

ONSHORE PIPE SPECIFICATIONS

US CUSTOMARY UNITS

MAOP/ANSI Class	750psi ANSI 300		1,000psi ANSI 400			1,500psi ANSI 600					2,250psi ANSI 900				3,000psi ANSI 1200		
Nominal Size (in)	4	6	3	4	8	2	3	4	6	8	2	3	4	6	2	3	4
Reel Length (ft)	2,920	1,247	4,560	2,920	607	6,578	3,904	2,247	1,099	591	4,462	2,887	1,804	820	4,298	2,444	1,362

Dimensions

Pipe Inside Diameter (in)	3.669	5.604	2.821	3.669	7.625	1.939	2.821	3.669	5.604	7.625	1.939	2.821	3.669	5.604	1.939	2.821	3.669
Pipe Outside Diameter (in)	4.576	6.931	3.650	4.608	9.253	2.689	3.682	4.688	7.083	9.325	2.801	3.762	4.760	7.211	2.801	3.834	4.888
Storage Bend Radius, SBR (ft)	3.4	5.2	2.7	3.4	6.9	2.0	2.7	3.5	5.3	7.0	2.1	2.8	3.6	5.4	2.1	2.9	3.6
Operating Bend Radius, OBR (ft)	3.4	5.2	2.7	3.4	6.9	2.0	2.7	3.5	5.3	7.0	2.1	2.8	3.6	5.4	2.1	2.9	3.6

Weights

Weight Empty in Air (lb/ft)	4.6	9.2	3.3	5.1	19.5	2.3	3.7	6.9	14.1	22.5	3.3	5.4	8.4	18.1	3.5	6.2	11.0
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Pressures

Factory Test Pressure (psi)	975	975	1,300	1,300	1,300	1,950	1,950	1,950	1,950	1,950	2,925	2,925	2,925	2,925	3,900	3,900	3,900
Burst Pressure (psi)	1,500	1,500	2,000	2,000	2,000	3,000	3,000	3,000	3,000	3,000	4,500	4,500	4,500	4,500	6,000	6,000	6,000

Flow Properties

Absolute Roughness, ϵ (ft)	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06
Relative Roughness, ϵ/D	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06
Hazen-Williams Coefficient, C	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150

Thermal Properties

Maximum Temperature (°F)	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
OHTC, U (based on ID) BTU/hr-ft ² °F	5.08	3.39	5.76	5.10	2.98	6.73	5.78	5.13	3.42	2.99	6.85	5.83	5.15	3.44	6.85	5.87	5.20

Mechanical Properties

Bending Stiffness, EI (lb-ft ²)	6,314	33,063	2,769	6,387	91,303	919	2,816	6,591	34,260	92,658	1,017	2,950	6,803	35,462	1,018	3,088	7,271
Spooling Tension (lb)	541	1,236	373	540	1,915	228	373	538	1,226	1,913	233	374	539	1,225	233	377	546
Maximum Installation Tension (lb)	8,000	20,000	8,000	11,000	40,000	3,800	8,000	15,000	25,000	40,000	10,500	9,000	20,000	30,000	10,500	14,000	22,000

ONSHORE PIPE SPECIFICATIONS

METRIC																	
MAOP/ANSI Class	50 bar ANSI 300		70 bar ANSI 400			100 bar ANSI 600				155 bar ANSI 900				200 bar ANSI 1200			
Nominal Size (in)	4	6	3	4	8	2	3	4	6	8	2	3	4	6	2	3	4
Reel Length (m)	890	380	1,390	890	185	2,005	1,190	685	335	180	1,360	880	550	250	1,310	745	415

Dimensions

Pipe Inside Diameter (mm)	93.2	142.3	71.7	93.2	193.7	49.3	71.7	93.2	142.3	193.7	49.3	71.7	93.2	142.3	49.3	71.7	93.2
Pipe Outside Diameter (mm)	116.2	176.1	92.7	117.1	235.0	68.3	93.5	119.1	179.9	236.9	71.1	95.5	120.9	183.2	71.1	97.4	124.2
Storage Bend Radius, SBR (m)	1.04	1.58	0.83	1.05	2.10	0.61	0.84	1.07	1.61	2.12	0.64	0.86	1.08	1.64	0.64	0.87	1.11
Operating Bend Radius, OBR (m)	1.04	1.58	0.83	1.05	2.10	0.61	0.84	1.07	1.61	2.12	0.64	0.86	1.08	1.64	0.64	0.87	1.11

Weights

Weight Empty in Air (kg/m)	6.9	13.7	5.0	7.6	29.0	3.4	5.6	10.3	21.0	33.5	5.0	8.0	12.5	27.0	5.2	9.2	16.3
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Pressures

Factory Test Pressure (MPa)	6.72	6.72	8.96	8.96	8.96	13.44	13.44	13.44	13.44	13.44	20.17	20.17	20.17	20.17	26.89	26.89	26.89
Burst Pressure (MPa)	10.34	10.34	13.79	13.79	13.79	20.68	20.68	20.68	20.68	20.68	31.03	31.03	31.03	31.03	41.37	41.37	41.37

Flow Properties

Absolute Roughness, ϵ (m)	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06	1.5E-06
Relative Roughness, ϵ/D	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06	16E-06
Hazen-Williams Coefficient, C	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150

Thermal Properties

Maximum Temperature (°C)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
OHTC, U (based on ID) W/m ² °C	28.86	19.26	32.70	28.93	16.93	38.19	32.81	29.11	19.40	16.98	38.91	33.09	29.26	19.52	38.91	33.34	29.53

Mechanical Properties

Bending Stiffness, EI (N-m ²)	2,609	13,664	1,145	2,639	37,731	380	1,164	2,724	14,158	38,291	420	1,219	2,811	14,655	421	1,276	3,005
Spooling Tension (kN)	2.4	5.5	1.7	2.4	8.5	1.0	1.7	2.4	5.5	8.5	1.0	1.7	2.4	5.4	1.0	1.7	2.4
Maximum Installation Tension (kN)	35.6	89.0	35.6	48.9	177.9	16.9	35.6	66.7	111.2	177.9	46.7	40.0	89.0	133.4	46.7	62.3	97.9