



Tool material

Solid Carbide

Surface



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

M Stainless steel ○

K Cast iron •

N Aluminum ○

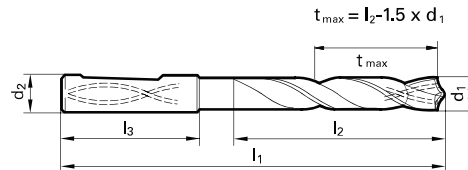
S Titanium alloys ○

H Hardened steel ○

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

●=Optimal

○=Limited



Speeds and feeds information on pg. 559

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.1181		3.00	6.00	70.00	25.50	30.00	9056120030000
0.1220		3.10	6.00	70.00	25.35	30.00	9056120031000
0.1248	1/8	3.17	6.00	70.00	25.25	30.00	9056120031700
0.1260		3.20	6.00	70.00	25.20	30.00	9056120032000
0.1280		3.25	6.00	70.00	25.13	30.00	9056120032500
0.1299		3.30	6.00	70.00	25.05	30.00	9056120033000
0.1339		3.40	6.00	75.00	30.40	35.50	9056120034000
0.1378		3.50	6.00	75.00	30.25	35.50	9056120035000
0.1406	9/64 #28	3.57	6.00	75.00	30.15	35.50	9056120035700
0.1417		3.60	6.00	75.00	30.10	35.50	9056120036000
0.1457		3.70	6.00	75.00	29.95	35.50	9056120037000
0.1496	#25	3.80	6.00	75.00	31.80	37.50	9056120038000
0.1535		3.90	6.00	75.00	31.65	37.50	9056120039000
0.1563	5/32	3.97	6.00	75.00	31.55	37.50	9056120039700
0.1575		4.00	6.00	75.00	31.50	37.50	9056120040000
0.1614		4.10	6.00	75.00	31.35	37.50	9056120041000
0.1654		4.20	6.00	75.00	31.20	37.50	9056120042000
0.1693	#18	4.30	6.00	85.00	38.55	45.00	9056120043000
0.1720	11/64	4.37	6.00	85.00	38.45	45.00	9056120043700
0.1732		4.40	6.00	85.00	38.40	45.00	9056120044000
0.1772	#16	4.50	6.00	85.00	38.25	45.00	9056120045000
0.1811		4.60	6.00	85.00	38.10	45.00	9056120046000
0.1831		4.65	6.00	85.00	38.03	45.00	9056120046500
0.1850	#13	4.70	6.00	85.00	37.95	45.00	9056120047000
0.1874	3/16	4.76	6.00	90.00	42.86	50.00	9056120047600
0.1890		4.80	6.00	90.00	42.80	50.00	9056120048000
0.1929		4.90	6.00	90.00	42.65	50.00	9056120049000
0.1969		5.00	6.00	90.00	42.50	50.00	9056120050000
0.2008		5.10	6.00	90.00	42.35	50.00	9056120051000
0.2031	13/64	5.16	6.00	90.00	42.26	50.00	9056120051600
0.2047		5.20	6.00	90.00	42.20	50.00	9056120052000
0.2087		5.30	6.00	90.00	42.05	50.00	9056120053000
0.2126		5.40	6.00	97.00	48.90	57.00	9056120054000
0.2165		5.50	6.00	97.00	48.75	57.00	9056120055000
0.2244		5.70	6.00	97.00	48.45	57.00	9056120057000
0.2283		5.80	6.00	97.00	48.30	57.00	9056120058000
0.2323		5.90	6.00	97.00	48.15	57.00	9056120059000
0.2362		6.00	6.00	97.00	48.00	57.00	9056120060000
0.2441		6.20	8.00	106.00	56.70	66.00	9056120062000
0.2480		6.30	8.00	106.00	56.55	66.00	9056120063000
0.2500	1/4 E	6.35	8.00	106.00	56.48	66.00	9056120063500
0.2559		6.50	8.00	106.00	56.25	66.00	9056120065000

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.2598		6.60	8.00	106.00	56.10	66.00	9056120066000
0.2638		6.70	8.00	106.00	55.95	66.00	9056120067000
0.2677		6.80	8.00	106.00	55.80	66.00	9056120068000
0.2717	I	6.90	8.00	116.00	65.65	76.00	9056120069000
0.2756		7.00	8.00	116.00	65.50	76.00	9056120070000
0.2795		7.10	8.00	116.00	65.35	76.00	9056120071000
0.2835		7.20	8.00	116.00	65.20	76.00	9056120072000
0.2913		7.40	8.00	116.00	64.90	76.00	9056120074000
0.2953		7.50	8.00	116.00	64.75	76.00	9056120075000
0.2992		7.60	8.00	116.00	64.60	76.00	9056120076000
0.3031		7.70	8.00	116.00	64.45	76.00	9056120077000
0.3071		7.80	8.00	116.00	64.30	76.00	9056120078000
0.3150		8.00	8.00	116.00	64.00	76.00	9056120080000
0.3189		8.10	10.00	131.00	74.85	87.00	9056120081000
0.3228	P	8.20	10.00	131.00	74.70	87.00	9056120082000
0.3307		8.40	10.00	131.00	74.40	87.00	9056120084000
0.3346	21/64	8.50	10.00	131.00	74.25	87.00	9056120085000
0.3386		8.60	10.00	131.00	74.10	87.00	9056120086000
0.3425		8.70	10.00	131.00	73.95	87.00	9056120087000
0.3465		8.80	10.00	131.00	73.80	87.00	9056120088000
0.3543		9.00	10.00	131.00	73.50	87.00	9056120090000
0.3583		9.10	10.00	139.00	81.35	95.00	9056120091000
0.3622		9.20	10.00	139.00	81.20	95.00	9056120092000
0.3661		9.30	10.00	139.00	81.05	95.00	9056120093000
0.3701		9.40	10.00	139.00	80.90	95.00	9056120094000
0.3740		9.50	10.00	139.00	80.75	95.00	9056120095000
0.3748	3/8	9.52	10.00	139.00	80.72	95.00	9056120095200
0.3819		9.70	10.00	139.00	80.45	95.00	9056120097000
0.3858	W	9.80	10.00	139.00	80.30	95.00	9056120098000
0.3898		9.90	10.00	139.00	80.15	95.00	9056120099000
0.3937		10.00	10.00	139.00	80.00	95.00	9056120100000
0.4016		10.20	12.00	155.00	90.70	106.00	9056120102000
0.4055		10.30	12.00	155.00	90.55	106.00	9056120103000
0.4134		10.50	12.00	155.00	90.25	106.00	9056120105000
0.4252		10.80	12.00	155.00	89.80	106.00	9056120108000
0.4331		11.00	12.00	155.00	89.50	106.00	9056120110000
0.4409		11.20	12.00	163.00	97.20	114.00	9056120112000
0.4528		11.50	12.00	163.00	96.75	114.00	9056120115000
0.4646		11.80	12.00	163.00	96.30	114.00	9056120118000
0.4724		12.00	12.00	163.00	96.00	114.00	9056120120000
0.4764		12.10	14.00	182.00	114.85	133.00	9056120121000
0.4803		12.20	14.00	182.00	114.70	133.00	9056120122000

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.4921	1/2	12.50	14.00	182.00	114.25	133.00	9056120125000
0.5000		12.70	14.00	182.00	113.95	133.00	9056120127000
0.5118		13.00	14.00	182.00	113.50	133.00	9056120130000
0.5315		13.50	14.00	182.00	112.75	133.00	9056120135000
0.5512	3/4	14.00	14.00	182.00	112.00	133.00	9056120140000
0.5551		14.10	16.00	204.00	130.85	152.00	9056120141000
0.5591		14.20	16.00	204.00	130.70	152.00	9056120142000
0.5709		14.50	16.00	204.00	130.25	152.00	9056120145000
0.5906	1	15.00	16.00	204.00	129.50	152.00	9056120150000
0.6102		15.50	16.00	204.00	128.75	152.00	9056120155000

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.6299	1 1/4	16.00	16.00	204.00	128.00	152.00	9056120160000
0.6496		16.50	18.00	223.00	146.25	171.00	9056120165000
0.6693		17.00	18.00	223.00	145.50	171.00	9056120170000
0.6890		17.50	18.00	223.00	144.75	171.00	9056120175000
0.7087	1 1/2	18.00	18.00	223.00	144.00	171.00	9056120180000
0.7283		18.50	20.00	244.00	162.25	190.00	9056120185000
0.7480		19.00	20.00	244.00	161.50	190.00	9056120190000
0.7500		19.05	20.00	244.00	161.43	190.00	9056120190500
0.7677	2	19.50	20.00	244.00	160.75	190.00	9056120195000
0.7874		20.00	20.00	244.00	160.00	190.00	9056120200000

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	460 395		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	0.0125 0.0100	0.0140 0.0110	0.0160 0.0125		
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	550 480		0.0065 0.0065	0.0100 0.0100	0.0125 0.0125	0.0160 0.0160	0.0160 0.0160	0.0180 0.0180	0.0200 0.0200		
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	415 400 395		0.0065 0.0050 0.0050	0.0100 0.0080 0.0080	0.0125 0.0100 0.0125	0.0160 0.0125 0.0125	0.0160 0.0125 0.0125	0.0180 0.0140 0.0140	0.0200 0.0160 0.0160		
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	395 335		0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125	0.0125 0.0125	0.0140 0.0140	0.0160 0.0160		
Unalloyed case hardened steels	≤ 25	≤ 255	465		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180	0.0200		
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	395 270		0.0050 0.0030	0.0080 0.0050	0.0100 0.0065	0.0125 0.0080	0.0125 0.0080	0.0140 0.0090	0.0160 0.0100		
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	340 325		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	0.0125 0.0100	0.0140 0.0110	0.0160 0.0125		
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	230 175		0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080	0.0100 0.0080	0.0110 0.0090	0.0125 0.0100		
High speed steels	≤ 43	≤ 402	195		0.0025	0.0040	0.0050	0.0065	0.0065	0.0070	0.0080		
Spring steels	≤ 38	≤ 354	195		0.0020	0.0030	0.0040	0.0050	0.0050	0.0055	0.0065		
Hardened steels	≤ 48 ≤ 66	≤ 460 -	175 110		0.0020 0.0020	0.0030 0.0030	0.0040 0.0040	0.0050 0.0050	0.0050 0.0050	0.0055 0.0055	0.0065 0.0065		
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	195 175 155		0.0030 0.0030 0.0030	0.0050 0.0050 0.0050	0.0065 0.0065 0.0065	0.0080 0.0080 0.0080	0.0080 0.0080 0.0080	0.0090 0.0090 0.0090	0.0100 0.0100 0.0100		
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	640 525		0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200	0.0200 0.0200	0.0220 0.0220	0.0245 0.0245		
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	435 415		0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160	0.0200 0.0160	0.0220 0.0180	0.0245 0.0200		
Chilled cast iron	≤ 38	≤ 354	130		0.0020	0.0030	0.0040	0.0050	0.0050	0.0055	0.0065		
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549	110		0.0025	0.0040	0.0050	0.0065	0.0065	0.0070	0.0080		
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402	140 130		0.0020 0.0020	0.0030 0.0030	0.0040 0.0040	0.0050 0.0050	0.0050 0.0050	0.0055 0.0055	0.0065 0.0065		
Aluminium and Al-alloys	-	≤ 120	1000		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220	0.0245		
Al wrought alloys	-	≤ 200	1000		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220	0.0245		
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180	845 710		0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200	0.0200 0.0200	0.0220 0.0220	0.0245 0.0245		
Magnesium alloys	-	≤ 120	900		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180	0.0200		
Copper, low-alloyed	-	≤ 150	400		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180	0.0200		
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180	1050 710		0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160	0.0200 0.0160	0.0220 0.0180	0.0245 0.0200		
Bronze, short-chipping	-	≤ 180	410		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180	0.0200		
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	345 285 250		0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125	0.0125 0.0125	0.0140 0.0140	0.0160 0.0160		
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	330 280	0.0002 0.0002	0.0003 0.0003	0.0005 0.0005	0.0009 0.0009	0.0011 0.0011	0.0014 0.0014				
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	295 265	0.0002 0.0002	0.0003 0.0003	0.0005 0.0005	0.0009 0.0009	0.0011 0.0011	0.0014 0.0014				
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	295 265 245	0.0002 0.0002 0.0002	0.0002 0.0002 0.0002	0.0004 0.0004 0.0004	0.0006 0.0006 0.0006	0.0006 0.0006 0.0006	0.0010 0.0010 0.0010				
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	245 215	0.0002 0.0002	0.0002 0.0002	0.0004 0.0004	0.0006 0.0006	0.0006 0.0006	0.0010 0.0010				
Unalloyed case hardened steels	≤ 25	≤ 255	265	0.0002	0.0003	0.0005	0.0009	0.0011	0.0014				
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	245 215	0.0002 0.0002	0.0002 0.0002	0.0004 0.0004	0.0006 0.0006	0.0006 0.0006	0.0010 0.0010				
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	245 215	0.0002 0.0002	0.0002 0.0002	0.0004 0.0004	0.0006 0.0006	0.0006 0.0006	0.0010 0.0010				
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	245 215	0.0001 0.0001	0.0002 0.0002	0.0003 0.0003	0.0004 0.0004	0.0005 0.0005	0.0008 0.0008				
High speed steels	≤ 43	≤ 402	180	0.0001	0.0002	0.0003	0.0004	0.0005	0.0008				
Spring steels	≤ 38	≤ 354	215	0.0001	0.0002	0.0003	0.0004	0.0005	0.0008				
Hardened steels	≤ 48 ≤ 66	≤ 460 -	100 85	0.0001 0.0001	0.0002 0.0002	0.0003 0.0003	0.0004 0.0004	0.0005 0.0005	0.0008 0.0008				
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	180 150 115	0.0002 0.0002 0.0002	0.0002 0.0002 0.0002	0.0004 0.0004 0.0004	0.0006 0.0006 0.0006	0.0006 0.0006 0.0006	0.0010 0.0010 0.0010				
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	180 160	0.0003 0.0003	0.0005 0.0005	0.0009 0.0009	0.0013 0.0013	0.0016 0.0016	0.0020 0.0020				
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	260 230	0.0002 0.0002	0.0003 0.0003	0.0005 0.0005	0.0009 0.0009	0.0011 0.0011	0.0014 0.0014				
Chilled cast iron	≤ 38	≤ 354	180	0.0002	0.0002	0.0004	0.0006	0.0006	0.0010				
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549	115	0.0001	0.0002	0.0003	0.0004	0.0005	0.0008				
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402	115 100	0.0001 0.0001	0.0002 0.0002	0.0003 0.0003	0.0004 0.0004	0.0005 0.0005	0.0008 0.0008				
Aluminium and Al-alloys	-	≤ 120	590	0.0005	0.0007	0.0014	0.0018	0.0022	0.0026				
Al wrought alloys	-	≤ 200	655	0.0003	0.0005	0.0009	0.0013	0.0016	0.0020				
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180	525 395	0.0005 0.0005	0.0007 0.0007	0.0014 0.0014	0.0018 0.0018	0.0022 0.0022	0.0026 0.0026				
Magnesium alloys	-	≤ 120	245	0.0005	0.0007	0.0014	0.0018	0.0022	0.0026				
Copper, low-alloyed	-	≤ 150	395	0.0002	0.0003	0.0005	0.0009	0.0011	0.0014				
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180	295 215	0.0008 0.0008	0.0012 0.0012	0.0024 0.0024	0.0027 0.0027	0.0030 0.0030	0.0033 0.0033				
Bronze, short-chipping	-	≤ 180	245	0.0005	0.0007	0.0014	0.0018	0.0022	0.0026				
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	230	0.0005	0.0007	0.0014	0.0018	0.0022	0.0026				
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK			230 200 165	0.0002 0.0002 0.0002	0.0003 0.0003 0.0002	0.0005 0.0005 0.0004	0.0009 0.0009 0.0006	0.0011 0.0011 0.0010	0.0014 0.0014 0.0010				