



Speeds & Feeds

Product Table: Undercutting End Mills - 270°
Characteristics: 4 Flutes, Type II (1.5° Tapered Neck)
Series: 7585xx

Product notes:

Posted values are Base Chip Loads and do not account for varying neck lengths. Use Table 1 (previous page) to determine the correct adjustment multiplier and calculate final adjusted chip loads.

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)											Depth of Cut Passes			
	SFM	Chip Load (IPT) By Cutter Diameter													
		0.062	0.078	0.093	0.125	0.187	0.250	0.312	0.375	0.500	0.625		0.750	1.000	
ALUMINUM ALLOYS															
Casting (2xx, 5xx, 7xx, 8xx)	750	Deburring	.00052	.00066	.00078	.00105	.00158	.00211	.00263	.00316	.00421	.00527	.00632	.00843	1
		Profiling	.00045	.00057	.00068	.00092	.00137	.00183	.00229	.00275	.00366	.00458	.00550	.00733	2
		Slotting	.00045	.00057	.00068	.00092	.00137	.00183	.00229	.00275	.00366	.00458	.00550	.00733	3
Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1000	Slotting	.00045	.00057	.00068	.00092	.00137	.00183	.00229	.00275	.00366	.00458	.00550	.00733	3
Casting - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	750	Deburring	.00047	.00059	.00071	.00095	.00142	.00190	.00237	.00284	.00379	.00474	.00569	.00759	1
Casting - 5%-8% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	700	Profiling	.00041	.00051	.00061	.00082	.00123	.00165	.00206	.00247	.00330	.00412	.00495	.00660	2
Casting - 8%-12% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	650	Profiling	.00041	.00051	.00061	.00082	.00123	.00165	.00206	.00247	.00330	.00412	.00495	.00660	2
Casting - 12%-16% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	475	Slotting	.00041	.00051	.00061	.00082	.00123	.00165	.00206	.00247	.00330	.00412	.00495	.00660	3
Wrought - 5%-8% Si (4xxx)	1000	Slotting	.00041	.00051	.00061	.00082	.00123	.00165	.00206	.00247	.00330	.00412	.00495	.00660	3
Wrought - 8%-12% Si (4xxx)	800	Slotting	.00041	.00051	.00061	.00082	.00123	.00165	.00206	.00247	.00330	.00412	.00495	.00660	3
MAGNESIUM ALLOYS															
	1500	Deburring	.00052	.00066	.00078	.00105	.00158	.00211	.00263	.00316	.00421	.00527	.00632	.00843	1
		Profiling	.00045	.00057	.00068	.00092	.00137	.00183	.00229	.00275	.00366	.00458	.00550	.00733	2
ZINC ALLOYS															
	800	Slotting	.00045	.00057	.00068	.00092	.00137	.00183	.00229	.00275	.00366	.00458	.00550	.00733	3
COPPER ALLOYS															
High Coppers - 90%+ (C1xxx)	225	Deburring	.00042	.00053	.00063	.00084	.00126	.00169	.00210	.00253	.00337	.00421	.00506	.00674	1
Brass (Copper Zinc alloys, C2xxx, C3xxx, C4xxx, C66400-C69800)	500	Profiling	.00036	.00046	.00055	.00073	.00110	.00147	.00183	.00220	.00293	.00366	.00440	.00586	2
Phosphor Bronzes (Copper Tin alloys, C5xxx)	225	Profiling	.00036	.00046	.00055	.00073	.00110	.00147	.00183	.00220	.00293	.00366	.00440	.00586	2
Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200)	500	Profiling	.00036	.00046	.00055	.00073	.00110	.00147	.00183	.00220	.00293	.00366	.00440	.00586	2
Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	500	Profiling	.00036	.00046	.00055	.00073	.00110	.00147	.00183	.00220	.00293	.00366	.00440	.00586	2
Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxx)	225	Profiling	.00036	.00046	.00055	.00073	.00110	.00147	.00183	.00220	.00293	.00366	.00440	.00586	2
Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	550	Slotting	.00036	.00046	.00055	.00073	.00110	.00147	.00183	.00220	.00293	.00366	.00440	.00586	3

MATERIAL	Hardness: 29-37 Rc (279-344 HBn)											Depth of Cut Passes			
	SFM	Chip Load (IPT) By Cutter Diameter													
		0.062	0.078	0.093	0.125	0.187	0.250	0.312	0.375	0.500	0.625		0.750	1.000	
CARBON STEELS															
Free-Machining/Low Carbon steels, 10xx - 1029 & all 10Lxx, 11xx - 1139 & all 11Lxx, 12xx - 1215 & all 12Lxx	600	Deburring	.00019	.00024	.00029	.00038	.00058	.00077	.00096	.00115	.00154	.00192	.00231	.00308	1
		Profiling	.00017	.00021	.00025	.00033	.00050	.00067	.00083	.00100	.00134	.00167	.00201	.00268	3
		Slotting	.00017	.00021	.00025	.00033	.00050	.00067	.00083	.00100	.00134	.00167	.00201	.00268	4
1030 - 1095, 1140 - 1151, 13xx, 15xx, 2xxx, 3xxx, 4xxx & 4xLxx, 5xxx & 5xLxx, 50xxx & 50Lxx, 51xxx & 51Lxx, 52xxx & 52Lxx, 6xxx, 8xxx, 9xxx	200	Deburring	.00017	.00022	.00026	.00035	.00053	.00070	.00088	.00106	.00141	.00176	.00211	.00281	1
		Profiling	.00015	.00019	.00023	.00031	.00046	.00061	.00076	.00092	.00122	.00153	.00184	.00245	3
		Slotting	.00015	.00019	.00023	.00031	.00046	.00061	.00076	.00092	.00122	.00153	.00184	.00245	4
STAINLESS STEELS															
203 EZ, 303 (all types), 416, 416Se, 416 Plus X, 420F, 420FSe, 430F, 430FSe, 440F, 440FSe	450	Deburring	.00019	.00024	.00029	.00038	.00058	.00077	.00096	.00115	.00154	.00192	.00231	.00308	1
		Profiling	.00017	.00021	.00025	.00033	.00050	.00067	.00083	.00100	.00134	.00167	.00201	.00268	3
		Slotting	.00017	.00021	.00025	.00033	.00050	.00067	.00083	.00100	.00134	.00167	.00201	.00268	4
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	Deburring	.00017	.00022	.00026	.00035	.00053	.00070	.00088	.00106	.00141	.00176	.00211	.00281	1
		Profiling	.00015	.00019	.00023	.00031	.00046	.00061	.00076	.00092	.00122	.00153	.00184	.00245	3
		Slotting	.00015	.00019	.00023	.00031	.00046	.00061	.00076	.00092	.00122	.00153	.00184	.00245	4
414, 431, 440A, 440B, 440C, 13-8, 15-5, 15-7, 17-4, 17-7	150	Deburring	.00011	.00014	.00016	.00022	.00033	.00044	.00055	.00066	.00088	.00110	.00132	.00176	1
		Profiling	.00009	.00012	.00014	.00019	.00029	.00038	.00048	.00057	.00076	.00096	.00115	.00153	3
		Slotting	.00009	.00012	.00014	.00019	.00029	.00038	.00048	.00057	.00076	.00096	.00115	.00153	4
TOOL STEELS															
A, L, O, P, W series	200	Deburring	.00017	.00022	.00026	.00035	.00053	.00070	.00088	.00106	.00141	.00176	.00211	.00281	1
		Profiling	.00015	.00019	.00023	.00031	.00046	.00061	.00076	.00092	.00122	.00153	.00184	.00245	3
		Slotting	.00015	.00019	.00023	.00031	.00046	.00061	.00076	.00092	.00122	.00153	.00184	.00245	4
D, H, M, T, S series	150	Deburring	.00011	.00014	.00016	.00022	.00033	.00044	.00055	.00066	.00088	.00110	.00132	.00176	1
		Profiling	.00009	.00012	.00014	.00019	.00029	.00038	.00048	.00057	.00076	.00096	.00115	.00153	3
		Slotting	.00009	.00012	.00014	.00019	.00029	.00038	.00048	.00057	.00076	.00096	.00115	.00153	4
TITANIUM ALLOYS															
	150	Deburring	.00011	.00014	.00016	.00022	.00033	.00044	.00055	.00066	.00088	.00110	.00132	.00176	1
		Profiling	.00009	.00012	.00014	.00019	.00029	.00038	.00048	.00057	.00076	.00096	.00115	.00153	3
		Slotting	.00009	.00012	.00014	.00019	.00029	.00038	.00048	.00057	.00076	.00096	.00115	.00153	4
HIGH TEMP ALLOYS															
Inconel, Hastelloy, Waspalloy, Monel, Nimonic, Haynes, Discoloy, Incoloy	70	Deburring	.00011	.00014	.00016	.00022	.00033	.00044	.00055	.00066	.00088	.00110	.00132	.00176	1
		Profiling	.00009	.00012	.00014	.00019	.00029	.00038	.00048	.00057	.00076	.00096	.00115	.00153	3
		Slotting	.00009	.00012	.00014	.00019	.00029	.00038	.00048	.00057	.00076	.00096	.00115	.00153	4

MATERIAL	Hardness: 38-45 Rc (353-421 HBn)											Depth of Cut Passes			
	SFM	Chip Load (IPT) By Cutter Diameter													
		0.062	0.078	0.093	0.125	0.187	0.250	0.312	0.375	0.500	0.625		0.750	1.000	
		Deburring	-	-	-	-	-	-	-	-	-	-	-	-	-
		Profiling	-	-	-	-	-	-	-	-	-	-	-	-	-
		Slotting	-	-	-	-	-	-	-	-	-	-	-	-	-
		Deburring	-	-	-	-	-	-	-	-	-	-	-	-	-
		Profiling	-	-	-	-	-	-	-	-	-	-	-	-	-
		Slotting	-	-	-	-	-	-	-	-	-	-	-	-	-
		Deburring	-	-	-	-	-	-	-	-	-	-	-	-	-
		Profiling	-	-	-	-	-	-	-	-	-	-	-	-	-
		Slotting	-	-	-	-	-	-	-	-	-	-	-	-	-
		Deburring	.00015	.00019	.00023	.00031	.00046	.00062	.00077	.00093	.00124	.00155	.00186	.00248	1
		Profiling	.00013	.00017	.00020	.00027	.00040	.00054	.00067	.00081	.00108	.00135	.00162	.00216	4
		Slotting	.00013												