



Speeds & Feeds

**Product Table:** Engraving Cutters - Marking Cutters - Tip Radius for Ferrous Materials  
**Characteristics:** 2 Flutes

Series or Item	RPM	Chip Load (IPT) by Material											Axial DOC	
		Non-Ferrous	Iron			Carbon Steels			Stainless Steels		Titanium			High Temp Alloys
		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
909730	6000+	.00126	.00126	.00050	.00063	.00077	.00059	.00032	.00063	.00032	.00063	.00032	.00050	< .010
909745	6000+	.00139	.00139	.00055	.00069	.00084	.00064	.00035	.00069	.00035	.00069	.00035	.00055	< .010
914330	6000+	.00126	.00126	.00050	.00063	.00077	.00059	.00032	.00063	.00032	.00063	.00032	.00050	< .010
914345	6000+	.00139	.00139	.00055	.00069	.00084	.00064	.00035	.00069	.00035	.00069	.00035	.00055	< .010
918430	6000+	.00126	.00126	.00050	.00063	.00077	.00059	.00032	.00063	.00032	.00063	.00032	.00050	< .010
918445	6000+	.00139	.00139	.00055	.00069	.00084	.00064	.00035	.00069	.00035	.00069	.00035	.00055	< .010
926330	6000+	.00119	.00119	.00048	.00060	.00072	.00055	.00030	.00060	.00030	.00060	.00030	.00048	< .010
926345	6000+	.00131	.00131	.00052	.00065	.00079	.00061	.00033	.00065	.00033	.00065	.00033	.00052	< .010
947215	6000+	.00088	.00088	.00035	.00044	.00054	.00041	.00022	.00044	.00022	.00044	.00022	.00035	< .010
947230	6000+	.00126	.00126	.00050	.00063	.00077	.00059	.00032	.00063	.00032	.00063	.00032	.00050	< .010
947245	6000+	.00139	.00139	.00055	.00069	.00084	.00064	.00035	.00069	.00035	.00069	.00035	.00055	< .010
954915	6000+	.00088	.00088	.00035	.00044	.00054	.00041	.00022	.00044	.00022	.00044	.00022	.00035	< .010
954930	6000+	.00126	.00126	.00050	.00063	.00077	.00059	.00032	.00063	.00032	.00063	.00032	.00050	< .010
954945	6000+	.00139	.00139	.00055	.00069	.00084	.00064	.00035	.00069	.00035	.00069	.00035	.00055	< .010
958715	6000+	.00078	.00078	.00031	.00039	.00048	.00036	.00020	.00039	.00020	.00039	.00020	.00031	< .010
958730	6000+	.00112	.00112	.00045	.00056	.00068	.00052	.00028	.00056	.00028	.00056	.00028	.00045	< .010
958745	6000+	.00123	.00123	.00049	.00062	.00075	.00057	.00031	.00062	.00031	.00062	.00031	.00049	< .010
961915	6000+	.00088	.00088	.00035	.00044	.00054	.00041	.00022	.00044	.00022	.00044	.00022	.00035	< .010
961930	6000+	.00126	.00126	.00050	.00063	.00077	.00059	.00032	.00063	.00032	.00063	.00032	.00050	< .010
961940	6000+	.00101	.00101	.00040	.00050	.00061	.00047	.00025	.00050	.00025	.00050	.00025	.00040	< .010
961945	6000+	.00139	.00139	.00055	.00069	.00084	.00064	.00035	.00069	.00035	.00069	.00035	.00055	< .010
961960	6000+	.00151	.00151	.00060	.00076	.00092	.00070	.00038	.00076	.00038	.00076	.00038	.00060	< .010
966815	6000+	.00078	.00078	.00031	.00039	.00048	.00036	.00020	.00039	.00020	.00039	.00020	.00031	< .010
966830	6000+	.00112	.00112	.00045	.00056	.00068	.00052	.00028	.00056	.00028	.00056	.00028	.00045	< .010
966845	6000+	.00123	.00123	.00049	.00062	.00075	.00057	.00031	.00062	.00031	.00062	.00031	.00049	< .010
981815	6000+	.00088	.00088	.00035	.00044	.00054	.00041	.00022	.00044	.00022	.00044	.00022	.00035	< .010
981820	6000+	.00101	.00101	.00040	.00050	.00061	.00047	.00025	.00050	.00025	.00050	.00025	.00040	< .010
981830	6000+	.00126	.00126	.00050	.00063	.00077	.00059	.00032	.00063	.00032	.00063	.00032	.00050	< .010
981845	6000+	.00139	.00139	.00055	.00069	.00084	.00064	.00035	.00069	.00035	.00069	.00035	.00055	< .010
987615	6000+	.00078	.00078	.00031	.00039	.00048	.00036	.00020	.00039	.00020	.00039	.00020	.00031	< .010
987630	6000+	.00112	.00112	.00045	.00056	.00068	.00052	.00028	.00056	.00028	.00056	.00028	.00045	< .010
987640	6000+	.00090	.00090	.00036	.00045	.00054	.00042	.00022	.00045	.00022	.00045	.00022	.00036	< .010
987645	6000+	.00123	.00123	.00049	.00062	.00075	.00057	.00031	.00062	.00031	.00062	.00031	.00049	< .010
987660	6000+	.00134	.00134	.00054	.00067	.00082	.00062	.00034	.00067	.00034	.00067	.00034	.00054	< .010
831430	6000+	.00126	.00126	.00050	.00063	.00077	.00059	.00032	.00063	.00032	.00063	.00032	.00050	< .010
831445	6000+	.00139	.00139	.00055	.00069	.00084	.00064	.00035	.00069	.00035	.00069	.00035	.00055	< .010
830745	6000+	.00131	.00131	.00052	.00065	.00079	.00061	.00033	.00065	.00033	.00065	.00033	.00052	< .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](mailto: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.