JCM INDUSTRIES

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.
Expansion joints are not intended for buried service per ANSI/AWWA Standard C221. Contact manufacturer.

For best installation: 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. Expansion joints should remain accessible for inspection and maintenance when required.

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. Limit rods do not perform as restraints. Limit Rods engage to stop movement from one expansion joint and transfer pipe movement to the next expansion joint.

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

Installation

1. Inspect pipe for integrity, size, pipe end connections and any obstacles that would prevent/interfere with installation. Confirm the proper size and range of expansion joint and fitting end connections. Inspect fitting to ensure all parts are included. The expansion joint shipped with the slip pipe and packing installed in the closed position.
2. Loosen packing gland bolts to permit the slip pipe to move within the body of the fitting. Setting the slip pipe for the correct position is determined by the ambient temperature at the time of installation (see formula below). When the slip pipe is in proper position, tighten the bolts (5 - 10 ft lbs) on the packing ring, alternating in a star pattern
3. Install the expansion joint in the pipeline. Connect the pipe ends.
4. Tighten packing gland to approximately 20 ft. lbs. or until stuffing box packing is tight enough to prevent leakage. Do not over tighten.

INSTALLATION GUIDE

Withdraw the slip pipe to the calculated value determined by the following formula:

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

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

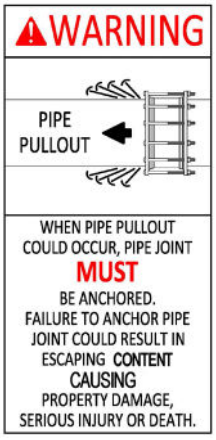
Example:

Installation Temp	= 80° F
Max. Operating Temp	= 130°F
Min. Operating Temp	= 30°F

Formula

$$\frac{130 - 80}{130 - 30} \times 10 = \frac{50 \times 10}{100} = 5\text{”}$$ total Slip pipe withdrawal (inches) single end expansion joint

2-1/2” withdrawal on each end of a double end expansion joint



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.

INT801-0825

NSF Certified to NSF/ANSI/CAN 61 & NSF/ANSI 372

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

JCM INDUSTRIES

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 a calibrated Torque Wrench with Deep Socket is highly recommended**. U**se of pneumatic wrench for installation could cause hardware to seize and is not recommended.