



Identifying Threads

It is important to identify the threads required before ordering couplings.

Identifying threads can sometimes be the most difficult and frustrating part of coupling selection. However, without the right combination of threads, you may not provide a functional or safe connection.

The diameters, threads per inch (TPI) and thread pitch, etc. are necessary to completely identify a thread. Ring, Plug and GO/NOGO gauges are required to accurately gauge or identify threads. In the field, in the absence of these gauges, thread leaf gauges can be used to identify the Threads Per Inch (TPI) and the thread pitch. On threads you have determined to be straight threads, a caliper can be used to measure the Outside Diameter of the Male (OD) or the Inside Diameter of the Female (ID). A caliper can also be used to take measurements of tapered thread diameters. However, these are more difficult to define because of the taper. Fortunately, there are few tapered threads to deal with and these can usually be identified from the nominal ODM and the TPI.

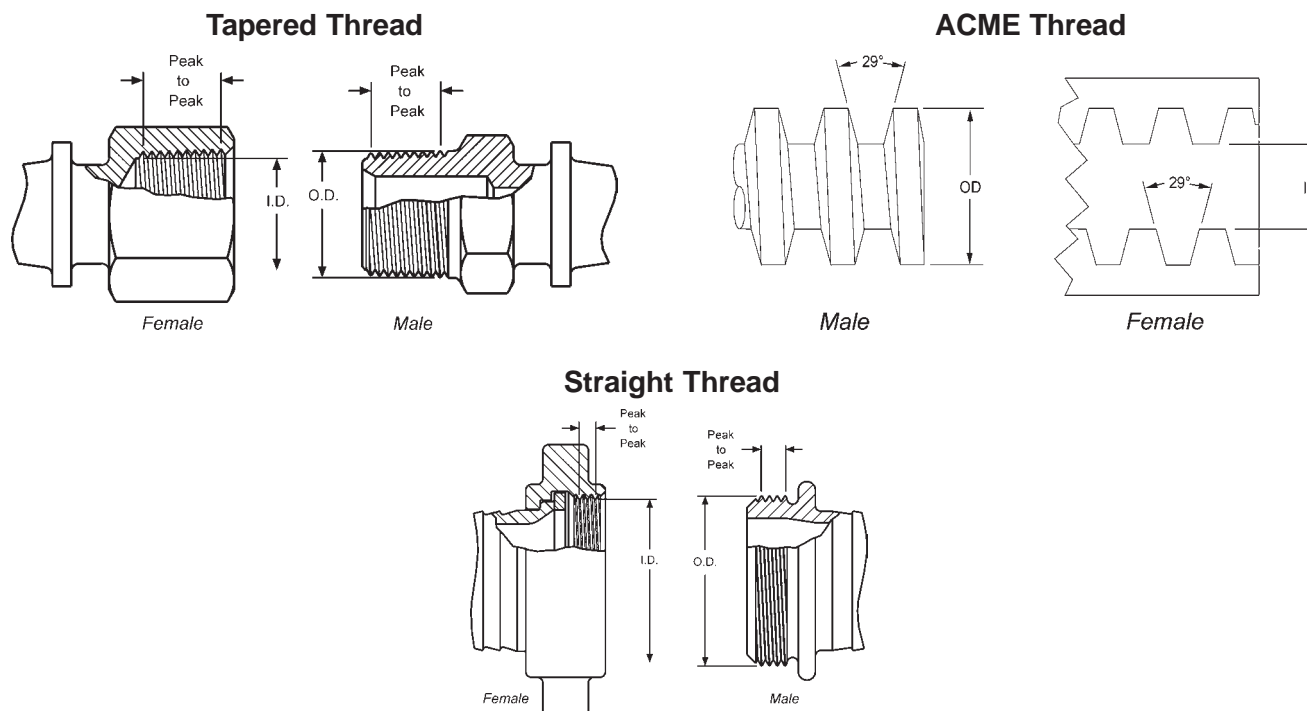
However, identifying the thread may not fully identify what is needed in a mating fitting. The application is the primary *limiting factor on the thread type used*. Dixon offers products with a wide variety of threads used with hose, pipe and hydraulics.

When attempting to choose a fitting, it is always advisable to first identify the thread to which it must connect. This may entail checking with a fitting or equipment manufacturer.

When it is not possible to identify the thread:

- 1) Determine the number of threads per inch by measuring the distance from peak of thread to peak of thread across the largest number of whole threads. Then divide the number of threads by the measurement (This will provide the TPI).
- 2) Check to see if the thread is straight, tapered, or flat
 - a) Straight Threads
Measure the Outside Diameter of the Male (OD) or the Inside Diameter of the Female (ID), from peak of thread to peak of thread.
 - b) Tapered Threads
Measure the Outside Diameter of the Male (OD) at the large end and the small end, or the Inside Diameter of the Female (ID) at the large end and the small end, from peak of thread to peak of thread. Then measure the Outside Diameter (OD) of the unthreaded pipe.
 - c) Flat (ACME) Threads
Acme threads are used for bevel seat and John Perry fittings in sanitary installations. Sizes 1" to 3" (tube size) have 8 threads per (TPI) and the 4" has 6 TPI. There is not a sharp point on this thread and it is a straight thread. The tops of the threads are flat and there is typically a 29° included angle between the threads. Measure the outside diameter of the male (OD) or inside diameter of the female (ID)

Once the application and these two pieces of information have been determined, the thread can generally be determined. When in doubt, *contact the factory*.



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