Dovetail Cutters Speeds & Feeds

Material	Grades	SFM	Feed by Dovetail Cutter Diameter (IPT)						
			1/8 (.1250)	1/4 (.2500)	3/8 (.3750)	1/2 (.5000)	5/8 (.0625)	3/4 (.7500)	1 (1.000)
P - Steels									
High Strength Tool Steel	A2, D2, P20, H11, H13, S2, 01	200-350	.0002-.0006	.0005-.0010	.0010-.0015	.0015-.0020	.0020-.0030	.0035-.0050	.0050-.0060
High Strength Tool Steel >32 HRC		100-300	.0002-.0006	.0005-.0010	.0010-.0015	.0015-.0020	.0020-.0030	.0035-.0050	.0050-.0060
Low Carbon	A36, 12L14, 12L15, 1005, 1018, 1020, 1108-1119, 1213-1215, 1513-1518, 4012, 5015, 9310	250-550	.0002-.0006	.0005-.0010	.0010-.0020	.0020-.0030	.0035-.0045	.0045-.0060	.0060-.0070
Low Carbon >32HRC		80-150	.0003-.0005	.0005-.0007	.0006-.0008	.0008-.0010	.0010-.0015	.0015-.0020	.0020-.0030
Medium Carbon	1040-1095, 1140-1151, 1330-1345, 1520-1572, 4023-4063, 4120-4161, 4330-4340, 4620-4640, 8620-8660, 8740-8750, 6150, 51000, 52100	100-250	.0004-.0008	.0008-.0015	.0010-.0015	.0015-.0020	.0020-.0030	.0030-.0040	.0040-.0050
Medium Carbon >32 HRC		80-150	.0003-.0005	.0005-.0007	.0006-.0008	.0008-.0010	.0010-.0015	.0015-.0020	.0020-.0030
M - Stainless Steels									
Austenitic	301-304L, 310, 316L, 321, 347	250-400	.0002-.001	.0002-.0010	.0010-.0020	.0010-.0020	.0020-.0060	.0020-.0060	.0020-.0060
Austenitic >32 HRC		50-250	.0002-.001	.0002-.0010	.0010-.0020	.0010-.0020	.0010-.0060	.0010-.0060	.0010-.0060
Martensitic	403, 410, 416, 420, 430, 431, 440	250-400	.0002-.001	.0002-.0010	.0010-.0020	.0010-.0020	.0020-.0060	.0020-.0060	.0020-.0060
Martensitic >32 HRC		50-250	.0002-.001	.0002-.0010	.0010-.0020	.0010-.0020	.0010-.0060	.0010-.0060	.0010-.0060
Precipitation Hardening	12/8, 15/5, 17/4, AM-350/355/363, PH13-8M0, PH14-8/M0	250-400	.0002-.001	.0002-.0010	.0010-.0020	.0010-.0020	.0020-.0060	.0020-.0060	.0020-.0060
Precipitation Hardening >32 HRC		50-250	.0002-.001	.0002-.0010	.0010-.0020	.0010-.0020	.0010-.0060	.0010-.0060	.0010-.0060
K - Cast Irons									
Ductile	A536, J434, 60-40-18	80-400	.0002-.0006	.0006-.0010	.0010-.0015	.0015-.0020	.0020-.0030	.0035-.0045	.0045-.0060
Gray	A48, A436, A319, Class 20, G4000	200-500	.0003-.0015	.0015-.0020	.0015-.0020	.0020-.0030	.0030-.0040	.0040-.0050	.0050-.0060
Malleable	A220, A602, J158	250-600	.001-.0015	.0015-.0020	.0020-.0025	.0025-.0030	.0035-.0040	.0040-.0045	.0050-.0060
N - Non-Ferrous									
Aluminum Alloys		900-1300	.0002-.0010	.0010-.0020	.0020-.0030	.0030-.0040	.0050-.0060	.0060-.0070	.0070-.0080
Aluminum High Silicon		600-900	.0002-.0010	.0010-.0020	.0020-.0030	.0030-.0040	.0050-.0060	.0060-.0070	.0070-.0080
Brass/Bronze	Aluminum Bronze, Low Silicon Bronze								
Composites	G-10, Fiberglass, Graphite, Graphite Epoxy, Plastics								
Copper		350-900	.0005-.0010	.0010-.0015	.0015-.0020	.0020-.0025	.0030-.0040	.0040-.0050	.0050-.0060
Magnesium		800-1400	.0005-.0010	.0010-.0020	.0020-.0030	.0030-.0040	.0050-.0070	.0060-.0080	.0080-.0100
S - High Temp Alloys									
Cobalt Base	Stellite, HS-21, Haynes 25/188,	150-300	.0002-.0006	.0005-.0010	.0010-.0015	.0015-.0020	.0020-.0025	.0025-.0030	.0030-.0040
Cobalt Base >32HRC	X40, L605	20-130	.0003-.0006	.0005-.0008	.0007-.0009	.0008-.0010	.0010-.0014	.0013-.0018	.0016-.0020
Iron Base	Incoloy 800-802, Multmet N-155	20-130	.0002-.0006	.0005-.0010	.0010-.0015	.0015-.0020	.0020-.0025	.0025-.0030	.0030-.0040
Iron Base >32HRC	Timkin 16-25-6, Carpenter 22-b3	15-80	.0003-.0006	.0005-.0008	.0007-.0009	.0008-.0010	.0010-.0014	.0013-.0018	.0016-.0020
Nickel Base	Inconel 625/718, Inco 700, 713C, 718	150-300	.0002-.0006	.0005-.0010	.0010-.0015	.0015-.0020	.0020-.0025	.0025-.0030	.0030-.0040
Nickel Base >32HRC	Monel 400-401, 404, K401, Rene, Rene 41 & 95 Hastelloy, Waspoloy, Udimet 500 & 700	20-130	.0003-.0006	.0005-.0008	.0007-.0009	.0008-.0010	.0010-.0014	.0013-.0018	.0016-.0020
Titanium	Commercially Pure, 6Al-4V, ASTM 1/2/3, 6Al-25N-4Zr-2Mo-Si, Ti-8Al-1Mo, Ti-8Al-4Mo	30-350	.0002-.0005	.0005-.0010	.0008-.0015	.0015-.0020	.0020-.0030	.0030-.0040	.0040-.0050

NOTE: Speeds and Feeds listed are estimated and will vary by application.

These tools can be found on pages 442-445.