



Installation Instructions

Fabricated Flanged Coupling Adapters Model 303, 304

Read instructions before starting installation*

Review of “Tricks of the Trade” on the reverse will assist with installation.

For purposes other than water, contact JCM Industries for application and product assistance.

NOTE: Maximum 90PSI working pressure on gas service applications.

For higher pressure ratings, contact JCM Industries Engineered and Technical Sales.

1. Clean and scrape pipe. Remove any scale, pipe wrap, debris or dirt that may interfere with the complete sealing of the gasket. Inspect pipe for integrity, size, outside diameter and surface irregularities. Confirm the proper size and range of coupling and flange bolt pattern. Inspect fitting to ensure all parts are included.

Fittings furnished with stainless steel hardware; see reverse for fastener management.

2. Lubricate the pipe and the fitting gasket with soapy water. **Do not use oil base pipe lubricant.**
3. (*For FCA's furnished with additional gaskets and/or backup rings, see note.)

Install follower ring, gasket and flanged adapter body onto the plain end of pipe. **NOTE:** Flat side of the gasket face meets the follower ring, the tapered side inserts into the adapter body. Insert the valve bolts into the flanged adapter body facing toward the valve or flanged fitting end. 4. Insert the flanged coupling adapter bolts to make up the coupling side. Loosely make up the FCA on the pipe end making certain the pipe extends past the gasket a minimum of one and one-half inch (1-1/2") (38mm) after deflection has occurred. Mark pipe to make certain FCA does not slide during tightening.

5. Align bolt holes of the adapter and connecting flange and loosely make up flange connection. Tighten flange bolts and nuts, alternating bolts in a star pattern.

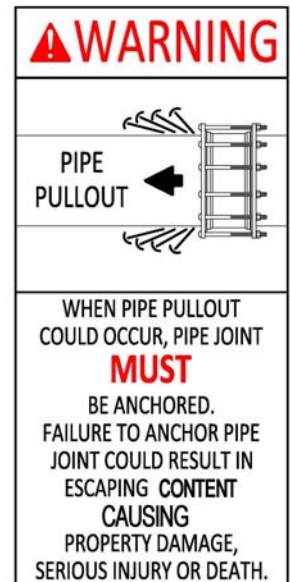
Recommended Torque:	5/8" Bolts	75 Foot Pounds
	3/4" Bolts	90 Foot Pounds

6. **Lift the middle ring to insure that the gasket is evenly centered in the end.** Tighten flange coupling adapter bolts to make up the coupling side, alternating from side to side drawing the follower flange in evenly until all bolts have been tightened to 50 - 60 Foot Pounds. Check torque of bolts prior to completion.

***Optional Custom FCA provided with multiple thickness gaskets and/or backup rings to accommodate unknown pipe diameters. Custom backup rings are implemented when the transition of the standard coupling I.D. is greater than 1/2" (accomplished through thicker gaskets). Thicker gaskets require additional wall coverage to properly compress the gasket into the flared end. This coverage is provided by the backup ring.**

(A) Determine the correct thickness of gasket for installation. Should gasket require cutting or trimming, cut gasket end to the same bias/diagonal cut to meet up to the opposite end.

(B) As in step three (3), install the follower ring on the pipe. Then install the special backup ring (between the FCA bolt follower ring and the gasket). The backup ring provides additional bearing surface area to the gasket wall and aids in gasket compression. Install the gasket & flanged adapter body and continue with standard installation from step three (3).



INT303-0115

*Ensure fitting is suitable for application (confirm size, materials, pressure ratings, line content, meets local governing & association standards, etc.). Pipeline operation forces, including pressure fluctuations, thermal expansion/contraction, movement/shifting, etc. will influence the success of the application. Proper anchorage, restraint, harnessing, thrust blocks or other devices must be provided to prevent pipe movement (lateral, angular, axial) or pipe pullout from the bolt-on fitting. Inspection of the pipe integrity is the responsibility of the end user. JCM recommends the use of calibrated torque wrench. Failure to follow installation instructions will result in voided product warranty.

For application review or questions contact JCM Industries at 1-800-527-8482, 903-832-2581





Tricks of the Trade for Installation

Fabricated Flanged Coupling Adapters Model 303, 304

JCM Quality Fitting Equipped With 18-8 Stainless Steel Bolts and Nuts

When not properly handled it is the nature of stainless steel fasteners to gall and freeze (seize up). This is due to the inherent properties of the stainless material. Galling and freezing is often triggered by the presence of metal chips, burrs and grains of sand on the threads of the bolts and nuts. Extra care has been taken by JCM prior to assembly and packing of this fitting to assure a trouble-free installation.

1. The nuts and bolts are made from material of different hardness so that they have different strengths.
2. Standard 5/8" and 3/4" nuts are coated with a special blue or green (antiseize) coating. Additional lubricant may be needed. Uncoated stainless steel hardware is provided without lubrication to prevent a build up of dirt, sand or grit during shipment. **A Molybdenum-Base lubricant is recommended.**
3. Each nut is assembled by hand to be sure that it went on the bolt freely.
4. The bolts and nuts are handled carefully to avoid damage to the threads.
5. The bolts and nuts are made to exacting specifications to assure that the correct material is used and that the thread form is correct.

Stainless hardware is especially susceptible to galling. JCM supplies specially coated nuts to eliminate the galling caused by over torquing, but **the bolt threads must be kept clean, free from nicks and not pitched or thrown into the tool bucket during the installation process.** Use of the **JCM 901 Master Wrench or JCM 905 Torque Wrench with Deep Socket is highly recommended.** Use of pneumatic wrench for installation could cause hardware to seize and is not recommended.

Tricks of the Trade

Years of field experience, special applications and product testing have revealed many subtleties regarding application and installation of bolted fittings. For maximum performance under adverse conditions take advantage of the JCM "Tricks of the Trade."

Always clean and lubricate pipe with water or soapy water. This helps overcome friction when installing the gasket. Do not use oil base pipe lubricant; the oil does not disperse, leaves residue and prevents the gasket from sealing/adhering to the pipe wall. Use water solvent lubricant. Alcohol may be added to water in freezing weather.

Difficult to reach or cramped areas on the backside or underside of the pipe can be visually checked by using a mirror.

Couplings perform at optimal effectiveness when centered over joint area.

Use of short shims will assist in keeping the follower centered on the pipe and can be removed as bolts are tightened.

Lubricating coupling bolts will ease installation and assure proper torquing of bolts.

Tightening bolts a star rotation pattern will compress the gasket evenly into the coupling ring and prevent leak or blowout due to misaligned gasket.