



**High Pressure  
Equipment  
Company**

**Assembly Instructions for AF2, AF4, and AF6  
Taperseal Connections**

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# Taperseal Connections

## Description:

Taper Seal connections are available for 1/16", 1/8", 1/4", and 3/8" O.D. tubing. No special tubing preparation is required - simply cut tubing to desired length, deburr and assemble.

The 1/8", 1/4", and 3/8" sizes utilize a two-piece sleeve which is supplied partially assembled. When the connection is assembled, the outer sleeve portion is permanently compressed over the inner portion to rigidly lock the sleeve onto the tubing. Note that the sleeve is not forced to bite into the tubing, but rather is clamped onto the tubing much like a machine collet.

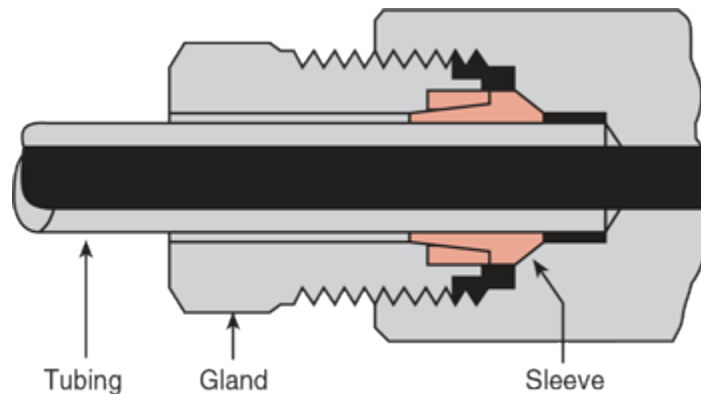
Pressure ratings: The 1/16" and 1/8" O.D. tubing size connections are rated to 15,000 psi working pressure. The 1/4" and 3/8" O.D. sizes are rated to 10,000 psi working pressure.

Easy make-up connections: One of the popular benefits of taper seal connections is that it is very easy to determine when the connection is "tight enough" during initial assembly. Simply rotate the tubing gland into the connection until you feel a "bottoming out" or "dead stop" of the wrench. This signals that the connection has been properly made.

A commercial thread lubricant is highly recommended to facilitate initial makeup of the connection, but such lubrication may be removed afterwards if desired. The Taper Seal connection can be disassembled and then reassembled an indefinite number of times.

Standard material for the gland is Type 316 stainless steel. The inner portion of the two-piece sleeve is Type 316 stainless steel. The non-wetted outer sleeve portion is zinc plated alloy steel. (Note that the 1/16" O.D. size is a one-piece sleeve design) in Type 316 stainless steel.

Tubing glands and sleeves are provided with all valves and fittings unless otherwise requested. (See chart at right for size details and catalog numbers).



<b>15,000 psi</b>		<b>10,000 psi</b>	
<b>AF1</b> 1/16" O.D. Tubing	<b>AF2</b> 1/8" O.D. Tubing	<b>AF4</b> 1/4" O.D. Tubing	<b>AF6</b> 3/8" O.D. Tubing
<b>Female Opening Detail</b>			
<p>AF1</p>	<p>AF2</p>	<p>AF4</p>	<p>AF6</p>
<b>Gland</b>			
<p>15-2AM1</p>	<p>15-2AM2</p>	<p>10-2AM4</p>	<p>10-2AM6</p>
<b>Sleeve</b>			
<p>15-2A1</p>	<p>15-2A2</p>	<p>10-2A4</p>	<p>10-2A6</p>
<b>Plug</b>			
<p>15-7AM1</p>	<p>15-7AM2</p>	<p>10-7AM4</p>	<p>10-7AM6</p>

Assembly Instructions for AF2, AF4, and AF6 Taperseal Connections:

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1. Deburr the end of the tube.
2. Lubricate the male threads of the gland, and the back of the outer collar on the sleeve with a process compatible lubricant.
3. Put a small amount of lubricant on the area where the outer collar and the inner sleeve contact each other. This will help reduce friction as the outer collar slides over the inner sleeve.
4. Insert the end of the tube into the fitting until it bottoms. Using the appropriate torque wrench, turn the gland nut clockwise one-half turn then stop. Back off the gland nut and repeat 3-4 times or as required until the gland nut stops turning or bottoms out. Thus initial step is required to compress the sleeve onto the tube. Do not continuously rotate the gland nut clockwise or galling between the out collar and inner sleeve could occur.
5. Remove the tube with the gland and sleeve attached and inspect that the sleeve assembly has slid completely down over the inner sleeve. No gaps should be present.

Note: a mandrel can be used to properly make up the connection rather than using the actual component. Using the mandrel will help prevent galling of the female component threads. Mandrels can be purchased from HiP.