

SAMPLE ONLY

RainPac®

Bladder

Tank Handbook

Model (AS SPECIFIED)

Handbook Contents:

- 1. Producer Statement**
- 2. Installation Guide**
- 3. Maintenance Checklist**

sample Only

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PRODUCER STATEMENT

Model: RainPac Bladder RP**3040**
Description: Scrim-reinforced PVC Bladder Tank
Nominal Capacity: **6,700** litres
Width: **3.0** metres
Length: **4.0** metres
Fill Height (max): **0.7** metres
Material of Construction: Scrim-reinforced **PVC 1.1mm** to AS/NZ 4020:2005
Date Produced: 10/04/09
Design Standard: **AS/NZS 4766: 2006**
Proposed use: **Containment / Storage of Water**
Specific Gravity: 1.0
Service Temperature: **30 deg Celsius**

Manufacturer's Statement:

The above details relate to a bladder tank manufactured by Liquid Containment Pty Limited. It has been made in accordance with the relevant standard under quality controls accepted as good manufacturing practice and is deemed fit for the stated purpose.

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Paul Wrigley
Director
Liquid Containment Pty Limited

RainPac® **INSTALLATION GUIDE**

1. SELECTING A TANK

Our quoted lengths and widths are the dimensions when the tanks are empty. The tanks will get narrower and shorter as they fill. The quoted height is what the tanks will reach under gravity fed stormwater. The height of the tanks can also be limited – see below. The required clearance above the tank is 30mm (3cm). The quoted volume is the volume when the tank reaches its quoted fill height.

2. PLACEMENT AND GROUND PREPARATION

RainPac™ Tanks are specifically designed for placement under houses or verandas, but can be used in other locations as long as the following conditions are satisfied. These guidelines are designed to prevent or minimise the chances of water loss under the house.

2.1. Level Ground

The aim is to position the bladder tank on a level surface so that it will not roll or slip. Where the bladder tank is to be placed on a surface with a slope of less than 5 degrees, digging a 50cm deep channel at a position about half the width of the bladder tank along its length will provide additional stability. Care must be taken when digging near walls and supports so that these are not destabilised.

2.2. Ground Type

The ground surface should not have sharp edges, or be of a material that causes slipping or scratching. Sand is an ideal surface.

Tanks are supplied with a Geotextile Tank Protector which locates beneath the bladder and provides additional protection from puncture, slipping and scratching.

2.3. Don't Lean

We do not recommend that bladder tanks lean against walls or structural supports as they can weigh a significant amount when full and could contribute to movement over time. The movement can cause the material to rub and wear.

2.4. Minimise Sunlight

To maximise the lifespan of your tank we encourage you to minimise direct sunlight exposure to your tank. While the tanks are UV stabilised, the heat and drying effect of direct sunlight can impact the material over time.

In most cases tanks are located under a house or veranda/deck which reduces exposure so sunlight protection is not necessary. If a part of your tank is exposed to lengthy periods of direct sunlight we recommend covering it.

3. CONNECTING YOUR TANK

The aim of connecting your bladder tank is to maximise water collection, while allowing water to overflow into your stormwater when your tank is full. It is also important to take into account that bladder tanks change shape as they fill and hence the fitting locations on the tank can move. All our tank inlet and outlet fittings are located on the tank ends which minimises this movement.

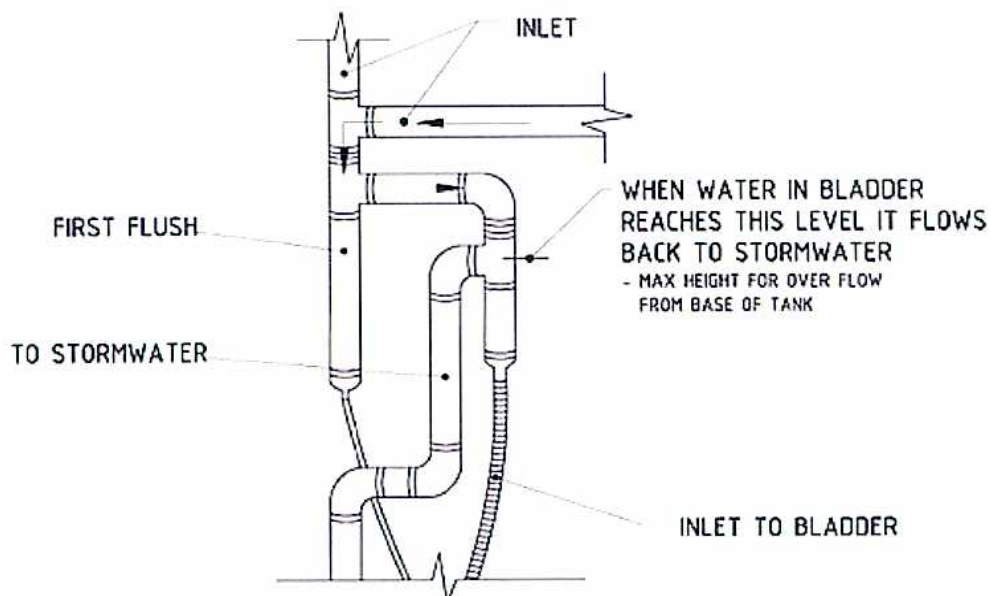
The following diagrams show possible ways of connecting your bladder tank. These diagrams use a reinforced flexible hose which is coupled with an adjustable hose clamp. This method provides flexibility while being impossible to collapse.

An alternative method is to use PVC downpipe and the correct fittings which are suspended to the underside of the floor framing. This method allows the tank to be connected by screwing the correct size fitting to the bladder inlet.

Warning: The overflow system to the storm water for your bladder tank must be set at the maximum fill height of your bladder tank. The fill height for each tank is dependent on the dimensions of your bladder. Generally the larger the width, the greater the height to which the tank can be filled e.g. 3 metre wide bladder tanks can be filled to a height of 700mm whereas 1.1 metre wide bladders can only be filled to 400mm.

If you are unsure of your fill height please contact:
Mark O'Connell on 027 218 9855.

The following diagrams can be adapted to suit the installation type for your requirements.



Overflow Diagram showing overflow height and connection to a First-Flush Device

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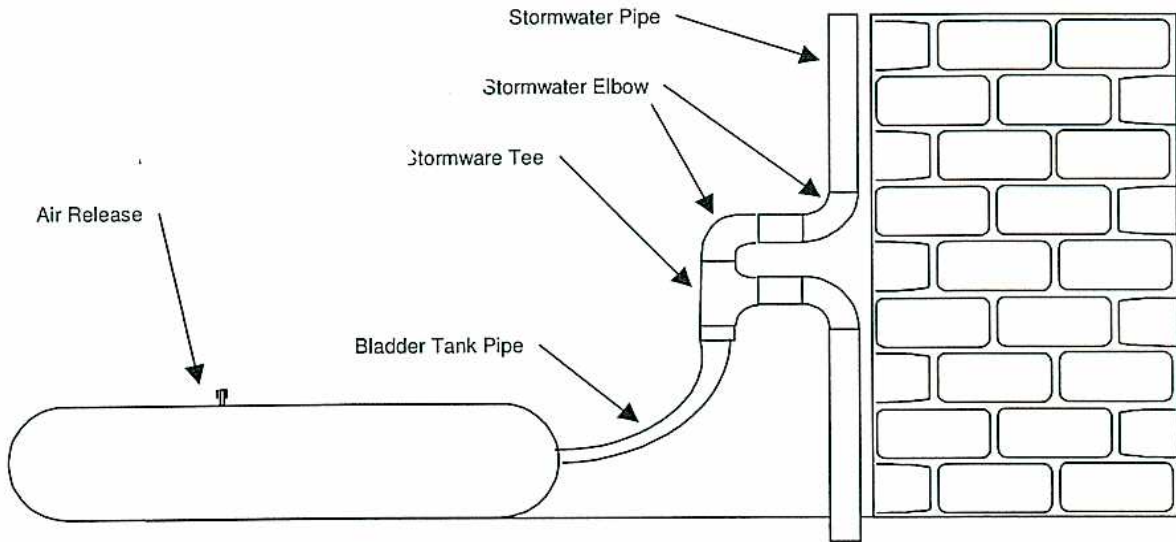


Diagram 1: Connecting your tank to stormwater downpipe (example 1)

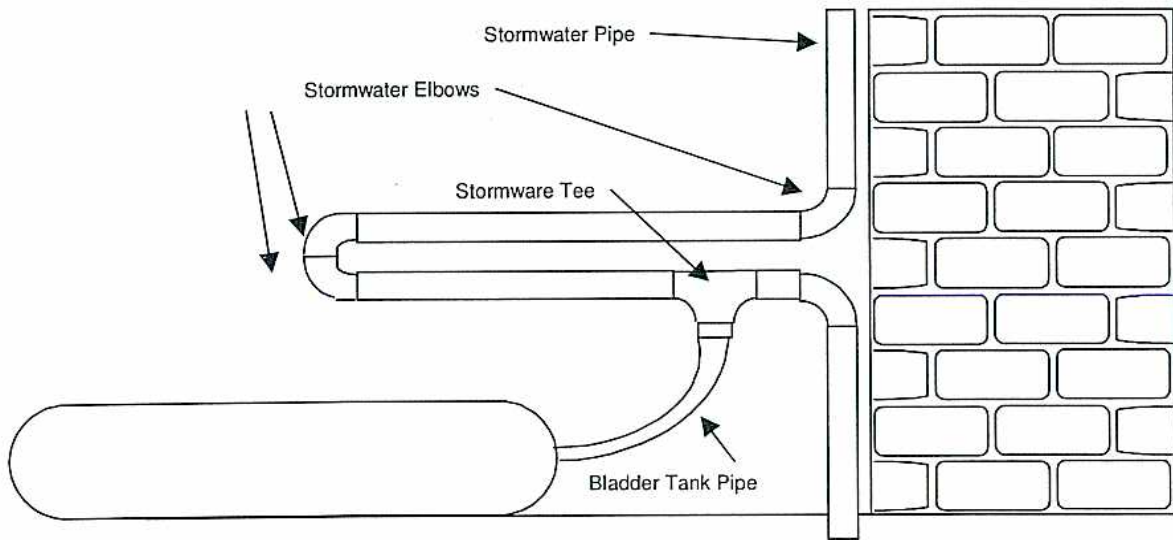


Diagram 2: Connecting your tank to stormwater downpipe (example 2)

3.1. Inlet and Outlet Fittings

RainPac® tanks have a 50mm threaded inlet fitting or they can be supplied with a 100mm PVC Collar Pan fitting as the inlet and each tanks has two (2) threaded outlet fittings - one on each end for connection to your pump

3.2. Air Release

RainPac® tanks are fitted with a 15mm barbed fitting in the middle at the top. This fitting allows air to escape as the tank is filling thus preventing the tank from over-inflating. To prevent water escaping from this fitting when the tank is full we recommend connecting 15mm clear pipe, 12mm garden hose or 13mm poly pipe to it and making sure the top of this pipe is above your overflow level. This is shown in Diagram 1.

3.3. Tank Height

The heights we list for the tanks are the heights at which they will achieve their quoted volume. The tanks will actually fill higher than this level. You can limit your tank to this height or lower if you do not have the height space. You do this by the height you position the overflow system (illustrated in all diagrams) so that the tank will overflow when it reaches the required height. Your overflow should be no more than 200mm above the recommended installation height of the tank. Tanks should never be filled above their recommended height if using a pump to fill the tank. **Doing this will void the bladder tank warranty.** Bladder tanks are designed to support gravity filling pressures and will not support pump filling pressures.

3.4. Leaf Filter and First Flush Devices

We strongly encourage the use a Leaf traps or some other filters in the downpipe to keep leaves and other debris out of your bladder tank. RainPac suggests the use of the Leaf Trap, Marley Leaf Eater/Leaf Beater, or Frogmouth Filter to keep leaves out of your system. These items are generally available from most plumbers' merchants. We suggest that you also consider installing a first flush diverter system. Whether this is required will depending on council regulations, your location and the intended use for your water.

Note that in many cases it is easier to use a Leaf Eater or Leaf Beater with your First Flush device than a Frogmouth Filter.

3.5. Cascading Tanks

RainPac Bladder tanks can easily be joined together (if specified at time of ordering) by connecting the fittings at either end of the tank. The cascading tanks have a 100mm or 75mm or 50mm male threaded outlet fitting on each end, which allows the outlet connection to be at either end of the tank. To connect your tanks together we recommend

using a flexible reinforced hose pipe. Depending on your situation you may need to use standard Hanson – type Fittings such as:

- Hose Tail - 100mm or 75mm or 50mm
- 100mm or 75mm or 50mm Flexible Reinforced Pipe (per m)
- 100mm or 75mm or 50mm Adjustable Pipe or Hose Clamp

4. LEGAL

Most councils in New Zealand require work on stormwater systems to be undertaken by a licensed Plumber. As a result RainPac strongly encourages you to get a Plumber to do the actual connection to your downpipe / stormwater system.

For more information contact Mark O'Connell on 027 218 9855

RainPac thanks you for your interest in our Bladder Tanks.

If you have questions or comments on this guide then please email info@aquatanks.co.nz

RainPac Bladder Tanks

Bladder Tank Maintenance

This maintenance checklist applies to bladder tanks when connected to spouting and downpipe systems when the water tank collects water from the roof.

Leaves, pine needles, twigs, grass, animals and debris can block the water flow and may pollute the flow to your water tank. Consequently regular maintenance on these systems should be employed to improve the quality of water and the flow rate.

The building or homeowner can perform these duties.

Alternatively in the Yellow pages there are a number of *Tank Services* businesses that can perform the maintenance on the tank.

4-Month Duties

1. Inspect the roof and spouting and downpipes for any foreign material and remove as necessary.
2. Inspect any leaf guards, pre-tank filter or first-flush systems fitted on the tank entry pipe and clean as required. Note: these may require more regular servicing if roof collection area is located in high bush, dust or pollen region.
3. Inspect all fittings, and screwed or welded joints to ensure there are no leaks.

12- Month / Annual Duties

(These duties are additional to the 4 Monthly duties listed above).

1. Clean the roof and spouting to ensure removal of moss, mould, sun-caked solids and faeces. When rinsing to the downpipes, ensure the bladder tank is by-passed.
2. Clean and flush guttering and all pipes leading to water tank.
3. Bladder tanks can be emptied, unscrewed at the inlet and outlet, rolled up and removed prior to flushing out, emptying and refitting. Care must be taken not to puncture the bladder.
4. If there is a water pressure pump or other equipment fitted in or along side the tank then these should be inspected to ensure they are in good working condition.
5. Ensure there is no undermining of footings in close proximity to the bladder tank installation.
6. If the tank is installed underground then check visually inside tank and immediate surrounding area to confirm the earthworks are still stable.

