List 8630, 8730, 8631, 8671: 3xD Length of Cut

Slotting

Work Material		Aluminum Alloys, Magnesium Alloys A5052, A6061, A7075, AZ91, AZ80A		Aluminum Alloy Casting AC4C, ADC		Copper Alloy C1100	
Cutting Speed		600 ~ 1500 SFM		600 ~ 1500 SFM		300 ~ 900 SFM	
Depth of Cut		∂a=1xD				∂a=0.5xD	
Mill Dia.		Speed	Feed	Speed	Feed	Speed	Feed
Inch	mm	RPM	in/min	RPM	in/min	RPM	in/min
-	3	25,000	70.9	25,000	70.9	19,400	55.0
1/8	-	25,000	70.9	25,000	70.9	18,300	51.9
-	4	25,000	82.7	25,000	82.7	14,500	48.0
3/16	-	24,400	92.2	24,400	92.2	12,200	46.1
-	5	23,300	96.3	23,300	96.3	11,600	48.0
-	6	19,400	96.2	19,400	96.2	9,700	48.1
1/4	-	18,300	95.1	18,300	95.1	9,200	47.8
5/16	-	14,700	97.2	14,700	97.2	7,300	48.3
-	8	14,500	95.9	14,500	95.9	7,300	48.3
3/8	-	12,200	92.2	12,200	92.2	6,100	46.1
-	10	11,600	95.9	11,600	95.9	5,800	48.0
-	12	9,700	96.2	9,700	96.2	4,800	47.6
1/2	-	9,200	95.6	9,200	95.6	4,600	47.8
5/8	-	7,300	96.6	7,300	96.6	3,700	48.9
3/4	-	6,100	98.0	6,100	98.0	3,100	49.8
1	-	4,600	91.3	4,600	91.3	2,300	45.6

1. Use a rigid and precise machine and holder.
2. The indicated speeds and feeds are for milling with water-soluble coolant.
3. Please adjust the speed and feed when the cutting depth is large or when machines with low rigidity are used.
4. Reduce speed and feed as well as depth of cut when high precision is required.
5. Please always use the appropriate cutting fluid recommended by the cutting fluid manufacturer in the machining of magnesium alloys. Be cautious with the cutting chips as they are highly flammable and may pose a serious fire risk if not properly handled.

List 8630, 8730, 8631, 8671: 3xD Length of Cut

Side Milling

Work Material		Aluminum Alloys, Magnesium Alloys A5052, A6061, A7075, AZ91, AZ80A		Aluminum Alloy Casting AC4C, ADC		Copper Alloy C1100	
Cutting Speed		800 ~ 2200 SFM		800 ~ 2200 SFM		600 ~ 1200 SFM	
Depth of Cut		a_a=3xD • a_r=0.1xD					
Mill Dia.		Speed	Feed	Speed	Feed	Speed	Feed
Inch	mm	RPM	in/min	RPM	in/min	RPM	in/min
-	3	25,000	79.7	25,000	79.7	25,000	79.7
1/8	-	25,000	88.6	25,000	88.6	25,000	88.6
-	4	25,000	102.8	25,000	102.8	21,800	89.6
3/16	-	25,000	118.1	25,000	118.1	18,300	86.5
-	5	25,000	128.4	25,000	128.4	17,500	89.9
-	6	25,000	154.1	25,000	154.1	14,500	89.4
1/4	-	25,000	162.4	25,000	162.4	13,700	89.0
5/16	-	20,800	172.0	20,800	172.0	11,000	90.9
-	8	20,600	169.3	20,600	169.3	10,900	89.6
3/8	-	17,300	163.5	17,300	163.5	9,200	86.9
-	10	16,500	169.5	16,500	169.5	8,700	89.4
-	12	13,700	168.9	13,700	168.9	7,300	90.0
1/2	-	13,000	168.9	13,000	168.9	6,900	89.7
5/8	-	10,400	172.0	10,400	172.0	5,500	90.9
3/4	-	8,700	174.7	8,700	174.7	4,600	92.4
1	-	6,500	161.2	6,500	161.2	3,400	84.3

1. Use a rigid and precise machine and holder.
2. The indicated speeds and feeds are for milling with water-soluble coolant.
3. Please adjust the speed and feed when the cutting depth is large or when machines with low rigidity are used.
4. Reduce speed and feed as well as depth of cut when high precision is required.
5. Please always use the appropriate cutting fluid recommended by the cutting fluid manufacturer in the machining of magnesium alloys. Be cautious with the cutting chips as they are highly flammable and may pose a serious fire risk if not properly handled.

List 8630, 8730, 8631, 8671: 3xD Length of Cut

Plunging

Work Material		Aluminum Alloys, Magnesium Alloys A5052, A6061, A7075, AZ91, AZ80A		Aluminum Alloy Casting AC4C, ADC		Copper Alloy C1100	
Cutting Speed		230 SFM		230 SFM		164 SFM	
Depth of Cut		ap=1xD				ap=0.5xD	
Mill Dia.		Speed	Feed	Speed	Feed	Speed	Feed
Inch	mm	RPM	in/min	RPM	in/min	RPM	in/min
-	3	7,500	13.8	7,500	13.8	5,300	3.9
1/8	-	7,023	13.7	7,023	13.7	5,008	4.0
-	4	5,600	13.8	5,600	13.8	3,980	3.9
3/16	-	4,682	14.4	4,682	14.4	3,338	4.2
-	5	4,460	13.8	4,460	13.8	3,180	3.9
-	6	3,680	15.7	3,680	15.7	2,650	4.3
1/4	-	3,511	15.1	3,511	15.1	2,504	4.4
5/16	-	2,809	15.8	2,809	15.8	2,003	4.6
-	8	2,800	17.7	2,800	17.7	1,990	4.7
3/8	-	2,341	16.5	2,341	16.5	1,669	4.8
-	10	2,230	17.7	2,230	17.7	1,590	4.7
-	12	1,840	17.7	1,840	17.7	1,330	4.7
1/2	-	1,756	17.9	1,756	17.9	1,252	5.2
5/8	-	1,405	19.3	1,405	19.3	1,002	5.6
3/4	-	1,170	20.7	1,170	20.7	835	6.0
1	-	878	23.4	878	23.4	626	6.8

1. Use a rigid and precise machine and holder.
2. The indicated speeds and feeds are for milling with water-soluble coolant.
3. Please adjust the speed and feed when the cutting depth is large or when machines with low rigidity are used.
4. Reduce speed and feed as well as depth of cut when high precision is required.
5. Please always use the appropriate cutting fluid recommended by the cutting fluid manufacturer in the machining of magnesium alloys. Be cautious with the cutting chips as they are highly flammable and may pose a serious fire risk if not properly handled.

List 8630, 8730, 8631, 8671: 4xD Length of Cut

Side Milling

Work Material		Aluminum Alloys, Magnesium Alloys A5052, A6061, A7075, AZ91, AZ80A		Aluminum Alloy Casting AC4C, ADC		Copper Alloy C1100	
Cutting Speed		800 ~ 1600 SFM		800 ~ 1600 SFM		300 ~ 900 SFM	
Depth of Cut		ap=4xD • ar=0.1xD					
Mill Dia.		Speed	Feed	Speed	Feed	Speed	Feed
Inch	mm	RPM	in/min	RPM	in/min	RPM	in/min
-	3	25,000	79.7	25,000	79.7	25,000	79.7
1/8	-	25,000	88.6	25,000	88.6	18,300	64.8
-	4	25,000	102.8	25,000	102.8	14,500	59.6
3/16	-	24,400	115.3	24,400	115.3	12,200	57.6
-	5	23,300	119.7	23,300	119.7	11,600	59.6
-	6	19,400	119.6	19,400	119.6	9,700	59.8
1/4	-	18,300	118.9	18,300	118.9	9,200	59.8
-	8	14,500	119.2	14,500	119.2	7,300	60.0
3/8	-	12,200	115.3	12,200	115.3	6,100	57.6
-	10	11,600	119.2	11,600	119.2	5,800	59.6
-	12	9,700	119.6	9,700	119.6	4,800	59.2
1/2	-	9,200	119.5	9,200	119.5	4,600	59.8
5/8	-	7,300	120.7	7,300	120.7	3,700	61.2
3/4	-	4,600	122.5	4,600	122.5	3,100	62.2

1. Use a rigid and precise machine and holder.
2. The indicated speeds and feeds are for milling with water-soluble coolant.
3. Please adjust the speed and feed when the cutting depth is large or when machines with low rigidity are used.
4. Reduce speed and feed as well as depth of cut when high precision is required.
5. Please always use the appropriate cutting fluid recommended by the cutting fluid manufacturer in the machining of magnesium alloys. Be cautious with the cutting chips as they are highly flammable and may pose a serious fire risk if not properly handled.

List 8630, 8730, 8631, 8671: 5xD Length of Cut

Side Milling

Work Material		Aluminum Alloys, Magnesium Alloys A5052, A6061, A7075, AZ91, AZ80A		Aluminum Alloy Casting AC4C, ADC		Copper Alloy C1100	
Cutting Speed		600 ~ 1200 SFM		600 ~ 1200 SFM		200 ~ 600 SFM	
Depth of Cut		a_a=5xD • a_r=0.1xD					
Mill Dia.		Speed	Feed	Speed	Feed	Speed	Feed
Inch	mm	RPM	in/min	RPM	in/min	RPM	in/min
-	3	25,000	79.7	25,000	79.7	12,900	41.1
-	4	21,800	92.7	21,800	92.7	9,700	41.2
-	5	17,500	89.9	17,500	89.9	7,800	40.1
-	6	14,500	89.4	14,500	89.4	6,500	40.1
1/4	-	13,700	89.0	13,700	89.0	6,100	39.6
-	8	10,900	89.6	10,900	89.6	4,800	39.5
-	10	8,700	89.4	8,700	89.4	3,900	40.0
-	12	7,300	90.0	7,300	90.0	3,200	39.5
1/2	-	6,900	89.7	6,900	89.7	3,100	40.3
5/8	-	5,500	90.9	5,500	90.9	2,400	39.7

1. Use a rigid and precise machine and holder.
2. The indicated speeds and feeds are for milling with water-soluble coolant.
3. Please adjust the speed and feed when the cutting depth is large or when machines with low rigidity are used.
4. Reduce speed and feed as well as depth of cut when high precision is required.
5. Please always use the appropriate cutting fluid recommended by the cutting fluid manufacturer in the machining of magnesium alloys. Be cautious with the cutting chips as they are highly flammable and may pose a serious fire risk if not properly handled.