



## List 4581: 4 Flute, Ball End, Tapered

### Slotting

Hardness	<20 HRC			20-30 HRC			30-38 HRC			38-45 HRC			45-55 HRC		
Work Material	Mild Steels Carbon Steels Cast Iron			Alloy Steels Tool Steels			Hardened Steels Pre-hardened Steels			Stainless Steels Hardened Steels			Hardened Steels		
Cutting Speed	400 SFM			330 SFM			300 SFM			240 SFM			160 SFM		
Depth of Cut															
Mill Dia.	Speed (RPM)	Feed (in/min)	aa	Speed (RPM)	Feed (in/min)	aa	Speed (RPM)	Feed (in/min)	aa	Speed (RPM)	Feed (in/min)	aa	Speed (RPM)	Feed (in/min)	aa
0.5	25,000	20.0	0.0004	25,000	20.0	0.0004	25,000	20.0	0.0004	25,000	20.0	0.0004	25,000	10.0	0.0002
0.6	25,000	42.5	0.0009	25,000	42.5	0.0009	25,000	42.5	0.0009	25,000	42.5	0.0009	25,000	22.5	0.0005
0.7	25,000	65.0	0.0013	25,000	65.0	0.0013	25,000	65.0	0.0013	25,000	65.0	0.0013	22,178	31.0	0.0007
0.8	25,000	87.5	0.0018	25,000	87.5	0.0018	25,000	87.5	0.0018	25,000	87.5	0.0018	19,406	36.9	0.0010
0.9	25,000	110.0	0.0022	25,000	110.0	0.0022	25,000	110.0	0.0022	25,000	110.0	0.0022	17,249	41.4	0.0012
1.0	25,000	132.5	0.0027	25,000	132.5	0.0027	25,000	132.5	0.0027	23,287	123.4	0.0027	15,524	45.0	0.0015
1.2	25,000	155.0	0.0031	25,000	155.0	0.0031	24,257	150.4	0.0031	19,406	120.3	0.0031	12,937	44.0	0.0017
1.5	25,000	177.5	0.0036	21,346	151.6	0.0036	19,406	137.8	0.0036	15,524	110.2	0.0036	10,350	40.4	0.0020
1.6	24,257	194.1	0.0040	20,012	160.1	0.0040	18,193	145.5	0.0040	14,554	116.4	0.0040	9,703	42.7	0.0022
1.8	21,562	191.9	0.0045	17,788	158.3	0.0045	16,171	143.9	0.0045	12,937	115.1	0.0045	8,625	42.3	0.0025
2.0	19,406	190.2	0.0049	16,010	156.9	0.0049	14,554	142.6	0.0049	11,643	114.1	0.0049	7,762	41.9	0.0027
2.5	15,524	166.1	0.0054	12,808	137.0	0.0054	11,643	124.6	0.0054	9,315	99.7	0.0054	6,210	36.6	0.0030
3.0	12,937	150.1	0.0058	10,673	123.8	0.0058	9,703	112.6	0.0058	7,762	90.0	0.0058	5,175	33.1	0.0032

1. To achieve flute depth, sequential use of each neck length is most effective.
2. When corner processing, reduce the feed rate by approximately half.
3. Use cutting fluid.

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