



Speeds & Feeds

Product Table: Drill/End Mills - Helical Tip - 2 Flute
Characteristics: 60°-120° Included Angle, 2 Flutes
Series: 8477xx-C6, 8596xx-C6, 8725xx-C6

Product Notes:

Milling - Presented data reflects slotting application using OD of cutter up to .5x Dia Axial DOC
 - Use OD of cutter for Chip Load selection and RPM calculation
 - If Axial DOC exceeds .5x Dia, Chip Load and/or Radial DOC must be reduced

Chamfering - Presented data reflects full chamfer engagement on one side of workpiece
 - Due to a varying tip diameter, an Effective Cutter Diameter is needed for Chip Load selection and RPM calculation. Consider the major and minor diameters along the actual contact length and average them: (Major Diameter + Minor Diameter)/2
 - Depth of Cut is shown as number of Passes with each made using a descending stepover
 - Feed rates may be increased (or number of passes decreased) when creating traditional edge breaks

General Notes:

All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions. For ferrous materials with hardness ≤ 28 Rc, chip loads can be increased 10%-20%.

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 appropriate safety equipment in the vicinity of use.

MATERIAL	Hardness: 29-37 Rc (279-344 HBn)													Hardness: 38-45 Rc (353-421 HBn)																		
	SFM	Chip Load (IPT) By Cutter Diameter											Depth of Cut		SFM	Chip Load (IPT) By Cutter Diameter											Depth of Cut					
		0.062	0.078	0.093	0.125	0.187	0.250	0.312	0.375	0.500	0.625	0.750	1.000	Radial		Axial	0.062	0.078	0.093	0.125	0.187	0.250	0.312	0.375	0.500	0.625	0.750	1.000	Radial	Axial		
CARBON STEELS Free-Machining/Low Carbon steels, 10xx - 1029 & all 10Lxx, 11xx - 1139 & all 11Lxx, 12xx - 1215 & all 12Lxx	600	Milling	.00029	.00037	.00044	.00059	.00088	.00118	.00147	.00177	.00236	.00295	.00354	.00473	1x Dia	.5x Dia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Chamfering	.00034	.00042	.00051	.00068	.00102	.00136	.00170	.00204	.00272	.00340	.00408	.00543	3 passes		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1030 - 1095, 1140 - 1151, 13xx, 15xx, 20xx, 30xx, 40xx & 4xLxx, 50xx & 5xLxx, 50xxx & 50Lxxx, 51xxx & 51Lxxx, 52xxx & 52Lxxx, 60xx, 80xx, 90xx	200	Milling	.00027	.00034	.00040	.00054	.00081	.00108	.00135	.00162	.00216	.00270	.00324	.00432	1x Dia	.5x Dia	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Chamfering	.00031	.00039	.00046	.00062	.00093	.00124	.00155	.00186	.00248	.00311	.00373	.00497	3 passes		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
STAINLESS STEELS 203 EZ, 303 (all types), 416, 416Se, 416 Plus X, 420F, 420FSe, 430F, 430FSe, 440F, 440FSe	450	Milling	.00029	.00037	.00044	.00059	.00088	.00118	.00147	.00177	.00236	.00295	.00354	.00473	1x Dia	.5x Dia	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Chamfering	.00034	.00042	.00051	.00068	.00102	.00136	.00170	.00204	.00272	.00340	.00408	.00543	3 passes		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
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, 420, 429, 430, 434, 436, 442, 446, 501, 502	200	Milling	.00027	.00034	.00040	.00054	.00081	.00108	.00135	.00162	.00216	.00270	.00324	.00432	1x Dia	.5x Dia	100	Milling	.00013	.00017	.00020	.00027	.00040	.00054	.00067	.00081	.00108	.00135	.00162	.00216	1x Dia	.5x Dia
		Chamfering	.00031	.00039	.00046	.00062	.00093	.00124	.00155	.00186	.00248	.00311	.00373	.00497	3 passes		Chamfering	.00031	.00039	.00046	.00062	.00093	.00124	.00155	.00186	.00248	.00311	.00373	.00497	4 passes		
414, 431, 440A, 440B, 440C, 13-8, 15-5, 15-7, 17-4, 17-7	150	Milling	.00017	.00021	.00025	.00034	.00050	.00068	.00084	.00101	.00135	.00169	.00203	.00270	1x Dia	.5x Dia	90	Milling	.00008	.00011	.00013	.00017	.00025	.00034	.00042	.00051	.00068	.00084	.00101	.00135	1x Dia	.5x Dia
		Chamfering	.00019	.00024	.00029	.00039	.00058	.00078	.00097	.00116	.00155	.00194	.00233	.00311	3 passes		Chamfering	.00019	.00024	.00029	.00039	.00058	.00078	.00097	.00116	.00155	.00194	.00233	.00311	4 passes		
TOOL STEELS A, L, O, P, W series	200	Milling	.00027	.00034	.00040	.00054	.00081	.00108	.00135	.00162	.00216	.00270	.00324	.00432	1x Dia	.5x Dia	100	Milling	.00013	.00017	.00020	.00027	.00040	.00054	.00067	.00081	.00108	.00135	.00162	.00216	1x Dia	.5x Dia
		Chamfering	.00031	.00039	.00046	.00062	.00093	.00124	.00155	.00186	.00248	.00311	.00373	.00497	3 passes		Chamfering	.00031	.00039	.00046	.00062	.00093	.00124	.00155	.00186	.00248	.00311	.00373	.00497	4 passes		
D, H, M, T, S series	150	Milling	.00017	.00021	.00025	.00034	.00050	.00068	.00084	.00101	.00135	.00169	.00203	.00270	1x Dia	.5x Dia	90	Milling	.00008	.00011	.00013	.00017	.00025	.00034	.00042	.00051	.00068	.00084	.00101	.00135	1x Dia	.5x Dia
		Chamfering	.00019	.00024	.00029	.00039	.00058	.00078	.00097	.00116	.00155	.00194	.00233	.00311	3 passes		Chamfering	.00019	.00024	.00029	.00039	.00058	.00078	.00097	.00116	.00155	.00194	.00233	.00311	4 passes		
TITANIUM ALLOYS	150	Milling	.00017	.00021	.00025	.00034	.00050	.00068	.00084	.00101	.00135	.00169	.00203	.00270	1x Dia	.5x Dia	75	Milling	.00008	.00011	.00013	.00017	.00025	.00034	.00042	.00051	.00068	.00084	.00101	.00135	1x Dia	.5x Dia
		Chamfering	.00019	.00024	.00029	.00039	.00058	.00078	.00097	.00116	.00155	.00194	.00233	.00311	3 passes		Chamfering	.00019	.00024	.00029	.00039	.00058	.00078	.00097	.00116	.00155	.00194	.00233	.00311	4 passes		
HIGH TEMP ALLOYS Inconel, Hastelloy, Waspalloy, Monel, Nimonic, Haynes, Discology, Incoloy	70	Milling	.00017	.00021	.00025	.00034	.00050	.00068	.00084	.00101	.00135	.00169	.00203	.00270	1x Dia	.5x Dia	50	Milling	.00008	.00011	.00013	.00017	.00025	.00034	.00042	.00051	.00068	.00084	.00101	.00135	1x Dia	.5x Dia
		Chamfering	.00019	.00024	.00029	.00039	.00058	.00078	.00097	.00116	.00155	.00194	.00233	.00311	3 passes		Chamfering	.00019	.00024	.00029	.00039	.00058	.00078	.00097	.00116	.00155	.00194	.00233	.00311	4 passes		