

## Do's and Don'ts in Metal Expansion Joints Installation

In order to ensure that the Expansion Joints work properly and in order to prolong their working life, it is necessary to respect a series of precautions that make the Expansion Joints almost maintenance free elements. In case of doubt we recommend that you contact MACOGA directly and inquire about your specific question.

### ✓ Do's

- Inspect for damage during shipment, i.e., dents, broken hardware, water marks on carton, etc.
- Store in clean dry area where it will not be exposed to heavy traffic or damaging environment.
- Use only designated lifting lugs to lift the Expansion Joints.
- Expansion Joints must be fitted in the appropriate longitude as laid out in the instructions supplied by MACOGA.
- Install joint with arrow pointing in the direction of flow.
- Install single van stone liners, pointing in the direction of flow. Be sure to install a gasket between the mating flange and liner.
- With telescoping van stone liners, install the smallest I.D. liner pointing in the direction of flow.
- Remove all shipping devices after the installation is complete and before any pressure test of the fully installed system.
- Remove any foreign material that may have become lodged between the convolutions.
- Protect the bellows with an appropriate fire resistance insulation blanket during nearby welding operations.
- Refer to EJMA Standards for proper guide spacing and anchor recommendations.

### ✗ Don'ts

- Do not lift the expansion joint by the shipping bars.
- Do not lift the expansion joint by the hinges, gimbals, tie rods or any other operative device.
- Do not fix any chains or ropes to the bellows section. The bellows portion of the expansion joint may be easily damaged and cannot usually be repaired.
- Do not remove any blocking/transport device (yellow marked and clearly identified) if available until the Expansion Joint has been installed.
- Do not stretch or compress the expansion joint in order to absorb any defects along the length of the pipe or to rectify any misalignments unless this was taken into account during the initial design and the manufacturing process.
- Do not allow weld splatter to hit unprotected bellows. Protect with an appropriate fire resistance insulation blanket or wet chloride-free insulation.
- Do not use cleaning agents that contain chlorides.
- Do not use steel wool or wire brushes on bellows.
- Do not force-rotate one end of an expansion joint for alignment of bolt holes. Ordinary bellows are not capable of absorbing rotation.
- Do not hydrostatic pressure test or evacuate the system before installation of all guides and anchors. Pipe hangers are not adequate guides.
- Do not exceed a pressure test 1- times the rated working pressure of the expansion joint.
- Do not use shipping bars to retain thrust if tested prior to installation.

This document is "FOR INFORMATION ONLY" and MACOGA does not accept any liability of the information contained herein. The Purchaser shall be responsible for proper, storage, unpacking, handling and installation of the Expansion Joints and operating within the design limits of the delivered unit(s).