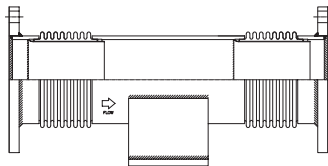
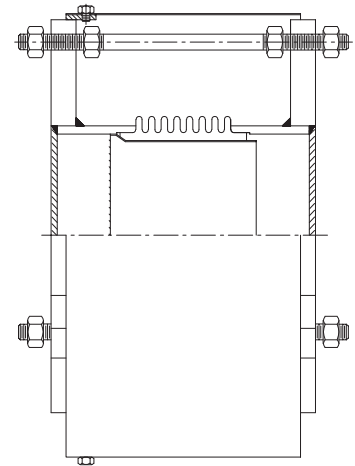


Optional Features

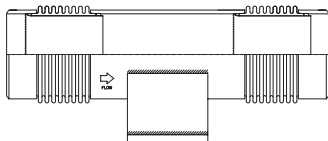
Series 1500 Laminated Bellows Expansion Joints are available with optional features such as limit rods and removable covers. The function of limit rods is to restrict the movement of the bellows in the event of over-travel. In the event of an anchor failure the rods are designed to react the full pressure thrust force. Covers are available to protect the bellows from damage resulting from falling objects, welding slag etc., or to allow for the installation of external insulation that does not contact the bellows.

Dual Center Anchor Base Configurations

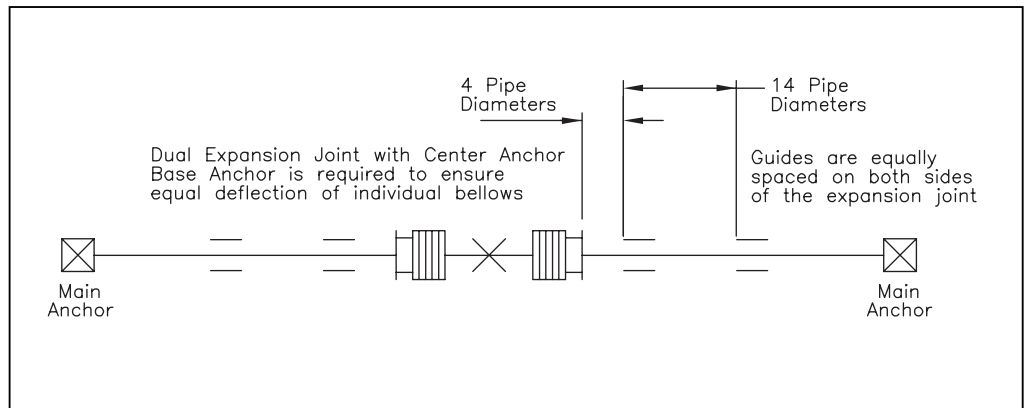
If the expansion or contraction of a straight run exceeds the motion capability of a single joint, two or more single joints can be installed separated by an intermediate anchor as illustrated on Page 3. As an alternative, a Dual Center Anchor Base Expansion Joint can be installed which incorporates two joints and an intermediate anchor.



1505 Flanged Dual Center Anchor Base



1506 Weld End Dual Center Anchor Base



In-Line Pressure Balanced Expansion Joint

Since the pressure thrust force can be significant, there are applications where it is not possible to provide main anchors that are adequate to react the total force. Series 1500 Laminated Bellows Expansion Joints are available as in-line pressure balanced configurations. This configuration incorporates two bellows that are same diameter as the nominal line size, and a third bellows that has an effective area that is twice the line size bellows. They are linked together by internal linkage to react the pressure thrust. There is still a bellows spring force that requires an intermediate anchor—refer to Anchor Forces on page 3.

