



Speeds & Feeds

Product Table: Engraving Cutters - Pointed

Characteristics: 1 Flute, Pointed Tip

Series or Item	RPM	Chip Load (IPT) by Material													Axial DOC
		Plastics	Non-Ferrous	Iron			Carbon Steels			Stainless Steels		Titanium		High Temp Alloys	
		Non-Filled, Glass Filled, Carbon Fiber, G10	Aluminum, Magnesium, Copper Alloys	Cast Iron (< 30 Rc)	Cast Iron (30+ Rc)	Ductile, Malleable	< 29 Rc	30 < 39 Rc	40 < 45 Rc	< 30 Rc	32 < 45 Rc	< 30 Rc	32 < 45 Rc	Inconel, Waspaloy, Monel	
250xx	6000+	.00126	.00084	.00084	.00034	.00042	.00050	.00038	.00021	.00042	.00021	.00042	.00021	.00034	< .010
251xx	6000+	.00144	.00096	.00096	.00038	.00048	.00058	.00043	.00024	.00048	.00024	.00048	.00024	.00038	< .010
300xx	6000+	.00180	.00120	.00120	.00048	.00060	.00072	.00054	.00030	.00060	.00030	.00060	.00030	.00048	< .010
301xx	6000+	.00198	.00132	.00132	.00053	.00066	.00079	.00059	.00033	.00066	.00033	.00066	.00033	.00053	< .010
304xx	6000+	.00171	.00114	.00114	.00046	.00057	.00068	.00051	.00029	.00057	.00029	.00057	.00029	.00046	< .010
305xx	6000+	.00188	.00125	.00125	.00050	.00063	.00075	.00056	.00031	.00063	.00031	.00063	.00031	.00050	< .010
8535xx	6000+	.00135	.00090	.00090	.00036	.00045	.00054	.00041	.00023	.00045	.00023	.00045	.00023	.00036	< .010
8555xx	6000+	.00171	.00114	.00114	.00046	.00057	.00068	.00051	.00029	.00057	.00029	.00057	.00029	.00046	< .010
8841xx	6000+	.00198	.00132	.00132	.00053	.00066	.00079	.00059	.00033	.00066	.00033	.00066	.00033	.00053	< .010
8986xx	6000+	.00180	.00120	.00120	.00048	.00060	.00072	.00054	.00030	.00060	.00030	.00060	.00030	.00048	< .010
9372xx	6000+	.00180	.00120	.00120	.00048	.00060	.00072	.00054	.00030	.00060	.00030	.00060	.00030	.00048	< .010
9378xx	6000+	.00144	.00096	.00096	.00038	.00048	.00058	.00043	.00024	.00048	.00024	.00048	.00024	.00038	< .010
9417xx	6000+	.00126	.00084	.00084	.00034	.00042	.00050	.00038	.00021	.00042	.00021	.00042	.00021	.00034	< .010
9717xx	6000+	.00189	.00126	.00126	.00050	.00063	.00076	.00057	.00032	.00063	.00032	.00063	.00032	.00050	< .010
9786xx	6000+	.00144	.00096	.00096	.00038	.00048	.00058	.00043	.00024	.00048	.00024	.00048	.00024	.00038	< .010
9815xx	6000+	.00126	.00084	.00084	.00034	.00042	.00050	.00038	.00021	.00042	.00021	.00042	.00021	.00034	< .010
9835xx	6000+	.00207	.00138	.00138	.00055	.00069	.00083	.00062	.00035	.00069	.00035	.00069	.00035	.00055	< .010
9838xx	6000+	.00117	.00078	.00078	.00031	.00039	.00047	.00035	.00020	.00039	.00020	.00039	.00020	.00031	< .010
9905xx	6000+	.00216	.00144	.00144	.00058	.00072	.00086	.00065	.00036	.00072	.00036	.00072	.00036	.00058	< .010
9965xx	6000+	.00090	.00060	.00060	.00024	.00030	.00036	.00027	.00015	.00030	.00015	.00030	.00015	.00024	< .010
9973xx	6000+	.00153	.00102	.00102	.00041	.00051	.00061	.00046	.00026	.00051	.00026	.00051	.00026	.00041	< .010
9981xx	6000+	.00099	.00066	.00066	.00026	.00033	.00040	.00030	.00017	.00033	.00017	.00033	.00017	.00026	< .010
9984xx	6000+	.00162	.00108	.00108	.00043	.00054	.00065	.00049	.00027	.00054	.00027	.00054	.00027	.00043	< .010
9997xx	6000+	.00108	.00072	.00072	.00029	.00036	.00043	.00032	.00018	.00036	.00018	.00036	.00018	.00029	< .010

Please note:

All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions (minimal runout is required for best results).

Suggested speed is 6000 rpm or more. Choose an rpm value that creates the least amount of internal machine vibration. In many cases, a speed increaser is helpful.
 Posted chip loads reflect axial depths of cut up to .009. For depths of cut = .010"-.015", reduce posted chip loads by 20%. For depths of cut = .016"-.020", reduce posted chip loads by 30%.
 Posted chip loads reflect uncoated cutters. Coating is better suited to prolong tool life rather than decrease cycle times.
 Posted chip loads reflect HORIZONTAL milling conditions. For VERTICAL plunge milling to depth, reduce posted chip loads by 50% (ramping is preferred to maintain tip integrity).

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.