



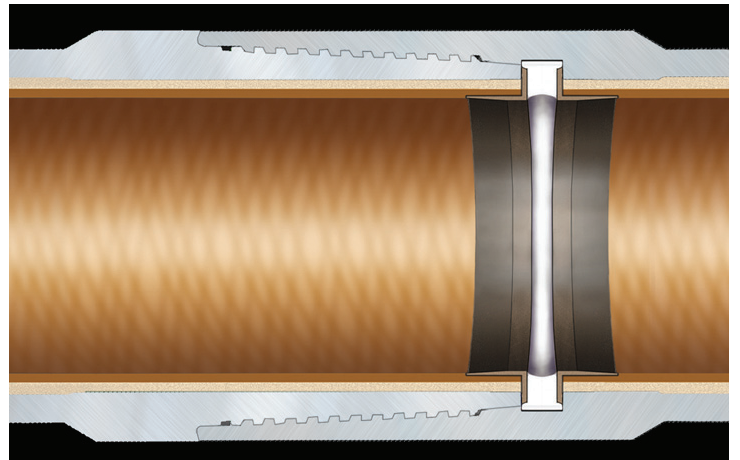
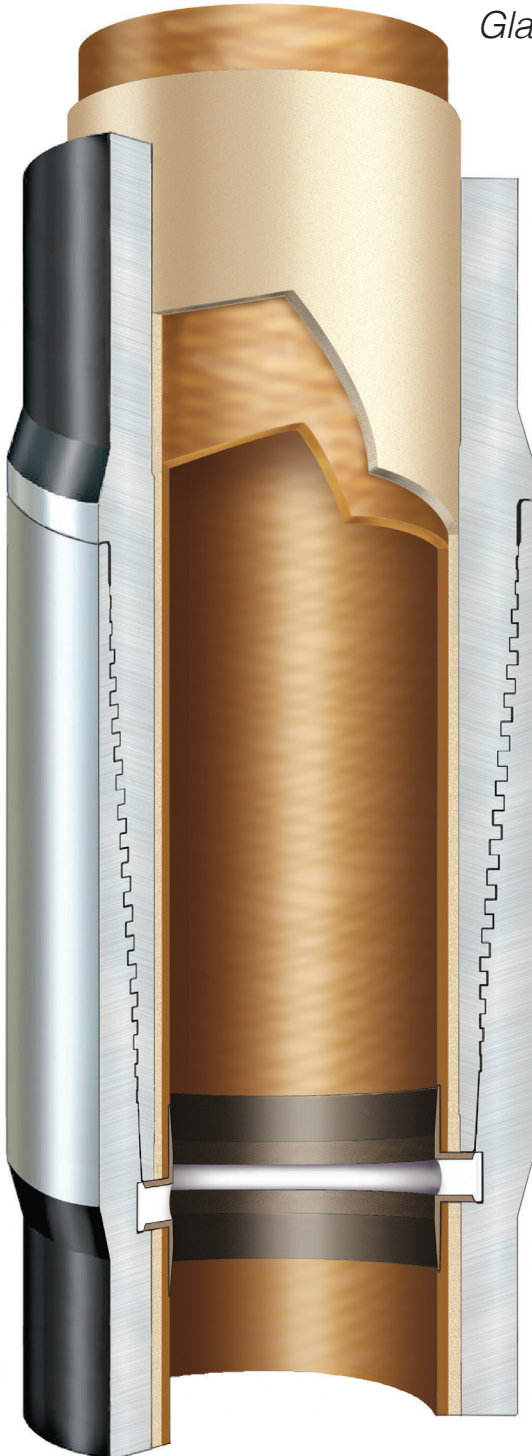
Fiberglass Lining
External Wrapping
Threading Services
Field Services
Inspection Services

GlassBore[®]
Premium

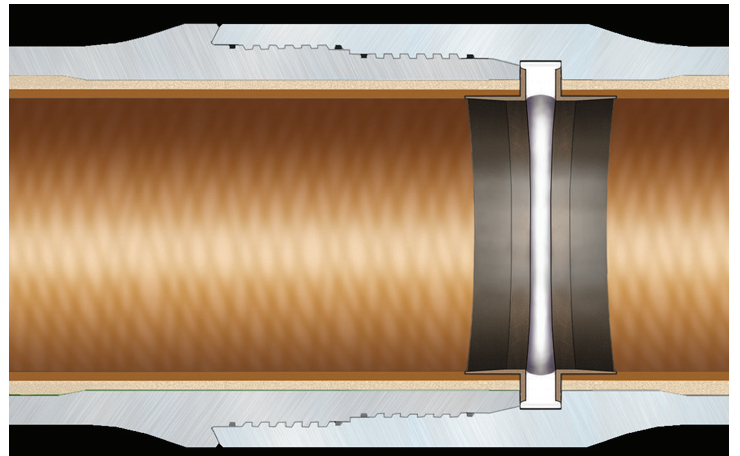
7812 West Hwy 80 • Midland, TX 79706 • 432.617.0242 • 432.617.0244 Fax

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

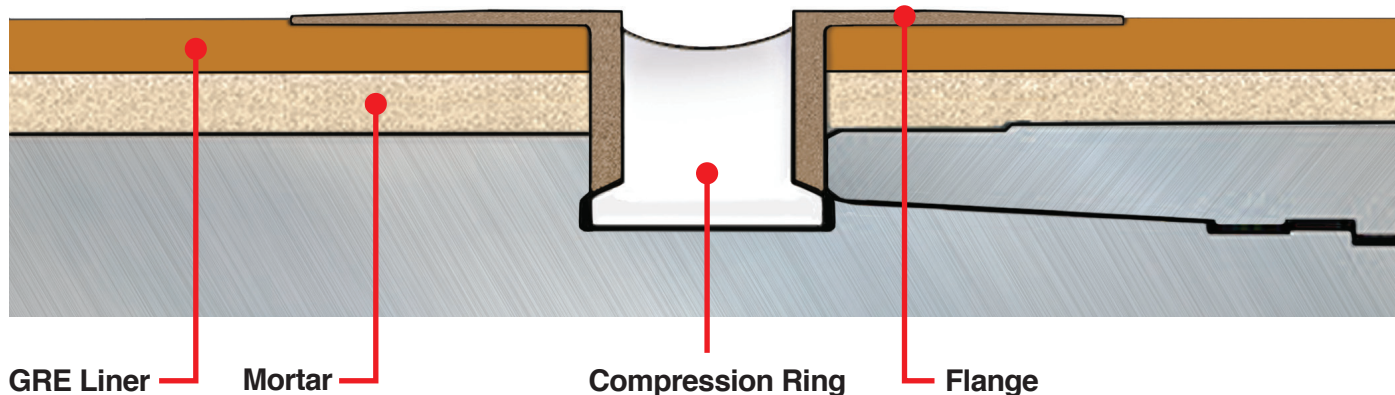
- Cost Effective
- Composite Strength
- Durable
- Holiday Free
- Proven Technology
- Premium Protection



Integral Connection



2-Step Connection



Pipe Dia. (inches)	Weight ppf	Liner ID	Flange ID	Wall Thickness	Added Weight ppf	Drift (Premium)	Drift (API)
2-1/16	3.25	1.500	1.420	0.040	0.40	1.300	1.250
2-3/8	4.70	1.810	1.750	0.040	0.50	1.625	1.600
2-7/8	6.50	2.250	2.200	0.040	0.50	2.070	1.950
3-1/2	9.30	2.750	2.690	0.045	0.75	2.565	2.440
4-1/2	11.60/12.75	3.690	3.600	0.060	1.50	3.475	3.350
4-1/2	13.50	3.600	3.510	0.060	1.25	3.380	3.260
5	15.00/18.00	4.010	3.900	0.065	1.25	3.780	3.650
5-1/2	15.50/17.00	4.520	4.400	0.075	2.00	4.275	4.150
5-1/2	20.00	4.520	4.400	0.075	1.50	4.275	4.150
5-1/2	23.00	4.395	4.280	0.075	1.25	4.155	4.030
7	23.00/26.00	5.900	5.780	0.095	3.20/2.50	5.655	5.530
7	29.00/32.00	5.800	5.690	0.095	2.40/1.70	5.565	5.440

Specifications

Temperature Rating- 250°F

Compression Ring Material- Glass-Filled PTFE

Liner Material- Glass Reinforced Epoxy

Resin System- Amine-Cured Epoxy

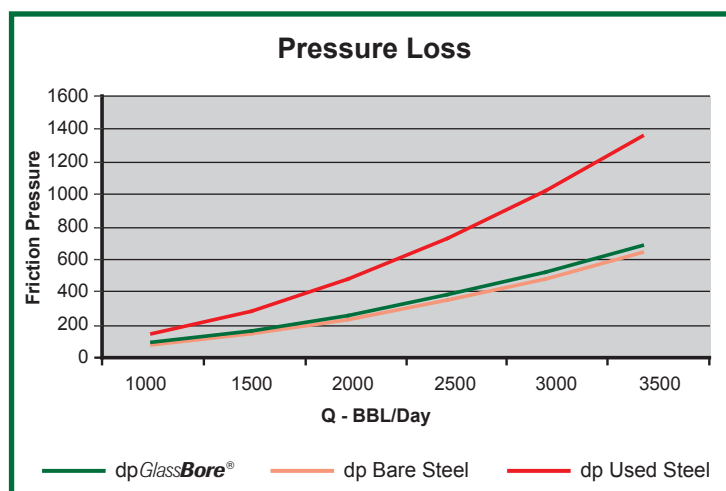
Strength of Material- To tensile limit of steel tubing

Flow Characteristics

Hazen-Williams Coefficient = 150

Absolute Roughness = 0.00021 inches

Improved Flow Efficiency-The GRE liner provides a smooth friction-reduced surface to increase the flowing efficiency of produced or injected gases and fluids. The chart illustrates nearly equivalent efficiency of flow through a string of GRE-lined premium tubing compared to that of new bare tubing in spite of the disproportionate diameter. As new tubing corrodes (Used Steel curve) the benefit of *GlassBore*® becomes even more apparent.



Example

Tubing = 2 3/8 IJ Premium

Hazen Williams $C_{GlassBore} = 150$

Hazen-Williams $C_{Steel} = 120$

Hazen-Williams $C_{Used Steel} = 80$

Inside Diameter_{Glassbore} = 1.81 Inches

Inside Diameter_{Steel} = 1.99 Inches

String Length = 5500 Feet

Flow Rate = 1000 to 3500 bbl/day