Structural Pressure Vessels (Composite & FRP)

for residential, commercial & industrial use

STRUCTURAL

Pentair Water

Structural Pressure Vessels (FRP)

The product

Structural has been designing and manufacturing pressure vessels for over 4 decades. In fact, we were among the first to use fiberglass reinforced plastic (FRP) in our patented manufacturing process.

Today, we lead the industry with highly advanced manufacturing facilities and dedicated sales personnel located around the world.

Structural high performance pressure vessels are guaranteed to provide years of dependable service.

Structural pressure vessels provide cost-effective solutions for the most challenging applications. Our pressure vessels are accepted globally as the superior solution for water treatment.

Application areas

FRP vessels are used mainly for residential and small commercial applications like

- Softener
- Filtration

Water Softener

Benefits & advantages of using FRP vessels

- 100% non-metallic construction
- One piece seamless molded vessel with no weld or joints.
- About 1/3 the weight of steel tanks and can be handled easily
- Available in standard Polyester or chemical resistant Vinylester construction depending on your needs.
- Optional custom openings located as per your specifications.
- Easy to handle and install.

FRP Vessel Specification

Model	Opening (Inches)	Volume (Litres)	Dia (mm)	HOS (mm)	Height w/o base (mm)	Height w/ base (mm)	Weight (kg)
6 x 13	2.5"T	5	159	203	320	340	1
6 x 18	2.5"T	8	159	340	450	479	1
6 x 35	2.5"T	16	159	770	885	909	2
7 x 17	2.5"T	10	184	297	427	437	1
7 x 24	2.5"T	14	184	470	608	610	2
7 x 30	2.5"T	18	184	622	761	763	3
7 x 35	2.5"T	21	184	745	885	887	3
7 x 40	2.5"T	24	184	875	1014	1017	3
7 x 44	2.5"T	27	184	984	1117	1124	3
8 x 17	2.5"T	12	210	269	427	437	2
8 x 22	2.5"T	17	210	410	569	579	2
8 x 30	2.5"T	23	210	602	781	768	3
8 x 35	2.5"T	27	210	728	885	895	3
8 x 40	2.5"T	31	210	858	1013	1024	4
8 x 44	2.5"T	35	210	964	1017	1130	4
9 x 35	2.5"T	34	236	707	885	897	4
9 x 40	2.5"T	39	236	835	1019	1118	4
9 x 48	2.5"T	48	236	1040	1216	1223	5
10 x 19	2.5"T	20	257	285	482	487	3
10 x 30	2.5"T	33	257	570	737	762	4
10 x 35	2.5"T	40	257	690	885	893	4
10 x 40	2.5"T	46	257	817	1015	1021	5
10 x 44	2.5"T	52	257	922	1017	1124	5
10 x 47	2.5"T	55	257	995	1191	1200	6
10 x 54	2.5"T	64	257	1173	1367	1375	6
12 x 29	2.5"T	43	305	480	715	737	5
12 x 48	2.5"T	79	305	981	1217	1236	7
13 x 54	2.5"T	106	335	1105	1365	1388	10
13 x 54	4"T	106	335	1105	1365	1388	10
14 x 65	4"T	150	362	1295	1640	1659	14
16 x 65	4"T	182	400	1262	1650	1671	18

- Models marked in Blue are new models.
- Top & Bottom option is available for 1248, 1354, 1465 and 1665 tank models. Vessels with top & bottom openings are with extended base.
- Above vessels should not be used for pneumatic applications.
- Vessel drawings are available for exact parameters.

Structural Pressure Vessels (Composite)

Technology & manufacturing process

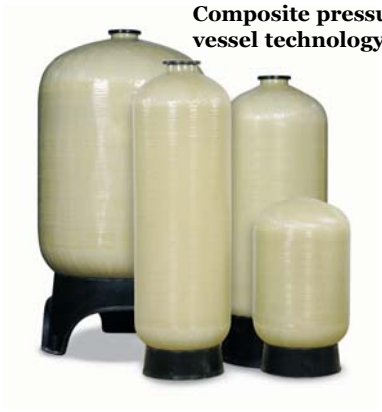
Our exclusive, patented manufacturing process creates a seamless polyethylene shell that is wound continuously with fiberglass reinforcements and sealed with epoxy resins. This process makes the vessels non-corrosive and there is no chance of any leakage. Computer aided winding machine and other customized equipment are used to create a product that offers outstanding performance and durability.

Application areas

Commercial Composite vessels are used basically for large commercial and industrial uses like

- Softening
- Filtration
- Storage

Global leaders in Composite pressure vessel technology!



The non-corrosive & cost effective solution for commercial/industrial water treatment & storage.

Composite Vessel specifications

Description	Opening	Operating Pressure	Height w/base (mm)	Height w/o base (mm)	Dia (mm)	Capacity (litres)	Base	Weight w/base (Kg)
18 x 65	4"T	10 Bar	1753	1640	473	250	SMC	32.83
18 x 65	4" T/B	10 Bar	2060	1645	473	250	Tripod	38.26
21 x 62	4"T	10 Bar	1619	1489	552	310	SMC	42.23
21 x 62	4" T/B	10 Bar	1735	1505	552	310	Tripod	39.71
24 x 72	4"T	10 Bar	1857	1731	610	450	SMC	45.68
24 x 72	4" T/B	10 Bar	2268	1740	610	450	Tripod	47.96
24 x 72	6" T/B FL.	10 Bar	2222	1875	610	450	Tripod	56.42
30 x 72	4" T/B	10 Bar	2336	1815	770	710	Tripod	80.96
30 x 72	6" T/B FL.	10 Bar	2261	1946	770	710	Tripod	88.92
36 x 72	4" T/B	10 Bar	2295	1856	927	1020	Tripod	105.26
36 x 72	6" T/B FL.	10 Bar	2353	2000	927	1020	Tripod	114.52
42 x 72	6" T/B FL.	10 Bar	2292	1880	1074	1360	Tripod	145.72
48 x 72	6" T/B FL.	10 Bar	2740	2070	1226	1840	Tripod	182.72
42 x 42	6" T/B FL.	5 Bar	1497	1067	1070	670	Tripod	95.92
42 x 72	6" T/B FL.	5 Bar	2292	1880	1074	1360	Tripod	135.92
48 x 48	6" T/B FL.	5 Bar	1629	1219	1221	970	Tripod	122.42
48 x 72	6" T/B FL.	5 Bar	2470	2070	1226	1840	Tripod	162.42
63 x 63	6" T/B FL.	5 Bar	2240	1610	1582	2000	Tripod	301.92

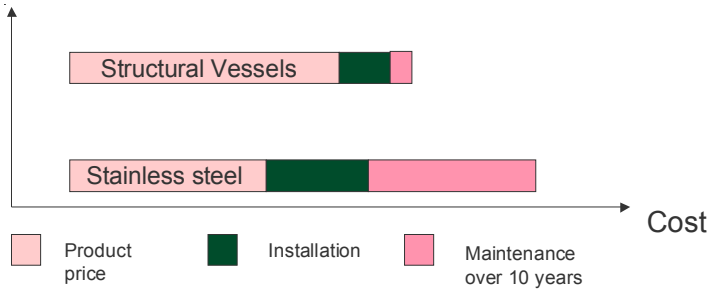
Why customers specify Structural pressure vessels?

- High-quality products
- Unparalleled customer support
- On-time delivery
- The best warranties in the business!

Benefits & advantages over conventional tanks

Steel / Metallic tanks	Structural pressure vessels
Very Heavy, difficult to handle and involve high cost of labor to install	60% lighter than Steel, easy to handle and can be maneuvered easily
Corrode and rust over period of time	Non-corrosive and does not rust
Lining has to be replaced periodically	Low maintenance
Painting, coating, galvanizing have to be undertaken regularly	Since the outer material is fiber glass, it never fades or changes color.

Cost-effectiveness graph of Structural vessels ...



Quality Standards at Pentair

Pentair Water India is an **ISO 9001:2000 company** and has ASME & NSF certification for membrane housings and FRP pressure vessels respectively. Our products are complying to European Pressure Equipment Directives (PED/97/23/EC).

Every Structural FRP & Composite vessel is designed to last 250,000 cycles without failure, and has a minimum burst pressure of 4 times the rated pressure.

Our commitment to quality and innovation remains strong. We continually strive to improve existing products and develop new ones giving our customers the very best pressure vessels money can buy.

Using the latest tools and technologies, at Pentair we critically evaluate every design detail to ensure our products meet or exceed ISO, NSF, PED and other agency standards.

Design parameters - Pentair
Safety factor:
4:1 (Minimum burst at 600 psi)
Cycle test:
250,000 cycles without leakage

Design parameters - NSF
Safety factor:
4:1 (Minimum burst at 600 psi)
Cycle test:
100,000 cycles without leakage

Indian Water Treatment scenario in 80's-90's

The water treatment industry in India was using mild steel as the main material of construction for pressure vessels. To protect these vessels from corrosion in the hot, humid and tropical Indian conditions, they were coated with epoxy, red oxide primer and were rubber lined. The overall cost of maintenance of these mild steel vessels on a long term basis was very high.

In late 90's Pentair entered India and revolutionized this industry with the introduction of FRP & Composite pressure vessels, thereby instantly bringing "Global Quality" & "Global Standards" to the Indian water treatment industry.

Pentair Water Inc., is a diversified 2.7 billion USD manufacturer, serving customers world-wide in the water technology business. Headquartered in Minnesota-USA, Pentair operates from more than 50 locations across the globe. Pentair Water India is a 100% subsidiary of Pentair Inc., USA and has a world class manufacturing facility in Goa, with offices across India.

Pentair Water

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www.pentairwater.com

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