Installation Instructions

# FlexcompTM Expansion Compensators

1. Piping system must be adequately anchored to limit the pipe movements the compensator must absorb. The compensator should be installed close to a main anchor, and should be followed by a pipe guide (within 14 pipe diameters) which prevents displacement of the line. **See chart on next page for intermediate guide spacing.**
2. Be sure all pipe lines are supported so the compensator does not carry the pipe load.
3. Be certain that the piping configuration does not impose torque on the compensator.
4. System movement must not exceed compensator capability as shown on the label. Operation beyond design limits will result in premature failure.
5. Compensators incorporate an anti-torque device. Care must still be used however on threaded models not to torque the compensator during installation.
6. Check system pressure and temperature and do not exceed compensator capability as shown on the label. Operation beyond design limits will result in premature failure.
7. Compensator alloy must be chemically compatible with the media in the piping system. If in doubt about suitability, refer to a Chemical Resistance Data Table or contact Flex-Hose Co. for guidance.
8. Copper tube models are manufactured with high temperature brazed joints. Do not exceed 1000°F (537°C) during installation.
9. The shipping bar is tack welded to the compensator at the factory to insure rated movement. Do not remove this bar until the installation is complete and all anchors, guides and supports have been adjusted. Remove the restraint prior to testing and remove tack weld or solder flash. The restraint is not designed to react to pressure thrust.

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# Intermediate Pipe Guided Spacing for Externally Pressurized Expansion Compensators

**14 D L MAX LENGTH**

**INTERMEDIATE**

**GUIDE SPACING**

**Anchor**

**1st Guide**

**All Other Guides**



**NOTE:** First pipe guide must be located within a distance no greater than 14 pipe diameters from the end of the bellows.

|  |  |  |
| --- | --- | --- |
| **Nom. Pipe Size (In.)** | **Maximum Distance from Expansion Joint to 1st Guide****or Anchor** | **Approximate Distance Between Additional Pipe Guides (Ft.)** |
| **@ 50 PSI** | **@ 100 PSI** | **@ 150 PSI** | **@ 200 PSI** | **@ 250 PSI** |
| .75 | 10.00” | 13.50 | 9.50 | 8.00 | 7.00 | 6.00 |
| 1.00 | 1’-2.00’” | 17.00 | 12.00 | 10.00 | 8.50 | 7.50 |
| 1.25 | 1’-5.00” | 21.00 | 15.00 | 12.00 | 10.50 | 9.00 |
| 1.50 | 1’-9.00” | 25.00 | 18.00 | 14.50 | 12.50 | 11.00 |
| 2.00 | 2’-4.00” | 29.50 | 21.00 | 17.00 | 15.00 | 13.00 |
| 2.50 | 2’-11.00” | 37.00 | 26.50 | 21.50 | 18.50 | 17.00 |
| 3.00 | 3’-6.00” | 42.50 | 30.50 | 25.00 | 21.50 | 19.00 |
| 4.00 | 4’-8.00” | 55.50 | 39.50 | 32.00 | 28.00 | 25.00 |

The above chart is based on schedule 40 wall carbon steel pipe at 500°F or less.

|  |  |  |
| --- | --- | --- |
| **Nom. Pipe Size (In.)** | **Maximum Distance from Expansion Joint to 1st Guide****or Anchor** | **Approximate Distance Between Additional Pipe Guides (Ft.)** |
| **@ 50 PSI** | **@ 100 PSI** | **@ 150 PSI** | **@ 200 PSI** | **@ 250 PSI** |
| .75 | 10.00” | 5.50 | 4.00 | 3.00 | 3.00 | 2.50 |
| 1.00 | 1’-2.00’” | 7.50 | 5.00 | 4.00 | 3.50 | 3.00 |
| 1.25 | 1’-5.00” | 8.50 | 6.00 | 5.00 | 4.00 | 4.00 |
| 1.50 | 1’-9.00” | 11.00 | 7.50 | 6.00 | 5.50 | 5.00 |
| 2.00 | 2’-4.00” | 14.00 | 10.00 | 8.00 | 7.00 | 6.00 |
| 2.50 | 2’-11.00” | 16.50 | 11.50 | 9.50 | 8.00 | 7.50 |
| 3.00 | 3’-6.00” | 19.00 | 13.50 | 11.00 | 9.50 | 8.50 |

The above chart is based on type M copper tubing at 500°F or less.

**Special Note:** The diagrams above are for FlexComp externally pressurized expansion compensators. The Flexcomp externally pressurized guided expansion compensator incorporates an internal guide ring to direct the motion of the joint axially. Because of this feature the first guide immediately following the Flexcomp externally pressurized guided expansion joint needs to be placed within 14 pipe diameters of the joint. After placement of the first guide, use the chart above for the spacing of intermediate guides.

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