



Technical Information

Adapter Sizing Chart

NPTF, BSPT and BSPP measure 1/4" larger than their actual size. For example, a 1/4" NPTF, BSPT or BSPP will actually measure 1/2" on the O. D. of the threads. JIC, SAE O-ring & Flat Face threads measure as listed below. The first number listed is the size of thread, the second number is the threads per inch.

Size	NPTF (Pipe)	JIC (37°)	SAE (O-Ring)	Face Seal (Flat Face)	BSPP (Parallel)	BSPT (Tapered)
-2	1/8 - 27	5/16 - 24	5/16 - 24	-	1/8 - 28	1/8 - 28
-3	-	3/8 - 24	3/8 - 24	-	-	-
-4	1/4 - 18	7/16 - 20	7/16 - 20	9/16 - 18	1/4 - 19	1/4 - 19
-5	-	1/2 - 20	1/2 - 20	-	-	-
-6	3/8 - 18	9/16 - 18	9/16 - 18	11/16 - 16	3/8 - 19	3/8 - 19
-8	1/2 - 14	3/4 - 16	3/4 - 16	13/16 - 16	1/2 - 14	1/2 - 14
-10	-	7/8 - 14	7/8 - 14	1 - 14	-	-
-12	3/4 - 14	1-1/16 - 12	1-1/16 - 12	1 3/16 - 12	3/4 - 14	3/4 - 14
-14	-	1-3/16 - 12	1-3/16 - 12	1 5/16 - 12	-	-
-16	1 - 11-1/2	1-5/16 - 12	1-5/16 - 12	1 7/16 - 12	1 - 11	1 - 11
-20	1-1/4 - 11-1/2	1-5/8 - 12	1-5/8 - 12	1 11/16 - 12	1-1/4 - 11	1-1/4 - 11
-24	1-1/2 - 11-1/2	1-7/8 - 12	1-7/8 - 12	2 - 12	1-1/2 - 11	1-1/2 - 11
-32	2 - 11-1/2	2-1/2 - 12	2-1/2 - 12	2 1/2 - 12	2 - 11	2 - 11

Thread Sizing Kit

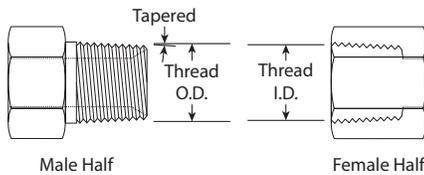
Allows the user to properly identify threads of all hydraulic types. This handy kit includes a fractional thread pitch gauge, a metric thread pitch gauge, inside & outside caliper (inches and millimeters), a seat angle gauge (24 degree/30 degree/37 degree/45 degree), 27-page fluid ports & connections identification guid. A carrying case is standard for easy and convenient storage.



Stock Number	Ship Wt.
1706410	1

NPTF (National Pipe Thread Fuel)

Commonly referred to as "pipe" threads, this connection is still widely used in fluid power systems, even though it is not recommended by the National Fluid Power Association (NFPA) for use in hydraulic applications. The thread is tapered and the seal takes place by deformation of the threads. NPTF threads differ from NPT threads in that NPT threads are designed for mechanical or low-pressure air or fluid applications. Visually, the two look identical. However, the thread forms are different. Mating a NPT threads with NPTF threads will most likely produce a connection what will leak. All of our hydraulic fittings and adapters are NPTF threads. A thread sealant is recommended for all NPTF fittings and adapters.

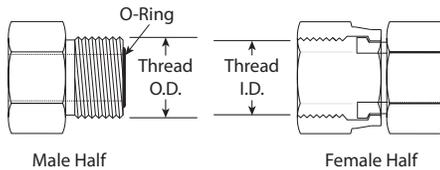


NPTF Thread Measuring Tip: Measure the thread diameter and subtract one quarter inch to find the nominal thread size.

Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D.	Female Thread I.D.
1/8	02	1/8 - 27	12/32 (0.41)	3/8 (0.38)
1/4	04	1/4 - 18	17/32 (0.54)	1/2 (0.49)
3/8	06	3/8 - 18	11/16 (0.68)	5/8 (0.63)
1/2	08	1/2 - 14	27/32 (0.84)	25/32 (0.77)
3/4	12	3/4 - 14	1 1/16 (1.05)	1 (0.98)
1	16	1 - 11 1/2	1 5/32 (1.32)	1 1/4 (1.24)
1 1/4	20	1 1/4 - 11 1/2	1 21/32 (1.66)	1 19/32 (1.58)
1 1/2	24	1 1/2 - 11 1/2	1 29/32 (1.90)	1 13/16 (1.82)
2	32	2 - 11 1/2	2 3/8 (2.38)	2 5/16 (2.30)

O-Ring Face Seal (ORFS)

This connection offers the very best leakage control available today. The male connector has a straight thread and o-ring in the face. The female has a straight thread and a machined flat face. The seal takes place by compressing the o-ring onto the flat face of the female, similar to a flange type fitting. The threads hold the connection mechanically.



Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D.	Female Thread I.D.	O-Ring
1/4"	04	9/16 - 18	9/16 (.56)	17/32 (.51)	011N90
3/8"	06	11/16 - 16	11/16 (.69)	5/8 (.63)	012N90
1/2"	08	13/16 - 16	13/16 (.82)	3/4 (.75)	014N90
5/8"	10	1 - 14	1 (1.00)	15/16 (.93)	016N90
3/4"	12	1 3/16 - 12	1 3/16 (1.19)	1 1/8 (1.11)	018N90
1"	16	1 7/16 - 12	1 7/16 (1.44)	1 3/4 (1.36)	021N90
1 1/4"	20	1 11/16 - 12	1 11/16 (1.69)	1 5/8 (1.61)	025N90
1 1/2"	24	2 - 12	2 (2.00)	1 15/16 (1.92)	029N90

