Recommended Cutting Conditions

■Shoulder Milling

Shoulder Willing (inch)									
Workpiece Material		Alloy Steels, Tool Steels, Pre-hardened Steels		Austenitic Stainless Steels(≤200HB) Titanium Alloys		Copper, Copper Alloys		Heat Resistant Alloys	
		AISI H13, AISI W1-10, AISI P21		AISI 304, AISI 316, Ti-6AL-4V				Inconel 718	
(mm)	(inch)	Revolution n (min ⁻¹)	Feed Rate vf (IPM)	Revolution n (min ⁻¹)	Feed Rate vf (IPM)	Revolution n (min ⁻¹)	Feed Rate vf (IPM)	Revolution n (min ⁻¹)	Feed Rate vf (IPM)
10	.394	_	_	4800	78.7	_	_	1300	10.2
12	.472	_	_	4000	78.7	_	_	1100	9.1
16	.630	4000	86.6	3000	63.0	2400	55.1	800	7.1
20	.787	3200	74.8	2400	55.1	1900	43.3	640	5.9
		— > < ≤0.12DC					_ ≤0.05DC		

0.5DC-1.5DC

DC=Dia.

0.5DC-1.5DC

■Trochoid Milling

Depth of

Cut

1	i	n	^	h	١

Trochold Willing (Inch)							
Workpiece Material		Alloy Steels, Too Pre-hardened St	eels	Austenitic Stainless Steels(≤200HB) Titanium Alloys			
Widt	Cital	AISI H13, AISI W	/1-10, AISI P21	AISI 304, AISI 316, Ti-6AL-4V			
D	С	Revolution	Feed Rate	Revolution	Feed Rate		
(mm)	(inch)	n (min ⁻¹)	vf (IPM)	n (min ⁻¹)	vf (IPM)		
10	.394	_	_	4800	55.1		
12	.472	_	_	4000	47.2		
16	.630	4000	63.0	3000	43.3		
20	.787	3200	55.1	2400	35.4		
Depth of Cut		1.5DC≤ 0.5DC−1.5DC					

DC=Dia.

Note 1) If the depth of cut is smaller, the revolution and the feed rate can be increased.

Note 2) The irregular helix flute end mill has a larger effect on controlling vibration when compared to standard end mills. However, if the rigidity of the machine or the work material installation is very low, then vibration can occur. In this case, please reduce the revolution and the feed rate proportionately, or set a lower depth of cut.