

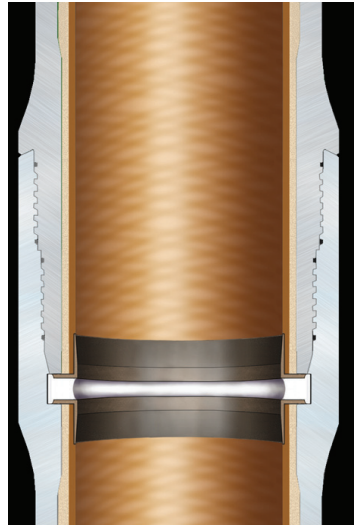


Fiberglass Lining
External Wrapping
Threading Services
Field Services
Inspection Services

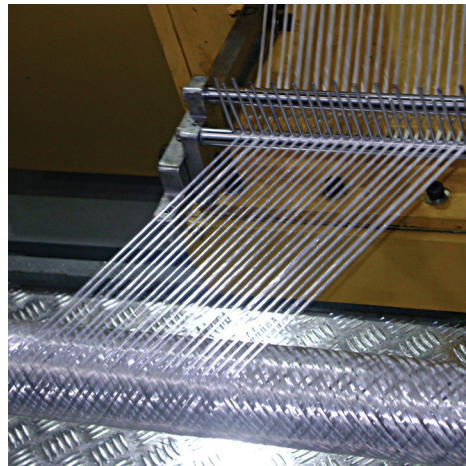
GlassBore[®] Premium

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

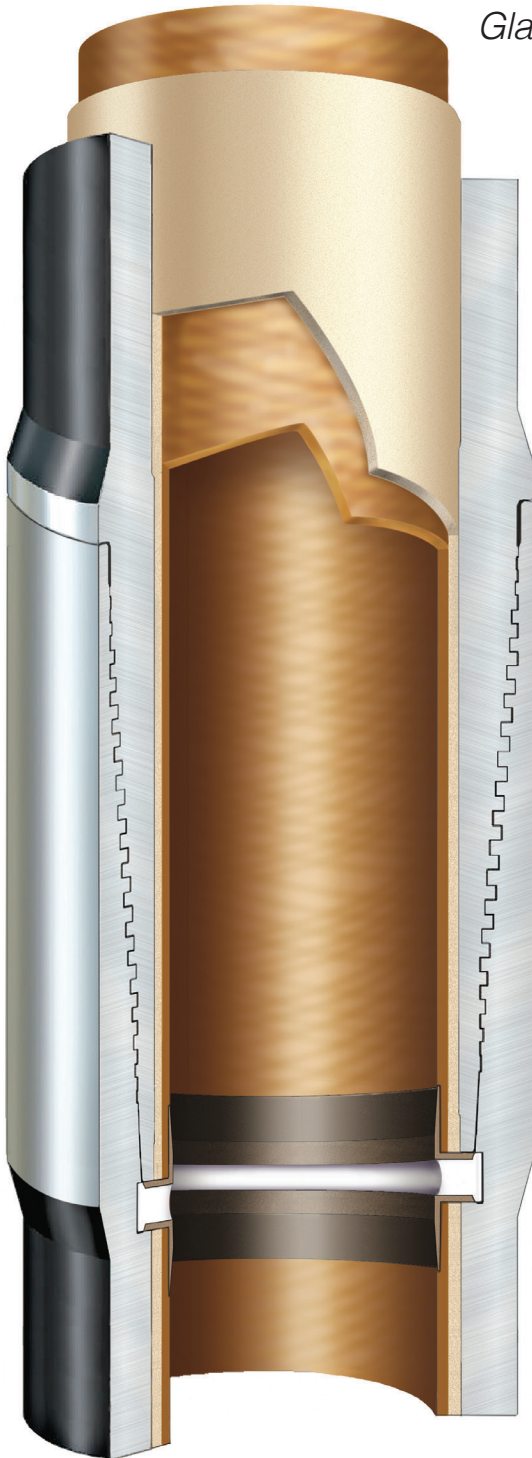
- Premium Protection
- Cost Effective
- Composite Strength
- Durable
- Holiday Free
- Proven Technology



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)

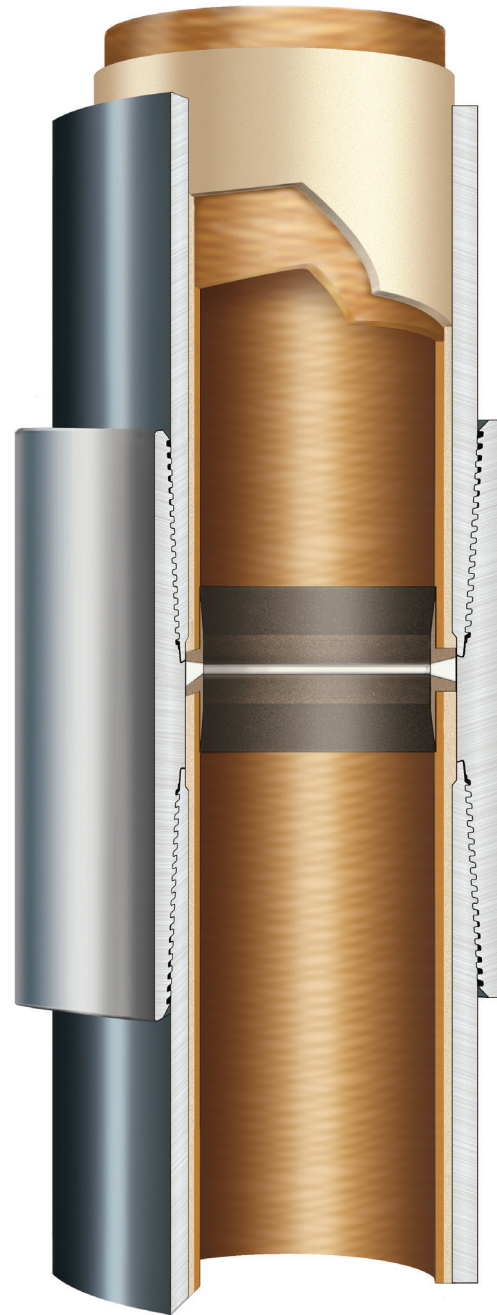
Flexibility- increased availability and wider variety of serviceable premium connections

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

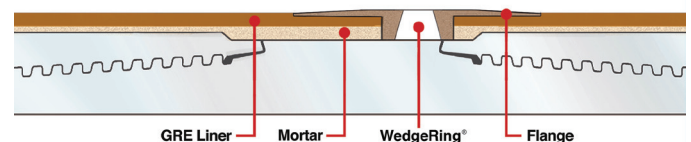
Simplicity- easily installed, maintained and repaired at well site

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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