HARVEY TOOL
Speeds & Feeds

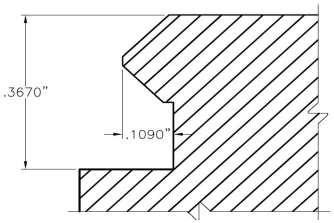
Product Table: Picatinny Form Cutters - Picatinny Rail Form Cutters
Characteristics: 4 Flutes
Series: 8300xx, 8756xx

Product notes:

To acheive Picatinny Form standard, total radial step over is .1090" to create form, independent of cutter diameter.

Chip loads are based off of Cutter Diameter.

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



Chip Loads are given 2 ways:
Double Chamfer - Engaged on either or both chamfer angles only
Full Form - Engaged on the chamfer angles and end length simultaneously
Use double chamfer chiploads for first pass to hog the chamfer profile before full engagement

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

Hardness: ≤ 28 Rc (≤ 271 HBn)

MATERIAL	SFM	Chip Load (IPT) By Cutter Diameter	0.250	0.312	0.375	0.500	0.625	0.750	1.000	Depth of Cut Passes
ALUMINUM ALLOYS										
Casting (2xx, 5xx, 7xx, 8xx)	750	Double Chamfer	.00220	.00275	.00330	.00440	.00550	.00660	.00880	2
Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1000	Full Form	.00154	.00192	.00231	.00308	.00385	.00462	.00616	2
Casting - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	750									
Casting - 5%-8% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	700	Double Chamfer	.00198	.00247	.00297	.00396	.00495	.00594	.00792	2
Casting - 8%-12% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	650									
Casting - 12%-16% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	475	Full Form	.00139	.00173	.00208	.00277	.00347	.00416	.00554	2
Wrought - 5%-8% Si (4xxx)	1000									
Wrought - 8%-12% Si (4xxx)	800									
MAGNESIUM ALLOYS	1500	Double Chamfer	.00220	.00275	.00330	.00440	.00550	.00660	.00880	2
ZINC ALLOYS	800	Full Form	.00154	.00192	.00231	.00308	.00385	.00462	.00616	2
COPPER ALLOYS										
High Coppers - 90%+ (C1xxxx)	225									
Brass (Copper Zinc alloys, C2xxxx, C3xxxx, C4xxxx, C66400-C69800)	500	Double Chamfer	.00176	.00220	.00264	.00352	.00440	.00528	.00704	2
Phosphor Bronzes (Copper Tin alloys, C5xxxx)	225									
Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200)	500									
Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	500									
Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxxx)	225	Full Form	.00123	.00154	.00185	.00246	.00308	.00370	.00493	2
Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	550									

Hardness: 29-37 Rc (279-344 HBn)

MATERIAL	SFM	Chip Load (IPT) By Cutter Diameter	0.250	0.312	0.375	0.500	0.625	0.750	1.000	Depth of Cut Passes
CARBON STEELS										
Free-Machining/Low Carbon steels, 10xx - 1029 & all 10Lxx, 11xx - 1139 & all 11Lxx, 12xx - 1215 & all 12Lxx	600	Double Chamfer	.00095	.00118	.00142	.00189	.00236	.00284	.00378	3
		Full Form	.00066	.00083	.00099	.00132	.00165	.00198	.00265	3
1030 - 1095, 1140 - 1151, 13xx, 15xx, 2xxx, 3xxx, 4xxx & 4xLxx, 5xxx & 5xLxx, 50xxx & 50Lxxx, 51xxx & 51Lxxx, 52xxx & 52Lxxx, 6xxx, 8xxx, 9xxx	200	Double Chamfer	.00086	.00108	.00130	.00173	.00216	.00259	.00346	3
		Full Form	.00060	.00075	.00091	.00121	.00151	.00181	.00242	3
STAINLESS STEELS	450	Double Chamfer	.00095	.00118	.00142	.00189	.00236	.00284	.00378	3
203 EZ, 303 (all types), 416, 416Se, 416 Plus X, 420F, 420FSe, 430F, 430FSe, 440F, 440FSe		Full Form	.00066	.00083	.00099	.00132	.00165	.00198	.00265	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	Double Chamfer	.00086	.00108	.00130	.00173	.00216	.00259	.00346	3
		Full Form	.00060	.00075	.00091	.00121	.00151	.00181	.00242	3
414, 431, 440A, 440B, 440C, 13-8, 15-5, 15-7, 17-4, 17-7	150	Double Chamfer	.00054	.00067	.00081	.00108	.00135	.00162	.00216	3
		Full Form	.00038	.00047	.00057	.00076	.00095	.00113	.00151	3
TOOL STEELS	200	Double Chamfer	.00086	.00108	.00130	.00173	.00216	.00259	.00346	3
A, L, O, P, W series		Full Form	.00060	.00075	.00091	.00121	.00151	.00181	.00242	3
D, H, M, T, S series	150	Double Chamfer	.00054	.00067	.00081	.00108	.00135	.00162	.00216	3
		Full Form	.00038	.00047	.00057	.00076	.00095	.00113	.00151	3
TITANIUM ALLOYS	150	Double Chamfer	.00054	.00067	.00081	.00108	.00135	.00162	.00216	3
		Full Form	.00038	.00047	.00057	.00076	.00095	.00113	.00151	3
HIGH TEMP ALLOYS	70	Double Chamfer	.00054	.00067	.00081	.00108	.00135	.00162	.00216	3
Inconel, Hastelloy, Waspalloy, Monel, Nimonic, Haynes, Discoloy, Incoloy		Full Form	.00038	.00047	.00057	.00076	.00095	.00113	.00151	3

Hardness: 38-45 Rc (353-421 HBn)

SFM	Chip Load (IPT) By Cutter Diameter	0.250	0.312	0.375	0.500	0.625	0.750	1.000	Depth of Cut Passes
-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-
100	Double Chamfer	.00086	.00108	.00130	.00173	.00216	.00259	.00346	3
	Full Form	.00060	.00075	.00091	.00121	.00151	.00181	.00242	3
90	Double Chamfer	.00054	.00067	.00081	.00108	.00135	.00162	.00216	3
	Full Form	.00038	.00047	.00057	.00076	.00095	.00113	.00151	3
100	Double Chamfer	.00086	.00108	.00130	.00173	.00216	.00259	.00346	3
	Full Form	.00060	.00075	.00091	.00121	.00151	.00181	.00242	3
90	Double Chamfer	.00054	.00067	.00081	.00108	.00135	.00162	.00216	3
	Full Form	.00038	.00047	.00057	.00076	.00095	.00113	.00151	3
75	Double Chamfer	.00054	.00067	.00081	.00108	.00135	.00162	.00216	3
	Full Form	.00038	.00047	.00057	.00076	.00095	.00113	.00151	3
50	Double Chamfer	.00054	.00067	.00081	.00108	.00135	.00162	.00216	3
	Full Form	.00038	.00047	.00057	.00076	.00095	.00113	.00151	3