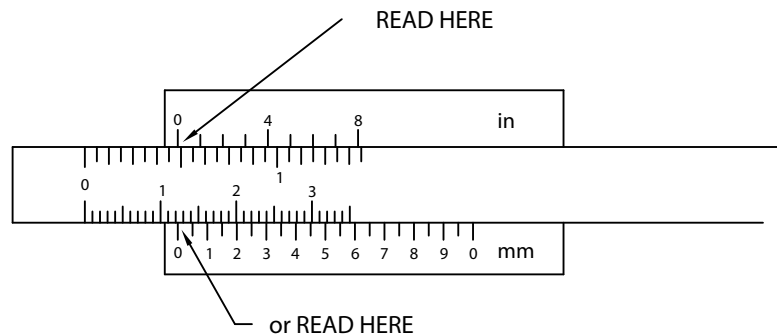


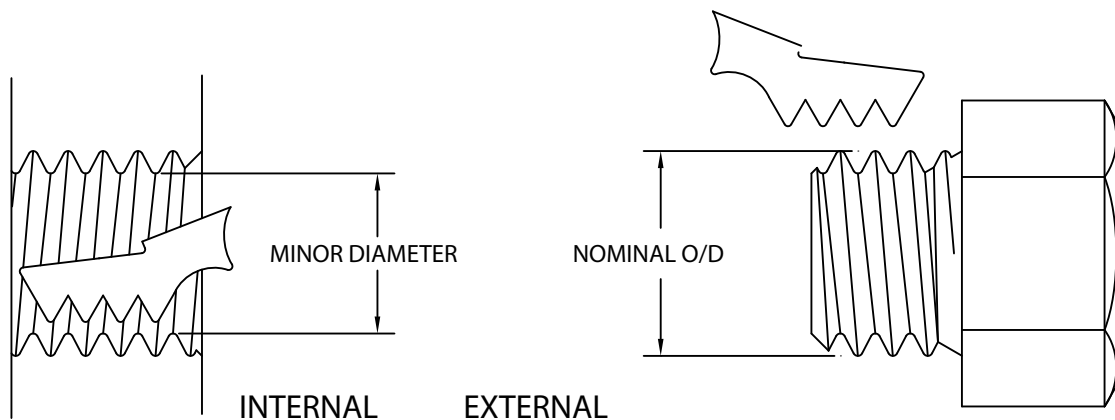
Measuring Screw Threads

External Threads - Drain Plugs

Measure the diameter over the thread using a caliper.
The caliper reads directly in inches(fractions) and millimeters.



Look for the nominal size just above the '0' point on the caliper.
Above diagram shows about 1/2".
Worn threads are usually undersize.



Find the pitch or TPI using the Screw Thread gauges.
Compare the O/D and pitch with the thread data chart to establish the thread.

Internal Threads - Sump Holes

Using the caliper, measure the Minor Diameter.
The pitch can be checked as shown. Again refer to the data chart.



Some Popular Thread Sizes

American National Standard Taper Pipe Threads (NPT)

Nominal	O/D (mm)	TPI	Minor Diameter (mm)	Thread Size written as-
1/4"	13.5	18	11	1/4 - 18 NPT
3/8"	17	18	14.5	3/8 - 18 NPT
1/2"	21	14	18	1/2 - 14 NPT
3/4"	26.5	14	23.5	3/4 - 14 NPT
1"	33	11.5	29	1 - 11.5 NPT
1 1/4"	42	11.5	38	1 1/4 - 11.5 NPT
1 1/2"	48	11.5	44	1 1/2 - 11.5 NPT

British Standard Pipe Threads (BSP) may be tapered (BSPT)

Nominal	O/D (mm)	TPI	Minor Diameter (mm)	Thread Size written as-
1/4"	13	19	11	1/4 BSP
3/8"	16.5	19	14.5	3/8 BSP
1/2"	20.5	14	18.5	1/2 BSP
5/8"	23	14	21	5/8 BSP
3/4"	26	14	24	3/4 BSP
1"	33	11	30	1 BSP
1 1/4"	41.5	11	38.5	1 1/4 BSP
1 1/2"	47.5	11	44.5	1 1/2 BSP

ISO Metric Threads

Nominal O/D (mm)	Pitch (mm)	Minor Diameter (mm)	Thread Size written as-
12	1.25	11	M12 x 1.25
12	1.5	10.5	M12 x 1.5
12	1.75	10	M12 x 1.75
14	1.25	13	M14 x 1.25
14	1.5	12.5	M14 x 1.5
16	1.5	14.5	M16 x 1.5
18	1.5	16.5	M18 x 1.5
20	1.5	18.5	M20 x 1.5
22	1.5	20.5	M22 x 1.5
24	1.5	22.5	M24 x 1.5
24	2	22	M24 x 2
25	1.5	23.5	M25 x 1.5
26	1.5	24.5	M26 x 1.5
27	2	25	M27 x 2
28	1.5	26.5	M28 x 1.5
30	1.5	28.5	M30 x 1.5
30	2	28	M30 x 2
32	1.5	30.5	M32 x 1.5
32	2	30	M32 x 2
34	1.5	32.5	M34 x 1.5
36	1.5	34.5	M36 x 1.5
36	2	34	M36 x 2
38	1.5	36.5	M38 x 1.5



Unified Screw Threads

O/D (inch)	TPI	Minor Diameter (mm)	Thread Size written as-
1/2"	13 UNC	10.5	1/2 - 13UNC
1/2"	20 UNF	11.5	1/2 - 20UNF
1/2"	24 UNS	11.5	1/2 - 24UNS
9/16"	18 UNF	12.5	9/16 -18UNF
5/8"	11 UNC	13.5	5/8 - 11UNC
5/8"	18 UNF	14.5	5/8 - 18UNF
3/4"	10 UNC	16.5	3/4 - 10UNC
3/4"	16 UNF	17.5	3/4 - 16UNF
3/4"	20 UNEF	17.5	3/4 - 20UNEF
3/4"	24 UNS	18	3/4 - 24UNS
7/8"	14 UNF	20.5	7/8 - 14UNF
7/8"	16 UN	20.5	7/8 - 16UN
1"	8 UNC	22	1 - 8UNC
1"	12 UNF	23	1 - 12UNF
1"	18 UNS	24	1 - 18UNS
1 1/16"	12 UN	24.5	1 1/16 - 12UN
1 1/8"	12 UNF	26.5	1 1/8 - 12UNF
1 1/4"	12 UNF	29.5	1 1/4 - 12UNF
1 1/4"	18 UNEF	30	1 1/4 - 18UNEF
1 1/2"	12 UNF	36	1 1/2 - 12UNF
2"	12 UN	48.5	2 - 12UN

British Standard Screw Threads

O/D (inch)	TPI	Minor Diameter (mm)	Thread Size written as-
1/2"	12 BSW	10.5	1/2 BSW
1/2"	16 BSF	11	1/2 BSF
5/8"	11 BSW	13.5	5/8 BSW
5/8"	14 BSF	14	5/8 BSF
3/4"	10 BSW	16.5	3/4 BSW
3/4"	12 BSF	17	3/4 BSF
1"	8 BSW	22	1 BSW
1"	10 BSF	23	1 BSF

