





List 4471: Stub Length, 4 Flute, Corner Radius

Standard Milling

Hardness	<40 HRC		40-45 HRC		45-55 HRC		55-60 HRC		60-65 HRC									
Work Material	Mild Steels Carbon Steels Cast Iron		Tool Steels Hardened Steels Pre-hardened Steels		Hardened Steels													
Depth of Cut	<table border="1"> <tr> <th>Dia</th> <th>aa</th> <th>ar</th> </tr> <tr> <td>D≤1/16</td> <td>1.5D</td> <td>0.05D</td> </tr> <tr> <td>D>1/16</td> <td>1.5D</td> <td>0.10D</td> </tr> </table>		Dia	aa	ar	D≤1/16	1.5D	0.05D	D>1/16	1.5D	0.10D		$aa=1.5D$ $ar=0.05D$ $ar \text{ Max}=\text{less than } 0.04''$		$aa=1.5D$ $ar=0.03D$ $ar \text{ Max}=\text{less than } 0.02''$		$aa=1.0D$ $ar=0.02D$ $ar \text{ Max}=\text{less than } 0.02''$	
	Dia	aa	ar															
D≤1/16	1.5D	0.05D																
D>1/16	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	Speed RPM	Feed in/min								
1/16	25,000	70.0	25,000	70.0	20,170	56.5	15,158	36.4	14,180	22.7								
3/32	18,743	75.0	16,828	67.3	13,446	53.8	10,105	30.3	9,453	22.7								
1/8	14,058	73.1	12,621	65.6	10,085	52.4	7,579	27.3	7,090	25.5								
3/16	9,372	60.0	8,414	53.9	6,723	43.0	5,053	22.2	4,727	20.8								
1/4	7,029	101.2	6,311	90.9	5,042	72.6	3,789	37.9	3,545	31.2								
3/8	4,686	105.0	4,207	94.2	3,362	75.3	2,526	39.4	2,363	31.2								
1/2	3,514	99.8	3,155	89.6	2,521	71.6	1,895	38.7	1,772	31.2								

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

High Speed Light Milling

Hardness	<40 HRC		40-45 HRC		45-55 HRC		55-60 HRC		60-65 HRC	
Work Material	Mild Steels Carbon Steels Cast Iron		Tool Steels Hardened Steels Pre-hardened Steels		Hardened Steels					
Depth of Cut	$aa=1.0D$ $ar=0.05D$ $ar \text{ Max} = \text{less than } 0.02''$			$aa=1.0D$ $ar=0.03D$ $ar \text{ Max} = \text{less than } 0.02''$		$aa=1.0D$ $ar=0.02D$ $ar \text{ Max} = \text{less than } 0.008''$		$aa=1.0D$ $ar=0.01D$ $ar \text{ Max} = \text{less than } 0.008''$		
	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	70.0	25,000	70.0	25,000	70.0	25,000	50.0	25,000	50.0
3/32	25,000	100.0	25,000	100.0	25,000	100.0	21,433	68.6	20,170	56.5
1/8	25,000	130.0	25,000	130.0	25,000	130.0	16,075	70.7	15,127	54.5
3/16	20,068	128.4	20,068	128.4	16,706	106.9	10,716	72.9	10,085	52.4
1/4	15,051	216.7	15,051	216.7	12,530	180.4	8,037	93.2	7,564	78.7
3/8	10,034	224.8	10,034	224.8	8,353	187.1	5,358	96.4	5,042	78.7
1/2	7,525	213.7	7,525	213.7	6,265	177.9	4,019	93.2	3,782	75.6

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

