

**PARALLEL SHANK TWIST DRILLS**

JOBBER SERIES, SUB SERIES &amp; LONG SERIES

SIZE H8			JOBBER SERIES IS:5101		STUB SERIES IS:5100		LONG SERIES IS:5102		
			FL	OAL	FL	OAL	FL	OAL	
mm	inch	DG	MM		MM		MM		
1.00		60	12	34	12	34	12	34	
1.04		59							
1.07		58							
1.09		57	14	36	7	28	37	60	
1.10									
1.18		56							
1.19	3/64								
1.20			16	38	8	30	41	65	
1.30									
1.32		55							
1.40		54	18	40	9	32	45	70	
1.50									
1.51	1/16	53							
1.59									
1.60				20	43	10	34	50	76
1.61			52						
1.70			51						
1.78		50							
1.80									
1.85		49	22	46	11	36	53	80	
1.90									
1.93	5/64	48							
1.98									
1.99			47						
2.00				24	49	12	38	56	85
2.06			46						
2.08			45						
2.10									
2.18		44							
2.20									
2.26		43	27	53	13	40	59	90	
2.30									
2.37	3/32	42							
2.38									
2.40									
2.44			41						
2.49			40	30	57	14	43	62	95
2.50									
2.53			39						
2.58			38						



High Speed Steel  
**PARALLEL SHANK TWIST DRILLS**  
 JOBBER SERIES, STUB SERIES & LONG SERIES

SIZE H8			JOBBER SERIES IS:5101		STUB SERIES IS:5100		LONG SERIES IS:5102	
			FL	OAL	FL	OAL	FL	OAL
MM	INCH	DG	MM		MM		MM	
2.60			30	57	14	43	62	95
2.64		37						
2.70			33	61	16	46	66	100
2.71		36						
2.78	7/64							
2.79		35						
2.80								
2.82		34						
2.87		33						
2.90								
2.95		32						
3.00								
3.05			36	65	18	49	89	106
3.10		31						
3.17	1/8							
3.20								
3.26		30						
3.30								
3.40			39	70	20	52	73	112
3.45		29						
3.50								
3.57	9/64	28						
3.60								
3.66		27						
3.70								
3.73		26						
3.80		25						
3.86		24						
3.90			43	75	22	55	78	119
3.91		23						
3.97	5/32							
3.99		22						
4.00								
4.04		21						
4.09		20						
4.10								
4.20								
4.22		19						
4.30		18	47	80	24	58	82	126
4.37	11/64							
4.39		17						

High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 JOBBER SERIES, STUB SERIES & LONG SERIES

SIZE H8			JOBBER SERIES IS:5101		STUB SERIES IS:5100		LONG SERIES IS:5102	
			FL	OAL	FL	OAL	FL	OAL
MM	INCH	DG	MM		MM		MM	
4.40			47	80	24	58	82	126
4.50		16						
4.57		15						
4.60								
4.62		14						
4.70		13						
4.76	3/16		52	86	26	62	87	132
4.80		12						
4.85		11						
4.90								
4.92		10						
4.98		9						
5.00								
5.06		8						
5.10								
5.11		7						
5.16	13/64							
5.18		6						
5.20								
5.22		5						
5.30								
5.31		4	57	93	28	66	91	139
5.40								
5.41		3						
5.50								
5.56	7/32							
5.60								
5.61		2						
5.70								
5.79		1						
5.80								
5.90								
5.94		A	63	101	31	70	97	148
5.95								
6.00								
6.00		B						
6.10								
6.15		C						
6.20								
6.25		D						
6.30								



High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 JOBBER SERIES, STUB SERIES & LONG SERIES

SIZE H8			JOBBER SERIES IS:5101		STUB SERIES IS:5100		LONG SERIES IS:5102	
			FL	OAL	FL	OAL	FL	OAL
MM	INCH	DG	MM		MM		MM	
8.84		S	81	125	40	84	115	175
8.90								
9.00								
9.09		T						
9.10	23/64							
9.13								
9.20								
9.30								
9.34		U						
9.40								
9.50								
9.52	3/8							
9.58		V						
9.60								
9.70								
9.80		W						
9.90								
9.92	25/64							
10.00								
10.08		X						
10.10								
10.20								
10.26		Y						
10.30								
10.3	13/32							
10.40								
10.49		Z						
10.50								
10.60								
10.70			94	142	47	95	128	195
10.72	27/64							
10.80								
10.90								
11.00								
11.10								
11.11	7/16							
11.20								
11.30								
11.40								
11.50								
11.51	29/64							

High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 JOBBER SERIES, SUB SERIES & LONG SERIES

SIZE H8		JOBBER SERIES IS:5101		STUB SERIES IS:5100		LONG SERIES IS:5102	
		FL	OAL	FL	OAL	FL	OAL
mm	inch	MM		MM		MM	
11.60		94	142	47	95	128	94
11.70							
11.80							
11.90	15/32						
11.91							
12.00							
12.10							
12.20							
12.30							
12.40	1/2	101	151	51	102	134	205
12.50							
12.60							
12.70							
12.90							
13.00							
13.10	33/64						
13.20							
13.30	17/32						
13.40							
13.49							
13.50							
13.60							
13.70							
13.80	35/64	108	160	54	107	140	214
13.89							
13.90							
14.00	9/16						
14.25							
14.29							
14.50							
14.68							
14.75							
15.00	37/64	114	169	56	111	144	220
15.08							
15.25	39/64	120	178	58	115	149	227
15.48							
15.50	5/8						
15.75							
15.87							
16.00							

SIZE H8		JOBBER SERIES IS:5101		STUB SERIES IS:5100		LONG SERIES IS:5102	
		FL	OAL	FL	OAL	FL	OAL
mm	inch	MM		MM		MM	
16.25	41/64	125	184	60	119	154	235
16.27							
16.50							
16.67							
16.74	21/32						
17.00							
17.07	43/64						
17.25							
17.46	11/16	130	191	62	123	158	241
17.50							
17.75							
17.86	45/64						
18.00							
18.25	23/32	135	199	64	1127	162	247
18.26							
18.50							
18.65	47/64						
18.75							
19.00	49/64	140	205	66	131	166	254
19.05							
19.25							
19.45							
19.50							
19.75							
19.84	25/32						
20.00							
20.24	51/64						
20.25							
20.64	13/16	-	-	68	136	171	261
20.75							
21.00							
21.03	53/64						
21.25							
21.43	27/32			70	141	176	268
21.50							
21.75	55/64	-	-				
21.83							
22.00							

High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 JOBBER SERIES, SUB SERIES & LONG SERIES

SIZE H8		JOBBER SERIES IS:5100		STUB SERIES IS:5102	
		FL	OAL	FL	OAL
mm	inch	MM		MM	
22.22 22.25	7/8	70	141	176	268
22.50 22.62 22.75 23.00 23.02 23.25 23.42 23.50	57/64   29/32  59/64	72	146	180	275
23.75 23.81 24.00 24.21 24.25 24.50 24.61 24.75 25.00	15/16  61/64  31/32  63/64	75	151	185	282
25.25 25.40 25.50 25.75 26.00 26.19 26.25 26.50	1  1.1/32	78	156	190	290
26.75 26.99	1.1/16	81	162	195	298



High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 JOBBER SERIES, SUB SERIES & LONG SERIES

SIZE H8		JOBBER SERIES IS:5100		STUB SERIES IS:5102						
		FL	OAL	FL	OAL					
mm	inch	MM		MM						
27.00	1.3/32	81	162	195	298					
27.25										
27.50										
27.75										
27.78										
28.00										
28.25	1.1/8	84	168	201	307					
28.50										
28.57										
28.76										
29.00										
29.25										
29.37	1.5/32	87	174	207	316					
29.50										
29.75										
30.00										
30.16										
30.25										
30.50	1.7/32	87	174	207	316					
30.75										
30.96										
31.00										
31.25										
31.50										
31.75	1.1/4	90	180	-	-					
32.00										
32.50										
32.54										
						1.9/32				

High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 JOBBER SERIES, SUB SERIES & LONG SERIES

SIZE H8		JOBBER SERIES IS: 5100	
		FL	OAL
mm	inch	MM	
33.00 33.34 33.50	1.5/16	90	180
34.00 34.13 34.50 34.92 35.00 35.50	1.11/32  1.3/8	93	186
35.72 36.00 36.50 36.51 37.00 37.31 37.50	1.13/32  1.7/16  1.15/32	96	193
38.00 38.10 38.50 39.89 39.00 39.50 39.69 40.00	1.1/2  1.17/32  1.9/16	100	200

High Speed Steel  
**PARALLEL SHANK TWIST DRILLS**  
 EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		SERIES 3		
			FL	OAL	FL	OAL	FL	OAL	
mm	inch	DG	MM		MM		MM		
3.00	1/8		100	150	130	190	-	-	
3.05		31							
3.10									
3.17				105	155	135	200	-	-
3.20									
3.26		30							
3.30									
3.40	9/64	29							
3.45									
3.50									
3.57		28		115	165	145	210	180	265
3.60									
3.66		27							
3.70									
3.73	26								
3.80	5/32	25							
3.86		24							
3.90									
3.91		23							
3.97									
3.99		22		120	175	150	220	190	280
4.00									
4.04		21							
4.09		20							
4.10									
4.20									
4.22	19								
4.30	11/64	18							
4.37									
4.39		17							
4.40									
4.50		16		125	185	160	235	200	295
4.57		15							
4.60									
4.62		14							
4.70	13								
4.76	3/16								
4.80		12							
4.85		11		135	195	170	245	210	315
4.90									
4.92		10							

High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		SERIES 3	
			FL	OAL	FL	OAL	FL	OAL
mm	inch	DG	MM		MM		MM	
4.98		9	135	195	170	245	210	315
5.00								
5.06								
5.10								
5.11								
5.16								
5.18								
5.20								
5.22								
5.30								
5.31	7/32	4	140	205	180	260	225	330
5.40								
5.41								
5.50								
5.56								
5.60								
5.61								
5.70								
5.79								
5.80								
5.90								
5.94	15/64	A	150	215	190	275	235	350
5.95								
6.00								
6.04								
6.10								
6.15								
6.20								
6.25								
6.30								
6.35								
6.40								
6.50								
6.53								
6.60								
6.63								
6.70								
6.75	17/64	H	115	225	200	290	250	370
6.80								
6.90								
7.00								
		I						

High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		SERIES 3		
			FL	OAL	FL	OAL	FL	OAL	
mm	inch	DG	MM		MM		MM		
7.03	9/32	J	155	225	200	290	250	370	
7.10		K							
7.14									
7.20									
7.30									
7.37									L
7.40									
7.49									
7.50									
7.54	19/64	N	165	240	210	305	265	390	
7.60									
7.67									
7.70									
7.80									
7.90									
7.94									5/16
8.00									
8.03									
8.10									
8.20									P
8.30									
8.33									
8.40									
8.43									Q
8.50									
8.60	11/32	R	175	250	220	320	280	410	
8.61									
8.70									
8.73									
8.80									
8.84									S
8.90									
9.00									
9.09									T
9.10									
9.13									
9.20									
9.30									
9.34									U
9.40									
9.50									

High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		SERIES 3									
			FL	OAL	FL	OAL	FL	OAL								
mm	inch	DG	MM		MM		MM									
9.52	3/8	V														
9.38																
9.60	25/64	W														
9.70																
9.80																
9.90																
9.92																
10.00																
10.08																
10.10																
10.20																
10.26																
10.30	13/32	X	185	185	185	185	185	185								
10.32																
10.40																
10.49																
10.50																
10.60																
10.70	27/64															
10.72																
10.80																
10.90																
11.00																
11.10																
11.11									7/16		195	280	250	365	310	455
11.12																
11.20																
11.30																
11.40	29/64															
11.50																
11.51																
11.60																
11.70																
11.80																
11.90	1/32															
11.91																
12.00																
12.10																
12.20																
12.30									31/64		205	295	260	375	330	480
12.40																
12.50																

High Speed Steel  
 PARALLEL SHANK TWIST DRILLS  
 EXTRA LONG SERIES

SIZE H8		SERIES 1		SERIES 2		SERIES 3	
		FL	OAL	FL	OAL	FL	OAL
mm	inch	MM		MM		MM	
12.60	1/2						
12.70							
12.80		205	295	260	375	330	480
12.90							
13.00							

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH STANDARD SHANK

SIZE H8			SERIES 1		MT SHANK NO.
mm	inch	DG	FL	OAL	
			MM		
3.00			33	144	1
3.05	1/8	31	36	117	1
3.10					
3.17					
3.20					
3.30		30			
3.40	9/64	29	39	120	1
3.45					
3.50					
3.57		28			
3.60					
3.66		27			
3.70					
3.73	26				
3.80	5/32	25	43	124	1
3.86		24			
3.90					
3.91		23			
3.97					
3.99		22			
4.00					
4.04		21			
4.09		20			
4.10					
4.20					
4.22	19				
4.30	11/64	18	47	128	1
4.37					
4.39		17			
4.40					
4.50		16			
4.57		15			
4.60					
4.62		14			
4.70	13				
4.76	3/16	12	52	133	1
4.80		11			
4.85					
4.90		10			
4.92					
4.98		9			
5.00					



High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH STANDARD SHANK

SIZE H8			FA	OAL	MT SHANK NO.
mm	inch	DG/LG			
5.06	13/64	8	52	155	1
5.1		7			
5.11		6			
5.16		5			
5.18					
5.2					
5.22					
5.30					
5.31	7/32	4	57	138	1
5.40		3			
5.41					
5.50					
5.56					
5.60					
5.61		2			
5.70		1			
5.79					
5.80					
5.90	15/64	A			
5.94					
5.95					
6.00					
6.04	1/4	B	63	144	1
6.10		C			
6.15		D			
6.20					
6.25					
6.30		E			
6.30					
6.40					
6.50					
6.53		F			
6.60					
6.63	G				
6.70					
6.75	9/32	H	69	150	1
6.80		I			
6.90		J			
7.00					
7.03					
7.10		K			
7.14					
7.20					

SIZE H8			FA	OAL	MT SHANK NO.
mm	inch	DG/LG			
7.30		L	69	150	1
7.37					
7.40		M			
7.49					
7.50					
7.54	5/16	N	75	156	1
7.60					
7.67					
7.70					
7.80					
7.90		O			
7.94					
8.00					
8.03					
8.10					
8.20					
8.30					
8.33					
8.40	21/64				
8.40					
8.43					
8.43					
8.50					
8.60	11/32	R	81	162	1
8.61					
8.70					
8.73					
8.80					
8.84		S			
8.90					
9.00					
9.09					
9.10					
9.13					
9.20					
9.30					
9.34	23/64				
9.34					
9.40					
9.40					
9.50					
9.52	3/8	U	87	168	1
9.58					
9.60					
9.70		V			
9.70					
9.80					
9.80					
9.90	W				
9.90					



High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH STANDARD SHANK

SIZE H8			FA	OAL	MT SHANK NO.
mm	inch	DG/LG	MM		
9.92	25/64	X	87	168	1
10.00					
10.08					
10.10					
10.20					
10.26	13/32	Y	87	168	1
10.30					
10.32					
10.40					
10.00					
10.49	Z				
10.50					
10.60					
10.70					
10.72					
10.80	27/64		94	175	1
10.90					
11.00					
11.11					
11.20					
11.30	29/64		94	175	1
11.40					
11.50					
11.51					
11.60					
11.70	29/64		94	175	1
11.80					
11.90					
11.91					
12.00					
12.10	15/32		101	182	1
12.20					
12.30					
12.40					
12.50					
12.60	31/64		101	182	1
12.70					
12.80					
13.00					
12.70					
12.80	1/2		101	182	1
13.10					
13.20					
13.30					
13.40					
13.30	33/64		108	189	1
13.40					

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH STANDARD SHANK

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
13.49 13.50 13.60 13.70 13.80 13.89 13.90 14.00	17/32     35/64	108	189	1
14.25 14.29 14.50 14.68 14.75 15.00	9/16  37/64	114	212	2
15.08 15.25 15.48 15.50 15.75 15.87 16.00	19/32  39/64  5/8	120	218	2
16.25 16.27 16.50 16.67 16.75 17.00	41/64  21/32	125	223	2
17.07 17.25 17.46 17.50 17.75 17.86 18.00	43/64  11/16  45/64	130	228	2
18.25 18.26 18.50 18.65 18.75 19.00	23/32  47/64	135	233	2
19.05 19.25 19.45	3/4  49/64	140	238	2

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH STANDARD SHANK

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
19.50 19.75 19.84 20.00	25/32  51/64	140	238	1
20.24 20.25 20.50 20.64 20.75 21.00 21.03	13/16  53/64	145	243	2
21.25 21.43 21.50 21.75 21.83 22.00 22.22 22.25	27/32	150	248	2
22.50 22.62 22.75 23.00 23.02 23.25 23.42 23.50		155	253	2
23.75 23.81 24.00 24.21 24.25 24.50 24.61 24.75 25.00		160	281	3
25.25 25.40 25.50 25.75 26.00 26.19 26.25		165	286	3

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH STANDARD SHANK

SIZE H8		FA	OAL	MT SHANK NO.
mm	inch	MM		
26.50		165	286	3
26.75				
26.99				
27.00				
27.25		170	291	3
27.50				
27.75				
27.78	1.3/32			
28.00				
28.25				
28.50				
28.57	1.1/8			
28.75				
29.00		175	296	3
29.25				
29.37	1.5/32			
29.50				
29.75				
30.00				
30.16	1.3/16			
30.25				
30.50				
30.75				
30.96	1.7/32	180	301	3
31.00				
31.25				
31.50				
31.75	1.1/4	185	306	
32.00				
32.50				
32.54	1.9/32	185	334	4
33.00				
33.34	1.5/16			
33.50				
34.00				
34.13	1.11/32	190	339	4
34.50				
34.92	1.3/8			
35.00				
35.50		190	339	4
35.72	1.13/32			
36.00		195	334	4
36.50				

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH STANDARD SHANK

SIZE H8			FA	OAL	MT SHANK NO.
mm		INCH	MM		
36.51 37.00 37.31 37.50		1.7/16  1.15/32	195	344	4
38.00 38.10 38.50 38.89 39.00 39.50 39.69 40.00		1.1/2  1.17/32  1.19/32	200	349	4
40.48 40.50 41.00 41.27 41.50 42.00 42.07 42.50		1.19/32  1.5/8  1.21/32	205	354	4
42.86 43.00 43.50 43.50 43.66 44.00 44.45 44.50 45.00		1.11/16	210	359	4
45.24 45.50 46.00 46.04 46.50 46.83 47.00 47.50		1.25/32  1.13/16  1.27/32	215	364	4
47.62 48.00 48.42 48.50 49.00 49.21		1.29/32  1.15/16	220	369	4

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH STANDARD SHANK

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
49.50 50.00 50.01 50.50 50.80	2	225	374	4
51.00 52.00 50.80 53.00	2.1/16	225	412	5
53.97 54.00 55.00 55.56 56.00	2.1/8  2.3/16	230	417	5
57.00 57.15 58.00 58.74 59.00 60.00	2.1/4  2.5/16	235	422	5
60.32 61.00 61.91 62.00 63.00	2.3/8  2.7/16	240	427	5
63.50 64.00 65.00 65.09 66.00 66.67 67.00	2.1/2  2.9/16  2.5/8	245	432	5
68.00 68.26 69.00 69.85 70.00 71.00	2.11/16  2.3/4	250	437	5
71.44 72.00 73.00 73.02 74.00	2.13/16  2.7/8	255	442	5



High Speed Steel  
 TAPER SHANK TWIST DRILLS  
 WITH STANDARD SHANK

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
74.61 75.00				
76.00 76.20	3	260	447	5
77.00 77.79 78.00 79.00 79.37 80.00	3.1/16   3.1/8	260	514	6
80.96 81.00 82.00 82.55 83.00 84.00 84.14 85.00	3.3/16  3.1/4  3.5/16	265	519	6
85.72 86.00 87.00 87.31 88.00 90.00	3.3/8  3.7/16	270	524	6

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH STANDARD SHANK

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
90.49	3.9/16	275	529	6
91.00				
92.00				
92.07				
93.00				
93.66				
94.00				
95.00				
95.25	3.3/4	280	534	6
96.00				
96.84				
97.00				
98.00				
98.42				
99.00				
100.00				
100.01	3.15/16	285	539	6
101.00				
101.60				
102.00				

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH OVERSIZE SHANK

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
11.90				101
11.91				
12.00				
12.10				
12.20				
12.30	31/64			
12.40		101	199	
12.50				
12.60				
12.70	1/2			
12.80				
12.90				
13.00				
13.10	33/64			
13.20				
13.30				206
13.40				
13.49	17/32			
13.50				
13.60		108		
13.70				
13.80				
13.89	35/64			
13.90				
14.00				
14.25				-
14.29	9/16			
14.50		114		
14.68	37/64			
14.75				
15.00				
15.08	19/32			
15.25				
15.48	39/64	120		
15.50				
15.75				
15.87	5/8			
16.00				
16.25				-
16.27	41/64			
16.50		125		
16.67	21/32			
16.75				

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH OVERSIZE SHANK

SIZE H8		FA	OAL	MT SHANK NO.	
mm	INCH	MM			
17.00		125			
17.07	43/64	135			
17.25					
14.46	Nov/16				
17.50					
17.75					
17.86	45/64				
18.00					
18.25		135	256	3	
18.26	23/32				
18.50					
18.65	47/64				
18.75					
19.00					
19.05	3/4	140	261	3	
19.25					
19.45	49/64				
19.50					
19.75					
19.84	25/32				
20.00					
20.24	51/64	145	271	3	
20.25					
20.50					
20.64	13/16				
20.75					
21.00					
21.03	53/64	150	271	3	
21.25					
21.43	27/32				
21.50					
21.75					
21.83	55/64				
22.00					
22.22	7/8				
22.25					
22.50		155	276	3	
22.62	57/64				
22.75					
23.00					
23.02	29/32			-	-
23.25					
23.42	59/64				

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH OVERSIZE SHANK

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
23.50		155		
23.75		160	-	-
23.81	15/16			
24.00				
24.21	61/64			
24.25				
24.50				
24.61	31/32			
24.75				
25.00	63/64			
25.25		165		
25.40	1			
25.50				
25.75				
26.00				
26.19	1.1/32			
26.25				
26.50				
26.75		170	319	4
26.99	1.1/6			
27.00				
27.25				
27.50				
27.75				
27.78	1.3/32			
28.00				
28.25				
28.50				
28.57	1.1/8			
28.75				
29.00				
29.25				
29.37	1.5/32			
29.50				
29.75				
30.00				
30.16	1.3/16	180	329	4
30.25				
30.50				
30.75				
30.96	1.7/32			
31.00				

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH OVERSIZE SHANK

SIZE H8			FA	OAL	MT SHANK NO.
mm		INCH	MM		
31.25 31.50			180	329	4
31.75 32.00 32.50 32.54 33.00 33.34 33.50		1.1/4  1.9/32  1.5/16	185	334	
34.00 34.13 34.50 34.92 35.00 35.50		1.11/32  1.3/8	190		
35.72 36.00 36.50 36.51 37.00 37.31 37.50		1.13/32  1.7/16  1.15/32	195	-	-
38.00 38.10 38.50 38.89 39.00 39.50 39.69 40.00		1.1/2  1.17/32  1.9/16	200		
40.48 40.50 41.00 41.27 41.50 42.00 42.07 42.50		1.19/32  1.5/8  1.21/32	205	392	5
42.86 43.00 43.50 43.66 44.00		1.11/16  1.23/32	210	397	5

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH OVERSIZE SHANK

SIZE H8			FA	OAL	MT SHANK NO.
mm		INCH	MM		
44.45 44.50 45.00		1.3/4	210	397	5
45.24 45.50 46.00 46.04 46.50 46.83 47.00 47.50		1.25/32  1.13/16  1.27/32	215	402	5
47.62 48.00 48.42 48.50 49.00 4.21 49.50 50.0		17/8  1.2/32  1.15/16	220	407	5
50.01 50.50 50.80 51.00 52.00 52.39 53.00		1.31/32  2  2.1/16	225	412	
53.97 54.00 55.00 55.56 56.00		2.1/8  2.3/16	230		
57.00 57.15 58.00 58.74 59.00 60.00		2.1/4  2.5/16	235	-	-
60.32 61.00 61.91 62.00 63.00		2.3/8  2.7/16	240		
63.50		2.1/2	245	499	6

High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH OVERSIZE SHANK

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
64.00				6
65.00				
65.09	2.9/16	245	499	
66.00				
66.67	2.5/8			
67.00				
68.00				6
68.26	2.11/16			
69.00		250	504	
69.85	2.3/4			
70.00				
71.00				
71.44	2.13/16			6
72.00				
73.00				
73.02	2.7/8	255	509	
74.00				
74.61	2.15/16			
75.00				
76.00			514	
76.20		3		6
77.00				
77.79	3.1/16	260		
78.00				
79.00				
79.37	3.1/8			
80.00				
80.96	3.3/16			-
81.00				
82.00				
82.55	3.1/4	265		
83.00				
84.00				
84.14	3.5/16			
85.00				
85.72	3.3/8			
86.00				
87.00				
87.31	3.7/16	270		
88.00				
88.90	3.1/2			
89.00				
90.00				



High Speed Steel  
TAPER SHANK TWIST DRILLS  
WITH OVERSIZE SHANK

SIZE H8			FA	OAL	MT SHANK NO.
mm		INCH	MM		
90.49		3.9/16	275		
91.00					
92.00					
92.07		3.5/8			
93.00					
93.66		3.11/16			
94.00					
95.00					
95.25		3.3/4	280	-	-
96.00					
96.84		3.13/16			
97.00					
98.00					
98.42		3.7/8			
99.00					
100.00					
100.01		3.15/16			
101.00					
101.60		4			
102.00					

High Speed Steel  
 TAPER SHANK TWIST DRILLS  
 LONG SERIES

SIZE H8			FA	OAL	MT SHANK NO.
mm	inch	DG	MM		
5.00	13/64	8	74	155	1
5.06					
5.10					
5.11					
5.16					
5.18					
5.20					
5.22					
5.30	7/32	4	80	161	1
5.31					
5.40					
5.41					
5.50					
5.56					
5.60					
5.61					
5.70					
5.79					
5.80					
5.90					
5.94	15/64	A	86	167	1
5.95					
6.00					
6.04					
6.10					
6.15					
6.20					
6.25					
6.30					
6.30					
6.40					
6.50					
6.53	17/64	H	93	174	1
6.60					
6.63					
6.70					
6.75					
6.80					
6.90					
7.00					
7.03	9/32	I	93	174	1
7.10					
7.14					
7.10	9/32	J	93	174	1
7.03					
7.14					
7.14	9/32	K	93	174	1
7.03					
7.14					



High Speed Steel  
TAPER SHANK TWIST DRILLS  
LONG SERIES

SIZE H8		FA	OAL	MT SHANK NO.		
mm	INCH	DG	MM			
7.20		L	93	174	1	
7.30						
7.37						
7.40						
7.49						
7.50						
7.54	19/64	N	100	181	1	
7.60	5/16					
7.67						
7.70						
7.80						
7.90						
7.94						
8.00						
8.03						O
8.10						
8.20						P
8.30						
8.33						21/64
8.40						
8.43	Q					
8.50						
8.60	11/32	R	107	188	1	
8.61						
8.70						
8.73						
8.80						
8.84		S				
8.90						
9.00						
9.09		T				
9.10						
9.13		23/64				
9.20						
9.30						
9.34		U				
9.40						
9.50						
9.52	3/8	V	116	197	1	
9.58						
9.60						
9.70						
9.80	W					

High Speed Steel  
TAPER SHANK TWIST DRILLS  
LONG SERIES

SIZE H8			FA	OAL	MT SHANK NO.	
mm	INCH	DG	MM			
9.90	25/64	X	116	197	1	
9.92						
10.00						
10.08						
10.10						
10.20						
10.26		Y				
10.30						
10.32		13/32				Z
10.40						
10.49						
10.50						
10.60						
10.70	27/64			125	206	1
10.72						
10.80						
10.90						
11.00						
11.11		7/16				
11.20						
11.30						
11.40		11.50				
11.51						
11.60						
11.70						
11.80						
11.90	15/32		134	215	1	
11.91						
12.00						
12.10						
12.20						
12.30						31/64
12.40						
12.50						
12.60						
12.70						1/2
12.80						
12.90						
13.00						
13.10	33/64					
13.20						
13.30	17/32		142	223	1	
13.40						
13.49						

High Speed Steel  
TAPER SHANK TWIST DRILLS  
LONG SERIES

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
13.50				1
13.60				
13.70				
13.80		142	223	
13.89	35/64			
13.90				
14.00				
14.25				2
14.29	9/16			
14.50		147	245	
14.68	37/64			
14.75				
15.00				
15.08				2
15.25	19/32			
15.48	39/64			
15.50		153	251	
15.75				
15.87	5/8			
16.00				
16.25				2
16.27	41/64			
16.50		159	257	
16.67	21/32			
16.75				
17.00				
17.07				2
17.25	43/64			
17.46	11/16			
17.50		165	263	
17.75				
17.86	45/64			
18.00				
18.25				2
18.26	23/32			
18.50		171	269	
18.65	47/64			
18.75				
19.00				
19.05	3/4	177	275	2

High Speed Steel  
TAPER SHANK TWIST DRILLS  
LONG SERIES

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
19.25 19.45 19.5 19.75 19.84 20.00	49/64    25/32	177	275	2
20.24 20.25 20.50 20.64 20.75 21.00 21.03	51/64   13/16   53/64	184	282	2
21.25 21.43 21.50 21.75 21.83 22.00 22.22 22.25	27/32   55/64   7/8	191	289	2
22.50 22.62 22.75 23.00 23.02	57/64    29/32	198	296	2
23.25 23.42 23.50	59/64	198	296	2
23.75 23.81 24.00 24.21 24.25 24.50 24.61 24.75 25.00	15/16  61/64   31/32  63/64	206	327	3
25.25 25.40		214	335	3

High Speed Steel  
TAPER SHANK TWIST DRILLS  
LONG SERIES

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
25.50 25.75 26.00 26.19 26.25 26.50	1.1/32	214	335	3
26.75 26.99 27.00 27.25 27.50 27.75 27.78 28.00	1.1/16      131/32	222	343	3
28.25 28.50 28.57 28.75 29.00 29.25 29.37 29.50 29.75 30.00	1.1/8     1.5/32	230	351	3
30.16 30.25 30.50 30.75 30.96 31.00 31.25 31.50 31.75	1.3/16   1.7/32  1.1/4	239	360	3
32.00 32.50 32.54 33.00 33.34 33.50	1.9/32  1.5/16	248	397	4
34.00 34.13 34.50	1.11/32	190	406	4



High Speed Steel  
TAPER SHANK TWIST DRILLS  
LONG SERIES

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
34.92 35.00 35.50	1.3/8	257	406	4
35.72 36.00 36.50 36.51 37.00 37.31 37.50	1.13/32  1.7/16  1.15/32	267	416	4
38.00 38.10 38.50 38.89 39.00 39.50 39.69 40.00	1.1/2  1.17/32  1.9/16	277	426	4
40.48 40.50 41.00 41.27 41.50 42.00 42.07 42.50	1.19/32  1.5/8  1.21/32	287	436	4
42.86 43.00 43.50 43.50 43.66 44.00 44.45 44.50 45.00	1.11/16  1.23/32  1.3/4	298	447	4
45.24 45.50 46.00 46.04 46.50 46.83 47.00 47.50	1.25/32  1.13/16  1.27/32	310	459	4

High Speed Steel  
 TAPER SHANK TWIST DRILLS  
 LONG SERIES

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
47.62	1.7/8	321	470	4
48.00				
48.42	1.29/32			
48.50				
49.00				
49.21	1.15/16			
19.50				
50.00				

High Speed Steel  
TAPER SHANK TWIST DRILLS  
EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		MT SHANK NO.
			FL	OAL	FL	OAL	
mm	inch	DG	MM		MM		
5.94 5.95 6.00	15/64	A	100	200	150	250	1
6.04 6.10 6.15 6.20 6.25 6.30 6.35 6.40 6.50 6.53 6.60 6.63 6.70	1/4	B C D E F G	125	225	175	275	-
6.75 6.80 6.90 7.00 7.03 7.10 7.14 7.20 7.30 7.37 7.40 7.49 7.50	17/64     9/32	H I J K L M	150	250	200	300	-
7.54 7.60 7.67 7.70 7.80 7.90 7.94 8.00 8.03 8.10 8.20 8.30 8.33 8.40	19/64    5/16   21/64	N   O P	165	265	210	330	-

High Speed Steel  
TAPER SHANK TWIST DRILLS  
EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		MT SHANK NO.						
			FL	OAL	FL	OAL							
mm	inch	DG	MM		MM								
8.43	11/32	Q	175	275	220	345	1						
8.50													
8.60													
8.61													
8.70													
8.73													
8.80													
8.84													
8.90													
9.00													
9.09	23/64	T	175	275	220	345	1						
9.10													
9.13													
9.20													
9.30													
9.34													
9.40													
9.50													
9.52		3/8						V	185	285	235	360	1
9.58													
9.60													
9.70													
9.80													
9.90													
9.92													
10.00													
10.08													
10.10													
10.20	25/64	W	185	285	235	360	1						
10.26													
10.30													
10.32													
10.40													
10.49													
10.50													
10.60													
10.70		13/32						Y	195	300	250	375	1
10.72													
10.80													
10.90													
11.00													
11.10													
11.11													
11.11	7/16		Z	195	300	250	375	1					

High Speed Steel  
TAPER SHANK TWIST DRILLS  
EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		MT SHANK NO.
			FL	OAL	FL	OAL	
mm		inch	MM		MM		
11.20							
11.30							
11.40							
11.50			195	300	250	375	1
11.51		29/64					
11.60							
11.70							
11.80							
11.90							
11.91		15/32					
12.00							
12.10							
12.20							
12.30		31/64					
12.40							
12.50			205	310	260	395	1
12.60							
12.70		1/2					
12.80							
12.90							
13.00							
13.00							
13.10		33/64					
13.20							
13.30							
13.40							
13.49		17/32					
13.50							
13.60			220	325	275	410	1
13.70							
13.80							
13.89		17/32					
13.90							
14.00							
14.25							
14.29		9/16					
14.50							
14.68		37/64	220	340	275	425	2
14.75							
15.00							
15.08		19/32					
15.25			230	355	295	445	2
15.48		39/64					
15.50							

High Speed Steel  
TAPER SHANK TWIST DRILLS  
EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		MT SHANK NO.
			FL	OAL	FL	OAL	
mm	inch	MM		MM			
15.75 15.87 16.00	5/8	230	355	295	445	2	
16.25 16.27 16.50 16.67 16.75 17.00	41/64 21/32	230	355	295	445	2	
17.07 17.25 17.46 17.50 17.75 17.86 18.00	43/64 11/16 45/64	245	370	310	465	2	
18.25 18.26 18.50 18.65 18.75 19.00	23/32 47/64	245	370	310	465	2	
19.05 19.25 19.45 19.50 19.75 19.84 20.00	3/4 49/64 25/32	260	385	325	490	2	
20.24 20.25 20.50 20.64 20.75 21.00 21.03	51/64 13/16 53/64	260	385	325	490	2	
21.25 21.43 21.50 21.75 21.83 22.00 22.22	27/32 55/64 7/8	270	405	345	515	2	

High Speed Steel  
TAPER SHANK TWIST DRILLS  
EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		MT SHANK NO.			
			FL	OAL	FL	OAL				
mm		inch	MM		MM					
22.25		57/64	270	405	345	515	2			
22.50										
22.62										
22.75										
23.00										
23.02		29/32								
23.25		59/64	270	425	345	535	3			
23.25										
23.50										
23.75		15/16	290	440	555	290				
23.81										
24.00		61/64								
24.21										
24.25										
24.50		31/32								
24.61										
24.75										
25.00		63/64								
25.25		1					290	440	365	555
25.40										
25.50										
25.75										
26.00										
26.19			1.1/32							
26.25										
26.50										
26.75		1.1/16	305	460	385	580				
26.99										
27.00										
27.25										
27.50										
27.75							1.3/32			
27.78										
28.00										
28.25		1.1/8	305	460	385	580	3			
28.50										
28.57										
28.75										
29.00										
29.25		1.5/32								
29.37										
29.50										
29.75										

High Speed Steel  
TAPER SHANK TWIST DRILLS  
EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		MT SHANK NO.
			FL	OAL	FL	OAL	
mm		inch	MM		MM		
30.00			305	460	385	580	3
30.16		1.3/16					
30.25							
30.50							
30.75							
30.96		1.7/32	320	480	410	610	3
31.00							
31.25							
31.50							
31.75		1.1/4					
32.00							
32.50							
32.54		1.9/32	320	505	430	635	4
33.00							
33.34		1.5/16					
33.50							
34.00							
34.13		1.11/32					
34.50							
34.92		1.3/8	340	530	430	665	4
35.00							
35.50							
35.72		1.13/32					
36.00							
36.50							
36.51		1.7/16	340	530	430	665	4
37.00							
37.51		1.15/32					
37.50							
38.00							
38.10		1.1/2					
38.50							
38.89		1.17/32	360	555	460	695	4
39.00							
39.50							
39.69		1.9/16					
40.00							
40.48		1.19/32					
40.50							
41.00							
41.27		1.5/8	360	555	460	695	4
41.50							
42.00							



High Speed Steel  
TAPER SHANK TWIST DRILLS  
EXTRA LONG SERIES

SIZE H8			SERIES 1		SERIES 2		MT SHANK NO.
			FL	OAL	FL	OAL	
mm		inch	MM		MM		
42.07 42.50		1.21/32	360	555	460	695	4
42.86 43.00 43.50 43.66 44.00 44.45 44.50 45.00		1.11/16   1.23/32  1.3/4	385	585	490	735	4
45.24 45.50 46.00 46.04 46.50 46.83 47.00 47.50		1.25/32  1.13/16  1.27/32	385	585	490	735	4
47.62 48.00 48.42 48.50 49.00 49.21 49.50 50.00 50.01		1.7/8  1.29/32  1.15/16  1.31/32	405	605	510	765	4

High Speed Steel  
PARALLEL SHANK CORE DRILL

CHOICE 1	SIZE H8 MM	CHOICE 2	INCH	FL	OAL
				MM	
3.00				33	61
3.30		3.10		36	65
		3.20			
3.50		3.40		39	70
		3.60			
		3.70			
3.80		3.90		43	75
4.00		4.10			
		4.20			
4.80		4.90		52	66
5.00		5.10			
		5.20			
		5.30			
5.80		5.40	7/32	57	93
		5.50			
		5.60			
		5.70			
6.00		5.90	15/64		
		6.10	1/4	63	101
		6.20			
		6.30			
		6.40			
		6.50			
		6.60			
		6.70			
6.80			17/64	69	109
7.00		6.90			

High Speed Steel  
PARALLEL SHANK CORE DRILL

CHOICE 1	SIZE H8 MM	CHOICE 2	INCH	FL	OAL
				MM	
		7.10 7.20 7.30 7.40 7.50	9/32    19/64	69	109
7.80  8.00		7.60 7.70  7.90  8.10 8.20 8.30  8.40 8.50	5/16   21/64	75	117
8.80  9.00		8.60 8.70  8.90  9.10 9.20 9.30 9.40 9.50	11/32   23/64	81	125
9.80  10.00		9.60 9.70  9.90  10.10 10.20 10.30	3/8   25/64	87	133

High Speed Steel  
PARALLEL SHANK CORE DRILL

CHOICE 1	SIZE H8 MM	CHOICE 2	INCH	FL	OAL
				MM	
		10.40		87	133
		10.50			
		10.60			
10.75		10.70	27/64	94	142
11.00		10.80	7/16		
11.75		10.90			
		11.10			
		11.20			
		11.30			
		11.40			
		11.50			
		11.60			
		11.70			
		11.80			
12.00		11.90	15/32	101	151
12.75		12.10	1/2		
		12.20			
		12.30			
		12.40			
		12.50			
		12.60			
		12.70			
13.00		12.80	33/64		
		12.90			
		13.10			
		13.20			
		13.30	17/32	108	160
		13.40			
		13.50			

High Speed Steel  
PARALLEL SHANK CORE DRILL

CHOICE 1	SIZE H8 MM	CHOICE 2	INCH	FL	OAL
				MM	
13.75	14.00	13.60	35/64	108	160
		13.70			
		13.80			
		13.90			
14.75		14.25	9/16	114	169
15.00		14.50	37/64		
		15.25	19/32		
15.75		15.50	39/64	120	178
16.00			5/8		
16.75		16.25 16.50	21.32	125	184
17.00					
17.70		17.25	23/32	130	191
18.00		17.50			
18.70		18.25	23/32	135	198
		18.50	3/4		
19.70		19.25	25/32	140	205

High Speed Steel  
TAPER SHANK CORE DRILL

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
7.94 8.00 8.10 8.20 8.30	5/16	75	156	1
8.33 8.40 8.50	21/64			
8.60 8.70		81		
8.73 8.80 8.90 9.00 9.10	11/32		162	1
9.13 9.20	23/64			
9.30 9.40 9.50		81	162	1
9.52 9.60 9.70 9.80 9.90	3/8	87		
9.92 10.00 10.10 10.20 10.30	25/64		168	1
10.32 10.40 10.50 10.60	13/32			
10.70 10.72 10.80 10.90 11.00 11.10	27/64	94	175	1
11.11 11.20 11.30	7/16			

High Speed Steel  
TAPER SHANK CORE DRILL

SIZE H8			FA	OAL	MT SHANK NO.
mm		INCH	MM		
11.40 11.50 11.51 11.60 11.70 11.80		29/64	94	175	1
11.90 11.91		15/32	101	182	1
12.00 12.10 12.20 12.30		31/64			
12.40 12.50 12.60 12.70 12.80 12.90 13.00					
13.10 13.20		33/64			
13.30 13.40 13.49 13.50 13.60		17/32	101	182	1
13.70 13.80 13.89 13.90 14.00		35/64	108	189	1
14.25 14.29 14.50		9/16	114	212	1
14.68 14.75 15.00		37/64			
15.08 15.25		19/32	120	218	2
15.48 15.50 15.75		39/64			
15.87		5/8			

High Speed Steel  
TAPER SHANK CORE DRILL

SIZE H8			FA	OAL	MT SHANK NO.
mm		INCH	MM		
16.00			120	218	2
16.25 16.27 16.50		41/64	125	223	2
16.67 16.75 17.00		21/32			
17.07 17.25		43/64			
17.46 17.50 17.75		11/16	130	228	2
17.86 18.00		45/64			
18.25 18.26 18.50		23/32			
18.65 18.75 19.00		47/64	135	233	2
19.05 19.25		3/4			
19.45 19.50 19.75		49/64			
19.84 20.00		25/32	140	243	2
20.24 20.25 20.50 20.64 20.75 21.00		51/64			
21.03		53/64			
21.25 21.43 21.50 21.75		27/32	150	248	2
21.83 22.00		55/64			
22.22 22.25		7/8			
22.50			155	253	2



High Speed Steel  
TAPER SHANK CORE DRILL

SIZE H8			FA	OAL	MT SHANK NO.
mm		INCH	MM		
22.62 22.75 23.00		57/64	155	253	2
23.02 23.25		29/32			
23.42 23.50		59/64			
23.75 23.81		15/16	155	276	3
24.00 24.21		61/64	160	286	3
24.25 24.50 24.61		31/32			
24.75 25.00		63/64			
25.25 25.40 25.50 25.75 26.00 26.19 26.25 26.50		1			
26.75 26.99 27.00 27.25 27.50 27.75		1.1/6	170	291	3
27.78 28.00		1.3/32			
28.25 28.50 28.57 28.75		1.1/8	175	296	3
29.00 29.25 29.37 29.50 29.75 30.00			175	296	3
30.16		1.3/16			

High Speed Steel  
TAPER SHANK CORE DRILL

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
30.25	1.7/32	180	301	4
30.50				
30.75				
30.96				
31.00				
31.25				
31.50				
31.75	1.1/4	185	306	4
32.00	1.9/32	185	334	
32.50				
32.54				
33.00	1.5/16	185	334	4
33.34				
33.50				
34.00	1.11/32	190	339	4
34.13				
34.50	1.3/8			
34.92				
35.00				
35.50				
35.72	1.13/32	195	344	4
36.00				
36.50				
36.51	1.7/16			
37.00				
37.31	1.15/32			
37.50				
38.00	1.1/2	200	349	4
38.10				
38.50	1.17/32			
38.89				
39.00				
39.50				
39.69	1.9/16			
40.00				
40.48	1.19/32	205	354	4
40.50				
41.00				
41.27	1.5/8			
41.50				
42.00				
42.07	1.21/32			
42.50				

High Speed Steel  
TAPER SHANK CORE DRILL

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
42.86	1.11/16	210	359	4
43.00				
43.50				
43.66				
44.00				
44.50				
45.00				
45.24	1.25/32	215	364	4
45.50				
46.00				
46.04				
46.50				
46.83				
47.00				
47.50				
47.62	1.7/8	220	369	4
48.00				
48.42				
48.50				
50.00				
50.01	1.31/32	225	374	4
50.50		225	421	
50.80		2		
51.00	2.1/16	225	421	5
52.00				
52.39				
53.00				
53.97	2.1/8	230	417	5
54.00				
55.00				
55.56				
56.00				
57.00	2.1/4	235	422	5
57.15				
58.00				
58.74				
59.00				
60.00				
60.32	2.3/8	240	427	

High Speed Steel  
TAPER SHANK CORE DRILL

SIZE H8		FA	OAL	MT SHANK NO.
mm	INCH	MM		
61.00 61.91 62.00 63.00	2.7/16	240	427	5
63.50 64.00 65.00	2.1/2	245	432	5
65.09 66.00	2.9/16			
66.67 67.00	2.5/8			
68.00 68.26 69.00	2.11/16	250	437	5
69.85 70.00 71.00	2.3/4			
71.44 72.00	2.13/16			
73.00 73.02 74.00	2.7/8	255	442	5
74.61 75.00 76.00	2.15/16			

High Speed Steel  
 SHELL CORE DRILL  
 WITH TAPER BORE & SLOT DRIVE

Nominal diameter h8	Diameter of large end of taper bore	Overall Length
25 26 27 28 29 30 31 32 33 34 35	13	45
36 37 38 39 40 41 42 43 44 45	16	50
46 47 48 49 50 52	19	56
55 58 60 62	22	63
65 70 72 75	27	71
80 85 90	27	71
95 100	40	90

High Speed Steel  
 SHELL CORE DRILL  
 WITH TAPER BORE & SLOT DRIVE

Nominal diameter h8	Diameter of large end of Taper bore	CEL	OAL
1 1.1/16 1.1/8 1.3/16 1.1/4	5/8	2.1/4	2.3/4
1.5/16 1.3/8 1.7/16 1.1/2 1.9/16 1.5/8	3/4	2.3/8	3
1.11/16 1.3/4 1.13/16 1.7/8 1.15/16 2	1	2.3/4	3.1/2
2.1/8 2.1/4 2.3/8	1.1/4	3	3.3/4
2.1/2 2.5/8 2.3/4 2.7/8 3	1.1/2	3.1/4	4
3.1/8 3.1/4 3.3/8 3.1/2	1.3/4	3.3/4	4.1/2
3.5/8 3.3/4 3.7/8 4	2	4.1/4	5

High Speed Steel  
CENTRE DRILLS

Pilot diameter k12	Body diameter h9	OAL		Pilot Length	
		MAX	MIN	MAX	MIN
1.0	3.15	33.5	29.5	1.9	1.3
1.3	3.15	33.5	29.5	2.2	1.6
1.6	4.0	37.5	33.5	2.8	2.0
2.0	5.0	42	38	3.3	2.5
2.5	6.3	47	43	4.1	3.1
3.2	8.0	52	48	4.9	3.9
4.0	10.0	59	53	6.2	5.0
5.0	12.5	66	60	7.5	6.3
6.3	16.0	74	68	9.2	8.0
8.0	20.0	83	77	11.5	10.1
10.0	10.0	103	97	14.2	12.8

B.S No	Body dia	Pilot dia	Pilot Length		OAL	
			Max	Min	Size	Tol
1	1/8	3/64	5/64	1/16	1.1/2	1/32
2	3/16	1/16	3/32	5/64	1.3/4	1/32
3	1/4	3/32	5/32	1/8	2	1/16
4	5/16	1/8	3/16	5/32	2.1/4	1/16
5	7/16	3/16	9/32	1/4	2.1/2	3/32
6	5/8	1/4	3/8	5/16	3	3/32
7	3/4	5/16	15/32	13/32	3.1/2	3/32

Pilot diameter k12	Body diameter h9	OAL		Pilot Length	
		Max	Min	Size	Tol
2	8	52	48	3.3	2.5
2.5	10	59	53	4.1	3.1
3.2	11.2	63	57	4.9	3.9
4.0	14	70	64	6.2	5
5.0	18	78	72	7.5	6.3
6.3	20	83	77	9.2	8
8.0	25	103	97	11.5	10.1

High Speed Steel  
**SUBLAND TWIST DRILLS**

d2 h8	d1 h9	OAL l-1	FL l-2	l-3	Thread	
					Nominal diameter	Pitch
9.0	6.8	123	81	21.0	M8	1.25
11.0	8.5	142	94	25.5	M10	1.5
14.0	10.2	160	108	30.0	M12	1.75
16.0	12.0	178	120	34.5	M14	2.0

d2 h8	d1 h9	OAL l-1	FL l-2	l-3	MT Shank No.	Thread	
						Nominal diameter	Pitch
9	6.8	162	81	2	1	M8	1.25
11	8.5	175	94	25.5		M10	1.5
14	10.2	789	108	30		M12	1.75
16	12.0	218	120	34.5	2	M14	2
18	14.0	228	130	38.5		M16	2
20	15.5	238	140	43.5		M18	2.5
22	238	248	150	47.5		M20	2.5
24	19.5	281	160	51.5	3	M22	2.5
26	21.0	268	165	56.5		M24	3
30	24.0	296	175	62.5		M27	3
33	26.5	334	185	70	4	M30	3.5



High Speed Steel  
**TAPER SHANK TWIST DRILLS**  
 FOR TAPER PIN HOLES - WITH TAPER 1:50

Nominal diameter	Small End diameter	Large End diameter	OAL	FL	Paraller diameter length	MT Shank No.
5	4.98	6.62	164	6	86	1
6	5.97	8.25	195	6	117	
8	7.97	10.69	222	10	143	
10	9.96	13.12	244	10	165	
12	11.96	15.7	293	15	198	2
16	15.95	21.07	362	15	267	
20	19.95	25.15	393	22	278	3
25	24.94	30.88	433	22	323	
32	31.93	37.99	472	30	327	4
40	39.92	46.22	500	40	348	
50	49.9	56.42	550	50	368	5

**High Speed Steel  
DRILLS FOR USE PRIOR TO TAPPING  
SCREW THREADS**

**BSW & BSF**

Nominal diameter inch	T.P.I		Nearest Drill size*	
	BSW	BSF	BSW	BSF
1/8	40	-	2.55	
3/16	24	32	3.70	5/32 in
7/32	-	28	-	4.60
1/4	20	26	5.10	5.30
9/32	-	26	-	6.11
5/16	18	22	6.50	6.80
3/8	16	20	5/16 in	8.30
7/16	14	18	9.30	9.70
1/2	12	16	10.50	7/16 in
9/16	12	16	12.10	1/2 in
5/8	11	14	13.50	14.00
11/16	11	14	15.00	15.50
3/4	10	12	41/64 in	16.75
7/8	9	11	19.25	25/32 in
1	8	10	22.00	22.75
1.1/8	7	9	24.75	25.50
1.1/4	7	9	13/32 in	1.1/8 in
1.3/8	-	8	-	31.50
1.1/2	6	8	33.50	1.23/64 in
1.5/8	-	8	-	37.90
1.3/4	5	7	39.00	41.00
2	4.5	7	44.50	47.00
2.1/4	4	6	51.00	53.00
2.1/2	4	6	57.00	58.00
2.3/4	3.5	6	62.14	63.35
3	3.5	5	68.30	69.50

**BA**

Designating No.	Diameter mm	Pitch mm	Nearest Drill size mm
0	6.0	1.00	5.10
1	5.3	0.90	4.50
2	4.7	0.81	4.00
3	4.1	0.73	3.40
4	3.6	0.66	3.00
5	3.2	0.59	4.65
6	2.8	0.53	2.30

**BSP (Parallel)**

Nominal diameter inch	Basic Major diameter of thread mm	Thread per inch	Nearest Drill size*
1/8	9.728	28	8.80
1/4	13.157	19	11.80
3/8	16.662	19	15.25
1/2	20.955	14	3/4 in
5/8	22.911	14	53/64 in
3/4	26.441	14	24.50
7/8	30.201	14	28.25
1	33.249	11	39.50
1.1/4	41.910	11	39.50
1.1/2	41.803	11	1.25/32 in
1.3/4	53.746	11	51.00
2	59.614	11	2.1/4 in
2.1/4	65.710	11	63.26
2.1/2	75.184	11	72.73
2.3/4	81.534	11	79.08
3	87.884	11	85.43
3.1/2	100.330	11	97.88
4	113.030	11	110.58

**BSP (Taper)**

Nominal diameter inch	Basic or Gauge dia of thread mm	Thread per inch	Nearest drill size*
1/8	9.728	28	8.40
1/4	13.157	19	11.20
3/8	16.662	19	14.75
1/2	20.955	14	23/32 in
3/4	26.441	14	15/16 in
1	33.249	11	30.00
1.1/4	41.910	11	38.50
1.1/2	47.803	11	44.00
2	59.614	11	56.00
2.1/2	75.184	11	2.13/16 in
3	87.884	11	84.35
3.1/2	100.330	11	109.42

**High Speed Steel  
DRILLS FOR USE PRIOR TO TAPPING  
SCREW THREADS**

**ISO INCH THREADS**

**Unified Coarse (UNC)**

Nominal diameter inch	Thread per inch	Pitch mm	Drill diameter mm
NO.1	64	0.397	1.55
NO.2	56	0.454	1.85
NO.3	48	0.529	2.10
NO.4	40	0.635	2.35
NO.5	40	0.635	5.65
NO.6	32	0.794	2.85
NO.8	32	0.794	3.50
NO.10	24	1.058	3.90
NO.12	24	1.058	43.50
1/4	20	1.27	5.10
5/16	18	1.411	6.60
3/8	16	1.588	8.00
7/16	14	1.814	9.40
1/2	13	1.954	10.80
9/16	12	2.117	12.20
5/8	11	2.309	13.50
3/4	10	2.54	16.50
7/8	9	2.822	19.50
1	8	3.175	22.25
1.1/8	7	3.629	25.00
1.1/4	7	3.629	28.00
1.3/8	6	4.233	30.75
1.1/2	6	4.233	34.00
1.3/4	5	5.08	39.50
2	4.1/2	6.644	45.00

**Unified Fine (UNF)**

Nominal diameter inch	Thread per inch	Pitch mm	Drill diameter mm
NO.0	80	0.318	1.25
NO.1	72	0.353	1.55
NO.2	64	0.397	1.90
NO.3	56	0.454	2.15
NO.4	48	0.529	2.40
NO.5	44	0.577	2.70
NO.6	40	0.632	2.95
NO.8	36	0.706	3.50
NO.10	32	0.794	4.10
NO.12	28	0.907	4.70
1/4	28	0.907	5.50
5/16	24	1.058	6.90
3/8	24	1.058	8.50
7/16	20	1.270	9.90
1/2	20	1.270	11.50
9/16	18	1.411	12.90
5/8	18	1.411	15.50
3/4	16	1.588	17.50
7/8	14	1.814	20.40
1	12	2.117	23.25
1.1/8	12	2.117	26.50
1.1/4	12	2.117	29.50
1.3/8	12	2.117	32.75
1.1/2	12	2.117	36.00

**PIPE THREADS**

Where pressure-tight joints are made on the threads

Nominal diameter No.	Thread per inch	Pitch mm	Drill diameter mm
1/8	28	0.907	8.60
1/4	19	1.337	11.50
3/8	19	1.337	15.25
1/2	41	1.814	19.00
3/4	41	1.814	21.00
1	11	2.309	24.50
1.1/4	11	2.309	39.00
1.1/2	11	2.309	45.00
2	11	2.309	56.50

Where pressure-tight joints are not made on the threads

Nominal per inch	Thread per inch	Pitch mm	Drill diameter mm
1/8	28	0.907	8.80
1/4	19	1.337	11.80
3/8	19	1.337	15.25
1/2	14	1.814	19.00
5/8	14	1.814	21.00
3/4	14	1.814	24.50
7/8	14	1.814	28.25
1	11	2.309	30.75
1.1/4	11	2.309	39.50
1.1/2	11	2.309	45.00
1.3/4	11	2.309	51.00
2	11	2.309	57.00

**High Speed Steel  
DRILLS FOR USE PRIOR TO TAPPING  
SCREW THREADS**

**DAGGER IN ROLL TAPS**

**METRIC THREAD (ISO)**

Nominal Size of Tap inch	BSW		BSF	
	T.P.I	Nearest Drill size	T.P.I	Nearest Drill size
M 2.5	0.45	2.3	0.35	2.35
M 3	0.50	2.8	0.35	2.85
M 3.5	0.60	3.2	0.35	3.3
M 4	0.70	3.7	0.50	3.8
M 4.5	0.75	4.1	0.50	4.3
M 5	0.80	4.6	0.50	4.8
M 6	1.00	5.5	0.75	5.6
M 7	1.00	6.5	0.75	6.6
M 8	1.25	7.4	1.00	7.5
M 10	1.50	9.3	1.00	9.5

**UNIFIED THREAD (UNC & UNF)**

Nominal Size of Tap inch	UNC		UNF	
	T.P.I	Nearest Drill size	T.P.I	Nearest Drill size
No.3	48	2.25	56	2.3
No.4	40	2.55	48	2.6
No.5	40	2.9	44	2.9
No.6	32	3.2	40	3.2
No.8	32	3.8	36	3.8
No.10	24	4.3	32	4.4
No.12	24	5.0	28	5.9
1/4	20	5.8	28	5.9
5/16	18	7.3	24	7.4
3/8	16	8.8	24	9.0

**B.S. WHITWORTH & FINE THREADS (BSW & BSF)**

Nominal Size of Tap inch	BSW		BSF	
	T.P.I	Nearest Drill size	T.P.I	Nearest Drill size
1/8	40	2.9	-	-
3/16	24	4.3	32	4.4
7/32	-	-	28	5.1
1/4	20	5.8	26	5.9
5/16	18	7.3	22	7.4
3/8	16	8.8	20	8.9

**BRITISH ASSOCIATION SCREW THREADS (BA)**

Designating no.	Pitch	Nearest Drill Size
6	0.530	2.55
5	0.590	2.9
4	0.660	3.3
3	0.730	3.8
2	0.810	4.3
1	0.900	4.9
0	1.000	5.5

**High Speed Steel  
PARALLEL HAND REAMERS**

<b>Nominal diameter m6</b>	<b>Cutting Edge Length</b>	<b>Overall Length</b>
3.0	31	62
3.2	33	66
3.5	35	71
4.0	38	76
4.5	41	81
5.0	44	87
5.5	47	93
6.0		
6.5	50	100
7.0	54	107
8.0	58	115
9.0	62	124
10.0	66	133
11.0	71	142
12.0	76	152
13.0		
14.0	81	163
15.0		
16.0	87	175
17.0		
18.0	93	188
19.0		
20.0	100	201
21.0		
22.0	107	215
23.0		
24.0	115	231
25.0		
26.0		

High Speed Steel  
PARALLEL HAND REAMERS

Nominal diameter m6	Cutting Edge Length	Overall Length
27.0 28.0 30.0	124	247
32.0	133	265
34.0 35.0 36.0	142	284
38.0 40.0 42.0	152	305
44.0 45.0 46.0	163	326
48.0 50.0 52.0	174	347
55.0 56.0 58.0 60.0	184	367
62.0 63.0 67.0	194	387
71.0	203	406

**High Speed Steel  
PARALLEL HAND REAMERS**

Nominal diameter m6	Cutting Edge Length	Overall Length
1/8	1.5/16	2.5/8
5/32	1.1/2	3
3/16	1.3/4	3.7/16
7/32	1.7/8	3.11/16
1/4	2	3.15/16
9/32	2.1/8	4.3/16
5/16	2.1/4	4.1/2
11/32	2.7/16	4.7/8
3/8	2.5/8	5.1/4
13/32	2.5/8	5.1/4
7/16	2.13/16	5.5/8
15/32	3	6
1/2	3	6
9/16	3.3/16	6.7/16
5/8	3.7/16	6.7/8
11/16	3.11/16	7.7/16
3/4	3.15/16	7.15/16
13/16	3.15/16	7.15/16
7/8	4.3/16	8.1/2
15/16	4.1/2	9.1/16
1	4.1/2	9.1/16
1.1/16	4.7/8	9.3/4
1.1/8	4.7/8	9.3/4
1.3/16	5.1/4	10.7/16
1.1/4	5.1/4	10.7/16
1.5/16	5.1/4	10.7/16
1.3/8	5.5/8	11.3/16
1.7/16	5.5/8	11.3/16
1.1/2	6	12
1.5/8	6	12
1.3/4	6.7/16	12.13/16
1.7/8	6.7/8	13.11/16
2	6.7/8	13.11/16
2.1/16	6.7/8	13.11/16
2.1/8	7.1/4	14.7/16
2.3/16	7.1/4	14.7/16
2.1/4	7.1/4	14.7/16
2.5/16	7.1/4	14.7/16
2.3/8	7.5/8	15.1/4
2.7/16	7.5/8	15.1/4
2.1/2	7.5/8	15.1/4

**High Speed Steel  
LONG FLUTED MACHINE REAMERS**

Nominal diameter m6	Cutting Edge Length	Overall Length	MT SHANK No.
3.0	31	111	1
3.2	33	113	
3.5	35	115	
4.0	38	1181	
4.5	41	1211	
5.0	44	124	
6.0	47	127	
6.5	50	130	
7.0	54	134	
8.0	58	138	
9.0	62	142	
10.0	66	146	
11.0	71	151	
12.0	76	156	1
13.0			
14.0	81	161	1
15.0	81	181	2
16.0	87	187	2
17.0			
18.0	93	193	2
19.0			
20.0	100	200	2
21.0			
22.0	107	207	2
23.0			
23.5	107	234	3
24.0	115	242	3
25.0			
26.0			
27.0	124	251	3
28.0			
30.0			

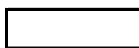


High Speed Steel  
LONG FLUTED MACHINE REAMERS

Nominal diameter m6	Cutting Edge Length	Overall Length	MT SHANK No.
31.75	133	260	3
32.0	133	293	4
34.0 35.0 36.0	142	302	4
38.0 40.0 42.0	152	312	4
44.0 45.0 46.0	163	323	4
48.0 50.0	174	334	4
52.0	174	371	5
55.0 56.0 58.0 60.0	184	381	5
62.0 63.0 67.0	194	391	5
71.0	203	400	5

High Speed Steel  
PARALLEL MACHINE REAMERS

Nominal diameter m6	Cutting Edge Length	Overall Length	MT SHANK No.
1/8	1.5/16	4.7/16	1
5/32	1.1/2	4.5/8	
3/16	1.3/4	4.7/8	
1/4	2	5.1/8	
9/32	2.1/8	5.1/4	
5/16	2.1/4	5.3/8	1
11/32	2.7/16	5.9/16	
3/8	2.5/8	5.3/4	
13/32	2.5/5	5.3/4	
7/16	2.13/16	5.15/16	
15/32	3	6.1/8	1
1/2	3	6.1/8	2
9/16	3.3/16	7.1/8	2
5/8	3.7/16	7.3/8	2
11/16	3.11/16	7.5/8	
3/4	3.15/16	7.7/8	2
13/16	3.15/16	7.7/8	
7/8	4.3/16	8.1/8	
15/16	4.1/2	9.1/2	3
1	4.1/2	9.1/2	
1.1/16	4.7/8	9.7/8	
1.1/8	4.7/8	9.7/8	
1.3/16	5.1/4	10.1/4	
1.1/4	5.1/4	10.1/4	3
1.5/16	5.1/4	11.9/16	4
1.3/8	5.5/8	11.15/16	4
1.7/16	5.5/8	11.15/16	4
1.1/2	6	15.5/16	4
1.5/8	6	12.5/16	4
1.3/4	6.7/16	12.3/4	4
1.7/8	6.7/8	13.3/16	4
2	6.7/8	13.3/16	4
2.1/4	7.1/4	15	5
2.1/2	7.5/8	15.3/8	5
3	8.3/8	16.1/8	



High Speed Steel  
CHUCKING REAMERS WITH PARALLEL SHANK

Nominal diameter m6	Cutting Edge Length	Overall Length	MT SHANK No.
3.0	3.0	15	61
3.2	3.2	16	65
3.5	3.5	18	70
4.0	4.0	19	75
4.5	4.5	21	80
5.0	5.0	23	86
5.5	5.5	26	93
6.0	6.0	26	93
5.5	5.5	28	101
7.0	7.0	31	109
8.0	8.0	33	117
9.0	9.0	36	125
10.0	10.0	38	133
11.0	11.0	41	142
12.0	12.0	44	151
13.0	10.0	44	151
14.0	12.5	47	160
15.0	12.5	50	162
16.0	12.5	52	170
17.0	14.0	54	175
18.0	14.0	56	182
19.0	16.0	58	189
20.0	16.0	60	195

High Speed Steel  
 CHICKING REAMERS WITH PARALLEL SHANK

Nominal diameter m6	Cutting Edge Length	Overall Length	MT SHANK No.
1/8	0.0984	9/16	2.3/8
5/32	0.1240	5/8	2.3/4
3/16	0.1575	3/4	3.1/8
7/32	0.1968	7/8	3.9/16
1/4	0.1968	7/8	3.9/16
9/32	0.2480	1	4.1/16
5/16	0.2480	1	4.1/16
11/32	0.3150	1.1/8	4.11/16
3/8	0.3150	1.1/8	4.11/16
13/32	0.3150	1.1/8	4.11/16
7/16	0.3937	1.5/16	5.3/8
15/32	0.3937	1.5/16	5.3/8
1/2	0.3937	1.5/16	5.3/8
9/16	0.4921	1.1/2	6.3/16
5/8	0.4921	1.1/2	6.3/16

**High Speed Steel  
CHUCKING REAMERS WITH TAPER SHANK**

Nominal diameter m6	Cutting Edge Length	Overall Length	MT SHANK No.
3.0	15	122	1
3.2	16	124	
3.5	18	126	
4.0	19	128	
4.5	21	130	
5.0	23	133	1
5.5	26	138	
6.0	26	138	
6.5	28	144	
7.0	31	150	
8.0	33	156	1
9.0	36	162	
10.0	38	168	
11.0	41	175	
12.0	44	182	
13.0	44	182	1
14.0	47	189	1
15.0	50	204	2
16.0	52	210	2
17.0	54	214	2
18.0	56	219	2
19.0	58	223	
20.0	60	228	
21.0	62	232	
22.0	64	237	2
23.0	66	241	2
23.5	66	264	3
24.0	68	268	3
25.0	68	268	3
26.0	70	273	3
28.0	71	277	
30.0	73	281	
31.0	75	285	
31.75	77	290	
32.0	77	317	4
34.0	78	321	
35.0	78	321	
36.0	79	325	
38.0	81	329	
40.0	81	329	4
42.0	82	33	
44.0	83	336	
45.0	83	336	
46.0	84	340	
48.0	86	344	4
50.0	86	344	

High Speed Steel  
 CHUCKING REAMERS WITH TAPER SHANK

Nominal diameter m6	Cutting Edge Length	Overall Length	MT SHANK No.
5/32	5/8	4.7	1
3/16	3/4	4.9/16	
1/4	7/8	4.11/16	
5/16	1	5.1/16	
3/8	1.1/8	5.1/2	
7/16	1.3/4	8	1
1/2	1.3/4	8	1
9/16	2	8.7/8	2
5/8	2	9.5/8	2
11/16	2	9.5/8	2
3/4	1.3/4	8	2
16/16	1.3/4	8	2
7/8	2	8.7/8	2
15/16	2	9.5/8	3
1	2	9.5/8	3
11.1/16	2.3/8	10.5/8	3
1.1/8	2.3/4	10.5/8	3
1.3/16	2.3/4	10.5/8	3
1.1/4	2.3/4	10.5/8	3
1.5/16	3.1/8	10.5/8	4
1.3/8	2.3/4	12.7/8	4
1.7/16	2.3/4	12.7/8	
1.1/2	2.3/4	12.7/8	
1.5/8	2.3/4	12.7/8	
1.3/4	3.1/8	14.1/4	
1.7/8	3.1/8	14.1/4	4
2	3.1/8	14.1/4	

**High Speed Steel  
MACHINE JIG REAMERS**

<b>Nominal diameter m6</b>	<b>Cutting Edge Length</b>	<b>Overall Length</b>	<b>MT SHANK No.</b>
6.0	26	138	1
6.5	28	144	
7.0	31	150	
8.0	33	156	
9.0	36	162	
10.0	38	168	1
11.0	41	175	
12.0	44	182	
13.0	44	182	
14.0	47	189	
20.0	60	228	2
21.0	62	232	2
22.0	64	237	2
23.0	66	241	2
23.5	66	264	3
24.0	68	268	3
25.0	68	268	
26.0	70	273	
28.0	71	277	
30.0	73	281	
31.0	75	285	3
31.8	77	290	3
32.0	77	290	4
34.0	78	321	4
35.0	78	321	4

**High Speed Steel  
MACHINE JIG REAMERS**

Nominal diameter m6	Cutting Edge Length	Overall Length	MT SHANK No.
1/4	7/8	5.5/8	1
5/16	1	5.15/16	
3/8	1.1/8	6.1/4	
7/16	1.5/16	6.11/16	
1/2	1.5/16	6.11/16	
9/16	1.1/2	7.13/16	2
5/8	1.1/2	7.13/16	
11/16	1.3/4	8.7/16	
3/4	1.3/4	8.7/16	
13/16	1.3/4	8.7/16	
7/8	2	8.7/8	2
15/16	2	9.15/16	3
1	2	9.15/16	3
1.1/16	2.3/8	10.3/4	3
1.1/8	2.3/8	10.3/4	3
1.3/16	2.3/8	10.3/4	3
1.1/4	2.3/8	10.3/4	3
1.5/16	2.3/8	12	4
1.3/8	2.3/4	13.1/8	4
1.7/16	2.3/4	13.1/8	4
1.1/2	2.3/4	13.1/8	4
1.5/8	2.3/4	13.1/8	
1.3/4	3.1/8	14.5/16	
1.7/8	3.1/8	14.5/16	
2	3.1/8	14.5/16	



High Speed Steel  
 SHELL REAMERS  
 With Taper Bore - 1:30

Nominal diameter m6	Cutting Edge Length	Overall Length	MT SHANK No.
21 22 23	10	28	40
24 25 26 27 28 29 30	13	32	45
31 32 33 34 35	16	36	50
36 37 38 39 40 41 42	19	40	56
43 44 45 46 47 48 49 50	22	45	63
51 52 53 54 55 56 57 58 59 60	27	50	71
61 62 63 64 65 66 67 68 69 70 71	32	56	80

High Speed Steel  
SHELL REAMERS  
With Taper Bore - 1:30

Nominal diameter m6	Large End Dia of Taper Bore	Cutting Edge Length	Overall Length
72	40	63	90
73			
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			
86	50	71	100
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			
98			
99			
100			

High Speed Steel  
 SHELL REAMERS  
 With Taper Hole (1/8" Taper per foot on dia.)

Nominal diameter m6	Overall Length	Cutting Edge Length	Diameter of larger end of Taper Bore
1 1.11/16 1.1/8 1.3/16 1.1/4	2.3/4	2.1/4	0.625
1.5/16 1.3/8 1.7/16 1.1/2 1.9/16 1.5/8	3	2.3/8	0.750
1.11/16 1.3/4 1.13/16 1.7/8 1.15/16 2	3.1/2	2.3/4	1.000
2.1/16 2.1/8 2.3/16 2.1/4 2.5/16 2.3/8 2.7/16	3.3/4	3	1.250
2.1/2 2.5/8 2.3/4 2.7/8 3	4	3.1/4	1.500
3.1/8 3.1/4 3.3/8 3.1/2	4.1/2	3.3/4	1.750
3.5/8 3.3/4 3.7/8 4	5	4.14	2.000

High Speed Steel  
PARALLEL SHANK SOCKET REAMERS

Morse Taper No.	Cutting Edge Length	Overall Length	Dia of Shank h9
0	61	98	8
1	66	102	10
2	79	121	14
3	96	146	20
4	119	179	25
5	150	222	31.5
6	208	300	45

Morse Taper No.	Cutting Edge Length	Overall Length	Dia of Shank h9
0	2.1/4	3.1/4	11/32
1	2.1/2	3.3/4	15/32
2	3	4.1/2	21/32
3	3.3/4	5.1/2	7/8
4	4.5/8	6.7/8	1
5	6	8.1/2	1.3/8
6	8.1/4	11.1/2	2

High Speed Steel  
TAPER SHANK SOCKET REAMERS

Morse Taper No.	Cutting Edge Length	Overall Length	Dia of Shank h9
0	61	137	1
1	66	142	1
2	79	173	2
3	96	212	3
4	119	263	4
5	150	331	5
6	208	389	5

Morse Taper No.	Cutting Edge Length	Overall Length	Dia of Shank h9
0	2.1/4	5.5/8	1
1	2.1/2	5.7/8	1
2	3	6.7/8	2
3	3.3/4	8.3/8	3
4	4.5/8	10.1/4	4
5	6	12.7/8	5
6	8.1/4	15.1/8	5

**High Speed Steel  
HAND TAPER PIN REAMERS**

Nominal Diameter	Cutting Edge Length	Overall Length
3	58	80
4	65	93
5	73	100
6	105	135
8	145	180
10	175	215
12	210	255
16	230	280
20	250	310
25	300	370
30	320	400
40	340	430
50	360	460

Nominal Diameter	Cutting Edge Length	Overall Length	Large End Dia & Dia of Shank	Small End Dia.
1/8	1.3/4	2.3/4	0.127	0.0905
5/32	2	3	0.158	0.1163
3/16	2.3/4	4	0.195	0.1377
7/32	2.3/4	4	0.22	0.1627
1/4	3.3/8	4.5/8	0.253	0.1827
9/32	4.1/8	5.5/8	0.292	0.2061
5/16	4.1/8	5.5/8	0.316	0.2301
11/32	4.1/2	6	0.347	0.2533
3/8	5	6.1/2	0.381	0.2768
13/32	5.3/4	7.1/2	0.412	0.2922
7/16	5.3/4	7.1/2	0.443	0.3232
1/2	6.1/2	8.1/4	0.506	0.3706
9/16	6.3/4	8.1/2	0.571	0.4304
5/8	7.1/2	9.1/4	0.633	0.4768
3/4	8.3/4	10.3/4	0.76	0.5777
7/8	9.1/2	12	0.885	0.6871

**High Speed Steel  
MACHINE TAPER PIN REAMERS**

Nominal Diameter	Cutting Edge Length	Overall Length	MT Shank No.
3	58	140	1
4	68	150	1
5	73	155	1
6	105	187	1
8	145	227	1
10	175	257	1
12	210	315	2
16	230	335	2
20	250	377	3
25	300	427	3
30	320	475	4
40	340	795	4
50	360	550	5

Nominal Diameter	Cutting Edge Length	Overall Length	Large End Dia.	Small End Dia.	MT Shank No.
3/16	2.3/4	5.3/4	0.195	0.1377	1
7/32	2.3/4	5.3/4	0.220	0.1627	
1/4	3.3/8	6.3/8	0.253	0.1827	
9/32	4.1/8	7.1/4	0.292	0.2061	
5/16	4.1/8	7.1/4	0.316	0.2301	
11/32	4.1/2	7.5/8	0.347	0.2533	1
3/8	5	8.1/8	0.381	0.2768	
13/32	5.3/4	8.7/8	0.412	0.2922	
7/16	5.3/4	8.7/8	0.443	0.3232	
1/2	6.1/2	9.5/8	0.506	0.3706	
9/16	6.3/4	10.7/16	0.571	0.4304	2
5/8	7.1/2	11.3/16	0.633	0.4768	
3/4	8.3/4	12.5/8	0.760	0.5777	
7/8	9.1/2	13.3/8	0.855	0.6871	

High Speed Steel  
MACHINE BRIDGE REAMERS

Nominal Diameter	Cutting Edge Length	Overall Length	MT Shank No.
6.4	75	151	1
7.4	80	156	
8.4	85	161	
9.5	90	166	
10.0	95	171	
11.0	100	176	
13.0	105	199	2
14.0	115	209	
15.0	125	219	
16.0	135	229	
17.0	135	251	3
19.0	145	261	
21.0	155	271	
23.0	165	281	
25.0	180	296	
28.0	195	311	
31.0	210	326	
32.0	210	354	4
34.0	220	364	
37.0	220	364	
40.0	230	374	
43.0	240	384	
49.0	250	394	



High Speed Steel  
MACHINE BRIDGE REAMERS

Nominal Diameter	Cutting Edge Length	Overall Length	Dia of Small End of Taper	MT Shank No.
1/4	3.3/8	6.3/8	1/8	1
5/16	3.3/4	6.3/4	3/16	
3/8	4	7	7/32	
7/16	4.3/8	8.1/8	1/4	2
1/2	5.3/8	9.1/8	9/32	
9/16	5.3/8	9.1/8	5/16	2
5/8	6.1/8	9.7/8	11/32	
11/16	6.1/8	9.7/8	3/8	3
11/16	7.1/8	11.3/4	3/8	
3/4	7.3/8	12	7/16	
13/16	7.3/8	12	1/2	3
7/8	7.3/8	12	9/16	
15/16	7.3/8	12	5/8	
1	7.3/8	12	11/16	
1.1/16	7.3/8	12	3/4	
1.1/8	7.3/8	12	13/16	3
1.3/16	7.3/8	12	7/8	
1.1/4	7.3/8	12	15/16	
1.1/4	7.3/8	13	15/16	4
1.5/16	7.3/8	13	1	
1.3/8	7.3/8	13	1.1/16	4
1.7/16	7.3/8	13	1.1/8	
1.1/2	7.3/8	13	1.3/16	
1.9/16	8.3/8	14	1.1/4	
1.5/8	8.3/8	14	1.5/16	
1.11/16	8.3/8	14	1.3/8	4
1.3/4	8.3/8	14	1.7/16	
1.13/16	8.3/8	14	1.1/2	
1.7/8	8.3/8	14	1.9/16	
1.15/16	8.3/8	14	1.5/8	
2	8.3/8	14	1.11/16	

**Speed Steel**  
**: MILLS UNGUIDED-TYPE 'A'**

Nominal Diameter	Cutting Edge Length	Overall Length	MT Shank No.
5.9	25	110	1
7.9	52	120	
9.9	30	125	
11.8	35	140	
12.8	35	140	
13.8	35	160	1
14.8	35	160	
15.8	40	160	1
17.8	45	180	
19.8	45	180	
21.7	45	200	2
23.7	55	200	3
24.7	55	200	
25.7	60	200	
26.7	60	220	
27.7	60	220	3
29.7	60	220	
31.7	60	220	
33.7	60	250	4
34.7	60	250	
35.7	60	250	4
37.7	60	250	
39.7	60	250	
41.6	60	250	
44.6	60	250	
46.6	60	280	4
47.6	60	280	
49.6	60	280	

High Speed Steel  
HOLE MILLS GUIDED-TYPE 'B'

Nominal Diameter		Cutting Edge length	Overall Length	MT Shank No.
Roughing h6	Finishing m6			
5.9	6	25	150	1
7.9	8	25	170	
9.9	10	30	180	
11.8	12	35	190	
12.8	13	35	200	
13.8	14	35	200	
14.8	15	35	210	
15.8	16	40	230	2
17.8	18	45	235	
19.8	20	45	245	
21.7	22	45	255	
23.7	24	55	290	3
24.7	25	55	290	
25.7	26	60	305	
26.7	27	60	305	
27.7	28	60	305	
29.7	30	60	305	
31.7	32	60	360	4
33.7	34	60	360	
34.7	35	60	360	
35.7	36	60	360	
37.7	38	60	360	
39.7	40	60	360	
41.6	42	60	360	

High Speed Steel  
CENTRE REAMERS  
Included Angle 60, 80 & 90

Body Diameter -0.001 -0.003	Overall Length	Length of Shank	Nominal Diameter of Shank
1/4	1.1/2	3/4	3/16
3/8	1.3/4	7/8	1/4
1/2	2	1	3/8
5/8	2.1/4	1	3/8
3/4	2.5/8	1.1/4	1/2

High Speed Steel  
TAPER PIPE REAMERS

Nominal Size	Nominal Diameter		Length of Flutes	Length Overall
	Large End	Small End		
1/8	0.362	0.316	3/4	2.1/8
1/4	0.472	0.406	1.1/16	2.7/16
3/8	0.606	0.54	1.1/16	2.9/16
1/2	0.751	0.665	1.3/8	3.1/8
3/4	0.962	0.876	1.3/8	3.1/8
1	1.212	1.103	1.3/4	3.3/4
1.1/4	1.553	1.444	1.3/4	4
1.1/4	1.793	1.684	1.3/4	4.1/4
2	2.268	2.159	1.3/4	4.1/2

High Speed Steel

**HAND AND SHORT MACHINE TAPS**

ISO Metric Threads - Ground Threads

Fine Pitch

Nominal Diameter	Pitch	Thread Length	Overall Length
<b>M42</b>	2.00	39	149
<b>M42</b>	3.00	60	170
<b>M42</b>	4.00	60	170
<b>M45</b>	1.50	45	165
<b>M45</b>	2.00	45	165
<b>M45</b>	3.00	67	187
<b>M45</b>	4.00	67	187
<b>M48</b>	1.50	45	165
<b>M48</b>	2.00	45	165
<b>M48</b>	3.00	67	187
<b>M48</b>	4.00	67	187
<b>M52</b>	1.50	45	175
<b>M52</b>	2.00	45	175
<b>M52</b>	3.00	70	200
<b>M52</b>	4.00	70	200
<b>M56</b>	1.50	45	175
<b>M56</b>	2.00	45	175
<b>M56</b>	3.00	70	200
<b>M56</b>	4.00	70	200
<b>M60</b>	1.50	48	193
<b>M60</b>	2.00	48	193
<b>M60</b>	3.00	64	209
<b>M60</b>	4.00	64	209
<b>M64</b>	1.50	48	193
<b>M64</b>	2.00	48	193
<b>M64</b>	3.00	64	209
<b>M64</b>	4.00	64	209
<b>M68</b>	1.50	48	203
<b>M68</b>	2.00	48	203
<b>M68</b>	3.00	64	219
<b>M68</b>	4.00	64	219
<b>M72</b>	6.00	79	234
<b>M76</b>	6.00	83	258
<b>M80</b>	6.00	83	258
<b>M85</b>	6.00	86	261
<b>M90</b>	6.00	86	261
<b>M95</b>	6.00	89	279
<b>M100</b>	6.00	89	279

Dimensions in mm

Specifications conform to IS : 6175 - 1977/ISO 529 - 1975

These taps are usually supplied in set of two - Taper and Bottoming, non-serial with Thread Tolerance 6H.

Shank diameter/design is supplied according to IS : 6175-Part II for the sizes below M12. For size M12 and above it is as per IS : 6175 Part III

High Speed Steel  
**CYLINDRICAL MILLING CUTTERS**

**HIGH POWER TYPE**

Diameter + 0.045 - 0.0	Bore + 0.00075 + 0.00025	Length*
2.1/2	1	1 2 3 4
3	1.1/4	1 2 3 4 5 6
3.1/2	1.1/4	2 3 4 5 6 7 8
4	1.1/4 to 1.1/2	2 3 4 5 6 7 8
4.1/2	1.1/2 or 2	2 3 4 5 6 7 8

Dimensions in inches.

Specifications conform to BS 122 Part 1 - 1953

These cutters have LH helical flutes

\*Tolerance - 6 inches and below = + 0.030"  
 - 0.0  
 and above 6 inches = + 0.060"  
 - 0.0

High Speed Steel  
**CYLINDRICAL MILLING CUTTERS**

**HELICAL TYPE**

Diameter + 0.045 - 0.0	Bore + 0.00075 + 0.00025	Length*
3	1.1/4	2
		3
		4
		6
4	1.1/2	2
		3
		4
		6
5	1.1/2 or 2	2
		3
		4
		5

Dimensions in inches.

Specifications conform to BS 122 Part 1 - 1953

These cutters have LH helical flutes

\*Tolerance - 6 inches and below = + 0.030"  
 - 0.0  
 and above 6 inches = + 0.060"  
 - 0.0

High Speed Steel  
**SIDE AND FACE CUTTERS**

Diameter js 16	Width k11	Bore H7
50	5	16
	6	
	8	
	10	
63	5	22
	6	
	8	
	10	
	12	
	14	
80	5	27
	6	
	8	
	10	
	12	
	14	
	16	
	18	
100	20	32
	22	
	25	

Dimensions in mm.

Specifications conform to IS : 6308 - 1982 / ISO 2587 - 1972.

Normally Type N Tools are supplied.



High Speed Steel  
**SIDE AND FACE CUTTERS**

Diameter js 16	Width k11	Bore H7
125	8	32
	10	
	12	
	14	
	16	
	18	
	20	
	22	
	25	
28		
160	10	40
	12	
	14	
	16	
	18	
160	20	40
	22	
	25	
	28	
	32	
200	12	40
	14	
	16	
	18	
	20	
	22	
	25	
	28	
	32	
	36	
	40	

Dimensions in mm.

Specifications conform to IS : 6308 - 1982 / ISO 2587 - 1972.

Normally Type N Tools are supplied.

High Speed Steel  
**SIDE AND FACE CUTTERS**

Diameter + 0.045 - 0.0	Bore + 0.00075 + 0.00025	Width* + 0.0005 - 0.0
2.1/2	1	1/4 5/16 3/8 1/2
3	1	1/4 5/16 3/8 1/2 5/8
3.1/2	1	1/4 5/16 3/8 1/2 5/8 3/4
4	1 or 1.1/4	1/4 3/8 1/2 5/8 3/4 7/8 1
5	1.1/4	1/2 5/8 3/4 7/8 1
6	1.1/4 or 1.1/2	1/2 5/8 3/4 7/8 1 1.1/4

Dimensions in inches

Specifications conform to BS 122 Part 1 - 1953

\* Width 3/4 inch and above are normally supplied with LH helical flutes.

High Speed Steel  
**SIDE AND FACE CUTTERS**  
**STAGGERED TEETH**

Diameter + 0.045 - 0.0	Bore + 0.00075 + 0.00025	Width* + 0.0005 - 0.0
3	1	1/4 5/16 3/8 1/2
4	1	1/4 5/16 3/8 1/2 5/8
5	1.1/4	3/8 1/2 5/8
6	1.1/4	3/8 1/2 5/8 3/4
7	1.1/4	1/2 5/8 3/4 7/8
8	1.1/2	5/8 3/4 7/8 1

Dimensions in inches.

Specifications conform to BS 122 / Part 1 - 1953

High Speed Steel  
**SHELL END MILLS**

<b>Diameter js 16</b>	<b>Bore H7</b>	<b>Width* k16</b>
40	16	32
50	22	36
63	27	40
80	27	45
100	32	50
125	40	56
160	50	63

Dimensions in mm.

Specifications conform to IS : 6257 - 1982 / ISO 2586 - 1973

These Shell End Mills have RH helix for RH cutting

Tool Type N.

<b>Diameter + 0.045 - 0.0</b>	<b>Length + 0.030 - 0.0</b>	<b>Bore + 0.00075 + 0.00025</b>
1.1/4	1	1/2
1.1/2	1.1/8	1/2
1.3/4	1.1/4	3/4
2	1.3/8	3/4
2.1/4	1.1/2	1
2.1/2	1.5/8	1
2.3/4	1.5/8	1
3	1.3/4	1.1/4
3.1/2	1.7/8	1.1/4
4	2.1/4	1.1/2
4.1/2	2.1/4	1.1/2
5	2.1/4	1.1/2
5.1/2	2.1/4	2
6	2.1/4	2

Dimensions in inches

Specifications conform to BS : 122 Part / 1 - 1953

These Shell End Mills have RH helix for RH Cutting

High Speed Steel  
**SINGLE ANGLE CUTTERS**

Diameter js 16	Bore H7	Width* js 16	Angle* + 1°
50	16	12	60°, 65° 70°, 75° 80° & 85°
63	22	18	
63	22	26	70°, 75° & 80°
80	22	32	
100	27	36	

Dimensions in mm.

Specifications conform to IS : 6324 - 1971

Normally RH cutters Type H Tools are supplied.

Diameter + 0.045 - 0.0	Bore + 0.00075 + 0.00025	Width + 0.015 - 0.0	Angle°
2.3/4	1	5/16	30
		7/16	40
		1/2	45, 50 60, 70 & 80
3	1.1/4	5/16	30
		7/16	40
		1/2	45
		5/8	50, 60 70 & 80

Dimensions in inches.

Specifications conform to BS : 122 Part 1 - 1953

Normally RH cutters are supplied.

High Speed Steel  
**DOUBLE ANGLE CUTTERS**

Diameter js 16	Bore H7	Width js 16	Small Angle $\beta^{\circ} + 1^{\circ}$	Included Angle $\alpha^{\circ} + 1^{\circ}$
50	16	12	12	55
			15	60
			15	65
63	22	18	15	70
			15	75
			15	80
50	16	14	20	90
63	22	20		
50	16	16	25	100
63	22	22		
80	22	32	15	65
			15	70
			15	75
100	27	36	15	70
			15	75
			15	80

Dimensions in mm.

Specifications conform to IS : 6325 - 1977

Normally RH Cutter and Type H Tools are supplied.

High Speed Steel  
**DOUBLE ANGLE CUTTERS**

Diameter + 0.045" - 0.0	Bore + 0.00075 + 0.00025	Width + 0.015 - 0.0	Angle $\alpha^\circ \times \beta^\circ$
2.3/4	1	5/8	12 X 48 12 X 53 12 X 58 12 X 63 12 X 68 12 X 73
3	1.1/4	3/4	12 X 48 12 X 53 12 X 58 12 X 63 12 X 68 12 X 73

Dimensions in inches

Specifications conform to BS : 122 Part 1-1953

Normally RH Cutters are supplied.

High Speed Steel  
**EQUAL ANGLE CUTTERS**

Diameter js 16	Bore H7	Width k11	Included Angle <sup>o</sup> + 1°
56	16	10	45
		12	60
		14	90
63	22	12	45
		16	60
		18	90
100	27	18	45
		25	60
		28	90

Dimensions in mm.

Specifications conform to IS : 6326 - 1971

Normally Type H Tools are supplied.

Diameter + 0.045 - 0.0	Bore + 0.00075 + 0.00025	Width + 0.015* - 0.0	Included Angle <sup>o</sup>
2.3/4	1	5/16	30
		7/16	40
			45, 60
		1/2	& 90
3	1.1/4	5/16	30
		7/16	40
		1/2	45
		5/8	60 & 90

Dimensions in inches.

Specifications conform to BS 122 Part 1 - 1953



High Speed Steel

**50° SHELL AND SINGLE ANGLE CUTTERS**

<b>Diameter js 16</b>	<b>Width k16</b>	<b>Bore H7</b>	<b>Angle°</b>	<b>Tol. On Angle</b>
40	13	10	50	± 25
50	16	13		
63	20	16		
80	25	22	50	± 20
100	32	27		
125	40	32		
160	50	40		

Dimensions in mm.

Specifications conform to IS : 6256-1971

Normally RH Cutters and Type H Tools are supplied.

High Speed Steel

**FACE CUTTERS**

<b>Diameter + 0.045 - 0.0</b>	<b>Length + 0.030 - 0.0</b>	<b>Bore + 0.00075 + 0.00025</b>
1.3/4	1.1/4	3/4
2		
2.1/2		
3	1.11/16	1.1/8
4	1.3/4	
5	2	1.1/2

Dimensions in inches.

Specifications conform to BS 122/Part 1 - 1953

These cutters have RH helical flutes for RH cutting with a slot drive.

High Speed Steel  
**SLOTING CUTTERS**

Diameter + 0.045 - 0.0	Bore + 0.00075 + 0.00025	Width + 0.001 - 0.001
2.1/2	1	1/4 5/16 3/8 7/16 1/2
3	1	1/4 5/16 3/8 7/16 1/2 5/8 3/4
3.1/2	1	1/4 5/16 3/8 7/16 1/2 5/8 3/4 7/8
4	1	1/4 5/16 3/8 7/16

Dimensions in inches.

Specifications conform to BS 122 Part 1 - 1953

Width 3/4 and above are normally supplied with LH helical flutes.

High Speed Steel  
**SLOTING CUTTERS**

Diameter + 0.045 - 0.0	Bore + 0.00075 + 0.00025	Width + 0.001 - 0.001
4	1	1/2 5/8 3/4 7/8 1
5	1.1/4	1/4 5/16 3/8 7/16 1/2 5/8 3/4 7/8 1
5	1.1/4	1/4 5/16 3/8 7/16 1/2 5/8 3/4 7/8 1

Dimensions in inches.

Specifications conform to BS 122 Part 1 - 1953

Width 3/4 and above are normally supplied with LH helical flutes.

High Speed Steel  
**KEYWAY MILLING CUTTERS**

Diameter js16	Bore H7	Width d9
50	16	5
		6
		8
		10
63	22	5
		6
		8
		10
		12
		14
80		5
		6
		8
		10
		12
		14
		16
		18
100	32	6
		8
		10
		12
		14
		16
		18
		20
		22
		25

Dimensions in mm.

Specifications conform to IS : 6355 - 1982/ISO 2585 - 1972.

Normally RH Cutting, Type N Tools are supplied.

High Speed Steel  
**KEYWAY MILLING CUTTERS**

Diameter js16	Bore H7	Width d9
125	32	8
		10
		12
		14
		16
		18
		20
		22
		25
160	40	10
		12
		14
		16
		18
		20
		22
		25
		28
32		
200	40	12
		14
		16
		18
		20
		22
		25
		28
		32
		36
40		

Dimensions in mm.

Specifications conform to IS : 6355 - 1982/ISO 2585 - 1972.

Normally RH Cutting, Type N Tools are supplied.

High Speed Steel  
**HOLLOW MILLS**

Diameter of Bore + 0.0 - 0.002	Outside Diameter*	Overall Length
1/4	5/8	1.1/2
9/32 5/16 11/32	3/4	1.1/2
3/8 7/16 1/2	1	1.3/4
9/16 5/8	1.1/4	2
11/16 3/4 13/16	1.1/2	2
7/8 15/16 1	1.3/4	2.1/4

Dimensions in inches.

Specifications conform to BS 122/ Part 1 - 1953

The Hollow mills are normally supplied RH Cutting.

\* Tolerance - 1 inch and below - 0.0007  
- 0.0012  
above 1 inch - 0.0007  
- 0.0015



High Speed Steel  
**CONVEX MILLING CUTTERS**

<b>Diameter + 0.045" - 0.0</b>	<b>Width &amp; Circle Diameter*</b>	<b>Bore + 0.00075 + 0.00025</b>
2.1/4	1/8 3/16 1/4	1
2.1/2	5/16 3/8 7/16 1/2	1
2.3/4	9/16 5/8	1
3	11/16 3/4	1
3.1/4	13/16 7/8	1
3.1/2	15/16 1	1
4	1.1/8 1.1/4	1.1/4
4.1/2	1.3/8 1.1/2	1.1/4

Dimensions in inches.

Specifications conform to BS 122/ Part 1 - 1953

\* Tolerance - 5/8 inches and below = + 0.002  
- 0.0  
above 1 inch = + 0.004  
- 0.0



High Speed Steel

**CONCAVE MILLING CUTTERS**

<b>Radius N 11</b>	<b>Width</b>	<b>Diameter js 16</b>	<b>Bore H7</b>
1.60 2.00	8 9	50	16
2.50 3.00 3.15 4.00 5.00	10 12 12 16 20	63	22
6.00 6.30 8.00	24 24 32	80	27
10.00 12.00 12.50	36 40 40	100	32
16.00 20.00	50 60	125	32

Dimensions in mm.

Specifications conform to IS : 6322-1982

Normally Type N Tools are supplied.

High Speed Steel  
**CONCAVE MILLING CUTTERS**

Diameter + 0.045 - 0.0	Circle Diameter*	Bore + 0.00075 + 0.00025	Width + 0.010 - 0.0
2.1/4	1/8 3/16 1/4	1	5/16 3/8 1/2
2.1/2	5/16 3/8 7/16 1/2	1	5/8 3/4 7/8 1
2.3/4	9/16 5/8	1	1.3/16
3	11/16 3/4	1	1.3/8
3.1/4	13/16 7/8	1	1.9/16
3.1/2	13/16 1	1	1.3/4
4	1.1/8 1.1/4	1.1/4	1.15/16 2.1/8
4.1/4	1.3/8 1.1/2	1.1/4	2.5/16 2.1/2

Dimensions in inches.

Specifications conform to BS 122 Part-1-1953

\* Tolerance - 5/8 inch & below = + 0.0  
- 0.002  
above 5/8 inch = + 0.0  
- 0.004

High Speed Steel

**SINGLE CORNER ROUNDING CUTTERS**

<b>Diameter js 16</b>	<b>Bore H7</b>	<b>Width</b>	<b>Radius N11</b>
50	16	5	1.60 2.00
63	22	5	2.50
63	22	6	3.00 3.15
63	22	8 10	4.00 5.00
80	27	12	6.00 6.30
80	27	16	8.00
100	32	18	10.00
100	32	20	12.00 12.50
125	32	24 28	16.00 20.00

Dimensions in mm.

Specifications conform to IS: 6314 - 1982 / ISO 3860 - 1976.

Normally RH Cutting Type N Tools are supplied.

High Speed Steel

**HAND AND SHORT MACHINE TAPS**

**ISO Metric Threads - Ground Threads**

**COARSE PITCH**

Nominal Diameter	Pitch	Thread Length	Overall Length
<b>M3</b>	0.50	11	48
<b>M4</b>	0.70	13	53
<b>M4.5</b>	0.75	13	53
<b>M5</b>	0.80	16	58
<b>M6</b>	1.00	19	66
<b>M8</b>	1.25	22	72
<b>M10</b>	1.50	24	80
<b>M12</b>	1.75	29	89
<b>M14</b>	2.00	30	95
<b>M16</b>	2.00	32	102
<b>M18</b>	2.50	37	112
<b>M20</b>	2.50	37	112
<b>M22</b>	2.50	38	118
<b>M24</b>	3.00	45	130
<b>M25</b>	3.00	45	130
<b>M27</b>	3.00	45	135
<b>M30</b>	3.50	48	138
<b>M33</b>	3.50	48	151
<b>M36</b>	4.00	57	162
<b>M39</b>	4.00	60	170
<b>M42</b>	4.50	60	170
<b>M45</b>	4.50	67	187
<b>M48</b>	5.00	67	187
<b>M52</b>	5.00	70	200
<b>M56</b>	5.50	70	200
<b>M60</b>	5.50	76	221
<b>M64</b>	6.00	79	224
<b>M68</b>	6.00	79	234

Dimensions in mm

Specifications conform to IS : 6175 - 1977/ISO 529 - 1975

These taps are usually supplied in set of three - Taper, Second and Bottoming; non-serial with Thread Tolerance 6H.

Shank diameter/design is supplied according to IS : 6175-Part II for the sizes below M12. For size M12 and above it is as per IS : 6175 Part III

**HAND AND SHORT MACHINE TAPS****ISO Metric Threads - Ground Threads****Fine Pitch**

<b>Nominal Diameter</b>	<b>Pitch</b>	<b>Thread Length</b>	<b>Overall Length</b>
<b>M4</b>	0.50	13	53
<b>M4.5</b>	0.50	13	53
<b>M5</b>	0.50	16	58
<b>M6</b>	0.75	19	66
<b>M8</b>	1.00	19	69
<b>M10</b>	1.00	20	76
<b>M10</b>	1.25	20	76
<b>M12</b>	1.25	24	84
<b>M12</b>	1.50	29	89
<b>M14</b>	1.25	25	90
<b>M14</b>	1.50	30	95
<b>M16</b>	1.50	32	102
<b>M18</b>	1.50	33	108
<b>M18</b>	2.00	33	108
<b>M20</b>	1.50	33	108
<b>M20</b>	2.00	33	108
<b>M22</b>	1.50	35	115
<b>M22</b>	2.00	35	115
<b>M24</b>	1.50	35	120
<b>M24</b>	2.00	35	120
<b>M27</b>	1.50	37	127
<b>M27</b>	2.00	37	127
<b>M30</b>	1.50	37	127
<b>M30</b>	2.00	37	127
<b>M30</b>	3.00	48	138
<b>M33</b>	1.50	37	137
<b>M33</b>	2.00	37	137
<b>M33</b>	3.00	51	151
<b>M36</b>	1.50	39	144
<b>M36</b>	2.00	39	144
<b>M36</b>	3.00	57	162
<b>M39</b>	1.50	39	149
<b>M39</b>	2.00	39	149
<b>M39</b>	3.00	60	170
<b>M42</b>	1.50	39	149

Dimensions in mm

Specifications conform to IS : 6175 - 1977/ISO 529 - 1975

These taps are usually supplied in set of two - Taper and Bottoming, non-serial with Thread Tolerance 6H.

Shank diameter/design is supplied according to IS : 6175-Part II for the sizes below M12. For size M12 and above it is as per IS : 6175 Part III



High Speed Steel

**HAND AND SHORT MACHINE TAPS**

ISO Metric Threads - Ground Threads

Fine Pitch

Nominal Diameter	Pitch	Thread Length	Overall Length
<b>M42</b>	2.00	39	149
<b>M42</b>	3.00	60	170
<b>M42</b>	4.00	60	170
<b>M45</b>	1.50	45	165
<b>M45</b>	2.00	45	165
<b>M45</b>	3.00	67	187
<b>M45</b>	4.00	67	187
<b>M48</b>	1.50	45	165
<b>M48</b>	2.00	45	165
<b>M48</b>	3.00	67	187
<b>M48</b>	4.00	67	187
<b>M52</b>	1.50	45	175
<b>M52</b>	2.00	45	175
<b>M52</b>	3.00	70	200
<b>M52</b>	4.00	70	200
<b>M56</b>	1.50	45	175
<b>M56</b>	2.00	45	175
<b>M56</b>	3.00	70	200
<b>M56</b>	4.00	70	200
<b>M60</b>	1.50	48	193
<b>M60</b>	2.00	48	193
<b>M60</b>	3.00	64	209
<b>M60</b>	4.00	64	209
<b>M64</b>	1.50	48	193
<b>M64</b>	2.00	48	193
<b>M64</b>	3.00	64	209
<b>M64</b>	4.00	64	209
<b>M68</b>	1.50	48	203
<b>M68</b>	2.00	48	203
<b>M68</b>	3.00	64	219
<b>M68</b>	4.00	64	219
<b>M72</b>	6.00	79	234
<b>M76</b>	6.00	83	258
<b>M80</b>	6.00	83	258
<b>M85</b>	6.00	86	261
<b>M90</b>	6.00	86	261
<b>M95</b>	6.00	89	279
<b>M100</b>	6.00	89	279

Dimensions in mm

Specifications conform to IS : 6175 - 1977/ISO 529 - 1975

These taps are usually supplied in set of two - Taper and Bottoming, non-serial with Thread Tolerance 6H.

Shank diameter/design is supplied according to IS : 6175-Part II for the sizes below M12. For size M12 and above it is as per IS : 6175 Part III

High Speed Steel  
**HAND TAPS - BSW Form**  
**Ground Threads**

**BSW Form**

Nominal Diameter Inch	Threads Per Inch	Thread Length mm	Overall Length mm
<b>1/8</b>	40		48
<b>3/16</b>	24	16	58
<b>1/4</b>	20	19	66
<b>5/16</b>	18	22	72
<b>3/8</b>	16	24	80
<b>7/16</b>	14	25	85
<b>1/2</b>	12	29	89
<b>9/16</b>	12	30	95
<b>5/8</b>	11	32	102
<b>11/16</b>	11	37	112
<b>3/4</b>	10	37	112
<b>7/8</b>	9	38	118
<b>1</b>	8	45	130
<b>1.1/8</b>	7	48	138
<b>1.1/4</b>	7	51	151
<b>1.3/8</b>	6	57	162
<b>1.1/2</b>	6	60	170
<b>1.3/4</b>	5	67	187
<b>2</b>	4.1/2	70	200
<b>2.1/4</b>	4	75	221
<b>2.1/2</b>	4	79	224
<b>2.3/4</b>	3.1/2	79	234
<b>3</b>	3.1/2	83	258

Dimensions in inches/mm.

Specifications conform to BS 949-1969

These taps are usually supplied in set of Three-Taper, Second and Bottoming with Thread tolerance Zone 3.



High Speed Steel  
**HAND TAPS - BSF Form**  
**Ground Threads**

**BSF Form**

<b>Nominal Diameter Inch</b>	<b>Threads Per Inch</b>	<b>Thread Length mm</b>	<b>Overall Length mm</b>
<b>3/16</b>	32	16	58
<b>1/4</b>	26	19	66
<b>5/16</b>	22	22	72
<b>3/8</b>	20	24	80
<b>7/16</b>	18	25	85
<b>1/2</b>	16	29	89
<b>9/16</b>	16	30	95
<b>5/8</b>	14	32	102
<b>11/16</b>	14	37	112
<b>3/4</b>	12	37	112
<b>7/8</b>	11	90	118
<b>1</b>	10	45	130
<b>1.1/8</b>	9	48	138
<b>1.1/4</b>	9	51	151
<b>1.3/8</b>	8	57	162
<b>1.1/2</b>	8	60	170
<b>1.5/8</b>	8	60	170
<b>1.3/4</b>	7	67	187
<b>2</b>	7	70	200
<b>2.1/4</b>	6	76	221
<b>2.1/4</b>	6	79	224
<b>2.3/4</b>	6	79	234
<b>3</b>	5	83	258

Dimensions in inches/mm.

Specifications conform to BS 949-1969

These taps are usually supplied in set of Three-Taper, Second and Bottoming with Thread tolerance Zone 3.

High Speed Steel  
**HAND TAPS - UNC and UNF**  
**Ground Threads**

**UNC - Unified Coarse Thread Series**

Nominal Diameter Inch	Threads Per Inch	Thread Length mm	Overall Length mm
<b>1/4</b>	20	19	66
<b>5/16</b>	18	22	72
<b>3/8</b>	16	24	80
<b>7/16</b>	14	25	85
<b>1/2</b>	13	29	89
<b>9/16</b>	12	30	95
<b>5/8</b>	11	32	102
<b>3/4</b>	10	37	112
<b>7/8</b>	9	38	118
<b>1</b>	8	45	130
<b>1.1/8</b>	7	48	138
<b>1.1/4</b>	7	51	151
<b>1.3/8</b>	6	57	162
<b>1.1/2</b>	6	60	170
<b>1.3/4</b>	5	67	187
<b>2</b>	4.1/2	70	200
<b>2.1/4</b>	4.1/2	76	221
<b>2.1/2</b>	4	79	224
<b>2.3/4</b>	4	79	224
<b>3</b>	4	83	258

Dimensions in inches/mm.

Specifications conform to BS 949-1969

These taps are usually supplied in set of Three-Taper, Second and Bottoming.

## UNF - Unified Fine Thread Series

Nominal Diameter Inch	Threads Per Inch	Thread Length mm	Overall Length mm
			66
			69
<b>3/8</b>	24	20	76
<b>7/16</b>	20	22	82
<b>1/2</b>	20	24	84
<b>9/16</b>	18	25	90
<b>5/8</b>	18	25	95
<b>3/4</b>	16	29	104
<b>7/8</b>	14	33	113
<b>1</b>	12	35	120
<b>1.1/8</b>	12	37	127
<b>1.1/4</b>	12	37	137
<b>1.3/8</b>	12	39	144
<b>1.1/2</b>	12	39	149

Dimensions in inches/mm.

Specifications conform to BS 949-1969

These taps are usually supplied in set of Three-Taper, Second and Bottoming.

High Speed Steel

**LONG SHANK MACHINE TAPS**

**ISO Metric Threads - Ground Threads**

**COARSE PITCH**

Nominal Diameter	Pitch	Thread Length	Overall Length
<b>M3</b>	0.50	11	66
<b>M3.5</b>	0.60	13	68
<b>M4</b>	0.70	13	73
<b>M4.5</b>	0.75	13	73
<b>M5</b>	0.80	16	79
<b>M6</b>	1.00	19	89
<b>M8</b>	1.25	22	97
<b>M10</b>	1.50	24	108
<b>M12</b>	1.75	29	119
<b>M14</b>	2.00	30	127
<b>M16</b>	2.00	32	137
<b>M18</b>	2.50	37	149
<b>M20</b>	2.50	37	149
<b>M22</b>	2.50	38	158
<b>M24</b>	3.00	45	172
<b>M27</b>	3.00	45	180
<b>M30</b>	3.50	48	183
<b>M33</b>	3.50	51	201
<b>M36</b>	4.00	57	214
<b>M39</b>	4.00	60	225
<b>M42</b>	4.50	60	225
<b>M45</b>	4.50	67	247
<b>M48</b>	5.00	67	247
<b>M52</b>	5.00	70	265
<b>M56</b>	5.50	70	265
<b>M60</b>	5.50	76	293
<b>M64</b>	6.00	79	296
<b>M68</b>	6.00	79	296

Dimensions in mm.

Specifications conform to IS : 7821 - 1975/ISO 2283 - 1972

Type has to be mentioned by the purchaser while ordering.

Type A - 5 Deg. Taper Angle with Long Taper Lead.

Type B - 10 Deg. Taper Angle with Spiral Point

Type C - 20 Deg. Taper Angle with Short Taper Lead

Type D - 10 Deg. Taper Angle without Spiral Point.

High Speed Steel

**LONG SHANK MACHINE TAPS**

**ISO Metric Threads - Ground Threads**

**FINE PITCH**

Nominal Diameter	Pitch	Thread Length	Overall Length
<b>M3</b>	0.35	17	66
<b>M4</b>	0.50	13	73
<b>M5</b>	0.50	16	76
<b>M6</b>	0.75	19	89
<b>M8</b>	1.00	19	97
<b>M10</b>	1.00	20	108
<b>M10</b>	1.25	20	108
<b>M12</b>	1.25	24	119
<b>M12</b>	1.50	29	119
<b>M16</b>	1.50	32	137
<b>M20</b>	1.50	29	149
<b>M20</b>	2.00	37	149
<b>M24</b>	1.50	35	172
<b>M24</b>	2.00	35	172
<b>M30</b>	1.50	37	172
<b>M30</b>	2.00	37	172
<b>M36</b>	1.50	39	196.5
<b>M36</b>	2.00	39	196.5
<b>M36</b>	3.00	57	214.5
<b>M42</b>	1.50	39	204
<b>M42</b>	2.00	39	204
<b>M42</b>	3.00	60	225
<b>M48</b>	1.50	45	225
<b>M48</b>	2.00	45	225
<b>M48</b>	3.00	67	247
<b>M52</b>	1.50	45	240
<b>M52</b>	2.00	45	240
<b>M52</b>	3.00	70	265

Dimensions in mm.

Specifications conform to IS : 7821 - 1975/ISO 2283 - 1972

Type has to be mentioned by the purchaser while ordering.

Type A - 5 Deg. Taper Angle with Long Taper Lead.

Type B - 10 Deg. Taper Angle with Spiral Point

Type C - 20 Deg. Taper Angle with Short Taper Lead

Type D - 10 Deg. Taper Angle without Spiral Point.

High Speed Steel

**NUT TAPS**

**ISO Metric Threads - Ground Threads**

**COARSE PITCH**

<b>Nominal Diameter</b>	<b>Pitch</b>	<b>Thread Length</b>	<b>Overall Length</b>
<b>M6</b>	1.00	32	110
<b>M8</b>	1.25	40	125
<b>M10</b>	1.50	45	140
<b>M12</b>	1.75	50	180
<b>M14</b>	2.00	56	200
<b>M16</b>	2.00	63	200
<b>M18</b>	2.50	63	220
<b>M20</b>	2.50	70	250
<b>M22</b>	2.50	80	280
<b>M24</b>	3.00	80	280
<b>M27</b>	3.00	90	315
<b>M30</b>	3.50	100	315
<b>M33</b>	3.50	110	355
<b>M36</b>	4.00	110	400
<b>M39</b>	4.00	125	400
<b>M42</b>	4.50	125	450
<b>M45</b>	4.50	140	500
<b>M48</b>	5.00	140	500

Dimensions in mm.

Specifications conform to IS : 6174 - 1971

These taps are usually supplied with Tolerance class 6H.

High Speed Steel

**NUT TAPS - BSW and BSF**

Ground Threads

**BSW - British Standard Whitworth - Coarse Thread Series**

<b>Nominal Diameter</b>	<b>Threads per Inch</b>	<b>Thread Length mm</b>	<b>Overall Length mm</b>
<b>1/4</b>	20	38	110
<b>5/16</b>	18	42	120
<b>3/8</b>	16	48	140
<b>7/16</b>	14	55	160
<b>1/2</b>	12	64	180
<b>9/16</b>	12	64	200
<b>5/8</b>	11	70	200
<b>3/4</b>	10	76	250
<b>7/8</b>	9	85	280
<b>1</b>	8	95	280
<b>1.1/8</b>	7	109	315
<b>1.1/4</b>	7	109	355
<b>1.1/2</b>	6	127	400
<b>1.3/4</b>	5	153	500
<b>2</b>	4.1/2	170	560

Dimensions in inches/mm.

Specifications conform to BS : 949 - 1969

These taps are normally supplied with Tolerance Zone 3.

**BSF - British Standard Fine Thread Series**

<b>Nominal Diameter Inch</b>	<b>Threads per Inch</b>	<b>Thread Length mm</b>	<b>Overall Length mm</b>
<b>1/4</b>	20	38	110
<b>5/16</b>	18	42	120
<b>3/8</b>	16	48	140
<b>7/16</b>	14	55	160
<b>1/2</b>	12	64	180
<b>9/16</b>	12	64	200
<b>5/8</b>	11	70	200
<b>3/4</b>	10	76	250
<b>7/8</b>	9	85	280
<b>1</b>	8	95	280
<b>1.1/8</b>	7	109	315
<b>1.1/4</b>	7	109	355
<b>1.1/2</b>	6	127	400
<b>1.3/4</b>	5	153	500
<b>2</b>	4.1/2	170	560