Pioneer Water Tanks manufactures tanks from 3,856 gallons to 703,126 gallons capacity with structural engineering suitable for rural, domestic or commercial use using durable and 100% Zincalume steel.

Any Pioneer Water Tank can be designed to suit earthquake zones, cyclonic regions, heavy industrial or highly specialized environments.

Our tanks feature the innovative and aesthetically pleasing 8-80 V-LOCK profile with protective capped bolt system and fully enclosed vertical bolt cover for optimal strength and structural integrity.

**OUR COMMITMENT**

**Pricing**
Committed to providing a competitive price and personalized service to match individual needs.

**Experience**
Dedicated staff with practical knowledge and years of experience.

**Flexibility**
We listen to your specific needs and recommend a suitable custom water storage solution.

**Engineering**
Through our qualified engineering personnel and independent consultant engineers, we provide high quality professional design and support services.

**Installation**
Thorough check methods are employed to ensure correct installation from beginning through to commissioning. Our procedures provide for ease of installation, less time on site, minimal infrastructure and construction personnel.

**Distribution**
Acer Water Tanks is the exclusive Master Distributor of Pioneer Water Tanks for North America.

**Quality & Service**
Pioneer Water Tanks are committed to providing the best quality product and service from first contact to completed and tank and after sales service.

**Aesthetics**
Profiled wall design and wide range of colors to seamlessly integrate with the surrounding environment.

**Advanced Production Technologies**
Continual research and development and innovative production methods create uniform quality. A culture of continuous improvement forms a key pillar of Pioneer Water Tanks’ business success.
## GROSS CAPACITY CHART

<table>
<thead>
<tr>
<th>Tank model</th>
<th>Tank diameter</th>
<th>Number of rings/Wall height with Gross Capacity in Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R1 3 ft 9 in</td>
<td>R2 7 ft 2 in</td>
</tr>
<tr>
<td>XL01</td>
<td>8 ft 10 in</td>
<td>1,714</td>
</tr>
<tr>
<td>XL04</td>
<td>11 ft</td>
<td>2,678</td>
</tr>
<tr>
<td>XL05</td>
<td>13 ft 2 in</td>
<td>3,856</td>
</tr>
<tr>
<td>XL08</td>
<td>15 ft 5 in</td>
<td>5,226</td>
</tr>
<tr>
<td>XL10</td>
<td>17 ft 7 in</td>
<td>6,829</td>
</tr>
<tr>
<td>XL13</td>
<td>19 ft 9 in</td>
<td>8,647</td>
</tr>
<tr>
<td>XL15</td>
<td>22 ft</td>
<td>10,679</td>
</tr>
<tr>
<td>XL20</td>
<td>24 ft 2 in</td>
<td>12,925</td>
</tr>
<tr>
<td>XL23</td>
<td>26 ft 4 in</td>
<td>15,347</td>
</tr>
<tr>
<td>XL25</td>
<td>28 ft 7 in</td>
<td>18,018</td>
</tr>
<tr>
<td>XL30</td>
<td>30 ft 9 in</td>
<td>20,904</td>
</tr>
<tr>
<td>XL35</td>
<td>32 ft 11 in</td>
<td>24,004</td>
</tr>
<tr>
<td>XL40</td>
<td>35 ft 2 in</td>
<td>27,318</td>
</tr>
<tr>
<td>XL45</td>
<td>37 ft 4 in</td>
<td>30,792</td>
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<tr>
<td>XL50</td>
<td>39 ft 6 in</td>
<td>34,588</td>
</tr>
<tr>
<td>XL60</td>
<td>41 ft 8 in</td>
<td>38,545</td>
</tr>
<tr>
<td>XL65</td>
<td>43 ft 10 in</td>
<td>42,652</td>
</tr>
<tr>
<td>XL70</td>
<td>46 ft</td>
<td>46,900</td>
</tr>
<tr>
<td>XL80</td>
<td>48 ft 3 in</td>
<td>51,630</td>
</tr>
<tr>
<td>XL85</td>
<td>50 ft 5 in</td>
<td>56,367</td>
</tr>
<tr>
<td>XL90</td>
<td>52 ft 8 in</td>
<td>61,465</td>
</tr>
<tr>
<td>XL100</td>
<td>54 ft 10 in</td>
<td>66,703</td>
</tr>
<tr>
<td>XL110</td>
<td>57 ft</td>
<td>72,073</td>
</tr>
<tr>
<td>XL120</td>
<td>59 ft 2 in</td>
<td>77,737</td>
</tr>
<tr>
<td>XL130</td>
<td>61 ft 5 in</td>
<td>83,615</td>
</tr>
<tr>
<td>XL140</td>
<td>63 ft 7 in</td>
<td>89,708</td>
</tr>
<tr>
<td>XL150</td>
<td>65 ft 9 in</td>
<td>95,919</td>
</tr>
</tbody>
</table>

Note:
- Allowance must be made for air gap and pipe work positioning to establish usable tank volume.
- Availability subject to site conditions.

Conversion units:
- 1 US Gallon = 3.785 Litres
- 1 Foot = 0.3048 Meters
- 1 Inch = 2.54 Centimeters

Legend:
- ft = feet
- in = inches
**COLORS**

**Pioneer Water Tanks Standard Tank Color Range**

- CLASSIC CREAM™
- MANGROVE™
- PAPERBARK®
- SURFMIST®
- WOODLAND GREY™

**Colorbond® Standard Color Range**

- BASALT™
- COVE™
- COTTAGE GREEN®
- DEEP OCEAN®
- DUNE®
- EVENING HAZE™
- GULLY™
- IRONSTONE®
- JASPER®
- MANOR RED®
- MONUMENT®
- NIGHT SKY®
- PALE EUCALYPT®
- SHALE GREY™
- TERRAIN™
- WALLABY™
- WINDSPRAY®

**TANK DATA SHEET**

**Wall structure**
Bluescope ZINCALUME® steel, COLORBOND® steel or COLORBOND® Ultra steel panels complying with AS1397. Most severe earthquake loads to AS1170.4. 8-80 V-LOCK wall profile to AS4600.

**Steel grade**
G300 ZINCALUME® steel.

**Protective coating**
ZINCALUME® steel (zinc/aluminium/magnesium alloy) AM125 heavy-duty coating. Also available in COLORBOND® steel.

**Bolting specification**
M10 – M16 galvanized, flanged head, high tensile bolts.

**Dome roof**
- Bluescope ZINCALUME® steel, COLORBOND® steel or COLORBOND® Ultra steel.
- Custom orb profile.
- 0.42bmt thickness.
- High tensile G550.
- Hot dipped fully self supporting galvanized roof trusses.

**Nozzles**
Nozzles are manufactured from either PE100 SDR17 HDPE or hot dipped galvanized steel (available on request).

**Manufacturing and installation**
This can be either client or tank specific or both. Each project will be confirmed in writing and comprise a full installation, manufacturing and installation schedule. Note that Pioneer Water Tanks requires certain information prior to commencing manufacturing. This will be advised to you at the time of proposal.
The 8-80 V-LOCK ADVANTAGE

Pioneer Water Tanks’ unique 8-80 V-LOCK is the result of rigorous research and development.

The 8-80 V-LOCK profile is designed to minimize stress on the liner during tank level cycling.

Specifically engineered with a flat section at the bolted panel connections, the 8-80 V-LOCK vastly improves the structural integrity and overall aesthetic appeal of your finished tank.

UNIQUE SECURED LINER

Pioneer Water Tanks understands the importance of the longevity of your tank liner.

All Pioneer Water Tanks liners are uniquely secured to the tank wall at multiple points to provide optimal support for the liner. This support prevents the liner from pulling away from the tank wall and secures it in position.

The result: less stress on the liner and prolonged service life of your tank.
Aqualiner® and Industratex® have been exclusively developed and manufactured for Pioneer Water Tanks to provide to provide a water tight liquid storage membrane.

Strength, flex resistance, abrasion resistance, chemical resistance, water proofing and leak proofing have been considered in the design of Aqualiner® and Industratex®. Both liners can be custom manufactured for the relining of existing concrete, steel and other types of water tanks.

Primarily intended for potable water storage, your tank liner can be adapted for a variety of non-potable water grades including grey treated, bore, ground or well water.

**Liner Terms and Definitions**

**Tensile strength:**
Strength of material, measured by tensioning a 50mm wide sample in both directions - warp and weft. Result is the force measured in Newtons (N) at the point at which the material breaks.

**Elongation:**
During tensile test a stretch measurement is taken prior to material breaking.

**Warp:**
Threads stretched in a loom.

**Weft:**
Threads that cross the warp.

**Wing tear:**
Force (N) necessary to tear a sample of the material in the warp and weft weave direction. Warp test is measured by tearing in the weft direction and visa versa for the weft tear.

**Tongue tear:**
Similar test to wing tear, parallel cuts are made to the material the to create a “tongue”. Force (N) is applied tearing the material. Warp is measured by tearing in the weft direction and visa versa for the weft tear.

**Coating adhesion:**
Force (N) needed to separate a 50mm wide sample lamination (coating) from the weave.

**Flex cracking:**
Measured by flexing material until it deteriorates (measured in cycles).

**UV stabilization:**
Ability of material to withstand continuous exposure to UV light.

**Flume (water proof) test:**
A fabricated test sample (tube is increasingly pressurised with water until the material leaks. Measurement and inspections are conducted at regular intervals and recorded.

**Abrasion resistance:**
Ability of the material to withstand abrasive contact.
This data sheet sets out the criteria for evaluating the suitability of the Aqualiner® as a core component of the liner tank system.

Approval:
- British Standard: BS 6920 - Suitable for use in contact with potable water. Tested by Water Regulations Advisory Scheme, test report: MAT/LAB 356M, 607M & 608M.

Specifications and data:

Material make up:

Layer 1: Clear polyethylene film
Layer 2: Green advanced polyolefin coating
Layer 3: Weave: High tenacity multifilament polypropylene
Layer 4: Green advanced polyolefin coating
Layer 5: Black polyethylene film

Tensile strength:
- Newtons per 50mm: (AS2001.2.3)
  - Warp: 1901 N
  - Weft: 1353 N

Elongation at break:
- (AS2001.2.3)
  - (AS4878.6 - method 1)
  - Warp: 24.8%
  - Weft: 18.8%

Wing tear:
- Newtons per 50mm: (AS2001.2.10)
  - (AS 4878.7 – method A2)
  - Warp: 255 N
  - Weft: 135 N

Coating adhesion:
- Newtons per 50mm: (AS4878.2 – preparation 2)
  - 75-85 N

Flex cracking:
- (AS4878.9 – method B), 97,000 cycles

Max/min temperature:
- -22°F to +158°F

UV stabilisation:
- Both faces have UV resistance and therefore may be exposed to the sun. However excessive exposure and temperature may dry and shrink the material. It is Pioneer’s recommendation that the Aqualiner® be covered.

Material thickness:
- 0.60mm

Unit mass/weight (AS4878.2):
- 405 grams per square metre.

Seam weld:
- 25mm weld with 25mm seal tape welded to both sides covering edges of fabric.

Flume test:
- Water beads: 20 metres of water head pressure.
- Burst: 20 metres of water head pressure.

Chemical resistance:
- Aqualiner® is resistant to various chemicals. To be certain, we recommend a chemical analysis report be completed to confirm suitability.
  - pH: 5 - 10
  - Chlorine: 3 - 5ppm

Note: Intense levels of chlorine such as shock treatment and tablets can have an adverse affect on the Aqualiner®. It is therefore recommended controlled dosing systems be used.

Special comments:
- Aqualiner® can store a wide variety of non-aggressive and aggressive waters however you should also be considerate that the steel structure may not be so readily accepting.
This data sheet sets out the criteria for evaluating the suitability of Industratex® as a core function of the liner tank system.

**Approvals**

### Specifications and data

**Material make up:**

- **Layer 1:** Green PVC film
- **Layer 2:** Polyester weave
- **Layer 3:** Green PVC film

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile strength</td>
<td>Newtons per 50mm (AS2001.2.3) 2600 N Weft 2400 N</td>
</tr>
<tr>
<td>Tongue tear</td>
<td>Newtons per 50mm (BS3424.5) 550 N Weft 450 N</td>
</tr>
<tr>
<td>Coating adhesion</td>
<td>Newtons per 50mm (AS1441.1973) 90 N (min)</td>
</tr>
<tr>
<td>Flex cracking</td>
<td>(AS 1441.6) 400,000 cycles</td>
</tr>
<tr>
<td>Max/min temperature</td>
<td>4°F to +122°F</td>
</tr>
<tr>
<td>Stabilisation</td>
<td>Material is UV stabilised therefore may be exposed to the sun. Excessive exposure and temperatures may dry and shrink the material. It is Pioneer's recommendation that all Industratex® liners be covered.</td>
</tr>
<tr>
<td>Material thickness</td>
<td>0.06mm</td>
</tr>
<tr>
<td>Unit mass/weight</td>
<td>610 grams/m²</td>
</tr>
<tr>
<td>Seam weld</td>
<td>2.5cm weld</td>
</tr>
<tr>
<td>Flume (water proof) test</td>
<td>Water beads: 65.62 feet of water head pressure, Burst: 82.02 feet of water head pressure.</td>
</tr>
<tr>
<td>Chemical resistance</td>
<td>Industratex® is resistant to various chemicals, but to be certain if suitable for your application we recommend a chemical analysis report be forwarded to confirm. pH: 5 - 10 Chlorine: Maximum 50ppm Note: intense levels of chlorine such as shock treatment and tablets can have an adverse affect on the Industratex®. It is therefore recommended that controlled dosing systems be used.</td>
</tr>
</tbody>
</table>

**Recommended applications:**
- All water storage: potable, ground, bore well, water, river, spring water and seawater.

**Special comments:**
- Industratex® can store a wide variety of non aggressive and aggressive waters however you should also be considerate that the steel structure may not be so readily accepting.
ROOF OPTIONS

Pioneer Water Tanks has invested extensive effort developing a roof structure that is not only easy to install but stronger and easily adaptable for most applications.

The innovative truss foot connection allows a flush strong bolted connection with the tank wall, resulting in direct load transfer from roof structure to tank wall and then to the ground.

All roof structures utilize the strength of square hollow sections (SHS), fully welded and post galvanized to build a strong, robust structure that will perform in all conditions.

Additionally, all dome roof structures are carefully engineered to achieve load paths of uniform capacity to maximize cost efficiencies.
This is a robust engineered roof structure comprising SHS tube members fabricated into welded roof trusses with swivel truss feet to enable secure alignment with the tank wall.

The SHS trusses are high strength/high ductility and are engineered to provide direct load paths for all loads that are incident to the roof into the tank wall. The structure is typically galvanized to ensure excellent performance and long life. The roof structure is capable of handling construction and maintenance loads as required by AS1170.1.

As with most light building-type structures, personnel need to restrict their footprints to the lines of the trusses. This roof is suitable for most applications where standard access hatches are required, and when not located in an exposed area subject to gales. These roofs are designed in accordance with the relevant clauses of AS1170.0, AS1170.1 and AS1170.2, and can withstand regional wind speeds of up to 141.08 feet per second, as specified in AS1170.2.
The heavy duty roof is designed in accordance with the relevant clauses of AS1170.0, AS1170.1 and AS1170.2 to withstand minimum regional winds of up to 43 metres per second.

Embodying the features of the industry standard roof design, the heavy duty tank roof is capable of handling heavier loads arising from larger platforms such as the two metre by two metre roof platform and handrails.

The heavy duty roof has been structurally designed to enable mounting of ancillary features such as a vent hatch on one side of the roof diametrically opposite the access hatch.

Plan of Tank

Examples of Applications of this versatile Roof

Truss Centre Connection

Top Chord

Bottom Chord

Ventilation

Truss Vertical

Truss member

Truss Truss Tray plate, connected to major (Roof Truss)
Two cyclonic roof designs are available for Cyclonic Regions C and D in accordance with the relevant clauses of AS1170.0, AS1170.1 and AS1170.2.

Regional wind speeds in accordance with AS1170.2 for Region C and Region D cyclonic roofs are 65 metres per second and 82 metres per second respectively.

The cyclonic roofs embody the features of the heavy duty roof design with roof trusses of greater depth and closer spacing to withstand the higher wind velocities expected in Cyclonic Regions C and D.
Pioneer Water Tanks have developed a system for tanks without the need for a roof structure.

The open top tank ring truss gives superior strength and stiffness to the top edge of the tank body as shown in the images below.

This simple, but very effective solution works very well for tanks in the effluent treatment industry whereby special ring trusses must be designed to accommodate loads imposed from equipment such as floating aerators.

Plan of Tank

Ring Truss
Open top tanks require stiffening around the top edge wall. A ring type truss is utilised for larger tanks to achieve the required stiffening.
**Nozzles**

Pioneer Water Tanks has the flexibility to insert nozzles through the tank wall, roof or floor to suit most flange tables (BSP, D, E, DN, DIN or ANSI) with polyethylene or galvanized steel fitting also available.

**Valves**

Pioneer Water Tanks stocks a selection of valves including ball valves, butterfly valves, float control valves, diaphragm valves, check valves and electronic level sensors.

**Nozzle orientation**

The position and size of tank nozzles will determine the effective (or usable) storage capacity of your tank. Clients must nominate the position of each nozzle, inlet, outlet, overflow and the line to match existing or new pipe work prior to manufacture commencing.

The following nozzle orientation drawings are examples of plans that must be approved by the client prior to construction of your tank.
INDICATIVE ONLY – DO NOT DESIGN BEFORE CONFIRMING VERTICAL LOCATIONS WITH PWT.

(UPPER LIMITS)

- 150
- 190
- 230
- 270
- 310
- 350
- 390
- 430
- 470
- 510
- 550
- 590
- 630
- 670
- 710
- 750
- 790
- 830
- 870
- 910
- 950
- 990

(LOWER LIMITS)

- 145
- 165
- 185
- 205
- 225
- 245
- 265
- 285
- 305
- 325
- 345
- 365
- 385
- 405
- 425
- 445
- 465
- 485
- 505
- 525
- 545
- 565
- 585
- 605
- 625
- 645
- 665
- 685
- 705
- 725
- 745
- 765
- 785
- 805
- 825
- 845
- 865
- 885
- 905
- 925
- 945
- 965
- 985
- 1005
- 1025

DIMENSIONS FROM BOTTOM

GROUND LEVEL

COMMERCIAL BUILD ONLY

NOTE:
1. COMMERCIAL BUILD SHOWN
2. ANTI-VORTEX FITTINGS HAVE SPECIAL LIMITS

SAMPLE ONLY
NOZZLE AND FITTINGS DRAWING SAMPLE

TYPE 1 - NOZZLE

TABLE 'D' (EXCEPT FOR 10NB - TO BE TABLE 'E')
FULL FACED
HOPE FLANGE

COMMERCIAL CATALOGUE ONLY
NOT FOR CONSTRUCTION

TYPE 2 - NOZZLE

TABLE 'D' (EXCEPT FOR 10NB - TO BE TABLE 'E')
FULL FACED
HOPE FLANGE

COMMERCIAL CATALOGUE ONLY
NOT FOR CONSTRUCTION
LADDERS AND ACCESS HATCHES

Pioneer Water Tanks ladders and platforms are specifically designed to suit a range of access requirements.

A range of internal and external ladders have been developed to comply with relevant sections of the LEED, TCEQ and FDEP compliance requirements.

All ladders are hot dipped galvanized or produced in stainless steel, fibreglass, aluminium or powder coated steel.

All commercial style ladders accommodate external and internal platforms, requirements for cages and heights of up to 26 feet. These ladders are designed to connect with either the Pioneer Water Tanks roof platform or commercial sliding access hatch.
**ACCESSORIES**

**Ventilation**
Airflow is very important when personnel have to enter the tank for routine maintenance checks or remove airborne pollutants and excess condensation from your tank. Procedures for working in confined spaces are recommended.

**Scour Box**
Protects the scour valve from accidental damage or tampering.

**Side wall access hatch**
The side wall access hatch allows access to the inside of the tank from ground level in case of an emergency.

**Pipe brackets**
Pipe brackets are used to stabilize external piping. It is the client’s responsibility to ensure ground pipework is appropriately supported.

**Fascia**
The roof fascia conceals the trimmed edge of the roof sheeting and is ribbed in the same pattern as the wall panels to improve the overall aesthetics of your tank.

**Level indicators**
Level indicators can be externally mounted to rural or commercial tanks up to 26 feet in height to display the level of the water within the tank.

**Anode**
Anode: Magnesium alloy
Cable: PVC insulated and sheathed 6mm ø cross sectional area
Bag material: calico
Back fill mixture:
A premixed backfill surrounds the magnesium block. The ingredients are mixed in the following proportions as required by Australian Standards (AS 2239):
Bentonite 50%
Gypsum 45%
Sodium Sulphate 5%

**Geotextile**
A 100% polyester non-woven material with high breaking strength. We recommend geotextile when clean sand is difficult to source and protection is required against sharp objects such as stones or rocks that may damage or puncture the liner base.

**Dust seals**
Protects your stored water from dust, insects and frogs by installing dust seal between the corrugated roof and the top edge of the tank.
TANK SITE REQUIREMENTS:

- For commercial size tanks, Pioneer Water Tanks requires a concrete ring beam foundation. Some exclusions apply. Please consult Pioneer Water Tanks for more details.

- It is necessary to construct a level area 10 to 13 feet larger than the diameter of the ring beam. The sand inside the ring beam should be a depth of 4 inches and compacted. At least 3.3 feet clear area is required all around the tank for construction.

- Site preparation must be completed prior to the arrival of installers.

- For sloping sites, adequate retaining and drainage must be installed prior to completion of the tank construction. Professional engineering advice should be sought on the retaining and drainage requirements.

- Pioneer Water Tanks guidelines have to be met to prevent re-charges for cost of additional remedial works that may be required. In the event our crew needs to stand down due to delays or incomplete site preparations, additional costs will be incurred by the client.

- Tanks must be commissioned upon completion of construction as per Pioneer Water Tanks commissioning procedures. If your tank has not been commissioned, Pioneer Water Tanks must be consulted prior to the filling of the tank.
### SITE REQUIREMENTS – RING BEAM FOOTINGS

<table>
<thead>
<tr>
<th>Tank Model</th>
<th>Diameter (feet, inches)</th>
<th>R2</th>
<th>R3</th>
<th>R4</th>
<th>R5</th>
<th>R6</th>
<th>R7</th>
<th>R8</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL01</td>
<td>8' 10&quot;</td>
<td>18&quot; x 10&quot;</td>
<td>18' x 10&quot;</td>
<td>18&quot; x 16&quot;</td>
<td>24&quot; x 16&quot;</td>
<td>26&quot; x 20&quot;</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>XL04</td>
<td>11'</td>
<td>18&quot; x 10&quot;</td>
<td>18' x 10&quot;</td>
<td>18&quot; x 12&quot;</td>
<td>18&quot; x 16&quot;</td>
<td>20&quot; x 20&quot;</td>
<td>24&quot; x 24&quot;</td>
<td>N/A</td>
</tr>
</tbody>
</table>
| XL05       | 13' 2"
             | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 16" | 24" x 16" | 24" x 24" | N/A     |
| XL08       | 15' 5"                  | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 16" | 20" x 16" | 20" x 20" | 26" x 20" |
| XL10       | 17' 7"                  | 18" x 10" | 18' x 10" | 18" x 12" | 20" x 12" | 18" x 16" | 24" x 16" | 22" x 20" |
| XL13       | 19' 9"                  | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 16" | 22" x 16" | 20" x 20" |
| XL15       | 22'                     | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 16" | 20" x 16" | 20" x 20" |
| XL20       | 24' 2"                  | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 16" | 20" x 16" | 22" x 16" |
| XL23       | 26' 4"                  | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 16" | 20" x 16" | 20" x 16" |
| XL25       | 28' 7"                  | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 12" | 18" x 16" | 18" x 16" | 18" x 16" |
| XL30       | 30' 9"                  | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 16" | 18" x 16" |
| XL35       | 32' 11"                 | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 16" |
| XL40       | 35' 2"                  | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 16" |
| XL45       | 37' 4"                  | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 16" |
| XL50       | 39' 6"                  | 18" x 10" | 18' x 10" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 16" |
| XL60       | 41' 8"                  | 18" x 12" | 18' x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" |
| XL65       | 43' 10"                 | 18" x 12" | 18' x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" |
| XL70       | 46'                     | 18" x 12" | 18' x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" |
| XL80       | 48' 3"                  | 18" x 12" | 18' x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" |
| XL85       | 50' 5"                  | 18" x 12" | 18' x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" |
| XL90       | 52' 8"                  | 18" x 12" | 18' x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" |
| XL100      | 54' 10"                 | 18" x 12" | 18' x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" | 18" x 12" |
| XL110      | 57'                     | 18" x 12" | 18' x 12" | 18" x 12" | 20" x 12" | 20" x 12" | 20" x 12" | 20" x 12" |
| XL120      | 59' 2"                  | 18" x 12" | 18' x 12" | 18" x 12" | 20" x 12" | 20" x 12" | 20" x 12" | 20" x 12" |
| XL130      | 61' 5"                  | 18" x 12" | 18' x 12" | 20" x 12" | 20" x 12" | 20" x 12" | 20" x 12" | 20" x 12" |
| XL140      | 63' 7"                  | 18" x 12" | 18' x 12" | 20" x 12" | 20" x 12" | 20" x 12" | 20" x 12" | 20" x 12" |
| XL150      | 65' 9"                  | 18" x 12" | 18' x 12" | 20" x 12" | 20" x 12" | 20" x 12" | 20" x 12" | 20" x 12" |

**IMPORTANT BEAM FOUNDATION NOTES:**

- Ring beam sizes shown are suitable for areas that do not experience cyclonic/seismic conditions. Special designs are required for cyclonic and seismic areas.
- It is very important for the client to ensure that foundation conditions are adequate. These are:
  - safe bearing capacity shall equal or exceed 150 kPa
  - the founding material shall be stable; landfill or active clay may be unsuitable.
- Most sands and gravels that have been compacted to a reasonable level will be adequate provided there is stable soil beneath.
- Should there be any doubt about the stability or strength of the foundation, site-specific professional engineering advice shall be sought by the client.
- If the tank is likely to experience large settlements (eg: softer clay type sites) consideration shall be given to articulated connections for pipework.
- In areas with corrosive soil conditions, special protective measures shall be used (eg: grade N40 concrete and all steel reinforcement galvanized).
- For tanks taller than two rings, Pioneer Water Tanks utilize a jacking system to construct the tank, elevating it one ring at a time. For tanks larger than 238,000 gallons, an additional support bracket is anchored to the vertical face of the ring beam. To ensure this system can be properly employed, it is essential that ring beam specifications are strictly adhered to and that no adjacent concrete is poured prior to jacking. Any unauthorized alterations may inhibit construction and could adversely affect installation of your tank.
NOTES:
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE AND ACI 318-14
2. CONCRETE SHALL HAVE 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI
3. PROVIDE 3 INCH MINIMUM COVER
4. REINFORCEMENT SHALL CONSIST OF DEFORMED REINFORCING BARS CONFORMING TO ASTM A612, GRADE 60
5. SUBGRADE AND SAND TO BE STABLE AND COMPACTED. SUBGRADE SHALL HAVE MINIMUM SAFE BEARING CAPACITY OF 3,200 PSI. TOP OF SUBGRADE AND TOP OF SAND SHALL BE LEVEL
6. DRAINAGE AND ANTI-EROSION MEASURES ON SITE - BY OTHERS
7. THESE RING BEAM DETAILS SHALL BE USED WITH TANK XL50-02 ONLY. DIFFERENT SIZE TANKS WILL REQUIRE RING BEAMS OF DIFFERENT CROSS SECTION
8. FORMWORK FOR THE RING BEAM SIDES SHALL CONFORM WITH ACI 318-14. CONCRETE MUST MEET REQUIRED STRENGTH BEFORE CONSTRUCTION AND FINAL LOADS CAN BE APPLIED
9. SIDE FACES OF RING BEAM SHALL BE FORMED AND NOT CAST AGAINST EARTH

CONSTRUCTION TOLERANCES

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside Diameter</td>
<td>±1/16&quot; (+/- 0.1 mm)</td>
</tr>
<tr>
<td>Outside Diameter</td>
<td>0 + 1/8&quot; (+/- 0.3 mm)</td>
</tr>
<tr>
<td>Level of top surface</td>
<td>±1/8&quot; (+/- 0.3 mm)</td>
</tr>
</tbody>
</table>
Pioneer Water Tanks can offer a comprehensive range of project and site services for your water storage project.

**Documentation**
Sales documentation, contract administration, product specifications and pricing enabling your water storage project to proceed with confidence.

**Project management**
Providing comprehensive management and coordination of all aspects of your project for a safe, timely, cost effective delivery and installation.

**Engineering and drafting**
Custom designs, detailed drawings and professionally engineered storage solutions.

**Construction**
An experienced, efficient and professional installation team highly trained in safe methods of work and disciplined to operate within the strictest client site requirements.

**Civil works**
Provision of civil services including tank foundations (such as concrete ring beams).

**Structural works**
Including design, fabrication and erection of tank stands, platforms and ladders.

**Plumbing**
Supply and installation of pipe-work and fittings associated with your water storage project. Includes provision of automation such as level control and telemetry on water storage tanks.

**Commissioning and maintenance**
A comprehensive after-sales service, including full on-site commissioning of your storage tank(s) and the provision of ongoing preventive maintenance services, site inspections and reports.

Internal inspection using Remote Operated Vehicles (ROV) eliminate the need for down time and service interruptions.

Pioneer Water Tanks can provide swift response to rectify damage caused by external unplanned factors or accidents. In the unlikely event of a warranty or performance issue our professional staff will be on-site to provide quick assessment and corrective services.
OUR REFERENCES

Pioneer Water Tanks’ commercial and technical sales team has many years of experience and an intricate knowledge of specialised industrial and commercial project requirements both in Australia and around the world.

Installing in excess of 4,000 water tanks each year World Wide and in over 30 countries, our fast installation time frame and flat packaging for easy transportation are just two of the reasons why our clients have chosen to invest in our tanks.

Following is a partial list of our past projects.

MINING AND EXPLORATION

- Bounty Mine Forrestania, WA.
  250kL process tank and 100kL potable water tank.
- Pannawonica Mine Site, WA.
  720kL cyclone rated heavy-duty tank.
- Gold mine site, Kalgoorlie, WA.
  500kL process plant tank.
- Cannington silver and lead mine, North QLD.
  1.0mL x2 storage/processing tanks.
- Gold mine, Bendigo, VIC.
  250kL process water tank.
- Nickel mine, QLD.
  363kL chemical treated tank.
- Cullen Valley Mine, NSW.
  219kL raw water storage tank.
- Boddington Gold Mine, WA.
  434kL process water storage tank.
- Iron ore mine, Yandie, WA.
  384kL x4 water storage tanks.
- Ore Body 23, Newman WA.
  1.0mL water storage tank.
- Paraburadoo Iron Ore Mine Site, WA.
  1.14mL x2 process water storage tanks.
- Paraburadoo Iron Ore Mine Site, WA.
  2.6mL process water storage tank.
- Collie Power Station, WA.
  2.18mL process water storage tanks.
- LNG plant, WA.
  27 x 1.0mL fire process water storage tanks.

COMMERCIAL AND INDUSTRIAL

- WA State Government, York, WA.
  328kL potable storage tank.
- WA State Government, Lancelin, WA.
  294kL x2 potable storage tanks.
- WA State Government, Dalyellup, WA.
  1.3mL potable storage tank.
- WA State Government, Greenhead, WA.
  200kL potable storage tank.
- WA State Government, Sovereign Hill, WA.
  150kL potable storage tank.
- Electricity generation, Tasmania.
  1.0mL potable storage tank.
- Winery, Mt Barker, WA.
  400kL x2 bio-reactor storage tanks.
- Poultry site, Tamworth, NSW.
  1.5mL x2 processing tanks.
- Community water project, Warburton, WA.
  500kL potable storage tank.
- Dairy products processing site, Cobden, VIC.
  250kL x2 effluent storage tanks.
- Victorian State Government (VIC).
  1.27mL reuse water scheme tank.

FIRE CONTROL

- Fire Safe Systems, Kewdale, WA.
  143kL x4 fire water storage tanks.
- Coal mine, Douglas Park, NSW.
  330kL underground water services tank.
- Food warehouse, Canning Vale, WA.
  300kL x3 fire water storage tanks.
- Meat processing site, Wagga Wagga, NSW.
  250kL x2 fire water storage tanks.
- Building company, NSW.
  323kL potable water storage tank.
- College site, Stanwell Tops, NSW.
  244kL fire water storage tank.
- National electricity retailer, Midland, WA.
  75kL fire service water storage tank.
- Fire solutions provider, Welshpool, WA.
  500kL fire service water storage.

OVERSEAS EXPORT MARKETS

- Middle East:
  United Arab Emirates, Saudi Arabia, Oman, Qatar, Egypt, Kuwait, Iran.
- South Pacific:
  Cook Islands, Fiji, Tahiti, PNG, Norfolk Island, New Zealand, New Caledonia, Nauru, Samoa, Vanuatu.
- Asia:
  Malaysia, Brunei, Singapore, Thailand, Timor, Indonesia, Myanmar, India, Afghanistan, Maldives, Philippines.
- Africa:
- South America:
  Chile, Argentina, Peru, Uruguay, Costa Rica, Panama.
- North America:
  USA, Canada, Mexico, Hawaii.
- West Indies:
  Haiti, Santo Domingo.
- Europe:
  Ireland.
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