



## Installation Instructions

# Model 801 Expansion Joint

**Read instructions before starting installation\***

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

**Review of Stainless Steel Fastener Management on the reverse will assist with installation.**

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 expansion joint and end connections. Inspect fitting to ensure all parts are included.

**For fittings furnished with stainless steel fasteners, see reverse for fastener management.**

2. Lubricate the pipe and the fitting gasket with soapy water. **Do not use oil base pipe lubricant.**
3. Pipe alignment is important for proper functioning of the expansion joint, and to ensure free and concentric movement of the slip pipe through the stuffing box. Alignment guides should be provided to allow free pipe movement along the axis, and to prevent horizontal or vertical movement. The first alignment guide should be placed as close to the joint as is practical, up to maximum of 4 pipe diameters. The distance from the first guide to the second should not exceed 14 pipe diameters. If anchors are used, they too should be located within 4 pipe diameters of the expansion joint. Additional supports are usually required in accordance with standard practice.

Limit rods are required on long pipelines where two or more expansion joints are required and it is impractical to install intermediate anchors between joints. In other words, the limit rods control the amount of outward movement (pipeline contraction) that can take place in any one joint.

Note: All joints except the expansion joint must be restrained joints for the expansion joint to cycle properly.

### INSTALLATION GUIDE

Place the slip pipe to the full entry position in the sleeve body. Withdraw the slip pipe to the calculated value determined by the following formula:

$$\frac{\text{Max. Temp.} - \text{Installation Temp.}}{\text{Total Temp. Range} - (\text{Max.} - \text{Min. Temp.})} \times 10^* = \text{Total Slip Pipe Withdrawal (Inches)}$$

\*If joint is made for movement other than 10", substitute the figure for which joint is designed.

EXAMPLE:

INSTALLATION TEMP. = 80°F

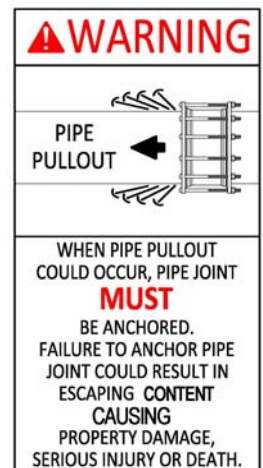
MAX. OPERATING TEMP. = 130°F

MIN. OPERATING TEMP. = 30°F

FORMULA CALCULATION:

$$\frac{130 - 80}{130 - 30} \times 10 = \frac{50}{100} \times 10 = 5" \text{ Total Slip Pipe Withdrawal (Inches)}$$

2 - 1/2" Withdrawal on each end of double expansion joint



When the slip pipe is in proper position, tighten the bolts on the packing ring, alternating in a star pattern. Tighten to approximately 20 ft. lbs. or until stuffing box packing is tight enough to prevent leakage.

**INT801-0115**

\*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**





Stainless Steel Fastener Management

## Model 801 Expansion Joint

### JCM Quality Fittings 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. Nuts are coated with a special anti-seize coating. Additional lubricant may be needed. **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.