

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Tool Type 'N', Point Angle 118°

Ground Flutes-Bright Finish

MM	INCH	WG	FL in MM	OAL in MM
0.20			3	19
0.25			3	19
0.30			3	19
0.32			4	19
0.34		80	4	19
0.35			4	19
0.37		79	4	19
0.38			4	19
0.40	1/64		5	20
0.41		78	5	20
0.42			5	20
0.45			5	20
0.46		77	5	20
0.48			5	20
0.50			6	22
0.51		76	6	22
0.52			6	22
0.53		75	6	22
0.55			7	24
0.57		74	7	24
0.58			7	24
0.60			7	24
0.61		73	8	26
0.62			8	26
0.64		72	8	26
0.65			8	26
0.66		71	8	26
0.68			9	28
0.70			9	28
0.71		70	9	28
0.72			9	28
0.74		69	9	28
0.75			9	28



MM	INCH	WG	FL in MM	OAL in MM
0.76			10	30
0.79	1/32	68	10	30
0.80			10	30
0.81		67	10	30
0.82			10	30
0.84		66	10	30
0.85			10	30
0.88			11	32
0.89		65	11	32
0.90			11	32
0.91		64	11	32
0.92			11	32
0.94		63	11	32
0.95			11	32
0.97		62	12	34
0.98			12	34
0.99		61	12	34
1.00			12	34
1.02		60	12	34
1.04		59	12	34
1.07		58	14	36
1.09		57	14	36
1.10			14	36
1.18		56	14	36
1.19	3/64		16	38
1.20			16	38
1.25			16	38
1.30			16	38
1.32		55	18	40
1.40		54	18	40
1.50			18	40
1.51		53	20	43
1.59	1/16		20	43

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Tool Type 'N', Point Angle 118°

Ground Flutes-Bright Finish

MM	INCH	WG	FL in MM	OAL in MM
1.60			20	43
1.61		52	20	43
1.70		51	20	43
1.75			20	43
1.78		50	22	46
1.80			22	46
1.85		49	22	46
1.90			22	46
1.93		48	24	49
1.98	5/64		24	49
1.99		47	24	49
2.00			24	49
2.06		46	24	49
2.08		45	24	49
2.10			24	49
2.15			27	53
2.18		44	27	53
2.20			27	53
2.25			27	53
2.26		43	27	53
2.30			27	53
2.35			27	53
2.37		42	30	57
2.38	3/32		30	57
2.40			30	57
2.44		41	30	57
2.49		40	30	57
2.50			30	57
2.53		39	30	57
2.58		38	30	57
2.60			30	57
2.64		37	30	57
2.70			33	61



MM	INCH	WG	FL in MM	OAL in MM
2.71		36	33	61
2.75			33	61
2.78	7/64		33	61
2.79		35	33	61
2.80			33	61
2.82		34	33	61
2.87		33	33	61
2.90			33	61
2.95		32	33	61
3.00			33	61
3.05		31	36	65
3.10			36	65
3.17	1/8		36	65
3.20			36	65
3.25			36	65
3.26		30	36	65
3.30			36	65
3.35			36	65
3.40			39	70
3.45		29	39	70
3.50			39	70
3.57	9/64	28	39	70
3.60			39	70
3.66		27	39	70
3.70			39	70
3.73		26	39	70
3.75			39	70
3.80		25	43	75
3.86		24	43	75
3.90			43	75
3.91		23	43	75
3.97	5/32		43	75
3.99		22	43	75

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Tool Type 'N', Point Angle 118°

Ground Flutes-Bright Finish

MM	INCH	WG	FL in MM	OAL in MM
4.00			43	75
4.04		21	43	75
4.09		20	43	75
4.10			43	75
4.20			43	75
4.22		19	43	75
4.25			43	75
4.30		18	47	80
4.37	11/16		47	80
4.39		17	47	80
4.40			47	80
4.50		16	47	80
4.57		15	47	80
4.60			47	80
4.62		14	47	80
4.70		13	47	80
4.75			47	80
4.76	3/16		52	86
4.80		12	52	86
4.85		11	52	86
4.90			52	86
4.92		10	52	86
4.98		9	52	86
5.00			52	86
5.06		8	52	86
5.10			52	86
5.11		7	52	86
5.16	13/64		52	86
5.18		6	52	86
5.20			52	86
5.22		5	52	86
5.25			52	86
5.30			52	86



MM	INCH	WG	FL in MM	OAL in MM
5.31		4	57	93
5.40			57	93
5.41		3	57	93
5.50			57	93
5.56	7/32		57	93
5.60			57	93
5.61		2	57	93
5.70			57	93
5.75			57	93
5.79		1	57	93
5.80			57	93
5.90			57	93
5.94		A	57	93
5.95	15/64		57	93
6.00			57	93
6.05		B	63	101
6.10			63	101
6.15		C	63	101
6.20			63	101
6.25		D	63	101
6.30			63	101
6.35	1/4	E	63	101
6.40			63	101
6.50			63	101
6.53		F	63	101
6.60			63	101
6.63		G	63	101
6.70			63	101
6.75	17/64	H	69	109
6.80			69	109
6.90		I	69	109
7.00			69	109
7.03		J	69	109

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Tool Type 'N', Point Angle 118°

Ground Flutes-Bright Finish

MM	INCH	WG	FL in MM	OAL in MM
7.10			69	109
7.14	9/32	K	69	109
7.20			69	109
7.25			69	109
7.30			69	109
7.37		L	69	109
7.40			69	109
7.49		M	69	109
7.50			69	109
7.54	19/64		75	117
7.60			75	117
7.67		N	75	117
7.70			75	117
7.75			75	117
7.80			75	117
7.90			75	117
7.94	5/16		75	117
8.00			75	117
8.03		O	75	117
8.10			75	117
8.20		P	75	117
8.25			75	117
8.30			75	117
8.33	21/64		75	117
8.40			75	117
8.43		Q	75	117
8.50			75	117
8.60			81	125
8.61		R	81	125
8.70			81	125
8.75			81	125
8.73	11/32		81	125
8.80			81	125



MM	INCH	WG	FL in MM	OAL in MM
8.84		S	81	125
8.90			81	125
9.00			81	125
9.09		T	81	125
9.10			81	125
9.13	23/64		81	125
9.20			81	125
9.25			81	125
9.30			81	125
9.34		U	81	125
9.40			81	125
9.50			81	125
9.52	3/8		87	133
9.58		V	87	133
9.60			87	133
9.70			87	133
9.75			87	133
9.80		W	87	133
9.90			87	133
9.92	25/64		87	133
10.00			87	133
10.08		X	87	133
10.10			87	133
10.20			87	133
10.25			87	133
10.26		Y	87	133
10.30			87	133
10.32	13/32		87	133
10.40			87	133
10.49		Z	87	133
10.50			87	133
10.60			87	133
10.70			94	142

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Tool Type 'N', Point Angle 118°

Ground Flutes-Bright Finish

MM	INCH	WG	FL in MM	OAL in MM
10.72	27/64		94	142
10.75			94	142
10.80			94	142
10.90			94	142
11.00			94	142
11.10			94	142
11.11	7/16		94	142
11.20			94	142
11.25			94	142
11.30			94	142
11.40			94	142
11.50			94	142
11.51	29/64		94	142
11.60			94	142
11.70			94	142
11.75			94	142
11.80			94	142
11.90			101	151
11.91	15/32		101	151
12.00			101	151
12.10			101	151
12.20			101	151
12.25			101	151
12.30	31/64		101	151
12.40			101	151
12.50			101	151
12.60			101	151
12.70	1/2		101	151
12.75			101	151
12.80			101	151
12.90			101	151
13.00			101	151
13.10	33/64		101	151



MM	INCH	WG	FL in MM	OAL in MM
13.20			101	151
13.25			108	160
13.30			108	160
13.40			108	160
13.49	17/32		108	160
13.50			108	160
13.60			108	160
13.70			108	160
13.75			108	160
13.80			108	160
13.89	35/64		108	160
13.90			108	160
14.00			108	160
14.25			114	169
14.29	9/16		114	169
14.50			114	169
14.68	37/64		114	169
14.75			114	169
15.00			114	169
15.08	19/32		120	178
15.25			120	178
15.50			120	178
15.75			120	178
15.87	5/8		120	178
16.00			120	178

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Slow Helix-Type H

Ground Flutes-Bright Finish

MM	INCH	FL in MM	OAL in MM
1.00		12	34
1.10		14	36
1.19	3/64	16	38
1.20		16	38
1.30		16	38
1.50		18	40
1.59	1/16	20	43
1.60		20	43
1.70		20	43
1.75		22	46
1.80		22	46
1.90		22	46
1.98	5/64	24	49
2.00		24	49
2.10		24	49
2.20		27	53
2.30		27	53
2.38	3/32	30	57
2.40		30	57
2.50		30	57
2.60		30	57
2.70		33	61
2.78	7/64	33	61
2.80		33	61
2.90		33	61
3.00		33	61
3.10		36	65
3.17	1/8	36	65
3.20		36	65
3.30		36	65
3.40		39	70
3.50		39	70
3.60		39	70



MM	INCH	FL in MM	OAL in MM
3.70		39	70
3.75		39	70
3.80		43	75
3.90		43	75
3.97	5/32	43	75
4.00		43	75
4.20		43	75
4.25		43	75
4.37	11/64	47	80
4.50		47	80
4.75		47	80
4.76	3/16	52	86
4.80		52	86
5.00		52	86
5.16	13/64	52	86
5.20		52	86
5.30		52	86
5.50		57	93
5.56	7/32	57	93
5.79		57	93
5.80		57	93
5.95	15/64	57	93
6.00		57	93
6.20		63	101
6.25		63	101
6.35	1/4	63	101
6.50		63	101
6.75	17/64	69	109
6.80		69	109
7.00		69	109
7.14	9/32	69	109
7.20		69	109
7.49		69	109

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Slow Helix-Type H

Ground Flutes-Bright Finish

MM	INCH	FL in MM	OAL in MM
7.50		69	109
7.54	19/64	75	117
7.80		75	117
7.94	5/16	75	117
8.00		75	117
8.20		75	117
8.33	21/64	75	117
8.50		75	117
8.73	11/32	81	125
8.80		81	125
9.00		81	125
9.13	23/64	81	125
9.20		81	125
9.50		81	125
9.52	3/8	87	133
9.80		87	133
9.92	25/64	87	133
10.00		87	133
10.32	13/32	87	133
10.50		87	133
10.72	27/64	94	142
11.00		94	142
11.11	7/16	94	142
11.50		94	142
11.51	29/64	94	142
11.91	15/32	101	151
12.00		101	151
12.30	31/64	101	151
12.50		101	151
12.70	1/2	101	151
13.00		101	151
13.10	33/64	101	151
13.49	17/32	108	160



MM	INCH	FL in MM	OAL in MM
13.50		108	160
13.89	35/64	108	160
14.00		108	160
14.29	9/16	114	169
14.50		114	169
14.68	37/64	114	169
15.00		114	169
15.08	19/32	120	178
15.25		120	178
15.50		120	178
15.87	5/8	120	178
16.00		120	178

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Quick Helix - Type W

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
1.00		12	34
1.19	3/64	16	38
1.20		16	38
1.50		18	40
1.59	1/16	20	43
1.98	5/64	24	49
2.00		24	49
2.38	3/32	30	57
2.50		30	57
2.60		30	57
2.70		33	61
2.78	7/64	33	61
3.00		33	61
3.17	1/8	36	65
3.20		36	65
3.30		36	65
3.40		39	70
3.50		39	70
3.57	9/64	39	70
3.80		43	75
3.90		43	75
3.97	5/32	43	75
4.00		43	75
4.10		43	75
4.20		43	75
4.30		47	80
4.37	11/64	47	80
4.50		47	80
4.76	3/16	52	86
4.80		52	86
5.00		52	86
5.10		52	86
5.16	13/64	52	86



MM	INCH	FL in MM	OAL in MM
5.20		52	86
5.30		52	86
5.50		57	93
5.56	7/32	57	93
5.80		57	93
5.95	15/64	57	93
6.00		57	93
6.10		63	101
6.20		63	101
6.35	1/4	63	101
6.50		63	101
6.75	17/64	69	109
6.80		69	109
7.00		69	109
7.14	9/32	69	109
7.20		69	109
7.50		69	109
7.54	19/64	75	117
7.80		75	117
7.94	5/16	75	117
8.00		75	117
8.20		75	117
8.33	21/64	75	117
8.50		75	117
8.73	11/32	81	125
8.80		81	125
9.00		81	125
9.13	23/64	81	125
9.20		81	125
9.50		81	125
9.52	3/8	87	133
9.80		87	133
9.92	25/64	87	133

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Quick Helix - Type W

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
10.00		87	133
10.32	13/32	87	133
10.50		87	133
10.72	27/64	94	142
10.80		94	142
11.00		94	142
11.11	7/16	94	142
11.20		94	142
11.50		94	142
11.51	29/64	94	142
11.80		94	142
11.91	15/32	101	151
12.00		101	151
12.20		101	151
12.30	31/64	101	151
12.40		101	151
12.50		101	151
12.70	1/2	101	151
12.80		101	151
13.00		101	151
13.10	33/64	101	151
13.20		101	151
13.49	17/32	108	160
13.50		108	160
13.80		108	160
13.89	35/64	108	160
14.00		108	160
14.25		114	169
14.29	9/16	114	169
14.50		114	169
14.68	37/64	114	169
14.75		114	169
15.00		114	169

MM	INCH	FL in MM	OAL in MM
15.08	19/32	120	178
15.25		120	178
15.50		120	178
15.75		120	178
15.87	5/8	120	178
16.00		120	178



RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
1.50		18	40
1.51		20	43
1.59	1/16	20	43
1.60		20	43
1.70		20	43
1.75		22	46
1.80		22	46
1.90		22	46
1.98	5/64	24	49
2.00		24	49
2.10		24	49
2.20		27	53
2.30		27	53
2.38	3/32	30	57
2.44		30	57
2.50		30	57
2.60		30	57
2.70		33	61
2.78	7/64	33	61
2.80		33	61
2.90		33	61
3.00		33	61
3.10		36	65
3.17	1/8	36	65
3.20		36	65
3.30		36	65
3.40		39	70
3.50		39	70
3.57	9/64	39	70
3.60		39	70
3.70		39	70
3.75		39	70
3.80		43	75



MM	INCH	FL in MM	OAL in MM
3.90		43	75
3.97	5/32	43	75
4.00		43	75
4.10		43	75
4.20		43	75
4.25		43	75
4.30		47	80
4.37	11/64	47	80
4.40		47	80
4.50		47	80
4.60		47	80
4.70		47	80
4.75		47	80
4.76	3/16	52	86
4.80		52	86
4.90		52	86
5.00		52	86
5.16	13/64	52	86
5.20		52	86
5.30		52	86
5.40		57	93
5.50		57	93
5.56	7/32	57	93
5.60		57	93
5.70		57	93
5.80		57	93
5.90		57	93
5.95	15/64	57	93
6.00		57	93
6.10		63	101
6.20		63	101
6.25		63	101
6.30		63	101

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
6.35	1/4	63	101
6.40		63	101
6.50		63	101
6.60		63	101
6.70		63	101
6.75	17/64	69	109
6.80		69	109
6.90		69	109
7.00		69	109
7.10		69	109
7.14	9/32	69	109
7.20		69	109
7.30		69	109
7.40		69	109
7.50		69	109
7.54	19/64	75	117
7.60		75	117
7.70		75	117
7.80		75	117
7.90		75	117
7.94	5/16	75	117
8.00		75	117
8.10		75	117
8.20		75	117
8.30		75	117
8.33	21/64	75	117
8.40		75	117
8.50		75	117
8.60		81	125
8.70		81	125
8.73	11/32	81	125
8.80		81	125
8.90		81	125



MM	INCH	FL in MM	OAL in MM
9.00		81	125
9.10		81	125
9.13	23/64	81	125
9.20		81	125
9.30		81	125
9.40		81	125
9.50		81	125
9.52	3/8	87	133
9.60		87	133
9.70		87	133
9.90		87	133
9.92	25/64	87	133
10.00		87	133
10.20		87	133
10.32	13/32	87	133
10.50		87	133
10.72	27/64	94	142
10.80		94	142
11.00		94	142
11.11	7/16	94	142
11.20		94	142
11.50		94	142
11.51	29/64	94	142
11.80		94	142
11.91	15/32	101	151
12.00		101	151
12.20		101	151
12.30	31/64	101	151
12.50		101	151
12.70	1/2	101	151
12.80		101	151
13.00		101	151
13.10	33/64	101	151

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Heavy Web, Point Angle 135° - Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
13.20		101	151
13.49	17/32	108	160
13.50		108	160
13.80		108	160
13.89	35/64	108	160
14.00		108	160
14.25		114	169
14.29	9/16	114	169
14.50		114	169
14.68	37/64	114	169
14.75		114	169
15.00		114	169
15.08	19/32	120	178
15.25		120	178
15.50		120	178
15.75		120	178
15.87	5/8	120	178
16.00		120	178



RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Parabolic Flutes - Point Angle 130°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
2.50		30	57
2.60		30	57
2.70		33	61
2.78	7/64	33	61
2.80		33	61
2.90		33	61
3.00		33	61
3.10		36	65
3.17	1/8	36	65
3.20		36	65
3.40		39	70
3.50		39	70
3.57	9/64	39	70
3.60		39	70
3.70		39	70
3.75		39	70
3.80		43	75
3.90		43	75
3.97	5/32	43	75
4.00		43	75
4.10		43	75
4.20		43	75
4.25		43	75
4.30		47	80
4.37	11/64	47	80
4.40		47	80
4.50		47	80
4.60		47	80
4.70		47	80
4.75		47	80
4.76	3/16	52	86
4.80		52	86
4.90		52	86



MM	INCH	FL in MM	OAL in MM
5.00		52	86
5.10		52	86
5.16	13/64	52	86
5.20		52	86
5.30		52	86
5.40		57	93
5.50		57	93
5.56	7/32	57	93
5.60		57	93
5.70		57	93
5.80		57	93
5.90		57	93
5.95	15/64	57	93
6.00		57	93
6.10		63	101
6.20		63	101
6.30		63	101
6.35	1/4	63	101
6.40		63	101
6.50		63	101
6.60		63	101
6.70		63	101
6.75	17/64	69	109
6.80		69	109
6.90		69	109
7.00		69	109
7.10		69	109
7.14	9/32	69	109
7.20		69	109
7.30		69	109
7.40		69	109
7.50		69	109
7.54	19/64	75	117

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Parabolic Flutes - Point Angle 130°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
7.60		75	117
7.70		75	117
7.80		75	117
7.94	5/16	75	117
8.00		75	117
8.20		75	117
8.33	21/64	75	117
8.50		75	117
8.73	11/32	81	125
8.80		81	125
9.00		81	125
9.13	23/64	81	125
9.20		81	125
9.50		81	125
9.52	3/8	87	133
9.80		87	133
9.92	25/64	87	133
10.00		87	133
10.20		87	133
10.32	13/32	87	133
10.50		87	133
10.72	27/64	94	142
10.80		94	142
11.00		94	142
11.11	7/16	94	142
11.20		94	142
11.50		94	142
11.51	29/64	94	142
11.80		94	142
11.91	15/32	101	151
12.00		101	151
12.20		101	151
12.30	31/64	101	151



MM	INCH	FL in MM	OAL in MM
12.50		101	151
12.70	1/2	101	151
12.80		101	151
13.00		101	151
13.10	33/64	101	151
13.20		101	151
13.49	17/32	108	160
13.50		108	160
13.80		108	160
13.89	35/64	108	160
14.00		108	160
14.25		114	169
14.29	9/16	114	169
14.50		114	169
14.68	37/64	114	169
14.75		114	169
15.00		114	169
15.08	19/32	120	178
15.25		120	178
15.50		120	178
15.75		120	178
15.87	5/8	120	178
16.00		120	178

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (LH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	WG	FL in MM	OAL in MM
0.40	1/64		5	20
0.41		78	5	20
0.45			5	20
0.46		77	5	20
0.50			6	22
0.51		76	6	22
0.53		75	6	22
0.55			7	24
0.57		74	7	24
0.60			7	24
0.61		73	8	26
0.64		72	8	26
0.65			8	26
0.66		71	8	26
0.70			9	28
0.71		70	9	28
0.74		69	9	28
0.75			9	28
0.79		68	10	30
0.79	1/32		10	30
0.80			10	30
0.81		67	10	30
0.84		66	10	30
0.85			10	30
0.89		65	11	32
0.90			11	32
0.91		64	11	32
0.94		63	11	32
0.95			11	32



MM	INCH	WG	FL in MM	OAL in MM
0.97		62	12	34
0.99		61	12	34
1.00			12	34
1.02		60	12	34
1.04		59	12	34
1.07		58	14	36
1.09		57	14	36
1.10			14	36
1.18		56	14	36
1.19	3/64		16	38
1.20			16	38
1.30			16	38
1.32		55	16	38
1.40		54	18	40
1.50			18	40
1.51		53	20	43
1.59	1/16		20	43
1.60			20	43
1.61		52	20	43
1.70		51	20	43
1.75			20	43
1.78		50	22	46
1.80			22	46
1.85		49	22	46
1.90			22	46
1.93		48	24	49
1.98	5/64		24	49
1.99		47	24	49
2.00			24	49

LH - Left hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (LH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	WG	FL in MM	OAL in MM
2.06		46	24	49
2.08		45	24	49
2.10			24	49
2.15			27	53
2.18		44	27	53
2.20			27	53
2.26		43	27	53
2.30			27	53
2.35			27	53
2.37		42	30	57
2.38	3/32		30	57
2.40			30	57
2.44		41	30	57
2.49		40	30	57
2.50			30	57
2.53		39	30	57
2.58		38	30	57
2.60			30	57
2.64		37	30	57
2.70			33	61
2.71		36	33	61
2.78	7/64		33	61
2.79		35	33	61
2.80			33	61
2.82		34	33	61
2.87		33	33	61
2.90			33	61
2.95		32	33	61
3.00			33	61



MM	INCH	WG	FL in MM	OAL in MM
3.05		31	36	65
3.10			36	65
3.17	1/8		36	65
3.20			36	65
3.26		30	36	65
3.30			36	65
3.35			36	65
3.40			39	70
3.45		29	39	70
3.50			39	70
3.57	9/64	28	39	70
3.60			39	70
3.66		27	39	70
3.70			39	70
3.73		26	39	70
3.75			39	70
3.80		25	43	75
3.86		24	43	75
3.90			43	75
3.91		23	43	75
3.97	5/32		43	75
3.99		22	43	75
4.00			43	75
4.04		21	43	75
4.09		20	43	75
4.10			43	75
4.20			43	75
4.22		19	43	75
4.25			43	75

LH - Left hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (LH)



JOBBER SERIES

Made to IS:5101/1991, ISO 235:1975, BS:328 (Part-1), DIN-338

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	WG	FL in MM	OAL in MM
4.30		18	47	80
4.37	11/64		47	80
4.39		17	47	80
4.40			47	80
4.50		16	47	80
4.57		15	47	80
4.60			47	80
4.62		14	47	80
4.70		13	47	80
4.75			47	80
4.76	3/16		52	86
4.80		12	52	86
4.85		11	52	86
4.90			52	86
4.92		10	52	86
4.98		9	52	86
5.00			52	86
5.06		8	52	86
5.10			52	86
5.11		7	52	86
5.16	13/64		52	86
5.18		6	52	86
5.20			52	86
5.22		5	52	86
5.30			52	86
5.31		4	57	93
5.40			57	93
5.41		3	57	93
5.50			57	93
5.56	7/32		57	93



MM	INCH	WG	FL in MM	OAL in MM
5.60			57	93
5.61		2	57	93
5.70			57	93
5.79		1	57	93
5.80			57	93
5.90			57	93
5.94		A	57	93
5.95	15/64		57	93
6.00			57	93
6.05		B	63	101
6.10			63	101
6.15		C	63	101
6.20			63	101
6.25		D	63	101
6.30			63	101
6.35	1/4	E	63	101
6.40			63	101

LH - Left hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



JOBBER SERIES

As per IS:5101:1991, BS:328 (Part-1)1986, DIN:338

Heavy Web, Point-135°- Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
2.00		24	49
2.10		24	49
2.20		27	53
2.25		27	53
2.30		27	53
2.38	3/32	30	57
2.40		30	57
2.50		30	57
2.60		30	57
2.70		33	61
2.75		33	61
2.78	7/64	33	61
2.80		33	61
2.90		33	61
3.00		33	61
3.10		36	65
3.17	1/8	36	65
3.20		36	65
3.25		36	65
3.30		36	65
3.40		39	70
3.50		39	70
3.57	9/64	39	70
3.60		39	70
3.70		39	70
3.75		39	70
3.80		43	75
3.90		43	75
3.97	5/32	43	75
4.00		43	75



Dia	INCH	FL in MM	OAL in MM
4.10		43	75
4.20		43	75
4.25		43	75
4.30		47	80
4.37	11/64	47	80
4.40		47	80
4.50		47	80
4.60		47	80
4.70		47	80
4.75		47	80
4.76	3/16	52	86
4.80		52	86
4.90		52	86
5.00		52	86
5.10		52	86
5.16	13/64	52	86
5.20		52	86
5.25		52	86
5.30		52	86
5.40		57	93
5.50		57	93
5.56	7/32	57	93
5.60		57	93
5.70		57	93
5.80		57	93
5.90		57	93
5.95	15/64	57	93
6.00		57	93
6.10		63	101
6.20		63	101

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



JOBBER SERIES

As per IS:5101:1991, BS:328 (Part-1)1986, DIN:338

Heavy Web, Point-135°- Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
6.25		63	101
6.30		63	101
6.35	1/4	63	101
6.40		63	101
6.50		63	101
6.60		63	101
6.70		63	101
6.75	17/64	69	109
6.80		69	109
6.90		69	109
7.00		69	109
7.10		69	109
7.14	9/32	69	109
7.20		69	109
7.30		69	109
7.40		69	109
7.50		69	109
7.54	19/64	75	117
7.60		75	117
7.70		75	117
7.80		75	117
7.90		75	117
7.94	5/16	75	117
8.00		75	117
8.10		75	117
8.20		75	117
8.30		75	117
8.33	21/64	75	117
8.40		75	117
8.50		75	117



Dia	INCH	FL in MM	OAL in MM
8.60		81	125
8.70		81	125
8.73	11/32	81	125
8.80		81	125
8.90		81	125
9.00		81	125
9.10		81	125
9.13	23/64	81	125
9.20		81	125
9.30		81	125
9.40		81	125
9.50		81	125
9.52	3/8	87	133
9.60		87	133
9.70		87	133
9.80		87	133
9.90		87	133
9.92	25/64	87	133
10.00		87	133
10.10		87	133
10.20		87	133
10.25		87	133
10.30		87	133
10.32	13/32	87	133
10.40		87	133
10.50		87	133
10.60		87	133
10.70		94	142
10.72	27/64	94	142
10.80		94	142

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



JOBBER SERIES

As per IS:5101:1991, BS:328 (Part-1)1986, DIN:338

Heavy Web, Point-135°- Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
10.90		94	142
11.00		94	142
11.10		94	142
11.11	7/16	94	142
11.20		94	142
11.30		94	142
11.40		94	142
11.50		94	142
11.51	29/64	94	142
11.60		94	142
11.70		94	142
11.80		94	142
11.90		101	151
11.91	15/32	101	151
12.00		101	151
12.10		101	151
12.20		101	151
12.30	31/64	101	151
12.40		101	151
12.50		101	151
12.60		101	151
12.70	1/2	101	151
12.80		101	151
12.90		101	151
13.00		101	151
13.10	33/64	101	151
13.20		101	151
13.30		108	160
13.40		108	160



Dia	INCH	FL in MM	OAL in MM
13.49	17/32	108	160
13.50		108	160
13.60		108	160
13.70		108	160
13.80		108	160
13.89	35/64	108	160
13.90		108	160
14.00		108	160
14.25		114	169
14.29	9/16	114	169
14.50		114	169
14.68	37/64	114	169
14.75		114	169
15.00		114	169
15.08	19/32	120	178
15.25		120	178
15.50		120	178
15.75		120	178
15.87	5/8	120	178
16.00		120	178

RH - Right hand cutting
Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



JOBBER SERIES

As per IS:5101:1991, BS:328 (Part-1)1986, DIN:338

Parabolic Flutes - Point Angle 130°- Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
3.00		33	61
3.10		36	65
3.17	1/8	36	65
3.30		36	65
3.40		39	70
3.50		39	70
3.57	9/64	39	70
3.60		39	70
3.70		39	70
3.80		43	75
3.97	5/32	43	75
4.10		43	75
4.20		43	75
4.30		47	80
4.40		47	80
4.50		47	80
4.60		47	80
4.70		47	80
4.76	3/16	52	86
4.80		52	86
4.90		52	86
5.00		52	86
5.10		52	86
5.16	13/64	52	86
5.20		52	86
5.30		52	86
5.40		57	93
5.50		57	93
5.56	7/32	57	93
5.60		57	93
5.70		57	93
5.80		57	93
5.90		57	93



Dia	INCH	FL in MM	OAL in MM
5.95	15/64	57	93
6.00		57	93
6.10		63	101
6.20		63	101
6.30		63	101
6.35	1/4	63	101
6.40		63	101
6.50		63	101
6.60		63	101
6.70		63	101
6.75	17/64	69	109
6.80		69	109
6.90		69	109
7.00		69	109
7.10		69	109
7.14	9/64	69	109
7.20		69	109
7.30		69	109
7.40		69	109
7.50		69	109
7.54	19/64	75	117
7.60		75	117
7.70		75	117
7.80		75	117
7.90		75	117
7.94	5/16	75	117
8.00		75	117
8.10		75	117
8.20		75	117
8.30		75	117
8.33	21/64	75	117
8.40		75	117
8.50		75	117

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



JOBBER SERIES

As per IS:5101:1991, BS:328 (Part-1)1986, DIN:338

Parabolic Flutes - Point Angle 130°- Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
8.60		81	125
8.70		81	125
8.73	11/32	81	125
8.90		81	125
9.00		81	125
9.10		81	125
9.13	23/64	81	125
9.20		81	125
9.30		81	125
9.40		81	125
9.50		81	125
9.52	3/8	87	133
9.60		87	133
9.70		87	133
9.80		87	133
9.90		87	133
9.92	25/64	87	133
10.00		87	133
10.20		87	133
10.32	13/32	87	133
10.50		87	133
10.72	27/64	94	142
10.80		94	142
11.00		94	142
11.11	7/16	94	142
11.20		94	142
11.50		94	142
11.51	29/64	94	142
11.80		94	142
11.91	15/32	101	151
12.00		101	151
12.20		101	151
12.30	31/64	101	151



Dia	INCH	FL in MM	OAL in MM
12.50		101	151
12.70	1/2	101	151
13.00		101	151
13.10	33/64	101	151
13.49	17/32	108	160
13.50		108	160
13.89	35/64	108	160
14.00		108	160
14.29	9/16	114	169
14.50		114	169
14.68	37/64	114	169
15.00		114	169
15.08	19/32	120	178
15.25		120	178
15.50		120	178
15.87	5/8	120	178
16.00		120	178

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)



JOBBER SERIES

As per IS:5101:1991, BS:328 (Part-1)1986, DIN:338

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
2.00		24	49
2.10		24	49
2.20		27	53
2.30		27	53
2.38	3/32	30	57
2.40		30	57
2.50		30	57
2.60		30	57
2.70		33	61
2.78	7/64	33	61
2.80		33	61
2.90		33	61
3.00		33	61
3.10		36	65
3.17	1/8	36	65
3.20		36	65
3.30		36	65
3.40		39	70
3.50		39	70
3.60		39	70
3.70		39	70
3.75		39	70
3.80		43	75
3.90		43	75
3.97	5/32	43	75
4.00		43	75
4.10		43	75
4.20		43	75
4.30		47	80
4.37	11/64	47	80
4.40		47	80
4.50		47	80
4.60		47	80
4.70		47	80
4.76	3/16	52	86



Dia	INCH	FL in MM	OAL in MM
4.80		52	86
4.90		52	86
5.00		52	86
5.10		52	86
5.16	13/64	52	86
5.20		52	86
5.30		52	86
5.40		57	93
5.50		57	93
5.56	7/32	57	93
5.60		57	93
5.70		57	93
5.80		57	93
5.90		57	93
5.95	15/64	57	93
6.00		57	93
6.10		63	101
6.20		63	101
6.30		63	101
6.35	1/4	63	101
6.40		63	101
6.50		63	101
6.60		63	101
6.70		63	101
6.75	17/64	69	109
6.80		69	109
6.90		69	109
7.00		69	109
7.10		69	109
7.14	9/32	69	109
7.20		69	109
7.30		69	109
7.40		69	109
7.50		69	109
7.54	19/64	75	117

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)



JOBBER SERIES

As per IS:5101:1991, BS:328 (Part-1)1986, DIN:338
Heavy Web, Point Angle 135°- Split Point
Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
7.60		75	117
7.70		75	117
7.80		75	117
7.90		75	117
7.94	5/16	75	117
8.00		75	117
8.10		75	117
8.20		75	117
8.30		75	117
8.33	21/64	75	117
8.40		75	117
8.50		75	117
8.60		81	125
8.70		81	125
8.73	11/32	81	125
8.80		81	125
8.90		81	125
9.00		81	125
9.10		81	125
9.13	23/64	81	125
9.20		81	125
9.30		81	125
9.40		81	125
9.50		81	125
9.52	3/8	87	133
9.60		87	133
9.70		87	133
9.80		87	133
9.90		87	133
9.92	25/64	87	133
10.00		87	133
10.20		87	133
10.32	13/32	87	133
10.50		87	133
10.72	27/64	94	142



Dia	INCH	FL in MM	OAL in MM
10.80		94	142
11.00		94	142
11.11	7/16	94	142
11.20		94	142
11.50		94	142
11.51	29/64	94	142
11.80		94	142
11.91	15/32	101	151
12.00		101	151
12.20		101	151
12.30	31/64	101	151
12.50		101	151
12.70	1/2	101	151
12.80		101	151
13.00		101	151
13.10	33/64	101	151
13.20		101	151
13.40		108	160
13.49	17/32	108	160
13.50		108	160
13.80		108	160
13.89	35/64	108	160
14.00		108	160
14.25		114	169
14.29	9/16	114	169
14.50		114	169
14.68	37/64	114	169
14.75		114	169
15.00		114	169
15.08	19/32	120	178
15.25		120	178
15.50		120	178
15.75		120	178
15.87	5/8	120	178
16.00		120	178

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS Parallel Shank Twist Drills (RH)



STUB SERIES

Made to IS 5100:1991, ISO 235:1975

BS:328 (Part-1)1986, DIN 1897

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
1.00		6	26
1.19	3/64	8	30
1.20		8	30
1.50		9	32
1.59	1/16	10	34
1.80		11	36
1.98	5/64	12	38
2.00		12	38
2.10		12	38
2.20		13	40
2.25		13	40
2.30		13	40
2.38	3/32	14	43
2.40		14	43
2.50		14	43
2.60		14	43
2.70		16	46
2.75		16	46
2.78	7/64	16	46
2.80		16	46
2.90		16	46
3.00		16	46
3.10		18	49
3.17	1/8	18	49
3.20		18	49
3.25		18	49
3.30		18	49
3.40		20	52
3.50		20	52
3.57	9/64	20	52
3.60		20	52
3.70		20	52
3.75		20	52



Dia	INCH	FL in MM	OAL in MM
3.80		22	55
3.90		22	55
3.97	5/32	22	55
4.00		22	55
4.10		22	55
4.20		22	55
4.25		22	55
4.30		24	58
4.37	11/64	24	58
4.40		24	58
4.50		24	58
4.60		24	58
4.70		24	58
4.75		24	58
4.76	3/16	26	62
4.80		26	62
4.90		26	62
5.00		26	62
5.10		26	62
5.16	13/64	26	62
5.20		26	62
5.25		26	62
5.30		26	62
5.40		28	66
5.50		28	66
5.56	7/32	28	66
5.60		28	66
5.70		28	66
5.75		28	66
5.80		28	66
5.90		28	66
5.95	15/64	28	66
6.00		28	66

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS Parallel Shank Twist Drills (RH)



STUB SERIES

Made to IS 5100:1991, ISO 235:1975

BS:328 (Part-1)1986, DIN 1897

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
6.20		31	70
6.25		31	70
6.35	1/4	31	70
6.50		31	70
6.75	17/64	34	74
6.80		34	74
7.00		34	74
7.14	9/32	34	74
7.20		34	74
7.50		34	74
7.54	19/64	37	79
7.80		37	79
7.94	5/16	37	79
8.00		37	79
8.20		37	79
8.33	21/64	37	79
8.50		37	79
8.73	11/32	40	84
8.80		40	84
9.00		40	84
9.13	23/64	40	84
9.20		40	84
9.50		40	84
9.52	3/8	43	89
9.80		43	89
9.92	25/64	43	89
10.00		43	89
10.20		43	89
10.32	13/32	43	89
10.50		43	89
10.72	27/64	47	95
10.80		47	95
11.00		47	95



Dia	INCH	FL in MM	OAL in MM
11.11	7/16	47	95
11.20		47	95
11.50		47	95
11.51	29/64	47	95
11.80		47	95
11.91	15/32	51	102
12.00		51	102
12.20		51	102
12.30	31/64	51	102
12.50		51	102
12.70	1/2	51	102
12.80		51	102
13.00		51	102
13.10	33/64	51	102
13.20		51	102
13.49	17/32	54	107
13.50		54	107
13.80		54	107
13.89	35/64	54	107
14.00		54	107
14.25		56	111
14.29	9/16	56	111
14.50		56	111
14.68	37/64	56	111
14.75		56	111
15.00		56	111
15.08	19/32	58	115
15.25		58	115
15.50		58	115
15.75		58	115
15.87	5/8	58	115
16.00		58	115

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



STUB SERIES

IS:5100-1991, BS:328 (Part-1)-1986, DIN:1897

Heavy Web, POINT-135° - Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
2.00		12	38
2.10		12	38
2.20		13	40
2.30		13	40
2.38	3/32	14	43
2.40		14	43
2.50		14	43
2.60		14	43
2.70		16	46
2.78	7/64	16	46
2.80		16	46
2.90		16	46
3.00		16	46
3.10		18	49
3.17	1/8	18	49
3.20		18	49
3.30		18	49
3.40		20	52
3.50		20	52
3.57	9/64	20	52
3.60		20	52
3.70		20	52
3.80		22	55
3.90		22	55
3.97	5/32	22	55
4.00		22	55
4.10		22	55
4.20		22	55
4.30		24	58
4.37	11/64	24	58
4.40		24	58
4.50		24	58
4.60		24	58
4.70		24	58
4.76	3/16	26	62



Dia	INCH	FL in MM	OAL in MM
4.80		26	62
4.90		26	62
5.00		26	62
5.10		26	62
5.16	13/64	26	62
5.20		26	62
5.30		26	62
5.40		28	66
5.50		28	66
5.56	7/32	28	66
5.60		28	66
5.70		28	66
5.80		28	66
5.90		28	66
5.95	15/64	28	66
6.00		28	66
6.10		31	70
6.20		31	70
6.30		31	70
6.35	1/4	31	70
6.40		31	70
6.50		31	70
6.60		31	70
6.70		31	70
6.75	17/64	34	74
6.80		34	74
6.90		34	74
7.00		34	74
7.10		34	74
7.14	9/32	34	74
7.20		34	74
7.30		34	74
7.40		34	74
7.50		34	74
7.54	19/64	37	79

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



STUB SERIES

IS:5100-1991, BS:328 (Part-1)-1986, DIN:1897

Heavy Web, POINT-135°- Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
7.60		37	79
7.70		37	79
7.80		37	79
7.90		37	79
7.94	5/16	37	79
8.00		37	79
8.10		37	79
8.20		37	79
8.30		37	79
8.33	21/64	37	79
8.40		37	79
8.50		37	79
8.60		40	84
8.70		40	84
8.73	11/32	40	84
8.80		40	84
8.90		40	84
9.00		40	84
9.10		40	84
9.13	23/64	40	84
9.20		40	84
9.30		40	84
9.40		40	84
9.50		40	84
9.52	3/8	43	89
9.60		43	89
9.70		43	89
9.80		43	89
9.90		43	89
9.92	25/64	43	89
10.00		43	89
10.20		43	89
10.32	13/32	43	89
10.50		43	89
10.72	27/64	47	95



Dia	INCH	FL in MM	OAL in MM
10.80		47	95
11.00		47	95
11.11	7/16	47	95
11.20		47	95
11.50		47	95
11.51	29/64	47	95
11.80		47	95
11.91	15/32	51	102
12.00		51	102
12.20		51	102
12.30	31/64	51	102
12.50		51	102
12.70	1/2	51	102
12.80		51	102
13.00		51	102
13.10	33/64	51	102
13.20		51	102
13.40		54	107
13.49	17/32	54	107
13.50		54	107
13.80		54	107
13.89	35/64	54	107
14.00		54	107
14.25		56	111
14.29	9/16	56	111
14.50		56	111
14.68	37/64	56	111
14.75		56	111
15.00		56	111
15.08	19/32	58	115
15.25		58	115
15.50		58	115
15.75		58	115
15.87	5/8	58	115
16.00		58	115

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



STUB SERIES

IS:5100-1991, BS:328 (Part-1)-1986, DIN:1897
Parabolic Flutes - Point Angle 130°- Split Point
Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
3.00		16	46
3.17	1/8	18	49
3.20		18	49
3.50		20	52
3.57	9/64	20	52
3.80		22	55
3.97	5/32	22	55
4.00		22	55
4.20		22	55
4.37	11/64	24	58
4.50		24	58
4.76	3/16	26	62
4.80		26	62
5.00		26	62
5.16	13/64	26	62
5.20		26	62
5.50		28	66
5.56	7/32	28	66
5.80		28	66
5.95	15/64	28	66
6.00		28	66
6.20		31	70
6.35	1/4	31	70
6.50		31	70
6.75	17/64	34	74
6.80		34	74
7.00		34	74
7.14	9/32	34	74
7.20		34	74
7.50		34	74
7.54	19/64	37	79
7.80		37	79
7.94	5/16	37	79



Dia	INCH	FL in MM	OAL in MM
8.00		37	79
8.20		37	79
8.33	21/64	37	79
8.50		37	79
8.73	11/32	40	84
8.80		40	84
9.00		40	84
9.13	23/64	40	84
9.20		40	84
9.50		40	84
9.52	3/8	43	89
9.80		43	89
9.92	25/64	43	89
10.00		43	89
10.20		43	89
10.32	13/32	43	89
10.50		43	89
10.72	27/64	47	95
10.80		47	95
11.00		47	95
11.11	7/16	47	95
11.20		47	95
11.50		47	95
11.51	29/64	47	95
11.80		47	95
11.91	15/32	51	102
12.00		51	102
12.20		51	102
12.30	31/64	51	102
12.50		51	102
12.70	1/2	51	102
12.80		51	102
13.00		51	102

RH - Right hand cutting
Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



STUB SERIES

IS:5100-1991, BS:328 (Part-1)-1986, DIN:1897

Parabolic Flutes - Point Angle 130°- Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
13.10	33/64	51	102
13.20		51	102
13.49	17/32	54	107
13.50		54	107
13.80		54	107
13.89	35/64	54	107
14.00		54	107
14.25		56	111
14.29	9/16	56	111
14.50		56	111
14.68	37/64	56	111
14.75		56	111
15.00		56	111
15.08	19/32	58	115
15.25		58	115
15.50		58	115
15.75		58	115
15.87	5/8	58	115
16.00		58	115



RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)



STUB SERIES

IS:5100-1991, BS:328 (Part-1)-1986, DIN:1897

Heavy Web, POINT-135° - Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
2.00		12	38
2.10		12	38
2.20		13	40
2.30		13	40
2.38	3/32	14	43
2.40		14	43
2.50		14	43
2.60		14	43
2.70		16	46
2.78	7/64	16	46
2.80		16	46
2.90		16	46
3.00		16	46
3.10		18	49
3.17	1/8	18	49
3.20		18	49
3.30		18	49
3.40		20	52
3.50		20	52
3.60		20	52
3.70		20	52
3.80		22	55
3.90		22	55
3.97	5/32	22	55
4.00		22	55
4.10		22	55
4.20		22	55
4.25		22	55
4.30		24	58
4.37	11/64	24	58
4.40		24	58
4.50		24	58
4.60		24	58
4.70		24	58
4.76	3/16	26	62



Dia	INCH	FL in MM	OAL in MM
4.80		26	62
4.90		26	62
5.00		26	62
5.10		26	62
5.16	13/64	26	62
5.20		26	62
5.30		26	62
5.40		28	66
5.50		28	66
5.60		28	66
5.70		28	66
5.80		28	66
5.90		28	66
5.95	15/64	28	66
6.00		28	66
6.10		31	70
6.20		31	70
6.30		31	70
6.35	1/4	31	70
6.40		31	70
6.50		31	70
6.60		31	70
6.70		31	70
6.75	17/64	34	74
6.80		34	74
6.90		34	74
7.00		34	74
7.10		34	74
7.14	9/32	34	74
7.20		34	74
7.30		34	74
7.40		34	74
7.50		34	74
7.54	19/64	37	79
7.60		37	79

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)



STUB SERIES

IS:5100-1991, BS:328 (Part-1)-1986, DIN:1897

Heavy Web, POINT-135° - Split Point

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
7.70		37	79
7.80		37	79
7.90		37	79
7.94	5/16	37	79
8.00		37	79
8.10		37	79
8.20		37	79
8.30		37	79
8.33	21/64	37	79
8.40		37	79
8.50		37	79
8.60		40	84
8.70		40	84
8.73	11/32	40	84
8.80		40	84
8.90		40	84
9.00		40	84
9.10		40	84
9.13	23/64	40	84
9.20		40	84
9.30		40	84
9.40		40	84
9.50		40	84
9.52	3/8	43	89
9.60		43	89
9.70		43	89
9.80		43	89
9.90		43	89
9.92	25/64	43	89
10.00		43	89
10.20		43	89
10.32	13/32	43	89
10.50		43	89
10.72	27/64	47	95
10.80		47	95



Dia	INCH	FL in MM	OAL in MM
11.00		47	95
11.11	7/16	47	95
11.20		47	95
11.50		47	95
11.51	29/64	47	95
11.80		47	95
11.91	15/32	51	102
12.00		51	102
12.20		51	102
12.30	31/64	51	102
12.50		51	102
12.70	1/2	51	102
12.80		51	102
13.00		51	102
13.10	33/64	51	102
13.20		51	102
13.49	17/32	54	107
13.50		54	107
13.80		54	107
13.89	35/64	54	107
14.00		54	107
14.25		56	111
14.29	9/16	56	111
14.50		56	111
14.68	37/64	56	111
14.75		56	111
15.00		56	111
15.08	19/32	58	115
15.25		58	115
15.50		58	115
15.75		58	115
15.87	5/8	58	115
16.00		58	115

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)



STUB SERIES - Parabolic
IS:5100-1991, BS:328 (Part-1)-1986, DIN:1897
Parabolic Flutes - Point Angle 130°- Split Point
Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
3.00		16	46
3.10		18	49
3.17	1/8	18	49
3.20		18	49
3.30		18	49
3.40		20	52
3.50		20	52
3.57	9/64	20	52
3.60		20	52
3.70		20	52
3.80		22	55
3.90		22	55
3.97	5/32	22	55
4.00		22	55
4.10		22	55
4.20		22	55
4.30		24	58
4.37	11/64	24	58
4.40		24	58
4.50		24	58
4.60		24	58
4.70		24	58
4.76	3/16	26	62
4.80		26	62
4.90		26	62
5.00		26	62
5.10		26	62
5.16	13/64	26	62
5.20		26	62
5.30		26	62
5.40		28	66
5.50		28	66
5.56	7/32	28	66



Dia	INCH	FL in MM	OAL in MM
5.60		28	66
5.70		28	66
5.80		28	66
5.90		28	66
5.95	15/64	28	66
6.00		28	66
6.10		31	70
6.20		31	70
6.30		31	70
6.35	1/4	31	70
6.40		31	70
6.50		31	70
6.60		31	70
6.70		31	70
6.75	17/64	34	74
6.80		34	74
6.90		34	74
7.00		34	74
7.10		34	74
7.14	9/32	34	74
7.20		34	74
7.30		34	74
7.40		34	74
7.50		34	74
7.54	19/64	37	79
7.60		37	79
7.70		37	79
7.80		37	79
7.90		37	79
7.94	5/16	37	79
8.00		37	79
8.10		37	79
8.20		37	79

RH - Right hand cutting
 Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)



STUB SERIES - Parabolic
IS:5100-1991, BS:328 (Part-1)-1986, DIN:1897
Parabolic Flutes - Point Angle 130° - Split Point
Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
8.30		37	79
8.33	21/64	37	79
8.40		37	79
8.50		37	79
8.60		40	84
8.70		40	84
8.73	11/32	40	84
8.80		40	84
8.90		40	84
9.00		40	84
9.10		40	84
9.13	23/64	40	84
9.20		40	84
9.30		40	84
9.40		40	84
9.50		40	84
9.52	3/8	43	89
9.60		43	89
9.70		43	89
9.80		43	89
9.90		43	89
9.92	25/64	43	89
10.00		43	89
10.20		43	89
10.32	13/32	43	89
10.50		43	89
10.72	27/64	47	95
10.80		47	95
11.00		47	95
11.11	7/16	47	95
11.20		47	95
11.50		47	95
11.51	29/64	47	95



Dia	INCH	FL in MM	OAL in MM
11.80		47	95
11.91	15/32	51	102
12.00		51	102
12.20		51	102
12.30	31/64	51	102
12.50		51	102
12.70	1/2	51	102
12.80		51	102
13.00		51	102
13.10	33/64	51	102
13.20		51	102
13.40		54	107
13.49	17/32	54	107
13.50		54	107
13.80		54	107
13.89	35/64	54	107
14.00		54	107
14.25		56	111
14.29	9/16	56	111
14.50		56	111
14.68	37/64	56	111
14.75		56	111
15.00		56	111
15.08	19/32	58	115
15.25		58	115
15.50		58	115
15.75		58	115
15.87	5/8	58	115
16.00		58	115

RH - Right hand cutting
Other Finishes available - TiN, Blue (Steam Tempered), Straw Gold

HSS Parallel Shank Twist Drills (LH)



STUB SERIES

Made to IS 5362:1991, ISO 235:1975

BS:328 (Part-1)1986, DIN 1897

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
1.00		6	26
1.10		7	28
1.19	3/64	8	30
1.20		8	30
1.30		8	30
1.40		9	32
1.50		9	32
1.59	1/16	10	34
1.60		10	34
1.70		10	34
1.80		11	36
1.90		11	36
1.98	5/64	12	38
2.00		12	38
2.10		12	38
2.20		13	40
2.30		13	40
2.38	3/32	14	43
2.40		14	43
2.50		14	43
2.60		14	43
2.70		16	46
2.78	7/64	16	46
2.80		16	46
2.90		16	46
3.00		16	46
3.10		18	49
3.17	1/8	18	49
3.20		18	49
3.30		18	49
3.40		20	52
3.50		20	52
3.57	9/64	20	52
3.60		20	52
3.70		20	52



Dia	INCH	FL in MM	OAL in MM
3.80		22	55
3.90		22	55
3.97	5/32	22	55
4.00		22	55
4.10		22	55
4.20		22	55
4.30		24	58
4.37	11/64	24	58
4.40		24	58
4.50		24	58
4.60		24	58
4.70		24	58
4.76	3/16	26	62
4.80		26	62
4.90		26	62
5.00		26	62
5.10		26	62
5.16	13/64	26	62
5.20		26	62
5.30		26	62
5.40		28	66
5.50		28	66
5.56	7/32	28	66
5.60		28	66
5.70		28	66
5.80		28	66
5.90		28	66
5.95	15/64	28	66
6.00		28	66
6.10		31	70
6.20		31	70
6.30		31	70
6.35	1/4	31	70
6.40		31	70

LH - Left hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



DOUBLE ENDED DRILLS
Tool Type 'N', 135° Split Point
Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
2.50		10	43
2.78	7/64"	11	46
2.80		11	46
3.00		11	46
3.17	1/8"	13	49
3.20		13	49
3.30		13	49
3.50		13	52
3.57	9/64"	13	52
3.80		14	55
3.97	5/32"	14	55
4.00		14	55
4.10		14	55
4.20		14	55
4.25		14	55
4.50		16	58
4.75		16	58
4.76	3/16"	17	62
4.80		17	62
5.00		17	62
5.10		17	62



Dia	INCH	FL in MM	OAL in MM
5.50		19	66
5.56	7/32"	19	66
5.80		19	66
5.95	15/64"	19	66
6.00		19	66
6.20		21	70
6.35	1/4"	21	70
6.50		21	70
6.80		24	74
7.00		24	74
7.14	9/32"	24	74
7.20		24	74
7.50		24	74
7.94	5/16"	25	79
8.00		25	79
8.50		25	79
9.00		25	84
9.50		25	84
9.52	3/8"	25	89
10.00		25	89
10.20		25	89

LH - Left hand cutting
 Other Finish available - Blue (Steam Tempered)

Parallel Shank Twist Drills (RH)



SPOTTING DRILLS

(Short length)

Tool Type 'N', Point Angle 90° or 120°

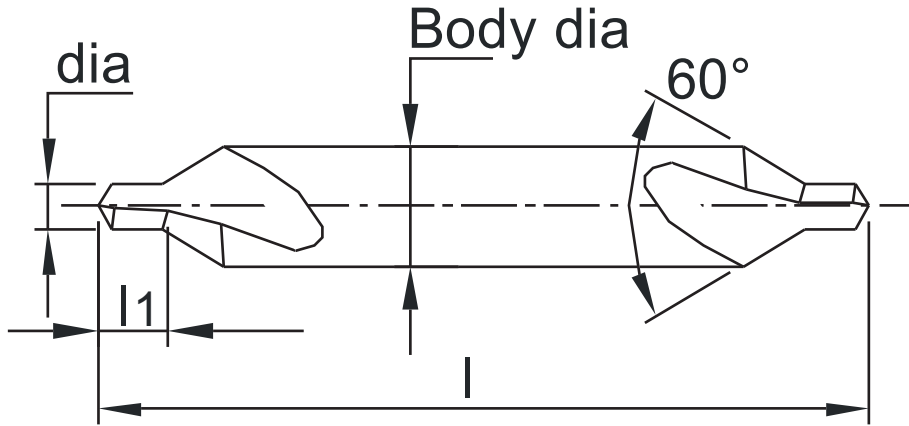
Ground Flutes - Bright Finish

Dia	INCH	FL in MM	OAL in MM
3.00		12	46
3.50		12	52
4.00		12	55
5.00		14	62
5.60		16	66
6.00		16	66
6.35	1/4	17	70
6.50		17	70
7.00		19	74
8.00		21	79
9.00		22	84
9.52	3/8	25	89
10.00		25	89
10.80		28	95
11.00		28	95
11.55		28	95
12.00		30	102
12.30	31/64	30	102
12.70	1/2	30	102
13.00		30	102
14.00		33.5	107
15.00		33.5	111
15.87	5/8	37.5	115
16.00		37.5	115



RH-Right hand cutting
 Also available in 5%-Co. and 8% Co.
 Other Finishes available - TiN

HSS CENTRE DRILLS



	Pilot Drill Dia in MM	Body Dia in MM	OAL in MM
TYPE-A	As per IS: 6708-1977		
	1.00	3.15	33.5
	1.25	3.15	33.5
	1.60	4	37.5
	2.00	5	42
	2.50	6.3	47
	3.15	8	52
	4.00	10	59
	5.00	12.5	66
	6.30	16	74
	8.00	20	83

	Pilot Drill Dia in MM	Body Dia in MM	OAL in MM
TYPE-B	As per IS: 6709-1977		
	1.00	4	37.5
	1.25	5	42
	1.60	6.3	47
	2.00	8	52
	2.50	10	59
	3.15	11.2	63
	4.00	14	70
	5.00	18	78
	6.30	20	83

No. B.S.	Pilot Drill Dia in MM	Body Dia in MM	OAL in MM
As per BS:328 Part-2 1950			
1	3/64	1/8	1.1/2
2	1/16	3/16	1.3/4
3	3/32	1/4	2
4	1/8	5/16	2.1/4
5	3/16	7/16	2.1/2
6	1/4	5/8	3
7	5/16	3/4	3.1/2

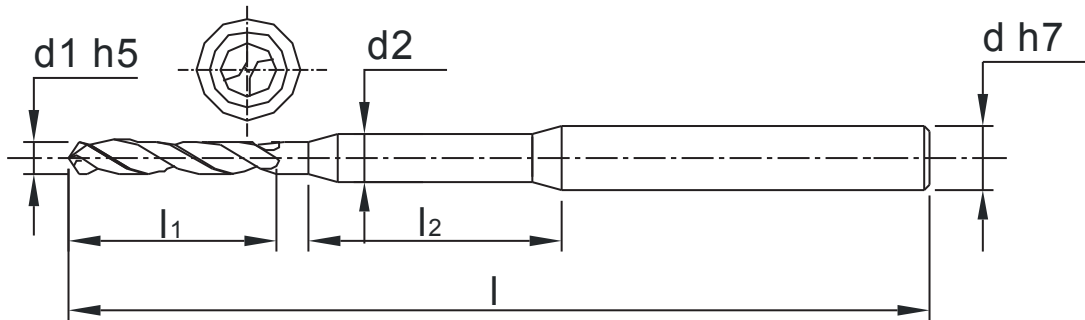
HSS-M2 Re-inforced Shank Twist Drills



CAPILLARY DRILLS

Helix - 20°, Point Angle 118°

Ground Flutes - Bright Finish



Dia (MM)	l_1	l_2	d_1	d	l
0.5	15	15	1.2	1.5	60
0.6	15	15	1.2	1.5	60
0.7	15	15	1.2	1.5	60
0.8	15	15	1.2	1.5	60
0.9	15	15	1.2	1.5	60
1.0	15	15	1.2	1.5	60
1.1	15	15	1.2	1.5	60
1.2	15	15	1.2	1.5	60
1.3	15	15	1.3	1.5	60
1.4	15	15	1.4	1.5	60

These drills are used for drilling refill tips on PM-20 or equivalent machining centres HSS-M42-8% cobalt drills available for harder tip materials like SS and NiSi

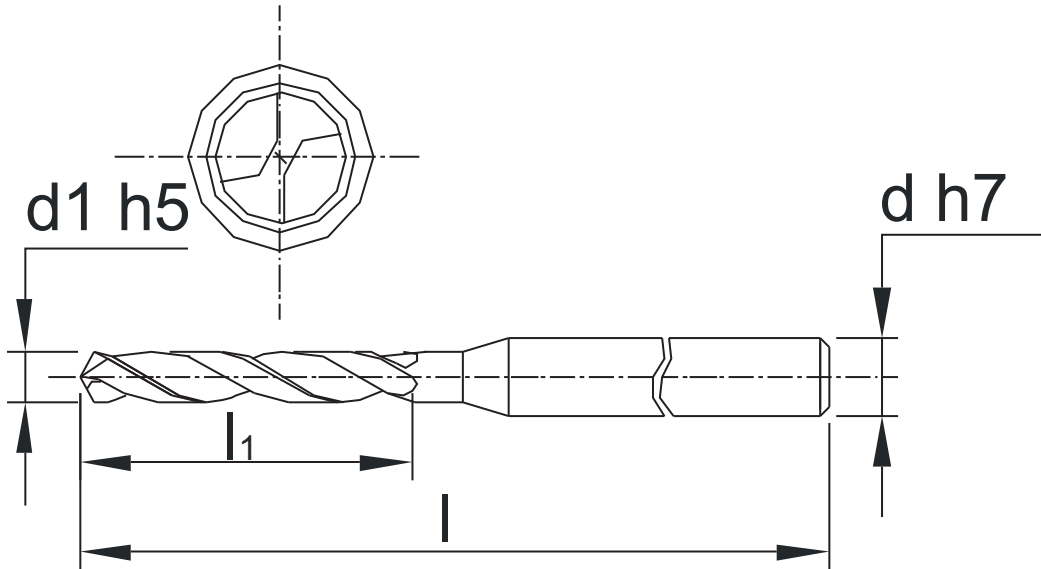
HSS-M2 Re-inforced Shank Twist Drills



CAPILLARY DRILLS

Helix - 20°, Point Angle 118°

Ground Flutes - Bright Finish



Dia (MM)	l ₁	d	l
0.50	18	1.5	38
0.60	18	1.5	38
0.70	18	1.5	38
0.80	18	1.5	38
0.90	18	1.5	38

Dia (MM)	l ₁	d	l
1.00	18	1.5	38
1.10	18	1.5	38
1.20	18	1.5	38
1.30	18	1.5	38
1.40	18	1.5	38

These drills are used for drilling refill tips on LX-24 or equivalent machining centres HSS-M42-8% cobalt drills available for harder tip materials like SS and NiSi

HSS Parallel Shank Twist Drills (RH)



LONG SERIES

Made to IS 5102:1991, ISO 235:1975, BS:328 (Part-1)1986, DIN 340

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	DG/LG	FL in MM	OAL in MM
0.50			12	32
0.60			17	40
0.70			21	44
0.80			25	50
0.90			29	52
1.00			33	56
1.02		60	33	56
1.04		59	33	56
1.07		58	37	60
1.09		57	37	60
1.10			37	60
1.18		56	41	65
1.19	3/64		41	65
1.20			41	65
1.30			41	65
1.32		55	41	65
1.40		54	45	70
1.50			45	70
1.51		53	50	76
1.59	1/16		50	76
1.60			50	76
1.61		52	50	76
1.70		51	50	76
1.78		50	53	80
1.80			53	80
1.85		49	53	80
1.90			53	80
1.93		48	56	85
1.98	5/64		56	85
1.99		47	56	85
2.00			56	85
2.06		46	56	85



MM	INCH	DG/LG	FL in MM	OAL in MM
2.08		45	56	85
2.10			56	85
2.18		44	59	90
2.20			59	90
2.26		43	59	90
2.30			59	90
2.35			59	90
2.37		42	62	95
2.38	3/32		62	95
2.40			62	95
2.44		41	62	95
2.49		40	62	95
2.50			62	95
2.53		39	62	95
2.58		38	62	95
2.60			62	95
2.64		37	62	95
2.65			62	95
2.70			66	100
2.71		36	66	100
2.78	7/64		66	100
2.79		35	66	100
2.80			66	100
2.82		34	66	100
2.87		33	66	100
2.90			66	100
2.95		32	66	100
3.00			66	100
3.05		31	89	106
3.10			89	106
3.17	1/8		89	106
3.20			89	106

RH - Right hand cutting
Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



LONG SERIES

Made to IS 5102:1991, ISO 235:1975, BS:328 (Part-1)1986, DIN 340

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	DG/LG	FL in MM	OAL in MM
3.26		30	89	106
3.30			89	106
3.35			89	106
3.40			73	112
3.45		29	73	112
3.50			73	112
3.57	9/64	28	73	112
3.60			73	112
3.66		27	73	112
3.70			73	112
3.73		26	73	112
3.75			73	112
3.80		25	78	119
3.86		24	78	119
3.90			78	119
3.91		23	78	119
3.97	5/32		78	119
3.99		22	78	119
4.00			78	119
4.04		21	78	119
4.09		20	78	119
4.10			78	119
4.20			78	119
4.22		19	78	119
4.25			78	119
4.30		18	82	126
4.37	11/64		82	126
4.39		17	82	126
4.40			82	126
4.50		16	82	126
4.57		15	82	126
4.60			82	126
4.62		14	82	126



MM	INCH	DG/LG	FL in MM	OAL in MM
4.70		13	82	126
4.75			82	126
4.76	3/16		87	132
4.80		12	87	132
4.85		11	87	132
4.90			87	132
4.92		10	87	132
4.98		9	87	132
5.00			87	132
5.06		8	87	132
5.10			87	132
5.11		7	87	132
5.16	13/64		87	132
5.18		6	87	132
5.20			87	132
5.22		5	87	132
5.30			87	132
5.31		4	91	139
5.40			91	139
5.41		3	91	139
5.50			91	139
5.56	7/32		91	139
5.60			91	139
5.61		2	91	139
5.70			91	139
5.79		1	91	139
5.80			91	139
5.90			91	139
5.94		A	91	139
5.95	15/64		91	139
6.00			91	139
6.05		B	97	148
6.10			97	148

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



LONG SERIES

Made to IS 5102:1991, ISO 235:1975, BS:328 (Part-1)1986, DIN 340

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	DG/LG	FL in MM	OAL in MM
6.15		C	97	148
6.20			97	148
6.25		D	97	148
6.30			97	148
6.35	1/4	E	97	148
6.40			97	148
6.50			97	148
6.53		F	97	148
6.60			97	148
6.63		G	97	148
6.70			97	148
6.75	17/64	H	102	156
6.80			102	156
6.90		I	102	156
7.00			102	156
7.03		J	102	156
7.10			102	156
7.14	9/32	K	102	156
7.20			102	156
7.30			102	156
7.37		L	102	156
7.40			102	156
7.49		M	102	156
7.50			102	156
7.54	19/64		109	165
7.60			109	165
7.67		N	109	165
7.70			109	165
7.80			109	165
7.90			109	165
7.94	5/16		109	165
8.00			109	165



MM	INCH	DG/LG	FL in MM	OAL in MM
8.03		O	109	165
8.10			109	165
8.20		P	109	165
8.30			109	165
8.33	21/64		109	165
8.40			109	165
8.43		Q	109	165
8.50			109	165
8.60			115	175
8.61		R	115	175
8.70			115	175
8.73	11/32		115	175
8.80			115	175
8.84		S	115	175
8.90			115	175
9.00			115	175
9.09		T	115	175
9.10			115	175
9.13	23/64		115	175
9.20			115	175
9.30			115	175
9.34		U	115	175
9.40			115	175
9.50			115	175
9.52	3/8		121	184
9.58		V	121	184
9.60			121	184
9.70			121	184
9.80		W	121	184
9.90			121	184
9.92	25/64		121	184
10.00			121	184

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



LONG SERIES

Made to IS 5102:1991, ISO 235:1975, BS:328 (Part-1)1986, DIN 340

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	DG/LG	FL in MM	OAL in MM
10.08		X	121	184
10.10			121	184
10.20			121	184
10.26		Y	121	184
10.30			121	184
10.32	13/32		121	184
10.40			121	184
10.49		Z	121	184
10.50			121	184
10.60			121	184
10.70			128	195
10.72	27/64		128	195
10.80			128	195
10.90			128	195
11.00			128	195
11.10			128	195
11.11	7/16		128	195
11.20			128	195
11.30			128	195
11.40			128	195
11.50			128	195
11.51	29/64		128	195
11.60			128	195
11.70			128	195
11.80			128	195
11.90			134	205
11.91	15/32		134	205
12.00			134	205
12.10			134	205
12.20			134	205
12.30	31/64		134	205



MM	INCH	DG/LG	FL in MM	OAL in MM
12.40			134	205
12.50			134	205
12.60			134	205
12.70	1/2		134	205
12.80			134	205
12.90			134	205
13.00			134	205
13.10	33/64		134	205
13.20			134	205
13.30			140	214
13.40			140	214
13.49	17/32		140	214
13.50			140	214
13.60			140	214
13.70			140	214
13.80			140	214
13.89	35/64		140	214
13.90			140	214
14.00			140	214
14.25			144	220
14.29	9/16		144	220
14.50			144	220
14.68	37/64		144	220
14.75			144	220
15.00			144	220
15.08	19/32		148	227
15.25			148	227
15.50			148	227
15.75			148	227
15.87	5/8		148	227
16.00			148	227

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



LONG SERIES

Made to IS 5102:1991, ISO 235:1975, BS:328 (Part-1)1986, DIN 340

Quick Helix - Type W

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
1.00		33	56
1.10		37	60
1.19	3/64	41	65
1.20		41	65
1.30		41	65
1.40		45	70
1.50		45	70
1.59	1/16	50	76
1.60		50	76
1.70		50	76
1.80		53	80
1.90		53	80
1.98	5/64	56	85
2.00		56	85
2.10		56	85
2.20		59	90
2.30		59	90
2.38	3/32	62	95
2.40		62	95
2.50		62	95
2.60		62	95
2.70		66	100
2.78	7/64	66	100
2.80		66	100
2.90		66	100
3.00		66	100
3.10		89	106
3.17	1/8	89	106
3.20		89	106
3.30		89	106
3.40		73	112
3.50		73	112
3.57	9/64	73	112



MM	INCH	FL in MM	OAL in MM
3.60		73	112
3.70		73	112
3.75		73	112
3.80		78	119
3.90		78	119
3.97	5/32	78	119
4.00		78	119
4.10		78	119
4.20		78	119
4.25		78	119
4.30		82	126
4.37	11/64	82	126
4.40		82	126
4.50		82	126
4.60		82	126
4.70		82	126
4.75		82	126
4.76	3/16	87	132
4.80		87	132
4.90		87	132
5.00		87	132
5.10		87	132
5.16	13/64	87	132
5.20		87	132
5.30		87	132
5.40		91	139
5.50		91	139
5.56	7/32	91	139
5.60		91	139
5.70		91	139
5.80		91	139
5.90		91	139
5.95	15/64	91	139

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



LONG SERIES

Made to IS 5102:1991, ISO 235:1975, BS:328 (Part-1)1986, DIN 340

Quick Helix - Type W

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
6.00		91	139
6.10		97	148
6.20		97	148
6.30		97	148
6.35	1/4	97	148
6.40		97	148
6.50		97	148
6.60		97	148
6.70		97	148
6.75	17/64	102	156
6.80		102	156
6.90		102	156
7.00		102	156
7.10		102	156
7.14	9/32	102	156
7.20		102	156
7.30		102	156
7.40		102	156
7.50		102	156
7.54	19/64	109	165
7.60		109	165
7.70		109	165
7.80		109	165



MM	INCH	FL in MM	OAL in MM
7.90		109	165
7.94	5/16	109	165
8.00		109	165
8.10		109	165
8.30		109	165
8.33	21/64	109	165
8.40		109	165
8.50		109	165
8.60		115	175
8.70		115	175
8.73	11/32	115	175
8.80		115	175
8.90		115	175
9.00		115	175
9.10		115	175
9.13	23/64	115	175
9.20		115	175
9.30		115	175
9.40		115	175
9.50		115	175
9.52	3/8	121	184
9.60		121	184
9.70		121	184

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



LONG SERIES

Made to IS 5102:1991, ISO 235:1975, BS:328 (Part-1)1986, DIN 340

Quick Helix - Type W

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
9.80		121	184
9.90		121	184
9.92	25/64	121	184
10.00		121	184
10.20		121	184
10.32	13/32	121	184
10.72	27/64	128	195
10.80		128	195
11.00		128	195
11.11	7/16	128	195
11.20		128	195
11.50		128	195
11.51	29/64	128	195
11.80		128	195
11.91	15/32	134	205
12.00		134	205
12.20		134	205
12.30	31/64	134	205
12.40		134	205
12.50		134	205
12.70	1/2	134	205
12.80		134	205
12.90		134	205



MM	INCH	FL in MM	OAL in MM
13.00		134	205
13.10	33/64	134	205
13.20		134	205
13.49	17/32	140	214
13.50		140	214
13.80		140	214
13.89	35/64	140	214
14.00		140	214
14.25		144	220
14.29	9/16	144	220
14.50		144	220
14.68	37/64	144	220
14.75		144	220
15.00		144	220
15.08	19/2	148	227
15.25		148	227
15.50		148	227
15.75		148	227
15.87	5/8	148	227
16.00		148	227

RH - Right hand cutting
Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
2.00		56	85
2.10		56	85
2.20		59	90
2.30		59	90
2.35		59	90
2.38	3/32	62	95
2.40		62	95
2.50		62	95
2.60		62	95
2.70		66	100
2.78	7/64	66	100
2.80		66	100
2.90		66	100
3.00		66	100
3.10		89	106
3.17	1/8	89	106
3.20		89	106
3.30		89	106
3.40		73	112
3.50		73	112
3.57	9/64	73	112
3.60		73	112
3.70		73	112
3.75		73	112



MM	INCH	FL in MM	OAL in MM
3.80		78	119
3.90		78	119
3.97	5/32	78	119
4.00		78	119
4.10		78	119
4.20		78	119
4.25		78	119
4.30		82	126
4.37	11/64	82	126
4.40		82	126
4.50		82	126
4.60		82	126
4.70		82	126
4.75		82	126
4.76	3/16	87	132
4.80		87	132
4.90		87	132
5.00		87	132
5.10		87	132
5.16	13/64	87	132
5.20		87	132
5.30		87	132
5.40		91	139
5.50		91	139

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
5.56	7/32	91	139
5.60		91	139
5.70		91	139
5.80		91	139
5.90		91	139
5.95	15/64	91	139
6.00		91	139
6.10		97	148
6.20		97	148
6.25		97	148
6.30		97	148
6.35	1/4	97	148
6.40		97	148
6.50		97	148
6.60		97	148
6.70		97	148
6.75	17/64	102	156
6.80		102	156
6.90		102	156
7.00		102	156
7.10		102	156
7.14	9/32	102	156
7.20		102	156
7.30		102	156



MM	INCH	FL in MM	OAL in MM
7.40		102	156
7.50		102	156
7.54	19/64	109	165
7.60		109	165
7.70		109	165
7.80		109	165
7.90		109	165
7.94	5/16	109	165
8.00		109	165
8.10		109	165
8.20		109	165
8.30		109	165
8.33	21/64	109	165
8.40		109	165
8.50		109	165
8.60		115	175
8.70		115	175
8.73	11/32	115	175
8.80		115	175
8.90		115	175
9.00		115	175
9.10		115	175
9.13	23/64	115	175
9.20		115	175

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
9.30		115	175
9.40		115	175
9.50		115	175
9.52	3/8	121	184
9.60		121	184
9.70		121	184
9.80		121	184
9.90		121	184
9.92	25/64	121	184
10.00		121	184
10.20		121	184
10.32	13/32	121	184
10.50		121	184
10.72	27/64	128	195
10.80		128	195
11.00		128	195
11.11	7/16	128	195
11.20		128	195
11.50		128	195
11.51	29/64	128	195
11.80		128	195
11.91	15/32	134	205
12.00		134	205
12.20		134	205
12.30	31/64	134	205



MM	INCH	FL in MM	OAL in MM
12.50		134	205
12.70	1/2	134	205
12.80		134	205
13.00		134	205
13.10	33/64	134	205
13.20		134	205
13.40		140	214
13.49	17/32	140	214
13.50		140	214
13.80		140	214
13.89	35/64	140	214
14.00		140	214
14.25		144	220
14.29	9/16	144	220
14.50		144	220
14.68	37/64	144	220
14.75		144	220
15.00		144	220
15.08	19/32	148	227
15.25		148	227
15.50		148	227
15.75		148	227
15.87	5/8	148	227
16.00		148	227

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Parabolic Flutes - Point 130° - Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
3.00		66	100
3.10		89	106
3.17	1/8	89	106
3.20		89	106
3.30		89	106
3.40		73	112
3.50		73	112
3.57	9/64	73	112
3.60		73	112
3.70		73	112
3.75		73	112
3.80		78	119
3.90		78	119
3.97	5/32	78	119
4.00		78	119
4.10		78	119
4.20		78	119
4.25		78	119
4.30		82	126
4.37	11/64	82	126
4.40		82	126
4.50		82	126
4.60		82	126
4.70		82	126
4.75		82	126
4.76	3/16	87	132
4.80		87	132
4.90		87	132
5.00		87	132
5.10		87	132
5.16	13/64	87	132
5.20		87	132
5.30		87	132



MM	INCH	FL in MM	OAL in MM
5.40		91	139
5.50		91	139
5.56	7/32	91	139
5.60		91	139
5.70		91	139
5.80		91	139
5.90		91	139
5.95	15/64	91	139
6.00		91	139
6.10		97	148
6.20		97	148
6.25		97	148
6.30		97	148
6.35	1/4	97	148
6.40		97	148
6.50		97	148
6.60		97	148
6.70		97	148
6.75	17/64	102	156
6.80		102	156
6.90		102	156
7.00		102	156
7.10		102	156
7.14	9/32	102	156
7.20		102	156
7.30		102	156
7.40		102	156
7.50		102	156
7.54	19/64	109	165
7.60		109	165
7.70		109	165
7.80		109	165
7.90		109	165

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Parabolic Flutes - Point 130°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
7.94	5/16	109	165
8.00		109	165
8.10		109	165
8.20		109	165
8.30		109	165
8.33	21/4	109	165
8.40		109	165
8.50		109	165
8.60		115	175
8.70		115	175
8.73	11/32	115	175
8.80		115	175
8.90		115	175
9.00		115	175
9.10		115	175
9.13	23/64	115	175
9.20		115	175
9.30		115	175
9.40		115	175
9.50		115	175
9.52	3/8	121	184
9.60		121	184
9.70		121	184
9.80		121	184
9.90		121	184
9.92	25/64	121	184
10.00		121	184
10.20		121	184
10.32	13/32	121	184
10.50		121	184
10.72	27/64	128	195
10.80		128	195
11.00		128	195



MM	INCH	FL in MM	OAL in MM
11.11	7/16	128	195
11.20		128	195
11.50		128	195
11.51	29/64	128	195
11.80		128	195
11.91	15/32	134	205
12.00		134	205
12.20		134	205
12.30	31/64	134	205
12.50		134	205
12.60		134	205
12.70	1/2	134	205
12.80		134	205
13.00		134	205
13.10	33/64	134	205
13.20		134	205
13.49	17/32	140	214
13.50		140	214
13.80		140	214
13.89	35/64	140	214
14.00		140	214
14.25		144	220
14.29	9/16	144	220
14.50		144	220
14.68	37/64	144	220
14.75		144	220
15.00		144	220
15.08	19/32	148	227
15.25		148	227
15.50		148	227
15.75		148	227
15.87	5/8	148	227
16.00		148	227

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
2.00		56	85
2.10		56	85
2.20		59	90
2.30		59	90
2.38	3/32	62	95
2.40		62	95
2.50		62	95
2.60		62	95
2.65		62	95
2.70		66	100
2.78	7/64	66	100
2.80		66	100
2.90		66	100
3.00		66	100
3.10		89	106
3.17	1/8	89	106
3.20		89	106
3.30		89	106
3.40		73	112
3.50		73	112
3.57	9/64	73	112
3.60		73	112
3.70		73	112
3.75		73	112



MM	INCH	FL in MM	OAL in MM
3.80		78	119
3.90		78	119
3.97	5/32	78	119
4.00		78	119
4.10		78	119
4.20		78	119
4.25		78	119
4.30		82	126
4.37	11/64	82	126
4.40		82	126
4.50		82	126
4.60		82	126
4.70		82	126
4.75		82	126
4.76	3/16	87	132
4.80		87	132
4.90		87	132
5.00		87	132
5.10		87	132
5.16	13/64	87	132
5.20		87	132
5.30		87	132
5.40		91	139
5.50		91	139

RH - Right hand cutting
Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
5.56	7/32	91	139
5.60		91	139
5.70		91	139
5.80		91	139
5.90		91	139
5.95	15/64	91	139
6.00		91	139
6.10		97	148
6.20		97	148
6.25		97	148
6.30		97	148
6.35	1/4	97	148
6.40		97	148
6.50		97	148
6.60		97	148
6.70		97	148
6.75	17/64	102	156
6.80		102	156
6.90		102	156
7.00		102	156
7.10		102	156
7.14	9/32	102	156
7.20		102	156
7.30		102	156



MM	INCH	FL in MM	OAL in MM
7.40		102	156
7.50		102	156
7.54	19/64	109	165
7.60		109	165
7.70		109	165
7.80		109	165
7.90		109	165
7.94	5/16	109	165
8.00		109	165
8.10		109	165
8.20		109	165
8.30		109	165
8.33	21/64	109	165
8.40		109	165
8.50		109	165
8.60		115	175
8.70		115	175
8.73	11/32	115	175
8.80		115	175
8.90		115	175
9.00		115	175
9.10		115	175
9.13	23/64	115	175
9.20		115	175

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
9.30		115	175
9.40		115	175
9.50		115	175
9.52	3/8	121	184
9.60		121	184
9.70		121	184
9.80		121	184
9.90		121	184
9.92	25/64	121	184
10.00		121	184
10.20		121	184
10.32	13/32	121	184
10.50		121	184
10.72	27/64	128	195
10.80		128	195
11.00		128	195
11.11	7/16	128	195
11.20		128	195
11.50		128	195
11.51	29/64	128	195
11.80		128	195
11.91	15/32	134	205
12.00		134	205
12.20		134	205



MM	INCH	FL in MM	OAL in MM
12.30	31/64	134	205
12.50		134	205
12.70	1/2	134	205
12.80		134	205
13.00		134	205
13.10	33/64	134	205
13.20		134	205
13.49	17/32	140	214
13.50		140	214
13.80		140	214
13.89	35/64	140	214
14.00		140	214
14.25		144	220
14.29	9/16	144	220
14.50		144	220
14.68	37/64	144	220
14.75		144	220
15.00		144	220
15.08	19/32	148	227
15.25		148	227
15.50		148	227
15.75		148	227
15.87	5/8	148	227
16.00		148	227

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Parabolic Flutes - Point 130°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
3.00		66	100
3.05		89	106
3.10		89	106
3.17	1/8	89	106
3.20		89	106
3.26		89	106
3.30		89	106
3.35		89	106
3.40		73	112
3.45		73	112
3.50		73	112
3.57	9/64	73	112
3.60		73	112
3.66		73	112
3.70		73	112
3.73		73	112
3.75		73	112
3.80		78	119
3.86		78	119
3.90		78	119
3.91		78	119
3.97	5/32	78	119
3.99		78	119
4.00		78	119
4.04		78	119
4.09		78	119
4.10		78	119
4.20		78	119
4.22		78	119
4.25		78	119
4.30		82	126
4.37	11/64	82	126
4.39		82	126



MM	INCH	FL in MM	OAL in MM
4.40		82	126
4.50		82	126
4.57		82	126
4.60		82	126
4.62		82	126
4.70		82	126
4.75		82	126
4.76	3/16	87	132
4.80		87	132
4.85		87	132
4.90		87	132
4.92		87	132
4.98		87	132
5.00		87	132
5.06		87	132
5.10		87	132
5.11		87	132
5.16	13/64	87	132
5.18		87	132
5.20		87	132
5.22		87	132
5.30		87	132
5.31		91	139
5.40		91	139
5.41		91	139
5.50		91	139
5.56	7/32	91	139
5.60		91	139
5.61		91	139
5.70		91	139
5.79		91	139
5.80		91	139
5.90		91	139

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Parabolic Flutes - Point 130° - Web thinned

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
5.94		91	139
5.95	15/64	91	139
6.00		91	139
6.04		97	148
6.10		97	148
6.15		97	148
6.20		97	148
6.25		97	148
6.30		97	148
6.35	1/4	97	148
6.40		97	148
6.50		97	148
6.53		97	148
6.60		97	148
6.63		97	148
6.70		97	148
6.75	17/64	102	156
6.80		102	156
6.90		102	156
7.00		102	156
7.03		102	156
7.10		102	156
7.14	9/32	102	156
7.20		102	156
7.30		102	156
7.37		102	156
7.40		102	156
7.49		102	156
7.50		102	156
7.54	19/64	109	165
7.60		109	165
7.67		109	165
7.70		109	165



MM	INCH	FL in MM	OAL in MM
7.80		109	165
7.90		109	165
7.94	5/16	109	165
8.00		109	165
8.03		109	165
8.10		109	165
8.20		109	165
8.30		109	165
8.33	21/64	109	165
8.40		109	165
8.43		109	165
8.50		109	165
8.60		115	175
8.61		115	175
8.70		115	175
8.73	11/32	115	175
8.80		115	175
8.84		115	175
8.90		115	175
9.00		115	175
9.09		115	175
9.10		115	175
9.13	23/64	115	175
9.20		115	175
9.30		115	175
9.34		115	175
9.40		115	175
9.50		115	175
9.52	3/8	121	184
9.58		121	184
9.60		121	184
9.70		121	184
9.80		121	184

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)

LONG SERIES

IS:5102-1969, BS:328 (Part-1)1986, DIN 340

Parabolic Flutes - Point 130°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
9.90		121	184
9.92	25/64	121	184
10.00		121	184
10.08		121	184
10.10		121	184
10.20		121	184
10.26		121	184
10.30		121	184
10.32	13/32	121	184
10.40		121	184
10.49		121	184
10.50		121	184
10.60		121	184
10.70		128	195
10.72	27/64	128	195
10.80		128	195
10.90		128	195
11.00		128	195
11.10		128	195
11.11	7/16	128	195
11.20		128	195
11.30		128	195
11.40		128	195
11.50		128	195
11.51	29/64	128	195
11.60		128	195
11.70		128	195
11.80		128	195
11.90		134	205
11.91	15/32	134	205
12.00		134	205
12.10		134	205



MM	INCH	FL in MM	OAL in MM
12.20		134	205
12.30	31/64	134	205
12.40		134	205
12.50		134	205
12.60		134	205
12.70	1/2	134	205
12.80		134	205
12.90		134	205
13.00		134	205
13.10	33/64	134	205
13.20		134	205
13.30		140	214
13.40		140	214
13.49	17/32	140	214
13.50		140	214
13.60		140	214
13.70		140	214
13.80		140	214
13.89	35/64	140	214
13.90		140	214
14.00		140	214
14.25		144	220
14.29	9/16	144	220
14.50		144	220
14.68	37/64	144	220
14.75		144	220
15.00		144	220
15.08	19/32	148	227
15.25		148	227
15.50		148	227
15.75		148	227
15.87	5/8	148	227
16.00		148	227

RH - Right hand cutting

Other Finishes available - TiN, Blue (Steam Tempered)

HSS Parallel Shank Twist Drills (RH)



EXTRA-LONG SERIES

Geometry as per IS:7823-2005

Tool type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	FL	OAL	FL	OAL	FL	OAL	FL	OAL	FL	OAL	FL	OAL	FL	OALF	LC	AL	FL	OAL
0.80	1/32	66	100	80	125														
1.00		66	100	80	125	100	150												
1.20	3/64	66	100	80	125	100	150												
1.50	1/16	66	100	80	125	100	150												
2.00	5/64			80	125	100	150	125	175	150	200								
2.50	3/32			80	125	100	150	125	175	150	200								
2.80	7/64					100	150	125	175	150	200								
3.00	1/8					100	150	125	175	150	200	175	225	200	250	250	300		
3.50	9/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350
4.00	5/32					100	150	125	175	150	200	175	225	200	250	250	300	300	350
4.50	11/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350
5.00	3/16					100	150	125	175	150	200	175	225	200	250	250	300	300	350
5.50	7/32					100	150	125	175	150	200	175	225	200	250	250	300	300	350
6.00	15/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350
6.50	1/4									150	200			200	250	250	300	300	350
7.00										150	200			200	250	250	300	300	350
7.50	9/32									150	200			200	250	250	300	300	350
8.00	5/16									150	200			200	250	250	300	300	350
8.50										150	200			200	250	250	300	300	350



9.00	11/32									150	200			200	250	250	300	300	350
9.50	3/8									150	200			200	250	250	300	300	350
10.00										150	200			200	250	250	300	300	350
10.50	13/32									150	200			200	250	250	300	300	350
11.00	7/16													200	250	250	300	300	350
11.50														200	250	250	300	300	350
12.00	15/32													200	250	250	300	300	350
12.50	1/2													200	250	250	300	300	350
13.00														200	250	250	300	300	350

Other Finishes available - TiN, Blue (Steam Tempered)

Also tool type 'W' (quick)-Point angle 130°

HSS Parallel Shank Twist Drills (RH)



EXTRA-LONG SERIES

Parabolic Flutes

Point Angle 130°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL	OALF	LO	AL	FL	OAL	FL	OAL	FL	OAL	FL	OAL	FL	OALF	LO	AL	FL	OAL
3.0	1/8					100	150	125	175	150	200	175	225	200	250	250	300		
3.5	9/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350
4.0	5/32					100	150	125	175	150	200	175	225	200	250	250	300	300	350
4.5	11/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350
5.0	3/16					100	150	125	175	150	200	175	225	200	250	250	300	300	350
5.5	7/32					100	150	125	175	150	200	175	225	200	250	250	300	300	350
6.0	15/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350
6.5	1/4									150	200			200	250	250	300	300	350
7.0										150	200			200	250	250	300	300	350
7.5	9/32									150	200			200	250	250	300	300	350
8.0	5/16									150	200			200	250	250	300	300	350
8.5										150	200			200	250	250	300	300	350
9.0	11/32									150	200			200	250	250	300	300	350
9.5	3/8									150	200			200	250	250	300	300	350
10.0										150	200			200	250	250	300	300	350
10.5	13/32									150	200			200	250	250	300	300	350
11.0	7/16													200	250	250	300	300	350
11.5														200	250	250	300	300	350



12.0	15/32													200	250	250	300	300	350
12.5	1/2													200	250	250	300	300	350
13.0														200	250	250	300	300	350

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



EXTRA-LONG SERIES
Tool Type 'N', Point Angle 118°
Ground Flutes - Bright Finish

MM	INCH	FL	OALF	LO	AL	FL	OAL	FL	OAL	FL	OAL	FL	OAL	FL	OALF	LO	AL	FL	OAL	
0.8	1/32	66	100	80	125															
1.0		66	100	80	125	100	150													
1.2	3/64	66	100	80	125	100	150													
1.5	1/16	66	100	80	125	100	150													
2.0	5/64			80	125	100	150	125	175	150	200									
2.5	3/32			80	125	100	150	125	175	150	200									
2.8	7/64					100	150	125	175	150	200									
3.0	1/8					100	150	125	175	150	200	175	225	200	250	250	300			
3.5	9/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350	
4.0	5/32					100	150	125	175	150	200	175	225	200	250	250	300	300	350	
4.5	11/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350	
5.0	3/16					100	150	125	175	150	200	175	225	200	250	250	300	300	350	
5.5	7/32					100	150	125	175	150	200	175	225	200	250	250	300	300	350	
6.0	15/24					100	150	125	175	150	200	175	225	200	250	250	300	300	350	
6.5	1/4									150	200			200	250	250	300	300	350	
7.0										150	200			200	250	250	300	300	350	
7.5	9/32									150	200			200	250	250	300	300	350	
8.0	5/16									150	200			200	250	250	300	300	350	
8.5										150	200			200	250	250	300	300	350	



9.0	11/32									150	200			200	250	250	300	300	350	
9.5	3/8									150	200			200	250	250	300	300	350	
10.0										150	200			200	250	250	300	300	350	
10.5	13/32									150	200			200	250	250	300	300	350	
11.0	7/16													200	250	250	300	300	350	
11.5														200	250	250	300	300	350	
12.0	15/32													200	250	250	300	300	350	
12.5	1/2													200	250	250	300	300	350	
13.0														200	250	250	300	300	350	

Other Finishes available - TiN, Blue (Steam Tempered)
Also tool type 'W' (quick)-Point angle 130°

HSS-M35 (5% cobalt) Parallel Shank Twist Drills (RH)



EXTRA-LONG SERIES

Parabolic Flutes

Point Angle 130°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL	OALF	LO	AL	FL	OAL	FL	OAL	FL	OAL	FL	OAL	FL	OALF	LO	AL	FL	OAL
3.0	1/8					100	150	125	175	150	200	175	225	200	250	250	300		
3.5	9/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350
4.0	5/32					100	150	125	175	150	200	175	225	200	250	250	300	300	350
4.5	11/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350
5.0	3/16					100	150	125	175	150	200	175	225	200	250	250	300	300	350
5.5	7/32					100	150	125	175	150	200	175	225	200	250	250	300	300	350
6.0	15/64					100	150	125	175	150	200	175	225	200	250	250	300	300	350
6.5	1/4									150	200			200	250	250	300	300	350
7.0										150	200			200	250	250	300	300	350
7.5	9/32									150	200			200	250	250	300	300	350
8.0	5/16									150	200			200	250	250	300	300	350
8.5										150	200			200	250	250	300	300	350
9.0	11/32									150	200			200	250	250	300	300	350
9.5	3/8									150	200			200	250	250	300	300	350
10.0										150	200			200	250	250	300	300	350
10.5	13/32									150	200			200	250	250	300	300	350
11.0	7/16													200	250	250	300	300	350
11.5														200	250	250	300	300	350
12.0	15/32													200	250	250	300	300	350



12.5	1/2													200	250	250	300	300	350
13.0														200	250	250	300	300	350

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)



EXTRA-LONG SERIES
Tool Type 'N', Point Angle 118°
Ground Flutes-Bright Finish

MM	INCH	FL in MM	OAL in MM
2.00	5/64	80	125
2.00	5/64	100	150
2.00	5/64	125	175
2.00	5/64	150	200
2.50	5/32	80	125
2.50	5/32	100	150
2.50	5/32	125	175
2.50	5/32	150	200
2.80	7/64	100	150
2.80	7/64	125	175
2.80	7/64	150	200
3.00	1/8	100	150
3.00	1/8	125	175
3.00	1/8	150	200
3.00	1/8	175	225
3.00	1/8	200	250
3.00	1/8	250	300
3.50	9/64	100	150
3.50	9/64	125	175
3.50	9/64	150	200
3.50	9/64	175	225
3.50	9/64	200	250
3.50	9/64	250	300
3.50	9/64	300	350
4.00	5/32	100	150
4.00	5/32	125	175
4.00	5/32	150	200



MM	INCH	FL in MM	OAL in MM
4.00	5/32	175	225
4.00	5/32	200	250
4.00	5/32	250	300
4.00	5/32	300	350
4.50	11/64	100	150
4.50	11/64	125	175
4.50	11/64	150	200
4.50	11/64	175	225
4.50	11/64	200	250
4.50	11/64	250	300
4.50	11/64	300	350
5.00	3/16	100	150
5.00	3/16	125	175
5.00	3/16	150	200
5.00	3/16	175	225
5.00	3/16	200	250
5.00	3/16	250	300
5.00	3/16	300	350
5.50	7/32	100	150
5.50	7/32	125	175
5.50	7/32	150	200
5.50	7/32	175	225
5.50	7/32	200	250
5.50	7/32	250	300
5.50	7/32	300	350
6.00	15/64	100	150
6.00	15/64	125	175

Other Finish available - TiN, Blue (Steam Tempered)
 135° - split point available

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)



EXTRA-LONG SERIES
Tool Type 'N', Point Angle 118°
Ground Flutes-Bright Finish

MM	INCH	FL in MM	OAL in MM
6.00	15/64	150	200
6.00	15/64	175	225
6.00	15/64	200	250
6.00	15/64	250	300
6.00	15/64	300	350
6.50	1/4	150	200
6.50	1/4	200	250
6.50	1/4	250	300
6.50	1/4	300	350
7.00		150	200
7.00		200	250
7.00		250	300
7.00		300	350
7.50	9/32	150	200
7.50	9/32	200	250
7.50	9/32	250	300
7.50	9/32	300	350
8.00	5/16	150	200
8.00	5/16	200	250
8.00	5/16	250	300
8.00	5/16	300	350
8.50		150	200
8.50		200	250
8.50		250	300
8.50		300	350
9.00	11/32	150	200



MM	INCH	FL in MM	OAL in MM
9.00	11/32	250	300
9.00	11/32	300	350
9.50	3/8	150	200
9.50	3/8	200	250
9.50	3/8	250	300
9.50	3/8	300	350
10.00		150	200
10.00		200	250
10.00		250	300
10.00		300	350
10.50	13/32	150	200
10.50	13/32	200	250
10.50	13/32	250	300
10.50	13/32	300	350
11.00	7/16	200	250
11.00	7/16	250	300
11.00	7/16	300	350
11.50		200	250
11.50		250	300
11.50		300	350
12.00	15/32	200	250
12.00	15/32	250	300
12.00	15/32	300	350
12.50	1/2	200	250
12.50	1/2	250	300
12.50	1/2	300	350

Other Finish available - TiN, Blue (Steam Tempered)
 135° - split point available

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)



EXTRA LONG SERIES

Parabolic Flutes - Point Angle 130°- Split Point
Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
3.00	1/8	100	150
3.00	1/8	125	175
3.00	1/8	150	200
3.00	1/8	175	225
3.00	1/8	200	250
3.00	1/8	250	300
3.50	9/64	100	150
3.50	9/64	125	175
3.50	9/64	150	200
3.50	9/64	175	225
3.50	9/64	200	250
3.50	9/64	250	300
3.50	9/64	300	350
4.00	5/32	100	150
4.00	5/32	125	175
4.00	5/32	150	200
4.00	5/32	175	225
4.00	5/32	200	250
4.00	5/32	250	300
4.00	5/32	300	350
4.50	11/64	100	150
4.50	11/64	125	175
4.50	11/64	150	200
4.50	11/64	175	225
4.50	11/64	200	250



MM	INCH	FL in MM	OAL in MM
4.50	11/64	250	300
4.50	11/64	300	350
5.00	3/16	100	150
5.00	3/16	125	175
5.00	3/16	150	200
5.00	3/16	175	225
5.00	3/16	200	250
5.00	3/16	250	300
5.00	3/16	300	350
5.50	7/32	100	150
5.50	7/32	125	175
5.50	7/32	150	200
5.50	7/32	175	225
5.50	7/32	200	250
5.50	7/32	250	300
5.50	7/32	300	350
6.00	15/64	100	150
6.00	15/64	125	175
6.00	15/64	150	200
6.00	15/64	175	225
6.00	15/64	200	250
6.00	15/64	250	300
6.00	15/64	300	350
6.50	1/4	150	200
6.50	1/4	200	250

Other Finish available - TiN, Blue (Steam Tempered)

HSS-M42 (8% cobalt) Parallel Shank Twist Drills (RH)

EXTRA LONG SERIES

Parabolic Flutes - Point Angle 130°- Split Point
Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM
6.50	1/4	250	300
6.50	1/4	300	350
7.00		150	200
7.00		200	250
7.00		250	300
7.00		300	350
7.50	9/32	150	200
7.50	9/32	200	250
7.50	9/32	250	300
7.50	9/32	300	350
8.00	5/16	150	200
8.00	5/16	200	250
8.00	5/16	250	300
8.00	5/16	300	350
8.50		150	200
8.50		200	250
8.50		250	300
8.50		300	350
9.00	11/32	150	200
9.00	11/32	200	250
9.00	11/32	250	300
9.00	11/32	300	350
9.50	3/8	150	200



MM	INCH	FL in MM	OAL in MM
9.50	3/8	200	250
9.50	3/8	250	300
9.50	3/8	300	350
10.00		150	200
10.00		200	250
10.00		250	300
10.00		300	350
10.50	13/32	150	200
10.50	13/32	200	250
10.50	13/32	250	300
10.50	13/32	300	350
11.00	7/16	200	250
11.00	7/16	250	300
11.00	7/16	300	350
11.50		200	250
11.50		250	300
11.50		300	350
12.00	15/32	200	250
12.00	15/32	250	300
12.00	15/32	300	350
12.50	1/2	200	250
12.50	1/2	250	300
12.50	1/2	300	350

Other Finish available - TiN, Blue (Steam Tempered)

HSS TAPER SHANK TWIST DRILLS



TAPER SHANK STANDARD SERIES

Made to IS:5103-1969, ISO 235:1975, BS:328 (Part-1)1986, DIN:345

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	DG/LG
3.00		33	114	1
3.10		36	117	1
3.17	1/8	36	117	1
3.20		36	117	1
3.30		36	117	1
3.40		39	120	1
3.50		39	120	1
3.75	9/64	39	120	1
3.70		39	120	1
3.75		39	120	1
3.80		43	124	1
3.90		43	124	1
3.97	5/32	43	124	1
4.00		43	124	1
4.10		43	124	1
4.20		43	124	1
4.25		43	124	1
4.30		47	128	1
4.37	11/64	47	128	1
4.40		47	128	1
4.50		47	128	1
4.60		47	128	1
4.76	3/16	52	133	1
4.80		52	133	1
4.90		52	133	1
5.00		52	133	1
5.10		52	133	1
5.16	13/64	52	133	1
5.20		52	133	1
5.25		52	133	1
5.30		52	133	1



MM	INCH	FL in MM	OAL in MM	DG/LG
5.40		57	138	1
5.50		57	138	1
5.56	7/32	57	138	1
5.60		57	138	1
5.70		57	138	1
5.75		57	138	1
5.80		57	138	1
5.90		57	138	1
5.95	15/64	57	138	1
6.00		57	138	1
6.10		63	144	1
6.20		63	144	1
6.25		63	144	1
6.30		63	144	1
6.35	1/4	63	144	1
6.40		63	144	1
6.50		63	144	1
6.60		63	144	1
6.70		63	144	1
6.75	17/64	69	150	1
6.80		69	150	1
6.90		69	150	1
7.00		69	150	1
7.50		69	150	1
7.54	19/64	75	156	1
7.60		75	156	1
7.70		75	156	1
7.80		75	156	1
7.90		75	156	1
7.94	5/16	75	156	1
8.00		75	156	1

Other Finish available - TiN, Blue (Steam Tempered)

Also tool type 'H' (slow) & type 'W' (quick)

HSS TAPER SHANK TWIST DRILLS



TAPER SHANK STANDARD SERIES

Made to IS:5103-1969, ISO 235:1975, BS:328 (Part-1)1986, DIN:345

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	DG/LG
8.10		75	156	1
8.20		75	156	1
8.30		75	156	1
8.33	21/64	75	156	1
8.40		75	156	1
8.50		75	156	1
8.60		81	162	1
8.70		81	162	1
8.73	11/32	81	162	1
8.80		81	162	1
8.90		81	162	1
9.00		81	162	1
9.10		81	162	1
9.13	23/64	81	162	1
9.20		81	162	1
9.30		81	162	1
9.40		81	162	1
9.50		81	162	1
9.53	3/8	87	168	1
9.60		87	168	1
9.70		87	168	1
9.80		87	168	1
9.90		87	168	1
9.92	25/64	87	168	1
10.00		87	168	1
10.10		87	168	1
10.20		87	168	1
10.25		87	168	1
10.30		87	168	1
10.32	13/32	87	168	1
10.40		87	168	1



MM	INCH	FL in MM	OAL in MM	DG/LG
10.50		87	168	1
10.60		94	175	1
10.70		94	175	1
10.80		94	175	1
10.80		94	175	1
10.90		94	175	1
11.00		94	175	1
11.10		94	175	1
11.20		94	175	1
11.30		94	175	1
11.40		94	175	1
11.50		94	175	1
11.51	29/64	94	175	1
11.60		94	175	1
11.70		94	175	1
11.80		94	175	1
11.90		101	182	1
12.00		101	182	1
12.10		101	182	1
12.20		101	182	1
12.30	31/64	101	182	1
12.40		101	182	1
12.50		101	182	1
12.60		101	182	1
12.70	1/2	101	182	1
12.80		101	182	1
12.90		101	182	1
13.00		101	182	1
13.10	33/64	101	182	1
13.20		101	182	1
13.30		108	189	1

Other Finish available - TiN, Blue (Steam Tempered)
Also tool type 'H' (slow) & type 'W' (quick)

HSS TAPER SHANK TWIST DRILLS



TAPER SHANK STANDARD SERIES

Made to IS:5103-1969, ISO 235:1975, BS:328 (Part-1)1986, DIN:345

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	DG/LG
13.40		108	189	1
13.49	17/32	108	189	1
13.50		108	189	1
13.60		108	189	1
13.70		108	189	1
13.80		108	189	1
13.89	35/64	108	189	1
13.90		108	189	1
14.00		108	189	1
14.25		114	212	2
14.29	9/16	114	212	2
14.50		114	212	2
14.68	37/64	114	212	2
14.75		114	212	2
15.00		114	212	2
15.08	19/32	120	218	2
15.25		120	218	2
15.48	39/64	120	218	2
15.50		120	218	2
15.75		120	218	2
15.88	5/8	120	218	2
16.00		120	218	2
16.25		125	223	2
16.27	11/16	125	223	2
16.50		125	223	2
16.67	21/32	125	223	2
16.75		125	223	2
17.00		125	223	2
17.07	43/64	130	228	2
17.25		130	228	2
17.46	11/64	130	228	2



Other Finish available - TiN, Blue (Steam Tempered)
Also tool type 'H' (slow) & type 'W' (quick)

HSS-M35 (5% cobalt) Taper Shank Twist Drills (RH)

TAPER SHANK STANDARD SERIES

IS:5103-1969, BS:328 (Part-1)1986, ISO 235:1975, DIN 345

Heavy Web, Point Angle 135°- Split Point

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	DG/LG
3.00		33	114	1
3.17	1/8	36	117	1
3.20		36	117	1
3.50		39	120	1
3.55	9/64	39	120	1
3.80		43	124	1
3.97	5/32	43	124	1
4.00		43	124	1
4.20		43	124	1
4.37	11/64	47	128	1
4.50		47	128	1
4.76	3/16	52	133	1
4.80		52	133	1
5.00		52	133	1
5.16	13/64	52	133	1
5.20		52	133	1
5.50		57	138	1
5.56	7/32	57	138	1
5.80		57	138	1
5.95	15/64	57	138	1
6.00		57	138	1
6.20		63	144	1
6.35	1/4	63	144	1
6.50		63	144	1
6.75	17/64	69	150	1
6.80		69	150	1
7.00		69	150	1



MM	INCH	FL in MM	OAL in MM	DG/LG
7.50		69	150	1
7.54	19/64	75	156	1
7.80		75	156	1
7.94	5/16	75	156	1
8.00		75	156	1
8.20		75	156	1
8.33	21/64	75	156	1
8.50		75	156	1
8.73	11/32	81	162	1
8.80		81	162	1
9.00		81	162	1
9.13	23/64	81	162	1
9.20		81	162	1
9.50		81	162	1
9.53	3/8	87	168	1
9.80		87	168	1
9.92	25/64	87	168	1
10.00		87	168	1
10.20		87	168	1
10.32	13/32	87	168	1
10.50		87	168	1
10.80		94	175	1
11.00		94	175	1
11.20		94	175	1
11.50		94	175	1
11.51	29/64	94	175	1
11.80		94	175	1

Other Finishes available - TiN, Blue (Steam Tempered)



HSS-M35 (5% cobalt) Taper Shank Twist Drills (RH)

TAPER SHANK STANDARD SERIES
 IS:5103-1969, BS:328 (Part-1)1986, ISO 235:1975, DIN 345
 Heavy Web, Point Angle 135°- Split Point
 Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	DG/LG
12.00		101	182	1
12.20		101	182	1
12.30	31/64	101	182	1
12.50		101	182	1
12.70	1/2	101	182	1
12.80		101	182	1
13.00		101	182	1
13.10	33/64	101	182	1
13.20		101	182	1
13.40		108	189	1
13.49	17/32	108	189	1
13.50		108	189	1
13.80		108	189	1
13.89	35/64	108	189	1
14.00		108	189	1



MM	INCH	FL in MM	OAL in MM	DG/LG
14.25		114	212	2
14.29	9/16	114	212	2
14.50		114	212	2
14.68	37/64	114	212	2
14.75		114	212	2
15.00		114	212	2
15.08	19/32	120	218	2
15.25		120	218	2
15.48	39/64	120	218	2
15.50		120	218	2
15.75		120	218	2
15.88	5/8	120	218	2
16.00		120	218	2

Other Finishes available - TiN, Blue (Steam Tempered)

HSS TAPER SHANK TWIST DRILLS



TAPER SHANK LONG SERIES DRILLS

Made to IS:8305-1976, DIN:341

Tool Type 'N', Point Angle 118°

Ground Flute - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
4.76	3/16	74	155	1
5.00		74	155	1
5.10		74	155	1
5.16	13/64	74	155	1
5.20		74	155	1
5.30		74	155	1
5.40		80	161	1
5.50		80	161	1
5.56	7/32	80	161	1
5.60		80	161	1
5.70		80	161	1
5.80		80	161	1
5.90		80	161	1
5.95	15/64	80	161	1
6.00		80	161	1
6.10		86	167	1
6.20		86	167	1
6.30		86	167	1
6.35	1/4	86	167	1
6.40		86	167	1
6.50		86	167	1
6.60		86	167	1
6.70		86	167	1
6.75	17/64	93	174	1
6.80		93	174	1
6.90		93	174	1
7.00		93	174	1
7.10		93	174	1
7.14	9/32	93	174	1
7.20		93	174	1
7.30		93	174	1
7.40		93	174	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
7.50		93	174	1
7.54	19/64	100	181	1
7.60		100	181	1
7.70		100	181	1
7.80		100	181	1
7.90		100	181	1
7.94	5/16	100	181	1
8.00		100	181	1
8.10		100	181	1
8.20		100	181	1
8.30		100	181	1
8.33	21/64	100	181	1
8.40		100	181	1
8.50		100	181	1
8.60		107	188	1
8.70		107	188	1
8.73	11/32	107	188	1
8.80		107	188	1
8.90		107	188	1
9.00		107	188	1
9.10		107	188	1
9.13	23/64	107	188	1
9.20		107	188	1
9.30		107	188	1
9.40		107	188	1
9.50		107	188	1
9.52	3/8	116	197	1
9.60		116	197	1
9.70		116	197	1
9.80		116	197	1
9.90		116	197	1
9.92	25/64	116	197	1

Other Finishes available - TiN, Blue (Steam Tempered)

HSS TAPER SHANK TWIST DRILLS (RH)



TAPER SHANK LONG SERIES DRILLS

Made to IS:8305-1976, DIN:341

Tool Type 'N', Point Angle 118°

Ground Flute - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
10.00		116	197	1
10.10		116	197	1
10.20		116	197	1
10.30		116	197	1
10.32	13/32	116	197	1
10.40		116	197	1
10.50		116	197	1
10.60		116	197	1
10.70		125	206	1
10.72	27/64	125	206	1
10.80		125	206	1
10.90		125	206	1
11.00		125	206	1
11.10		125	206	1
11.11	7/16	125	206	1
11.20		125	206	1
11.30		125	206	1
11.40		125	206	1
11.50		125	206	1
11.51	29/64	125	206	1
11.60		125	206	1
11.70		125	206	1
11.80		125	206	1
11.90		134	215	1
11.91	15/32	134	215	1
12.00		134	215	1
12.10		134	215	1
12.20		134	215	1
12.30	31/64	134	215	1
12.40		134	215	1
12.50		134	215	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
12.60		134	215	1
12.70	1/2	134	215	1
12.80		134	215	1
12.90		134	215	1
13.00		134	215	1
13.10	33/64	134	215	1
13.20		134	215	1
13.30		142	223	1
13.40		142	223	1
13.49	17/32	142	223	1
13.50		142	223	1
13.60		142	223	1
13.70		142	223	1
13.80		142	223	1
13.89	35/64	142	223	1
13.90		142	223	1
14.00		142	223	1
14.25		147	245	2
14.29	9/16	147	245	2
14.50		147	245	2
14.68	37/64	147	245	2
14.75		147	245	2
15.00		147	245	2
15.08	19/32	153	251	2
15.25		153	251	2
15.48		153	251	2
15.50		153	251	2
15.75		153	251	2
15.87	5/8	153	251	2
16.00		153	251	2

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Taper Shank Twist Drills (RH)



TAPER SHANK LONG SERIES
IS:8305:1976, DIN:341
Heavy Web - 135° Split Point
Ground Flutes-Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
4.76	3/16	74	155	1
5.00		74	155	1
5.10		74	155	1
5.16	13/64	74	155	1
5.20		74	155	1
5.30		74	155	1
5.40		80	161	1
5.50		80	161	1
5.56	7/32	80	161	1
5.60		80	161	1
5.70		80	161	1
5.80		80	161	1
5.90		80	161	1
5.95	15/64	80	161	1
6.00		80	161	1
6.10		86	167	1
6.20		86	167	1
6.30		86	167	1
6.35	1/4	86	167	1
6.40		86	167	1
6.50		86	167	1
6.60		86	167	1
6.70		86	167	1
6.75	17/64	93	174	1
6.80		93	174	1
6.90		93	174	1
7.00		93	174	1
7.10		93	174	1
7.14	9/32	93	174	1
7.20		93	174	1
7.30		93	174	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
7.40		93	174	1
7.50		93	174	1
7.54	19/64	100	181	1
7.60		100	181	1
7.70		100	181	1
7.80		100	181	1
7.90		100	181	1
7.94	5/16	100	181	1
8.00		100	181	1
8.10		100	181	1
8.20		100	181	1
8.30		100	181	1
8.33	21/64	100	181	1
8.40		100	181	1
8.50		100	181	1
8.60		107	188	1
8.70		107	188	1
8.73	11/32	107	188	1
8.80		107	188	1
8.90		107	188	1
9.00		107	188	1
9.10		107	188	1
9.13	23/64	107	188	1
9.20		107	188	1
9.30		107	188	1
9.40		107	188	1
9.50		107	188	1
9.52	3/8	116	197	1
9.60		116	197	1
9.70		116	197	1
9.80		116	197	1

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Taper Shank Twist Drills (RH)



TAPER SHANK LONG SERIES
IS:8305:1976, DIN:341
Heavy Web - 135° Split Point
Ground Flutes-Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
9.90		116	197	1
9.92	25/64	116	197	1
10.00		116	197	1
10.10		116	197	1
10.20		116	197	1
10.30		116	197	1
10.32	13/32	116	197	1
10.40		116	197	1
10.50		116	197	1
10.60		116	197	1
10.70		125	206	1
10.72	27/64	125	206	1
10.80		125	206	1
10.90		125	206	1
11.00		125	206	1
11.10		125	206	1
11.11	7/16	125	206	1
11.20		125	206	1
11.30		125	206	1
11.40		125	206	1
11.50		125	206	1
11.51	29/64	125	206	1
11.60		125	206	1
11.70		125	206	1
11.80		125	206	1
11.90		134	215	1
11.91	15/32	134	215	1
12.00		134	215	1
12.20		134	215	1
12.30	31/64	134	215	1
12.40		134	215	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
12.50		134	215	1
12.60		134	215	1
12.70	1/2	134	215	1
12.80		134	215	1
12.90		134	215	1
13.00		134	215	1
13.10	33/64	134	215	1
13.20		134	215	1
13.30		142	223	1
13.40		142	223	1
13.49	17/32	142	223	1
13.50		142	223	1
13.60		142	223	1
13.70		142	223	1
13.80		142	223	1
13.89	35/64	142	223	1
13.90		142	223	1
14.00		142	223	1
14.25		147	245	2
14.29	9/16	147	245	2
14.50		147	245	2
14.68	37/64	147	245	2
14.75		147	245	2
15.00		147	245	2
15.08	19/32	153	251	2
15.25		153	251	2
15.48		153	251	2
15.50		153	251	2
15.75		153	251	2
15.87	5/8	153	251	2
16.00		153	251	2

Other Finishes available - TiN, Blue (Steam Tempered)

HSS TAPER SHANK TWIST DRILLS (RH)



TAPER SHANK EXTRA LONG SERIES

Geometry as per IS:7822:2005, ISO:3291-1975, DIN:1870

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
3.00	1/8	120	200	1
3.00	1/8	145	225	1
3.00	1/8	170	250	1
3.00	1/8	195	275	1
3.00	1/8	220	300	1
3.00	1/8	245	325	1
3.50		120	200	1
3.50		145	225	1
3.50		170	250	1
3.50		195	275	1
3.50		220	300	1
3.50		245	325	1
4.00	5/32	120	200	1
4.00	5/32	145	225	1
4.00	5/32	170	250	1
4.00	5/32	195	275	1
4.00	5/32	220	300	1
4.00	5/32	245	325	1
4.50		120	200	1
4.50		145	225	1
4.50		170	250	1
4.50		195	275	1
4.50		220	300	1
4.50		245	325	1
5.00	3/16	120	200	1
5.00	3/16	145	225	1
5.00	3/16	170	250	1
5.00	3/16	195	275	1
5.00	3/16	220	300	1
5.00	3/16	245	325	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
5.50	7/32	120	200	1
5.50	7/32	145	225	1
5.50	7/32	170	250	1
5.50	7/32	195	275	1
5.50	7/32	220	300	1
5.50	7/32	245	325	1
6.00		120	200	1
6.00		145	225	1
6.00		170	250	1
6.00		195	275	1
6.00		220	300	1
6.00		245	325	1
6.50	1/4	120	200	1
6.50	1/4	145	225	1
6.50	1/4	170	250	1
6.50	1/4	195	275	1
6.50	1/4	220	300	1
6.50	1/4	235	315	1
6.50	1/4	245	325	1
7.00		120	200	1
7.00		145	225	1
7.00		170	250	1
7.00		195	275	1
7.00		220	300	1
7.00		235	315	1
7.00		245	325	1
7.50		120	200	1
7.50		145	225	1
7.50		170	250	1
7.50		195	275	1

Other Finishes available - TiN, Blue (Steam Tempered)

HSS TAPER SHANK TWIST DRILLS (RH)



TAPER SHANK EXTRA LONG SERIES

Geometry as per IS:7822:2005, ISO:3291-1975, DIN:1870

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
7.50		220	300	1
7.50		235	315	1
7.50		245	325	1
8.00	5/16	120	200	1
8.00	5/16	145	225	1
8.00	5/16	170	250	1
8.00	5/16	195	275	1
8.00	5/16	220	300	1
8.00	5/16	235	315	1
8.00	5/16	245	325	1
8.50		120	200	1
8.50		145	225	1
8.50		170	250	1
8.50		195	275	1
8.50		220	300	1
8.50		235	315	1
8.50		245	325	1
9.00		120	200	1
9.00		145	225	1
9.00		170	250	1
9.00		195	275	1
9.00		220	300	1
9.00		235	315	1
9.00		245	325	1
9.50	3/8	120	200	1
9.50	3/8	145	225	1
9.50	3/8	170	250	1
9.50	3/8	195	275	1
9.50	3/8	220	300	1
9.50	3/8	235	315	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
9.50	3/8	245	325	1
10.00		120	200	1
10.00		145	225	1
10.00		170	250	1
10.00		195	275	1
10.00		220	300	1
10.00		235	315	1
10.00		245	325	1
10.00		270	350	1
10.00		295	375	1
10.00		300	400	1
10.50		120	200	1
10.50		145	225	1
10.50		170	250	1
10.50		195	275	1
10.50		220	300	1
10.50		235	315	1
10.50		245	325	1
10.50		270	350	1
10.50		295	375	1
10.50		300	400	1
11.00		120	200	1
11.00		145	225	1
11.00		170	250	1
11.00		195	275	1
11.00		220	300	1
11.00		235	315	1
11.00		245	325	1
11.00		270	350	1
11.00		295	375	1

Other Finishes available - TiN, Blue (Steam Tempered)

HSS TAPER SHANK TWIST DRILLS (RH)



TAPER SHANK EXTRA LONG SERIES

Geometry as per IS:7822:2005, ISO:3291-1975, DIN:1870

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
11.00		300	400	1
11.50	7/16	120	200	1
11.50	7/16	145	225	1
11.50	7/16	170	250	1
11.50	7/16	195	275	1
11.50	7/16	220	300	1
11.50	7/16	235	315	1
11.50	7/16	245	325	1
11.50	7/16	270	350	1
11.50	7/16	295	375	1
11.50	7/16	300	400	1
12.00		145	225	1
12.00		170	250	1
12.00		195	275	1
12.00		220	300	1
12.00		235	315	1
12.00		245	325	1
12.00		270	350	1
12.00		295	375	1
12.00		300	400	1
12.50	1/2	145	225	1
12.50	1/2	170	250	1
12.50	1/2	195	275	1
12.50	1/2	220	300	1
12.50	1/2	235	315	1
12.50	1/2	245	325	1
12.50	1/2	270	350	1
12.50	1/2	295	375	1
12.50	1/2	300	400	1
13.00		170	250	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
13.00		195	275	1
13.00		220	300	1
13.00		235	315	1
13.00		245	325	1
13.00		270	350	1
13.00		295	375	1
13.00		300	400	1
13.50		170	250	1
13.50		195	275	1
13.50		220	300	1
13.50		235	315	1
13.50		245	325	1
13.50		270	350	1
13.50		295	375	1
13.50		300	400	1
14.00		170	250	1
14.00		195	275	1
14.00		220	300	1
14.00		235	315	1
14.00		245	325	1
14.00		270	350	1
14.00		295	375	1
14.00		300	400	1
14.50	9/16	150	250	2
14.50	9/16	175	275	2
14.50	9/16	200	300	2
14.50	9/16	215	315	2
14.50	9/16	225	325	2
14.50	9/16	250	350	2
14.50	9/16	275	375	2

Other Finishes available - TiN, Blue (Steam Tempered)

HSS TAPER SHANK TWIST DRILLS (RH)



TAPER SHANK EXTRA LONG SERIES

Geometry as per IS:7822:2005, ISO:3291-1975, DIN:1870

Tool Type 'N', Point Angle 118°

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
14.50	9/16	300	400	2
14.50	9/16	300	425	2
14.50	9/16	300	450	2
14.50	9/16	300	475	2
14.50	9/16	300	500	2
15.00		150	250	2
15.00		175	275	2
15.00		200	300	2
15.00		215	315	2
15.00		225	325	2
15.00		250	350	2
15.00		275	375	2
15.00		300	400	2
15.00		300	425	2
15.00		300	450	2
15.00		300	475	2
15.00		300	500	2
15.50		150	250	2
15.50		175	275	2
15.50		200	300	2
15.50		215	315	2
15.50		225	325	2
15.50		250	350	2
15.50		275	375	2
15.50		300	400	2
15.50		300	425	2
15.50		300	450	2
15.50		300	475	2
15.50		300	500	2
16.00	5/8	150	250	2



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
16.00	5/8	175	275	2
16.00	5/8	200	300	2
16.00	5/8	215	315	2
16.00	5/8	225	325	2
16.00	5/8	250	350	2
16.00	5/8	275	375	2
16.00	5/8	300	400	2
16.00	5/8	300	425	2
16.00	5/8	300	450	2
16.00	5/8	300	475	2
16.00	5/8	300	500	2

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Taper Shank Twist Drills (RH)

TAPER SHANK EXTRA LONG SERIES
Geometry will be maintained as per IS:7822-2005
Heavy Web, POINT-135°- Split Point
Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
3.00	1/8	120	200	1
3.00	1/8	145	225	1
3.00	1/8	170	250	1
3.00	1/8	195	275	1
3.00	1/8	220	300	1
3.00	1/8	245	325	1
3.50		120	200	1
3.50		145	225	1
3.50		170	250	1
3.50		195	275	1
3.50		220	300	1
3.50		245	325	1
4.00	5/32	120	200	1
4.00	5/32	145	225	1
4.00	5/32	170	250	1
4.00	5/32	195	275	1
4.00	5/32	220	300	1
4.00	5/32	245	325	1
4.50		120	200	1
4.50		145	225	1
4.50		170	250	1
4.50		195	275	1
4.50		220	300	1
4.50		245	325	1
5.00	3/16	120	200	1
5.00	3/16	145	225	1
5.00	3/16	170	250	1
5.00	3/16	195	275	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
5.00	3/16	220	300	1
5.00	3/16	245	325	1
5.50	7/32	120	200	1
5.50	7/32	145	225	1
5.50	7/32	170	250	1
5.50	7/32	195	275	1
5.50	7/32	220	300	1
5.50	7/32	245	325	1
6.00		120	200	1
6.00		145	225	1
6.00		170	250	1
6.00		195	275	1
6.00		220	300	1
6.00		235	315	1
6.00		245	325	1
6.50	1/4	120	200	1
6.50	1/4	145	225	1
6.50	1/4	170	250	1
6.50	1/4	195	275	1
6.50	1/4	220	300	1
6.50	1/4	235	315	1
6.50	1/4	245	325	1
7.00		120	200	1
7.00		145	225	1
7.00		170	250	1
7.00		195	275	1
7.00		220	300	1
7.00		235	315	1

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Taper Shank Twist Drills (RH)

TAPER SHANK EXTRA LONG SERIES
 Geometry will be maintained as per IS:7822-2005
 Heavy Web, POINT-135°- Split Point
 Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
7.00		245	325	1
7.50		120	200	1
7.50		145	225	1
7.50		170	250	1
7.50		195	275	1
7.50		220	300	1
7.50		235	315	1
7.50		245	325	1
8.00	5/16	120	200	1
8.00	5/16	145	225	1
8.00	5/16	170	250	1
8.00	5/16	195	275	1
8.00	5/16	220	300	1
8.00	5/16	235	315	1
8.00	5/16	245	325	1
8.50		120	200	1
8.50		145	225	1
8.50		170	250	1
8.50		195	275	1
8.50		220	300	1
8.50		235	315	1
8.50		245	325	1
9.00		120	200	1
9.00		145	225	1
9.00		170	250	1
9.00		195	275	1
9.00		220	300	1
9.00		235	315	1
9.00		245	325	1
9.50	3/8	120	200	1
9.50	3/8	145	225	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
9.50	3/8	170	250	1
9.50	3/8	195	275	1
9.50	3/8	220	300	1
9.50	3/8	235	315	1
9.50	3/8	245	325	1
10.00		120	200	1
10.00		145	225	1
10.00		170	250	1
10.00		195	275	1
10.00		220	300	1
10.00		235	315	1
10.00		245	325	1
10.00		270	350	1
10.00		295	375	1
10.00		300	400	1
10.50		120	200	1
10.50		145	225	1
10.50		170	250	1
10.50		195	275	1
10.50		220	300	1
10.50		235	315	1
10.50		245	325	1
10.50		270	350	1
10.50		295	375	1
10.50		300	400	1
11.00		120	200	1
11.00		145	225	1
11.00		170	250	1
11.00		195	275	1
11.00		220	300	1
11.00		235	315	1

Other Finishes available - TiN, Blue (Steam Tempered)

HSS-M35 (5% cobalt) Taper Shank Twist Drills (RH)

TAPER SHANK EXTRA LONG SERIES
Geometry will be maintained as per IS:7822-2005
Heavy Web, POINT-135°- Split Point
Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
11.00		245	325	1
11.00		270	350	1
11.00		295	375	1
11.00		300	400	1
11.50	7/16	120	200	1
11.50	7/16	145	225	1
11.50	7/16	170	250	1
11.50	7/16	195	275	1
11.50	7/16	220	300	1
11.50	7/16	235	315	1
11.50	7/16	245	325	1
11.50	7/16	270	350	1
11.50	7/16	295	375	1
11.50	7/16	300	400	1
12.00		145	225	1
12.00		170	250	1
12.00		195	275	1
12.00		220	300	1
12.00		235	315	1
12.00		245	325	1
12.00		270	350	1
12.00		295	375	1
12.00		300	400	1
12.50	1/2	145	225	1
12.50	1/2	170	250	1
12.50	1/2	195	275	1
12.50	1/2	220	300	1
12.50	1/2	235	315	1
12.50	1/2	245	325	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
12.50	1/2	270	350	1
12.50	1/2	295	375	1
12.50	1/2	300	400	1
13.00		170	250	1
13.00		195	275	1
13.00		220	300	1
13.00		235	315	1
13.00		245	325	1
13.00		270	350	1
13.00		295	375	1
13.00		300	400	1
13.50		170	250	1
13.50		195	275	1
13.50		220	300	1
13.50		235	315	1
13.50		245	325	1
13.50		270	350	1
13.50		295	375	1
13.50		300	400	1
14.00		170	250	1
14.00		195	275	1
14.00		220	300	1
14.00		235	315	1
14.00		245	325	1
14.00		270	350	1
14.00		295	375	1
14.00		300	400	1
14.50	9/16	150	250	2
14.50	9/16	175	275	2

Other Finishes available - TiN, Blue (Steam Tempered)



HSS-M35 (5% cobalt) Taper Shank Twist Drills (RH)

TAPER SHANK EXTRA LONG SERIES
 Geometry will be maintained as per IS:7822-2005
 Heavy Web, POINT-135°- Split Point
 Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
14.50	9/16	200	300	2
14.50	9/16	215	315	2
14.50	9/16	225	325	2
14.50	9/16	250	350	2
14.50	9/16	275	375	2
14.50	9/16	300	400	2
14.50	9/16	300	425	2
14.50	9/16	300	450	2
14.50	9/16	300	475	2
14.50	9/16	300	500	2
15.00		150	250	2
15.00		175	275	2
15.00		200	300	2
15.00		215	315	2
15.00		225	325	2
15.00		250	350	2
15.00		275	375	2
15.00		300	400	2
15.00		300	425	2
15.00		300	450	2
15.00		300	475	2
15.00		300	500	2
15.50		150	250	2
15.50		175	275	2
15.50		200	300	2
15.50		215	315	2
15.50		225	325	2
15.50		250	350	2
15.50		275	375	2



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
15.50		300	400	2
15.50		300	425	2
15.50		300	450	2
15.50		300	475	2
15.50		300	500	2
16.00	5/8	150	250	2
16.00	5/8	175	275	2
16.00	5/8	200	300	2
16.00	5/8	215	315	2
16.00	5/8	225	325	2
16.00	5/8	250	350	2
16.00	5/8	275	375	2
16.00	5/8	300	400	2
16.00	5/8	300	425	2
16.00	5/8	300	450	2
16.00	5/8	300	475	2
16.00	5/8	300	500	2

Other Finishes available - TiN, Blue (Steam Tempered)

HSS TAPER SHANK TWIST DRILLS (RH)



TAPER SHANK CORE DRILLS

Made to IS:5366-1978, DIN:343, BS:328 (Part-1)1959

Tool Type 'N', Point Angle 120°

Ground Flutes - Bright Finish

MM	INCH	FL in MM	OAL in MM	MT SHANK NO
5.00		52	133	1
5.10		52	133	1
6.00		57	138	1
7.00		69	150	1
7.14	9/32	69	150	1
7.50		69	150	1
7.80		75	156	1
7.90		75	156	1
7.94	5/16	75	156	1
8.00		75	156	1
8.10		75	156	1
8.20		75	156	1
8.30		75	156	1
8.33	21/64	75	156	1
8.40		75	156	1
8.50		75	156	1
8.60		81	162	1
8.70		81	162	1
8.73	11/32	81	162	1
8.80		81	162	1
8.90		81	162	1
9.00		81	162	1
9.10		81	162	1
9.13	23/64	81	162	1
9.20		81	162	1
9.30		81	162	1
9.40		81	162	1
9.50		81	162	1



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
9.52	3/8	87	168	1
9.60		87	168	1
9.70		87	168	1
9.80		87	168	1
9.90		87	168	1
9.92	25/64	87	168	1
10.00		87	168	1
10.10		87	168	1
10.20		87	168	1
10.30		87	168	1
10.32	13/32	87	168	1
10.40		87	168	1
10.50		87	168	1
10.60		87	168	1
10.70		94	175	1
10.72	27/64	94	175	1
10.80		94	175	1
10.90		94	175	1
11.00		94	175	1
11.10		94	175	1
11.11	7/16	94	175	1
11.20		94	175	1
11.30		94	175	1
11.40		94	175	1
11.50		94	175	1
11.51	29/64	94	175	1
11.60		94	175	1
11.70		94	175	1

Also available in 5%-Co. and 8%-Co.

HSS TAPER SHANK TWIST DRILLS (RH)



TAPER SHANK CORE DRILLS

Made to IS:5366-1978, DIN:343, BS:328 (Part-1)1959

Tool Type 'N', Point Angle 120°

Ground Flutes - Bright Finish

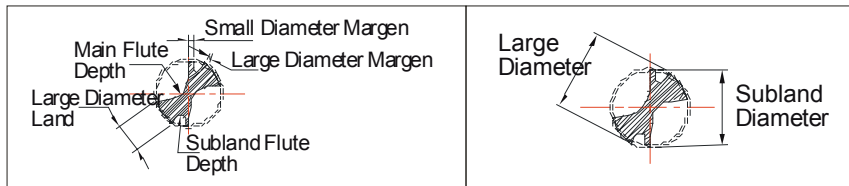
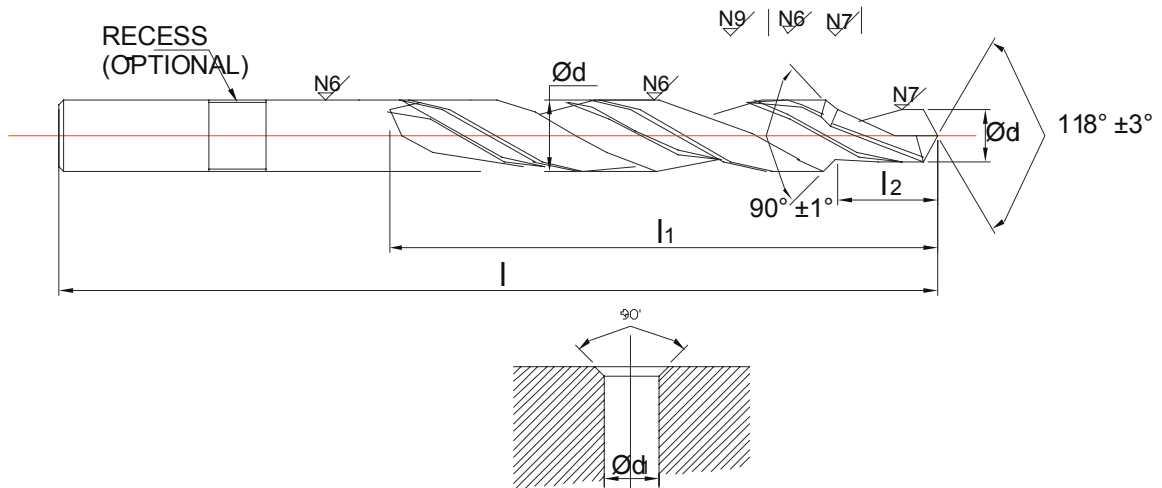
MM	INCH	FL in MM	OAL in MM	MT SHANK NO
11.80		94	175	1
11.90		101	182	1
11.91	15/32	101	182	1
12.00		101	182	1
12.10		101	182	1
12.20		101	182	1
12.30	31/64	101	182	1
12.40		101	182	1
12.50		101	182	1
12.60		101	182	1
12.70	1/2	101	182	1
12.80		101	182	1
12.90		101	182	1
13.00		101	182	1
13.10	33/64	101	182	1
13.20		101	182	1
13.30		101	182	1
13.40		101	182	1
13.49	17/32	101	182	1
13.50		101	182	1
13.60		101	182	1
13.70		108	189	1
13.80		108	189	1
13.89	35/64	108	189	1
13.90		108	189	1
14.00		108	189	1
14.25		114	212	2
14.29	9/16	114	212	2



MM	INCH	FL in MM	OAL in MM	MT SHANK NO
14.50		114	212	2
14.68	37/64	114	212	2
14.75		114	212	2
15.00		114	212	2
15.08	19/32	120	218	2
15.25		120	218	2
15.50		120	218	2
15.75		120	218	2
15.87	5/8	120	218	2
16.00		120	218	2

Also available in 5%-Co. and 8%-Co.

SUBLAND TWIST DRILLS



Thread		d(h8)	d1(h8)	LL	1L	2
Nominal Dia.	Pitch					
M3	0.5	3.4	2.5	70	39	8.8
M4	0.7	4.5	3.3	80	47	11.4
M5	0.8	5.5	4.2	93	57	13.6
M6	1	6.6	5	101	63	16.5
M8	1.25	9	6.8	125	81	21
M10	1.5	11	8.5	142	94	25.5
M12	1.75	14	10.2	160	108	30
M14	2	15.5	12.0	178	120	34.5

Available in HSS Grades M-2 & M-35