HARVEY TOOL

Speeds & Feeds

Product Table: Engraving Cutters - Marking Cutters for Non-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	
902915	6000+	.00112	.00112	.00045	.00056	.00068	.00052	.00028	.00056	.00028	.00056	.00028	.00045	< .010
902930	6000+	.00160	.00160	.00064	.00080	.00097	.00074	.00040	.00080	.00040	.00080	.00040	.00064	< .010
902945	6000+	.00176	.00176	.00070	.00088	.00107	.00082	.00044	.00088	.00044	.00088	.00044	.00070	< .010
918630	6000+	.00160	.00160	.00064	.00080	.00097	.00074	.00040	.00080	.00040	.00080	.00040	.00064	< .010
918645	6000+	.00176	.00176	.00070	.00088	.00107	.00082	.00044	.00088	.00044	.00088	.00044	.00070	< .010
921230	6000+	.00160	.00160	.00064	.00080	.00097	.00074	.00040	.00080	.00040	.00080	.00040	.00064	< .010
921245	6000+	.00176	.00176	.00070	.00088	.00107	.00082	.00044	.00088	.00044	.00088	.00044	.00070	< .010
963215	6000+	.00112	.00112	.00045	.00056	.00068	.00052	.00028	.00056	.00028	.00056	.00028	.00045	< .010
963220	6000+	.00128	.00128	.00051	.00064	.00078	.00059	.00032	.00064	.00032	.00064	.00032	.00051	< .010
963230	6000+	.00160	.00160	.00064	.00080	.00097	.00074	.00040	.00080	.00040	.00080	.00040	.00064	< .010
963245	6000+	.00176	.00176	.00070	.00088	.00107	.00082	.00044	.00088	.00044	.00088	.00044	.00070	< .010
963260	6000+	.00192	.00192	.00077	.00096	.00116	.00089	.00048	.00096	.00048	.00096	.00048	.00077	< .010
967415	6000+	.00089	.00089	.00036	.00045	.00054	.00041	.00022	.00045	.00022	.00045	.00022	.00036	< .010
967420	6000+	.00102	.00102	.00041	.00051	.00062	.00047	.00026	.00051	.00026	.00051	.00026	.00041	< .010
967430	6000+	.00128	.00128	.00051	.00064	.00078	.00059	.00032	.00064	.00032	.00064	.00032	.00051	< .010
967445	6000+	.00140	.00140	.00056	.00070	.00085	.00065	.00035	.00070	.00035	.00070	.00035	.00056	< .010
987815	6000+	.00089	.00089	.00036	.00045	.00054	.00041	.00022	.00045	.00022	.00045	.00022	.00036	< .010
987820	6000+	.00102	.00102	.00041	.00051	.00062	.00047	.00026	.00051	.00026	.00051	.00026	.00041	< .010
987830	6000+	.00128	.00128	.00051	.00064	.00078	.00059	.00032	.00064	.00032	.00064	.00032	.00051	< .010
987845	6000+	.00140	.00140	.00056	.00070	.00085	.00065	.00035	.00070	.00035	.00070	.00035	.00056	< .010
993215	6000+	.00089	.00089	.00036	.00045	.00054	.00041	.00022	.00045	.00022	.00045	.00022	.00036	< .010
993220	6000+	.00102	.00102	.00041	.00051	.00062	.00047	.00026	.00051	.00026	.00051	.00026	.00041	< .010
993230	6000+	.00128	.00128	.00051	.00064	.00078	.00059	.00032	.00064	.00032	.00064	.00032	.00051	< .010

Please note:

Tools are able to cut a variety of materials, although they are best suited for Non-Ferrous applications.
All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions (mini mal 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 ma ny 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 5 0% (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 approp riate safety equipment in the vicinity of use.