

Speeds & Feeds

Product Table: High Helix End Mills for Aluminum Alloys - Ball - Tapered Reach (Mold Cutters)

Characteristics: 7° Neck Angle Series: 9956xx

Product Notes:

Posted values represent a 5x Reach. Use the table below to adjust Chip Load (IPT) and Depths of Cut for tools with longer reach.

Reach		Profiling		Finishing					
	IPT	Radial DOC*	Axial DOC	IPT	Radial DOC*	Axial DOC			
5x	100%	100%	100%	100%	100%	100%			
8x	83%	100%	100%	83%	100%	100%			
10x	79%	100%	100%	79%	100%	100%			
15x	66%	77%	77%	66%	80%	100%			
20x	59%	77%	77%	59%	80%	100%			
25x	52%	77%	62%	52%	80%	80%			
30x	45%	62%	62%	45%	60%	60%			
40x	45%	62%	38%	45%	60%	50%			
50x	45%	46%	31%	45%	50%	40%			
60x	45%	46%	23%	45%	50%	30%			

General Notes:

All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions. Chip loads reflect uncoated cutters and may be increased 10%-20% if coated. For ferrous materials with hardness ≤ 28 Rc, chip loads can be increased 10%-20%.

If you require additional information, Harvey Tool has a team of technical experts available to assist you through even the most challenging applications. Please contact us at 800-645-5609 or Harveytech@harveyperformance.com.

WARNING: Cutting tools may shatter under improper use. Government regulations require use of safety glasses and other appropriate safety equipment in the vicinity of use.

MATERIAL		Hardness: ≤ 28 Rc (≤ 271 HBn)													
	SFM	Chip Load (IPT) by Cutter Diameter											Depth of Cut		
	J		.015	.031	.047	.062	.078	.093	.125	.187	.250	.312	.375	Radial	Axial
ALUMINUM ALLOYS	750	Profiling	.00048	.00099	.00151	.00199	.00250	.00298	.00401	.00600	.00802	.01001	.01204	.13 x Dia	.13 x Dia
Casting (2xx, 5xx, 7xx, 8xx)	750														
Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1000	Finishing	.00044	.00090	.00137	.00181	.00228	.00271	.00365	.00546	.00729	.00910	.01094	.10 x Dia	.10 x Dia
Casting - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	750	Profiling	ofiling .00043	.00090	.00136	.00179	.00225	.00269	.00361	.00540	.00722	.00901	.01083	.13 x Dia	.13 x Dia
Casting - 5%-8% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	700														
Casting - 8%-12% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	650														
Casting - 12%-16% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	475	Finishins	00000	.00081	.00123	.00163	.00205	.00244	.00328	.00491	.00657	.00819	.00985	.10 x Dia	.10 x Dia
Wrought - 5%-8% Si (4xxx)	1000	Finishing	.00039												
Wrought - 8%-12% Si (4xxx)	800														
MAGNESIUM ALLOYS	1500	Profiling	.00048	.00099	.00151	.00199	.00250	.00298	.00401	.00600	.00802	.01001	.01204	.13 x Dia	.13 x Dia
ZINC ALLOYS	800	Finishing	.00044	.00090	.00137	.00181	.00228	.00271	.00365	.00546	.00729	.00910	.01094	.10 x Dia	.10 x Dia
COPPER ALLOYS															
High Coppers - 90%+ (C1xxxx)	225	Profiling	ng .00039	.00080	.00121	.00159	.00200	.00239	.00321	.00480	.00642	.00801	.00963	.13 x Dia	.13 x Dia
Brass (Copper Zinc alloys, C2xxxx, C3xxxx, C4xxxx, C66400-C69800)	500														
Phosphor Bronzes (Copper Tin alloys, C5xxxx)	225														
Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200)	500														
Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	500	Finishing	inishing .00035	.00072	.00110	.00145	.00182	.00217	.00292	.00437	.00584	.00728	.00875	.10 x Dia	.10 x Dia
Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxxx)	225														
Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	550														