



List 78PXAL - PHOENIX® PXAL: 3 Flute, Short Length


Side Milling $L/D \leq 3$

Work Material		Aluminum Alloy Expanding Material (5052, 7075)					
Cutting Speed (SFM)		1650 SFM					
Depth of Cut		 <table border="1"> <tr> <td>aa</td> <td>ar</td> </tr> <tr> <td>0.7D</td> <td>0.2D</td> </tr> </table>		aa	ar	0.7D	0.2D
aa	ar						
0.7D	0.2D						
Mill Dia.		Speed (RPM)	Feed (in/min)				
(Inch)	(mm)						
-	10	16,000	189				
-	12	13,300	154				
-	14	11,400	135				
5/8	-	10,100	142				
	16	10,000	142				
	18	8,900	126				
3/4	-	8,400	151				
-	20	8,000	151				
-	22	7,300	138				
-	25	6,400	151				
1	-	6,300	151				


Side Milling $3 < L/D \leq 5$

Work Material		Aluminum Alloy Expanding Material (5052, 7075)					
Cutting Speed (SFM)		980 SFM					
Depth of Cut		 <table border="1"> <tr> <td>aa</td> <td>ar</td> </tr> <tr> <td>0.7D</td> <td>0.08D</td> </tr> </table>		aa	ar	0.7D	0.08D
aa	ar						
0.7D	0.08D						
Mill Dia.		Speed (RPM)	Feed (in/min)				
(Inch)	(mm)						
-	10	9,600	91				
-	12	8,000	76				
-	14	6,900	65				
5/8	-	6,000	68				
	16	6,000	68				
	18	5,400	61				
3/4	-	5,000	72				
-	20	4,800	73				
-	22	4,400	67				
-	25	3,900	74				
1	-	3,700	71				


Side Milling $5 < L/D \leq 7$

Work Material		Aluminum Alloy Expanding Material (5052, 7075)					
Cutting Speed (SFM)		660 SFM					
Depth of Cut		 <table border="1"> <tr> <td>aa</td> <td>ar</td> </tr> <tr> <td>0.7D</td> <td>0.04D</td> </tr> </table>		aa	ar	0.7D	0.04D
aa	ar						
0.7D	0.04D						
Mill Dia.		Speed (RPM)	Feed (in/min)				
(Inch)	(mm)						
-	10	6,400	55				
-	12	5,400	46				
-	14	4,600	39				
5/8	-	4,000	41				
	16	4,000	41				
	18	3,600	37				
3/4	-	3,400	44				
-	20	3,200	44				
-	22	2,900	40				
-	25	2,600	44				
1	-	2,500	43				


Side Milling $L/D \leq 3$

Work Material		Aluminum Alloy Expanding Material (5052, 7075)			
Cutting Speed (SFM)		1650 SFM			
Depth of Cut		 <table border="1"> <tr> <td>aa</td> </tr> <tr> <td>0.5D</td> </tr> </table>		aa	0.5D
aa					
0.5D					
Mill Dia.		Speed (RPM)	Feed (in/min)		
(Inch)	(mm)				
-	10	16,000	189		
-	12	13,300	154		
-	14	11,400	135		
5/8	-	10,100	118		
	16	10,000	118		
	18	8,900	105		
3/4	-	8,400	95		
-	20	8,000	94		
-	22	7,300	86		
-	25	6,400	76		
1	-	6,300	76		

Side Milling $3 < L/D \leq 5$

Work Material		Aluminum Alloy Expanding Material (5052, 7075)			
Cutting Speed (SFM)		980 SFM			
Depth of Cut		 <table border="1"> <tr> <td>aa</td> </tr> <tr> <td>0.35D</td> </tr> </table>		aa	0.35D
aa					
0.35D					
Mill Dia.		Speed (RPM)	Feed (in/min)		
(Inch)	(mm)				
-	10	9,600	85		
-	12	8,000	71		
-	14	6,900	61		
5/8	-	6,000	53		
	16	6,000	53		
	18	5,400	48		
3/4	-	5,000	42		
-	20	4,800	43		
-	22	4,400	39		
-	25	3,900	35		
1	-	3,700	33		

Side Milling $5 < L/D \leq 7$

Work Material		Aluminum Alloy Expanding Material (5052, 7075)			
Cutting Speed (SFM)		660 SFM			
Depth of Cut		 <table border="1"> <tr> <td>aa</td> </tr> <tr> <td>0.2D</td> </tr> </table>		aa	0.2D
aa					
0.2D					
Mill Dia.		Speed (RPM)	Feed (in/min)		
(Inch)	(mm)				
-	10	6,400	38		
-	12	5,400	32		
-	14	4,600	27		
5/8	-	4,000	23		
	16	4,000	24		
	18	3,600	21		
3/4	-	3,400	19		
-	20	3,200	19		
-	22	2,900	17		
-	25	2,600	15		
1	-	2,500	15		

1. Use a rigid and precise machine and holder.
2. Please adjust the speed and feed when the depth of cut is large or when machines with low rigidity are used.
3. Please adjust the cutting condition when the overhang length is longer.
4. Please consider the overhang length as the total length of replaceable head and overhang length of shank holder.
5. When milling copper and copper alloys, lower the rotational speed by 20 to 40%, feed rate by 50 to 80%, and cutting depth by ap 50 to 80% in accordance with the table above.
6. 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.