



Tool material

Solid Carbide

Surface



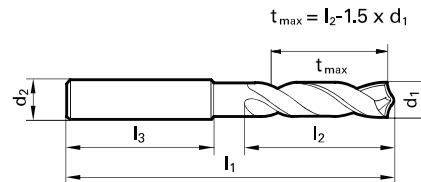
P	Steel	●
M	Stainless steel	○
K	Cast iron	●
N	Aluminum	○
S	Titanium alloys	○
H	Hardened steel	○

●=Optimal

○=Limited

web thinning $\geq \varnothing 3.000$ • facet point grinding • main cutting edge form straight • optimized cutting geometry

structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AlSi-alloys



Speeds and feeds information on pg. 552

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.1181		3.00	6.00	66.00	23.50	28.00	9055150030000
0.1220		3.10	6.00	66.00	23.35	28.00	9055150031000
0.1248	1/8	3.18	6.00	66.00	23.23	28.00	9055150031700
0.1260		3.20	6.00	66.00	23.20	28.00	9055150032000
0.1280		3.25	6.00	66.00	23.13	28.00	9055150032500
0.1299		3.30	6.00	66.00	23.05	28.00	9055150033000
0.1339		3.40	6.00	66.00	22.90	28.00	9055150034000
0.1378		3.50	6.00	66.00	22.75	28.00	9055150035000
0.1406	9/64 #28	3.57	6.00	66.00	22.65	28.00	9055150035700
0.1417		3.60	6.00	66.00	22.60	28.00	9055150036000
0.1457		3.70	6.00	66.00	22.45	28.00	9055150037000
0.1496	#25	3.80	6.00	74.00	30.30	36.00	9055150038000
0.1535		3.90	6.00	74.00	30.15	36.00	9055150039000
0.1563	5/32	3.97	6.00	74.00	30.05	36.00	9055150039700
0.1575		4.00	6.00	74.00	30.00	36.00	9055150040000
0.1614		4.10	6.00	74.00	29.85	36.00	9055150041000
0.1654		4.20	6.00	74.00	29.70	36.00	9055150042000
0.1693		4.30	6.00	74.00	29.55	36.00	9055150043000
0.1720	11/64	4.37	6.00	74.00	29.45	36.00	9055150043700
0.1732		4.40	6.00	74.00	29.40	36.00	9055150044000
0.1772	#16	4.50	6.00	74.00	29.25	36.00	9055150045000
0.1811		4.60	6.00	74.00	29.10	36.00	9055150046000
0.1831		4.65	6.00	74.00	29.03	36.00	9055150046500
0.1850		4.70	6.00	74.00	28.95	36.00	9055150047000
0.1874	3/16	4.76	6.00	82.00	36.86	44.00	9055150047600
0.1890	#12	4.80	6.00	82.00	36.80	44.00	9055150048000
0.1929		4.90	6.00	82.00	36.65	44.00	9055150049000
0.1969		5.00	6.00	82.00	36.50	44.00	9055150050000
0.2008		5.10	6.00	82.00	36.35	44.00	9055150051000
0.2031	13/64	5.16	6.00	82.00	36.26	44.00	9055150051600
0.2047		5.20	6.00	82.00	36.20	44.00	9055150052000
0.2067		5.25	6.00	82.00	36.13	44.00	9055150052500
0.2087		5.30	6.00	82.00	36.05	44.00	9055150053000
0.2126		5.40	6.00	82.00	35.90	44.00	9055150054000
0.2165		5.50	6.00	82.00	35.75	44.00	9055150055000
0.2185		5.55	6.00	82.00	35.68	44.00	9055150055500
0.2189	7/32	5.56	6.00	82.00	35.66	44.00	9055150055600
0.2205		5.60	6.00	82.00	35.60	44.00	9055150056000
0.2244		5.70	6.00	82.00	35.45	44.00	9055150057000
0.2283		5.80	6.00	82.00	35.30	44.00	9055150058000
0.2323		5.90	6.00	82.00	35.15	44.00	9055150059000
0.2343	15/64	5.95	6.00	82.00	35.08	44.00	9055150059500

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.2362		6.00	6.00	82.00	35.00	44.00	9055150060000
0.2402		6.10	8.00	91.00	43.85	53.00	9055150061000
0.2441		6.20	8.00	91.00	43.70	53.00	9055150062000
0.2480		6.30	8.00	91.00	43.55	53.00	9055150063000
0.2500	1/4 E	6.35	8.00	91.00	43.48	53.00	9055150063500
0.2520		6.40	8.00	91.00	43.40	53.00	9055150064000
0.2559		6.50	8.00	91.00	43.25	53.00	9055150065000
0.2598		6.60	8.00	91.00	43.10	53.00	9055150066000
0.2638		6.70	8.00	91.00	42.95	53.00	9055150067000
0.2657	17/64 H	6.75	8.00	91.00	42.88	53.00	9055150067500
0.2677		6.80	8.00	91.00	42.80	53.00	9055150068000
0.2717	I	6.90	8.00	91.00	42.65	53.00	9055150069000
0.2756		7.00	8.00	91.00	42.50	53.00	9055150070000
0.2795		7.10	8.00	91.00	42.35	53.00	9055150071000
0.2811	9/32 K	7.14	8.00	91.00	42.29	53.00	9055150071400
0.2835		7.20	8.00	91.00	42.20	53.00	9055150072000
0.2874		7.30	8.00	91.00	42.05	53.00	9055150073000
0.2913		7.40	8.00	91.00	41.90	53.00	9055150074000
0.2953		7.50	8.00	91.00	41.75	53.00	9055150075000
0.2969	19/64	7.54	8.00	91.00	41.69	53.00	9055150075400
0.2992		7.60	8.00	91.00	41.60	53.00	9055150076000
0.3031		7.70	8.00	91.00	41.45	53.00	9055150077000
0.3071		7.80	8.00	91.00	41.30	53.00	9055150078000
0.3110		7.90	8.00	91.00	41.15	53.00	9055150079000
0.3125	5/16	7.94	8.00	91.00	41.09	53.00	9055150079400
0.3150		8.00	8.00	91.00	41.00	53.00	9055150080000
0.3189		8.10	10.00	103.00	48.85	61.00	9055150081000
0.3228	P	8.20	10.00	103.00	48.70	61.00	9055150082000
0.3268		8.30	10.00	103.00	48.55	61.00	9055150083000
0.3280	21/64	8.33	10.00	103.00	48.51	61.00	9055150083300
0.3307		8.40	10.00	103.00	48.40	61.00	9055150084000
0.3346		8.50	10.00	103.00	48.25	61.00	9055150085000
0.3386		8.60	10.00	103.00	48.10	61.00	9055150086000
0.3425		8.70	10.00	103.00	47.95	61.00	9055150087000
0.3437	11/32	8.73	10.00	103.00	47.91	61.00	9055150087300
0.3465		8.80	10.00	103.00	47.80	61.00	9055150088000
0.3504		8.90	10.00	103.00	47.65	61.00	9055150089000
0.3543		9.00	10.00	103.00	47.50	61.00	9055150090000
0.3583		9.10	10.00	103.00	47.35	61.00	9055150091000
0.3594	23/64	9.13	10.00	103.00	47.31	61.00	9055150091300
0.3622		9.20	10.00	103.00	47.20	61.00	9055150092000
0.3642		9.25	10.00	103.00	47.13	61.00	9055150092500

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.3661		9.30	10.00	103.00	47.05	61.00	9055150093000
0.3701		9.40	10.00	103.00	46.90	61.00	9055150094000
0.3740		9.50	10.00	103.00	46.75	61.00	9055150095000
0.3750	3/8	9.52	10.00	103.00	46.72	61.00	9055150095200
0.3780		9.60	10.00	103.00	46.60	61.00	9055150096000
0.3819		9.70	10.00	103.00	46.45	61.00	9055150097000
0.3858	W	9.80	10.00	103.00	46.30	61.00	9055150098000
0.3898		9.90	10.00	103.00	46.15	61.00	9055150099000
0.3906	25/64	9.92	10.00	103.00	46.12	61.00	9055150099200
0.3937		10.00	10.00	103.00	46.00	61.00	9055150100000
0.3976		10.10	12.00	118.00	55.85	71.00	9055150101000
0.4016		10.20	12.00	118.00	55.70	71.00	9055150102000
0.4055		10.30	12.00	118.00	55.55	71.00	9055150103000
0.4063	13/32	10.32	12.00	118.00	55.52	71.00	9055150103200
0.4094		10.40	12.00	118.00	55.40	71.00	9055150104000
0.4134		10.50	12.00	118.00	55.25	71.00	9055150105000
0.4173		10.60	12.00	118.00	55.10	71.00	9055150106000
0.4213		10.70	12.00	118.00	54.95	71.00	9055150107000
0.4220	27/64	10.72	12.00	118.00	54.92	71.00	9055150107200
0.4252		10.80	12.00	118.00	54.80	71.00	9055150108000
0.4291		10.90	12.00	118.00	54.65	71.00	9055150109000
0.4331		11.00	12.00	118.00	54.50	71.00	9055150110000
0.4370		11.10	12.00	118.00	54.35	71.00	9055150111000
0.4374	7/16	11.11	12.00	118.00	54.34	71.00	9055150111100
0.4409		11.20	12.00	118.00	54.20	71.00	9055150112000
0.4449		11.30	12.00	118.00	54.05	71.00	9055150113000
0.4488		11.40	12.00	118.00	53.90	71.00	9055150114000
0.4528		11.50	12.00	118.00	53.75	71.00	9055150115000
0.4567		11.60	12.00	118.00	53.60	71.00	9055150116000
0.4606		11.70	12.00	118.00	53.45	71.00	9055150117000
0.4646		11.80	12.00	118.00	53.30	71.00	9055150118000
0.4685		11.90	12.00	118.00	53.15	71.00	9055150119000
0.4689	15/32	11.91	12.00	118.00	53.14	71.00	9055150119100
0.4724		12.00	12.00	118.00	53.00	71.00	9055150120000
0.4764		12.10	14.00	124.00	58.85	77.00	9055150121000
0.4803		12.20	14.00	124.00	58.70	77.00	9055150122000
0.4843	31/64	12.30	14.00	124.00	58.55	77.00	9055150123000

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.4882		12.40	14.00	124.00	58.40	77.00	9055150124000
0.4921		12.50	14.00	124.00	58.25	77.00	9055150125000
0.4961		12.60	14.00	124.00	58.10	77.00	9055150126000
0.5000	1/2	12.70	14.00	124.00	57.95	77.00	9055150127000
0.5118		13.00	14.00	124.00	57.50	77.00	9055150130000
0.5157	33/64	13.10	14.00	124.00	57.35	77.00	9055150131000
0.5197		13.20	14.00	124.00	57.20	77.00	9055150132000
0.5236		13.30	14.00	124.00	57.05	77.00	9055150133000
0.5315		13.50	14.00	124.00	56.75	77.00	9055150135000
0.5394		13.70	14.00	124.00	56.45	77.00	9055150137000
0.5433		13.80	14.00	124.00	56.30	77.00	9055150138000
0.5512		14.00	14.00	124.00	56.00	77.00	9055150140000
0.5551		14.10	16.00	133.00	61.85	83.00	9055150141000
0.5591		14.20	16.00	133.00	61.70	83.00	9055150142000
0.5626	9/16	14.29	16.00	133.00	61.57	83.00	9055150142900
0.5630		14.30	16.00	133.00	61.55	83.00	9055150143000
0.5669		14.40	16.00	133.00	61.40	83.00	9055150144000
0.5709		14.50	16.00	133.00	61.25	83.00	9055150145000
0.5787		14.70	16.00	133.00	60.95	83.00	9055150147000
0.5906		15.00	16.00	133.00	60.50	83.00	9055150150000
0.5945		15.10	16.00	133.00	60.35	83.00	9055150151000
0.5984		15.20	16.00	133.00	60.20	83.00	9055150152000
0.6102		15.50	16.00	133.00	59.75	83.00	9055150155000
0.6142		15.60	16.00	133.00	59.60	83.00	9055150156000
0.6181		15.70	16.00	133.00	59.45	83.00	9055150157000
0.6220		15.80	16.00	133.00	59.30	83.00	9055150158000
0.6250	5/8	15.87	16.00	133.00	59.20	83.00	9055150158700
0.6299		16.00	16.00	133.00	59.00	83.00	9055150160000
0.6496		16.50	18.00	143.00	68.25	93.00	9055150165000
0.6693		17.00	18.00	143.00	67.50	93.00	9055150170000
0.6890		17.50	18.00	143.00	66.75	93.00	9055150175000
0.7087		18.00	18.00	143.00	66.00	93.00	9055150180000
0.7283		18.50	20.00	153.00	73.25	101.00	9055150185000
0.7480		19.00	20.00	153.00	72.50	101.00	9055150190000
0.7677		19.50	20.00	153.00	71.75	101.00	9055150195000
0.7874		20.00	20.00	153.00	71.00	101.00	9055150200000

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	- ≤ 32	≤ 150 ≤ 301	425 360		0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125	0.0160 0.0125				
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	475 360		0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160	0.0200 0.0160				
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	395 360 345		0.0065 0.0065 0.0065	0.0100 0.0100 0.0100	0.0125 0.0125 0.0125	0.0160 0.0160 0.0160	0.0160 0.0160 0.0160				
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	345 330		0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125	0.0160 0.0125				
Unalloyed case hardened steels	≤ 25	≤ 255	425		0.0080	0.0125	0.0160	0.0200	0.0200				
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	395 280		0.0065 0.0040	0.0100 0.0065	0.0125 0.0080	0.0160 0.0100	0.0160 0.0100				
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	330 295		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	0.0125 0.0100				
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	215 180		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	0.0125 0.0100				
High speed steels	≤ 43	≤ 402	150		0.0030	0.0050	0.0065	0.0080	0.0080				
Spring steels	≤ 38	≤ 354	150		0.0025	0.0040	0.0050	0.0065	0.0065				
Hardened steels	≤ 48 ≤ 66	≤ 460 -	150 80		0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	0.0065 0.0050				
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	180 150 150		0.0030 0.0030 0.0025	0.0050 0.0050 0.0040	0.0065 0.0065 0.0050	0.0080 0.0080 0.0065	0.0080 0.0080 0.0065				
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	690 510		0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200	0.0200 0.0200				
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	510 410		0.0065 0.0065	0.0100 0.0100	0.0125 0.0125	0.0160 0.0160	0.0160 0.0160				
Chilled cast iron	≤ 38	≤ 354	115		0.0025	0.0040	0.0050	0.0065	0.0065				
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549	80		0.0030	0.0050	0.0065	0.0080	0.0080				
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402	130 115		0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065	0.0080 0.0065				
Aluminium and Al-alloys	-	≤ 120	855		0.0100	0.0160	0.0200	0.0245	0.0245				
Al wrought alloys	-	≤ 200	855		0.0100	0.0160	0.0200	0.0245	0.0245				
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180	720 590		0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200	0.0200 0.0200				
Magnesium alloys	-	≤ 120	855		0.0080	0.0125	0.0160	0.0200	0.0200				
Copper, low-alloyed	-	≤ 150	360		0.0065	0.0065	0.0100	0.0125	0.0125				
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180	885 590		0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160	0.0200 0.0160				
Bronze, short-chipping	-	≤ 180	360		0.0065	0.0065	0.0100	0.0125	0.0125				
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	330 215		0.0050 0.0050	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0100 0.0100				
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK													

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	- ≤ 32	≤ 150 ≤ 301	425 360		0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125	0.0160 0.0125				
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	475 360		0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160	0.0200 0.0160				
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	395 360 345		0.0065 0.0065 0.0065	0.0100 0.0100 0.0100	0.0125 0.0125 0.0125	0.0160 0.0160 0.0160	0.0160 0.0160 0.0160				
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	345 330		0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125	0.0160 0.0125				
Unalloyed case hardened steels	≤ 25	≤ 255	425		0.0080	0.0125	0.0160	0.0200	0.0200				
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	395 280		0.0065 0.0040	0.0100 0.0065	0.0125 0.0080	0.0160 0.0100	0.0160 0.0100				
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	320 280		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	0.0125 0.0100				
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	195 145		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	0.0125 0.0100				
High speed steels	≤ 43	≤ 402	150		0.0030	0.0050	0.0065	0.0080	0.0080				
Spring steels	≤ 38	≤ 354	150		0.0025	0.0040	0.0050	0.0065	0.0065				
Hardened steels	≤ 48 ≤ 66	≤ 460 -	150 80		0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	0.0065 0.0050				
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	180 150 150		0.0030 0.0030 0.0025	0.0050 0.0050 0.0040	0.0065 0.0065 0.0050	0.0080 0.0080 0.0065	0.0080 0.0080 0.0065				
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	690 510		0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200	0.0200 0.0200				
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	475 410		0.0065 0.0065	0.0100 0.0100	0.0125 0.0125	0.0160 0.0160	0.0160 0.0160				
Chilled cast iron	≤ 38	≤ 354	115		0.0025	0.0040	0.0050	0.0065	0.0065				
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549	80		0.0030	0.0050	0.0065	0.0080	0.0080				
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402	130 115		0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065	0.0080 0.0065				
Aluminium and Al-alloys	-	≤ 120	855		0.0080	0.0125	0.0160	0.0200	0.0200				
Al wrought alloys	-	≤ 200	855		0.0080	0.0125	0.0160	0.0200	0.0200				
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180	700 560		0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200	0.0200 0.0200				
Magnesium alloys	-	≤ 120	855		0.0080	0.0125	0.0160	0.0200	0.0200				
Copper, low-alloyed	-	≤ 150	360		0.0065	0.0100	0.0100	0.0125	0.0160				
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180	885 590		0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160	0.0200 0.0160				
Bronze, short-chipping	-	≤ 180	360		0.0065	0.0100	0.0100	0.0125	0.0160				
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	330 215		0.0050 0.0050	0.0080 0.0080	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125				
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK													