

Thread Mill Predrill Ø Chart

Ø	UNC		UNF	
	Pitch (TPI)	Drill Size (inch)	Pitch (TPI)	Drill Size (inch)
#0	-	-	80	3/64
#1	64	0.059 (#53)	72	0.059 (#53)
#2	56	0.067 (#51)	64	0.070 (#50)
#3	48	5/64	56	0.081 (#46)
#4	40	0.089 (#43)	48	0.093 (#42)
#5	40	0.099 (#39)	44	0.104 (#37)
#6	32	0.106 (#36)	40	0.113 (#33)
#8	32	0.136 (#29)	36	0.136 (#29)
#10	24	0.149 (#25)	32	0.159 (#21)
#12	24	0.173 (#17)	28	0.180 (#15)
1/4	20	0.201 (#7)	28	0.213 (#3)
5/16	18	0.257 (F)	24	0.272 (I)
3/8	16	5/16	24	0.332 (Q)
7/16	14	0.368 (U)	20	0.386 (W)
1/2	13	27/64	20	29/64
9/16	12	31/64	18	33/64
5/8	11	17/32	18	37/64
3/4	10	21/32	16	11/16
7/8	9	49/64	14	13/16
1	8	7/8	12	15/16
1-1/8	7	63/64	12	1-1/32
1-1/4	7	1-7/64	12	1-11/64
1-3/8	6	1-7/32	12	1-19/64
1-1/2	6	1-11/32	12	1-27/64
1-3/4	5	1-35/64	12	1-43/64
2	4-1/2	1-25/32	12	1-59/64

Ø	ISO Coarse			ISO Fine		
	Pitch	Drill Size		Pitch	Drill Size	
		mm	in		mm	in
M1.6	0.35	1.25	3/64	-	-	-
M1.8	0.35	1.45	0.059 (#53)	-	-	-
M2	0.4	1.60	0.063 (#52)	-	-	-
M2.2	0.45	1.75	0.070 (#50)	-	-	-
M2.5	0.45	2.05	0.081 (#46)	-	-	-
M3	0.5	2.50	0.099 (#39)	-	-	-
M3.5	0.6	2.90	0.116 (#32)	-	-	-
M4	0.7	3.30	0.128 (#30)	-	-	-
M4.5	0.75	3.70	0.147 (#26)	-	-	-
M5	0.8	4.20	0.166 (#19)	-	-	-
M6	1	5.00	0.199 (#8)	-	-	-
M7	1	6.00	0.238 (B)	-	-	-
M8	1.25	6.80	0.266 (H)	1	7.00	0.277 (J)
M10	1.5	8.50	0.339 (R)	1.25	8.80	11/32
M12	1.75	10.20	0.404 (Y)	1.50	10.50	0.413 (Z)
M14	2	12.00	15/32	1.50	12.50	1/2
M16	2	14.00	9/16	1.5	14.50	37/64
M18	2.5	15.50	39/64	1.5	16.50	21/32
M20	2.5	17.50	11/16	1.5	18.50	47/64
M22	2.5	19.50	49/64	1.5	20.50	13/16
M24	3	21.00	53/64	2	22.00	7/8
M27	3	24.00	61/64	2	25.00	63/64
M30	3.5	26.50	1-3/64	2	28.00	1-7/64
M33	3.5	29.50	1-11/64	2	31.00	1-7/32
M36	4	32.00	1-17/64	3	33.00	1-19/64
M39	4	35.00	1-25/64	3	36.00	1-27/64

Pipe Tap Size	NPT & NPTF		NPS & NPSF	
	Pitch (TPI)	Drill Size* (inch)	Pitch (TPI)	Drill Size (inch)
1/16	27	0.242 (C)	-	-
1/8	27	0.332 (Q)	27	0.348 (S)
1/4	18	7/16	18	29/64
3/8	18	9/16	18	19/32
1/2	14	45/64	14	47/64
3/4	14	29/32	14	15/16
1	11-1/2	1-9/64	11-1/2	1-3/16
1-1/4	11-1/2	1-31/64	11-1/2	1-33/64
1-1/2	11-1/2	1-23/32	11-1/2	1-3/4
2	11-1/2	2-7/32	11-1/2	2-7/32
2-1/2	8	2-5/8	8	2-21/32
3	8	3-1/4	8	3-9/32
3-1/2	8	3-3/4	8	3-25/32
4	8	4-1/4	8	4-9/32

*Without taper reamer

Pipe Tap Size	BSW		BSPP		BSPT	
	Pitch (TPI)	Drill Size (inch)	Pitch (TPI)	Drill Size (inch)	Pitch (TPI)	Drill Size* (inch)
1/16	60	0.046 (#56)	28	0.261 (G)	-	-
1/8	40	0.098 (#40)	28	11/32	28	21/64
1/4	20	0.196 (#9)	19	29/64	19	7/16
5/16	18	1/4	-	-	-	-
3/8	16	5/16	19	19/32	19	37/64
7/16	14	23/64	-	-	-	-
1/2	12	0.413 (Z)	14	3/4	14	23/32
9/16	12	17/32	-	-	-	-
5/8	11	35/64	14	53/64	-	-
3/4	10	41/64	14	31/32	14	15/16
7/8	9	3/4	14	1-7/64	-	-
1	8	55/64	11	1-13/64	11	1-11/64
1-1/4	7	1-3/32	11	1-35/64	11	1-33/64
1-1/2	6	1-5/16	11	1-25/32	11	1-3/4
1-3/4	5	1-17/32	11	2	11	-
2	4.5	1-3/4	11	2-1/4	11	2-3/16

*Without taper reamer

UN & ISO Drill Ø = Thread Ø - (1.229 x Pitch x 0.75) For UN, Pitch = 1 / TPI
NOTE: 0.75 represents 75% of full thread and can be reduced to 0.60 (60%) for deep threads or difficult-to-machine materials.