



heritage water tanks  
Steel Water Tanks from 55,000L to 375,000L

**YOU HAVE A CHOICE!**  
Corrugated or Streamline Profile



## Why choose a steel water tank?

**Water tanks are available in a wide range of materials including poly plastic, galvanised steel, AQUAPLATE®, stainless steel, concrete, fibreglass, and ZINCALUME®.**

This question of which tank to choose is a complicated one, mainly due to the fact that there is such a variety of different rainwater tank options available.

### Plastic Tanks

Plastic or poly water tanks are typically made with a rotational moulding process, which means that the size of the tanks is limited to the maximum size of the mould. Typically, they are seen in domestic or rural settings and are limited to under 50,000l. This can be a real disadvantage when the average household uses 277,000l per year on average. This means that you may need to install at least two tanks, rather than one steel tank. Having additional tanks may also result in having a more complex plumbing arrangement for tank outlets and more fittings to maintain. With Poly tanks in sizes up to 24000 litres, the price per litre decreases as the size of the tank increases. However, the price per litre for these tanks does an about turn and rather than continuing downwards as might be expected, costs rise as the tanks increase in size. Around 60% of Poly tank production is between 22,500 to 24,500l, with demand above this size predominately turning to steel lined tanks.

Polyethylene (Poly) tanks are non-corrosive, don't rust and are lightweight, but may be at risk of moving in high winds if water levels are allowed to run low. Polyethylene tanks can be recycled at the end of their service life. Recycled plastic cannot make more water tanks however, because potable water regulations only allow new plastics to be used.

Poly tanks can also be vulnerable to bush-fire and are prone to catastrophically fail due to water pressure causing outward pressure and plastics softening in extreme heat conditions.

The logistics of transporting Poly tanks can be problematic in some instances. In most states, tanks in excess of 24,500 litres are considered to be over size loads, which are subject to various conditions during transport. These conditions increase the costs of delivery and this increased cost is often recovered through higher pricing.

### **Galvanised Steel Water Tanks**

The typical Aussie water tanks that we all remember were galvanised steel water tanks. The older galvanised tanks didn't use a tank liner, which affected the taste of the water due to excess concentrations of zinc.

Galvanising is the process of applying metal to metal and the "galvanised tank" is made from zinc galvanised to steel. Galvanised steel is not inherently resistant to corrosion and must have rust-resistant coatings applied. Initial corrosion of galvanised steel normally leads to production of a thin film that coats the surface of the tank and provides protection against further corrosion. It is important when cleaning such tanks not to disturb this film.

### **Aquaplate®**

Plastic coated steel has a food-grade polymer skin bonded to a galvanised steel base rather than a liner and come in sizes up to 30,000l. The polymer used in plastic coated steel is not resistant to prolonged exposure to sunlight, so tanks must have a top cover in place at all times.

The polymer coating must not be damaged when manufacturing, installing or cleaning the tank. If the coating is damaged, it should be repaired immediately using an appropriate sealant to prevent corrosion of the metal portions of the tank.

Like PVC water tank liners and poly tanks, kerosene or similar chemicals typically used as mosquito larvicides can cause degeneration of the polymer coating.

### **Stainless Steel Tanks**

Sometimes seen in industries such as dairy or food processing, stainless steel can be used to manufacture water tanks as it does not suffer from rust or corrosion. However, the cost of stainless steel is significantly higher than normal steel tanks. Stainless steel tanks vary in quality and require a seam where the sheets are joined.

While stainless steel tanks are largely corrosion resistant, corrosion can occur in the solder at the joints or in rivets and screws. External factors like iron deposits or metals vulnerable to rust, can cause pitting corrosion when in contact with stainless steel.

### **Concrete Tanks**

Concrete water tanks and ferro-cement water tanks are very heavy and difficult to handle. While these tanks are growing less popular in the domestic/rural setting, concrete water tanks are often installed underground in urban environments.

Unlined concrete water tanks may impart tastes and leach lime, thereby increasing the pH of water. Cracking and leaking is one of the most common complaints suffered by concrete tanks. If the tank is underground, leak may go undetected for many years if not monitored.

### **Fibreglass**

Fibreglass tanks are often seen in chemical and food processing industries due to its corrosion resistant properties. Fibreglass tanks (GFRP Glass Fibre Reinforced Plastic) are manufactured with a food-grade coating on their interior surface. One advantage of Fibreglass is that it is very stiff or rigid. This means that tank walls can be relatively thin to manage water pressure. However, the disadvantage of this very rigid material is that it can tend to be brittle in nature, being prone to cracking and leaking.

Fibreglass water tanks allow more light entry than other types of tanks, which can encourage algal growth. Some tanks are manufactured with sufficient pigment to prevent this occurring.

### **Zincalume® Tanks**

Zincalume tanks are seen widely in rural, domestic and every manner of industrial contexts in all sizes, from smaller household tanks, through to tanks of up to several megalitres.

The coating on ZINCALUME® steel comprises of 55% aluminium, 43.5% zinc and 1.5% silicon. It has excellent corrosion performance, forming capabilities and is available in a range of high strength grades.

ZINCALUME® steel was developed after extensive research into improving the traditional performance of galvanised steel. By blending aluminum with zinc in an alloy coating, researchers discovered a way to greatly enhance corrosion resistance. Extensive testing indicated that roofing or walling made from ZINCALUME® steel has a lifespan of up to four times that of galvanised steel, with a Z275 coating in the same environment. [See more information about ZINCALUME® steel.](#)

All tanks intended for storing potable water, including plastic tanks and steel tanks with plastic liners must be constructed of materials that are food-grade. For domestic use, materials that come into contact with water must be compliant with Australian Standard AS2070, 'Plastics materials for food contact use' and AS/NZS4020, 'Testing of products for use in contact with drinking water'.

### **Fire Resistance**

No tanks are completely fire proof, however concrete and steel tanks offer better fire resistance than other products.

Bush-fire exposure makes stainless steel tanks turn black, but prolonged exposure to extreme temperatures will eventually destroy the welded joints, depending on how much water is in the tank and the intensity of the fire.

Plastic tanks can ignite when there is a sustained ignition source, such as a high intensity bush fire. Plastic coated steel tanks, contrary to what some tank manufacturers state, are sensitive to temperature. In an intense fire, the plastic coating inside the tank will separate and render the tank useless.

In Fire Impact research conducted by the CSIRO's Sustainable Ecosystems Branch, Zinalume® (steel liner tanks) performed better than Aquaplate®, with the Zinalume® coating melting at about 200 degrees and fibreglass tanks failing extensively.

Heritage Water Tanks are designed to resist damage to their structural integrity and retain water during and after exposure to a fire front. Examples of this were observed in bush fires in Victoria in 2009.

### **The Heritage Water Tank point of difference**

All bias aside, we know that our product is truly outstanding and independent testing of our liner provides even more proof.

### **Arma Liner**

The Heritage Water Tanks Arma Liner is manufactured to the highest standards. In independent testing, our liners were rated on lineal weight or weight per square metre. Our liners weigh 700 g/m<sup>2</sup>, where our closest competitor's liner weighs under 500g/m<sup>2</sup>. See the comparative test results [here](#)

The extra density of our liner material is why Heritage Water Tanks also come out on top against our main competitors for Weld Shear Strength and Puncture resistance.

### **Independent liner test results:**

Heritage Water tanks – [ARMA liner](#)

Pioneer – [Aqualiner](#)

Rhino – [Infinity Metallocene LLDPE Liner](#)

For more information about this testing, please view our YouTube video here: [ARMA liner independent testing](#)

Our liners are also food and potable water grade certified (PBA free) and conform to Australian Standards AS2070 and AS/NZS4020. Our liner is made of chemically inert material, with exceptional strength, durability and elasticity and retains these properties for greatly extended periods of time, even under the most harsh environmental conditions.

This is why our tanks are so well suited to the harsh climate and extreme temperatures experienced in much of Australia. Not only can our tank materials stand up to rigorous lab testing, but they also stand up to the true Aussie bush test, performing outstandingly well on many pastoral stations in central and northern Australia.



TEMPERATURE INSIDE TANK IN NT

### **Our tank walls**

Our walls are made from proven, highly corrosion resistant, long lasting BlueScope ZINCAUME® G300, alloy coated structural steel with a guaranteed minimum yield strength of 300 MPa. Find out more about BlueScope ZINCALUME® G300 within the link to the following [datasheet](#).

The steel used in the production of our water tanks is a minimum of 1mm bmt, which is thicker than material used by most of our competitors. Our wall profile was also designed in consultation with engineers to provide superior strength and exceptional durability.

### **Heritage Water Tanks Gutter system**

With declining rainfalls all around the country, it's never been more important to capture every drop. Heritage Water Tanks patented Gutter Technology captures every drop of precious rain that falls onto the roof of your tank. This means that 22% of your tanks' volume can be captured directly from the roof, based on a 500mm rainfall.

With the gutter system fitted to your tank, all the rain that lands on the tank roof is directly diverted into your tank, via the gutter system.

The circular tank gutter system can be optionally fitted onto your Heritage Water Tank when your new tank is installed. The gutter can also be fitted to all existing steel tanks with a profiled roof.

For more information about our products please call our Sales Team on 1800 115 552, email us at [info@heritagetanks.com.au](mailto:info@heritagetanks.com.au) or visit our website at [www.heritagetanks.com.au](http://www.heritagetanks.com.au)