



Speeds & Feeds

Product Table: Miniature End Mills - Corner Radius - Stub & Standard
Characteristics: 1.5x Length of Cut, 4 Flutes
Series: 7341xx, 7342xx, 7587xx, 8560xx, 8571xx, 8720xx, 8924xx, 9048xx, 9137xx, 9152xx, 9350xx, 9369xx, 9379xx, 9411xx, 9414xx, 9548xx, 9588xx, 9640xx, 9664xx, 9802xx, 9875xx, 9938xx, 9945xx, 9979xx

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	.00017	.00035	.00052	1 x Dia	.20 x Dia	.00060	.00076	.00090	.00121	.00181	.00242	.00363	.00484	1 x Dia	.50 x Dia
		Roughing	.00022	.00045	.00068	.30 x Dia	1 x Dia	.00078	.00099	.00118	.00158	.00237	.00316	.00474	.00633	60 x Dia	1 x Dia
Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1000	Finishing	.00024	.00050	.00075	.13 x Dia	1 x Dia	.00086	.00108	.00129	.00174	.00260	.00348	.00521	.00695	25 x Dia	1 x Dia
		Slotting	.00015	.00031	.00047	1 x Dia	.20 x Dia	.00054	.00068	.00081	.00109	.00163	.00218	.00327	.00436	1 x Dia	.50 x Dia
Casting - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	700	Slotting	.00015	.00031	.00047	1 x Dia	.20 x Dia	.00054	.00068	.00081	.00109	.00163	.00218	.00327	.00436	1 x Dia	.50 x Dia
		Roughing	.00020	.00041	.00062	.30 x Dia	1 x Dia	.00071	.00089	.00106	.00142	.00213	.00285	.00427	.00569	60 x Dia	1 x Dia
Casting - 5%-8% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	650	Slotting	.00015	.00031	.00047	1 x Dia	.20 x Dia	.00054	.00068	.00081	.00109	.00163	.00218	.00327	.00436	1 x Dia	.50 x Dia
		Roughing	.00020	.00041	.00062	.30 x Dia	1 x Dia	.00071	.00089	.00106	.00142	.00213	.00285	.00427	.00569	60 x Dia	1 x Dia
Casting - 12%-16% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	475	Slotting	.00015	.00031	.00047	1 x Dia	.20 x Dia	.00054	.00068	.00081	.00109	.00163	.00218	.00327	.00436	1 x Dia	.50 x Dia
		Roughing	.00020	.00041	.00062	.30 x Dia	1 x Dia	.00071	.00089	.00106	.00142	.00213	.00285	.00427	.00569	60 x Dia	1 x Dia
Wrought - 5%-8% Si (4xxx)	1000	Slotting	.00015	.00031	.00047	1 x Dia	.20 x Dia	.00054	.00068	.00081	.00109	.00163	.00218	.00327	.00436	1 x Dia	.50 x Dia
		Roughing	.00020	.00041	.00062	.30 x Dia	1 x Dia	.00071	.00089	.00106	.00142	.00213	.00285	.00427	.00569	60 x Dia	1 x Dia
Wrought - 8%-12% Si (4xxx)	800	Slotting	.00017	.00035	.00052	1 x Dia	.20 x Dia	.00060	.00076	.00090	.00121	.00181	.00242	.00363	.00484	1 x Dia	.50 x Dia
		Roughing	.00022	.00045	.00068	.30 x Dia	1 x Dia	.00078	.00099	.00118	.00158	.00237	.00316	.00474	.00633	60 x Dia	1 x Dia
MAGNESIUM ALLOYS	1500	Slotting	.00017	.00035	.00052	1 x Dia	.20 x Dia	.00060	.00076	.00090	.00121	.00181	.00242	.00363	.00484	1 x Dia	.50 x Dia
		Roughing	.00022	.00045	.00068	.30 x Dia	1 x Dia	.00078	.00099	.00118	.00158	.00237	.00316	.00474	.00633	60 x Dia	1 x Dia
ZINC ALLOYS	800	Slotting	.00017	.00035	.00052	1 x Dia	.20 x Dia	.00060	.00076	.00090	.00121	.00181	.00242	.00363	.00484	1 x Dia	.50 x Dia
		Roughing	.00022	.00045	.00068	.30 x Dia	1 x Dia	.00078	.00099	.00118	.00158	.00237	.00316	.00474	.00633	60 x Dia	1 x Dia
COPPER ALLOYS	225	Slotting	.00013	.00028	.00042	1 x Dia	.20 x Dia	.00048	.00060	.00072	.00097	.00145	.00194	.00290	.00387	1 x Dia	.50 x Dia
		Roughing	.00017	.00036	.00055	.30 x Dia	1 x Dia	.00063	.00079	.00094	.00127	.00189	.00253	.00380	.00506	60 x Dia	1 x Dia
High Coppers - 90%+ (C1xxx)	500	Slotting	.00013	.00028	.00042	1 x Dia	.20 x Dia	.00048	.00060	.00072	.00097	.00145	.00194	.00290	.00387	1 x Dia	.50 x Dia
		Roughing	.00017	.00036	.00055	.30 x Dia	1 x Dia	.00063	.00079	.00094	.00127	.00189	.00253	.00380	.00506	60 x Dia	1 x Dia
Brass (Copper Zinc alloys, C2xxx, C3xxx, C4xxx, C6400-C69800)	225	Slotting	.00013	.00028	.00042	1 x Dia	.20 x Dia	.00048	.00060	.00072	.00097	.00145	.00194	.00290	.00387	1 x Dia	.50 x Dia
		Roughing	.00017	.00036	.00055	.30 x Dia	1 x Dia	.00063	.00079	.00094	.00127	.00189	.00253	.00380	.00506	60 x Dia	1 x Dia
Phosphor Bronzes (Copper Tin alloys, C5xxx)	500	Slotting	.00013	.00028	.00042	1 x Dia	.20 x Dia	.00048	.00060	.00072	.00097	.00145	.00194	.00290	.00387	1 x Dia	.50 x Dia
		Roughing	.00017	.00036	.00055	.30 x Dia	1 x Dia	.00063	.00079	.00094	.00127	.00189	.00253	.00380	.00506	60 x Dia	1 x Dia
Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200)	500	Slotting	.00013	.00028	.00042	1 x Dia	.20 x Dia	.00048	.00060	.00072	.00097	.00145	.00194	.00290	.00387	1 x Dia	.50 x Dia
		Roughing	.00017	.00036	.00055	.30 x Dia	1 x Dia	.00063	.00079	.00094	.00127	.00189	.00253	.00380	.00506	60 x Dia	1 x Dia
Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	500	Slotting	.00013	.00028	.00042	1 x Dia	.20 x Dia	.00048	.00060	.00072	.00097	.00145	.00194	.00290	.00387	1 x Dia	.50 x Dia
		Roughing	.00017	.00036	.00055	.30 x Dia	1 x Dia	.00063	.00079	.00094	.00127	.00189	.00253	.00380	.00506	60 x Dia	1 x Dia
Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxx)	225	Slotting	.00013	.00028	.00042	1 x Dia	.20 x Dia	.00048	.00060	.00072	.00097	.00145	.00194	.00290	.00387	1 x Dia	.50 x Dia
		Roughing	.00017	.00036	.00055	.30 x Dia	1 x Dia	.00063	.00079	.00094	.00127	.00189	.00253	.00380	.00506	60 x Dia	1 x Dia
Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	550	Slotting	.00019	.00040	.00060	.13 x Dia	1 x Dia	.00069	.00087	.00103	.00139	.00208	.00278	.00417	.00556	25 x Dia	1 x Dia
		Roughing	.00024	.00048	.00072	.30 x Dia	1 x Dia	.00086	.00108	.00129	.00174	.00260	.00348	.00521	.00695	25 x Dia	1 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	.00006	.00012	.00018	1 x Dia	.20 x Dia	.00021	.00026	.00031	.00042	.00062	.00083	.00125	.00166	1 x Dia	.50 x Dia
		Roughing	.00007	.00014	.00021	.30 x Dia	1 x Dia	.00024	.00031	.00036	.00049	.00073	.00098	.00147	.00196	60 x Dia	1 x Dia
		Finishing	.00007	.00015	.00023	.13 x Dia	1 x Dia	.00027	.00034	.00040	.00054	.00081	.00109	.00163	.00217	25 x Dia	1 x Dia
1030 - 1095, 1140 - 1151, 13xx, 15xx, 2xxx, 3xxx, 4xxx & 4xLxx, 5xxx & 5xLxx, 50xxx & 50Lxxx, 51xxx & 51Lxxx, 52xxx & 52Lxxx, 6xxx, 8xxx, 9xxx	200	Slotting	.00005	.00011	.00016	1 x Dia	.20 x Dia	.00019	.00024	.00028	.00038	.00057	.00076	.00114	.00152	1 x Dia	.50 x Dia
		Roughing	.00006	.00013	.00019	.30 x Dia	1 x Dia	.00022	.00028	.00033	.00045	.00067	.00089	.00134	.00179	60 x Dia	1 x Dia
		Finishing	.00007	.00014	.00021	.13 x Dia	1 x Dia	.00025	.00031	.00037	.00050	.00074	.00099	.00149	.00199	25 x Dia	1 x Dia
STAINLESS STEELS	450	Slotting	.00006	.00012	.00018	1 x Dia	.20 x Dia	.00021	.00026	.00031	.00042	.00062	.00083	.00125	.00166	1 x Dia	.50 x Dia
		Roughing	.00007	.00014	.00021	.30 x Dia	1 x Dia	.00024	.00031	.00036	.00049	.00073	.00098	.00147	.00196	60 x Dia	1 x Dia
		Finishing	.00007	.00015	.00023	.13 x Dia	1 x Dia	.00027	.00034	.00040	.00054	.00081	.00109	.00163	.00217	25 x Dia	1 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	.00005	.00011	.00016	1 x Dia	.20 x Dia	.00019	.00024	.00028	.00038	.00057	.00076	.00114	.00152	1 x Dia	.50 x Dia
		Roughing	.00006	.00013	.00019	.30 x Dia	1 x Dia	.00022	.00028	.00033	.00045	.00067	.00089	.00134	.00179	60 x Dia	1 x Dia
		Finishing	.00007	.00014	.00021	.13 x Dia	1 x Dia	.00025	.00031	.00037	.00050	.00074	.00099	.00149	.00199	25 x Dia	1 x Dia
414, 431, 440A, 440B, 440C, 13-8, 15-5, 15-7, 17-4, 17-7	150	Slotting	.00003	.00007	.00010	1 x Dia	.20 x Dia	.00012	.00015	.00018	.00024	.00036	.00048	.00071	.00095	1 x Dia	.50 x Dia
		Roughing	.00004	.00008	.00012	.30 x Dia	1 x Dia	.00014	.00017	.00021	.00028	.00042	.00056	.00084	.00112	60 x Dia	1 x Dia
		Finishing	.00004	.00009	.00013	.13 x Dia	1 x Dia	.00015	.00019	.00023	.00031	.00046	.00062	.00093	.00124	25 x Dia	1 x Dia
TOOL STEELS	200	Slotting	.00005	.00011	.00016	1 x Dia	.20 x Dia	.00019	.00024	.00028	.00038	.00057	.00076	.00114	.00152	1 x Dia	.50 x Dia
		Roughing	.00006	.00013	.00019	.30 x Dia	1 x Dia	.00022	.00028	.00033	.00045	.00067	.00089	.00134	.00179	60 x Dia	1 x Dia
		Finishing	.00007	.00014	.00021	.13 x Dia	1 x Dia	.00025	.00031	.00037	.00050	.00074	.00099	.00149	.00199	25 x Dia	1 x Dia
A, L, O, P, W series	150	Slotting	.00003	.00007	.00010	1 x Dia	.20 x Dia	.00012	.00015	.00018	.00024	.00036	.00048	.00071	.00095	1 x Dia	.50 x Dia
		Roughing	.00004	.00008	.00012	.30 x Dia	1 x Dia	.00014	.00017	.00021	.00028	.00042	.00056	.00084	.00112	60 x Dia	1 x Dia
		Finishing	.00004	.00009	.00013	.13 x Dia	1 x Dia	.00015	.00019	.00023	.00031	.00046	.00062	.00093	.00124	25 x Dia	1 x Dia
D, H, M, T, S series	150	Slotting	.00003	.00007	.00010	1 x Dia	.20 x Dia	.00012	.00015	.00018	.00024	.00036	.00048	.00071	.00095	1 x Dia	.50 x Dia
		Roughing	.00004	.00008	.00012	.30 x											