

FIBERSPAR TECH NOTES

Product, service and cost savings information from the leader in spoolable pipeline systems

Now, Fiberspar LinePipe™ is available in large diameters—for corrosion resistance and cost reduction throughout your pipeline systems.

The world's leading spoolable pipeline technology is now available in 6" diameter suitable for trunk line or higher capacity gathering or injection applications, so you can get the proven cost benefits of Fiberspar LinePipe across all your gathering and distribution systems.

With nearly 50 million ft (15.3 million m) in service, Fiberspar LinePipe is the world's most widely accepted spoolable high-pressure pipeline technology. Nothing else comes close. And with our large diameter products, you can get the exceptional corrosion resistance, simple installation and cost benefits of spoolable composite pipe for both flowline and trunk line applications.

A choice of large diameter products

Fiberspar large diameter LinePipe is available in pressure ratings of both 750 and 1,500 psi.

Higher flow with less pressure drop

These new products enable you to achieve greater flow with reduced pressure drop. Thanks to a smooth thermoplastic-lined inner surface, flow performance is equivalent to or better than 6" steel pipe, and represents a 250% increase in flow capacity over 4" pipe.

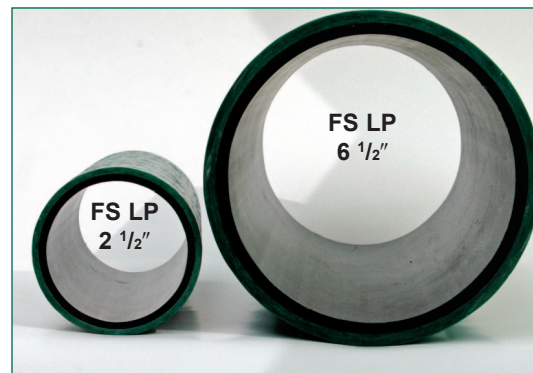
The best technology at the lowest cost

Like all LinePipe products, our large diameter configurations meet or exceed industry specifications including American Petroleum Institute (API), American Society of Testing and Materials (ASTM), Canadian Standards Association (CSA) and Energy Resources Conservation Board (ERCB) standards. These products are qualified for oil, water, gas or multi-phase service, and are available in temperature ratings up to 140°F (60°C) or 180°F (82°C).

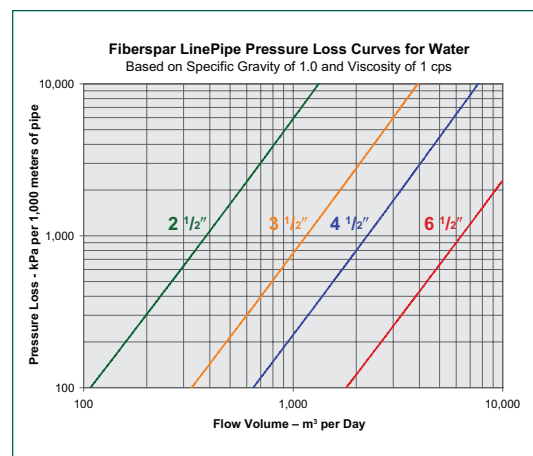
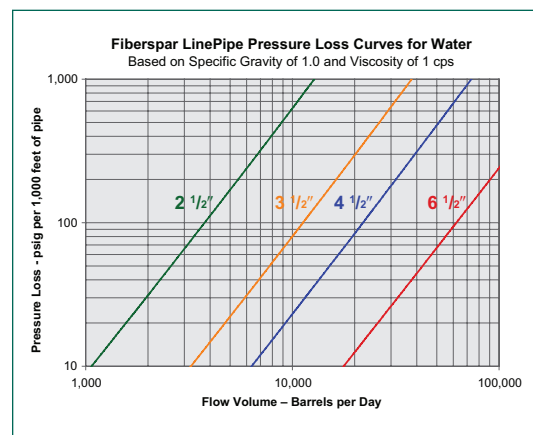
Proven connectors

Large diameter fittings utilize the same easy-to-install LinePipe connectors that are field proven in thousands of high-pressure LinePipe installations. LinePipe connectors actually exceed pipe strength. Standard service ends are coated for corrosion protection and come with ANSI 300 or 600 flanges. Threaded, stainless and other specialized fittings are available on request.

See specifications on reverse side.



With a full range of diameters now available, you can use Fiberspar products for both smaller flow lines and main trunk line applications – maximizing cost savings throughout your field.



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Specifications – Imperial

Fiberspar LinePipe is intended for corrosive gathering and injection applications including general and sour produced fluids and gases. Fiberspar LinePipe is available with high-density polyethylene or high-temperature polyethylene pressure barriers with temperature ratings to 140°F and 180°F, respectively. **Other pressure ratings and diameters are available upon request.**

Product Name	ID (in.)	OD (in.)	Nominal Reinforced Wall Thickness (nom.)	Minimum Reinforced Wall Thickness (min.)	Weight (lbs/ft)	Recommended Maximum Operating Pressure ² (psi)	Minimum Burst Room Temperature (psi)	Minimum Burst Operating Temperature (psi)	Maximum Recommended Install Tensile Load (lbf)	Minimum Bend Radius (in.)
750 Series										
FS LPI 6 1/2" 750 (E)	5.20	6.21	0.157	0.133	5.04	750	3,005	2,554	17,840	150
FS LPI 6 1/2" 750 (X)	5.20	6.21	0.157	0.133	5.04	750	3,005	2,254	17,840	150
FS LP 6 1/2" 750 (E)	5.60	6.69	0.163	0.138	5.77	750	2,898	2,463	20,040	162
FS LP 6 1/2" 750 (X)	5.60	6.69	0.163	0.138	5.77	750	2,898	2,174	20,040	162
1,500 Series										
FS LPI 6 1/2" 1500 (E)	5.00	6.20	0.248	0.211	6.35	1,500	4,847	4,120	27,720	150
FS LPI 6 1/2" 1500 (X)	5.00	6.20	0.248	0.211	6.35	1,500	4,847	3,635	27,720	150
FS LPJ 6 1/2" 1,500 (E)	5.60	6.90	0.270	0.230	7.71	1,500	4,718	4,010	33,760	167
FS LPJ 6 1/2" 1,500 (X)	5.60	6.90	0.270	0.230	7.71	1,500	4,718	3,539	33,760	167

* Pressure ratings are based on minimum 20-year service life using ASTM D2992 long-term test procedures. Recommended maximum operating pressure is Fiberspar recommendation for general oilfield water, gas, low-vapor pressure hydrocarbon and multi-phase service conditions at the maximum rated temperature. Consult Fiberspar for a recommended maximum pressure rating for other service conditions.

E = High-density polyethylene (HDPE) rated from -29°F to 140°F

X = High-temperature polyethylene (HTP) rated from -29°F to 180°F

Specifications – Metric

Product Name	ID (mm)	OD (mm)	Nominal Reinforced Wall Thickness (mm)	Minimum Reinforced Wall Thickness (mm)	Weight (kg/m)	Recommended Maximum Operating Pressure ² (MPa)	Minimum Burst Room Temperature (MPa)	Minimum Burst Operating Temperature (MPa)	Maximum Recommended Install Tensile Load (kgf)	Minimum Bend Radius (cm)
750 Series										
FS LPI 6 1/2" 750 (E)	132	158	4.0	3.4	7.50	5.17	20.72	17.61	8,090	382
FS LPI 6 1/2" 750 (X)	132	158	4.0	3.4	7.50	5.17	20.72	15.54	8,090	382
FS LP 6 1/2" 750 (E)	142	170	4.1	3.5	8.59	5.17	19.98	16.98	9,080	412
FS LP 6 1/2" 750 (X)	142	170	4.1	3.5	8.59	5.17	19.98	14.99	9,080	412
1,500 Series										
FS LPI 6 1/2" 1500 (E)	127	157	6.3	5.4	9.45	10.34	33.42	28.41	12,570	381
FS LPI 6 1/2" 1500 (X)	127	157	6.3	5.4	9.45	10.34	33.42	25.07	12,570	381
FS LPJ 6 1/2" 1,500 (E)	142	175	6.9	5.8	11.48	10.34	32.53	27.65	15,310	425
FS LPJ 6 1/2" 1,500 (X)	142	175	6.9	5.8	11.47	10.34	32.53	24.40	15,310	425

* Pressure ratings are based on minimum 20-year service life using ASTM D2992 long-term test procedures. Recommended maximum operating pressure is Fiberspar recommendation for general oilfield water, gas, low-vapor pressure hydrocarbon and multi-phase service conditions at the maximum rated temperature. Consult Fiberspar for a recommended maximum pressure rating for other service conditions.

E = High-density polyethylene (HDPE) rated from -34°C to 60°C

X = High-temperature polyethylene (HTP) rated from -34°C to 82°C

All products are hydrotested to 1.5 times maximum recommended operating pressure. Material selection is based on the desired operating temperature and chemical compatibility of Fiberspar LinePipe constituents with fluids.

Reel Capacities

(All products shipped on 16-ft reels)

	Quantity/Reel (ft)	Quantity/Reel (m)
750 Series		
FS LPI 6 1/2" 750 (E) and (X)	1,200	366
FS LPJ 6 1/2" 750 (E) and (X)	600	183
1,500 Series		
FS LPI 6 1/2" 1,500 (E) and (X)	1,200	366
FS LPJ 6 1/2" 1,500 (E) and (X)	600	183

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API Q1, ISO 9001:2008, ISO/TS 29001 Registered

Fiberspar® spoolable composite pipe and fittings are covered by one or more of the following U.S. Patents: 6,016,845, 5,921,285, 6,148,866, 6,286,558, 6,357,485, 6,604,550, 6,857,452, 7,285,333, 6,004,639, 6,361,299, 6,706,348, 5,988,702 and one or more of the following Canadian Patents: 2,233,295, 2,282,358, 2,321,536, 2,409,304, 2,305,148, 2,233,345. Additional U.S. and Canadian patents are pending.