

NPT Pipe Thread Chart

US tapered pipe thread (NPT): pipe OD, threads per inch and measured thread diameters, with the BSP look-alike.

NPT SIZE	PIPE OD IN	OD MM	TPI	MALE THREAD	MM	FEMALE THREAD	MM	BSPT TPI
1/8"	0.405	10.3	27	0.401	10.18	0.336	8.54	28
1/4"	0.540	13.7	18	0.533	13.54	0.436	11.07	19
3/8"	0.675	17.1	18	0.668	16.98	0.571	14.49	19
1/2"	0.840	21.3	14	0.832	21.14	0.705	17.90	14
3/4"	1.050	26.7	14	1.043	26.49	0.914	23.21	14
1"	1.315	33.4	11.5	1.305	33.14	1.148	29.15	11
1-1/4"	1.660	42.2	11.5	1.649	41.90	1.491	37.87	11
1-1/2"	1.900	48.3	11.5	1.888	47.97	1.730	43.49	11
2"	2.375	60.3	11.5	2.362	60.00	n/a	n/a	11

LOOK-ALIKE	ACROSS	TPI	HOW TO TELL
3/4" garden hose thread	about 1.0625"	11.5	3/4" NPT is 1.050" with 14 TPI
1/2" BSPT (ISO 7/1)	0.825" male	14	55 degree thread (NPT 60)
3/4" BSPT (ISO 7/1)	1.041" male	14	55 degree thread (NPT 60)

Measure the male thread across its crests, at the fourth or fifth full thread, then count threads per inch.

Measured thread diameters are approximate. Use them to identify a thread, not to inspect one.

NPT tapers 1 in 16 on the diameter (3/4" per foot) with a 60 degree thread, and seals on the threads with tape or sealant on the male end.

BSPT (ISO 7/1) has a 55 degree thread. At 1/2" and 3/4" its size and count are almost the same as NPT.

Garden hose thread seals with a rubber washer in the female end.

Sources: National Bureau of Standards Handbook H28, Table VII.2 and Tables X.1-X.2; Swagelok Thread and End Connection Identification Guide (MS-13-77).