



List 4970: High Feed Radius Type

Facing

Hardness	-	-	-	-	45 HRC	65 HRC	70 HRC							
Work Material	Stainless Steel	Colbalt-Chromium Alloys (Stellite)	Titanium Alloy	Ni-Based Alloy (Inconel 718)	Hardened Steel									
SFM	330-395	295-360	230-295	100-165	295-360	230-295	165-230							
Depth of Cut	<table border="1"> <tr> <th>aa</th> <th>ar</th> </tr> <tr> <td>Max: 0.04D</td> <td>Max: 0.5D</td> </tr> </table>							aa	ar	Max: 0.04D	Max: 0.5D			
aa	ar													
Max: 0.04D	Max: 0.5D													
Mill Dia. X Effective Corner Radius (DxRt)	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	Speed RPM	Feed in/min	Speed RPM	Feed in/min
4XR0.5	8760	248.4	7960	225.6	6370	180.7	3180	29.9	7960	225.6	6370	180.7	4780	67.7
5XR0.6	7010	248.4	6370	225.6	5100	180.7	2550	30.3	6370	225.6	5100	180.7	3820	67.7
6XR0.8	5840	248.4	5310	225.6	4250	180.7	2120	29.9	5310	225.6	4250	180.7	3180	67.7
8XR1	4380	248.4	3980	225.6	3180	180.3	1590	29.9	3980	225.6	3180	180.3	2390	67.7
10XR1.2	3500	248	3180	225.2	2550	180.7	1270	29.9	3180	225.2	2550	180.7	1910	67.7
12XR1.5	2920	248.4	2650	225.2	2120	180.3	1060	29.9	2650	225.2	2120	180.3	1590	67.7

Side Milling

Hardness	-	-	-	-	45 HRC	65 HRC	70 HRC							
Work Material	Stainless Steel	Colbalt-Chromium Alloys (Stellite)	Titanium Alloy	Ni-Based Alloy (Inconel 718)	Hardened Steel									
SFM	330-395	265-330	165-230	100-165	265-330	195-230	100-165							
Depth of Cut	aa Max: 1.5D ar Max: 0.05D		aa Max: 1.5D ar Max: 0.02D		aa Max: 1.5D ar Max: 0.05D		aa Max: 1.0D ar Max: 0.02D							
Mill Dia. X Effective Corner Radius (DxRt)	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	Speed RPM	Feed in/min	Speed RPM	Feed in/min
4XR0.5	7960	52.8	7170	47.2	4780	22.4	2390	9.1	7960	47.2	6370	22.4	4780	9.1
5XR0.6	6370	52.8	5730	47.2	3820	22.4	1910	9.1	6370	47.2	5100	22.4	3820	9.1
6XR0.8	5310	52.8	4780	47.2	3180	22.4	1590	9.1	5310	47.2	4250	22.4	3180	9.1
8XR1	3980	75.2	3580	67.7	2390	31.5	1190	9.1	3980	67.7	3180	31.5	2390	15
10XR1.2	3180	75.2	2870	67.7	1910	31.5	960	9.1	3180	67.7	2550	31.5	1910	15
12XR1.5	2650	75.2	2390	67.7	1590	31.5	800	9.1	2650	67.7	2120	31.5	1590	15

Parameter Reduction Chart by Length to Diameter Ratio

Overhang Length	Cutting Speed	ap	fz
L/D ≤ 4	100%	100%	100%
4 < L/D ≤ 5	90%	75%	80%
5 < L/D ≤ 6	80%	50%	60%

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