



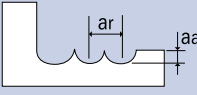
## List 9010: MAX Ball, Stub Length, 2 Flute

## List 9110: MAX Ball, Stub Length, 2 Flute

## List 9011: MAX Ball, Long Shank, 2 Flute

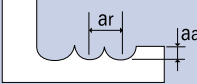
## List 9111: MAX Ball, Long Shank, 2 Flute

### High Speed Light Milling

Hardness	<45 HRC		<50 HRC		<55 HRC		<60 HRC		<65 HRC																						
Work Material	Hardened Steels		Hardened Steels		Hardened Steels		Hardened Steels		Hardened Steels																						
Cutting Speed	1,650 SFM		1,250 SFM		900 SFM		740 SFM		410 SFM																						
Depth of Cut	<table border="1"> <tr><th>Dia</th><th>a<sub>a</sub></th><th>a<sub>r</sub></th></tr> <tr><td>D≤2</td><td>0.6D</td><td>0.1D</td></tr> <tr><td>D≤4</td><td>0.1D</td><td>0.15D</td></tr> <tr><td>D≤10</td><td>0.2D</td><td>0.2D</td></tr> </table>		Dia	a <sub>a</sub>	a <sub>r</sub>	D≤2	0.6D	0.1D	D≤4	0.1D	0.15D	D≤10	0.2D	0.2D			<table border="1"> <tr><th>Dia</th><th>a<sub>a</sub></th><th>a<sub>r</sub></th></tr> <tr><td>D≤4</td><td>0.05D</td><td>0.1D</td></tr> <tr><td>D≤10</td><td>0.10D</td><td>0.15D</td></tr> </table>		Dia	a <sub>a</sub>	a <sub>r</sub>	D≤4	0.05D	0.1D	D≤10	0.10D	0.15D	$a_a=0.02D$ $a_r=0.1D$			
	Dia	a <sub>a</sub>	a <sub>r</sub>																												
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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	Speed RPM	Feed in/min																					
1	25,000	100	25,000	85	25,000	76	25,000	60	25,000	19																					
2	25,000	175	25,000	150	25,000	130	25,000	87	20,000	63																					
3	25,000	175	25,000	150	25,000	130	25,000	105	15,000	57																					
4	25,000	159	25,000	135	22,000	130	18,000	105	10,000	53																					
6	25,000	157	20,000	133	15,000	118	12,000	94	6,600	47																					
8	20,000	138	15,000	117	11,000	104	9,000	83	5,000	41																					
10	15,000	125	12,000	106	8,750	94	7,200	75	4,000	38																					

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	<45 HRC		<50 HRC		<55 HRC		<60 HRC		<65 HRC																						
Work Material	Hardened Steels		Hardened Steels		Hardened Steels		Hardened Steels		Hardened Steels																						
Cutting Speed	1,600 SFM		1,300 SFM		1,000 SFM		790 SFM		430 SFM																						
Depth of Cut	<table border="1"> <tr><th>Dia</th><th>a<sub>a</sub></th><th>a<sub>r</sub></th></tr> <tr><td>D≤1/16</td><td>0.6D</td><td>0.1D</td></tr> <tr><td>D≤1/8</td><td>0.1D</td><td>0.15D</td></tr> <tr><td>D≤3/8</td><td>0.2D</td><td>0.2D</td></tr> </table>		Dia	a <sub>a</sub>	a <sub>r</sub>	D≤1/16	0.6D	0.1D	D≤1/8	0.1D	0.15D	D≤3/8	0.2D	0.2D			<table border="1"> <tr><th>Dia</th><th>a<sub>a</sub></th><th>a<sub>r</sub></th></tr> <tr><td>D≤1/8</td><td>0.05D</td><td>0.1D</td></tr> <tr><td>D≤3/8</td><td>0.10D</td><td>0.15D</td></tr> </table>		Dia	a <sub>a</sub>	a <sub>r</sub>	D≤1/8	0.05D	0.1D	D≤3/8	0.10D	0.15D	$a_a=0.02D$ $a_r=0.1D$			
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