

## Installation Instructions:

Metal Bellows Expansion Joints have been designed to absorb a specified amount of movement by flexing of the thin-gauge convolutions. If proper care is not taken during installation, it may reduce the cycle life and the pressure capacity of the expansion joints which could result in an early failure of the bellows element or damage the piping system. The following recommendations are included to avoid the most common errors that occur during installation. When in doubt about installation procedure, contact the manufacturer / piping design engineer for clarification before attempting to install the Expansion Joint.

The piping system has to be well designed with proper supports hangers etc. as per the recommendations of a piping design engineer. **THE BELLOWS IS NOT A HARDWARE WHICH CAN TAKE UP MISALIGNMENTS & WEIGHTS DUE TO INADEQUATELY DESIGNED PIPING SYSTEM.**

DO'S	DON'T
<b>Inspector for damage during shipment i.e. dents, broken hardware, water marks on carton etc.</b>	Do not drop or strike carton.
<b>Store in clean dry area where it will not be exposed to heavy traffic or damaging environment.</b>	Do not remove shipping bars until installation is complete.
<b>Use only designated lifting lugs.</b>	Do not remove any moisture absorbing desiccant bags or protective coatings until ready for installation.
<b>Make the piping systems fit the Expansion Joint. By stretching, compressing or offsetting the joint to fit the piping, it may be over stressed when the system is in service.</b>	Do not use hanger lugs as lifting lugs without approval of manufacturer.
<b>It is good practice to leave one flange loose until the expansion joint has been fitted into position. Make necessary adjustment of loose flange before welding.</b>	Do not use hanger lugs as lifting lugs without approval of manufacturer.
<b>Install joint with arrow pointing in the direction of flow.</b>	Do not allow weld splatter to hit unprotected bellows. Protect with wet chloride free insulation.

<b>Install single van stone liners pointing in the direction of flow. Be sure to install a gasket between the liner and Van Stone flange as well as between the mating flange and liner.</b>	Do not use cleaning agents that contain chlorides.
<b>With telescoping van stone liners, install the smallest LD. liner pointing in the direction of flow.</b>	Do not use steel wool or wire brushes on bellows.
<b>Remove all shipping devices after the installation is complete and before any pressure test of the fully installed system.</b>	Do not force rotate one end of an expansion joint for alignment of bolt holes. Ordinary bellows are not capable of absorbing torque.
<b>Remove any foreign material that may have become lodged between the convolutions.</b>	Do not hydrostatic pressure test or evacuate the system before installation of all guides and anchors.
<b>Refer to EJMA standards for proper guide spacing and anchor recommendations.</b>	Pipe hangers are not adequate guides.
	Do not exceed a pressure test of 1.5 times the rated working pressure of the expansion joint.
	Do not use shipping bars to retain thrust if tested prior to installation.
<b>The manufacturer's warranty may be void if improper installation procedures have been used.</b>	