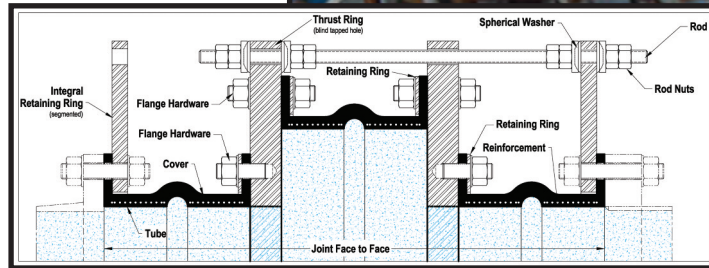
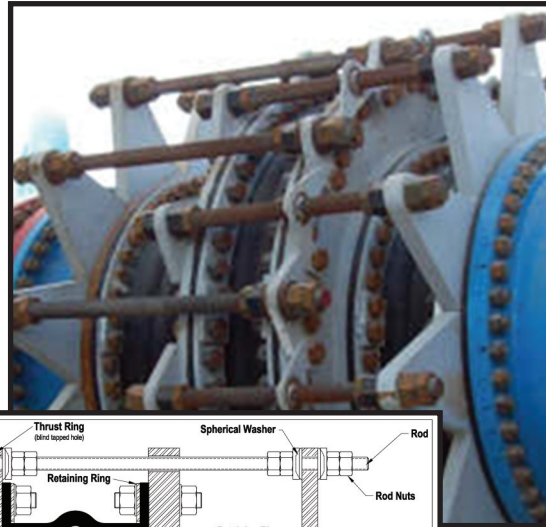
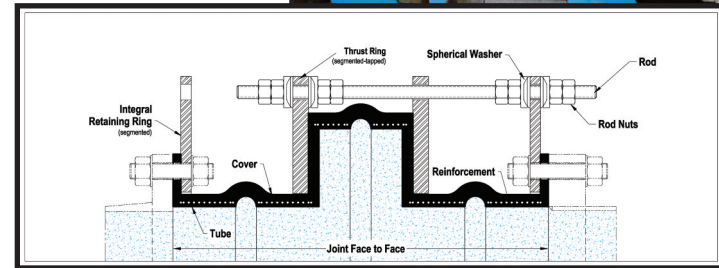
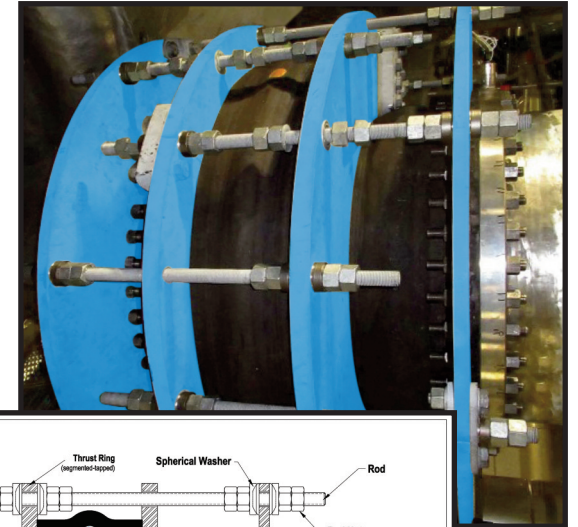


In-Line Pressure Balanced Expansion Joint • Three-Piece Design vs. One-Piece Design

Three-Piece Design



One-Piece Design



Cost	More Expensive	Thrust ring surfaces are in direct contact with the media, often requiring corrosion-resistant exotic alloys.	Less Expensive	Only the rubber is exposed to the fluid media allowing the thrust rings to be designed using common alloys.
Flange Leaks	Increased	Thrust rings are used to join the three joints together requiring a more complicated combination of tapped and through holes which increases the sealing area 400%.	Reduced	Thrust rings are not used to join three joints together eliminating the need for complicated attachment methods and reducing the overall sealing area 400%.
Footprint	Larger	Larger in both diameter and length.	Smaller	Smaller in both diameter and length.
Diameter	Larger	Due to the tie rods needing to clear the center balancing bellows flange OD, the thickness of the flange thrust ring is increased due to an increased moment arm.	Smaller	Since the tie rods do not need to clear a center balancing bellows flange OD, the thickness of the flange thrust ring is reduced due to a shorter moment arm.
Face-to-Face	Longer	Thicker thrust rings mounted parallel to the three joints increases the cumulative length.	Shorter	Thinner thrust rings are mounted outside the one piece design and do not add to the cumulative length.
Gross Weight	Higher	Due to increased metals as demonstrated above.	Lower	Due to reduced metals as demonstrated above.
Installation Time	Longer	Complexity of three-piece design increases installation time.	Shorter	Simplicity of one-piece design reduces installation time.