

Installation Procedure

Operating Conditions: Series 1500 Laminated Bellows Expansion Joints are supplied with a tag attached stating the Design Pressure. The maximum test pressure is 1.5 times the design pressure. The design temperature for all standard joints is 500°F. Consult the purchase specification for the allowable travel. Be certain that the system conditions and test conditions do not exceed these values.

Guides, Supports, Anchors: Series 1500 Laminated Bellows Expansion Joints are designed for applications where the principal movement is axial to the centerline of the expansion joint, and the system includes guides, supports and anchors. Refer to Page 3 for system requirements.

Flow Direction: Series 1500 Laminated Bellows Expansion Joints include a flow liner. The direction of flow is indicated on the exterior of the expansion joint. Confirm that the joint is orientated correctly.

Shipping Restraints: External restraints are installed at the factory to insure installation at the correct length and alignment. They are painted yellow and labeled – Shipping Bars, Remove after Installation. Leave these restraints installed until after the installation of the expansion joint is complete – but they must be removed prior to pressure testing. *CAUTION: they are not designed to react the pressure thrust of the expansion joint – they must be removed prior to testing. Normally the shipping restraints are installed by welding – provide protection for the bellows element from cutting or grinding during removal.*

Limit Rods: Standard Series 1500 Laminated Bellows Expansion Joints do not include tie rods or control rods that limit travel, but they are available as an option. If rods are included, be certain that they are adjusted to allow the design movement of the expansion joint.

Post Installation Inspection

1. Inspect the expansion joint for damage with close attention to the bellows element.
2. Is the expansion joint installed at the correct location; and are the anchors, guides and supports installed in accordance with the system design?
3. Are the guides and support free to allow the movement of the expansion joint.
4. Is the flow direction correct?
5. Are the Shipping Restraints removed?

FIVE YEAR LIMITED WARRANTY

This warranty is given by HYSpan PRECISION PRODUCTS, INC. (HYSpan) for the benefit of the first purchasers for use of its Series 1500 Laminated Bellows Expansion Joints manufactured by HYSpan to standard catalog construction or standard construction with laminated Alloy 625 bellows. The product is warranted to be free from defects in material and workmanship for a period of five (5) years from the date of shipment by HYSpan in accordance with the following conditions:

1. The design pressure and temperature are not exceeded – including surge and upset conditions.
2. The installation conforms to HYSpan installation instructions and approved practice for anchoring, supporting and guiding, and generally accepted good piping practice.
3. Substances in contact with all internal and external surfaces must be compatible with the materials of construction, including all contaminants. Steam, condensate, and water containing more than 100 parts per million chlorides are specifically excluded when stainless bellows are used, Inconel bellows construction qualifies.
4. The warranty shall be limited to the replacement by HYSpan of the same model Series 1500 expansion joint, and payment for transportation by the least expensive method. Labor, material and other costs related to the failure or replacement of the expansion joint are not included. HYSpan shall not be liable for damage or delay suffered by the purchaser, regardless of whether such damages are general, special or consequential in nature, whether caused by defective material or workmanship, or whether caused by HYSpan's negligence regardless of the degree.
5. The warranty is limited to installations in the United States, Puerto Rico and Canada.

The purchaser shall advise the HYSpan factory of any warranty claim, including the nature of the failure. HYSpan shall provide return goods authorization and shipping directions to return the failed joint to the factory. A mutually agreeable delivery schedule and method of shipping the replacement shall be established. The purchaser shall furnish a confirming purchase order and is obligated to the current replacement cost of the joint and shipping expense. Upon receipt of the failed product, the cause of failure shall be determined by the factory at no expense to the purchaser. A credit shall be issued by the factory for the replacement cost and least expensive shipping for valid warranty claims. In the event of a dispute, HYSpan shall furnish the failed product to the purchaser or their representative for failure analysis.