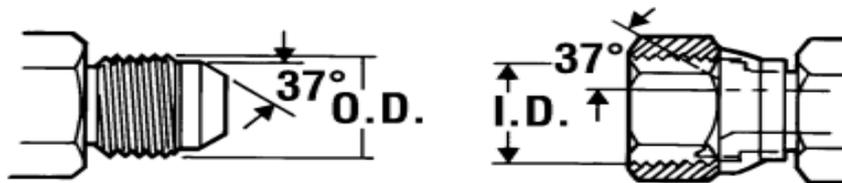


Additional Thread Form Information – JIC, BSP, NPTF and Metric

JIC/SAE 37°/UNF STRAIGHT

These three threadforms share the same dimensions and thread pitches in all sizes. The only effective difference is that JIC (also known as SAE 37°) has a conical seating face (37° or 74° total angle) and UNF straight has a flat seat – sealing being effected by use of a washer. Male JIC fittings have a convex cone, female fittings a concave cone. JIC (also called AN from its American Army/Navy usage) is the most widely-used thread type in competition or high performance plumbing. Most hose ends are made to this specification. (There is, also, an SAE45° threadform which has a 45° conical seat. It shares the same dimensions as JIC except for the angle of its seat and in its 1–1/16 size when it has 14t.p.i. It is rare outside refrigeration and air conditioning plant and its use should be avoided as any seal it may produce with a JIC fitting cannot be guaranteed).

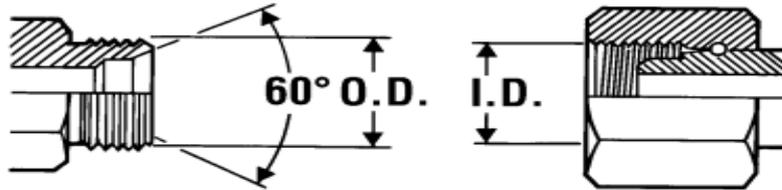


JIC THREAD DASH SIZE	THREAD SIZE	MALE THREAD O.D. (INS)	FEMALE THREAD I.D. (INS)
-02	5/16 x 24	0.3125	0.2614
-03	3/8 x 24	0.3750	0.3299
-04	7/16 x 20	0.4375	0.3762
-05	1/2 x 20	0.5000	0.4387
-06	9/16 x 18	0.5625	0.4943
-08	3/4 x 16	0.7500	0.6733
-10	7/8 x 14	0.8750	0.7874
-12	1–1/16 x 12	1.0625	0.9603

The AN dash sizes were originally used for hard metal tubing – the dash number indicated the outside diameter in increments of 1/16". From this the inside diameter could be calculated (as the piping used was standardised). This convention was carried over to flexible hoses – the dash size being used to indicate the interior diameter of the hose (in 1/16"). This is no longer the case – if you need to know the internal diameter of FLEXOLITE hose, consult the Hose Data given in the corresponding section.

B.S.P.

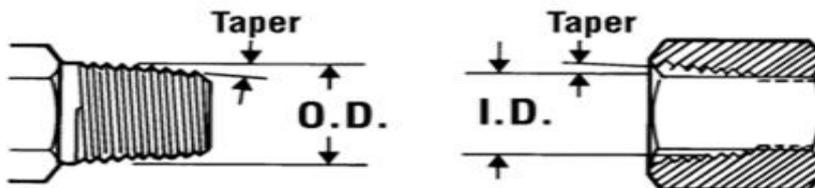
British Standard Pipe thread was widely used on British cars and components and is still found in use today. Male fittings have a 60° concave cone seating, females a convex cone (the opposite of JIC). There is also a tapered form – B.S.P.T. – but this is little used in competition plumbing, although it is found on older British cars. B.S.P. fittings occasionally use a Dowty washer (or similar) under their hex to effect a seal. (Female fittings will sometimes have a globeseal seat instead of a cone). B.S.P. is also found on Japanese motor industry's past history as a producer of British cars. There is also an inverted version of J.I.S. where the male fitting has a convex seat, the female a concave.



NOMINAL THREAD SIZE	MALE THREAD O.D. (INS)	FEMALE THREAD I.D. (INS)
1/8 x 28	0.383	0.337
1/4 x 19	0.518	0.451
3/8 x 19	0.656	0.589
1/2 x 14	0.825	0.734
5/8 x 14	0.902	0.811
3/4 x 14	1.041	0.950

N.P.T.F.

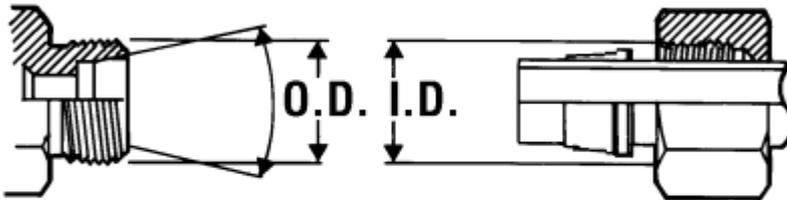
National Pipe Tapered Fuel is an American tapered thread widely used today by American manufacturers. As with B.S.P.T., the seal is made by deformation of the threads. In both cases the use of P.T.F.E. sealant tape (or similar) should be used to assist sealing.



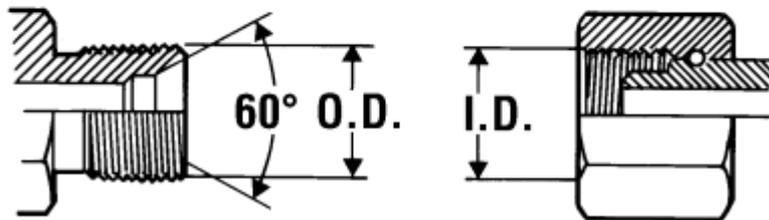
	MALE THREAD O.D. (INS)	FEMALE THREAD I.D. (INS)
1/8 x 27	0.4063	0.3438
1/4 x 18	0.5625	0.4688
3/8 x 18	0.6875	0.5938
1/2 x 14	0.8438	0.7188
3/4 x 14	1.0625	0.9375
1 x 11-1/2	1.3125	1.1875

DIN7631/7647 & DIN 3901/3902

These are German specifications which are identical in threadform except in their 30mm sizes – 7631/2 has 30 x 1.50 pitch, 3901/2 has a 30 x 2.00 pitch. DIN7631/2 has a 60° conical seat, 3901/2 has a 20° cone. DIN3901/2 is easy to identify as its sealing is achieved by use of a compression olive.



DIN 3901/3902



DIN 7631/7647

THREAD SIZE	MALE THREAD (O.D.) MM	FEMALE THREAD (I.D.) MM
M10 x 1.00	10	8.5
M12 x 1.5	12	10.5
M14 x 1.5	14	12.5
M16 x 1.5	16	14.5
M18 x 1.5	18	16.5
M22 x 1.5	22	20.5
M26 x 1.5	26	24.5
M30 x 1.5	30	28.5