



## Speeds & Feeds

**Product Table:** Undercutting End Mills - 270° Deburring Undercut  
**Series:** 7222xx, 7326xx, 7371xx, 8083xx, 8096xx, 8098xx, 8099xx, 8832xx, 8833xx, 8861xx, 8908xx, 8909xx, 8953xx, 8996xx, 8997xx, 9264xx, 9265xx, 9805xx, 9806xx

Table 1	
Neck Length Multiple	Chip Load
3x	120%
5x	100%
8x	80%
12x	65%
15x	55%

Material	SFM	Chip Load (IPT) By Effective Cutter Diameter								
		0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250
<b>Non-Ferrous Alloys</b> Aluminum, Magnesium, Zinc & Copper Alloys	800	.00008	.00017	.00031	.00041	.00051	.00061	.00083	.00123	.00165
<b>Ferrous Alloys</b> Carbon, Stainless & Tool Steels	200	.00008	.00016	.00028	.00037	.00047	.00056	.00075	.00112	.00150
<b>High Temp Alloys</b> Titanium, Inconel & Nickel Based Alloys	100	.00007	.00014	.00025	.00033	.00042	.00050	.00068	.00101	.00135

**Please note:**

All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions.

Speed and feed calculations should be made in the traditional manner with 3 adjustments:

1. In cases that involve a angled (like a cone shape) or spherical cutter diameter, the EFFECTIVE cutter diameter should be used; that is, the specific diameter within the angled or spherical form that directly contacts the burr.
2. Burs possess right and left hand flutes. Feed calculations should be made using the number of right hand flutes only.
3. For varying neck lengths, use **Table 1** to calculate adjusted chip load

EX: Tool #980593 has a neck diameter of .038" and a neck length of .250". The neck length multiple is  $.250 / .038 = 6.5x$

Round up to the next multiple, and the suggested chip load is 80% of posted values.

Posted chip loads reflect uncoated cutters. Coating is better suited to prolong tool life rather than decrease cycle times.

Axial and radial depths of cut are not posted as deburring is typically done in one pass.

Since miniscule material is being removed, chip load is not as closely connected to the workpiece material as is seen in traditional machining, allowing minimal material buckets.

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.