MATERIAL	SFM	Chip Load (IPT) By Cutter Dia .015	.031	.047	Depth of Cut Radial	Axial	Chip Load (IPT) By Cutter Dia .062	.078	.093	.125	.187	.250	Depth of Cut Radial	Axial
Hardness: ≤ 28 Rc (≤ 271 HBn)														
ALUMINUM ALLOYS Casting (2xx, 5xx, 7xx, 8xx)	750	Roughing .00013	.00026	.00040	.30 x Dia	.35 x Dia	.00046	.00057	.00068	.00092	.00138	.00184	.60 x Dia	.35 x Dia
Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1000	Finishing .00019	.00040	.00061	.08 x Dia	1.5 x Dia	.00070	.00088	.00105	.00141	.00211	.00282	.15 x Dia	1.5 x Dia
Casting - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	750	Roughing .00011	.00024	.00036	.30 x Dia	.35 x Dia	.00041	.00052	.00062	.00083	.00124	.00166	.60 x Dia	.35 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	Finishing .00018	.00036	.00055	.08 x Dia	1.5 x Dia	.00063	.00079	.00094	.00127	.00190	.00254	.15 x Dia	1.5 x Dia
Wrought - 5%-8% Si (4xxx)	1000													
Wrought - 8%-12% Si (4xxx)	800													
MAGNESIUM ALLOYS	1500	Roughing .00013	.00026	.00040	.30 x Dia	.35 x Dia	.00046	.00057	.00068	.00092	.00138	.00184	.60 x Dia	.35 x Dia
ZINC ALLOYS	800	Finishing .00019	.00040	.00061	.08 x Dia	1.5 x Dia	.00070	.00088	.00105	.00141	.00211	.00282	.15 x Dia	1.5 x Dia
COPPER ALLOYS High Coppers - 90%+ (C1xxxx)	225	Roughing .00010	.00021	.00032	.30 x Dia	.35 x Dia	.00036	.00046	.00055	.00074	.00110	.00147	.60 x Dia	.35 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	Finishing .00016	.00032	.00049	.08 x Dia	1.5 x Dia	.00056	.00070	.00084	.00113	.00169	.00226	.15 x Dia	1.5 x Dia
Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	500													
Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxxx)	225													
Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	550													

Product Table: Backdraft Cutters - Corner Radius
Characteristics: 1.5x LOC, 5x Reach, 0.5°, 4 Flutes
Series: 7809xx, 7812xx

Product Notes:
Use the end diameter of the tool to select the correct Chip Load (IPT)

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	SFM	Chip Load (IPT) By Cutter Dia .015	.031	.047	Depth of Cut Radial	Axial	Chip Load (IPT) By Cutter Dia .062	.078	.093	.125	.187	.250	Depth of Cut Radial	Axial
Hardness: 29-37 Rc (279-344 HBn)														
CARBON STEELS Free-Machining/Low Carbon steels, 10xx - 1029 & all 10Lxx, 11xx - 1139 & all 11Lxx, 12xx - 1215 & all 12Lxx	600	Roughing .00005	.00011	.00017	.30 x Dia	.35 x Dia	.00020	.00025	.00029	.00040	.00059	.00079	.60 x Dia	.35 x Dia
		Finishing .00008	.00017	.00026	.08 x Dia	1.5 x Dia	.00030	.00038	.00045	.00061	.00091	.00121	.15 x Dia	1.5 x Dia
1030 - 1095, 1140 - 1151, 13xx, 15xx, 2xxx, 3xxx, 4xxx & 4xLxx, 5xxx & 5xLxx, 50xxx & 50Lxxx, 51xxx & 51Lxxx, 52xxx & 52Lxxx, 6xxx, 8xxx, 9xxx	200	Roughing .00005	.00010	.00016	.30 x Dia	.35 x Dia	.00018	.00023	.00027	.00036	.00054	.00072	.60 x Dia	.35 x Dia
		Finishing .00008	.00016	.00024	.08 x Dia	1.5 x Dia	.00027	.00035	.00041	.00055	.00083	.00111	.15 x Dia	1.5 x Dia
STAINLESS STEELS 203 EZ, 303 (all types), 416, 416Se, 416 Plus X, 420F, 420FSe, 430F, 430FSe, 440F, 440FSe	450	Roughing .00005	.00011	.00017	.30 x Dia	.35 x Dia	.00020	.00025	.00029	.00040	.00059	.00079	.60 x Dia	.35 x Dia
		Finishing .00008	.00017	.00026	.08 x Dia	1.5 x Dia	.00030	.00038	.00045	.00061	.00091	.00121	.15 x Dia	1.5 x Dia
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	Roughing .00005	.00010	.00016	.30 x Dia	.35 x Dia	.00018	.00023	.00027	.00036	.00054	.00072	.60 x Dia	.35 x Dia
		Finishing .00008	.00016	.00024	.08 x Dia	1.5 x Dia	.00027	.00035	.00041	.00055	.00083	.00111	.15 x Dia	1.5 x Dia
414, 431, 440A, 440B, 440C, 13-8, 15-5, 15-7, 17-4, 17-7	150	Roughing .00003	.00006	.00010	.30 x Dia	.35 x Dia	.00011	.00014	.00017	.00023	.00034	.00045	.60 x Dia	.35 x Dia
		Finishing .00005	.00010	.00015	.08 x Dia	1.5 x Dia	.00017	.00022	.00026	.00035	.00052	.00069	.15 x Dia	1.5 x Dia
TOOL STEELS A, L, O, P, W series	200	Roughing .00005	.00010	.00016	.30 x Dia	.35 x Dia	.00018	.00023	.00027	.00036	.00054	.00072	.60 x Dia	.35 x Dia
		Finishing .00008	.00016	.00024	.08 x Dia	1.5 x Dia	.00027	.00035	.00041	.00055	.00083	.00111	.15 x Dia	1.5 x Dia
D, H, M, T, S series	150	Roughing .00003	.00006	.00010	.30 x Dia	.35 x Dia	.00011	.00014	.00017	.00023	.00034	.00045	.60 x Dia	.35 x Dia
		Finishing .00005	.00010	.00015	.08 x Dia	1.5 x Dia	.00017	.00022	.00026	.00035	.00052	.00069	.15 x Dia	1.5 x Dia
TITANIUM ALLOYS	150	Roughing .00003	.00006	.00010	.30 x Dia	.35 x Dia	.00011	.00014	.00017	.00023	.00034	.00045	.60 x Dia	.35 x Dia
		Finishing .00005	.00010	.00015	.08 x Dia	1.5 x Dia	.00017	.00022	.00026	.00035	.00052	.00069	.15 x Dia	1.5 x Dia
HIGH TEMP ALLOYS Inconel, Hastelloy, Waspalloy, Monel, Nimonic, Haynes, Discoloy, Incoloy	70	Roughing .00003	.00006	.00010	.30 x Dia	.35 x Dia	.00011	.00014	.00017	.00023	.00034	.00045	.60 x Dia	.35 x Dia
		Finishing .00005	.00010	.00015	.08 x Dia	1.5 x Dia	.00017	.00022	.00026	.00035	.00052	.00069	.15 x Dia	1.5 x Dia

SFM	Chip Load (IPT) By Cutter Dia .015	.031	.047	Depth of Cut Radial	Axial	Chip Load (IPT) By Cutter Dia .062	.078	.093	.125	.187	.250	Depth of Cut Radial	Axial
Hardness: 38-45 Rc (353-421 HBn)													
-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
100 Roughing	.00002	.00005	.00008	.30 x Dia	.35 x Dia	.00009	.00011	.00013	.00018	.00027	.00036	.60 x Dia	.35 x Dia
Finishing	.00004	.00008	.00012	.08 x Dia	1.5 x Dia	.00014	.00017	.00021	.00028	.00042	.00056	.15 x Dia	1.5 x Dia
90 Roughing	.00002	.00003	.00005	.30 x Dia	.35 x Dia	.00006	.00007	.00008	.00011	.00017	.00023	.60 x Dia	.35 x Dia
Finishing	.00002	.00005	.00008	.08 x Dia	1.5 x Dia	.00009	.00011	.00013	.00017	.00026	.00035	.15 x Dia	1.5 x Dia
100 Roughing	.00002	.00005	.00008	.30 x Dia	.35 x Dia	.00009	.00011	.00013	.00018	.00027	.00036	.60 x Dia	.35 x Dia
Finishing	.00004	.00008	.00012	.08 x Dia	1.5 x Dia	.00042	.00053	.00063	.00085	.00128	.00171	.15 x Dia	1.5 x Dia
90 Roughing	.00002	.00003	.00005	.30 x Dia	.35 x Dia	.00006	.00007	.00008	.00011	.00017	.00023	.60 x Dia	.35 x Dia
Finishing	.00002	.00005	.00008	.08 x Dia	1.5 x Dia	.00009	.00011	.00013	.00017	.00026	.00035	.15 x Dia	1.5 x Dia
75 Roughing	.00002	.00003	.00005	.30 x Dia	.35 x Dia	.00006	.00007	.00008	.00011	.00017	.00023	.60 x Dia	.35 x Dia
Finishing	.00002	.00005	.00008	.08 x Dia	1.5 x Dia	.00009	.00011	.00013	.00017	.00026	.00035	.15 x Dia	1.5 x Dia
50 Roughing	.00002	.00003	.00005	.30 x Dia	.35 x Dia	.00006	.00007	.00008	.00011	.00017	.00023	.60 x Dia	.35 x Dia
Finishing	.00002	.00005	.00008	.08 x Dia	1.5 x Dia	.00009	.00011	.00013	.00017	.00026	.00035	.15 x Dia	1.5 x Dia