



PIONEER WATER TANKS LLC

بايونير لخزانات المياه ذم م



“PIONEERS IN WATER STORAGE SOLUTIONS”



Mission

Pioneer Water Tanks LLC aspire to provide its customers with quality storage tanks to the highest industry standards at competitive prices.

Philosophy

Protecting a precious life-giving resource with quality and integrity.

Values

Innovative storage solutions with superior quality, competitive prices and after sales timely service.

Who We Are

Pioneer Water Tanks LLC manufacture and distribute modular bolted steel liner tanks throughout the UAE, Gulf and MENA region.

PWT tanks are locally manufactured using high quality Australian materials and components including Zincalume® steel structure and internal Liners.

PWT tanks are made to the highest Industry standards with capacities exceeding 3,000m³.

Pioneer Water Tanks LLC were the first to introduce liner tanks to the UAE market in 1993 and have since successfully installed numerous projects in this region. With our installation expertise and a genuine 10 Year warranty, Pioneer storage tanks are Built-to-Last.



Main Features

1. RIGID CONSTRUCTION

The PWT tank shell is constructed using Zincalume® steel corrugated panels bolted together to form a robust cylindrical structure.

The PWT dome roof is self supporting on the tank shell without the requirement of any ground columns. The roof consists of a series of hot-dipped galvanized trusses that will be further protected with epoxy paint for raw water or aggressive liquid applications.

Overlapped Zincalume® steel sheets are deployed over the roof trusses and a special seal is introduced around the roof circumference to prevent influx of airborne pollutants into the stored water. A roof-mounted dynamic ventilator fitted with insect mesh ensures that the tank breathes and prevents vapour build up.

2. HIGH CORROSION RESISTANCE

PWT tank walls and roof sheets are made using Zincalume® coated steel (Zinc / Aluminium alloy).

Zincalume® is factory-applied using a thermosetting process to ensure proper adhesion of the protective layers. Zincalume steel combines superior corrosion resistance of Aluminium with protective qualities of Zinc thus providing remarkable anti-corrosion properties, four times more than that of hot-dipped galvanized coatings.

Zincalume® readily accepts additional coatings in a wide range of colours for landscaping and aesthetic requirements.



3. SIZE FLEXIBILITY

The PWT tank shell is built in ring layers with varying diameters up to 21 meters and heights up to 9.4 meters giving our clients a wide selection of capacities from 30m³ to 3,300m³.

4. IDEAL FOR REMOTE AREAS

PWT tanks are designed for fast assembly and dismantling. It takes less than six days to install a 500m³ capacity tank without the need for heavy lifting equipment.



5. BENEFITS AND ADVANTAGES

Advantages offered by PWT tanks over conventional tanks are numerous and significant -

- Lower capital investment.
- Investment Protection - PWT tanks can be relocated when required.
- Minimal foundation requirements offering cost savings.
- Design flexibility - variable diameter and height combinations up to 3,300m³.
- Knock-down modular design ideal for remote areas.
- Lower transportation costs - Multiple PWT tanks can be packed into a sea container.
- Faster installation time at lower cost.
- Negligible maintenance costs - leakage, corrosion, cracking are all eliminated.
- Water-tight liner, corrosion-free water storage.
- 10 Year warranty, 25 Year design life.

Applications

PWT tanks are ideally suited for storage of potable water, effluent, treated waste water as well as brackish water and sea water.

PWT tanks are often used for Military or Labor Camps, Mining, Fire Protection, Waste Water and Sewage Treatment Plants, Irrigation, Desalination Plants, Demineralized Water for Power Plants, Fish and Shrimp Aquaculture.



Labour & Military Camps



Agriculture & Landscaping



Industrial & Mining



Fire Fighting Systems



Water Desalination



Ready Mix Plants



Poultry & Animal Farms



Aquaculture

Specifications for PWT Tank Series

Description	Cylindrical-shaped, Modular-built, Bolted Steel Water storage tanks with internal Liner covered by a Dome Roof.
Wall Structure	Zincalume® G300 steel panels (Zinc / Aluminium Alloy) with special corrugated profile. Panels are overlapped in both horizontal and vertical directions for increased rigidity, and connected using high tensile bolts with protective caps. Wall panels are multi-laminated to increase resistance to hydrostatic pressure in taller tanks.
Protective Coating	Tank panels and roof sheets are made of Zincalume® steel, Grade AZ150. This is a hard-wearing, thermo-set coating of 150 gr/m ² deposit.
Bolting Specification	Hot-Dipped Galvanized, high tensile steel bolts, Grade 8.8, diameter M12 for the tank body and M16 for nozzles.
Roof Panels	Zincalume® G550 corrugated steel, 0.50mm thick with a compressed foam perimeter seal.
Roof Trusses	Hot-Dipped Galvanized steel tube sections to European standard BS-EN-ISO-1461. The roof trusses shall be self-supporting with no ground columns and bolted to the tank wall.
Tank Liner	A high-tear resistant, one-piece heavy duty, Reinforced PVC-Polyester liner shall be installed inside the tank to contain the stored liquid. The liner shall have an internal woven scrim for reinforcement, with a minimum tensile strength of 3000N per 5cm in the Warp direction and shall have a minimum coated-weight of 650gr/m ² . The Liner shall be suitable for liquid storage with a pH range of 5-10. Liner is to be rated for the storage of potable water with a relevant test certificate to the Australian Standard AS4020:1999.
Nozzles	Tank nozzles and fittings shall be of Hot-Dipped Galvanized (HDG) steel with an outer flange connection to external piping systems. Tanks shall be supplied with an overflow, downpipe and a scour drain.
Accessories	<ul style="list-style-type: none"> • External Ladder with safety cage for tanks above 4.0m off the ground (HDG) • Lockable Roof Access Hatch with Platform and Handrail (HDG) • Full-Length Level Indicator with HDG Column • Roof Ventilator – Dynamic Type (Whirlybird or similar)
Foundation	Tanks shall be designed for installation onto a reinforced concrete ring beam foundation encasing a clean compacted sand base.
Warranty	Tanks to be covered by a 10-Year conditional Warranty

Gross Capacity Chart

Tank Model	Tank Diameter	Number of Rings / Wall Height								
		R1 1.14m	R2 2.14m	R3 3.17m	R4 4.20m	R5 5.24m	R6 6.28m	R7 7.31m	R8 8.35m	R9 9.39m
PWT-04	2.73m	7KL	12KL	-	-	-	-	-	-	-
PWT-05	3.41m	10KL	20KL	29KL	-	-	-	-	-	-
PWT-06	4.09m	15KL	28KL	42KL	55KL	-	-	-	-	-
PWT-07	4.78m	18KL	38KL	57KL	75KL	94KL	-	-	-	-
PWT-08	5.46m	27KL	50KL	74KL	98KL	123KL	-	-	-	-
PWT-09	6.14m	34KL	63KL	94KL	125KL	155KL	186KL	-	-	-
PWT-10	6.82m	42KL	78KL	116KL	154KL	192KL	230KL	267KL	-	-
PWT-11	7.51m	50KL	94KL	140KL	186KL	232KL	278KL	324KL	-	-
PWT-12	8.19m	60KL	112KL	167KL	222KL	276KL	331KL	385KL	440KL	-
PWT-13	8.87m	70KL	132KL	196KL	260KL	324KL	388KL	452KL	516KL	-
PWT-14	9.55m	82KL	152KL	227KL	301KL	376KL	450KL	524KL	598KL	-
PWT-15	10.24m	94KL	176KL	261KL	346KL	431KL	516KL	602KL	687KL	773KL
PWT-16	10.92m	107KL	200KL	297KL	394KL	491KL	588KL	685KL	781KL	879KL
PWT-17	11.60m	121KL	226KL	335KL	445KL	554KL	663KL	773KL	882KL	993KL
PWT-18	12.28m	136KL	252KL	376KL	498KL	621KL	744KL	866KL	989KL	1,113KL
PWT-19	12.97m	151KL	283KL	419KL	555KL	692KL	829KL	965KL	1,102KL	1,240KL
PWT-20	13.65m	167KL	312KL	464KL	615KL	767KL	918KL	1,070KL	1,221KL	1,374KL
PWT-21	14.33m	184KL	344KL	512KL	678KL	845KL	1,012KL	1,179KL	1,346KL	1,515KL
PWT-22	15.01m	202KL	379KL	562KL	744KL	928KL	1,111KL	1,294KL	1,477KL	1,662KL
PWT-23	15.70m	221KL	415KL	614KL	814KL	1,014KL	1,214KL	1,415KL	1,615KL	1,817KL
PWT-24	16.38m	240KL	450KL	668KL	886KL	1,104KL	1,322KL	1,540KL	1,758KL	1,978KL
PWT-25	17.06m	261KL	488KL	725KL	961KL	1,198KL	1,435KL	1,671KL	1,908KL	2,147KL
PWT-26	17.74m	282KL	528KL	784KL	1,040KL	1,296KL	1,552KL	1,808KL	2,064KL	2,322KL
PWT-27	18.43m	304KL	569KL	846KL	1,125KL	1,397KL	1,673KL	1,949KL	2,225KL	2,504KL
PWT-28	19.11m	327KL	612KL	910KL	1,206KL	1,503KL	1,800KL	2,096KL	2,393KL	2,693KL
PWT-29	19.79m	351KL	657KL	976KL	1,294KL	1,612KL	1,930KL	2,249KL	2,567KL	2,889KL
PWT-30	20.47m	376KL	703KL	1,044KL	1,384KL	1,725KL	2,066KL	2,407KL	2,747KL	3,091KL
PWT-31	21.16m	401KL	747KL	1,115KL	1,478KL	1,842KL	2,206KL	2,570KL	2,934KL	3,301KL

Note: Net tank capacity depends on position and size of tank nozzles

1 Cubic Meter = 1,000 Liter | 1 US Gallon = 3.785 Liter | 1 Imperial Gallon = 4.546 Liter

Tank Liner

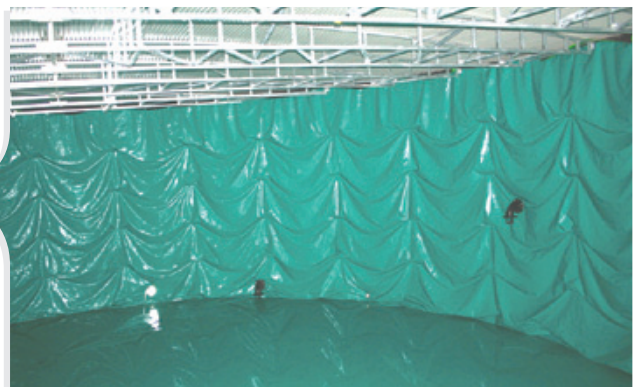
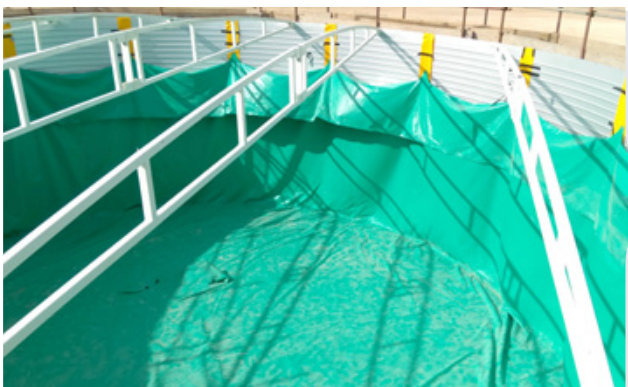
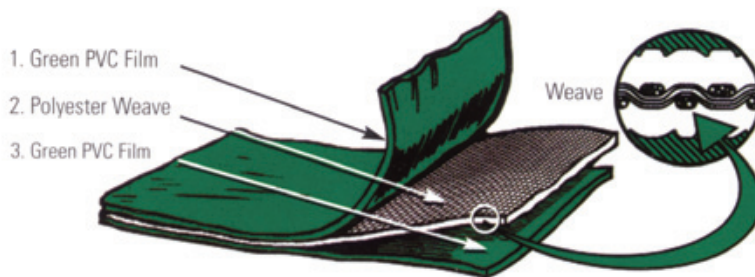
The water in a PWT tank is stored in a one piece, fiber-reinforced, PVC-coated Polyester liner rated for potable water storage. This water-tight liner ensures the stored liquid does not contact the tank shell. There is no requirement for a steel floor as the liner rests on a compacted clean sand base within the concrete ring beam foundation.

PWT tank liners ensure the stored water is contained in a clean, hygienic and sealed environment. Liner material is UV stabilized and algae resistant. High tensile strength and high tear-resistance ensure the liner will not stretch under hydrostatic load.

Performance is further enhanced by outstanding flex resistance, abrasion resistance and chemical resistance properties. Tank liners are custom-welded to fit PWT tanks and will store liquids with temperatures up to 70° C and a pH range of 5-10.

PWT liners are tested to the Australian standard AS4020 “Products for use in contact with drinking water” and comply with various International standards for storage of potable water.

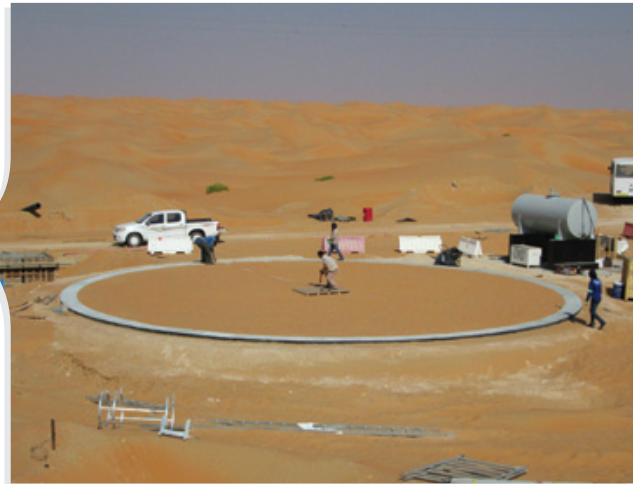
Fibre Reinforced Liner



Ring Beam Foundation

Pioneer water tanks are installed over a reinforced concrete ring beam foundation filled with compacted clean sand.

Ring Beam preparation is fast and simple and offers significant cost savings when compared to other tank type foundations.



Jacking System

Taller tanks can be installed using our innovative Jacking System allowing fast and safe installation without the need for scaffolding or lifting equipment.

The tank is built at ground level starting with the roof structure over the top ring. Next, the lower rings are progressively installed building the tank from top to bottom allowing the tank to be constructed significantly faster than traditional construction methods.



Flexible Tanks

Pioneer manufactures a range of quality flexible storage tanks with sizes up to 300m³ capacity in a variety of shapes and sizes, the most common being Pillow and Onion tanks.

Pioneer 'Flexi-tanks' are manufactured using high strength reinforced industrial fabrics of European origin that are UV stabilized, algae-resistant and have excellent abrasion tolerances. Pioneer Flexi-tanks are suited for hot temperatures and harsh climates.

Pioneer Flexi-tanks are rated for storage of potable water, diesel and other petro-chemical products. Tanks are ready-for-use on deployment, are fully collapsible and readily transportable making it ideally suited for use in remote areas, military operations and disaster relief applications.

Pillow Tank



Onion Tank



Pillow Tank Test

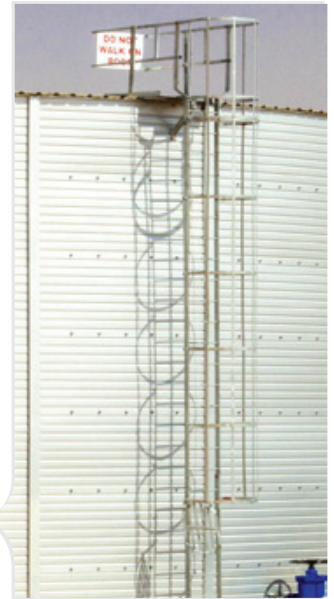
Accessories



Overflow with
Down-Pipe



Roof Ventilator



Ladder with
Safety Cage



Inlet



Outlet



Level Gauge



Anti-Vortex

Pioneer Water Tanks have a proven track record of supplying and installing Zincalume® coated steel tanks for decades that have already stood the Test of Time.

We remain committed to provide our clients with quality tanks at competitive prices.

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