

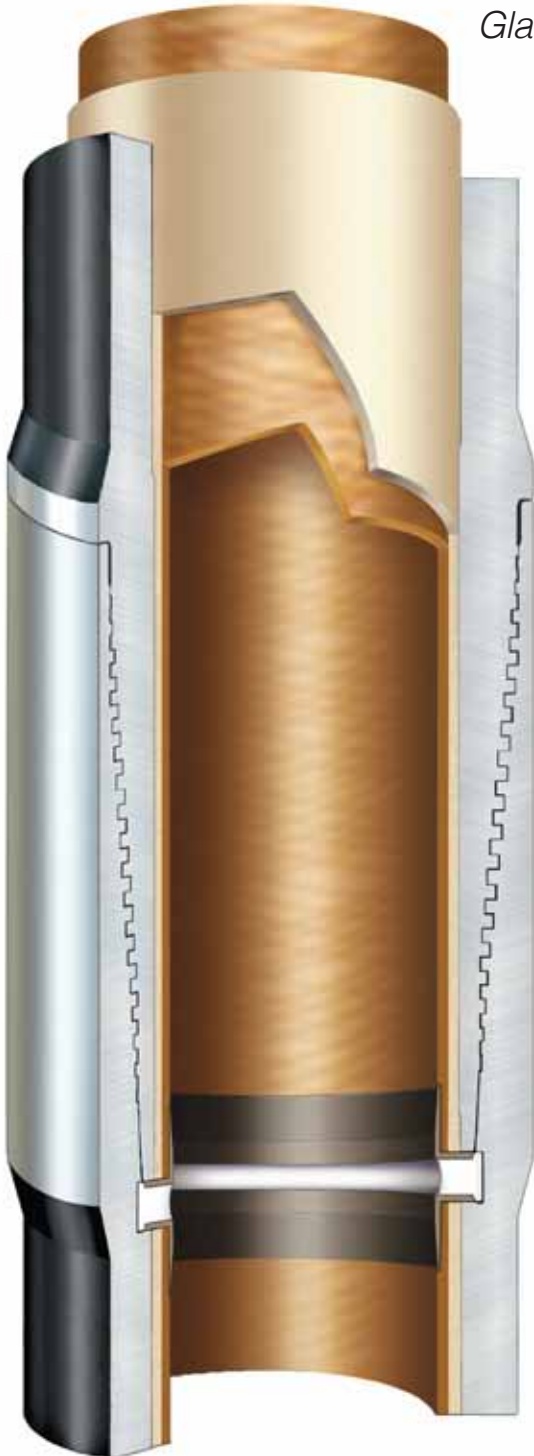


Fiberglass Lining
 Plastic Coating
 External Wrapping
 Threading Services
 Field Services
 Pipe Services

GlassBore[®] Premium

Best-in-Class Protection for Oilfield Tubulars GlassBore[®] Glass Reinforced Epoxy (GRE) Lining System

- Premium Protection
- Cost Effective
- Composite Strength
- Durable
- Holiday Free
- Proven Technology



GlassBore[®] Premium



WedgeRing[®]



Dimensions Table

| Pipe Dia. (inches) | Weight ppf | Liner ID | Flange ID | Wall Thickness | Drift (Premium) | Drift (API) |
|--------------------|------------|----------|-----------|----------------|-----------------|-------------|
| 2-1/16 | 3.25 | 1.500 | 1.420 | 0.040 | 1.300 | 1.250 |
| 2-3/8 | 4.70 | 1.810 | 1.750 | 0.040 | 1.625 | 1.600 |
| 2-7/8 | 6.50 | 2.250 | 2.200 | 0.040 | 2.070 | 1.950 |
| 3-1/2 | 9.30 | 2.750 | 2.690 | 0.045 | 2.565 | 2.440 |
| 4-1/2 | 11.60 | 3.690 | 3.600 | 0.060 | 3.475 | 3.350 |
| 4-1/2 | 12.75 | 3.690 | 3.600 | 0.060 | 3.475 | 3.350 |
| 4-1/2 | 13.50 | 3.600 | 3.510 | 0.060 | 3.380 | 3.260 |
| 5 | 15.00 | 4.010 | 3.900 | 0.065 | 3.780 | 3.650 |
| 5 | 18.00 | 4.010 | 3.900 | 0.065 | 3.780 | 3.650 |
| 5-1/2 | 15.50 | 4.520 | 4.400 | 0.075 | 4.275 | 4.150 |
| 5-1/2 | 17.00 | 4.520 | 4.400 | 0.075 | 4.275 | 4.150 |
| 5-1/2 | 20.00 | 4.520 | 4.400 | 0.075 | 4.275 | 4.150 |
| 5-1/2 | 23.00 | 4.395 | 4.280 | 0.075 | 4.155 | 4.030 |
| 7 | 23.00 | 5.900 | 5.780 | 0.095 | 5.655 | 5.530 |
| 7 | 26.00 | 5.900 | 5.780 | 0.095 | 5.655 | 5.530 |
| 7 | 29.00 | 5.800 | 5.690 | 0.095 | 5.565 | 5.440 |
| 7 | 32.00 | 5.800 | 5.690 | 0.095 | 5.565 | 5.440 |

Dimensions are in inches

Specifications

Temperature Rating- 250°F

Compression Ring Material- Glass-Filled PTFE

Liner Material- Glass Reinforced Epoxy

Resin System- Amine-Cured Epoxy

Strength of Material- To tensile limit of steel tubing

Improved Flow Efficiency

The GRE liner provides a smooth friction-reduced surface to increase the flowing efficiency of produced or injected gases and fluids.

Flow Characteristics

Hazen-Williams Coefficient = 150

Absolute Roughness = 0.00021 inches

Connection Options

- Flush Joint
- Semi-Flush Joint
- Standard Integral Joint
- Two Step Integral Joint
- Premium T&C
- Specialty Non-Upset

Contact a CLS Technical Advisor for Thread Compatibilities and Design

voestalpine



WedgeRing®

Composite Lining Systems is pleased to add the **WedgeRing®** to the list of options available for adapting the **GlassBore®** system to a variety of premium connections. The customer now has the added advantage of using an **unmodified** premium connection to join **GlassBore®** tubing or casing over multiple diameters. Lower price and greater simplicity round out the benefits to **WedgeRing®** users. This connection is not over-engineered and requires very little maintenance or meticulous and time-consuming measurement upon installation, is easily repaired or replaced and is highly affordable. The wedge-shaped glass-filled PTFE ring compresses between two sturdy molded flanges across the connection to insure against corrosion of exposed box or collar steel surfaces.

Quality- combined performance of premium-jointed tubing with the advanced protection of Glass Reinforced Epoxy (GRE)

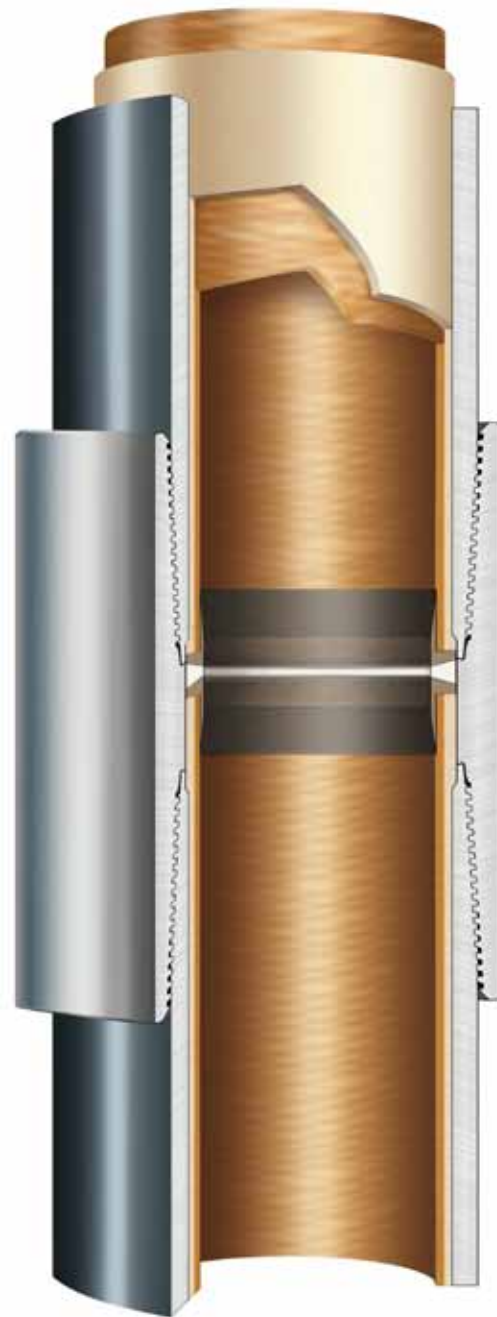
Flexibility- increased availability and wider variety of serviceable premium connections

Economy- lowest cost alternative to competitive adapters, no additional costs incurred to modify off-the-shelf premium connection

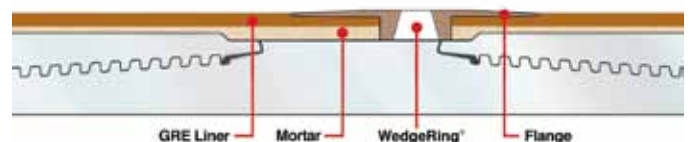
Simplicity- easily installed, maintained and repaired at well site

Durability- resistant to sour corrosive environments and capable of withstanding high temperature well conditions

Delivery- Compatibility with common connections eliminate extra shop time for special order threading requirement



WedgeRing® T&C





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