



Speeds & Feeds

Product Table: Miniature End Mills - Corner Radius - Long Flute
Characteristics: 4x Length of Cut, 4 Flutes
Series: 7192xx, 7873xx, 7875xx

Please note:

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	Hardness: ≤ 28 Rc (≤ 271 HBn)															
		Chip Load (IPT) by Dia			Depth of Cut		Chip Load (IPT) by Cutter Dia						Depth of Cut				
		0.015	0.031	0.047	Radial	Axial	0.062	0.078	0.093	0.125	0.187	0.250	0.375	0.500	Radial	Axial	
ALUMINUM ALLOYS	750	Slotting	.00014	.00028	.00043	1 x Dia	.11 x Dia	.00049	.00062	.00074	.00099	.00148	.00198	.00297	.00396	1 x Dia	27 x Dia
		Roughing	.00011	.00024	.00036	.13 x Dia	4 x Dia	.00041	.00051	.00061	.00083	.00123	.00165	.00248	.00330	25 x Dia	4 x Dia
Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1000	Finishing	.00017	.00035	.00053	.06 x Dia	4 x Dia	.00060	.00076	.00091	.00122	.00182	.00243	.00365	.00487	12 x Dia	4 x Dia
		Slotting	.00012	.00025	.00039	1 x Dia	.11 x Dia	.00044	.00056	.00066	.00089	.00133	.00178	.00267	.00356	1 x Dia	27 x Dia
Casting - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	750	Slotting	.00012	.00025	.00039	1 x Dia	.11 x Dia	.00044	.00056	.00066	.00089	.00133	.00178	.00267	.00356	1 x Dia	27 x Dia
		Roughing	.00010	.00021	.00032	.13 x Dia	4 x Dia	.00037	.00046	.00055	.00074	.00111	.00149	.00223	.00297	25 x Dia	4 x Dia
Casting - 5%-8% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	700	Slotting	.00012	.00025	.00039	1 x Dia	.11 x Dia	.00044	.00056	.00066	.00089	.00133	.00178	.00267	.00356	1 x Dia	27 x Dia
		Roughing	.00010	.00021	.00032	.13 x Dia	4 x Dia	.00037	.00046	.00055	.00074	.00111	.00149	.00223	.00297	25 x Dia	4 x Dia
Casting - 8%-12% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	650	Slotting	.00012	.00025	.00039	1 x Dia	.11 x Dia	.00044	.00056	.00066	.00089	.00133	.00178	.00267	.00356	1 x Dia	27 x Dia
		Roughing	.00010	.00021	.00032	.13 x Dia	4 x Dia	.00037	.00046	.00055	.00074	.00111	.00149	.00223	.00297	25 x Dia	4 x Dia
Casting - 12%-16% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	475	Slotting	.00012	.00025	.00039	1 x Dia	.11 x Dia	.00044	.00056	.00066	.00089	.00133	.00178	.00267	.00356	1 x Dia	27 x Dia
		Roughing	.00010	.00021	.00032	.13 x Dia	4 x Dia	.00037	.00046	.00055	.00074	.00111	.00149	.00223	.00297	25 x Dia	4 x Dia
Wrought - 5%-8% Si (4xxx)	1000	Slotting	.00015	.00031	.00047	.06 x Dia	4 x Dia	.00054	.00068	.00081	.00109	.00164	.00219	.00328	.00438	12 x Dia	4 x Dia
		Finishing	.00015	.00031	.00047	.06 x Dia	4 x Dia	.00054	.00068	.00081	.00109	.00164	.00219	.00328	.00438	12 x Dia	4 x Dia
Wrought - 8%-12% Si (4xxx)	800	Slotting	.00014	.00028	.00043	1 x Dia	.11 x Dia	.00049	.00062	.00074	.00099	.00148	.00198	.00297	.00396	1 x Dia	27 x Dia
		Roughing	.00011	.00024	.00036	.13 x Dia	4 x Dia	.00041	.00051	.00061	.00083	.00123	.00165	.00248	.00330	25 x Dia	4 x Dia
MAGNESIUM ALLOYS	1500	Slotting	.00014	.00028	.00043	1 x Dia	.11 x Dia	.00049	.00062	.00074	.00099	.00148	.00198	.00297	.00396	1 x Dia	27 x Dia
		Roughing	.00011	.00024	.00036	.13 x Dia	4 x Dia	.00041	.00051	.00061	.00083	.00123	.00165	.00248	.00330	25 x Dia	4 x Dia
ZINC ALLOYS	800	Slotting	.00014	.00028	.00043	1 x Dia	.11 x Dia	.00049	.00062	.00074	.00099	.00148	.00198	.00297	.00396	1 x Dia	27 x Dia
		Roughing	.00011	.00024	.00036	.13 x Dia	4 x Dia	.00041	.00051	.00061	.00083	.00123	.00165	.00248	.00330	25 x Dia	4 x Dia
COPPER ALLOYS	225	Slotting	.00011	.00023	.00034	1 x Dia	.11 x Dia	.00039	.00049	.00059	.00079	.00118	.00158	.00238	.00317	1 x Dia	27 x Dia
		Roughing	.00009	.00019	.00029	.13 x Dia	4 x Dia	.00033	.00041	.00049	.00066	.00099	.00132	.00198	.00264	25 x Dia	4 x Dia
High Coppers - 90%+ (C1xxxx)	500	Slotting	.00011	.00023	.00034	1 x Dia	.11 x Dia	.00039	.00049	.00059	.00079	.00118	.00158	.00238	.00317	1 x Dia	27 x Dia
		Roughing	.00009	.00019	.00029	.13 x Dia	4 x Dia	.00033	.00041	.00049	.00066	.00099	.00132	.00198	.00264	25 x Dia	4 x Dia
Brass (Copper Zinc alloys, C2xxxx, C3xxxx, C4xxxx, C6400-C69800)	225	Slotting	.00011	.00023	.00034	1 x Dia	.11 x Dia	.00039	.00049	.00059	.00079	.00118	.00158	.00238	.00317	1 x Dia	27 x Dia
		Roughing	.00009	.00019	.00029	.13 x Dia	4 x Dia	.00033	.00041	.00049	.00066	.00099	.00132	.00198	.00264	25 x Dia	4 x Dia
Phosphor Bronzes (Copper Tin alloys, C5xxxx)	500	Slotting	.00011	.00023	.00034	1 x Dia	.11 x Dia	.00039	.00049	.00059	.00079	.00118	.00158	.00238	.00317	1 x Dia	27 x Dia
		Roughing	.00009	.00019	.00029	.13 x Dia	4 x Dia	.00033	.00041	.00049	.00066	.00099	.00132	.00198	.00264	25 x Dia	4 x Dia
Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200)	500	Slotting	.00011	.00023	.00034	1 x Dia	.11 x Dia	.00039	.00049	.00059	.00079	.00118	.00158	.00238	.00317	1 x Dia	27 x Dia
		Roughing	.00009	.00019	.00029	.13 x Dia	4 x Dia	.00033	.00041	.00049	.00066	.00099	.00132	.00198	.00264	25 x Dia	4 x Dia
Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	500	Slotting	.00011	.00023	.00034	1 x Dia	.11 x Dia	.00039	.00049	.00059	.00079	.00118	.00158	.00238	.00317	1 x Dia	27 x Dia
		Roughing	.00009	.00019	.00029	.13 x Dia	4 x Dia	.00033	.00041	.00049	.00066	.00099	.00132	.00198	.00264	25 x Dia	4 x Dia
Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxxx)	225	Slotting	.00011	.00023	.00034	1 x Dia	.11 x Dia	.00039	.00049	.00059	.00079	.00118	.00158	.00238	.00317	1 x Dia	27 x Dia
		Roughing	.00009	.00019	.00029	.13 x Dia	4 x Dia	.00033	.00041	.00049	.00066	.00099	.00132	.00198	.00264	25 x Dia	4 x Dia
Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	550	Slotting	.00013	.00028	.00042	.06 x Dia	4 x Dia	.00048	.00061	.00072	.00097	.00146	.00195	.00292	.00389	12 x Dia	4 x Dia
		Finishing	.00013	.00028	.00042	.06 x Dia	4 x Dia	.00048	.00061	.00072	.00097	.00146	.00195	.00292	.00389	12 x Dia	4 x Dia

MATERIAL	SFM	Hardness: 29-37 Rc (279-344 HBn)															
		Chip Load (IPT) by Dia			Depth of Cut		Chip Load (IPT) by Cutter Dia						Depth of Cut				
		0.015	0.031	0.047	Radial	Axial	0.062	0.078	0.093	0.125	0.187	0.250	0.375	0.500	Radial	Axial	
CARBON STEELS	600	Slotting	.00005	.00010	.00015	1 x Dia	.11 x Dia	.00017	.00021	.00025	.00034	.00051	.00068	.00102	.00136	1 x Dia	27 x Dia
		Roughing	.00004	.00007	.00011	.13 x Dia	4 x Dia	.00013	.00016	.00019	.00026	.00038	.00051	.00077	.00102	25 x Dia	4 x Dia
		Finishing	.00005	.00011	.00016	.06 x Dia	4 x Dia	.00019	.00024	.00028	.00038	.00057	.00076	.00114	.00152	12 x Dia	4 x Dia
1030 - 1029 & all 10Lxx, 11xx - 1139 & all 11Lxx, 12xx - 1215 & all 12Lxx	200	Slotting	.00004	.00009	.00013	1 x Dia	.11 x Dia	.00015	.00019	.00023	.00031	.00047	.00062	.00093	.00124	1 x Dia	27 x Dia
		Roughing	.00003	.00007	.00010	.13 x Dia	4 x Dia	.00012	.00015	.00017	.00023	.00035	.00047	.00070	.00093	25 x Dia	4 x Dia
		Finishing	.00005	.00010	.00015	.06 x Dia	4 x Dia	.00017	.00022	.00026	.00035	.00052	.00070	.00104	.00139	12 x Dia	4 x Dia
STAINLESS STEELS	450	Slotting	.00005	.00010	.00015	1 x Dia	.11 x Dia	.00017	.00021	.00025	.00034	.00051	.00068	.00102	.00136	1 x Dia	27 x Dia
		Roughing	.00004	.00007	.00011	.13 x Dia	4 x Dia	.00013	.00016	.00019	.00026	.00038	.00051	.00077	.00102	25 x Dia	4 x Dia
		Finishing	.00005	.00011	.00016	.06 x Dia	4 x Dia	.00019	.00024	.00028	.00038	.00057	.00076	.00114	.00152	12 x Dia	4 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	Slotting	.00004	.00009	.00013	1 x Dia	.11 x Dia	.00015	.00019	.00023	.00031	.00047	.00062	.00093	.00124	1 x Dia	27 x Dia
		Roughing	.00003	.00007	.00010	.13 x Dia	4 x Dia	.00012	.00015	.00017	.00023	.00035	.00047	.00070	.00093	25 x Dia	4 x Dia
		Finishing	.00005	.00010	.00015	.06 x Dia	4 x Dia	.00017	.00022	.00026	.00035	.00052	.00070	.00104	.00139	12 x Dia	4 x Dia
414, 431, 440A, 440B, 440C, 13-8, 15-5, 15-7, 17-4, 17-7	150	Slotting	.00003	.00006	.00008	1 x Dia	.11 x Dia	.00010	.00012	.00014	.00019	.00029	.00039	.00058	.00078	1 x Dia	27 x Dia
		Roughing	.00002	.00004	.00006	.13 x Dia	4 x Dia	.00007	.00009	.00011	.00015	.00022	.00029	.00044	.00058	25 x Dia	4 x Dia
		Finishing	.00003	.00006	.00009	.06 x Dia	4 x Dia	.00011	.00014	.00016	.00022	.00033	.00043	.00065	.00087	12 x Dia	4 x Dia
TOOL STEELS	200	Slotting	.00004	.00009	.00013	1 x Dia	.11 x Dia	.00015	.00019	.00023	.00031	.00047	.00062	.00093	.00124	1 x Dia	27 x Dia
		Roughing	.00003	.00007	.00010	.13 x Dia	4 x Dia	.00012	.00015	.00017	.00023	.00035	.00047	.00070	.00093	25 x Dia	4 x Dia
		Finishing	.00005	.00010	.00015	.06 x Dia	4 x Dia	.00017	.00022	.00026	.00035	.00052	.00070	.00104	.00139	12 x Dia	4 x Dia
A, L, O, P, W series	150	Slotting	.00003	.00006	.00008	1 x Dia	.11 x Dia	.00010	.00012	.00014	.00019	.00029	.00039	.00058	.00078	1 x Dia	27 x Dia
		Roughing	.00002	.00004	.00006	.13 x Dia	4 x Dia	.00007	.00009	.00011	.00015	.00022	.00029	.00044	.00058	25 x Dia	4 x Dia
		Finishing	.00003	.00006	.00009	.06 x Dia	4 x Dia	.00011	.00014	.00016	.00022	.00033	.00043	.00065	.00087	12 x Dia	4 x Dia
D, H, M, T, S series	150																