



Speeds & Feeds

**Product Table:** Variable Helix End Mills for High Temp Alloys - Finishers - Square

**Characteristics:** 12x Length of Cut

**Series:** 691xx-C6, 692xx-C6

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
Stainless Steels: 40x, 41x, 42x, 43x, 44x, 13-8, 15-5, 15-7, 17-4, 17-7	275 - 300	400	Finishing	-	.00011	.00016	.00022	.00027	.00033	.00044	.00065	.00088	.00115	.00138	.00184	< .04x Dia	.5x - 12x Dia
	300 - 350	350		-	.00011	.00016	.00022	.00027	.00033	.00044	.00065	.00088	.00115	.00138	.00184	< .04x Dia	.5x - 12x Dia
Tool Steels: D, H, M, T, S series	300 - 350	500	Finishing	-	.00011	.00016	.00022	.00027	.00033	.00044	.00065	.00088	.00115	.00138	.00184	< .04x Dia	.5x - 12x Dia
	350 - 400	250	Finishing	-	.00009	.00013	.00017	.00022	.00026	.00035	.00052	.00070	.00092	.00110	.00147	< .04x Dia	.5x - 12x Dia
	400 - 540	200	Finishing	-	.00007	.00011	.00014	.00018	.00021	.00028	.00043	.00057	.00075	.00090	.00119	< .04x Dia	.5x - 12x Dia
Titanium: All alloys	275 - 300	300	Finishing	-	.00005	.00007	.00010	.00012	.00014	.00019	.00029	.00039	.00051	.00061	.00081	< .04x Dia	.5x - 12x Dia
	300 - 350	200		-	.00005	.00007	.00010	.00012	.00014	.00019	.00029	.00039	.00051	.00061	.00081	< .04x Dia	.5x - 12x Dia
	350 - 400	150	Finishing	-	.00004	.00006	.00008	.00010	.00012	.00016	.00023	.00031	.00041	.00049	.00065	< .04x Dia	.5x - 12x Dia
	400 - 425	100		-	.00004	.00006	.00008	.00010	.00012	.00016	.00023	.00031	.00041	.00049	.00065	< .04x Dia	.5x - 12x Dia
Nickel Alloys: Inconel, Hastelloy, Waspalloy, Monel, Nimonic, Haynes, Discoloy, Incoloy	275 - 300	150	Finishing	-	.00002	.00002	.00003	.00004	.00005	.00007	.00010	.00013	.00017	.00020	.00027	< .02x Dia	.5x - 12x Dia
	300 - 350	100		-	.00002	.00002	.00003	.00004	.00005	.00007	.00010	.00013	.00017	.00020	.00027	< .02x Dia	.5x - 12x Dia
	350 - 400	80	Finishing	-	.00001	.00002	.00003	.00003	.00004	.00005	.00008	.00010	.00014	.00016	.00022	< .02x Dia	.5x - 12x Dia
	400 - 425	60		-	.00001	.00002	.00003	.00003	.00004	.00005	.00008	.00010	.00014	.00016	.00022	< .02x Dia	.5x - 12x Dia

**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 greater than maximum Axial or Radial DOC values are used, decreased feed rates may be needed.  
 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 **tech@harveytool.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.