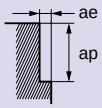
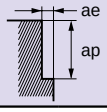
RECOMMENDED CUTTING CONDITIONS

Side milling

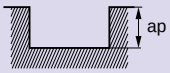
Work material	Carbon steel, Alloy steel, Mild Steel, Copper, Copper alloys						Pre-hardened steel, Carbon steel, Alloy steel, Alloy tool steel						Austenitic stainless steel, Ferritic, Precipitation hardening stainless steel, Titanium alloy					
Dia. (mm)	Cutting speed (m/min)	Revolution (min^{-1})	Feed (mm/tooth)	Feed rate (mm/min)	Depth of cut ap (mm)	Depth of cut ae (mm)	Cutting speed (m/min)	Revolution (min^{-1})	Feed (mm/tooth)	Feed rate (mm/min)	Depth of cut ap (mm)	Depth of cut ae (mm)	Cutting speed (m/min)	Revolution (min^{-1})	Feed (mm/tooth)	Feed rate (mm/min)	Depth of cut ap (mm)	Depth of cut ae (mm)
10	150	4800	0.045	860	8	4	120	3800	0.03	460	8	4	100	3200	0.0375	480	8	4
12	150	4000	0.045	720	9.6	4.8	120	3200	0.0325	420	9.6	4.8	100	2700	0.04	430	9.6	4.8
16	150	3000	0.05	600	12.8	6.4	120	2400	0.0375	360	12.8	6.4	100	2000	0.045	360	12.8	6.4
20	150	2400	0.05	480	16	8	120	1900	0.0375	290	16	8	100	1600	0.045	290	16	8
25	150	1900	0.06	460	20	10	120	1500	0.0375	230	20	10	100	1300	0.045	230	20	10
Depth of cut																		

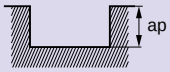
Work material	Precipitation hardening stainless steel, Cobalt chromium alloy						Heat resistant alloys Inconel718					
Dia. (mm)	Cutting speed (m/min)	Revolution (min^{-1})	Feed (mm/tooth)	Feed rate (mm/min)	Depth of cut ap (mm)	Depth of cut ae (mm)	Cutting speed (m/min)	Revolution (min^{-1})	Feed (mm/tooth)	Feed rate (mm/min)	Depth of cut ap (mm)	Depth of cut ae (mm)
10	75	2400	0.03	290	8	4	40	1300	0.04	210	8	1
12	75	2000	0.0325	260	9.6	4.8	40	1100	0.045	200	9.6	1.2
16	75	1500	0.0375	230	12.8	6.4	40	800	0.05	160	12.8	1.6
20	75	1200	0.0375	180	16	8	40	640	0.05	130	16	2
25	75	950	0.0375	140	20	10	40	510	0.05	100	20	2.5
Depth of cut												

1) For stainless steel, titanium alloy and heat resistant alloy, the use of water-soluble coolant is effective.
2) If the depth of cut is shallow, the revolution and feed rate can be increased.
3) Vibration may occur if the rigidity of machine or workpiece is low.
   In this case, please reduce the revolution and feed rate proportionately, or set a lower depth of cut.

RECOMMENDED CUTTING CONDITIONS

Slotting

Work material	Carbon steel, Alloy steel, Mild Steel, Copper, Copper alloys					Pre-hardened steel, Carbon steel, Alloy steel, Alloy tool steel					Austenitic stainless steel, Ferritic, Precipitation hardening stainless steel, Titanium alloy				
Dia. (mm)	Cutting speed (m/min)	Revolution (min^{-1})	Feed (mm/tooth)	Feed rate (mm/min)	Depth of cut ap (mm)	Cutting speed (m/min)	Revolution (min^{-1})	Feed (mm/tooth)	Feed rate (mm/min)	Depth of cut ap (mm)	Cutting speed (m/min)	Revolution (min^{-1})	Feed (mm/tooth)	Feed rate (mm/min)	Depth of cut ap (mm)
10	120	3800	0.045	680	5	100	3200	0.03	380	5	60	1900	0.02	150	4
12	120	3200	0.045	580	6	100	2700	0.0325	350	6	60	1600	0.025	160	4.8
16	120	2400	0.05	480	8	100	2000	0.0375	300	8	60	1200	0.03	140	6.4
20	120	1900	0.05	380	10	100	1600	0.0375	240	10	60	950	0.034	130	8
25	120	1500	0.06	360	12	100	1300	0.0375	200	12	60	760	0.034	100	10
Depth of cut															

Work material	Precipitation hardening stainless steel, Cobalt chromium alloy				
Dia. (mm)	Cutting speed (m/min)	Revolution (min^{-1})	Feed (mm/tooth)	Feed rate (mm/min)	Depth of cut ap (mm)
10	40	1300	0.016	83	4
12	40	1100	0.02	88	4.8
16	40	800	0.024	77	6.4
20	40	640	0.0272	70	8
25	40	510	0.0272	55	10
Depth of cut					

1) For stainless steel, titanium alloy and heat resistant alloy, the use of water-soluble coolant is effective.
2) If the depth of cut is shallow, the revolution and feed rate can be increased.
3) Vibration may occur if the rigidity of machine or workpiece is low.
   In this case, please reduce the revolution and feed rate proportionately, or set a lower depth of cut.