For example, if the expansion joint is used as a replacement in a system that has not cooled down, and the pipe temperature is 170°F over a 200 foot run, the joint must be compressed 1.53".

## **Table 11 Installation Preset**

Temperature Difference	Distance Between Anchors – Feet					
°F	50	100	150	200	250	300
20	0.08	0.15	0.23	0.31	0.38	0.46
30	0.11	0.23	0.34	0.46	0.57	0.69
40	0.15	0.31	0.46	0.61	0.76	0.92
50	0.19	0.68	0.57	0.76	0.95	1.15
60	0.23	0.46	0.69	0.92	1.15	1.37
70	0.27	0.53	0.80	1.07	1.34	1.60
80	0.31	0.61	0.92	1.22	1.53	1.83
90	0.34	0.69	1.03	1.37	1.72	2.06
100	0.38	0.76	1.15	1.53	1.91	2.29
110	0.42	0.84	1.26	1.68	2.10	2.52
120	0.46	0.92	1.37	1.83	2.29	2.75
140	0.53	1.07	1.60	2.14	2.67	3.20
160	0.61	1.22	1.83	2.44	3.05	3.66
180	0.69	1.37	2.06	2.75	3.43	4.12
200	0.76	1.53	2.29	3.05	3.82	4.57
1	2	3	4	5	6	7

Field preset is not recommended unless it cannot be avoided. Note that there must be a significant temperature difference to warrant presetting during installation. If presetting is anticipated, Series 3500 expansion joints can be ordered with threaded adjusting rods factory installed to facilitate presetting.

## **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 3500 Externally Pressurized 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.
- 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 contaminates. Steam, condensate, and water containing more than 100 parts per million chlorides, are specifically excluded when stainless bellows are used; Alloy 625 bellows construction qualifies.
- 4. The warranty shall be limited to the replacement by HYSPAN of the same model Series 3500 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 put in force by receipt at the factory of a completed and executed Warranty Card, which is provided with each expansion joint.
- 6. 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 and the serial number of the expansion joint (permanently located adjacent to the lifting lug). 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.