



List 3604 - EXOCARB® WXL®: Regular Length, 4 Flute

Side Milling

Hardness	-		<32 HRC		33-41 HRC		42-50 HRC										
Work Material	Aluminum Copper Alloy		Cast Iron, Carbon Steel, Alloy Steels, Stainless, Die Steels		Hardened Steels Pre-hardened Steels, P20, H13, S7, A2												
Cutting Speed	974 SFM		250 SFM		172 SFM		153 SFM										
Depth of Cut	<table border="1"> <thead> <tr> <th>Dia</th> <th>aa</th> <th>ar</th> </tr> </thead> <tbody> <tr> <td>D<7/64</td> <td>1.5D</td> <td>0.05D</td> </tr> <tr> <td>7/64≤D</td> <td>1.5D</td> <td>0.10D</td> </tr> </tbody> </table>				Dia	aa	ar	D<7/64	1.5D	0.05D	7/64≤D	1.5D	0.10D			aa=1.0D ar=0.02D	
Dia	aa	ar															
D<7/64	1.5D	0.05D															
7/64≤D	1.5D	0.10D															
Mill Dia.	Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min									
1/16	25,000	40.0	14,000	22.4	8,200	13.1	7,400	11.8									
5/64	25,000	50.0	12,000	24.0	7,000	14.0	6,350	12.7									
3/32	25,000	60.0	10,800	25.9	6,600	15.8	5,950	14.3									
7/64	25,000	70.0	8,900	24.9	5,750	16.1	5,150	14.4									
1/8	25,000	90.0	7,000	25.2	4,800	15.4	4,200	13.4									
5/32	25,000	130.0	6,050	31.5	4,250	20.4	3,700	16.3									
3/16	21,500	137.6	5,500	35.2	3,900	23.4	3,425	19.2									
7/32	17,500	140.0	4,100	32.8	2,950	20.1	2,650	18.0									
1/4	14,000	128.8	3,800	35.0	2,600	20.8	2,300	18.4									
9/32	12,500	130.0	3,400	35.4	2,400	23.0	2,100	18.5									
5/16	12,000	144.0	3,050	36.6	2,200	25.5	1,950	19.5									
3/8	10,100	141.4	2,750	38.5	1,975	22.9	1,750	19.6									
7/16	8,700	139.2	2,250	36.0	1,600	21.8	1,425	18.2									
1/2	7,400	133.2	1,900	34.2	1,350	18.9	1,200	15.8									
5/8	6,000	110.4	1,500	27.6	1,100	16.3	995	13.9									
3/4	5,000	94.0	1,275	24.0	950	16.3	850	13.9									
1	3,750	69.4	950	17.6	690	11.8	630	10.3									

1. Use a rigid and precise machine and holder.
2. When chattering occurs, reduce the speed and feed simultaneously.
3. Use a suitable cutting fluid with high smoke retardant.

High Speed Light Milling

Hardness	-		<32 HRC		33-41 HRC		42-50 HRC																			
Work Material	Aluminum Copper Alloy		Cast Iron, Carbon Steel, Alloy Steels, Stainless, Die Steels		Hardened Steels Pre-hardened Steels, P20, H13, S7, A2																					
Cutting Speed	1,627 SFM		1,231 SFM		803 SFM		482 SFM																			
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Mill Dia.	Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min																		
7/32	25,000	200.0	20,000	160.0	13,000	88.4	7,950	54.1																		
1/4	22,500	207.0	19,000	174.8	11,500	92.0	7,000	56.0																		
9/32	24,000	249.6	17,500	182.0	10,500	100.8	6,250	55.0																		
5/16	19,500	234.0	14,500	174.0	9,900	114.8	5,950	59.5																		
3/8	17,500	245.0	13,250	185.5	8,900	103.2	5,350	59.9																		
7/16	14,250	228.0	10,950	175.2	7,275	98.9	4,350	55.7																		
1/2	12,000	216.0	9,200	165.6	6,125	85.8	3,675	48.5																		
5/8	9,700	178.5	7,450	137.1	4,950	73.3	2,950	41.3																		
3/4	9,150	172.0	6,275	118.0	4,175	71.8	2,500	41.0																		
1	6,200	114.7	4,700	88.4	3,050	51.9	1,850	30.5																		

1. The indicated speeds and feeds are for high speed light milling for use with high speed/high precision machining centers.
2. Do not use flammable fluids because tools with considerable wear can cause sparks.
3. We recommend using air blow. When using cutting fluids, use a high quality fluid with high smoke retardant.

