

## RECOMMENDED CUTTING CONDITIONS

### Side milling

Work material	Carbon steel, Cast iron, Alloy steel (–30HRC)		Alloy steel, Tool steel, Pre-hardened steel		Austenitic stainless steel, Titanium alloy		Hardened steel (45–55HRC)		Heat resistant alloys		
	Dia. DC (mm)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)
AISI 1050, AISI No 35 B, AISI P20				AISI H13, AISI W1-10, AISI P21		AISI 304, AISI 306, Ti-6Al-4V		AISI H13		Inconel718	
<b>3</b>	16000	960	13000	640	6400	260	5300	100	4200	70	
<b>4</b>	12000	960	9500	640	4800	260	4000	100	3200	70	
<b>5</b>	9500	960	7600	640	3800	260	3200	100	2500	70	
<b>6</b>	8000	960	6400	680	3200	290	2700	110	2100	75	
<b>8</b>	6000	1050	4800	760	2400	340	2000	140	1600	95	
<b>10</b>	4800	1050	3800	760	1900	340	1600	150	1300	105	
<b>12</b>	4000	960	3200	700	1600	320	1300	150	1100	110	
<b>16</b>	3000	840	2400	620	1200	300	1000	150	800	110	
<b>20</b>	2400	760	1900	560	1000	300	800	140	600	100	
Depth of cut											

DC: Dia.

### Slotting

Work material	Carbon steel, Cast iron, Alloy steel (–30HRC)		Alloy steel, Tool steel, Pre-hardened steel		Austenitic stainless steel, Titanium alloy		Hardened steel (45–55HRC)		Heat resistant alloys		
	Dia. DC (mm)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)
AISI 1050, AISI No 35 B, AISI P20				AISI H13, AISI W1-10, AISI P21		AISI 304, AISI 306, Ti-6Al-4V		AISI H13		Inconel718	
<b>3</b>	13000	720	11000	480	4800	190	3200	50	2100	25	
<b>4</b>	9500	720	8000	480	3600	190	2400	50	1600	25	
<b>5</b>	7600	720	6400	480	3200	190	1900	50	1300	25	
<b>6</b>	6400	720	5300	480	2700	200	1600	55	1100	30	
<b>8</b>	4800	800	4000	520	2000	220	1200	70	800	35	
<b>10</b>	3800	800	3200	520	1600	220	1000	70	600	35	
<b>12</b>	3200	750	2700	520	1300	210	800	75	500	40	
<b>16</b>	2400	620	2000	450	1000	180	600	75	400	45	
<b>20</b>	1900	540	1600	400	800	160	500	70	300	40	
Depth of cut											

DC: Dia.

- 1) When cutting austenitic stainless steels, the use of water-soluble cutting fluid is effective.
- 2) If the depth of cut is shallow, the revolution and feed rate can be increased.
- 3) 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.