Jobber length drills

Series no. **658**

Tool material **HSCO**

Surface **S**

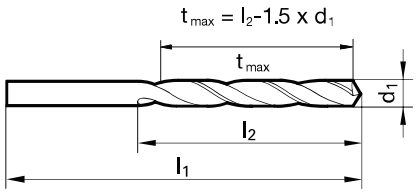
~5xD Cutting depth | DIN 338 Standard | GT 100 Type | 130° Point angle | h8 Tolerance on Ø | Web Thinning | Cyl Shank form | R Cutting direction

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

●=Optimal
○=Limited

web thinning ≥ Ø 1.000 • relieved cone • Co-alloyed high speed steel • wide flutes • increased wear resistance • especially for drilling depths > 3xD

alloyed and unalloyed steel • cast materials over 800 N/mm² • hot and cold rolled steels • antifriction bearing steels • high-alloyed steels • heat treatable and case hardened steels



Speeds and feeds information on pg. 517

Shank diameter = cut diameter

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.0394		1.00	34.00	10.50	12.00	9006580010000
0.0402	#60	1.02	34.00	10.47	12.00	9006580010200
0.0413		1.05	34.00	10.43	12.00	9006580010500
0.0421	#58	1.07	36.00	12.40	14.00	9006580010700
0.0433		1.10	36.00	12.35	14.00	9006580011000
0.0445		1.13	36.00	12.31	14.00	9006580011300
0.0453		1.15	36.00	12.28	14.00	9006580011500
0.0469	3/64	1.19	38.00	14.22	16.00	9006580011900
0.0472		1.20	38.00	14.20	16.00	9006580012000
0.0512		1.30	38.00	14.05	16.00	9006580013000
0.0520	#55	1.32	38.00	14.02	16.00	9006580013200
0.0531		1.35	40.00	15.98	18.00	9006580013500
0.0551	#54	1.40	40.00	15.90	18.00	9006580014000
0.0571		1.45	40.00	15.83	18.00	9006580014500
0.0591		1.50	40.00	15.75	18.00	9006580015000
0.0610		1.55	43.00	17.68	20.00	9006580015500
0.0626	1/16	1.59	43.00	17.62	20.00	9006580015900
0.0630		1.60	43.00	17.60	20.00	9006580016000
0.0634	#52	1.61	43.00	17.59	20.00	9006580016100
0.0642		1.63	43.00	17.56	20.00	9006580016300
0.0650		1.65	43.00	17.53	20.00	9006580016500
0.0669	#51	1.70	43.00	17.45	20.00	9006580017000
0.0701	#50	1.78	46.00	19.33	22.00	9006580017800
0.0709		1.80	46.00	19.30	22.00	9006580018000
0.0728	#49	1.85	46.00	19.23	22.00	9006580018500
0.0748		1.90	46.00	19.15	22.00	9006580019000
0.0760	#48	1.93	49.00	21.11	24.00	9006580019300
0.0768		1.95	49.00	21.08	24.00	9006580019500
0.0780	5/64	1.98	49.00	21.03	24.00	9006580019800
0.0783	#47	1.99	49.00	21.02	24.00	9006580019900
0.0787		2.00	49.00	21.00	24.00	9006580020000
0.0807		2.05	49.00	20.93	24.00	9006580020500
0.0811	#46	2.06	49.00	20.91	24.00	9006580020600
0.0819	#45	2.08	49.00	20.88	24.00	9006580020800
0.0827		2.10	49.00	20.85	24.00	9006580021000
0.0846		2.15	53.00	23.78	27.00	9006580021500
0.0858	#44	2.18	53.00	23.73	27.00	9006580021800
0.0866		2.20	53.00	23.70	27.00	9006580022000
0.0890	#43	2.26	53.00	23.61	27.00	9006580022600
0.0906		2.30	53.00	23.55	27.00	9006580023000
0.0925		2.35	53.00	23.48	27.00	9006580023500
0.0933	#42	2.37	57.00	26.45	30.00	9006580023700

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.0937	3/32	2.38	57.00	26.43	30.00	9006580023800
0.0945		2.40	57.00	26.40	30.00	9006580024000
0.0961	#41	2.44	57.00	26.34	30.00	9006580024400
0.0965		2.45	57.00	26.33	30.00	9006580024500
0.0980	#40	2.49	57.00	26.27	30.00	9006580024900
0.0984		2.50	57.00	26.25	30.00	9006580025000
0.0996	#39	2.53	57.00	26.21	30.00	9006580025300
0.1004		2.55	57.00	26.18	30.00	9006580025500
0.1016	#38	2.58	57.00	26.13	30.00	9006580025800
0.1024		2.60	57.00	26.10	30.00	9006580026000
0.1039	#37	2.64	57.00	26.04	30.00	9006580026400
0.1043		2.65	57.00	26.03	30.00	9006580026500
0.1063		2.70	61.00	28.95	33.00	9006580027000
0.1094	7/64	2.78	61.00	28.83	33.00	9006580027800
0.1098	#35	2.79	61.00	28.82	33.00	9006580027900
0.1102		2.80	61.00	28.80	33.00	9006580028000
0.1110	#34	2.82	61.00	28.77	33.00	9006580028200
0.1130	#33	2.87	61.00	28.70	33.00	9006580028700
0.1142		2.90	61.00	28.65	33.00	9006580029000
0.1161	#32	2.95	61.00	28.58	33.00	9006580029500
0.1181		3.00	61.00	28.50	33.00	9006580030000
0.1201	#31	3.05	65.00	31.43	36.00	9006580030500
0.1220		3.10	65.00	31.35	36.00	9006580031000
0.1248	1/8	3.17	65.00	31.25	36.00	9006580031700
0.1260		3.20	65.00	31.20	36.00	9006580032000
0.1280		3.25	65.00	31.13	36.00	9006580032500
0.1283	#30	3.26	65.00	31.11	36.00	9006580032600
0.1299		3.30	65.00	31.05	36.00	9006580033000
0.1339		3.40	70.00	33.90	39.00	9006580034000
0.1358	#29	3.45	70.00	33.83	39.00	9006580034500
0.1378		3.50	70.00	33.75	39.00	9006580035000
0.1406	9/64	#28 3.57	70.00	33.65	39.00	9006580035700
0.1417		3.60	70.00	33.60	39.00	9006580036000
0.1441	#27	3.66	70.00	33.51	39.00	9006580036600
0.1457		3.70	70.00	33.45	39.00	9006580037000
0.1469	#26	3.73	70.00	33.41	39.00	9006580037300
0.1476		3.75	70.00	33.38	39.00	9006580037500
0.1496	#25	3.80	75.00	37.30	43.00	9006580038000
0.1520	#24	3.86	75.00	37.21	43.00	9006580038600
0.1535		3.90	75.00	37.15	43.00	9006580039000
0.1563	5/32	3.97	75.00	37.05	43.00	9006580039700
0.1575		4.00	75.00	37.00	43.00	9006580040000

Jobber length drills

Series no. 658

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.1591	#21	4.04	75.00	36.94	43.00	9006580040400
0.1610	#20	4.09	75.00	36.87	43.00	9006580040900
0.1614		4.10	75.00	36.85	43.00	9006580041000
0.1654		4.20	75.00	36.70	43.00	9006580042000
0.1661	#19	4.22	75.00	36.67	43.00	9006580042200
0.1673		4.25	75.00	36.63	43.00	9006580042500
0.1693	#18	4.30	80.00	40.55	47.00	9006580043000
0.1720	11/64	4.37	80.00	40.45	47.00	9006580043700
0.1732		4.40	80.00	40.40	47.00	9006580044000
0.1772	#16	4.50	80.00	40.25	47.00	9006580045000
0.1799	#15	4.57	80.00	40.15	47.00	9006580045700
0.1811		4.60	80.00	40.10	47.00	9006580046000
0.1850	#13	4.70	80.00	39.95	47.00	9006580047000
0.1874	3/16	4.76	86.00	44.86	52.00	9006580047600
0.1890	#12	4.80	86.00	44.80	52.00	9006580048000
0.1909	#11	4.85	86.00	44.73	52.00	9006580048500
0.1929		4.90	86.00	44.65	52.00	9006580049000
0.1937	#10	4.92	86.00	44.62	52.00	9006580049200
0.1961	#9	4.98	86.00	44.53	52.00	9006580049800
0.1969		5.00	86.00	44.50	52.00	9006580050000
0.2008		5.10	86.00	44.35	52.00	9006580051000
0.2031	13/64	5.16	86.00	44.26	52.00	9006580051600
0.2047		5.20	86.00	44.20	52.00	9006580052000
0.2087		5.30	86.00	44.05	52.00	9006580053000
0.2126		5.40	93.00	48.90	57.00	9006580054000
0.2165		5.50	93.00	48.75	57.00	9006580055000
0.2189	7/32	5.56	93.00	48.66	57.00	9006580055600
0.2205		5.60	93.00	48.60	57.00	9006580056000
0.2209	#2	5.61	93.00	48.59	57.00	9006580056100
0.2244		5.70	93.00	48.45	57.00	9006580057000
0.2283		5.80	93.00	48.30	57.00	9006580058000
0.2323		5.90	93.00	48.15	57.00	9006580059000
0.2343	15/64	5.95	93.00	48.08	57.00	9006580059500
0.2362		6.00	93.00	48.00	57.00	9006580060000
0.2402		6.10	101.00	53.85	63.00	9006580061000
0.2421	C	6.15	101.00	53.78	63.00	9006580061500
0.2441		6.20	101.00	53.70	63.00	9006580062000
0.2480		6.30	101.00	53.55	63.00	9006580063000
0.2500	1/4 E	6.35	101.00	53.48	63.00	9006580063500
0.2520		6.40	101.00	53.40	63.00	9006580064000
0.2559		6.50	101.00	53.25	63.00	9006580065000
0.2571	F	6.53	101.00	53.21	63.00	9006580065300
0.2598		6.60	101.00	53.10	63.00	9006580066000
0.2638		6.70	101.00	52.95	63.00	9006580067000
0.2657	17/64 H	6.75	109.00	58.88	69.00	9006580067500
0.2677		6.80	109.00	58.80	69.00	9006580068000
0.2717	I	6.90	109.00	58.65	69.00	9006580069000
0.2756		7.00	109.00	58.50	69.00	9006580070000
0.2795		7.10	109.00	58.35	69.00	9006580071000
0.2811	9/32 K	7.14	109.00	58.29	69.00	9006580071400
0.2835		7.20	109.00	58.20	69.00	9006580072000
0.2874		7.30	109.00	58.05	69.00	9006580073000
0.2913		7.40	109.00	57.90	69.00	9006580074000

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.2953		7.50	109.00	57.75	69.00	9006580075000
0.2992		7.60	117.00	63.60	75.00	9006580076000
0.3031		7.70	117.00	63.45	75.00	9006580077000
0.3071		7.80	117.00	63.30	75.00	9006580078000
0.3110		7.90	117.00	63.15	75.00	9006580079000
0.3126	5/16	7.94	117.00	63.09	75.00	9006580079400
0.3150		8.00	117.00	63.00	75.00	9006580080000
0.3189		8.10	117.00	62.85	75.00	9006580081000
0.3228	P	8.20	117.00	62.70	75.00	9006580082000
0.3268		8.30	117.00	62.55	75.00	9006580083000
0.3307		8.40	117.00	62.40	75.00	9006580084000
0.3346		8.50	117.00	62.25	75.00	9006580085000
0.3386		8.60	125.00	68.10	81.00	9006580086000
0.3425		8.70	125.00	67.95	81.00	9006580087000
0.3437	11/32	8.73	125.00	67.91	81.00	9006580087300
0.3445		8.75	125.00	67.88	81.00	9006580087500
0.3465		8.80	125.00	67.80	81.00	9006580088000
0.3504		8.90	125.00	67.65	81.00	9006580089000
0.3543		9.00	125.00	67.50	81.00	9006580090000
0.3594	23/64	9.13	125.00	67.31	81.00	9006580091300
0.3622		9.20	125.00	67.20	81.00	9006580092000
0.3661		9.30	125.00	67.05	81.00	9006580093000
0.3740		9.50	125.00	66.75	81.00	9006580095000
0.3748	3/8	9.52	133.00	72.72	87.00	9006580095200
0.3780		9.60	133.00	72.60	87.00	9006580096000
0.3858	W	9.80	133.00	72.30	87.00	9006580098000
0.3898		9.90	133.00	72.15	87.00	9006580099000
0.3906	25/64	9.92	133.00	72.12	87.00	9006580099200
0.3937		10.00	133.00	72.00	87.00	9006580100000
0.3976		10.10	133.00	71.85	87.00	9006580101000
0.4016		10.20	133.00	71.70	87.00	9006580102000
0.4055		10.30	133.00	71.55	87.00	9006580103000
0.4063	13/32	10.32	133.00	71.52	87.00	9006580103200
0.4134		10.50	133.00	71.25	87.00	9006580105000
0.4220	27/64	10.72	142.00	77.92	94.00	9006580107200
0.4252		10.80	142.00	77.80	94.00	9006580108000
0.4331		11.00	142.00	77.50	94.00	9006580110000
0.4374	7/16	11.11	142.00	77.34	94.00	9006580111100
0.4409		11.20	142.00	77.20	94.00	9006580112000
0.4528		11.50	142.00	76.75	94.00	9006580115000
0.4606		11.70	142.00	76.45	94.00	9006580117000
0.4689	15/32	11.91	151.00	83.14	101.00	9006580119100
0.4724		12.00	151.00	83.00	101.00	9006580120000
0.4921		12.50	151.00	82.25	101.00	9006580125000
0.5118		13.00	151.00	81.50	101.00	9006580130000
0.5315		13.50	160.00		108.00	9006580135000
0.5433		13.80	160.00		108.00	9006580138000
0.5512		14.00	160.00		108.00	9006580140000
0.5709		14.50	169.00		114.00	9006580145000
0.5827		14.80	169.00		114.00	9006580148000
0.5906		15.00	169.00		114.00	9006580150000
0.6102		15.50	178.00		120.00	9006580155000
0.6299		16.00	178.00		120.00	9006580160000

Series # 657

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	45	0.0010	0.0025	0.0040	0.0050	0.0065	0.0065				
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	40	0.0010	0.0025	0.0040	0.0050	0.0065	0.0065				
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	40	0.0010	0.0025	0.0040	0.0050	0.0065	0.0065				
High speed steels	≤ 43	≤ 402	40	0.0010	0.0025	0.0040	0.0050	0.0065	0.0065				
Spring steels	≤ 38	≤ 354	30	0.0007	0.0020	0.0030	0.0040	0.0050	0.0050				
Hardened steels	≤ 48 ≤ 66	≤ 460 -	10	0.0005	0.0015	0.0025	0.0030	0.0040	0.0040				
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	55 40 45	0.0012 0.0010 0.0010	0.0030 0.0025 0.0025	0.0050 0.0040 0.0040	0.0065 0.0050 0.0050	0.0080 0.0065 0.0065	0.0080 0.0065 0.0065				
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354											
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354											
Chilled cast iron	≤ 38	≤ 354	30	0.0010	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	25	0.0005	0.0015	0.0025	0.0030	0.0040	0.0040				
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402	40 25	0.0007 0.0007	0.0020 0.0020	0.0030 0.0030	0.0040 0.0040	0.0050 0.0050	0.0050 0.0050				
Aluminium and Al-alloys	-	≤ 120											
Al wrought alloys	-	≤ 200											
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180											
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150											
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180											
Bronze, short-chipping	- ≤ 25	≤ 180 ≤ 255											
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	90	0.0012	0.0030	0.0050	0.0065	0.0080	0.0080				
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK													

Series # 658

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	115	0.0015	0.0040	0.0065	0.0080	0.0100					
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	100 55	0.0015 0.0012	0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080					
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	70 55	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
Unalloyed case hardened steels	≤ 25	≤ 255											
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	65 45	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	55 40	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	70 40	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
High speed steels	≤ 43	≤ 402	40	0.0010	0.0025	0.0040	0.0050	0.0065					
Spring steels	≤ 38	≤ 354											
Hardened steels	≤ 48 ≤ 66	≤ 460 -											
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	55 45	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	145 115	0.0017 0.0017	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125					
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	130 90	0.0017 0.0017	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125					
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											
Al wrought alloys	-	≤ 200											
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180	275 225	0.0020 0.0017	0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125					
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150	145	0.0015	0.0040	0.0065	0.0080	0.0100					
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180											
Bronze, short-chipping	- ≤ 25	≤ 180 ≤ 255											
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	115 90	0.0012 0.0012	0.0030 0.0030	0.0050 0.0050	0.0065 0.0065	0.0080 0.0080					
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK			70	0.0012	0.0030	0.0050	0.0065	0.0080					