5xD Ratio drills

Series no. **5768**

5xD Cutting depth | RT 100 Al Type | 140° Point angle | m7 Tolerance on Ø | Internal coolant | HA Shank form | R Cutting direction | NEW

Tool material: **Solid Carbide**

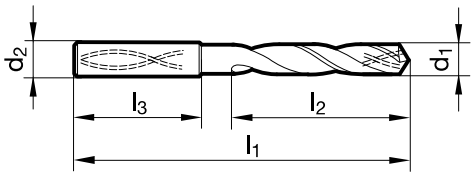
Surface: ◯

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

relieved cone • main cutting edge is slightly concave • optimized cutting geometry • sharp cutting edges NEW

aluminum and Al-alloys • Al materials with high Si-content

★ = 1st choice
● = Optimal
○ = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 583

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	**9057680030000**
0.1220		3.10	6.00	66.00	23.35	28.00	**9057680031000**
0.1248	1/8	3.17	6.00	66.00	23.25	28.00	**9057680031700**
0.1260		3.20	6.00	66.00	23.20	28.00	**9057680032000**
0.1280		3.25	6.00	66.00	23.13	28.00	**9057680032500**
0.1299		3.30	6.00	66.00	23.05	28.00	**9057680033000**
0.1339		3.40	6.00	66.00	22.90	28.00	**9057680034000**
0.1378		3.50	6.00	66.00	22.75	28.00	**9057680035000**
0.1406	9/64	3.57	6.00	66.00	22.65	28.00	**9057680035700**
0.1417		3.60	6.00	66.00	22.60	28.00	**9057680036000**
0.1457		3.70	6.00	66.00	22.45	28.00	**9057680037000**
0.1496		3.80	6.00	74.00	30.30	36.00	**9057680038000**
0.1535		3.90	6.00	74.00	30.15	36.00	**9057680039000**
0.1563	5/32	3.97	6.00	74.00	30.05	36.00	**9057680039700**
0.1575		4.00	6.00	74.00	30.00	36.00	**9057680040000**
0.1614		4.10	6.00	74.00	29.85	36.00	**9057680041000**
0.1654		4.20	6.00	74.00	29.70	36.00	**9057680042000**
0.1693		4.30	6.00	74.00	29.55	36.00	**9057680043000**
0.1720	11/64	4.37	6.00	74.00	29.45	36.00	**9057680043700**
0.1732		4.40	6.00	74.00	29.40	36.00	**9057680044000**
0.1772		4.50	6.00	74.00	29.25	36.00	**9057680045000**
0.1811		4.60	6.00	74.00	29.10	36.00	**9057680046000**
0.1831		4.65	6.00	74.00	29.03	36.00	**9057680046500**
0.1850		4.70	6.00	74.00	28.95	36.00	**9057680047000**
0.1874	3/16	4.76	6.00	82.00	36.86	44.00	**9057680047600**
0.1890		4.80	6.00	82.00	36.80	44.00	**9057680048000**
0.1929		4.90	6.00	82.00	36.65	44.00	**9057680049000**
0.1969		5.00	6.00	82.00	36.50	44.00	**9057680050000**
0.2008		5.10	6.00	82.00	36.35	44.00	**9057680051000**
0.2031	13/64	5.16	6.00	82.00	36.26	44.00	**9057680051600**
0.2047		5.20	6.00	82.00	36.20	44.00	**9057680052000**
0.2087		5.30	6.00	82.00	36.05	44.00	**9057680053000**
0.2126		5.40	6.00	82.00	35.90	44.00	**9057680054000**
0.2165		5.50	6.00	82.00	35.75	44.00	**9057680055000**
0.2185		5.55	6.00	82.00	35.68	44.00	**9057680055500**
0.2189	7/32	5.56	6.00	82.00	35.66	44.00	**9057680055600**
0.2205		5.60	6.00	82.00	35.60	44.00	**9057680056000**
0.2244		5.70	6.00	82.00	35.45	44.00	**9057680057000**
0.2283		5.80	6.00	82.00	35.30	44.00	**9057680058000**
0.2323		5.90	6.00	82.00	35.15	44.00	**9057680059000**
0.2343	15/64	5.95	6.00	82.00	35.08	44.00	**9057680059500**
0.2362		6.00	6.00	82.00	35.00	44.00	**9057680060000**

Diameter (d1) inch	wire/ltr		mm	d2 mm	l1 mm	t_{max} mm	l2 mm	EDP #
0.2402			6.10	8.00	91.00	43.85	53.00	**9057680061000**
0.2441			6.20	8.00	91.00	43.70	53.00	**9057680062000**
0.2480			6.30	8.00	91.00	43.55	53.00	**9057680063000**
0.2500	1/4	E	6.35	8.00	91.00	43.48	53.00	**9057680063500**
0.2520			6.40	8.00	91.00	43.40	53.00	**9057680064000**
0.2559			6.50	8.00	91.00	43.25	53.00	**9057680065000**
0.2598			6.60	8.00	91.00	43.10	53.00	**9057680066000**
0.2638			6.70	8.00	91.00	42.95	53.00	**9057680067000**
0.2657	17/64	H	6.75	8.00	91.00	42.88	53.00	**9057680067500**
0.2677			6.80	8.00	91.00	42.80	53.00	**9057680068000**
0.2717			6.90	8.00	91.00	42.65	53.00	**9057680069000**
0.2756			7.00	8.00	91.00	42.50	53.00	**9057680070000**
0.2795			7.10	8.00	91.00	42.35	53.00	**9057680071000**
0.2811	9/32	K	7.14	8.00	91.00	42.29	53.00	**9057680071400**
0.2835			7.20	8.00	91.00	42.20	53.00	**9057680072000**
0.2874			7.30	8.00	91.00	42.05	53.00	**9057680073000**
0.2913			7.40	8.00	91.00	41.90	53.00	**9057680074000**
0.2953			7.50	8.00	91.00	41.75	53.00	**9057680075000**
0.2969	19/64		7.54	8.00	91.00	41.69	53.00	**9057680075400**
0.2992			7.60	8.00	91.00	41.60	53.00	**9057680076000**
0.3031			7.70	8.00	91.00	41.45	53.00	**9057680077000**
0.3071			7.80	8.00	91.00	41.30	53.00	**9057680078000**
0.3110			7.90	8.00	91.00	41.15	53.00	**9057680079000**
0.3126	5/16		7.94	8.00	91.00	41.09	53.00	**9057680079400**
0.3150			8.00	8.00	91.00	41.00	53.00	**9057680080000**
0.3189			8.10	10.00	103.00	48.85	61.00	**9057680081000**
0.3228			8.20	10.00	103.00	48.70	61.00	**9057680082000**
0.3268			8.30	10.00	103.00	48.55	61.00	**9057680083000**
0.3280	21/64		8.33	10.00	103.00	48.51	61.00	**9057680083300**
0.3307			8.40	10.00	103.00	48.40	61.00	**9057680084000**
0.3346			8.50	10.00	103.00	48.25	61.00	**9057680085000**
0.3386			8.60	10.00	103.00	48.10	61.00	**9057680086000**
0.3425			8.70	10.00	103.00	47.95	61.00	**9057680087000**
0.3437	11/32		8.73	10.00	103.00	47.91	61.00	**9057680087300**
0.3465			8.80	10.00	103.00	47.80	61.00	**9057680088000**
0.3504			8.90	10.00	103.00	47.65	61.00	**9057680089000**
0.3543			9.00	10.00	103.00	47.50	61.00	**9057680090000**
0.3583			9.10	10.00	103.00	47.35	61.00	**9057680091000**
0.3594	23/64		9.13	10.00	103.00	47.31	61.00	**9057680091300**
0.3622			9.20	10.00	103.00	47.20	61.00	**9057680092000**
0.3642			9.25	10.00	103.00	47.13	61.00	**9057680092500**
0.3661			9.30	10.00	103.00	47.05	61.00	**9057680093000**

5xD Ratio drills

Series no. **5768**

Diameter (d1) inch	wire/ltr	mm	d2 mm	l1 mm	t_{max} mm	l2 mm	EDP #
0.3677		9.34	10.00	103.00	46.99	61.00	**9057680093400**
0.3701		9.40	10.00	103.00	46.90	61.00	**9057680094000**
0.3740		9.50	10.00	103.00	46.75	61.00	**9057680095000**
0.3748	3/8	9.52	10.00	103.00	46.72	61.00	**9057680095200**
0.3780		9.60	10.00	103.00	46.60	61.00	**9057680096000**
0.3819		9.70	10.00	103.00	46.45	61.00	**9057680097000**
0.3858		9.80	10.00	103.00	46.30	61.00	**9057680098000**
0.3898		9.90	10.00	103.00	46.15	61.00	**9057680099000**
0.3906	25/64	9.92	10.00	103.00	46.12	61.00	**9057680099200**
0.3937		10.00	10.00	103.00	46.00	61.00	**9057680100000**
0.3976		10.10	12.00	118.00	55.85	71.00	**9057680101000**
0.4016		10.20	12.00	118.00	55.70	71.00	**9057680102000**
0.4055		10.30	12.00	118.00	55.55	71.00	**9057680103000**
0.4063	13/32	10.32	12.00	118.00	55.52	71.00	**9057680103200**
0.4094		10.40	12.00	118.00	55.40	71.00	**9057680104000**
0.4134		10.50	12.00	118.00	55.25	71.00	**9057680105000**
0.4173		10.60	12.00	118.00	55.10	71.00	**9057680106000**
0.4213		10.70	12.00	118.00	54.95	71.00	**9057680107000**
0.4252		10.80	12.00	118.00	54.80	71.00	**9057680108000**
0.4291		10.90	12.00	118.00	54.65	71.00	**9057680109000**
0.4331		11.00	12.00	118.00	54.50	71.00	**9057680110000**
0.4370		11.10	12.00	118.00	54.35	71.00	**9057680111000**
0.4374	7/16	11.11	12.00	118.00	54.34	71.00	**9057680111100**
0.4409		11.20	12.00	118.00	54.20	71.00	**9057680112000**
0.4449		11.30	12.00	118.00	54.05	71.00	**9057680113000**
0.4488		11.40	12.00	118.00	53.90	71.00	**9057680114000**
0.4528		11.50	12.00	118.00	53.75	71.00	**9057680115000**
0.4567		11.60	12.00	118.00	53.60	71.00	**9057680116000**
0.4606		11.70	12.00	118.00	53.45	71.00	**9057680117000**
0.4646		11.80	12.00	118.00	53.30	71.00	**9057680118000**
0.4685		11.90	12.00	118.00	53.15	71.00	**9057680119000**
0.4689	15/32	11.91	12.00	118.00	53.14	71.00	**9057680119100**
0.4724		12.00	12.00	118.00	53.00	71.00	**9057680120000**
0.4764		12.10	14.00	124.00	58.85	77.00	**9057680121000**
0.4803		12.20	14.00	124.00	58.70	77.00	**9057680122000**
0.4921		12.50	14.00	124.00	58.25	77.00	**9057680125000**
0.4961		12.60	14.00	124.00	58.10	77.00	**9057680126000**
0.5000	1/2	12.70	14.00	124.00	57.95	77.00	**9057680127000**
0.5039		12.80	14.00	124.00	57.80	77.00	**9057680128000**

Diameter (d1) inch	wire/ltr	mm	d2 mm	l1 mm	t_{max} mm	l2 mm	EDP #
0.5079		12.90	14.00	124.00	57.65	77.00	**9057680129000**
0.5118		13.00	14.00	124.00	57.50	77.00	**9057680130000**
0.5157	33/64	13.10	14.00	124.00	57.35	77.00	**9057680131000**
0.5236		13.30	14.00	124.00	57.05	77.00	**9057680133000**
0.5276		13.40	14.00	124.00	56.90	77.00	**9057680134000**
0.5315		13.50	14.00	124.00	56.75	77.00	**9057680135000**
0.5394		13.70	14.00	124.00	56.45	77.00	**9057680137000**
0.5433		13.80	14.00	124.00	56.30	77.00	**9057680138000**
0.5512		14.00	14.00	124.00	56.00	77.00	**9057680140000**
0.5551		14.10	16.00	133.00	61.85	83.00	**9057680141000**
0.5591		14.20	16.00	133.00	61.70	83.00	**9057680142000**
0.5626	9/16	14.29	16.00	133.00	61.57	83.00	**9057680142900**
0.5630		14.30	16.00	133.00	61.55	83.00	**9057680143000**
0.5669		14.40	16.00	133.00	61.40	83.00	**9057680144000**
0.5709		14.50	16.00	133.00	61.25	83.00	**9057680145000**
0.5787		14.70	16.00	133.00	60.95	83.00	**9057680147000**
0.5827		14.80	16.00	133.00	60.80	83.00	**9057680148000**
0.5906		15.00	16.00	133.00	60.50	83.00	**9057680150000**
0.5945		15.10	16.00	133.00	60.35	83.00	**9057680151000**
0.5984		15.20	16.00	133.00	60.20	83.00	**9057680152000**
0.6024		15.30	16.00	133.00	60.05	83.00	**9057680153000**
0.6102		15.50	16.00	133.00	59.75	83.00	**9057680155000**
0.6181		15.70	16.00	133.00	59.45	83.00	**9057680157000**
0.6220		15.80	16.00	133.00	59.30	83.00	**9057680158000**
0.6299		16.00	16.00	133.00	59.00	83.00	**9057680160000**
0.6496		16.50	18.00	143.00	68.25	93.00	**9057680165000**
0.6575		16.70	18.00	143.00	67.95	93.00	**9057680167000**
0.6654		16.90	18.00	143.00	67.65	93.00	**9057680169000**
0.6693		17.00	18.00	143.00	67.50	93.00	**9057680170000**
0.6890		17.50	18.00	143.00	66.75	93.00	**9057680175000**
0.6969		17.70	18.00	143.00	66.45	93.00	**9057680177000**
0.7087		18.00	18.00	143.00	66.00	93.00	**9057680180000**
0.7283		18.50	20.00	153.00	73.25	101.00	**9057680185000**
0.7441		18.90	20.00	153.00	72.65	101.00	**9057680189000**
0.7480		19.00	20.00	153.00	72.50	101.00	**9057680190000**
0.7500	3/4	19.05	20.00	153.00	72.43	101.00	**9057680190500**
0.7598		19.30	20.00	153.00	72.05	101.00	**9057680193000**
0.7677		19.50	20.00	153.00	71.75	101.00	**9057680195000**
0.7874		20.00	20.00	153.00	71.00	101.00	**9057680200000**

Series # 5768

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	- ≤ 32	≤ 150 ≤ 301											
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301											
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301											
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402											
Unalloyed case hardened steels	≤ 25	≤ 255											
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402											
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402											
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402											
High speed steels	≤ 43	≤ 402											
Spring steels	≤ 38	≤ 354											
Hardened steels	≤ 48 ≤ 66	≤ 460 -											
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435											
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354											
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354											
Chilled cast iron	≤ 38	≤ 354											
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549											
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402											
Aluminium and Al-alloys	-	≤ 120	1150		0.0065	0.0125	0.0155	0.0195	0.0250	0.0250			
Al wrought alloys	-	≤ 200	1150		0.0065	0.0125	0.0155	0.0195	0.0250	0.0250			
Al cast alloys ≤ 10 % Si	-	≤ 180	1050		0.0065	0.0100	0.0155	0.0155	0.0195	0.0250			
≤ 24 % Si	-	≤ 180	920		0.0050	0.0080	0.0125	0.0125	0.0155	0.0195			
Magnesium alloys	-	≤ 120	1050		0.0050	0.0080	0.0125	0.0125	0.0155	0.0195			
Copper, low-alloyed	-	≤ 150	625		0.0050	0.0080	0.0125	0.0125	0.0155	0.0195			
Brass, short-chipping	-	≤ 180	525		0.0040	0.0065	0.0100	0.0100	0.0125	0.0155			
long-chipping	-	≤ 180	525		0.0040	0.0065	0.0100	0.0100	0.0125	0.0155			
Bronze, short-chipping	-	≤ 180	525		0.0040	0.0065	0.0100	0.0100	0.0125	0.0155			
	≤ 25	≤ 255	525		0.0040	0.0065	0.0100	0.0100	0.0125	0.0155			
Bronze, long-chipping	≤ 25	≤ 255	490		0.0040	0.0065	0.0100	0.0100	0.0125	0.0155			
	≤ 32	≤ 301	490		0.0040	0.0065	0.0100	0.0100	0.0125	0.0155			
Duroplastics			330		0.0020	0.0030	0.0050	0.0050	0.0065	0.0080			
Thermoplastics			330		0.0020	0.0030	0.0050	0.0050	0.0065	0.0080			
Reinforced plastics - Kevlar													
Reinforced plastics - GFK / CFK			330		0.0015	0.0025	0.0040	0.0040	0.0050	0.0065			

Series # 6068

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	- ≤ 32	≤ 150 ≤ 301											
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301											
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301											
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402											
Unalloyed case hardened steels	≤ 25	≤ 255											
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402											
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402											
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402											
High speed steels	≤ 43	≤ 402											
Spring steels	≤ 38	≤ 354											
Hardened steels	≤ 48 ≤ 66	≤ 460 -											
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435											
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	395 330		0.0050 0.0050	0.0080 0.0080	0.0120 0.0120	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200			
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	295 260		0.0050 0.0050	0.0080 0.0080	0.0120 0.0120	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200			
Chilled cast iron	≤ 38	≤ 354	130		0.0016	0.0025	0.0035	0.0040	0.0050	0.0060			
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549											
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402											
Aluminium and Al-alloys	-	≤ 120	1345		0.0050	0.0080	0.0125	0.0125	0.0160	0.0200			
Al wrought alloys	-	≤ 200	1345		0.0050	0.0080	0.0125	0.0125	0.0160	0.0200			
Al cast alloys ≤ 10 % Si	-	≤ 180	1245		0.0050	0.0080	0.0125	0.0125	0.0160	0.0200			
≤ 24 % Si	-	≤ 180	1080		0.0050	0.0080	0.0125	0.0125	0.0160	0.0200			
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150											
Brass, short-chipping	-	≤ 180	920		0.0060	0.0125	0.0160	0.0200	0.0250	0.0250			
long-chipping	-	≤ 180											
Bronze, short-chipping	-	≤ 180	360		0.0040	0.0060	0.0100	0.0100	0.0120	0.0160			
	≤ 25	≤ 255	260		0.0030	0.0050	0.0080	0.0080	0.0100	0.0125			
Bronze, long-chipping	≤ 25	≤ 255											
	≤ 32	≤ 301											
Duroplastics													
Thermoplastics													
Reinforced plastics - Kevlar													
Reinforced plastics - GFK / CFK													