

# Identification(Shoulder Milling)

Reduce the cutting parameters by the coefficient values shown according to the length of overhang.  
For long edge and oversize types heads refer to their specific recommended conditions.

(inch)

L/D	Carbon Steels, Alloy Steels, Mild Steels, Copper, Copper Alloys			Pre-hardened Steels, Carbon Steels, Alloy Steels, Alloy Tool Steels			Austenitic Stainless Steels, Ferritic and Martensitic Stainless Steels, Titanium Alloys		
	Revolution n (min <sup>-1</sup> )	Feed per Tooth fz (IPT)	Width of Cut ae	Revolution n (min <sup>-1</sup> )	Feed per Tooth fz (IPT)	Width of Cut ae	Revolution n (min <sup>-1</sup> )	Feed per Tooth fz (IPT)	Width of Cut ae
2	100%	100%	100%	100%	100%	100%	100%	100%	100%
3	100%	100%	100%	100%	100%	100%	100%	100%	100%
4	80%	90%	70%	80%	90%	70%	80%	90%	70%
5	60%	80%	40%	60%	80%	40%	60%	80%	40%
6	50%	70%	30%	50%	70%	30%	50%	70%	30%
7	40%	70%	20%	40%	70%	20%	30%	60%	20%
8	40%	60%	10%	40%	60%	10%	30%	50%	10%
9	30%	60%	10%	30%	60%	10%	20%	50%	10%

L/D	Precipitation Hardening Stainless Steels, Cobalt Chromium Alloys			Heat Resistant Alloys  Inconel718		
	Revolution n (min <sup>-1</sup> )	Feed per Tooth fz (IPT)	Width of Cut ae	Revolution n (min <sup>-1</sup> )	Feed per Tooth fz (IPT)	Width of Cut ae
2	100%	100%	100%	100%	100%	100%
3	100%	100%	100%	100%	100%	100%
4	80%	90%	70%	80%	90%	70%
5	60%	80%	40%	60%	80%	40%
6	50%	70%	30%	50%	70%	30%
7	30%	60%	20%	30%	60%	20%
8	30%	50%	10%	30%	50%	10%
9	20%	50%	10%	20%	50%	10%

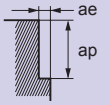
# iMX-53A/iMX-C3A

Square/Corner radius head, 3 flute, For aluminum alloys

## Recommended Cutting Conditions

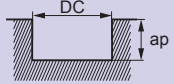
### Shoulder Milling

(inch)

Workpiece Material		Aluminum Alloys			
		Revolution $n$ (min <sup>-1</sup> )	Feed Rate $vf$ (IPM)	Depth of Cut $ap$	Width of Cut $ae$
DC					
(mm)	(inch)				
	.3750	17000	234.6	.300	.113
10	.3937	16000	220.8	.315	.118
12	.4724	13000	179.4	.378	.142
	.5000	13000	179.4	.400	.150
	.6250	10000	180.0	.500	.188
16	.6299	9900	178.2	.504	.189
	.7500	8400	173.9	.600	.225
20	.7874	8000	165.6	.630	.236
25	.9843	6400	159.4	.787	.295
	1.0000	6300	156.9	.800	.300
Depth of Cut					

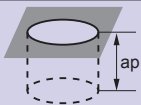
### Slot Milling

(inch)

Workpiece Material		Aluminum Alloys		
		Revolution $n$ (min <sup>-1</sup> )	Feed Rate $vf$ (IPM)	Depth of Cut $ap$
DC				
(mm)	(inch)			
	.3750	17000	137.7	.188
10	.3937	16000	129.6	.197
12	.4724	13000	109.2	.236
	.5000	13000	109.2	.250
	.6250	10000	111.0	.313
16	.6299	9900	109.9	.315
	.7500	8400	108.4	.375
20	.7874	8000	103.2	.394
25	.9843	6400	96.0	.492
	1.0000	6300	94.5	.500
Depth of Cut				
		DC = Dia.		

### Plunging

(inch)

Workpiece Material		Aluminum Alloys			
		Revolution $n$ (min <sup>-1</sup> )	Feed Rate $vf$ (IPM)	Depth of Cut $ap$	Step Feed $ap2$
DC					
(mm)	(inch)				
	.3750	10000	39.0	.188	.10
10	.3937	9600	37.4	.197	.10
12	.4724	8000	31.2	.236	.10
	.5000	7500	29.3	.250	.10
	.6250	6000	23.4	.313	.10
16	.6299	6000	23.4	.315	.10
	.7500	5000	19.5	.375	.10
20	.7874	4800	18.7	.394	.10
25	.9843	3800	14.8	.492	.10
	1.0000	3800	14.8	.500	.10
Depth of Cut					

Note 1) Vibration may occur if the rigidity of machine or workpiece material is low.

In this case, please reduce the revolution and the feed rate proportionately, or set a lower depth of cut.

Note 2) The use of water-soluble coolant is effective.


# iMX-53A/iMX-C3A

Square/Corner radius head, 3 flute, For aluminum alloys, Oversize type head

## Recommended Cutting Conditions

### Shoulder Milling

(inch)

L/D		DC		Revolution $n$ (min <sup>-1</sup> )	Feed Rate $vf$ (IPM)	Depth of Cut $ap$	Width of Cut $ae$
		(mm)	(inch)				
3		12	.4720	13000	181.1	.378	.094
		14	.5510	11000	153.5	.441	.110
		18	.7090	8800	157.5	.567	.142
		22	.8660	7200	149.6	.693	.173
		28	1.1020	5700	141.7	.882	.220
5		12	.4720	8000	86.6	.378	.039
		14	.5510	6800	70.9	.441	.043
		18	.7090	5300	74.8	.567	.055
		22	.8660	4300	70.9	.693	.071
		28	1.1020	3400	66.9	.882	.087
7		12	.4720	5300	51.2	.378	.020
		14	.5510	4500	43.3	.441	.024
		18	.7090	3500	47.2	.567	.028
		22	.8660	2900	39.4	.693	.035
		28	1.1020	2300	39.4	.882	.043
Depth of Cut							

Note 1) Vibration may occur if the rigidity of machine or workpiece material is low.

In this case, please reduce the revolution and the feed rate proportionately, or set a lower depth of cut.

Note 2) The use of water-soluble coolant is effective.