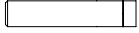


3xD**S**

TiN coated



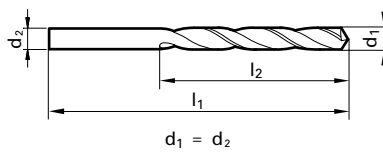
External Coolant



Straight Shank

Speeds & Feeds
information pg 447**Series 653****General Purpose****HSS, general purpose (Type N), stub length, 118° point, Form A web thinned >2.36mm dia., standard straight shank, RH helix**

Cut / Shank Dia. = h8 tolerance range

**Application Materials:**

Universal Steels



Cast Iron



General Steels

Dec. inch	Diameter (d1)		l1 mm	l2 mm	EDP #
	Fract. inch	Wire / letter			
0.0197			20.00	3.00	9006530005000
0.0236			21.00	3.50	9006530006000
0.0276			23.00	4.50	9006530007000
0.0295			23.00	4.50	9006530007500
0.0315			24.00	5.00	9006530008000
0.0354			25.00	5.50	9006530009000
0.0394			26.00	6.00	9006530010000
0.0402		60	26.00	6.00	9006530010200
0.0413			26.00	6.00	9006530010500
0.0421		58	28.00	7.00	9006530010700
0.0429		57	28.00	7.00	9006530010900
0.0433			28.00	7.00	9006530011000
0.0437			28.00	7.00	9006530011100
0.0453			28.00	7.00	9006530011500
0.0465		56	28.00	7.00	9006530011800
0.0469	3/64		28.00	7.00	9006530011900
0.0472			28.00	7.00	9006530012000
0.0492			28.00	7.00	9006530012500
0.0504			28.00	7.00	9006530012800
0.0512			28.00	7.00	9006530013000
0.0520		55	28.00	7.00	9006530013200
0.0531			32.00	9.00	9006530013500
0.0551		54	32.00	9.00	9006530014000
0.0571			32.00	9.00	9006530014500
0.0591			32.00	9.00	9006530015000
0.0594		53	34.00	10.00	9006530015100
0.0610			34.00	10.00	9006530015500
0.0626	1/16		34.00	10.00	9006530015900
0.0630			34.00	10.00	9006530016000
0.0634		52	34.00	10.00	9006530016100
0.0650			34.00	10.00	9006530016500
0.0669		51	34.00	10.00	9006530017000
0.0701		50	36.00	11.00	9006530017800
0.0709			36.00	11.00	9006530018000
0.0728		49	36.00	11.00	9006530018500
0.0748			36.00	11.00	9006530019000
0.0760		48	38.00	12.00	9006530019300
0.0768			38.00	12.00	9006530019500
0.0780	5/64		38.00	12.00	9006530019800
0.0783		47	38.00	12.00	9006530019900
0.0787			38.00	12.00	9006530020000
0.0811		46	38.00	12.00	9006530020600
0.0819		45	38.00	12.00	9006530020800
0.0827			38.00	12.00	9006530021000
0.0858		44	40.00	13.00	9006530021800
0.0866			40.00	13.00	9006530022000
0.0886			40.00	13.00	9006530022500
0.0890		43	40.00	13.00	9006530022600
0.0906			40.00	13.00	9006530023000
0.0925			40.00	13.00	9006530023500
0.0933		42	43.00	14.00	9006530023700
0.0937	3/32		43.00	14.00	9006530023800
0.0945			43.00	14.00	9006530024000
0.0961		41	43.00	14.00	9006530024400

Dec. inch	Diameter (d1)		l1 mm	l2 mm	EDP #	
	Fract. inch	Wire / letter				
0.0965			2.450	43.00	14.00	9006530024500
0.0984			2.500	43.00	14.00	9006530025000
0.0996		39	2.530	43.00	14.00	9006530025300
0.1004			2.550	43.00	14.00	9006530025500
0.1016		38	2.580	43.00	14.00	9006530025800
0.1024			2.600	43.00	14.00	9006530026000
0.1039		37	2.640	43.00	14.00	9006530026400
0.1063			2.700	46.00	16.00	9006530027000
0.1067		36	2.710	46.00	16.00	9006530027100
0.1083			2.750	46.00	16.00	9006530027500
0.1094	7/64		2.780	46.00	16.00	9006530027800
0.1102			2.800	46.00	16.00	9006530028000
0.1130		33	2.870	46.00	16.00	9006530028700
0.1142			2.900	46.00	16.00	9006530029000
0.1161		32	2.950	46.00	16.00	9006530029500
0.1181			3.000	46.00	16.00	9006530030000
0.1201		31	3.050	49.00	18.00	9006530030500
0.1220			3.100	49.00	18.00	9006530031000
0.1248	1/8		3.170	49.00	18.00	9006530031700
0.1260			3.200	49.00	18.00	9006530032000
0.1280			3.250	49.00	18.00	9006530032500
0.1283		30	3.260	49.00	18.00	9006530032600
0.1299			3.300	49.00	18.00	9006530033000
0.1339			3.400	52.00	20.00	9006530034000
0.1358		29	3.450	52.00	20.00	9006530034500
0.1378			3.500	52.00	20.00	9006530035000
0.1406	9/64	28	3.570	52.00	20.00	9006530035700
0.1417			3.600	52.00	20.00	9006530036000
0.1437			3.650	52.00	20.00	9006530036500
0.1441		27	3.660	52.00	20.00	9006530036600
0.1457			3.700	52.00	20.00	9006530037000
0.1469		26	3.730	52.00	20.00	9006530037300
0.1476			3.750	52.00	20.00	9006530037500
0.1496		25	3.800	55.00	22.00	9006530038000
0.1535			3.900	55.00	22.00	9006530039000
0.1563	5/32		3.970	55.00	22.00	9006530039700
0.1571		22	3.990	55.00	22.00	9006530039900
0.1575			4.000	55.00	22.00	9006530040000
0.1591		21	4.040	55.00	22.00	9006530040400
0.1610		20	4.090	55.00	22.00	9006530040900
0.1614			4.100	55.00	22.00	9006530041000
0.1634			4.150	55.00	22.00	9006530041500
0.1654			4.200	55.00	22.00	9006530042000
0.1673			4.250	55.00	22.00	9006530042500
0.1693		18	4.300	58.00	24.00	9006530043000
0.1720	11/64		4.370	58.00	24.00	9006530043700
0.1732			4.400	58.00	24.00	9006530044000
0.1772		16	4.500	58.00	24.00	9006530045000
0.1799		15	4.570	58.00	24.00	9006530045700
0.1811			4.600	58.00	24.00	9006530046000
0.1819		14	4.620	58.00	24.00	9006530046200
0.1831			4.650	58.00	24.00	9006530046500
0.1850		13	4.700	58.00	24.00	9006530047000
0.1874	3/16		4.760	62.00	26.00	9006530047600

Series 653

Speeds & Feeds information pg 447

Twist Drills

Diameter (d1)		Wire / letter	mm	I1 mm	I2 mm	EDP #
Dec. inch	Fract. inch					
0.1890		12	4.800	62.00	26.00	9006530048000
0.1909		11	4.850	62.00	26.00	9006530048500
0.1929			4.900	62.00	26.00	9006530049000
0.1937		10	4.920	62.00	26.00	9006530049200
0.1961		9	4.980	62.00	26.00	9006530049800
0.1969			5.000	62.00	26.00	9006530050000
0.1988			5.050	62.00	26.00	9006530050500
0.1992		8	5.060	62.00	26.00	9006530050600
0.2008			5.100	62.00	26.00	9006530051000
0.2012		7	5.110	62.00	26.00	9006530051100
0.2031	13/64		5.160	62.00	26.00	9006530051600
0.2039		6	5.180	62.00	26.00	9006530051800
0.2047			5.200	62.00	26.00	9006530052000
0.2067			5.250	62.00	26.00	9006530052500
0.2087			5.300	62.00	26.00	9006530053000
0.2091		4	5.310	66.00	28.00	9006530053100
0.2126			5.400	66.00	28.00	9006530054000
0.2130		3	5.410	66.00	28.00	9006530054100
0.2165			5.500	66.00	28.00	9006530055000
0.2189	7/32		5.560	66.00	28.00	9006530055600
0.2197			5.580	66.00	28.00	9006530055800
0.2205			5.600	66.00	28.00	9006530056000
0.2209		2	5.610	66.00	28.00	9006530056100
0.2244			5.700	66.00	28.00	9006530057000
0.2264			5.750	66.00	28.00	9006530057500
0.2283			5.800	66.00	28.00	9006530058000
0.2323			5.900	66.00	28.00	9006530059000
0.2343	15/64		5.950	66.00	28.00	9006530059500
0.2362			6.000	66.00	28.00	9006530060000
0.2382			6.050	66.00	28.00	9006530060500
0.2402			6.100	70.00	31.00	9006530061000
0.2421		C	6.150	70.00	31.00	9006530061500
0.2441			6.200	70.00	31.00	9006530062000
0.2461		D	6.250	70.00	31.00	9006530062500
0.2480			6.300	70.00	31.00	9006530063000
0.2500	1/4	E	6.350	70.00	31.00	9006530063500
0.2520			6.400	70.00	31.00	9006530064000
0.2539			6.450	70.00	31.00	9006530064500
0.2559			6.500	70.00	31.00	9006530065000
0.2571		F	6.530	70.00	31.00	9006530065300
0.2598			6.600	70.00	31.00	9006530066000
0.2638			6.700	70.00	31.00	9006530067000
0.2657	17/64	H	6.750	74.00	34.00	9006530067500
0.2677			6.800	74.00	34.00	9006530068000
0.2717		I	6.900	74.00	34.00	9006530069000
0.2756			7.000	74.00	34.00	9006530070000
0.2795			7.100	74.00	34.00	9006530071000
0.2811	9/32	K	7.140	74.00	34.00	9006530071400
0.2835			7.200	74.00	34.00	9006530072000
0.2854			7.250	74.00	34.00	9006530072500
0.2874			7.300	74.00	34.00	9006530073000
0.2902		L	7.370	74.00	34.00	9006530073700
0.2913			7.400	74.00	34.00	9006530074000
0.2953			7.500	74.00	34.00	9006530075000
0.2969	19/64		7.540	79.00	37.00	9006530075400
0.2992			7.600	79.00	37.00	9006530076000
0.3020		N	7.670	79.00	37.00	9006530076700
0.3031			7.700	79.00	37.00	9006530077000
0.3071			7.800	79.00	37.00	9006530078000
0.3110			7.900	79.00	37.00	9006530079000
0.3126	5/16		7.940	79.00	37.00	9006530079400
0.3150			8.000	79.00	37.00	9006530080000
0.3161		O	8.030	79.00	37.00	9006530080300
0.3189			8.100	79.00	37.00	9006530081000
0.3228		P	8.200	79.00	37.00	9006530082000
0.3248			8.250	79.00	37.00	9006530082500
0.3268			8.300	79.00	37.00	9006530083000
0.3280	21/64		8.330	79.00	37.00	9006530083300
0.3307			8.400	79.00	37.00	9006530084000
0.3319		Q	8.430	79.00	37.00	9006530084300

Diameter (d1)		Wire / letter	mm	I1 mm	I2 mm	EDP #
Dec. inch	Fract. inch					
0.3346			8.500	79.00	37.00	9006530085000
0.3366			8.550	84.00	40.00	9006530085500
0.3386			8.600	84.00	40.00	9006530086000
0.3390		R	8.610	84.00	40.00	9006530086100
0.3425			8.700	84.00	40.00	9006530087000
0.3437	11/32		8.730	84.00	40.00	9006530087300
0.3445			8.750	84.00	40.00	9006530087500
0.3465			8.800	84.00	40.00	9006530088000
0.3504			8.900	84.00	40.00	9006530089000
0.3543			9.000	84.00	40.00	9006530090000
0.3579		T	9.090	84.00	40.00	9006530090900
0.3594	23/64		9.130	84.00	40.00	9006530091300
0.3622			9.200	84.00	40.00	9006530092000
0.3642			9.250	84.00	40.00	9006530092500
0.3661			9.300	84.00	40.00	9006530093000
0.3701			9.400	84.00	40.00	9006530094000
0.3740			9.500	84.00	40.00	9006530095000
0.3748	3/8		9.520	89.00	43.00	9006530095200
0.3772		V	9.580	89.00	43.00	9006530095800
0.3819			9.700	89.00	43.00	9006530097000
0.3858		W	9.800	89.00	43.00	9006530098000
0.3898			9.900	89.00	43.00	9006530099000
0.3906	25/64		9.920	89.00	43.00	9006530099200
0.3937			10.000	89.00	43.00	9006530100000
0.3976			10.100	89.00	43.00	9006530101000
0.4016			10.200	89.00	43.00	9006530102000
0.4055			10.300	89.00	43.00	9006530103000
0.4063	13/32		10.320	89.00	43.00	9006530103200
0.4130		Z	10.490	89.00	43.00	9006530104900
0.4134			10.500	89.00	43.00	9006530105000
0.4173			10.600	89.00	43.00	9006530106000
0.4220	27/64		10.720	95.00	47.00	9006530107200
0.4232			10.750	95.00	47.00	9006530107500
0.4252			10.800	95.00	47.00	9006530108000
0.4331			11.000	95.00	47.00	9006530110000
0.4374	7/16		11.110	95.00	47.00	9006530111100
0.4409			11.200	95.00	47.00	9006530112000
0.4449			11.300	95.00	47.00	9006530113000
0.4488			11.400	95.00	47.00	9006530114000
0.4528			11.500	95.00	47.00	9006530115000
0.4531	29/64		11.510	95.00	47.00	9006530115100
0.4646			11.800	95.00	47.00	9006530118000
0.4689	15/32		11.910	102.00	51.00	9006530119100
0.4724			12.000	102.00	51.00	9006530120000
0.4764			12.100	102.00	51.00	9006530121000
0.4803			12.200	102.00	51.00	9006530122000
0.4843	31/64		12.300	102.00	51.00	9006530123000
0.4921			12.500	102.00	51.00	9006530125000
0.5000	1/2		12.700	102.00	51.00	9006530127000
0.5039			12.800	102.00	51.00	9006530128000
0.5118			13.000	102.00	51.00	9006530130000
0.5157	33/64		13.100	102.00	51.00	9006530131000
0.5311	17/32		13.490	107.00	54.00	9006530134900
0.5315			13.500	107.00	54.00	9006530135000
0.5433			13.800	107.00	54.00	9006530138000
0.5469	35/64		13.890	107.00	54.00	9006530138900
0.5512			14.000	107.00	54.00	9006530140000
0.5626	9/16		14.290	111.00	56.00	9006530142900
0.5709			14.500	111.00	56.00	9006530145000
0.5827			14.800	111.00	56.00	9006530148000
0.5906			15.000	111.00	56.00	9006530150000
0.5937	19/32		15.080	115.00	58.00	9006530150800
0.6024			15.300	115.00	58.00	9006530153000
0.6102			15.500	115.00	58.00	9006530155000
0.6220			15.800	115.00	58.00	9006530158000
0.6248	5/8		15.870	115.00	58.00	9006530158700
0.6299			16.000	115.00	58.00	9006530160000
0.6406	41/64		16.270	119.00	60.00	9006530162700
0.6496			16.500	119.00	60.00	9006530165000
0.6563	21/32		16.670	119.00	60.00	9006530166700

*Items listed in red are non-stocked items, and may take 2 - 6 weeks to receive

Series 653

Speeds & Feeds information pg 447

Dec. inch	Diameter (d1)		I1 mm	I2 mm	EDP #	
	Fract. inch	Wire / letter				
0.6693			17.000	119.00	60.00	9006530170000
0.6874	11/16		17.460	123.00	62.00	9006530174600
0.6890			17.500	123.00	62.00	9006530175000
0.7031	45/64		17.860	123.00	62.00	9006530178600
0.7087			18.000	123.00	62.00	9006530180000
0.7185			18.250	127.00	64.00	9006530182500
0.7189	23/32		18.260	127.00	64.00	9006530182600
0.7283			18.500	127.00	64.00	9006530185000
0.7343	47/64		18.650	127.00	64.00	9006530186500
0.7480			19.000	127.00	64.00	9006530190000
0.7500	3/4		19.050	131.00	66.00	9006530190500
0.7677			19.500	131.00	66.00	9006530195000
0.7874			20.000	131.00	66.00	9006530200000
0.8071			20.500	136.00	68.00	9006530205000
0.8126	13/16		20.640	136.00	68.00	9006530206400
0.8268			21.000	136.00	68.00	9006530210000
0.8465			21.500	141.00	70.00	9006530215000
0.8661			22.000	141.00	70.00	9006530220000

Dec. inch	Diameter (d1)		I1 mm	I2 mm	EDP #	
	Fract. inch	Wire / letter				
0.8858			22.500	146.00	72.00	9006530225000
0.8906	57/64		22.620	146.00	72.00	9006530226200
0.9055			23.000	146.00	72.00	9006530230000
0.9220	59/64		23.420	146.00	72.00	9006530234200
0.9449			24.000	151.00	75.00	9006530240000
0.9646			24.500	151.00	75.00	9006530245000
0.9843	63/64		25.000	151.00	75.00	9006530250000
1.0000	1		25.400	156.00	78.00	9006530254000
1.1220			28.500	168.00	84.00	9006530285000

Alternative Drill Series:
#5524 Cobalt, GU500, 3xD, 118 pt, Bright
#223 HSS, GP, 3xD, 118 pt, Bright/Steam Oxide > 2.36
#730 Carbide, GP, 3xD, 118 pt, Bright
#2463 Carbide, GP, 3xD, 118 pt, FIREX®