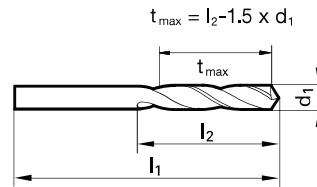


Tool material **HSS**
Surface

- P** Steel web thinning ≥ Ø 2.380 • relieved cone
M Stainless steel
K Cast iron soft, long chipping materials • aluminum, Al-alloys (long-chipping) • zinc, refined copper, silumin, Elektron • soft synthetic materials, wood
N Aluminum ●
S Titanium alloys
H Hardened steel
- =Optimal
○=Limited

Stub Length



Speeds and feeds information on pg. 480

Shank diameter = cut diameter

Diameter (d ₁)			l ₁ mm	t _{max} mm	l ₂ mm	EDP #
inch	wire/ltr	mm				
0.0394		1.00	26.00	4.50	6.00	9002250010000
0.0433		1.10	28.00	5.35	7.00	9002250011000
0.0469	3/64	1.19	30.00	6.22	8.00	9002250011900
0.0472		1.20	30.00	6.20	8.00	9002250012000
0.0512		1.30	30.00	6.05	8.00	9002250013000
0.0551	#54	1.40	32.00	6.90	9.00	9002250014000
0.0591		1.50	32.00	6.75	9.00	9002250015000
0.0626	1/16	1.59	34.00	7.62	10.00	9002250015900
0.0630		1.60	34.00	7.60	10.00	9002250016000
0.0669	#51	1.70	34.00	7.45	10.00	9002250017000
0.0709		1.80	36.00	8.30	11.00	9002250018000
0.0748		1.90	36.00	8.15	11.00	9002250019000
0.0780	5/64	1.98	38.00	9.03	12.00	9002250019800
0.0787		2.00	38.00	9.00	12.00	9002250020000
0.0827		2.10	38.00	8.85	12.00	9002250021000
0.0866		2.20	40.00	9.70	13.00	9002250022000
0.0886		2.25	40.00	9.63	13.00	9002250022500
0.0906		2.30	40.00	9.55	13.00	9002250023000
0.0937	3/32	2.38	43.00	10.43	14.00	9002250023800
0.0945		2.40	43.00	10.40	14.00	9002250024000
0.0984		2.50	43.00	10.25	14.00	9002250025000
0.1024		2.60	43.00	10.10	14.00	9002250026000
0.1063		2.70	46.00	11.95	16.00	9002250027000
0.1067	#36	2.71	46.00	11.94	16.00	9002250027100
0.1083		2.75	46.00	11.88	16.00	9002250027500
0.1094	7/64	2.78	46.00	11.83	16.00	9002250027800
0.1102		2.80	46.00	11.80	16.00	9002250028000
0.1142		2.90	46.00	11.65	16.00	9002250029000
0.1181		3.00	46.00	11.50	16.00	9002250030000
0.1201	#31	3.05	49.00	13.43	18.00	9002250030500
0.1220		3.10	49.00	13.35	18.00	9002250031000
0.1248	1/8	3.17	49.00	13.25	18.00	9002250031700
0.1260		3.20	49.00	13.20	18.00	9002250032000
0.1299		3.30	49.00	13.05	18.00	9002250033000
0.1339		3.40	52.00	14.90	20.00	9002250034000
0.1378		3.50	52.00	14.75	20.00	9002250035000
0.1417		3.60	52.00	14.60	20.00	9002250036000
0.1457		3.70	52.00	14.45	20.00	9002250037000
0.1496	#25	3.80	55.00	16.30	22.00	9002250038000
0.1535		3.90	55.00	16.15	22.00	9002250039000
0.1563	5/32	3.97	55.00	16.05	22.00	9002250039700

Diameter (d ₁)			l ₁ mm	t _{max} mm	l ₂ mm	EDP #
inch	wire/ltr	mm				
0.1575		4.00	55.00	16.00	22.00	9002250040000
0.1614		4.10	55.00	15.85	22.00	9002250041000
0.1654		4.20	55.00	15.70	22.00	9002250042000
0.1693	#18	4.30	58.00	17.55	24.00	9002250043000
0.1720	11/64	4.37	58.00	17.45	24.00	9002250043700
0.1732		4.40	58.00	17.40	24.00	9002250044000
0.1772	#16	4.50	58.00	17.25	24.00	9002250045000
0.1811		4.60	58.00	17.10	24.00	9002250046000
0.1850	#13	4.70	58.00	16.95	24.00	9002250047000
0.1874	3/16	4.76	62.00	18.86	26.00	9002250047600
0.1890	#12	4.80	62.00	18.80	26.00	9002250048000
0.1929		4.90	62.00	18.65	26.00	9002250049000
0.1969		5.00	62.00	18.50	26.00	9002250050000
0.2008		5.10	62.00	18.35	26.00	9002250051000
0.2031	13/64	5.16	62.00	18.26	26.00	9002250051600
0.2047		5.20	62.00	18.20	26.00	9002250052000
0.2067		5.25	62.00	18.13	26.00	9002250052500
0.2087		5.30	62.00	18.05	26.00	9002250053000
0.2126		5.40	66.00	19.90	28.00	9002250054000
0.2165		5.50	66.00	19.75	28.00	9002250055000
0.2189	7/32	5.56	66.00	19.66	28.00	9002250055600
0.2205		5.60	66.00	19.60	28.00	9002250056000
0.2244		5.70	66.00	19.45	28.00	9002250057000
0.2283		5.80	66.00	19.30	28.00	9002250058000
0.2323		5.90	66.00	19.15	28.00	9002250059000
0.2343	15/64	5.95	66.00	19.08	28.00	9002250059500
0.2362		6.00	66.00	19.00	28.00	9002250060000
0.2402		6.10	70.00	21.85	31.00	9002250061000
0.2441		6.20	70.00	21.70	31.00	9002250062000
0.2480		6.30	70.00	21.55	31.00	9002250063000
0.2500	1/4 E	6.35	70.00	21.48	31.00	9002250063500
0.2520		6.40	70.00	21.40	31.00	9002250064000
0.2559		6.50	70.00	21.25	31.00	9002250065000
0.2571		6.53	70.00	21.21	31.00	9002250065300
0.2598		6.60	70.00	21.10	31.00	9002250066000
0.2657	17/64 H	6.75	74.00	23.88	34.00	9002250067500
0.2677		6.80	74.00	23.80	34.00	9002250068000
0.2717	I	6.90	74.00	23.65	34.00	9002250069000
0.2756		7.00	74.00	23.50	34.00	9002250070000
0.2795		7.10	74.00	23.35	34.00	9002250071000
0.2811	9/32 K	7.14	74.00	23.29	34.00	9002250071400

Diameter (d ₁)			l ₁ mm	t _{max} mm	l ₂ mm	EDP #
inch	wire/ltr	mm				
0.2874		7.30	74.00	23.05	34.00	9002250073000
0.2953		7.50	74.00	22.75	34.00	9002250075000
0.2992		7.60	79.00	25.60	37.00	9002250076000
0.3071		7.80	79.00	25.30	37.00	9002250078000
0.3126	5/16	7.94	79.00	25.09	37.00	9002250079400
0.3150		8.00	79.00	25.00	37.00	9002250080000
0.3189		8.10	79.00	24.85	37.00	9002250081000
0.3228	P	8.20	79.00	24.70	37.00	9002250082000
0.3268		8.30	79.00	24.55	37.00	9002250083000
0.3280	21/64	8.33	79.00	24.51	37.00	9002250083300
0.3307		8.40	79.00	24.40	37.00	9002250084000
0.3346		8.50	79.00	24.25	37.00	9002250085000
0.3386		8.60	84.00	27.10	40.00	9002250086000
0.3425		8.70	84.00	26.95	40.00	9002250087000
0.3543		9.00	84.00	26.50	40.00	9002250090000
0.3701		9.40	84.00	25.90	40.00	9002250094000
0.3740		9.50	84.00	25.75	40.00	9002250095000
0.3748	3/8	9.52	89.00	28.72	43.00	9002250095200
0.3858		9.80	89.00	28.30	43.00	9002250098000
0.3937	W	10.00	89.00	28.00	43.00	9002250100000
0.4016		10.20	89.00	27.70	43.00	9002250102000

Diameter (d ₁)			l ₁ mm	t _{max} mm	l ₂ mm	EDP #
inch	wire/ltr	mm				
0.4134		10.50	89.00	27.25	43.00	9002250105000
0.4331		11.00	95.00	30.50	47.00	9002250110000
0.4374	7/16	11.11	95.00	30.34	47.00	9002250111100
0.4528		11.50	95.00	29.75	47.00	9002250115000
0.4646		11.80	95.00	29.30	47.00	9002250118000
0.4689	15/32	11.91	102.00	33.14	51.00	9002250119100
0.4724		12.00	102.00	33.00	51.00	9002250120000
0.4921		12.50	102.00	32.25	51.00	9002250125000
0.5000	1/2	12.70	102.00	31.95	51.00	9002250127000
0.5039		12.80	102.00	31.80	51.00	9002250128000
0.5118		13.00	102.00	31.50	51.00	9002250130000
0.5512		14.00	107.00	33.00	54.00	9002250140000
0.5709		14.50	111.00	34.25	56.00	9002250145000
0.5906		15.00	111.00	33.50	56.00	9002250150000
0.6299		16.00	115.00	34.00	58.00	9002250160000
0.6693		17.00	119.00	34.50	60.00	9002250170000
0.6890		17.50	123.00	35.75	62.00	9002250175000
0.7087		18.00	123.00	35.00	62.00	9002250180000
0.7480		19.00	127.00	35.50	64.00	9002250190000
0.7874		20.00	131.00	36.00	66.00	9002250200000

Stub Length

Series # 225

Material group	Hardness		SFM	Feed Rate - IPR									
	HRc	Bhn		1/16 in. 1.590 mm	1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm	1 1/4 in. 31.750 mm	1 1/2 in. 38.100 mm
Common structural steels	-	≤ 150											
Free-cutting steels	≤ 32	≤ 301											
Unalloyed heat-treatable steels	≤ 25	≤ 255											
Alloyed heat-treatable steels	≤ 32	≤ 301											
Unalloyed case hardened steels	≤ 43	≤ 402											
Alloyed case hardened steels	≤ 25	≤ 255											
Nitriding steels	≤ 32	≤ 301											
Tool steels	≤ 43	≤ 402											
High speed steels	≤ 25	≤ 255											
Spring steels	≤ 43	≤ 402											
Hardened steels	≤ 38	≤ 354											
Stainless steels, sulphured	≤ 48	≤ 460											
austenitic	≤ 66	-											
martensitic	≤ 28	≤ 273											
Cast iron	≤ 36	≤ 337											
Spheroidal graphite iron and malleable cast iron	≤ 46	≤ 435											
Chilled cast iron	≤ 23	≤ 242											
New cast materials GGV	≤ 38	≤ 354											
New cast materials ADI	≤ 23	≤ 242											
Special alloys	≤ 38	≤ 354											
Ti and Ti-alloys	≤ 20	≤ 220											
Aluminium and Al-alloys	≤ 32	≤ 301											
Al wrought alloys	≤ 43	≤ 402											
Al cast alloys ≤ 10 % Si	≤ 54	≤ 549											
≤ 24 % Si	≤ 25	≤ 255											
Magnesium alloys	≤ 43	≤ 402											
Copper, low-alloyed	-	≤ 120	295	0.0020	0.0065	0.0100	0.0125	0.0160	0.0160	0.0180	0.0200		
Brass, short-chipping	-	≤ 150	295	0.0020	0.0065	0.0100	0.0125	0.0160	0.0160	0.0180	0.0200		
Brass, long-chipping	-	≤ 180	225	0.0020	0.0065	0.0100	0.0125	0.0160	0.0160	0.0180	0.0200		
Bronze, short-chipping	-	≤ 180	115	0.0015	0.0040	0.0065	0.0080	0.0100	0.0100	0.0110	0.0125		
Bronze, long-chipping	-	≤ 255											
Duroplastics	≤ 25	≤ 255											
Thermoplastics	≤ 32	≤ 301											
Reinforced plastics - Kevlar			90	0.0015	0.0040	0.0065	0.0080	0.0100	0.0100	0.0110	0.0125		
Reinforced plastics - GFK / CFK													

Series # 226

Material group	Hardness		SFM	Feed Rate - IPR									
	HRc	Bhn		1/16 in. 1.590 mm	1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm	1 1/4 in. 31.750 mm	1 1/2 in. 38.100 mm
Common structural steels	-	≤ 150	115	0.0017	0.0050	0.0080	0.0100	0.0125					
Free-cutting steels	≤ 32	≤ 301	90	0.0015	0.0040	0.0065	0.0080	0.0100					
Unalloyed heat-treatable steels	≤ 25	≤ 255	115	0.0017	0.0050	0.0080	0.0100	0.0125					
Alloyed heat-treatable steels	≤ 32	≤ 301	90	0.0015	0.0040	0.0065	0.0080	0.0100					
Unalloyed case hardened steels	≤ 43	≤ 402											
Alloyed case hardened steels	≤ 25	≤ 255	115	0.0017	0.0050	0.0080	0.0100	0.0125					
Nitriding steels	≤ 32	≤ 301											
Tool steels	≤ 43	≤ 402											
High speed steels	≤ 25	≤ 255	55	0.0012	0.0030	0.0050	0.0065	0.0080					
Spring steels	≤ 43	≤ 402											
Hardened steels	≤ 38	≤ 354											
Stainless steels, sulphured	≤ 48	≤ 460											
austenitic	≤ 66	-											
martensitic	≤ 28	≤ 273											
Cast iron	≤ 36	≤ 337											
Spheroidal graphite iron and malleable cast iron	≤ 46	≤ 435											
Chilled cast iron	≤ 23	≤ 242	115	0.0017	0.0050	0.008	0.0100	0.0125					
New cast materials GGV	≤ 38	≤ 354	90	0.0017	0.0050	0.008	0.0100	0.0125					
New cast materials ADI	≤ 23	≤ 242	100	0.0017	0.0050	0.008	0.0100	0.0125					
Special alloys	≤ 38	≤ 354	75	0.0017	0.0050	0.008	0.0100	0.0125					
Ti and Ti-alloys	≤ 20	≤ 220											
Aluminium and Al-alloys	≤ 32	≤ 301											
Al wrought alloys	≤ 43	≤ 402											
Al cast alloys ≤ 10 % Si	≤ 54	≤ 549											
≤ 24 % Si	≤ 25	≤ 255	225	0.0020	0.0065	0.0100	0.0125	0.0160					
Magnesium alloys	-	≤ 180	180	0.0017	0.0050	0.0080	0.0100	0.0125					
Copper, low-alloyed	-	≤ 120	295	0.0017	0.0050	0.0080	0.0100	0.0125					
Brass, short-chipping	-	≤ 150	115	0.0015	0.0040	0.0065	0.0080	0.0100					
Brass, long-chipping	-	≤ 180	145	0.0015	0.0040	0.0065	0.0080	0.0100					
Bronze, short-chipping	-	≤ 255											
Bronze, long-chipping	≤ 25	≤ 255	115	0.0012	0.0030	0.0050	0.0065	0.0080					
Duroplastics	≤ 32	≤ 301	100	0.0012	0.0030	0.0050	0.0065	0.0080					
Thermoplastics			90	0.0012	0.0030	0.0050	0.0065	0.0080					
Reinforced plastics - Kevlar													
Reinforced plastics - GFK / CFK													