

Know Your Pipe Threads

In Great Britain BSP British Standard Pipe threads are commonly used. These are either parallel (BSPP) which normally seal on a washer or 'O' ring seal, or tapered (BSPT) which taper along their length of the male thread and normally seal by two mating threads.

How to measure your thread



Use a tape rule or (Vernier gauge) to measure across the outside of the male thread. Note that a thread that measures 0.5" is not 1/2" BSP thread!

Using the table below we can see that **0.5" is actually 1/4" BSP thread**. Similarly, a thread that measures **1.0" is actually 3/4" BSP thread**.

BSP Size	Max. diameter		Min. diameter		Thread pitch
	mm	inch	mm	inch	TPI
1/16"	7.723	0.304	6.561	0.258	28
1/8"	9.728	0.383	8.565	0.337	28
1/4"	13.157	0.518	11.445	0.451	19
3/8"	16.662	0.656	14.950	0.589	19
1/2"	20.955	0.825	18.633	0.734	14
5/8"	22.911	0.902	20.589	0.811	14
3/4"	26.441	1.041	24.120	0.950	14
1"	33.249	1.309	30.292	1.193	11
1 1/4"	41.910	1.650	38.953	1.534	11
1 1/2"	47.803	1.882	44.846	1.766	11
2"	59.614	2.347	56.657	2.231	11
2 1/2"	75.184	2.960	72.227	2.844	11
3"	87.884	3.460	84.927	3.344	11
4"	113.030	4.450	110.073	4.334	11
5"	138.430	5.450	135.472	5.334	11
6"	163.830	6.450	160.872	6.334	11

In Europe Metric (DIN) pipe threads are common on German machines. These generally have a 1.5mm thread pitch, although this can vary. Smaller sizes can be 1.0mm thread pitch, and larger sizes can be 2.0mm thread pitch. Other variations occur. French equipment often have GAZ fine threads with a 24 degree cone.

In North America NPT, JIC and ORFS pipe threads are common. Some NPT threads are similar to BSPT threads so if in doubt check origin of part.

In Japan JIS tapered and parallel threads are common and are interchangeable with the respective BSPT and BSPP threads, although the 30 degree cones might be inverted.