



**Speeds & Feeds**

**Product Table:** Variable Helix End Mills for Medium Alloy Steels - Square - Long Reach, Stub Flute

**Characteristics:** 10x Reach Multiple

**Series:** 9311xx-C3, 9312xx-C3

Material	Hardness (HBn)	SFM	Chip Load (IPT) By Cutter Diameter											Depth of Cut			
			0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250	0.312	0.375	0.500	Radial	Axial	
<b>CARBON STEELS</b>  1030 - 1095, 1140 - 1151, 13xx, 15xx, 2xxx, 3xxx, 4xxx & 4xLxx, 5xxx & 5xLxx, 50xxx & 50Lxxx, 51xxx & 51Lxxx, 52xxx & 52Lxxx, 6xxx, 8xxx, 9xxx	225 - 250	250	Slotting	.00006	.00013	.00019	.00025	.00032	.00038	.00048	.00072	.00097	.00127	.00152	.00203	1x Dia	.26x Dia
			Roughing	.00007	.00015	.00023	.00030	.00038	.00046	.00058	.00087	.00117	.00153	.00184	.00245	.26x Dia	.5x - 1x Dia
<b>STAINLESS STEELS</b>  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, 414, 42x, 43x, 44x, 501, 502	250 - 275	220	Finishing	.00009	.00018	.00028	.00037	.00046	.00055	.00070	.00105	.00141	.00184	.00221	.00295	.07x Dia	.5x - 1x Dia
			Max	.00011	.00024	.00036	.00047	.00059	.00071	.00090	.00135	.00181	.00237	.00285	.00379	-	-
<b>TOOL STEELS</b>  A, L, O, P, W series	275 - 300	180	Max	.00011	.00024	.00036	.00047	.00059	.00071	.00090	.00135	.00181	.00237	.00285	.00379	-	-

**Please note:**

All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions. If less than minimum Axial or Radial DOC values are used, increased feed rates are possible.

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.