

Structural[®] Poly Glass[®] Vessels



Structural Poly Glass Vessels have been the industry standard for quality and performance for over 30 years. Featuring a one piece, seamless high density polyethylene liner and an encapsulated, leak free engineered polymer inlet, Structural Poly Glass Vessels are designed to provide you with years of worry free performance.

Typical Applications

- Residential/light commercial softening
- Residential/light commercial filtration
- Portable exchange tanks

Color Options

- AL - Almond 
- BL - Blue 
- BK - Black 
- GR - Gray 
- NA - Natural 



Vessels Tested and Certified by NSF
International to NSF/ANSI Standard 61 for
material and structural integrity requirements.

Structural[®] Poly Glass[®] Vessels



Product Features

- For residential and light commercial water softener/filtration applications
- Slim diameter with capacities from 2 to 49 gallons
- Unmatched strength and chemical resistance
- 10-year warranty for 6" - 13" vessels
- 5-year warranty for 14" - 16" vessels

Material of Construction

- Inner shell of high density polyethylene
- Threaded inlet in various sizes: 2.5", 4", 4.5"

Operating Parameters

- Maximum operating pressure: 150 psi
- Maximum operating temperature: 120°F

Pentair Design Parameters

- Safety factor: 4:1
- Minimum burst at 600 psi
- Tested to 250,000 cycles without leakage

NSF Design Parameters

- Safety factor: 4:1
- Minimum burst at 600 psi
- Tested to 100,000 cycles without leakage

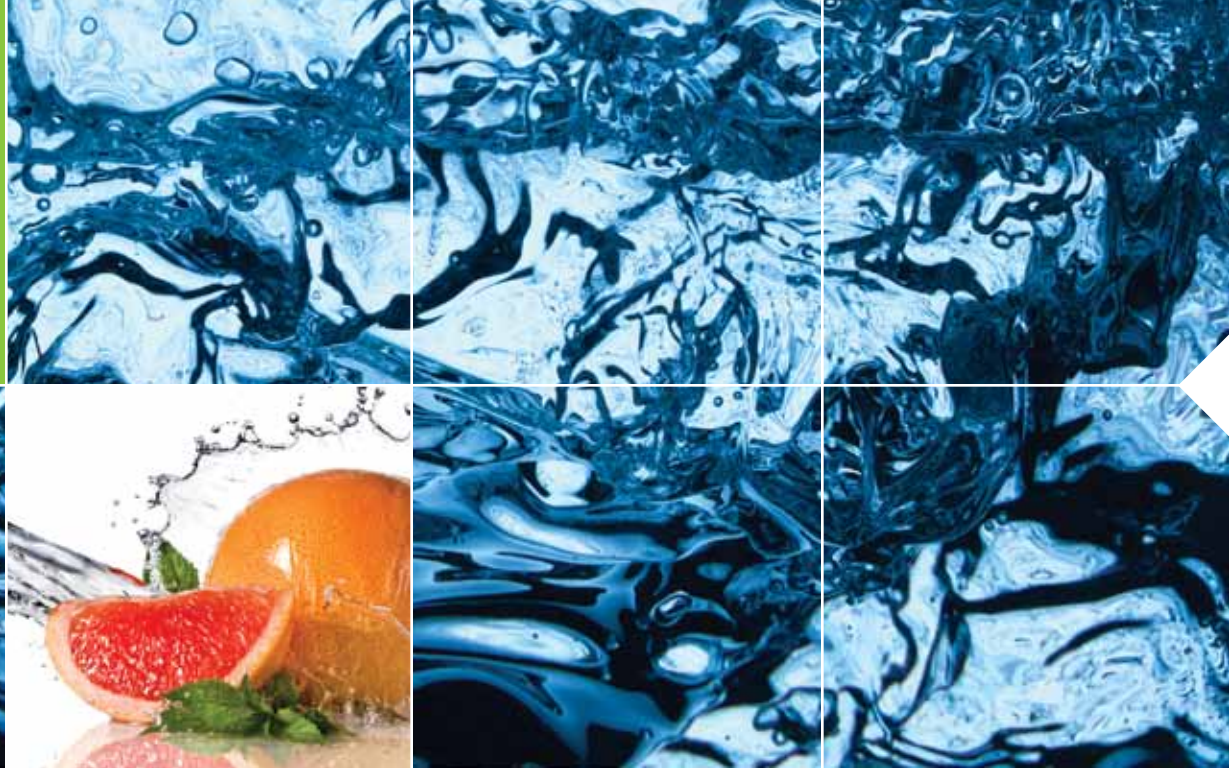
Specifications

	Part No.	Description	Height w/Base Inches / mm	Capacity Gallons / Liters	Cubic Feet
6" Dia.	CH30109	0613 PG 2.5"T	13.4 / 340	1.1 / 4.2	0.15
	CH30127	0618 PG 2.5"T	18.8 / 479	1.8 / 6.8	0.24
	CH30151	0635 PG 2.5"T	35.7 / 906	3.8 / 14.4	0.51
7" Dia.	CH30190	0735 PG 2.5"T	35.4 / 898	5.2 / 19.7	0.7
	CH30213	0744 PG 2.5"T	44.0 / 1120	6.7 / 25.4	0.9
8" Dia.	CH31835	0818 PG 2.5"T	18.7 / 475	3.3 / 12.5	0.44
	CH33858	0824 PG 2.5"T	24.4 / 620	4.5 / 17.0	0.6
	CH31836	0830 PG 2.5"T	30.3 / 770	5.9 / 22.3	0.79
	CH30264	0835 PG 2.5"T	35.39 / 899	6.6 / 25	0.88
	CH30286	0840 PG 2.5"T	40.1 / 1018	7.8 / 29.5	1
	CH30305	0844 PG 2.5"T	44.5 / 1130	8.7 / 32.9	1.2
9" Dia.	CH30317	0918 PG 2.5"T	18.4 / 467	3.9 / 14.8	0.52
	CH30347	0935 PG 2.5"T	35.3 / 896	8.3 / 31.4	1.1
	CH30360	0940 PG 2.5"T	39.8 / 1010	9.5 / 36	1.3
	CH30367	0942 PG 2.5"T	41.9 / 1063	10.1 / 38.2	1.4
	CH30383	0948 PG 2.5"T	48.7 / 1237	11.8 / 44.7	1.6



Specifications (cont'd.)

	Part No.	Description	Height w/Base Inches / mm	Capacity Gallons / Liters	Cubic Feet
10" Dia.	CH31357	1018 PG 2.5"T	18.9 / 480	4.9 / 18.5	0.65
	CH30460	1035 PG 2.5"T	35.5 / 902	10.2 / 38.6	1.4
	CH30491	1040 PG 2.5"T	40.3 / 1024	11.5 / 43.5	1.54
	CH30523	1044 PG 2.5"T	44.6 / 1134	13.1 / 49.6	1.8
	Consult Factory	1044 PG 2.5"T 1.25" THD	44.9 / 1142	13.1 / 49.6	1.8
	CH30546	1047 PG 2.5"T	47.7 / 1211	15.1 / 57.2	2
	CH30579	1054 PG 2.5"T	54.4 / 1383	16.4 / 62.1	2.2
	Consult Factory	1054 PG 2.5"T 1.25" THD	54.4 / 1383	16.4 / 62.1	2.2
	CH31478	1060 PG 2.5"T	61.3 / 1558	18.3 / 69.3	2.45
12" Dia.	CH30615	1242 PG 2.5"T	43.0 / 1093	19.1 / 72.3	2.6
	CH30617	1242 PG 4.5"T	43.1 / 1095	19.1 / 72.3	2.6
	CH30646	1248 PG 2.5"T	49.0 / 1245	20.6 / 78	2.8
	CH30647	1248 PG 4"T	49.4 / 1256	20.6 / 78	2.8
	Consult Factory	1248 PG 2.5"T 1.25" TDH	49.0 / 1244	20.6 / 78	2.8
	CH30666	1252 PG 2.5"T	53.0 / 1346	22.2 / 84	2.97
	Consult Factory	1252 PG 2.5"T 1.25" TDH	53.0 / 1346	22.2 / 84	2.97
	CH30669	1252 PG 4"T	53.4 / 1356	22.2 / 84	2.97
	CH32127	1252 PG 4.5"T	53.14 / 1350	22.2 / 84	2.97
13" Dia.	CH30721	1354 PG 2.5"T	54.3 / 1380	27 / 102	3.6
	Consult Factory	1354 PG 2.5"T 1,25" TDH	54.3 / 1380	27 / 102	3.6
	30724	1354 4"T	54.9 / 1394	27 / 102	3.6
14" Dia.	CH30745	1447 4"T	47.0 / 1195	27.5 / 104	3.7
	CH32006	1447 4.5"T	47.3 / 1200	27.5 / 104	3.7
	Consult Factory	1454 4"T	54.7 / 1388	32.8 / 124	4.4
	CH30785	1465 4"T	66.1 / 1679	38 / 144	5.1
16" Dia.	CH34368	1633 4"T	34.8 / 885	22.4 / 85	3
	CH30864	1653 4"T	55.0 / 1397	40 / 151	5.3
	CH30912	1665 4"T	66.2 / 1682	49 / 186	6.6
	CH30868	1665 4"T 4"B	78.8 / 2002	49 / 186	6.6



Structural[®] Composite Vessels

Structural Composite Pressure Vessels offer reinforced fiberglass construction for outstanding performance and durability. Available in capacities up to 1,600 gallons, composite vessels are available with a variety of different configurations. ASME code available.



Product Features

- For commercial and industrial water treatment and storage
- 100% composite fiberglass construction
- Outstanding performance and durability in harsh chemical environments
- Absolutely will not – and cannot – rust
- Requires little or no maintenance
- Capacities up to 1600 gallons
- Factory-backed five-year warranty
- Commercial softening & filtration

Color Options

- AL - Almond 
- BL - Blue 
- BK - Black 
- GR - Gray 
- NA - Natural 



Vessels Tested and Certified by NSF
International to NSF/ANSI Standard 61 for
material and structural integrity requirements.



Pentair
Water

Specifications

	Part No.	Description	Height w/base inches/mm	Height w/o base inches/mm	Capacity Gallons/Liters	Cubic Feet	Base	Ship Weight lbs.
18" Dia.	CH30948	18X65 COMP 4"T	66.25 / 1683	65 / 1651	64 / 242	8.56	SMC	67
	CH31343	18X65 COMP 4"T 4"B	73.13 / 1858	65.6 / 1394	64 / 242	8.56	SMC EXT	67
	CH31693	18X65 COMP 6"TF 6"BF	84.12 / 2137	70.5 / 1791	62 / 234	8.29	SMC EXT	92
21" Dia.	CH30950	21X36 COMP 4"T	41.7 / 1059	38.2 / 970	45 / 171	6.06	SMC	46
	CH31573	21X36 COMP 4"T 4"B	47.5 / 1205	38.25 / 970	45 / 171	6.06	SMC EXT	53
	CH30953	21X62 COMP 4"T	67.1 / 1705	63.5 / 1613	84 / 318	11.23	SMC	95
	CH30954	21X62 COMP 4"T 4"B	72.8 / 1848	63.5 / 1613	84 / 318	11.23	SMC EXT	95
24" Dia.	CH31043	24X38 COMP 4"T	42.6 / 1081	38.5 / 978	61 / 231	8.15	SMC	65
	CH31053	24X50 COMP 4"T	58 / 130	52.9 / 1343	83.5 / 316	11.16	SMC	90
	CH31611	24X50 COMP 4"T 4"B	63 / 1601	52.9 / 1343	83.5 / 316	11.16	SMC EXT	90
	CH32049	24X65 COMP 4"T	65.2 / 1655	61.1 / 1552	100 / 378	13.36	SMC	109
	CH32481	24X65 COMP 4"T 4"B	70.1 / 257	60 / 1524	100 / 378	13.36	SMC EXT	115
	CH32129	24X65 COMP 6"TF	65 / 1651	61.2 / 1556	100 / 378	13.36	SMC	114
	CH32139	24X65 COMP 6"TF 6"BF	79 / 2007	65 / 1651	100 / 378	13.36	TRIPOD	114
	CH31153	24X72 COMP 4"T	74.7 / 1896	70.6 / 1793	118 / 451	15.77	SMC	109
	CH31154	24X72 COMP 4"T 4"B	80.4 / 2043	70.3 / 1786	118 / 451	15.77	SMC EXT	124
	CH31155	24X72 COMP 6"TF	77 / 1956	73.4 / 1864	118 / 451	15.77	SMC	137
	CH31157	24X72 COMP 6"TF 6"BF	88.5 / 2248	74.5 / 1892	118 / 451	15.77	TRIPOD	137
30" Dia.	CH34177	30X60 COMP 6"TF	71.6 / 1819	64.3 / 1634	151 / 572	20.2	SMC EXT	195
	CH34178	30X60 COMP 6"TF 6"BF	82.5 / 2096	68.5 / 1740	151 / 572	20.2	TRIPOD	195
	CH33653	30X72 COMP 4"T	77.2 / 1961	69.8 / 1772	187 / 708	24.99	SMC EXT	198
	CH31161	30X72 COMP 4"T 4"B	77.2 / 1961	69.8 / 1772	187 / 708	24.99	SMC EXT	198
	CH31162	30X72 COMP 6"TF	79.7 / 2025	69.9 / 1778	187 / 708	24.99	SMC EXT	195
	CH311613	30X72 COMP 6"TF 6"BF	88.9 / 2258	74.9 / 1903	187 / 708	24.99	SMC EXT	211
36" Dia.	CH31209	36X36 COMP 6"TF	55.3 / 1403	41 / 1041	118 / 447	15.8	TRIPOD	148
	CH31417	36X57 COMP 6"TF	68 / 1727	59.3 / 1505	205 / 776	27.4	SMC EXT	225
	CH31418	36X57 COMP 6"TF 6"BF	77.3 / 1962	63 / 1600	205 / 776	27.4	TRIPOD	225
	CH33652	36X72 COMP 4"T	80.4 / 2042	71.8 / 1823	264 / 999	35.2	SMC EXT	264
	CH31523	36X72 COMP 4"T 4"B	80.5 / 2045	70.5 / 1791	264 / 999	35.2	SMC EXT	285
	CH31214	36X72 COMP 6"TF	83 / 2108	74.3 / 1886	264 / 999	35.2	SMC EXT	285
	CH31217	36X72 COMP 6"TF 6"BF	90.4 / 2296	76.1 / 1934	264 / 999	35.2	TRIPOD	285
	CH31712	36X72 COMP 6"TF 6"BF 4"TBSF	89.6 / 2275	75.3 / 1913	264 / 999	35.2	TRIPOD	292
42" Dia.	CH31272	42X72 COMP 6"TF	72.5 / 1842	71.1 / 1807	345 / 1306	46.1	SMC	370
	CH31276	42X72 COMP 6"TF 6"BF	90.1 / 2289	73 / 1854	345 / 1306	46.1	TRIPOD	400
	CH34226	42X72 COMP 6"TF 6"BF 4"TBSF	94.6 / 2403	77.5 / 1969	345 / 1306	46.1	TRIPOD	415



Specifications (cont'd.)

	Part No.	Description	Height w/base inches/mm	Height w/o base inches/mm	Capacity Gallons/Liters	Cubic Feet	Base	Ship Weight lbs.
48" Dia.	CH31281	48X72 COMP 6"TF	81.5 / 2071	75.2 / 1909	463 / 1753	61.9	SMC	494
	CH31285	48X72 COMP 6"TF 6"BF	92.9 / 2360	76.9 / 1953	463 / 1753	61.9	TRIPOD	494
	CH31283	48X72 COMP 6"TF 6"BF 4"TBSF	96.75 / 2458	80.75 / 2051	463 / 1753	61.9	TRIPOD	504
63" Dia.	CH31390	63X67 COMP 6"TF 6"BF	81.4 / 2068	67.1 / 1704.3	600 / 2271	80.2	TRIPOD	680
	CH31326	63X86 COMP 6"TF 6"BF	98.5 / 2503	84.1 / 2136	900 / 3407	120.3	TRIPOD	950
	CH31327	63X86 COMP 16"TMWY 6"BF	98.9 / 2513	84.5 / 2146	900 / 3407	120.3	TRIPOD	950
	CH31292	63X86 COMP 16"TMWY 6"BF 4"TBSF	99 / 2515	85 / 2159	900 / 3407	120.3	TRIPOD	950
	CH34234	63X116 16"TMWY 6"BF 4"TBSF	130.4 / 3312	115.9 / 2945	1250 / 4732	167	TRIPOD	1190
	CH31607	63X144 16"TMWY 6"BF 4"TBSF	157.9 / 4012	143.9 / 3656	1600 / 6057	214	TRIPOD	1398

*Measurements are subject to change without notice and are for reference only.

NOTE: Flexible connections must be installed between hard piping and tank openings. Failure to install flex connection properly with the vessel will void the warranty.

NOTE: Different base options can be selected on different tank diameters. The bases selected above illustrate most common base selection.

Material of Construction

- Polyethylene inner shell

Operating Parameters

- Maximum operating pressure: 150 psi
- Maximum operating temperature:
 - 120°F (threaded)
 - 150°F (flanged)

Pentair Design Parameters

- Safety factor: 4:1
- Minimum burst at 600 psi
- Tested to 250,000 cycles without leakage

NSF Design Parameters

- Safety factor: 4:1
- Minimum burst at 600 psi
- Tested to 100,000 cycles without leakage

ASME Design Parameters

- *Top/Bottom flange:*
 - Safety factor: 5:1
 - Minimum burst at 750 psi
 - Tested to 33,000 cycles without leakage
- *Side flange:*
 - Safety factor: 6:1
 - Minimum burst at 900 psi
 - Tested to 100,000 cycles without leakage

Installation Tips

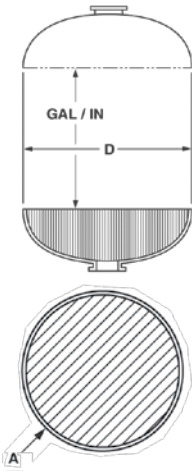
- Bolt base to floor
- Calculate height for valve and base combined (see photo)

Fleck Valve	Tank Dia. inches/mm	Adder Ht. (X) inches/mm
2750	18/457	6.5/165
2850	21/533	6.5/165
2900	24,30/610,762	12/305
3150	42/1067	10/254
3900	48-63/1219-1600	15/381

*Measurements are subject to change without notice and are for reference only.

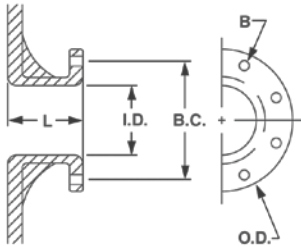


Dome Volume (gallons) and Straight Wall Gallon per Inch



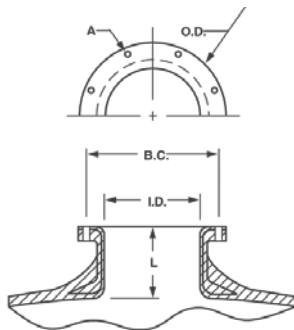
Nominal Diameter			
D (inches)	Gallons* (One Dome)	Gallon/Inch (Approx.)	A (Sq. Feet)
12	1.0	0.5	0.7
13	1.4	0.5	0.9
14	1.7	0.6	1.1
16	2.7	0.8	1.3
18	3.7	1.0	1.8
21	6.2	1.4	2.4
24	9.3	1.9	3.0
30	18	2.9	4.6
36	33	4.2	6.7
42	52	5.7	9.0
48	74	7.5	12.0
63	168	13.0	20.0

*Cubic Ft. = 0.1337 x Gallons



Side Flange

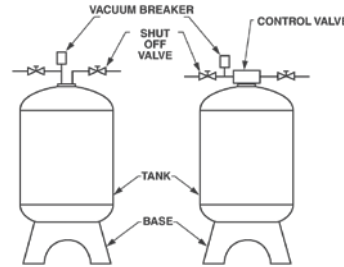
Size	L	I.D.	B.C.	O.D.	A Bolt Dia.	Number of Holes	Weight (lbs.)
4" ANSI	4.1"	4.0"	7.5"	9.0"	0.63"	8	6.4



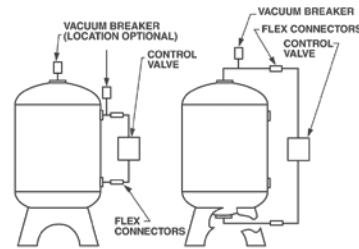
Top and Bottom Opening Flanges/Manway

Size	L	I.D.	B.C.	O.D.	A Bolt Dia.	Number of Holes	Weight (lbs.)
6" SNA	3.6"	5.9"	8.5"	9.4"	0.31"	12	5.8
10" ANSI	3.7"	10.0"	14.3"	16.0"	0.88"	12	17.8
16" Manway SNA	4.3"	16.0"	20.4"	21.3"	0.50"	24	34.0

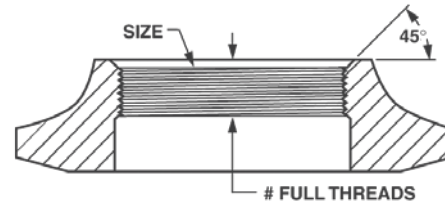
Vacuum Breaker Installation



Flex Connectors Installation

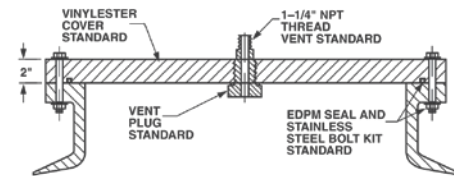


NOTE: Flexible connectors must be installed between hard piping and tank openings. These pressure vessels are treated for an internal negative pressure of 5y HG (17 Pa) vacuum below atmospheric. If negative pressure could ever exceed 5y Hg (17 Pa), an adequate vacuum breaker must also be properly installed. Failure to install flex connection properly, or improper installation of a vacuum breaker when required, may void the warranty.



Top and Bottom Opening Threads

Size	Composite/ Poly Glass	Number of Full Threads	Composite
2.5" - 8" NPSM	6	3 min	6
4" - 8" UN	7	3 min	7
4.5" - 8" Buttress	7	3 min	7



Manway Cover

Material	Pressure Rating	Tapping
CPVC	100 psi	As requested
VE	150 psi	As shown only



STRUCTURAL

Pentair Water



COMPOSITE PRESSURE VESSELS

COMPOSITE VS. STEEL



Global Leaders in Composite Pressure Vessel Technology

The non-corrosive, cost-effective solution for commercial/industrial water treatment and storage

STRUCTURAL® TECHNOLOGY AND MANUFACTURING PROCESSES

Our exclusive, patented manufacturing process creates a seamless polyethylene shell that is wound continuously with fiberglass roving and sealed with epoxy resin. This process results in a corrosion-resistant, leak-free vessel. Computer-aided winding machines and other customized equipment are used to produce a tank that offers outstanding performance and durability.

APPLICATIONS

Composite Pressure Vessels are used for large commercial and industrial applications such as:

- Softening
- Filtration
- Storage

WHY CUSTOMERS SPECIFY STRUCTURAL

- Trusted performance
- High quality products
- Unparalleled customer support
- Rapid delivery

COMPOSITE PRESSURE VESSELS

SPECIFICATIONS

DESCRIPTION	OPENING	OPERATING PRESSURE (PSI/BAR)	HEIGHT W/ BASE (IN/MM) ¹	HEIGHT W/O BASE (IN/MM) ¹	DIAMETER (IN/MM) ²	CAPACITY (GAL/LITER)	BASE	WEIGHT W/ BASE (LBS/KG) ³
18 x 65	4" T	150/10.34	66.25/1682.0	65.00/1651.0	18.65/473.8	64/242.0	SMC	67/30.4
18 x 65	4" TB	150/10.34	73.13/1857.5	65.63/1667.0	18.65/473.8	64/242.0	SMC EXT	67/30.4
21 x 62	4" T	150/10.34	67.13/1705.0	63.50/1612.9	22.00/558.8	84/318.0	SMC	95/43.1
21 x 62	4" TB	150/10.34	72.75/1847.9	63.50/1612.9	21.75/552.5	84/318.0	SMC EXT	95/43.1
24 x 72	4" T	150/10.34	74.66/1896.3	70.60/1793.2	24.25/616.0	118/446.7	SMC	109/49.4
24 x 72	4" TB	150/10.34	80.42/2042.7	70.30/1785.6	24.60/624.8	119/450.5	SMC EXT	124/56.2
24 x 72	6" TBF	150/10.34	88.50/2247.9	74.50/1892.3	24.20/614.7	119/450.5	TRIPOD	137/62.1
30 x 60	6" TF	150/10.34	71.63/1819.4	64.34/1634.2	30.20/767.0	151/571.6	SMC EXT	185/83.9
30 x 60	6" TBF	150/10.34	82.50/2095.5	68.50/1739.9	30.20/767.0	151/571.6	TRIPOD	185/83.9
30 x 72	4" TB	150/10.34	78.90/2004.1	70.40/1788.2	30.07/763.8	187/707.9	SMC EXT	198/89.8
30 x 72	6" TBF	150/10.34	88.90/2258.1	74.90/1902.5	30.20/767.1	187/707.9	TRIPOD	211/95.7
36 x 72	4" TB	150/10.34	80.50/2004.7	70.50/1790.7	36.00/914.4	264/999.3	SMC EXT	285/129.3
36 x 72	6" TBF	150/10.34	90.39/2295.9	76.14/1933.9	36.12/917.4	264/999.3	TRIPOD	285/129.3
42 x 72	6" TF	150/10.34	72.52/1842.0	71.14/1807.0	42.25/1073.2	345/1306.0	SMC LOW	370/168.0
42 x 72	6" TBF	150/10.34	90.12/2289.0	73.00/1854.2	42.25/1073.2	345/1306.0	TRIPOD	400/181.0
48 x 72	6" TF	150/10.34	81.54/2071.2	75.16/1909.1	48.25/1225.6	463/1753.0	SMC LOW	494/224.0
48 x 72	6" TBF	150/10.34	92.90/2359.7	76.90/1953.3	48.25/1225.6	463/1753.0	TRIPOD	494/224.0
63 x 67	6" TBF	150/10.34	81.41/2067.8	67.10/1704.3	64.00/1625.7	600/2271.0	TRIPOD	680/308.0
63 x 67	16" TMY, 6" BF	150/10.34	82.24/2088.9	67.80/1722.1	64.00/1625.7	600/2271.0	TRIPOD	680/308.0
63 x 86	6" TBF	150/10.34	98.54/2502.9	84.10/2136.1	64.00/1625.7	900/3407.0	TRIPOD	950/431.0
63 x 86	16" TMY, 6" BF	150/10.34	98.94/2513.1	84.50/2146.3	64.00/1625.7	900/3407.0	TRIPOD	950/431.0
63 x 116	16" TMY, 6" BF	150/10.34	130.44/3313.2	116.00/2946.4	64.00/1625.7	1250/4732.0	TRIPOD	1190/540.0
63 x 144	16" TMY, 6" BF	150/10.34	160.18/4068.6	145.50/3695.7	64.50/1638.3	1600/6057.0	TRIPOD	1398/634.0

¹ Height Tolerance is +/- 1.00in/ 25.4 mm

² Diameter Tolerance is +/- .50in/ 12.7 mm

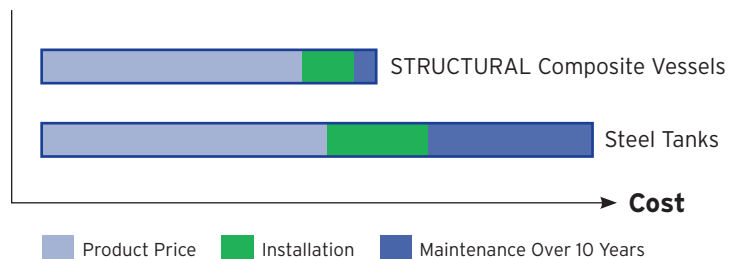
³ Product Weight - Contact customer service for shipping weight

Note: ASME Code available on flanged tanks 18" to 48" in diameter

COMPOSITE VESSEL BENEFITS OVER STEEL TANKS

Steel Tanks	STRUCTURAL Composite Vessels
Very heavy and difficult to handle thus involves higher labor cost to install	60% lighter than steel and easier to handle thus lower installation costs
Corrode and rust over a period of time	Corrosion-resistant both inside and out
Lining has to be periodically treated	Low maintenance
Painting and coating have to be undertaken regularly	Natural fiberglass shell never fades or changes color; colored shells recommended for UV protection

COMPOSITE VESSELS: LOWER TOTAL OPERATION COSTS VERSUS STEEL TANKS



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