



Tool material

Solid Carbide

Surface



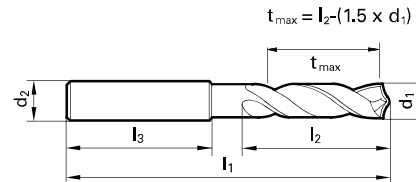
P	Steel
M	Stainless steel ●
K	Cast iron
N	Aluminum
S	Titanium alloys ●
H	Hardened steel ○

●=Optimal

○=Limited

web thinning $\geq \varnothing 3.000$ • relieved cone • main cutting edge form concave • optimized cutting geometry

stainless/acid-/heat-resistant steels • alloyed and high tensile steels up to 1600 N/mm² • Inconel, Hastelloy, Monel • Titanium and Titanium alloys



Speeds and feeds information on pg. 562

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.1181		3.00	6.00	62.00	15.50	20.00	9057410030000
0.1220		3.10	6.00	62.00	15.35	20.00	9057410031000
0.1248	1/8	3.17	6.00	62.00	15.25	20.00	9057410031700
0.1260		3.20	6.00	62.00	15.20	20.00	9057410032000
0.1280		3.25	6.00	62.00	15.13	20.00	9057410032500
0.1299		3.30	6.00	62.00	15.05	20.00	9057410033000
0.1339		3.40	6.00	62.00	14.90	20.00	9057410034000
0.1378		3.50	6.00	62.00	14.75	20.00	9057410035000
0.1406	9/64 #28	3.57	6.00	62.00	14.65	20.00	9057410035700
0.1417		3.60	6.00	62.00	14.60	20.00	9057410036000
0.1457		3.70	6.00	62.00	14.45	20.00	9057410037000
0.1496		3.80	6.00	66.00	18.30	24.00	9057410038000
0.1535	3 9/10	3.90	6.00	66.00	18.15	24.00	9057410039000
0.1563	5/32	3.97	6.00	66.00	18.05	24.00	9057410039700
0.1575		4.00	6.00	66.00	18.00	24.00	9057410040000
0.1614		4.10	6.00	66.00	17.85	24.00	9057410041000
0.1654		4.20	6.00	66.00	17.70	24.00	9057410042000
0.1693		4.30	6.00	66.00	17.55	24.00	9057410043000
0.1720	11/64	4.37	6.00	66.00	17.45	24.00	9057410043700
0.1732		4.40	6.00	66.00	17.40	24.00	9057410044000
0.1772		4.50	6.00	66.00	17.25	24.00	9057410045000
0.1811		4.60	6.00	66.00	17.10	24.00	9057410046000
0.1831		4.65	6.00	66.00	17.03	24.00	9057410046500
0.1850		4.70	6.00	66.00	16.95	24.00	9057410047000
0.1874	3/16	4.76	6.00	66.00	20.86	28.00	9057410047600
0.1890		4.80	6.00	66.00	20.80	28.00	9057410048000
0.1929		4.90	6.00	66.00	20.65	28.00	9057410049000
0.1969		5.00	6.00	66.00	20.50	28.00	9057410050000
0.2008		5.10	6.00	66.00	20.35	28.00	9057410051000
0.2031	13/64	5.16	6.00	66.00	20.26	28.00	9057410051600
0.2047		5.20	6.00	66.00	20.20	28.00	9057410052000
0.2087		5.30	6.00	66.00	20.05	28.00	9057410053000
0.2126		5.40	6.00	66.00	19.90	28.00	9057410054000
0.2165		5.50	6.00	66.00	19.75	28.00	9057410055000
0.2185		5.55	6.00	66.00	19.68	28.00	9057410055500
0.2189	7/32	5.56	6.00	66.00	19.66	28.00	9057410055600
0.2205		5.60	6.00	66.00	19.60	28.00	9057410056000
0.2244		5.70	6.00	66.00	19.45	28.00	9057410057000
0.2283		5.80	6.00	66.00	19.30	28.00	9057410058000
0.2323		5.90	6.00	66.00	19.15	28.00	9057410059000
0.2343	15/64	5.95	6.00	66.00	19.08	28.00	9057410059500
0.2362		6.00	6.00	66.00	19.00	28.00	9057410060000
0.2402		6.10	8.00	79.00	24.85	34.00	9057410061000
0.2441		6.20	8.00	79.00	24.70	34.00	9057410062000
0.2480		6.30	8.00	79.00	24.55	34.00	9057410063000
0.2500	1/4 E	6.35	8.00	79.00	24.48	34.00	9057410063500
0.2520		6.40	8.00	79.00	24.40	34.00	9057410064000
0.2559		6.50	8.00	79.00	24.25	34.00	9057410065000
0.2598		6.60	8.00	79.00	24.10	34.00	9057410066000
0.2638		6.70	8.00	79.00	23.95	34.00	9057410067000
0.2657	17/64 H	6.75	8.00	79.00	23.88	34.00	9057410067500
0.2677		6.80	8.00	79.00	23.80	34.00	9057410068000
0.2717	I	6.90	8.00	79.00	23.65	34.00	9057410069000
0.2756		7.00	8.00	79.00	23.50	34.00	9057410070000
0.2795		7.10	8.00	79.00	30.35	41.00	9057410071000
0.2811	9/32 K	7.14	8.00	79.00	30.29	41.00	9057410071400
0.2835		7.20	8.00	79.00	30.20	41.00	9057410072000
0.2874		7.30	8.00	79.00	30.05	41.00	9057410073000
0.2913		7.40	8.00	79.00	29.90	41.00	9057410074000
0.2953		7.50	8.00	79.00	29.75	41.00	9057410075000
0.2969	19/64	7.54	8.00	79.00	29.69	41.00	9057410075400
0.2992		7.60	8.00	79.00	29.60	41.00	9057410076000
0.3031		7.70	8.00	79.00	29.45	41.00	9057410077000
0.3071		7.80	8.00	79.00	29.30	41.00	9057410078000
0.3110		7.90	8.00	79.00	29.15	41.00	9057410079000
0.3126	5/16	7.94	8.00	79.00	29.09	41.00	9057410079400
0.3150		8.00	8.00	79.00	29.00	41.00	9057410080000
0.3189		8.10	10.00	89.00	34.85	47.00	9057410081000
0.3228	P	8.20	10.00	89.00	34.70	47.00	9057410082000
0.3268		8.30	10.00	89.00	34.55	47.00	9057410083000
0.3280	21/64	8.33	10.00	89.00	34.51	47.00	9057410083300
0.3307		8.40	10.00	89.00	34.40	47.00	9057410084000
0.3346		8.50	10.00	89.00	34.25	47.00	9057410085000
0.3386		8.60	10.00	89.00	34.10	47.00	9057410086000
0.3425		8.70	10.00	89.00	33.95	47.00	9057410087000
0.3437	11/32	8.73	10.00	89.00	33.91	47.00	9057410087300
0.3465		8.80	10.00	89.00	33.80	47.00	9057410088000
0.3504		8.90	10.00	89.00	33.65	47.00	9057410089000
0.3543		9.00	10.00	89.00	33.50	47.00	9057410090000
0.3583		9.10	10.00	89.00	33.35	47.00	9057410091000
0.3594	23/64	9.13	10.00	89.00	33.31	47.00	9057410091300
0.3622		9.20	10.00	89.00	33.20	47.00	9057410092000

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.3642		9.25	10.00	89.00	33.13	47.00	9057410092500
0.3661		9.30	10.00	89.00	33.05	47.00	9057410093000
0.3701		9.40	10.00	89.00	32.90	47.00	9057410094000
0.3740		9.50	10.00	89.00	32.75	47.00	9057410095000
0.3748	3/8	9.52	10.00	89.00	32.72	47.00	9057410095200
0.3780		9.60	10.00	89.00	32.60	47.00	9057410096000
0.3819		9.70	10.00	89.00	32.45	47.00	9057410097000
0.3858	W	9.80	10.00	89.00	32.30	47.00	9057410098000
0.3898		9.90	10.00	89.00	32.15	47.00	9057410099000
0.3906	25/64	9.92	10.00	89.00	32.12	47.00	9057410099200
0.3937		10.00	10.00	89.00	32.00	47.00	9057410100000
0.3976		10.10	12.00	102.00	39.85	55.00	9057410101000
0.4016		10.20	12.00	102.00	39.70	55.00	9057410102000
0.4055		10.30	12.00	102.00	39.55	55.00	9057410103000
0.4063	13/32	10.32	12.00	102.00	39.52	55.00	9057410103200
0.4094		10.40	12.00	102.00	39.40	55.00	9057410104000
0.4134		10.50	12.00	102.00	39.25	55.00	9057410105000
0.4173		10.60	12.00	102.00	39.10	55.00	9057410106000
0.4220	27/64	10.72	12.00	102.00	38.92	55.00	9057410107200
0.4252		10.80	12.00	102.00	38.80	55.00	9057410108000
0.4291		10.90	12.00	102.00	38.65	55.00	9057410109000

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.4331		11.00	12.00	102.00	38.50	55.00	9057410110000
0.4370		11.10	12.00	102.00	38.35	55.00	9057410111000
0.4374	7/16	11.11	12.00	102.00	38.34	55.00	9057410111100
0.4409		11.20	12.00	102.00	38.20	55.00	9057410112000
0.4449		11.30	12.00	102.00	38.05	55.00	9057410113000
0.4488		11.40	12.00	102.00	37.90	55.00	9057410114000
0.4528		11.50	12.00	102.00	37.75	55.00	9057410115000
0.4531	29/64	11.51	12.00	102.00	37.74	55.00	9057410115100
0.4567		11.60	12.00	102.00	37.60	55.00	9057410116000
0.4606		11.70	12.00	102.00	37.45	55.00	9057410117000
0.4646		11.80	12.00	102.00	37.30	55.00	9057410118000
0.4685		11.90	12.00	102.00	37.15	55.00	9057410119000
0.4689	15/32	11.91	12.00	102.00	37.14	55.00	9057410119100
0.4724		12.00	12.00	102.00	37.00	55.00	9057410120000
0.4764		12.10	14.00	107.00	41.85	60.00	9057410121000
0.4803		12.20	14.00	107.00	41.70	60.00	9057410122000
0.4843	31/64	12.30	14.00	107.00	41.55	60.00	9057410123000
0.4882		12.40	14.00	107.00	41.40	60.00	9057410124000
0.4921		12.50	14.00	107.00	41.25	60.00	9057410125000
0.4961		12.60	14.00	107.00	41.10	60.00	9057410126000
0.5000	1/2	12.70	14.00	107.00	40.95	60.00	9057410127000

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					
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					
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					
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					
Unalloyed case hardened steels	≤ 25	≤ 255	425		0.0080	0.0125	0.0160	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					
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	330 295		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	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					
High speed steels	≤ 43	≤ 402	150		0.0030	0.0050	0.0065	0.0080					
Spring steels	≤ 38	≤ 354	150		0.0025	0.0040	0.0050	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					
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					
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	690 510		0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	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					
Chilled cast iron	≤ 38	≤ 354	115		0.0025	0.0040	0.0050	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					
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					
Aluminium and Al-alloys	-	≤ 120	855										
Al wrought alloys	-	≤ 200	855										
Al cast alloys ≤ 10 % Si	-	≤ 180	720										
≤ 24 % Si	-	≤ 180	590										
Magnesium alloys	-	≤ 120	855										
Copper, low-alloyed	-	≤ 150	360										
Brass, short-chipping	-	≤ 180	885										
long-chipping	-	≤ 180	590										
Bronze, short-chipping	-	≤ 180	360										
	≤ 25	≤ 255	330										
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	240 215										
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	475 395		0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125					
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	560 475		0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200					
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	425 410 395		0.0080 0.0065 0.0065	0.0125 0.0100 0.0100	0.0160 0.0125 0.0125	0.0200 0.0160 0.0160					
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	395 345		0.0065 0.0065	0.0100 0.0100	0.0125 0.0125	0.0160 0.0160					
Unalloyed case hardened steels	≤ 25	≤ 255	475		0.0080	0.0125	0.0160	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					
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	350 330		0.0065 0.0040	0.0100 0.0065	0.0125 0.0080	0.0160 0.0100					
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	240 180		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100					
High speed steels	≤ 43	≤ 402	195		0.0030	0.0050	0.0065	0.0080					
Spring steels	≤ 38	≤ 354	195		0.0025	0.0040	0.0050	0.0065					
Hardened steels	≤ 48 ≤ 66	≤ 460 -	180 115		0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050					
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	195 180 165		0.0040 0.0040 0.0040	0.0065 0.0065 0.0065	0.0080 0.0080 0.0080	0.0100 0.0100 0.0100					
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	690 525		0.0100 0.0100	0.0160 0.0160	0.0200 0.0200	0.0245 0.0245					
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	450 425		0.0100 0.0080	0.0160 0.0125	0.0200 0.0160	0.0245 0.0200					
Chilled cast iron	≤ 38	≤ 354	130		0.0025	0.0040	0.0050	0.0065					
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549	115		0.0030	0.0050	0.0065	0.0080					
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402	150 130		0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
Aluminium and Al-alloys	-	≤ 120	1015										
Al wrought alloys	-	≤ 200	1015										
Al cast alloys ≤ 10 % Si	-	≤ 180	855										
≤ 24 % Si	-	≤ 180	720										
Magnesium alloys	-	≤ 120	920										
Copper, low-alloyed	-	≤ 150	410										
Brass, short-chipping	-	≤ 180	1065										
long-chipping	-	≤ 180	720										
Bronze, short-chipping	-	≤ 180	410										
	≤ 25	≤ 255	345										
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	295 260										
Duroplastics													
Thermoplastics													
Reinforced plastics - Kevlar													
Reinforced plastics - GFK / CFK													