

HARDMILL THREADMILL TECHNICAL

HARDMILL THREADMILLING RECOMMENDATIONS

- Hardmill Threadmills should be run with air blast not coolant.
- Evacuate chips properly while milling. Recutting chips will damage cutter.
- Hardmill Threadmilling requires several small radial cuts or “step overs”.
We recommend 7 passes for fine threads and 9 passes for coarse threads.
- Always cut feedrate by 50% when ramping in to the cut.
- Thread interpolation should spiral from bottom of thread in upward direction.

HOW TO CALCULATE HARDMILL THREADMILL RADIAL PASSES

EXAMPLE THREAD = 1/4-28

MAJOR THREAD DIAMETER YOU ARE CUTTING = .250

MINOR HOLE DIAMETER = .213

$.250 - .213 = .037$ TOTAL STOCK BEING REMOVED

$.037 / 2 = .0185$ STOCK PER SIDE BEING REMOVED

MULTIPLY .0185 x RECOMMENDED PERCENTAGES FOR APPROXIMATE RADIAL DEPTH OF CUT. ROUND NUMBERS WHERE NECESSARY.

(RADIAL DEPTH OF CUT IN X OR Y)

1ST PASS = $.0185 \times 23\% = .0045$ (add any leftover to first pass)

2ND PASS = $.0185 \times 23\% = .004$

3RD PASS = $.0185 \times 16\% = .003$

4TH PASS = $.0185 \times 16\% = .003$

5TH PASS = $.0185 \times 11\% = .002$

6TH PASS = $.0185 \times 11\% = .002$

7TH PASS = FREE PASS

Hardmill Threadmill Recommendations

Material	Tool Steel (-55HRC) AISI H13 ETC		Hardened Steel (55-60HRC) AISI D2 ETC		Hardened Steel (60-65HRC) AISI D2 ETC	
	SFM	CHIP LOAD PER TOOTH	SFM	CHIP LOAD PER TOOTH	SFM	CHIP LOAD PER TOOTH
DIA	600/700	.0006/.002	350/400	.0005-.0015	175/225	.0005-.001
0.150						
0.180						
0.235		.001-.0025		.001-.002		.0008/.0018
0.285						
0.305		.0015-.003		.0012-.0025		.001/.002
0.335						
0.350						
0.495						