

Threading Tapping Drill Size Chart

M
ISO METRIC COARSE (60°)

Tap Size	Pitch mm	Tapping Drill mm
M1.6	0.35	1.25
M2	0.4	1.6
M2.5	0.45	2.05
M3	0.5	2.5
M3.5	0.6	2.9
M4	0.7	3.3
M4.5	0.75	3.7
M5	0.8	4.2
M6	1.0	5.0
M8	1.25	6.8
M10	1.5	8.5
M12	1.75	10.2
M14	2.0	12.0
M16	2.0	14.0
M18	2.5	15.5
M20	2.5	17.5
M22	2.5	19.5
M24	3.0	21.0
M27	3.0	24.0
M30	3.5	26.5
M33	3.5	29.5
M36	4.0	32.0
M42	4.5	37.5
M45	4.5	40.5
M48	5.0	43.0
M52	5.0	47.0
M56	5.5	50.5

MF
ISO METRIC FINE (60°)

Tap Size	Pitch mm	Tapping Drill mm
M4	0.5	3.5
M5	0.5	4.5
M6	0.75	5.3
M8	1.0	7.0
M10**	1.0	9.0
M10	1.25	8.8
M12**	1.25	10.8
M12	1.5	10.5
M14**	1.25	12.8
M14	1.5	12.5
M16*	1.5	14.5
M18**	1.5	16.5
M20*	1.5	18.5
M22	1.5	20.5
M24	2.0	22.0
M25*	1.5	23.5
M32*	1.5	30.5
M40*	1.5	38.5
M50*	1.5	48.5

*Metric Conduit **Spark Plug

8UN (8 TPI)
UNIFIED NATIONAL FORM (60°)

Tap Size	TPI	Tapping Drill mm
1-1/8	8	25.5
1-1/4	8	28.5
1-3/8	8	31.75
1-1/2	8	35.0
1-5/8	8	38.0
1-3/4	8	41.5
1-7/8	8	44.5
2	8	47.5

UNC
UNIFIED NATIONAL COARSE (60°)

Tap Size	TPI	Tapping Drill mm
#2 (.086)	56	1.85
#3 (.099)	48	2.1
#4 (.112)	40	2.3
#5 (.125)	40	2.6
#6 (.138)	32	2.8
#8 (.164)	32	3.4
#10 (.190)	24	3.8
#12 (.216)	24	4.5
1/4	20	5.1
5/16	18	6.6
3/8	16	8.0
7/16	14	9.4
1/2	13	10.8
9/16	12	12.2
5/8	11	13.5
3/4	10	16.5
7/8	9	19.5
1	8	22.2
1-1/8	7	25.0
1-1/4	7	28.0
1-3/8	6	31.0
1-1/2	6	34.0
1-3/4	5	39.5
2	4.5	45.0

UNF
UNIFIED NATIONAL FINE (60°)

Tap Size	TPI	Tapping Drill mm
#3 (.099)	56	2.1
#4 (.112)	48	2.35
#5 (.125)	44	2.65
#6 (.138)	40	2.9
#8 (.164)	36	3.5
#10 (.190)	32	4.1
#12 (.216)	28	4.6
3/16*	32	4.0
1/4	28	5.5
5/16	24	6.9
3/8	24	8.5
7/16	20	9.8
1/2	20	11.5
9/16	18	12.8
5/8	18	14.5
3/4	16	17.5
7/8	14	20.5
1	12	23.5
1*	14	24.0
1-1/8	12	26.5
1-1/4	12	29.5
1-3/8	12	33.01
1-1/2	12	36.0

*UNS

UNEF
UNIFIED NATIONAL FORM (60°)

Tap Size	TPI	Tapping Drill mm
1/4	32	5.6
5/16	32	7.2
3/8	32	8.8
1/2	28	11.8
5/8	24	14.75
3/4	20	18
1	20	24.2

BSW
BRITISH STANDARD WHITWORTH (55°)

Tap Size	TPI	Tapping Drill mm
1/16*	60	1.2
3/32*	48	1.85
1/8	40	2.55
5/32*	32	3.2
3/16	24	3.7
7/32*	24	4.5
1/4	20	5.1
5/16	18	6.5
3/8	16	7.9
7/16	14	9.3
1/2	12	10.5
9/16	12	12.1
5/8	11	13.5
3/4	10	16.25
7/8	9	19.25
1	8	22.0
1-1/8	7	24.75
1-1/4	7	28.0
1-1/2	6	33.5
1-3/4	5	39.0
2	4-1/2	44.5

*WHIT. Form

BSF
BRITISH STANDARD FINE (55°)

Tap Size	TPI	Tapping Drill mm
3/16	32	4.0
7/32	28	4.6
1/4	26	5.3
5/16	22	6.8
3/8	20	8.3
7/16	18	9.8
1/2	16	11.0
9/16	16	12.7
5/8	14	14.0
11/16	14	15.5
3/4	12	16.75
7/8	11	19.75
1	10	22.75
1-1/8	9	25.5
1-1/4	9	28.5
1-1/2	8	34.5
1-3/4	7	41.0

BSB
BRITISH STANDARD BRASS (55°)

Tap Size	TPI	Tapping Drill mm
1/4	26	5.2
5/16	26	6.8
3/8	26	8.4
7/16	26	10.0
1/2	26	11.6
9/16	26	13.2
5/8	26	14.8
3/4	26	18.0
7/8	26	20.8
1	26	24.3

*Taper pipe threads of improved quality are obtained when the tapping hole is pre-formed using Sutton Taper Pipe Reamers.

Threading Tapping Drill Size Chart

Rc (BSP7)* ISO Rc TAPER SERIES 1:16 (55°)

Tap Size	TPI	Drill Only*	Drill & Reamer
Rc 1/16	28	6.4	6.2
Rc 1/8	28	8.4	8.4
Rc 1/4	19	11.2	10.8
Rc 3/8	19	14.75	14.5
Rc 1/2	14	18.25	18.0
Rc 3/4	14	23.75	23.0
Rc 1	11	30.0	29.0
Rc 1-1/4	11	38.5	38.0
Rc 1-1/2	11	44.5	44.0
Rc 2	11	56.0	55.0

G (BSPF) ISO G PARALLEL SERIES (55°)

Tap Size	TPI	Tapping Drill mm
G 1/16	28	6.8
G 1/8	28	8.8
G 1/4	19	11.8
G 3/8	19	15.3
G 1/2	14	19.0
G 5/8	14	21.0
G 3/4	14	24.5
G 7/8	14	28.5
G 1	11	31.0
G 1-1/4	11	39.5
G 1-1/2	11	45.5
G 1-3/4	11	51.5
G 2	11	57.5
G 2-1/2	11	72.5

Rp (BSPPL) SEALING PIPE THREAD PARALLEL (55°)

Rp 1/8	28	8.6
Rp 1/4	19	11.5
Rp 3/8	19	15.0
Rp 1/2	14	18.5
Rp 3/4	14	24.0
Rp 1	11	30.2
Rp 1-1/4	11	39.0
Rp 1-1/2	11	45.0
Rp 2	11	56.4

Pg (Steel Conduit) (80°)

Pg7	20	11.3
Pg9	18	13.9
Pg11	18	17.3
Pg13.5	18	19.1
Pg16	18	21.2
Pg21	15	26.8

THREAD FORMING (FLUTELESS TAPS)

Tap Size	Pitch mm	Tapping Drill mm
METRIC COARSE		
M1	0.25	0.9
M1.1	0.25	1.0
M1.2	0.25	1.1
M1.4	0.3	1.28
M1.6	0.35	1.45
M1.7	0.35	1.55
M1.8	0.35	1.65
M2.0	0.40	1.8
M2.2	0.45	2.0
M2.3	0.4	2.1
M2.5	0.45	2.3
M2.6	0.45	2.4
M3	0.5	2.8
M3.5	0.6	3.2
M4	0.7	3.7
M5	0.8	4.6
M6	1.0	5.5
M8	1.25	7.4
M10	1.5	9.3
M12	1.75	11.2
BSW		
1/8	40	2.9
5/32	32	3.6
3/16	24	4.3
1/4	20	5.8
5/16	18	7.3
3/8	16	8.8

NPT-NPTF* NATIONAL PIPE TAPER 1:16 (60°)

Tap Size	TPI	Drill Only*	Drill & Reamer
1/16	27	6.3	6.0
1/8	27	8.5	8.2
1/4	18	11.0	10.8
3/8	18	14.5	14.0
1/2	14	18.0	17.5
3/4	14	23.0	23.0
1	11-1/2	29.0	28.5
1-1/4	11-1/2	37.5	37.0
1-1/2	11-1/2	44	43.5
2	11-1/2	55.5	55.0

NPSF NATIONAL PIPE STRAIGHT (60°)

Tap Size	TPI	Tapping Drill mm
1/8	27	8.6
1/4	18	11.3
3/8	18	14.5
1/2	14	18.0

THREAD FORMING (FLUTELESS TAPS)

Tap Size	T.P.I.	Tapping Drill mm
UNC		
#1 (.073)	64	1.7
#2 (.086)	56	2.0
#3 (.099)	48	2.3
#4 (.112)	40	2.6
#5 (.125)	40	2.9
#6 (.138)	32	3.2
#8 (.164)	32	3.8
#10 (.190)	24	4.4
#12 (.216)	24	5.0
1/4	20	5.8
5/16	18	7.3
3/8	16	8.8
7/16	14	10.2
1/2	13	11.7
UNF		
#1 (.073)	72	1.7
#2 (.086)	64	2.0
#3 (.099)	56	2.3
#4 (.112)	48	2.6
#5 (.125)	44	2.9
#6 (.138)	40	3.2
#8 (.164)	36	3.9
#10 (.190)	32	4.5
#12 (.216)	28	5.1
1/4	28	6.0
5/16	24	7.5
3/8	24	9.0
7/16	20	10.6
1/2	20	12.1
G (BSPF)		
1/8	28	9.25
1/4	19	12.5
3/8	19	16.0
1/2	14	20.0
5/8	14	22.0
3/4	14	25.5
7/8	14	29.25
1	11	32.0
BA BRITISH ASSOCIATION (47.5°)		
Tap Size	Pitch mm	Tapping Drill mm
0	1	5.1
1	0.9	4.5
2	0.81	4.0
3	0.73	3.4
4	0.66	3.0
5	0.59	2.65
6	0.53	2.3
7	0.48	2.05
8	0.43	1.8
9	0.39	1.55
10	0.35	1.4
11	0.31	1.2
12	0.28	1.05
13	0.25	0.98
14	0.23	0.8
15	0.21	0.7
16	0.19	0.6