# Metragator Externally Pressurized Expansion Joint. OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

**General:** Metragator expansion joints are used to compensate for <u>axial</u> movement in piping systems. The Metragator features externally pressurized stainless steel bellows and carbon steel housing.

## Application:

- 1. Metragator expansion joints are designed for axial compression only. Metragator expansion joints are not designed for lateral, angular movement, or torques. Install only one joint between anchors.
- 2. All expansion joints require guiding and anchoring in accordance with EJMA (Expansion Joint Manufacturers Association) guidelines.
- 3. Metragator expansion joints as a standard are supplied to absorb pipe growth in hot systems. If expansion joint is for pipe contraction in a chilled system, notify Metraflex.
- 4. Metragator expansion joints are not flow directional. When installing Metragator joints on a vertical application, the traveling end should be installed on the top to allow for proper drainage.
- 5. Location of expansion joints should be reviewed to insure proper operation.

## Installation:

- 1. Inspect joint for shipping damage, insure that the shipping bar is intact.
- Installation of expansion joint and anchors must be made as close to the design ambient temperature as possible. If compensator is installed into a hot pipeline or at other than design ambient temperature, consult Metraflex.
- 3. Single joints ideally are installed near an anchor. Dual expansion joints are supplied with an intermediate anchor and must be installed equidistant between main anchors.
- 4. Do not remove shipping bar before the installation of guides and anchors.

## **Testing:**

- 1. Joint may be one-time pressure tested to 225 PSIG for 150 lb. class joints, or 450 PSIG for 300 lb. class joints. Do not exceed maximum pressure or temperature during operation.
- 2. Metraflex recommends hydrostatic test with all air in the system removed. If an air test is performed, appropriate safety precautions must be made.
- 3. Do not test until joint it is properly anchored and guided. The shipping bar is not designed to restrain the hydrostatic end load that will be developed by the expansion compensator under pressure.

#### **Precautions:**

1. Joint will develop hydrostatic end loads equal to pressure time effective area, and must be included in anchor load calculations.

#### Maintenance:

1. Metragator expansion joints have no serviceable parts and do not require maintenance.

Contact Metraflex or your local Metraflex Representative with ANY questions.

CUSTOMER		Metraflex.	
PROJECT	for pipes in motion		
ENGINEER	DESCRIPTION:		
ARCHITECT	Metragator Externally Pressurized Expansion Joint		
PRO. OR P.O. NO	Operation, Installation and Maintenance Instructions		
	DRAWING BY: JC	DATE: 04-27-12	DRAWING NO. Metragator-OIM