



## INSTALLATION INSTRUCTIONS

### TEFLEX MOLDED PTFE EXPANSION JOINTS

**SERVICE CONDITIONS:** Make sure the expansion joint ratings for temperature, pressure, vacuum, and movements match the system requirements.

**ALIGNMENT:** Expansion joints are not designed to compensate for piping misalignment errors. Piping should be lined up within 1/8". Misalignment reduces the rated movements of the expansion joint. Pipe guides should be installed to keep the pipe aligned and to prevent undue displacement.

**LIMIT ROD BOLTING:** Limit bolts are factory set at the maximum allowable travel position to prevent overextension. Do not remove or alter nuts at any time. Damage or personal injury can result due to changes in limit rod nut settings.

**PIPE SUPPORT:** Proper anchoring should be used wherever the pipeline changes direction and expansion joints should be located as close as possible to anchor points. Piping must be supported with proper pipe supports so expansion joints do not carry any pipe loads.

**PERSONNEL PROTECTION:** It is strongly recommended that safety shields be used for all hazardous service to protect against serious personal injury in the event of expansion joint failure.

**OPERATION:** After expansion joints are installed, it may be necessary to air blast the exterior to remove foreign debris, such as metal chips, from between the convolutions. The expansion joint should then be covered with a shield to protect from damage and foreign debris during operation. (Note: do not weld in immediate vicinity of expansion joint unless it is properly protected.)

**STORAGE:** Store expansion joint with wood flange covers in place to protect PTFE flange surfaces from damage until ready to install.

#### INSTALLATION:

A. Check to make sure PTFE surfaces are clean and free of foreign sediment.

B. Install expansion joints to the prescribed neutral lengths as stated in table listings. If expansion joints are used in high temperature processes, it is recommended that units be installed at near extended values. For cold process installations, expansion joints should be installed in a nearly compressed length. These settings will enable the expansion joint to realize full travel capabilities.

C. Thread installation bolts from mating flange side to prevent possible damage to PTFE elements. Extend bolts beyond the expansion joint flange by no more than 1-2 threads. Nuts are not necessary due to threaded flange holes.

D. Tighten flange bolts with a torque wrench. Tighten in an alternate crossing pattern in 20% increments until 80% of final bolt torques have been achieved. Tighten to final torque values (listed below) in a clockwise fashion around the flange to ensure bolts carry equal stress burdens. **TORQUE VALUES:** 1"-1 1/4": 10ft-lb, 1 1/2": 15ft-lb, 2": 25ft-lb, 2 1/2": 30ft-lb, 3": 40ft-lb, 4": 30ft-lb, 5": 40ft-lb, 6": 45ft-lb, 8": 60ft-lb, 10": 50ft-lb, 12": 60ft-lb, 14": 70ft-lb, 16": 65ft-lb, 18": 90ft-lb, 20": 80 ft-lb, 24":90ft-lb.

**WARNING:** PTFE expansion joints may operate in pipelines or equipment carrying fluids and/or gases at elevated temperatures and pressures, and may transport hazardous materials. Precautions should be taken to protect personnel in the event of leakage or splash. Expansion joints should not be installed in inaccessible areas where inspection is impossible. Make sure proper drainage is available in the event of leakage when operating personnel are not available.