

STAR™ Aliphatic Amine Line Pipe (High Pressure - API 15HR DESIGN - Product Data)

Product Description

- Pressure - Up to 3250 psi (22,4 MPa)
- Resin System - Aliphatic Amine Cured Epoxy
- Reinforcement - Premium Fiberglass
- Joining Systems - API 8rd Threaded
- Joint Length - 30 Feet (9,1 mts) Nominal
Random Lengths of 20 to 32 Feet (6,1 to 9,8 mts)
- Temperature - Up to 200° F (93.3° C) Maximum
- Sizes - 1½ through 8 inches
- Fittings - A variety of filament wound API 5B threaded are available. API design systems require higher rated fittings, refer to the chart on page 28 of the Threaded Line Pipe Installation and Application Practices. Temperature interpolation is not recommended for fittings.

High Pressure Design ≥ 500 psi

- API 15HR Design, Monogrammed products are indicated by a check mark (✓) in the pipe tables.
- Design Life - 20 years at full rating
- Design Temperature - 150° F (65.6° C)
- Wall Thickness - Minimum
- Hoop Stress - Lower Confidence Limit (LCL) of Long Term Hydrostatic Strength according to ASTM D2992-B
- 100% Factory Hydrotest - At 1.5 x the series rated pressure at 150° F (65.6° C)

Flow Factors

- Hazen Williams C=150
- Absolute Roughness = 0.00021 in. (0.00533 mm)

Nominal Moduli

- Modulus of Elasticity
 - Hoop - 3.3 x 10⁶ psi (22,8 GPa)
 - Axial - 2.0 x 10⁶ psi (13,8 GPa)
- Poisson's Ratio (Minor) = 0.39

Physical Properties

- Density = 124 lbs/cu ft (1986 kgs/cu m)
- Specific Gravity = 1.99

Thermal Properties

- Coefficient of Thermal Conductivity
0.23 BTU/(ft•hr•°F) (0.4 W/(m•C°))
- Coefficient of Thermal Expansion
8.7 x 10⁻⁶ in/in/°F (15,7 x 10⁻⁶ mm/mm/°C)

Benefits

- Corrosion Control
- Reduced Installation Costs
- Improved Flow Efficiency
- Reduced Paraffin & Scale Build-Up
- Reduced Maintenance Cost

Applications

- Production Lines or Injection Lines
- Transfer Lines or Disposal Lines
- Oil, Gas, Saltwater, CO₂ and H₂S

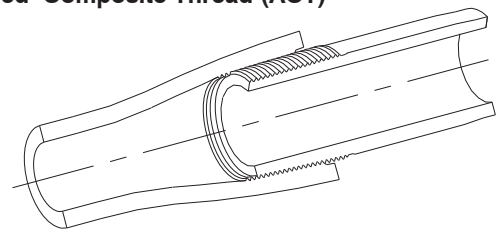
Performance Ratings vs. Temperature

(ASTM D2992-B)	73.4° F (23° C)	150° F (65.6° C)	180° F (82.2° C)	200° F (93.3° C)
11.4 Year Life, LTHS	26,353 (181,7)	22,203 (153,1)	20,578 (141,9)	19,494 (134,4)
20 Year Life, LTHS	26,004 (179,3)	21,404 (147,6)	19,602 (135,2)	18,401 (126,9)
20 Year Life, LCL (Lower Confidence Limit)	24,596 (169,6)	20,335 (140,2)	18,666 (128,7)	17,554 (121,0)

* 150° F and 180° F data are interpolated

Joining System

Advanced Composite Thread (ACT)



API Threads

- Advanced Composite Thread (ACT) - Molded threads using a graphite, ceramic and epoxy composite for high performance applications. (Patent No's 4,999,389 & 5,179,140)
- Precision Ground Thread (PGT) - Typical ground threads produced with numerical controlled grinding equipment.
- All 1½" EUE 10rd and 2-3/8" - 4½" EUE 8rd API threads conform to API 5B Table 14, 14th Edition (L4 is minimum) and all 5½" - 9 5/8" OD 8rd casing threads conform to API 5B Table 7, 14th Edition (L4 is minimum).

www.fiberglasssystems.com

P.O. Box 37389, 2425 SW 36th Street
San Antonio, Texas 78237 USA
Phone: 1 (210) 434-5043
Fax: 1 (210) 434-7543

NOV Fiber Glass Systems

SIZE		Product Code	PIPE DIMENSIONS (NOMINAL)							Minimum Bending Radius		Maximum Deflection	
Nom. Size	API Thread Type		Inside Diameter In (mm)	Outside Diameter In (mm)	Wall Thickness In (mm)	Pipe Weight Lbs/ft (kg/m)	API Thread Conn. Dia In (mm)	Ft (m)	In/jt (cm/jt)				

Series 500 - PGT (All Sizes)													
3	3 1/2	H0530	2.94 (74,7)	3.07 (78,0)	0.07 (1,8)	0.70 (1,0)	4.20 (106,7)	154 (46,9)	34 (86,4)				
4	4 1/2	H0540	3.85 (97,8)	4.02 (102,1)	0.09 (2,3)	1.20 (1,8)	5.45 (138,4)	201 (61,3)	26 (66,0)				
6	6 5/8	H0560	5.93 (150,6)	6.18 (157,0)	0.12 (3,0)	2.30 (3,4)	7.15 (181,6)	309 (94,2)	17 (43,2)				
8	8 5/8	H0580	7.74 (196,6)	8.07 (205,0)	0.17 (4,3)	4.30 (6,4)	9.25 (235,0)	404 (123,1)	13 (33,0)				

Series 750 - ACT or PGT (All Sizes Except 5" & 8")													
2	2 3/8	H0720	1.94 (49,3)	2.07 (52,6)	0.07 (1,8)	0.40 (0,6)	3.05 (77,5)	104 (31,7)	50 (127,0)				
2 1/2	2 7/8	H0725	2.37 (60,2)	2.52 (64,0)	0.08 (2,0)	0.60 (0,9)	3.55 (90,2)	126 (38,4)	41 (104,1)				
3	3 1/2	H0730	2.94 (74,7)	3.14 (79,8)	0.10 (2,5)	1.00 (1,5)	4.25 (108,0)	157 (47,9)	33 (83,8)				
4	4 1/2	H0740	3.85 (97,8)	4.09 (103,9)	0.12 (3,0)	1.70 (2,5)	5.55 (141,0)	204 (62,2)	25 (63,5)				
5	5 1/2	R0750	4.74 (120,4)	5.04 (128,0)	0.15 (3,8)	2.60 (3,9)	6.25 (158,8)	252 (76,8)	21 (53,3)				
6	6 5/8	H0755	5.50 (139,7)	5.85 (148,6)	0.18 (4,6)	3.20 (4,8)	7.35 (186,7)	293 (89,3)	18 (45,7)				
6	6 5/8	H0760	5.93 (150,6)	6.31 (160,3)	0.19 (4,8)	3.50 (5,2)	7.35 (186,7)	316 (96,3)	17 (43,2)				
8	8 5/8	H0780	7.74 (196,6)	8.23 (209,0)	0.25 (6,4)	6.20 (9,2)	9.55 (242,6)	411 (125,3)	13 (33,0)				

Series 1000 - ACT or PGT (All Sizes Except 5" & 8")													
2	2 3/8	H1020	1.94 (49,3)	2.11 (53,6)	0.08 (2,0)	0.50 (0,7)	3.10 (78,7)	105 (32,0)	49 (124,5)				
2 1/2	2 7/8	H1025	2.37 (60,2)	2.57 (65,3)	0.10 (2,5)	0.80 (1,2)	3.55 (90,2)	128 (39,0)	40 (101,6)				
3	3 1/2	H1030	2.94 (74,7)	3.19 (81,0)	0.13 (3,3)	1.20 (1,8)	4.40 (111,8)	160 (48,8)	33 (83,8)				
4	4 1/2	H1040	3.85 (97,8)	4.20 (106,7)	0.18 (4,6)	2.30 (3,4)	5.65 (143,5)	210 (64,0)	25 (63,5)				
5	5 1/2	R1050	4.74 (120,4)	5.15 (130,8)	0.20 (5,1)	3.30 (4,9)	6.45 (163,8)	257 (78,3)	20 (50,8)				
6	6 5/8	H1055	5.50 (139,7)	5.97 (151,6)	0.24 (6,1)	4.10 (6,1)	7.45 (189,2)	299 (91,1)	17 (43,2)				
6	6 5/8	H1060	5.93 (150,6)	6.45 (163,8)	0.26 (6,6)	4.70 (7,0)	7.60 (193,0)	322 (98,1)	16 (40,6)				
8	8 5/8	H1080	7.74 (196,6)	8.40 (213,4)	0.33 (8,4)	8.00 (11,9)	9.75 (247,7)	420 (128,0)	12 (30,5)				

Series 1250 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4" Sizes)													
2	2 3/8	H1220	1.94 (49,3)	2.15 (54,6)	0.11 (2,8)	0.70 (1,0)	3.15 (80,0)	108 (32,9)	48 (121,9)				
2 1/2	2 7/8	H1225	2.37 (60,2)	2.63 (66,8)	0.13 (3,3)	1.00 (1,5)	3.65 (92,7)	132 (40,2)	39 (99,1)				
3	3 1/2	H1230	2.94 (74,7)	3.26 (82,8)	0.16 (4,1)	1.50 (2,2)	4.35 (110,5)	163 (49,7)	32 (81,3)				
4	4 1/2	H1240	3.85 (97,8)	4.26 (108,2)	0.21 (5,3)	2.70 (4,0)	5.75 (146,1)	213 (64,9)	24 (61,0)				
6	6 5/8	H1255	5.50 (139,7)	6.09 (154,7)	0.30 (7,6)	5.30 (7,9)	7.60 (193,0)	305 (93,0)	17 (43,2)				
6	7	H1260	5.93 (150,6)	6.58 (167,1)	0.32 (8,1)	6.10 (9,1)	8.10 (205,7)	329 (100,3)	16 (40,6)				
8	9 5/8	H1280	7.74 (196,6)	8.57 (217,7)	0.42 (10,7)	11.50 (17,1)	11.15 (283,2)	429 (130,8)	12 (30,5)				

Series 1500 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4" Sizes)													
1 1/2	1.90	H1515	1.44 (36,6)	1.67 (42,4)	0.11 (2,8)	0.60 (0,9)	2.70 (68,6)	83 (25,3)	62 (157,5)				
2	2 3/8	H1520	1.94 (49,3)	2.24 (56,9)	0.15 (3,8)	0.90 (1,3)	3.30 (83,8)	112 (34,1)	46 (116,8)				
2 1/2	2 7/8	H1525	2.37 (60,2)	2.75 (69,9)	0.19 (4,8)	1.40 (2,1)	3.75 (95,3)	138 (42,1)	38 (96,5)				
3	3 1/2	H1530	2.94 (74,7)	3.40 (86,4)	0.23 (5,8)	2.10 (3,1)	4.45 (113,0)	170 (51,8)	31 (78,7)				
4	4 1/2	H1540	3.85 (97,8)	4.43 (112,5)	0.29 (7,4)	3.60 (5,4)	5.80 (147,3)	221 (67,4)	24 (61,0)				
6	6 5/8	H1555	5.50 (139,7)	6.33 (160,8)	0.42 (10,7)	7.20 (10,7)	7.74 (196,6)	317 (96,6)	16 (40,6)				
6	7	H1560	5.93 (150,6)	6.83 (173,5)	0.45 (11,4)	8.20 (12,2)	8.20 (208,3)	342 (104,2)	15 (38,1)				
8	9 5/8	R1580	7.74 (196,6)	8.75 (222,3)	0.51 (13,0)	13.90 (20,7)	11.80 (299,7)	437 (133,2)	12 (30,5)				

Series 1750 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4" Sizes)													
1 1/2	1.90	H1715	1.44 (36,6)	1.71 (43,4)	0.13 (3,3)	0.60 (0,9)	2.70 (68,6)	85 (25,9)	61 (154,9)				
2	2 3/8	H1720	1.94 (49,3)	2.31 (58,7)	0.19 (4,8)	1.20 (1,8)	3.35 (85,1)	116 (35,4)	45 (114,3)				
2 1/2	2 7/8	H1725	2.37 (60,2)	2.81 (71,4)	0.22 (5,6)	1.70 (2,5)	3.76 (95,5)	141 (43,0)	37 (94,0)				
3	3 1/2	H1730	2.94 (74,7)	3.47 (88,1)	0.27 (6,9)	2.50 (3,7)	4.50 (114,3)	174 (53,0)	30 (76,2)				
4	4 1/2	H1740	3.85 (97,8)	4.55 (115,6)	0.35 (8,9)	4.30 (6,4)	5.95 (151,1)	227 (69,2)	23 (58,4)				
6	6 5/8	R1755	5.50 (139,7)	6.35 (161,3)	0.42 (10,7)	7.40 (11,0)	7.92 (201,2)	317 (96,6)	16 (40,6)				
6	7	R1760	5.93 (150,6)	6.86 (174,2)	0.46 (11,7)	8.60 (12,8)	8.40 (213,4)	343 (104,5)	15 (38,1)				
8	9 5/8	R1780	7.74 (196,6)	8.94 (227,1)	0.60 (15,2)	16.40 (24,4)	11.90 (302,3)	447 (136,2)	12 (30,5)				

(Metric Conversions are in Parentheses)

SIZE		✓	STAR™ RATED PRESSURE ⁽⁴⁾			Ultimate ⁽²⁾ Pressure ASTM D-1599 psi (MPa)	Maximum Support Span Ft (m)	Collapse Rating psi (MPa)	Short Term Tensile Rating Lbs (kgs)	Threaded Adapter Product Code
Nom. Size	API Thread Type		Static ⁽¹⁾ 150° F (65.6° C) psi (MPa)	Static ⁽¹⁾ 180° F (82.2° C) psi (MPa)	Static ⁽¹⁾ 200° F (93.3° C) psi (MPa)					

Series 500 - PGT (All Sizes)										
3	3 1/2	✓	500 (3,4)	450 (3,1)	400 (2,8)	1400 (9,7)	10 (3,1)	30 (0,2)	1700 (771)	35NU
4	4 1/2	✓	500 (3,4)	450 (3,1)	400 (2,8)	1400 (9,7)	11 (3,4)	30 (0,2)	2900 (1315)	45NU
6	6 5/8	✓	500 (3,4)	450 (3,1)	400 (2,8)	1300 (9,0)	14 (4,3)	20 (0,1)	6700 (3039)	65NU
8	8 5/8	✓	500 (3,4)	450 (3,1)	400 (2,8)	1300 (9,0)	16 (4,9)	30 (0,2)	11800 (5352)	85NU

Series 750 - ACT or PGT (All Sizes Except 8")										
2	2 3/8	✓	750 (5,2)	650 (4,5)	600 (4,1)	2100 (14,5)	9 (2,8)	100 (0,7)	1100 (499)	23NR
2 1/2	2 7/8	✓	750 (5,2)	650 (4,5)	600 (4,1)	2100 (14,5)	9 (2,8)	100 (0,7)	1700 (771)	27NU
3	3 1/2	✓	750 (5,2)	650 (4,5)	600 (4,1)	2100 (14,5)	11 (3,4)	100 (0,7)	2700 (1225)	35NU
4	4 1/2	✓	750 (5,2)	650 (4,5)	600 (4,1)	1900 (13,1)	12 (3,7)	80 (0,6)	4300 (1950)	45NU
5	TC5 1/2		750 (5,2)	650 (4,5)	600 (4,1)	2000 (13,8)	13 (4,0)	80 (0,6)	6500 (2948)	N/A
6	6 5/8	✓	750 (5,2)	650 (4,5)	600 (4,1)	2000 (13,8)	14 (4,3)	80 (0,6)	8800 (3992)	65NU
6	6 5/8	✓	750 (5,2)	650 (4,5)	600 (4,1)	2000 (13,8)	15 (4,6)	80 (0,6)	10300 (4672)	65NS
8	8 5/8	✓	750 (5,2)	650 (4,5)	600 (4,1)	2000 (13,8)	17 (5,2)	80 (0,6)	17400 (7893)	85NR

Series 1000 - ACT or PGT (All Sizes Except 8")										
2	2 3/8	✓	1000 (6,9)	900 (6,2)	850 (5,9)	2600 (17,9)	9 (2,8)	200 (1,4)	1400 (635)	23NR
2 1/2	2 7/8	✓	1000 (6,9)	900 (6,2)	850 (5,9)	2600 (17,9)	10 (3,1)	200 (1,4)	2200 (998)	27NU
3	3 1/2	✓	1000 (6,9)	900 (6,2)	850 (5,9)	2600 (17,9)	11 (3,4)	200 (1,4)	3400 (1542)	35NU
4	4 1/2	✓	1000 (6,9)	900 (6,2)	850 (5,9)	2800 (19,3)	13 (4,0)	250 (1,7)	6300 (2858)	45NT
5	TC5 1/2		1000 (6,9)	900 (6,2)	850 (5,9)	2600 (17,9)	14 (4,3)	200 (1,4)	8900 (4037)	N/A
6	6 5/8	✓	1000 (6,9)	900 (6,2)	850 (5,9)	2600 (17,9)	15 (4,6)	200 (1,4)	12000 (5443)	65NT
6	6 5/8	✓	1000 (6,9)	900 (6,2)	850 (5,9)	2600 (17,9)	16 (4,9)	200 (1,4)	14000 (6350)	65NQ
8	8 5/8	✓	1000 (6,9)	900 (6,2)	850 (5,9)	2600 (17,9)	18 (5,5)	200 (1,4)	23800 (10796)	N/A

Series 1250 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4" Sizes)										
2	2 3/8	✓	1250 (8,6)	1100 (7,6)	1050 (7,2)	3300 (22,8)	9 (2,8)	390 (2,7)	1900 (862)	23NR
2 1/2	2 7/8	✓	1250 (8,6)	1100 (7,6)	1050 (7,2)	3400 (23,4)	11 (3,4)	430 (3,0)	2900 (1315)	27NU
3	3 1/2	✓	1250 (8,6)	1100 (7,6)	1050 (7,2)	3300 (22,8)	12 (3,7)	380 (2,6)	4300 (1950)	35NU
4	4 1/2	✓	1250 (8,6)	1100 (7,6)	1050 (7,2)	3300 (22,8)	13 (4,0)	390 (2,7)	7500 (3402)	45NS
6	6 5/8	✓	1250 (8,6)	1100 (7,6)	1050 (7,2)	3300 (22,8)	16 (4,9)	380 (2,6)	15300 (6940)	N/A
6	7	✓	1250 (8,6)	1100 (7,6)	1050 (7,2)	3300 (22,8)	17 (5,2)	380 (2,6)	17800 (8074)	N/A
8	9 5/8	✓	1250 (8,6)	1100 (7,6)	1050 (7,2)	3300 (22,8)	19 (5,9)	380 (2,6)	30200 (13699)	N/A

Series 1500 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4" Sizes)										
1 1/2	1.90	✓	1500 (10,3)	1350 (9,3)	1250 (8,6)	4700 (32,4)	9 (2,8)	1140 (7,9)	1500 (680)	19NR
2	2 3/8	✓	1500 (10,3)	1350 (9,3)	1250 (8,6)	4600 (31,7)	10 (3,1)	1010 (7,0)	2700 (1225)	23NR
2 1/2	2 7/8	✓	1500 (10,3)	1350 (9,3)	1250 (8,6)	4900 (33,8)	11 (3,4)	1230 (8,5)	4400 (1996)	27NT
3	3 1/2	✓	1500 (10,3)	1350 (9,3)	1250 (8,6)	4700 (32,4)	13 (4,0)	1090 (7,5)	6400 (2903)	35NS
4	4 1/2	✓	1500 (10,3)	1350 (9,3)	1250 (8,6)	4500 (31,0)	14 (4,3)	1000 (6,9)	10700 (4854)	45NR
6	6 5/8	✓	1500 (10,3)	1350 (9,3)	1250 (8,6)	4500 (31,0)	17 (5,2)	990 (6,8)	21900 (9934)	N/A
6	7	✓	1500 (10,3)	1350 (9,3)	1250 (8,6)	4500 (31,0)	18 (5,5)	980 (6,8)	25400 (11521)	N/A
8	9 5/8		1500 (10,3)	1350 (9,3)	1250 (8,6)	3900 (26,9)	20 (6,2)	660 (4,6)	37200 (16874)	N/A

Series 1750 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4" Sizes)										
1 1/2	1.90	✓	1750 (12,1)	1600 (11,0)	1500 (10,3)	5500 (37,9)	9 (2,8)	1720 (11,9)	1800 (816)	19NR
2	2 3/8	✓	1750 (12,1)	1600 (11,0)	1500 (10,3)	5600 (38,6)	11 (3,4)	1900 (13,1)	3500 (1588)	23NS
2 1/2	2 7/8	✓	1750 (12,1)	1600 (11,0)	1500 (10,3)	5600 (38,6)	12 (3,7)	1820 (12,5)	5100 (2313)	27NS
3	3 1/2	✓	1750 (12,1)	1600 (11,0)	1500 (10,3)	5300 (36,5)	13 (4,0)	1600 (11,0)	7500 (3402)	35NS
4	4 1/2	✓	1750 (12,1)	1600 (11,0)	1500 (10,3)	5400 (37,2)	15 (4,6)	1660 (11,4)	13100 (5942)	45NR
6	6 5/8		1750 (12,1)	1600 (11,0)	1500 (10,3)	4600 (31,7)	17 (5,2)	1040 (7,2)	22400 (10161)	N/A
6	7		1750 (12,1)	1600 (11,0)	1500 (10,3)	4600 (31,7)	18 (5,5)	1060 (7,3)	26200 (11884)	N/A
8	9 5/8		1750 (12,1)	1600 (11,0)	1500 (10,3)	4600 (31,7)	20 (6,2)	1060 (7,3)	44600 (20231)	N/A

(Metric Conversions are in Parentheses)

NA - Not Available (Repair Joint Required)

SIZE		Product Code	PIPE DIMENSIONS (NOMINAL)							Minimum Bending Radius Ft (m)	Maximum Deflection In/jt (cm/jt)
Nom. Size	API Thread Type		Inside Diameter In (mm)	Outside Diameter In (mm)	Wall Thickness In (mm)	Pipe Weight Lbs/ft (kg/m)	API Thread Conn. Dia In (mm)				

Series 2000 - ACT (All Sizes) or PGT (2", 2 1/2" and 3" Sizes)												
1 1/2	1.90	H2015	1.44 (36,6)	1.74 (44,2)	0.15 (3,8)	0.70 (1,0)	2.75 (69,9)	87 (26,5)	60 (152,4)			
2	2 3/8	H2020	1.94 (49,3)	2.36 (59,9)	0.21 (5,3)	1.30 (1,9)	3.40 (86,4)	118 (36,0)	44 (111,8)			
2 1/2	2 7/8	H2025	2.37 (60,2)	2.86 (72,6)	0.25 (6,4)	1.90 (2,8)	3.85 (97,8)	143 (43,6)	36 (91,4)			
3	3 1/2	H2030	2.94 (74,7)	3.55 (90,2)	0.30 (7,6)	2.80 (4,2)	4.63 (117,6)	177 (53,9)	29 (73,7)			
4	4 1/2	H2040	3.85 (97,8)	4.64 (117,9)	0.40 (10,2)	4.90 (7,3)	6.10 (154,9)	232 (70,7)	22 (55,9)			
6	7	R2055	5.50 (139,7)	6.48 (164,6)	0.49 (12,4)	9.00 (13,4)	8.80 (223,5)	324 (98,8)	16 (40,6)			

Series 2250 - ACT (All Sizes) or PGT (2", 2 1/2" and 3" Sizes)												
1 1/2	1.90	H2215	1.44 (36,6)	1.81 (46,0)	0.18 (4,6)	0.90 (1,3)	2.80 (71,1)	90 (27,4)	57 (144,8)			
2	2 3/8	H2220	1.94 (49,3)	2.41 (61,2)	0.23 (5,8)	1.50 (2,2)	3.50 (88,9)	120 (36,6)	43 (109,2)			
2 1/2	2 7/8	R2225	2.37 (60,2)	2.85 (72,4)	0.24 (6,1)	1.90 (2,8)	3.94 (100,1)	143 (43,6)	36 (91,4)			
3	3 1/2	R2230	2.94 (74,7)	3.54 (89,9)	0.30 (7,6)	2.80 (4,2)	4.74 (120,4)	177 (53,9)	29 (73,7)			
4	4 1/2	R2240	3.85 (97,8)	4.64 (117,9)	0.40 (10,2)	5.00 (7,4)	6.25 (158,8)	232 (70,7)	22 (55,9)			

Series 2500 - ACT (All Sizes) or PGT (2" and 2 1/2" Sizes)												
1 1/2	1.90	H2515	1.44 (36,6)	1.84 (46,7)	0.20 (5,1)	1.00 (1,5)	2.84 (72,1)	92 (28,0)	56 (142,2)			
2	2 3/8	H2520	1.94 (49,3)	2.46 (62,5)	0.26 (6,6)	1.70 (2,5)	3.60 (91,4)	123 (37,5)	42 (106,7)			
2 1/2	2 7/8	R2525	2.37 (60,2)	2.91 (73,9)	0.27 (6,9)	2.10 (3,1)	4.03 (102,4)	145 (44,2)	36 (91,4)			
3	3 1/2	R2530	2.94 (74,7)	3.61 (91,7)	0.34 (8,6)	3.20 (4,8)	4.85 (123,2)	181 (55,2)	29 (73,7)			
3 1/2	4 1/2	R2533	3.33 (84,6)	4.11 (104,4)	0.39 (9,9)	4.60 (6,8)	6.50 (165,1)	205 (62,5)	25 (63,5)			
4	5 1/2	R2540	3.85 (97,8)	4.73 (120,1)	0.44 (11,2)	6.00 (8,9)	7.12 (180,8)	236 (71,9)	22 (55,9)			

Series 3000 - ACT (Only)												
1 1/2	1.90	H3015	1.44 (36,6)	1.92 (48,8)	0.24 (6,1)	1.20 (1,8)	2.98 (75,7)	96 (29,3)	54 (137,2)			
2	2 3/8	R3020	1.94 (49,3)	2.49 (63,2)	0.27 (6,9)	1.80 (2,7)	3.65 (92,7)	124 (37,8)	42 (106,7)			
2 1/2	2 7/8	R3025	2.37 (60,2)	3.03 (77,0)	0.33 (8,4)	2.70 (4,0)	4.46 (113,3)	152 (46,3)	34 (86,4)			
3	TC4 1/2	R3030	2.94 (74,7)	3.77 (95,8)	0.41 (10,4)	4.90 (7,3)	7.00 (177,8)	188 (57,3)	28 (71,1)			
3 1/2	4 1/2	R3033	3.33 (84,6)	4.27 (108,5)	0.47 (11,9)	5.50 (8,2)	6.75 (171,5)	213 (64,9)	24 (61,0)			
4	5 1/2	R3040	3.85 (97,8)	4.93 (125,2)	0.54 (13,7)	7.40 (11,0)	7.47 (189,7)	247 (75,3)	21 (53,3)			

(Metric Conversions are in Parentheses)

Series 3250 - ACT (Only) Available Upon Request

Joining System Information (API 8rd Thread)

Pipe Size - Inches Joining System	1 1/2	2	2 1/2	3	4	5	6	6	8	8	
Thread Size ⁽⁹⁾	1.90" EUE 10rd	2 3/8" EUE 8rd	2 7/8" EUE 8rd	3 1/2" EUE 8rd	4 1/2" EUE 8rd	5 1/2" OD 8rd	6 5/8" OD 8rd	7" OD 8rd	8 5/8" OD 8rd	9 5/8" OD 8rd	
• Pin Upset O.D.	In (mm)	2.15 (54,6)	2.60 (66,0)	3.10 (78,7)	3.75 (95,3)	4.75 (120,7)	5.55 (141,0)	6.65 (168,9)	7.05 (179,1)	8.65 (219,7)	9.65 (245,1)
• Thread Length	In (mm)	2.36 (59,9)	2.94 (74,7)	3.25 (82,6)	3.50 (88,9)	3.88 (98,6)	4.75 (120,7)	4.25 (108,0)	4.88 (124,0)	4.85 (123,2)	5.13 (130,3)
• Make Up Length Loss	In (mm)	2.06 (52,4)	2.56 (65,1)	2.86 (73,0)	3.13 (79,4)	3.50 (88,9)	4.38 (111,1)	3.88 (98,4)	4.50 (114,3)	4.50 (114,3)	4.75 (120,7)

(Metric Conversions are in Parentheses)

SIZE		✓	STAR™ RATED PRESSURE ⁽⁴⁾			Ultimate ⁽²⁾ Pressure ASTM D-1599 psi (MPa)	Maximum Support Span Ft (m)	Collapse Rating psi (MPa)	Short Term Tensile Rating Lbs (kgs)	Threaded Adapter Product Code
Nom. Size	API Thread Type		Static ⁽¹⁾ 150° F (65.6° C) psi (MPa)	Static ⁽¹⁾ 180° F (82.2° C) psi (MPa)	Static ⁽¹⁾ 200° F (93.3° C) psi (MPa)					

Series 2000 - ACT (All Sizes) or PGT (2", 2½" and 3" Sizes)										
1 1/2	1.90	✓	2000 (13,8)	1800 (12,4)	1700 (11,7)	6000 (41,4)	9 (2,8)	2290 (15,8)	2000 (907)	19NR
2	2 3/8	✓	2000 (13,8)	1800 (12,4)	1700 (11,7)	6300 (43,4)	11 (3,4)	2670 (18,4)	4000 (1814)	23NQ
2 1/2	2 7/8	✓	2000 (13,8)	1800 (12,4)	1700 (11,7)	6100 (42,1)	12 (3,7)	2460 (17,0)	5800 (2631)	27NQ
3	3 1/2	✓	2000 (13,8)	1800 (12,4)	1700 (11,7)	6000 (41,4)	13 (4,0)	2320 (16,0)	8700 (3946)	35NR
4	4 1/2	✓	2000 (13,8)	1800 (12,4)	1700 (11,7)	6100 (42,1)	15 (4,6)	2350 (16,2)	15000 (6804)	45NP
6	7		2000 (13,8)	1800 (12,4)	1700 (11,7)	5300 (36,5)	18 (5,5)	1560 (10,8)	26100 (11839)	N/A

Series 2250 - ACT (All Sizes) or PGT (2", 2½" and 3" Sizes)										
1 1/2	1.90	✓	2250 (15,5)	2050 (14,1)	1900 (13,1)	7300 (50,3)	10 (3,1)	4100 (28,3)	2600 (1179)	19NQ
2	2 3/8	✓	2250 (15,5)	2050 (14,1)	1900 (13,1)	6900 (47,6)	11 (3,4)	3530 (24,3)	4500 (2041)	23NQ
2 1/2	2 7/8		2250 (15,5)	2050 (14,1)	1900 (13,1)	6000 (41,4)	12 (3,7)	2310 (15,9)	5600 (2540)	27NQ
3	3 1/2		2250 (15,5)	2050 (14,1)	1900 (13,1)	6000 (41,4)	13 (4,0)	2250 (15,5)	8600 (3901)	35NQ
4	4 1/2		2250 (15,5)	2050 (14,1)	1900 (13,1)	6100 (42,1)	15 (4,6)	2350 (16,2)	15000 (6804)	N/A

Series 2500 - ACT (All Sizes) or PGT (2" and 2½" Sizes)										
1 1/2	1.90	✓	2500 (17,2)	2250 (15,5)	2100 (14,5)	7900 (54,5)	10 (3,1)	5170 (35,6)	2900 (1315)	19NQ
2	2 3/8	✓	2500 (17,2)	2250 (15,5)	2100 (14,5)	7600 (52,4)	11 (3,4)	4620 (31,9)	5000 (2268)	23NP
2 1/2	2 7/8		2500 (17,2)	2250 (15,5)	2100 (14,5)	6600 (45,5)	12 (3,7)	3060 (21,1)	6300 (2858)	27NP
3	3 1/2		2500 (17,2)	2250 (15,5)	2100 (14,5)	6600 (45,5)	14 (4,3)	3080 (21,2)	9800 (4445)	35NP
3 1/2	4 1/2		2500 (17,2)	2250 (15,5)	2100 (14,5)	6700 (46,2)	14 (4,3)	3220 (22,2)	12800 (5806)	N/A
4	5 1/2		2500 (17,2)	2250 (15,5)	2100 (14,5)	6600 (45,5)	15 (4,6)	3080 (21,2)	16800 (7620)	N/A

Series 3000 - ACT (Only)										
1 1/2	1.90	✓	3000 (20,7)	2700 (18,6)	2550 (17,6)	9200 (63,4)	10 (3,1)	8070 (55,6)	3500 (1588)	N/A
2	2 3/8		3000 (20,7)	2700 (18,6)	2550 (17,6)	8000 (55,2)	12 (3,7)	5380 (37,1)	5400 (2449)	N/A
2 1/2	2 7/8		3000 (20,7)	2700 (18,6)	2550 (17,6)	8000 (55,2)	13 (4,0)	5380 (37,1)	8000 (3629)	N/A
3	^{TC} 4 1/2		3000 (20,7)	2700 (18,6)	2550 (17,6)	8000 (55,2)	14 (4,3)	5360 (37,0)	12300 (5579)	N/A
3 1/2	4 1/2		3000 (20,7)	2700 (18,6)	2550 (17,6)	8000 (55,2)	15 (4,6)	5310 (36,6)	15800 (7167)	N/A
4	5 1/2		3000 (20,7)	2700 (18,6)	2550 (17,6)	8000 (55,2)	16 (4,9)	5380 (37,1)	21200 (9616)	N/A

(Metric Conversions are in Parentheses)

NA - Not Available (Repair Joint Required)

Series 3250 - ACT (Only) Available Upon Request

Corresponding Numbered Notes:

- 1. STATIC RATED PRESSURE (API 15HR)** - Based on minimum wall thickness dimensions and API 15HR Edition 3, for a 20 year life expectancy. Since some of the long term test data is incomplete for some of these products, not all are available with an API Monogram. API Monogramable products are designated by check marks. NOV Fiber Glass Systems Standard Design products are not API monogrammed.
- 2. ULTIMATE PRESSURES** - The typical mode of failure for pressure is weep.
- 3. API CONNECTIONS** - All products are produced integral joint unless indicated (TC) Threaded and Coupled. All 1½" EUE 10rd and 2 3/8" - 4½" EUE 8rd API threads conform to API 5B Table 14, 14th Edition (L4 is minimum) and all 5½" - 9 5/8" OD 8rd casing thread conform to API 5B Table 7, 14th Edition (L4 is minimum).
- 4. CYCLIC PRESSURES** - Consult a NOV Fiber Glass Systems technical services personnel in applications where pressure fluctuations of more than 20 percent of the steady pressure rating are anticipated.

Pipe Capacity

Size		Inside Diameter		Capacity	
Pipe	Thread	in	(mm)	Bbls/1,000 ft. (m ³ /km)	
1 1/2	1.90	1.44	(36,6)	2.00	(1,0)
2	2 3/8	1.94	(49,3)	3.70	(1,9)
2 1/2	2 7/8	2.37	(60,2)	5.40	(2,8)
3	3 1/2	2.94	(74,7)	8.40	(4,4)
4	4 1/2	3.85	(97,8)	14.40	(7,5)
5	5 1/2	4.74	(120,4)	21.80	(11,4)
6	6 5/8	5.50	(139,7)	29.40	(15,3)
6	6 5/8	5.93	(150,6)	34.20	(17,8)
8	8 5/8	7.74	(196,6)	58.10	(30,3)
8	9 5/8	7.74	(196,6)	58.10	(30,3)

National Oilwell Varco has produced this brochure for general information only, and it is not intended for design purposes. Although every effort has been made to maintain the accuracy and reliability of its contents, National Oilwell Varco in no way assumes responsibility for liability for any loss, damage or injury resulting from the use of information and data herein nor is any warranty expressed or implied. Always cross-reference the bulletin date with the most current version listed at the web site noted in this literature.



15HR-0001 / 15HR-0005
LICENSEE Q1 RATED



www.fiberglasssystems.com

P.O. Box 37389, 2425 SW 36th Street
San Antonio, Texas 78237 USA
Phone: 1 (210) 434-5043
Fax: 1 (210) 434-7543

NOV Fiber Glass Systems

© 2009, NATIONAL OILWELL VARCO
® Trademark of NATIONAL OILWELL VARCO
O1301 Issued August 2009 - Supersedes August 2008