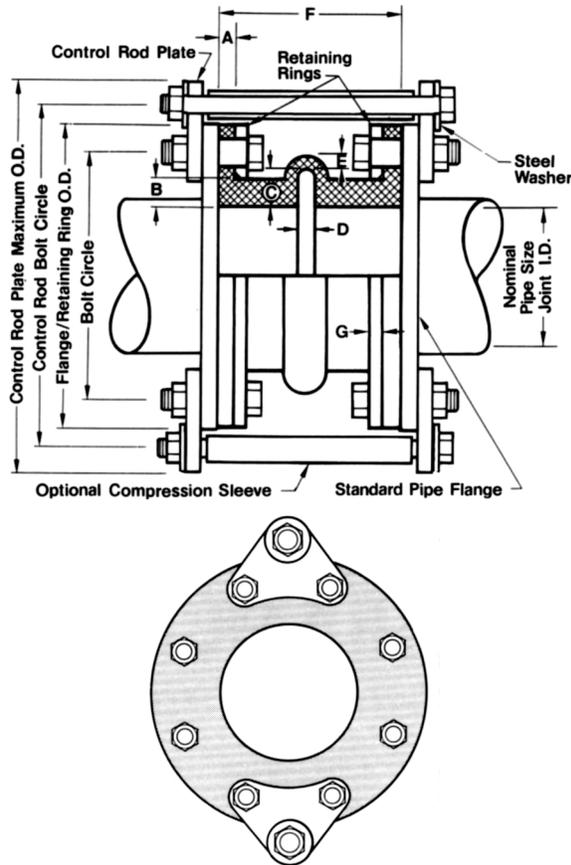


Control Rod Instructions



Pre-Installation Check List:

1. Compare the requirements of the system to ensure the proper number of control rods have been specified. (Minimum of two [2] required.)
2. Check units to be sure all parts are included. The unit consists of two [2] plates, one [1] bolt with nut and two [2] metal washers.

When Control Rods are Required:

1. Lack of proper pipe anchors
Initial surge of pump at an elbow may cause hyper-extension.
2. Lack of proper pipe supports
Holz expansion joints and vibration dampeners are not designed to support the weight of the piping system.
3. Lack of proper alignment guides
Control rods will prevent lateral movement beyond design specifications.
4. Wide fluctuations of temperature
The changing from hot to cold media may cause excessive expansion or contraction even when the pipe is properly anchored.
5. Testing at elevated pressures
The use of anchors and/or control rods is required to offset end thrust.

Installation:

1. Bolt the control rod plates to the opposite side of the metal flange at the same time the bolt is being installed through the rubber flange. The plates are to be equally spaced around the circumference of the flange.
2. Install the bolt through the third hole in each plate after placing a metal washer (next to the bolt head) and one-half of the rubber washers on each end of the bolt. (See illustration.)
3. Tighten the nut on the control rod until it is snug. **NOT TIGHT.** The combined thickness of the rubber washers is equal to the maximum allowable movements.

NOTE:

If excessive compression exists, optional *compression sleeves* should be specified. The compression sleeves will limit the compression to the maximum allowable movement.



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EXPANSION JOINTS & VIBRATION DAMPENERS FOR PIPING SYSTEMS



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INSTALLATION INSTRUCTIONS

NON METALLIC JOINTS • COUPLINGS • CONNECTORS • DAMPENERS
INDUSTRIAL AND PROCESS PIPING • AIR CONDITIONING SYSTEMS • POWER PLANTS • HEATING - MARINE - WATER - SEWAGE SYSTEMS

Pre-Installation Check List:

1. Compare the requirements of the system to ensure the temperature pressure, vacuum, media and movements are not beyond or different from the recommendations of Holz Rubber Company for the expansion joints provided.
2. Remeasure the opening to ensure the face to face is accurate. Any variance from the specified opening will reduce the total allowable movements by the amount of variance.
3. Align the Piping so the system misalignment does not exceed 1/8". If the system cannot be aligned to within 1/8", an offset expansion joint should be used.
4. Check anchors, supports and alignment guides to ensure proper design. The Holz non-metallic expansion joints and vibration dampeners are not designed to support the weight of the piping system. If the system is not properly supported or anchored, control rods must be installed. See reverse side for instructions.
5. Clean companion metal flanges of all foreign material. Be sure metal flanges do not have more than a 1/16" raised face.

Installation:

1. Apply lubricant consisting of a thin film of graphite dispersed in water or glycerine to the rubber flanges. No other lubricant or gasket is required.
2. Install part between mating flanges, inserting the bolts from the arch side of the flange. Washers must be used over splits in the retaining rings. Tighten bolts alternately around the joint until all nuts are tight and the rubber flanges bulge slightly.
3. Inspect cover for any accidental cuts or gouges. The protective cover should be repaired with rubber cement prior to system start-up.
4. Re-Tighten bolts after seven days of operation and periodically thereafter. Rubber parts will take a set after a period of compression. Loosening of the bolts and breakage of the seal may occur, if this procedure is not followed.

General Precautions:

1. Spare parts should be stored in a cool, dark, dry place in a flat position. (Do not store on flange edges.)
2. System tests should not exceed 150% of the rated working pressure of the expansion joints. Systems should not be operated above the rated pressure or temperature of the expansion joints.
3. Insulating over expansion joints is not recommended. If insulation is required, insulation should be designed for easy removal
- so the periodic inspection procedure can be maintained.
4. Welding should not take place in the vicinity of the expansion joints. If welding occurs frequently above the expansion joint, a shield should be installed. Contact Holz for shield information.
5. If underground installation is necessary, a protective shield over the expansion joint should be provided. Back filling directly onto the expansion joint is not recommended.