7.1	.138	.008	11000	47.2	.138	.024
4	.157	4000	7.1	.157	.008	9500	43.3	.157	.024
5	.197	3200	7.1	.197	.008	7600	43.3	.197	.024
6	.236	2700	7.1	.236	.008	6400	43.3	.236	.024
7	.276	2300	6.3	.276	.008	5500	39.4	.276	.024
8	.315	2000	6.3	.315	.008	4800	37.0	.315	.024
9	.354	1800	5.9	.354	.008	4200	33.9	.354	.024
10	.394	1600	5.5	.394	.008	3800	31.9	.394	.024
12	.472	1300	4.7	.472	.008	3200	28.7	.472	.024
14	.551	1200	4.7	.551	.008	2700	25.6	.551	.024

Depth of cut



Note 1) When cutting austenitic stainless steels, the use of water-soluble cutting fluid is effective.

Note 2) If the depth of cut is shallow, the revolution and feed rate can be increased.

Note 3) When drilling, please set the feed rate at 1/3 or below the values above.

Note 4) If the rigidity of the machine or the work materials installation is very low, or chattering and noise are generated, reduce the revolution and feed rate proportionately.

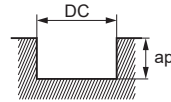
Recommended Cutting Conditions

Slotting

(inch)

Workpiece Material		Carbon steel, Cast iron, Alloy steel (—30HRC)			Alloy steel, Tool steel, Pre-hardened steel			Austenitic stainless steel, Titanium alloy		
		AISI 1050, AISI No 35 B, AISI P20			AISI H13, AISI W1-10, AISI P21			AISI 304, AISI 306, Ti-6Al-4V		
Dia. DC		Revolution (min ⁻¹)	Feed rate (IPM)	Depth of Cut ap	Revolution (min ⁻¹)	Feed rate (IPM)	Depth of Cut ap	Revolution (min ⁻¹)	Feed rate (IPM)	Depth of Cut ap
(mm)	(inch)									
3	.118	10000	35.4	.024	7000	23.6	.024	6000	17.7	.024
3.5	.138	8500	35.4	.024	6000	23.6	.024	5100	17.7	.024
4	.157	7500	35.4	.024	5200	23.6	.024	4500	17.7	.024
5	.197	6000	35.4	.024	4200	23.6	.024	3600	17.7	.024
6	.236	5000	35.4	.024	3500	23.6	.024	3000	17.7	.024
7	.276	4500	33.1	.024	3200	21.3	.024	2700	16.5	.024
8	.315	4000	30.7	.024	2800	20.5	.024	2400	15.4	.024
9	.354	3500	28.3	.024	2500	18.9	.024	2100	14.2	.024
10	.394	3200	26.8	.024	2200	17.7	.024	1900	13.4	.024
12	.472	2700	24.4	.024	1900	16.1	.024	1600	12.2	.024
14	.551	2300	21.7	.024	1600	13.8	.024	1400	11.0	.024

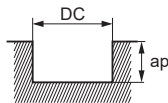
Depth of Cut



DC:Dia.

Workpiece Material		Hardened steel (45—55HRC)			Copper, Copper Alloy		
		AISI H13					
Dia. DC		Revolution (min ⁻¹)	Feed rate (IPM)	Depth of Cut ap	Revolution (min ⁻¹)	Feed rate (IPM)	Depth of Cut ap
(mm)	(inch)						
3	.118	5000	7.1	.008	13000	47.2	.024
3.5	.138	4500	7.1	.008	11000	47.2	.024
4	.157	4000	7.1	.008	9500	43.3	.024
5	.197	3200	7.1	.008	7600	43.3	.024
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Depth of Cut



DC:Dia.

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