



Speeds & Feeds

**Product Table:** Chamfer Cutters - Back Chamfer Cutters  
**Characteristics:** 90° Included Angle, 5x Reach Multiple, 5 and 6 Flutes  
**Series:** 9382xx

**Product notes:**

Due to a varying diameter, an **Effective Cutter Diameter** is needed for Chip Load selection and RPM calculation:  
 Effective Cutter Diameter = (Major Diameter + Minor Diameter)/2.  
 Or consider the actual diameter along the angle that is engaged with the workpiece.  
 For Full Chamfer engagement the Effective Cutter Diameter is 80% of the cutter diameter

Depth of Cut is shown as number of Passes with each pass resulting in a descending stepover

Chip Loads are given 3 ways:

- Deburring refers to removing the burr only
- Traditional Edge Break of .010"-.015"
- Full Chamfer engagement

Chip Loads within table pertain to machining on one side an existing slot.

For machining on two 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](mailto:harveytech@harveyperformance.com).

WARNING: Cutting tools may shatter under improper use. Government regulations require use of safety glasses and other

MATERIAL	Hardness: ≤ 28 Rc (≤ 271 HBn)											Depth of Cut Passes			
	SFM	Chip Load (IPT) By Effective Cutter Diameter													
		0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250	0.312		0.375	0.500	
<b>ALUMINUM ALLOYS</b>															
Castina (2xxx, 5xxx, 7xxx, 8xxx)	750	Deburr	.00013	.00028	.00042	.00056	.00070	.00083	.00112	.00168	.00224	.00280	.00337	.00449	1
		Edge Break	.00011	.00023	.00035	.00046	.00058	.00070	.00094	.00140	.00187	.00233	.00281	.00374	1
Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1000	Full Chamfer	.00008	.00017	.00026	.00035	.00044	.00052	.00070	.00105	.00140	.00175	.00210	.00281	2
Castings - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	750	Deburr	.00012	.00025	.00038	.00050	.00063	.00075	.00101	.00151	.00202	.00252	.00303	.00404	1
Castings - 5%-8% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	700	Edge Break	.00010	.00021	.00032	.00042	.00053	.00063	.00084	.00126	.00168	.00210	.00252	.00337	1
Castings - 8%-12% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	650	Full Chamfer	.00008	.00016	.00024	.00031	.00039	.00047	.00063	.00094	.00126	.00158	.00189	.00252	2
Castings - 12%-16% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	475	Edge Break	.00010	.00021	.00032	.00042	.00053	.00063	.00084	.00126	.00168	.00210	.00252	.00337	1
Wrought - 5%-8% Si (4xxx)	1000	Full Chamfer	.00008	.00016	.00024	.00031	.00039	.00047	.00063	.00094	.00126	.00158	.00189	.00252	2
Wrought - 8%-12% Si (4xxx)	800	Edge Break	.00013	.00028	.00042	.00056	.00070	.00083	.00112	.00168	.00224	.00280	.00337	.00449	1
<b>MAGNESIUM ALLOYS</b>	1500	Edge Break	.00011	.00023	.00035	.00046	.00058	.00070	.00094	.00140	.00187	.00233	.00281	.00374	1
<b>ZINC ALLOYS</b>	800	Full Chamfer	.00008	.00017	.00026	.00035	.00044	.00052	.00070	.00105	.00140	.00175	.00210	.00281	2
<b>COPPER ALLOYS</b>															
High Coppers - 90%+ (C1xxx)	225	Deburr	.00011	.00022	.00034	.00045	.00056	.00067	.00090	.00134	.00180	.00224	.00269	.00359	1
Brass (Copper Zinc alloys, C2xxx, C3xxx, C4xxx, C6400-C69800)	500	Edge Break	.00009	.00019	.00028	.00037	.00047	.00056	.00075	.00112	.00150	.00187	.00224	.00299	1
Phosphor Bronzes (Copper Tin alloys, C5xxx)	225	Full Chamfer	.00007	.00014	.00021	.00028	.00035	.00042	.00056	.00084	.00112	.00140	.00168	.00224	2
Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200)	500	Edge Break	.00009	.00019	.00028	.00037	.00047	.00056	.00075	.00112	.00150	.00187	.00224	.00299	1
Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	500	Full Chamfer	.00007	.00014	.00021	.00028	.00035	.00042	.00056	.00084	.00112	.00140	.00168	.00224	2
Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxx)	225	Edge Break	.00009	.00019	.00028	.00037	.00047	.00056	.00075	.00112	.00150	.00187	.00224	.00299	1
Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	550	Full Chamfer	.00007	.00014	.00021	.00028	.00035	.00042	.00056	.00084	.00112	.00140	.00168	.00224	2

MATERIAL	Hardness: 29-37 Rc (279-344 HBn)											Depth of Cut Passes			
	SFM	Chip Load (IPT) By Effective Cutter Diameter													
		0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250	0.312		0.375	0.500	
<b>CARBON STEELS</b>															
Free-Machining/Low Carbon steels, 10xx - 1029 & all 10Lxx, 11xx - 1139 & all 11Lxx, 12xx - 1215 & all 12Lxx	600	Deburr	.00006	.00012	.00018	.00024	.00030	.00036	.00048	.00072	.00096	.00120	.00145	.00193	1
		Edge Break	.00005	.00010	.00015	.00020	.00025	.00030	.00040	.00060	.00080	.00100	.00120	.00161	1
		Full Chamfer	.00004	.00007	.00011	.00015	.00019	.00022	.00030	.00045	.00060	.00075	.00090	.00120	3
1030 - 1095, 1140 - 1151, 13xx, 15xx, 20xx, 30xx, 40xx & 4xLxx, 50xx & 5xLxx, 50xxx & 50Lxxx, 51xxx & 51Lxxx, 52xxx & 52Lxxx, 60xx, 80xx, 90xx	200	Deburr	.00005	.00011	.00017	.00022	.00027	.00033	.00044	.00066	.00088	.00110	.00132	.00176	1
		Edge Break	.00004	.00009	.00014	.00018	.00023	.00027	.00037	.00055	.00073	.00092	.00110	.00147	1
		Full Chamfer	.00003	.00007	.00010	.00014	.00017	.00020	.00028	.00041	.00055	.00069	.00083	.00110	3
<b>STAINLESS STEELS</b>															
203 EZ, 303 (all types), 416, 416Se, 416 Plus X, 420F, 420FSe, 430F, 430FSe, 440F, 440FSe	450	Deburr	.00006	.00012	.00018	.00024	.00030	.00036	.00048	.00072	.00096	.00120	.00145	.00193	1
		Edge Break	.00005	.00010	.00015	.00020	.00025	.00030	.00040	.00060	.00080	.00100	.00120	.00161	1
		Full Chamfer	.00004	.00007	.00011	.00015	.00019	.00022	.00030	.00045	.00060	.00075	.00090	.00120	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	Deburr	.00005	.00011	.00017	.00022	.00027	.00033	.00044	.00066	.00088	.00110	.00132	.00176	1
		Edge Break	.00004	.00009	.00014	.00018	.00023	.00027	.00037	.00055	.00073	.00092	.00110	.00147	1
		Full Chamfer	.00003	.00007	.00010	.00014	.00017	.00020	.00028	.00041	.00055	.00069	.00083	.00110	3
414, 431, 440A, 440B, 440C, 13-8, 15-5, 15-7, 17-4, 17-7	150	Deburr	.00003	.00007	.00010	.00014	.00017	.00020	.00028	.00041	.00055	.00069	.00083	.00110	1
		Edge Break	.00003	.00006	.00009	.00011	.00014	.00017	.00023	.00034	.00046	.00057	.00069	.00092	1
		Full Chamfer	.00002	.00004	.00006	.00009	.00011	.00013	.00017	.00026	.00034	.00043	.00052	.00069	3
<b>TOOL STEELS</b>															
A, L, O, P, W series	200	Deburr	.00005	.00011	.00017	.00022	.00027	.00033	.00044	.00066	.00088	.00110	.00132	.00176	1
		Edge Break	.00004	.00009	.00014	.00018	.00023	.00027	.00037	.00055	.00073	.00092	.00110	.00147	1
		Full Chamfer	.00003	.00007	.00010	.00014	.00017	.00020	.00028	.00041	.00055	.00069	.00083	.00110	3
D, H, M, T, S series	150	Deburr	.00003	.00007	.00010	.00014	.00017	.00020	.00028	.00041	.00055	.00069	.00083	.00110	1
		Edge Break	.00003	.00006	.00009	.00011	.00014	.00017	.00023	.00034	.00046	.00057	.00069	.00092	1
		Full Chamfer	.00002	.00004	.00006	.00009	.00011	.00013	.00017	.00026	.00034	.00043	.00052	.00069	3
<b>TITANIUM ALLOYS</b>	150	Deburr	.00003	.00007	.00010	.00014	.00017	.00020	.00028	.00041	.00055	.00069	.00083	.00110	1
		Edge Break	.00003	.00006	.00009	.00011	.00014	.00017	.00023	.00034	.00046	.00057	.00069	.00092	1
		Full Chamfer	.00002	.00004	.00006	.00009	.00011	.00013	.00017	.00026	.00034	.00043	.00052	.00069	3
<b>HIGH TEMP ALLOYS</b>															
Inconel, Hastelloy, Waspalloy, Monel, Nimonic, Haynes, Discoloy, Incoloy	70	Deburr	.00003	.00007	.00010	.00014	.00017	.00020	.00028	.00041	.00055	.00069	.00083	.00110	1
		Edge Break	.00003	.00006	.00009	.00011	.00014	.00017	.00023	.00034	.00046	.00057	.00069	.00092	1
		Full Chamfer	.00002	.00004	.00006	.00009	.00011	.00013	.00017	.00026	.00034	.00043	.00052	.00069	3

MATERIAL	Hardness: 38-45 Rc (353-421 HBn)											Depth of Cut Passes			
	SFM	Chip Load (IPT) By Effective Cutter Diameter													
		0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250	0.312		0.375	0.500	
		Deburr	-	-	-	-	-	-	-	-	-	-	-	-	-
		Edge Break	-	-	-	-	-	-	-	-	-	-	-	-	-
		Full Chamfer	-	-	-	-	-	-	-	-	-	-	-	-	-
		Deburr	-	-	-	-	-	-	-	-	-	-	-	-	-
		Edge Break	-	-	-	-	-	-	-	-	-	-	-	-	-
		Full Chamfer	-	-	-	-	-	-	-	-	-	-	-	-	-
		Deburr	.00005	.00011	.00017	.00022	.00027	.00033	.00044	.00066	.00088	.00110	.00132	.00176	1
		Edge Break	.00004	.00009	.00014	.00018	.00023	.00027	.00037	.00055	.00073	.00092	.00110	.00147	2
		Full Chamfer	.00003	.00007	.00010	.00014	.00017	.00020	.00028	.00041	.00055	.00069	.00083	.00110	4
		Deburr	.00003	.00007	.00010	.00014	.00017	.00020	.00028	.00041	.00055	.00069	.00083	.00110	1
		Edge Break	.00003	.00006	.00009	.00011	.00014	.00017	.00023	.00034	.00046				