



Product Table: Corner Rounding End Mills - Long Reach - Flared
Characteristics: 8x Reach Multiple, 2 Flutes
Series: 557xx, 569xx, 574xx, 575xx

Product notes:

Due to a varying diameter, an Effective Cutter Diameter must be determined for Chip Load selection and RPM calculation:

- For a Radius/Pilot ratio < 2.5, Effective Cutter Diameter = Pilot Diameter + Radius
- For a Radius/Pilot ratio ≥ 2.5, Effective Cutter Diameter = Pilot Diameter + .7x Radius

Depth of Cut is shown as a full Radial stepover with multiple, descending Axial passes with following breakdown (same progression works for full Axial depth with multiple, descending Radial passes):

- 1 pass = 1x Radius
- 2 passes = .7x Radius, .3x Radius
- 3 passes = .4x Radius, .4x Radius, .2x Radius
- 4 passes = .4x Radius, .3x Radius, .2x Radius, .1x Radius
- 5 passes = .3x Radius, .3x Radius, .2x Radius, .1x Radius, .1x Radius

Chip Loads (IPT) within table pertain to rounding a corner on one side of existing slot.

For rounding on both sides, reduce Chip Loads to 60%-80% depending on contact length and finish

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

MATERIAL	Hardness: ≤ 28 Rc (≤ 271 HBn)												Depth of Cut			
	SFM	Chip Load (IPT) By Effective Cutter Diameter											Radial Passes	Axial Passes		
		0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250	0.312	0.375			0.500	
ALUMINUM ALLOYS																
Casting (2xx, 5xx, 7xx, 8xx)	750	.00013	.00026	.00040	.00053	.00066	.00079	.00106	.00159	.00213	.00265	.00319	.00425	1	2	
Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1000															
Casting - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	750															
Casting - 5%-8% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	700															
Casting - 8%-12% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	650	.00011	.00024	.00036	.00047	.00060	.00071	.00096	.00143	.00191	.00239	.00287	.00383	1	2	
Casting - 12%-16% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	475															
Wrought - 5%-8% Si (4xxx)	1000															
Wrought - 8%-12% Si (4xxx)	800															
MAGNESIUM ALLOYS	1500	.00013	.00026	.00040	.00053	.00066	.00079	.00106	.00159	.00213	.00265	.00319	.00425	1	2	
ZINC ALLOYS	800															
COPPER ALLOYS																
High Coppers - 90%+ (C1xxx)	225															
Brass (Copper Zinc alloys, C2xxx, C3xxx, C4xxx, C6400-C6900)	500															
Phosphor Bronzes (Copper Tin alloys, C5xxx)	225															
Aluminum Bronzes (Copper Aluminum alloys, C6000-C64200)	500	.00010	.00021	.00032	.00042	.00053	.00063	.00085	.00127	.00170	.00212	.00255	.00340	1	2	
Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	500															
Copper Nicksels, Nickel Silvers (Copper Nickel alloys, C7xxx)	225															
Cast Copper Alloys (C8300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	550															

MATERIAL	Hardness: 29-37 Rc (279-344 HBn)												Depth of Cut			
	SFM	Chip Load (IPT) By Effective Cutter Diameter											Radial Passes	Axial Passes		
		0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250	0.312	0.375			0.500	
CARBON STEELS																
Free-Machining/Low Carbon steels, 10xx - 1029 & all 10Lxx, 11xx - 1139 & all 11Lxx, 12xx - 1215 & all 12Lxx	600	.00005	.00011	.00017	.00023	.00029	.00034	.00046	.00068	.00091	.00114	.00137	.00183	1	3	
1030 - 1095, 1140 - 1151, 13xx, 15xx, 2xxx, 3xxx, 4xxx & 4Lxx, 5xxx & 5Lxx, 50xxx & 50Lxxx, 51xxx & 51Lxxx, 52xxx & 52Lxxx, 6xxx, 8xxx, 9xxx	200	.00005	.00010	.00016	.00021	.00026	.00031	.00042	.00062	.00084	.00104	.00125	.00167	1	3	
STAINLESS STEELS																
203 EZ, 303 (all types), 416, 416Se, 416 Plus X, 420F, 420FSe, 430F, 430FSe, 440F, 440FSe	450	.00005	.00011	.00017	.00023	.00029	.00034	.00046	.00068	.00091	.00114	.00137	.00183	1	3	
201, 202, 203, 205, 301, 302, 304, 304L, 308, 309, 310, 314, 316, 316L, 317, 321, 329, 330, 347, 348, 385, 403, 405, 409, 410, 413, 420, 429, 430, 434, 436, 442, 446, 501, 502	200	.00005	.00010	.00016	.00021	.00026	.00031	.00042	.00062	.00084	.00104	.00125	.00167	1	3	
414, 431, 440A, 440B, 440C, 13-8, 15-5, 15-7, 17-4, 17-7	150	.00003	.00006	.00010	.00013	.00016	.00019	.00026	.00039	.00052	.00065	.00078	.00104	1	3	
TOOL STEELS																
A, L, O, P, W series	200	.00005	.00010	.00016	.00021	.00026	.00031	.00042	.00062	.00084	.00104	.00125	.00167	1	3	
D, H, M, T, S series	150	.00003	.00006	.00010	.00013	.00016	.00019	.00026	.00039	.00052	.00065	.00078	.00104	1	3	
TITANIUM ALLOYS	150	.00003	.00006	.00010	.00013	.00016	.00019	.00026	.00039	.00052	.00065	.00078	.00104	1	3	
HIGH TEMP ALLOYS																
Inconel, Hastelloy, Waspalloy, Monel, Nimonic, Haynes, Discology, Incoloy	70	.00003	.00006	.00010	.00013	.00016	.00019	.00026	.00039	.00052	.00065	.00078	.00104	1	3	

MATERIAL	Hardness: 38-45 Rc (353-421 HBn)												Depth of Cut			
	SFM	Chip Load (IPT) By Effective Cutter Diameter											Radial Passes	Axial Passes		
		0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250	0.312	0.375			0.500	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	.00005	.00010	.00016	.00021	.00026	.00031	.00042	.00062	.00084	.00104	.00125	.00167	1	4		
90	.00003	.00006	.00010	.00013	.00016	.00019	.00026	.00039	.00052	.00065	.00078	.00104	1	4		
100	.00005	.00010	.00016	.00021	.00026	.00031	.00042	.00062	.00084	.00104	.00125	.00167	1	4		
90	.00003	.00006	.00010	.00013	.00016	.00019	.00026	.00039	.00052	.00065	.00078	.00104	1	4		
75	.00003	.00006	.00010	.00013	.00016	.00019	.00026	.00039	.00052	.00065	.00078	.00104	1	4		
50	.00003	.00006	.00010	.00013	.00016	.00019	.00026	.00039	.00052	.00065	.00078	.00104	1	4		