5xD Ratio drills

Series no. **1183**

Tool material **Solid Carbide**

Surface **S**

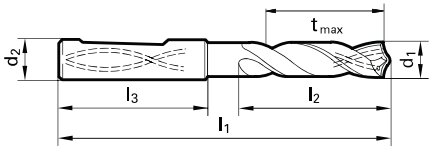
P	Steel	●
M	Stainless steel	○
K	Cast iron	●
N	Aluminum	○
S	Titanium alloys	○
H	Hardened steel	○

●=Optimal
○=Limited

web thinning ≥ Ø 3.300 • facet point grinding • main cutting edge form straight • optimized cutting geometry

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

$t_{max} = l_2-(1.5 \times d_1)$



Speeds and feeds information on pg. 532

Diameter (d1) inch	wire/ltr	mm	d2 mm	l1 mm	t_{max} mm	l2 mm	EDP #
0.1181		3.00	6.00	66.00	23.50	28.00	9011830030000
0.1220		3.10	6.00	66.00	23.35	28.00	9011830031000
0.1260		3.20	6.00	66.00	23.20	28.00	9011830032000
0.1299		3.30	6.00	66.00	23.05	28.00	9011830033000
0.1339		3.40	6.00	66.00	22.90	28.00	9011830034000
0.1378		3.50	6.00	66.00	22.75	28.00	9011830035000
0.1417		3.60	6.00	66.00	22.60	28.00	9011830036000
0.1457		3.70	6.00	66.00	22.45	28.00	9011830037000
0.1496	#25	3.80	6.00	74.00	30.30	36.00	9011830038000
0.1535		3.90	6.00	74.00	30.15	36.00	9011830039000
0.1575		4.00	6.00	74.00	30.00	36.00	9011830040000
0.1614		4.10	6.00	74.00	29.85	36.00	9011830041000
0.1654		4.20	6.00	74.00	29.70	36.00	9011830042000
0.1693	#18	4.30	6.00	74.00	29.55	36.00	9011830043000
0.1720	11/64	4.37	6.00	74.00	29.45	36.00	9011830043700
0.1732		4.40	6.00	74.00	29.40	36.00	9011830044000
0.1772	#16	4.50	6.00	74.00	29.25	36.00	9011830045000
0.1811		4.60	6.00	74.00	29.10	36.00	9011830046000
0.1831		4.65	6.00	74.00	29.03	36.00	9011830046500
0.1850	#13	4.70	6.00	74.00	28.95	36.00	9011830047000
0.1874	3/16	4.76	6.00	82.00	36.86	44.00	9011830047600
0.1890	#12	4.80	6.00	82.00	36.80	44.00	9011830048000
0.1929		4.90	6.00	82.00	36.65	44.00	9011830049000
0.1969		5.00	6.00	82.00	36.50	44.00	9011830050000
0.2008		5.10	6.00	82.00	36.35	44.00	9011830051000
0.2031	13/64	5.16	6.00	82.00	36.26	44.00	9011830051600
0.2047		5.20	6.00	82.00	36.20	44.00	9011830052000
0.2087		5.30	6.00	82.00	36.05	44.00	9011830053000
0.2126		5.40	6.00	82.00	35.90	44.00	9011830054000
0.2165		5.50	6.00	82.00	35.75	44.00	9011830055000
0.2189	7/32	5.56	6.00	82.00	35.66	44.00	9011830055600
0.2205		5.60	6.00	82.00	35.60	44.00	9011830056000
0.2244		5.70	6.00	82.00	35.45	44.00	9011830057000
0.2283		5.80	6.00	82.00	35.30	44.00	9011830058000
0.2323		5.90	6.00	82.00	35.15	44.00	9011830059000
0.2343	15/64	5.95	6.00	82.00	35.08	44.00	9011830059500
0.2362		6.00	6.00	82.00	35.00	44.00	9011830060000
0.2402		6.10	8.00	91.00	43.85	53.00	9011830061000
0.2441		6.20	8.00	91.00	43.70	53.00	9011830062000
0.2480		6.30	8.00	91.00	43.55	53.00	9011830063000
0.2500	1/4 E	6.35	8.00	91.00	43.48	53.00	9011830063500
0.2520		6.40	8.00	91.00	43.40	53.00	9011830064000

Diameter (d1) inch	wire/ltr	mm	d2 mm	l1 mm	t_{max} mm	l2 mm	EDP #
0.2559		6.50	8.00	91.00	43.25	53.00	9011830065000
0.2598		6.60	8.00	91.00	43.10	53.00	9011830066000
0.2638		6.70	8.00	91.00	42.95	53.00	9011830067000
0.2657	17/64 H	6.75	8.00	91.00	42.88	53.00	9011830067500
0.2677		6.80	8.00	91.00	42.80	53.00	9011830068000
0.2717	I	6.90	8.00	91.00	42.65	53.00	9011830069000
0.2756		7.00	8.00	91.00	42.50	53.00	9011830070000
0.2795		7.10	8.00	91.00	42.35	53.00	9011830071000
0.2811	9/32 K	7.14	8.00	91.00	42.29	53.00	9011830071400
0.2835		7.20	8.00	91.00	42.20	53.00	9011830072000
0.2874		7.30	8.00	91.00	42.05	53.00	9011830073000
0.2913		7.40	8.00	91.00	41.90	53.00	9011830074000
0.2953		7.50	8.00	91.00	41.75	53.00	9011830075000
0.2969	19/64	7.54	8.00	91.00	41.69	53.00	9011830075400
0.2992		7.60	8.00	91.00	41.60	53.00	9011830076000
0.3031		7.70	8.00	91.00	41.45	53.00	9011830077000
0.3071		7.80	8.00	91.00	41.30	53.00	9011830078000
0.3110		7.90	8.00	91.00	41.15	53.00	9011830079000
0.3125	5/16	7.94	8.00	91.00	41.09	53.00	9011830079400
0.3150		8.00	8.00	91.00	41.00	53.00	9011830080000
0.3189		8.10	10.00	103.00	48.85	61.00	9011830081000
0.3228	P	8.20	10.00	103.00	48.70	61.00	9011830082000
0.3268		8.30	10.00	103.00	48.55	61.00	9011830083000
0.3280	21/64	8.33	10.00	103.00	48.51	61.00	9011830083300
0.3307		8.40	10.00	103.00	48.40	61.00	9011830084000
0.3346		8.50	10.00	103.00	48.25	61.00	9011830085000
0.3386		8.60	10.00	103.00	48.10	61.00	9011830086000
0.3425		8.70	10.00	103.00	47.95	61.00	9011830087000
0.3437	11/32	8.73	10.00	103.00	47.91	61.00	9011830087300
0.3465		8.80	10.00	103.00	47.80	61.00	9011830088000
0.3504		8.90	10.00	103.00	47.65	61.00	9011830089000
0.3543		9.00	10.00	103.00	47.50	61.00	9011830090000
0.3583		9.10	10.00	103.00	47.35	61.00	9011830091000
0.3594	23/64	9.13	10.00	103.00	47.31	61.00	9011830091300
0.3622		9.20	10.00	103.00	47.20	61.00	9011830092000
0.3661		9.30	10.00	103.00	47.05	61.00	9011830093000
0.3701		9.40	10.00	103.00	46.90	61.00	9011830094000
0.3740		9.50	10.00	103.00	46.75	61.00	9011830095000
0.3750	3/8	9.52	10.00	103.00	46.72	61.00	9011830095200
0.3780		9.60	10.00	103.00	46.60	61.00	9011830096000
0.3819		9.70	10.00	103.00	46.45	61.00	9011830097000
0.3858	W	9.80	10.00	103.00	46.30	61.00	9011830098000

5xD Ratio drills

Series no. **1183**

Diameter (d1) inch	wire/ltr	mm	d2 mm	l1 mm	t_{max} mm	l2 mm	EDP #
0.3898		9.90	10.00	103.00	46.15	61.00	**9011830099000**
0.3906	25/64	9.92	10.00	103.00	46.12	61.00	**9011830099200**
0.3937		10.00	10.00	103.00	46.00	61.00	**9011830100000**
0.3976		10.10	12.00	118.00	55.85	71.00	**9011830101000**
0.4016		10.20	12.00	118.00	55.70	71.00	**9011830102000**
0.4055		10.30	12.00	118.00	55.55	71.00	**9011830103000**
0.4063	13/32	10.32	12.00	118.00	55.52	71.00	**9011830103200**
0.4094		10.40	12.00	118.00	55.40	71.00	**9011830104000**
0.4134		10.50	12.00	118.00	55.25	71.00	**9011830105000**
0.4173		10.60	12.00	118.00	55.10	71.00	**9011830106000**
0.4213		10.70	12.00	118.00	54.95	71.00	**9011830107000**
0.4220	27/64	10.72	12.00	118.00	54.92	71.00	**9011830107200**
0.4252		10.80	12.00	118.00	54.80	71.00	**9011830108000**
0.4291		10.90	12.00	118.00	54.65	71.00	**9011830109000**
0.4331		11.00	12.00	118.00	54.50	71.00	**9011830110000**
0.4370		11.10	12.00	118.00	54.35	71.00	**9011830111000**
0.4374	7/16	11.11	12.00	118.00	54.34	71.00	**9011830111100**
0.4409		11.20	12.00	118.00	54.20	71.00	**9011830112000**
0.4449		11.30	12.00	118.00	54.05	71.00	**9011830113000**
0.4488		11.40	12.00	118.00	53.90	71.00	**9011830114000**
0.4528		11.50	12.00	118.00	53.75	71.00	**9011830115000**
0.4531	29/64	11.51	12.00	118.00	53.74	71.00	**9011830115100**
0.4567		11.60	12.00	118.00	53.60	71.00	**9011830116000**
0.4606		11.70	12.00	118.00	53.45	71.00	**9011830117000**
0.4646		11.80	12.00	118.00	53.30	71.00	**9011830118000**
0.4685		11.90	12.00	118.00	53.15	71.00	**9011830119000**
0.4689	15/32	11.91	12.00	118.00	53.14	71.00	**9011830119100**
0.4724		12.00	12.00	118.00	53.00	71.00	**9011830120000**
0.4764		12.10	14.00	124.00	58.85	77.00	**9011830121000**
0.4803		12.20	14.00	124.00	58.70	77.00	**9011830122000**
0.4843	31/64	12.30	14.00	124.00	58.55	77.00	**9011830123000**
0.4882		12.40	14.00	124.00	58.40	77.00	**9011830124000**
0.4921		12.50	14.00	124.00	58.25	77.00	**9011830125000**
0.4961		12.60	14.00	124.00	58.10	77.00	**9011830126000**
0.5000	1/2	12.70	14.00	124.00	57.95	77.00	**9011830127000**
0.5039		12.80	14.00	124.00	57.80	77.00	**9011830128000**
0.5079		12.90	14.00	124.00	57.65	77.00	**9011830129000**
0.5118		13.00	14.00	124.00	57.50	77.00	**9011830130000**
0.5157	33/64	13.10	14.00	124.00	57.35	77.00	**9011830131000**
0.5197		13.20	14.00	124.00	57.20	77.00	**9011830132000**
0.5236		13.30	14.00	124.00	57.05	77.00	**9011830133000**
0.5276		13.40	14.00	124.00	56.90	77.00	**9011830134000**
0.5315		13.50	14.00	124.00	56.75	77.00	**9011830135000**
0.5354		13.60	14.00	124.00	56.60	77.00	**9011830136000**
0.5394		13.70	14.00	124.00	56.45	77.00	**9011830137000**
0.5433		13.80	14.00	124.00	56.30	77.00	**9011830138000**
0.5469	35/64	13.89	14.00	124.00	56.17	77.00	**9011830138900**
0.5472		13.90	14.00	124.00	56.15	77.00	**9011830139000**
0.5512		14.00	14.00	124.00	56.00	77.00	**9011830140000**
0.5551		14.10	16.00	133.00	61.85	83.00	**9011830141000**
0.5591		14.20	16.00	133.00	61.70	83.00	**9011830142000**
0.5626	9/16	14.29	16.00	133.00	61.57	83.00	**9011830142900**
0.5630		14.30	16.00	133.00	61.55	83.00	**9011830143000**
0.5669		14.40	16.00	133.00	61.40	83.00	**9011830144000**
0.5709		14.50	16.00	133.00	61.25	83.00	**9011830145000**
0.5748		14.60	16.00	133.00	61.10	83.00	**9011830146000**
0.5780	37/64	14.68	16.00	133.00	60.98	83.00	**9011830146800**
0.5787		14.70	16.00	133.00	60.95	83.00	**9011830147000**
0.5827		14.80	16.00	133.00	60.80	83.00	**9011830148000**
0.5866		14.90	16.00	133.00	60.65	83.00	**9011830149000**

Diameter (d1) inch	wire/ltr	mm	d2 mm	l1 mm	t_{max} mm	l2 mm	EDP #
0.5906		15.00	16.00	133.00	60.50	83.00	**9011830150000**
0.5945		15.10	16.00	133.00	60.35	83.00	**9011830151000**
0.5984		15.20	16.00	133.00	60.20	83.00	**9011830152000**
0.6024		15.30	16.00	133.00	60.05	83.00	**9011830153000**
0.6063		15.40	16.00	133.00	59.90	83.00	**9011830154000**
0.6094	39/64	15.48	16.00	133.00	59.78	83.00	**9011830154800**
0.6102		15.50	16.00	133.00	59.75	83.00	**9011830155000**
0.6142		15.60	16.00	133.00	59.60	83.00	**9011830156000**
0.6181		15.70	16.00	133.00	59.45	83.00	**9011830157000**
0.6220		15.80	16.00	133.00	59.30	83.00	**9011830158000**
0.6250	5/8	15.87	16.00	133.00	59.20	83.00	**9011830158700**
0.6260		15.90	16.00	133.00	59.15	83.00	**9011830159000**
0.6299		16.00	16.00	133.00	59.00	83.00	**9011830160000**
0.6339		16.10	18.00	143.00	68.85	93.00	**9011830161000**
0.6378		16.20	18.00	143.00	68.70	93.00	**9011830162000**
0.6406	41/64	16.27	18.00	143.00	68.60	93.00	**9011830162700**
0.6417		16.30	18.00	143.00	68.55	93.00	**9011830163000**
0.6457		16.40	18.00	143.00	68.40	93.00	**9011830164000**
0.6496		16.50	18.00	143.00	68.25	93.00	**9011830165000**
0.6535		16.60	18.00	143.00	68.10	93.00	**9011830166000**
0.6575		16.70	18.00	143.00	67.95	93.00	**9011830167000**
0.6614		16.80	18.00	143.00	67.80	93.00	**9011830168000**
0.6654		16.90	18.00	143.00	67.65	93.00	**9011830169000**
0.6693		17.00	18.00	143.00	67.50	93.00	**9011830170000**
0.6720	43/64	17.07	18.00	143.00	67.40	93.00	**9011830170700**
0.6732		17.10	18.00	143.00	67.35	93.00	**9011830171000**
0.6772		17.20	18.00	143.00	67.20	93.00	**9011830172000**
0.6811		17.30	18.00	143.00	67.05	93.00	**9011830173000**
0.6850		17.40	18.00	143.00	66.90	93.00	**9011830174000**
0.6874	11/16	17.46	18.00	143.00	66.81	93.00	**9011830174600**
0.6890		17.50	18.00	143.00	66.75	93.00	**9011830175000**
0.6929		17.60	18.00	143.00	66.60	93.00	**9011830176000**
0.6969		17.70	18.00	143.00	66.45	93.00	**9011830177000**
0.7008		17.80	18.00	143.00	66.30	93.00	**9011830178000**
0.7031	45/64	17.86	18.00	143.00	66.21	93.00	**9011830178600**
0.7047		17.90	18.00	143.00	66.15	93.00	**9011830179000**
0.7087		18.00	18.00	143.00	66.00	93.00	**9011830180000**
0.7126		18.10	20.00	153.00	73.85	101.00	**9011830181000**
0.7165		18.20	20.00	153.00	73.70	101.00	**9011830182000**
0.7205		18.30	20.00	153.00	73.55	101.00	**9011830183000**
0.7244		18.40	20.00	153.00	73.40	101.00	**9011830184000**
0.7283		18.50	20.00	153.00	73.25	101.00	**9011830185000**
0.7323		18.60	20.00	153.00	73.10	101.00	**9011830186000**
0.7343	47/64	18.65	20.00	153.00	73.03	101.00	**9011830186500**
0.7362		18.70	20.00	153.00	72.95	101.00	**9011830187000**
0.7402		18.80	20.00	153.00	72.80	101.00	**9011830188000**
0.7441		18.90	20.00	153.00	72.65	101.00	**9011830189000**
0.7480		19.00	20.00	153.00	72.50	101.00	**9011830190000**
0.7500	3/4	19.05	20.00	153.00	72.43	101.00	**9011830190500**
0.7520		19.10	20.00	153.00	72.35	101.00	**9011830191000**
0.7559		19.20	20.00	153.00	72.20	101.00	**9011830192000**
0.7598		19.30	20.00	153.00	72.05	101.00	**9011830193000**
0.7657	49/64	19.45	20.00	153.00	71.83	101.00	**9011830194500**
0.7677		19.50	20.00	153.00	71.75	101.00	**9011830195000**
0.7717		19.60	20.00	153.00	71.60	101.00	**9011830196000**
0.7756		19.70	20.00	153.00	71.45	101.00	**9011830197000**
0.7795		19.80	20.00	153.00	71.30	101.00	**9011830198000**
0.7835		19.90	20.00	153.00	71.15	101.00	**9011830199000**
0.7874		20.00	20.00	153.00	71.00	101.00	**9011830200000**

Series # 1183

Material group	Hardness HRc	Hardness Bhn	SFM	Feed Rate - IPR 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	360		0.0050	0.0080	0.0100	0.0125	0.0125	0.0140			
	≤ 32	≤ 301	295		0.0040	0.0065	0.0080	0.0100	0.0100	0.0110			
Free-cutting steels	≤ 25	≤ 255	425		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180			
	≤ 32	≤ 301	360		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180			
Unalloyed heat-treatable steels	≤ 20	≤ 220	325		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180			
	≤ 25	≤ 255	310		0.0050	0.0080	0.0100	0.0125	0.0125	0.0140			
	≤ 32	≤ 301	295		0.0050	0.0080	0.0100	0.0125	0.0125	0.0140			
Alloyed heat-treatable steels	≤ 32	≤ 301	295		0.0050	0.0080	0.0100	0.0125	0.0125	0.0140			
	≤ 43	≤ 402	260		0.0050	0.0080	0.0100	0.0125	0.0125	0.0140			
Unalloyed case hardened steels	≤ 25	≤ 255	360		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180			
Alloyed case hardened steels	≤ 32	≤ 301	295		0.0050	0.0080	0.0100	0.0125	0.0125	0.0140			
	≤ 43	≤ 402	210		0.0030	0.0050	0.0065	0.0080	0.0080	0.0090			
Nitriding steels	≤ 32	≤ 301	260		0.0050	0.0080	0.0100	0.0125	0.0125	0.0140			
	≤ 43	≤ 402	245		0.0030	0.0050	0.0065	0.0080	0.0080	0.0090			
Tool steels	≤ 25	≤ 255	180		0.0040	0.0065	0.0080	0.0100	0.0100	0.0110			
	≤ 43	≤ 402	130		0.0030	0.0050	0.0065	0.0080	0.0080	0.0090			
High speed steels	≤ 43	≤ 402	145		0.0025	0.0040	0.0050	0.0065	0.0065	0.0070			
Spring steels	≤ 38	≤ 354	145		0.0020	0.0030	0.0040	0.0050	0.0050	0.0055			
Hardened steels	≤ 48	≤ 460											
	≤ 66	-											
Stainless steels, sulphured	≤ 28	≤ 273	145		0.0030	0.0050	0.0065	0.0080	0.0080	0.0090			
austenitic	≤ 36	≤ 337	130		0.0030	0.0050	0.0065	0.0080	0.0080	0.0090			
martensitic	≤ 46	≤ 435	110		0.0030	0.0050	0.0065	0.0080	0.0080	0.0090			
Cast iron	≤ 23	≤ 242	620		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
	≤ 38	≤ 354	360		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
Spheroidal graphite iron and malleable cast iron	≤ 23	≤ 242	360		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
	≤ 38	≤ 354	310		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180			
Chilled cast iron	≤ 38	≤ 354											
New cast materials GGV	≤ 20	≤ 220											
	≤ 32	≤ 301											
New cast materials ADI	≤ 32	≤ 301											
	≤ 43	≤ 402											
Special alloys	≤ 54	≤ 549											
Ti and Ti-alloys	≤ 25	≤ 255											
	≤ 43	≤ 402											
Aluminium and Al-alloys	-	≤ 120	785		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
Al wrought alloys	-	≤ 200	785		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
Al cast alloys ≤ 10 % Si	-	≤ 180	655		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
≤ 24 % Si	-	≤ 180	555		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150											
Brass, short-chipping	-	≤ 180											
long-chipping	-	≤ 180											
Bronze, short-chipping	-	≤ 180											
	≤ 25	≤ 255											
Bronze, long-chipping	≤ 25	≤ 255											
	≤ 32	≤ 301											
Duroplastics													
Thermoplastics													
Reinforced plastics - Kevlar													
Reinforced plastics - GFK / CFK													

Series # 1184

Material group	Hardness HRc	Hardness Bhn	SFM	Feed Rate - IPR 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	330		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
	≤ 32	≤ 301	280		0.0040	0.0065	0.0080	0.0100	0.0110	0.0125			
Free-cutting steels	≤ 25	≤ 255	360		0.0065	0.0100	0.0125	0.0160	0.0180	0.0200			
	≤ 32	≤ 301	280		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
Unalloyed heat-treatable steels	≤ 20	≤ 220	260		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
	≤ 25	≤ 255	280		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
	≤ 32	≤ 301	260		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
Alloyed heat-treatable steels	≤ 32	≤ 301	260		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
	≤ 43	≤ 402	245		0.0040	0.0065	0.0080	0.0100	0.0110	0.0125			
Unalloyed case hardened steels	≤ 25	≤ 255	330		0.0065	0.0100	0.0125	0.0160	0.0180	0.0200			
Alloyed case hardened steels	≤ 32	≤ 301	295		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
	≤ 43	≤ 402	215		0.0030	0.0050	0.0065	0.0080	0.0090	0.0100			
Nitriding steels	≤ 32	≤ 301	245		0.0040	0.0065	0.0080	0.0100	0.0110	0.0125			
	≤ 43	≤ 402	230		0.0030	0.0050	0.0065	0.0080	0.0090	0.0100			
Tool steels	≤ 25	≤ 255	165		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
	≤ 43	≤ 402	130		0.0030	0.0050	0.0065	0.0080	0.0090	0.0100			
High speed steels	≤ 43	≤ 402											
Spring steels	≤ 38	≤ 354	115		0.0020	0.0030	0.0040	0.0050	0.0055	0.0065			
Hardened steels	≤ 48	≤ 460											
	≤ 66	-											
Stainless steels, sulphured	≤ 28	≤ 273	95		0.0025	0.0040	0.0050	0.0065	0.0065	0.0080			
austenitic	≤ 36	≤ 337	90		0.0025	0.0040	0.0050	0.0065	0.0065	0.0080			
martensitic	≤ 46	≤ 435	90		0.0020	0.0030	0.0040	0.0050	0.0050	0.0065			
Cast iron	≤ 23	≤ 242	525		0.0065	0.0100	0.0125	0.0160	0.0180	0.0200			
	≤ 38	≤ 354	395		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
Spheroidal graphite iron and malleable cast iron	≤ 23	≤ 242	395		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
	≤ 38	≤ 354	310		0.0050	0.0080	0.0100	0.0125	0.0140	0.0160			
Chilled cast iron	≤ 38	≤ 354											
New cast materials GGV	≤ 20	≤ 220											
	≤ 32	≤ 301											
New cast materials ADI	≤ 32	≤ 301											
	≤ 43	≤ 402											
Special alloys	≤ 54	≤ 549											
Ti and Ti-alloys	≤ 25	≤ 255											
	≤ 43	≤ 402											
Aluminium and Al-alloys	-	≤ 120	655		0.0080	0.0125	0.0160	0.0200	0.0220	0.0245			
Al wrought alloys	-	≤ 200	655		0.0080	0.0125	0.0160	0.0200	0.0220	0.0245			
Al cast alloys ≤ 10 % Si	-	≤ 180	560		0.0080	0.0125	0.0160	0.0200	0.0220	0.0245			
≤ 24 % Si	-	≤ 180	460		0.0065	0.0100	0.0125	0.0160	0.0180	0.0200			
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150											
Brass, short-chipping	-	≤ 180											
long-chipping	-	≤ 180											
Bronze, short-chipping	-	≤ 180											
	≤ 25	≤ 255											
Bronze, long-chipping	≤ 25	≤ 255											
	≤ 32	≤ 301											
Duroplastics													
Thermoplastics													
Reinforced plastics - Kevlar													
Reinforced plastics - GFK / CFK													