

## MN, MC and MNLC Internally Pressurized Expansion Joint. OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

**General:** The MN, NC, and MNLC family of expansion joints expansion joints feature internally pressurized bellows, each with unique pressure and movement capabilities. These joints are available in 50lb, 150lb, and 300lb Class, please consult the factory submittals for specific performance specifications.

### Application:

1. MC, MN and MNLC expansion joints can be used for axial, lateral, or angular movements. These joints are not suitable for applications that result in torque on the joint.
2. All expansion joints require guiding and anchoring in accordance with EJMA (Expansion Joint Manufacturers Association) guidelines.
3. Install only one joint between anchors.
4. When internally pressurized joints are used for applications with flow over 10 feet per second or with abrasive materials in the line, a liner should be installed to protect the bellows.
5. Internally pressurized joints supplied with a liner are flow directional and must be installed in the proper orientation. Joints without a liner are uni-directional.
6. 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.
2. Installation of expansion joint and anchors must be made as close to the design ambient temperature as possible. If expansion joint 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. Joint is to be installed in its neutral position. Do not compensate for flange or pipe misalignment by putting torque, compressive, or extension force on the joint. Metraflex recommends that a mating flange remain unwelded until the opposite flange is bolted up.
5. Do not test or remove shipping bar before the installation of guides and anchors.

### Testing:

1. Joint may be one-time pressure tested to 75 PSIG for 50 lb. class joints, 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 a 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. Expansion joints must be easily accessible to allow for periodic inspection. Bellows should be inspected for any signs of damage such as dents or scores. Damaged expansion joints should be replaced immediately. Metraflex expansion joints have no serviceable parts and do not require maintenance.

Contact Metraflex or your local Metraflex Representative with any questions.

CUSTOMER _____			
PROJECT _____			
ENGINEER _____			
ARCHITECT _____			
PRO. OR P.O. NO. _____			
DESCRIPTION:		<b>MN, MC AND MNLC</b>	
		<b>Internally Pressurized Expansion Joints</b>	
		Operation, Installation and Maintenance Instructions	
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