

Bottomless Rainwater Tank Attachment – User Manual

This external part fill valve can make any rainwater tank bottomless



Bottomless Rainwater Tank Attachment

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The Bottomless Rainwater Tank Attachment can be purchased online from the Measured Irrigation Shop:
<https://www.measuredirrigation.com/product-page/diy-kerbside-stormwater-recycling-kit>

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1. Introduction to the Bottomless Rainwater Tank Attachment

Many gardeners would like to use their rainwater tank to irrigate their garden. If the irrigation system has an irrigation controller, then a problem arises when the rainwater tank runs out of water. If you are on holidays at the time the consequences for your garden could be disastrous.

The ideal solution to this is to install the Bottomless Rainwater Tank Attachment so that your rainwater tank never runs out of water. There are other part fill valves available but these require a plumber to install the valve inside your rainwater tank. The Bottomless Rainwater Tank Attachment is completely external to the tank and easy for anyone to install.

A hose from a mains water tap is connected to the Bottomless Rainwater Tank Attachment. A valve inside the attachment opens and closes automatically to allow mains water to enter the tank. Whenever the tank is almost empty, a valve opens automatically and the tank will be part filled with mains water. The water level in the tank will be raised by only 28mm before the valve closes automatically, and so there is always plenty of room left for rainwater.

The Bottomless Rainwater Tank Attachment includes a clear vertical tube where the water level in the tube tells you the water level in your rainwater tank.



2. Instructions for installing the Bottomless Rainwater Tank Attachment

- Step 1. Unscrew the brass tee from the bottom of the attachment.
- Step 2. Unscrew the tap from the rainwater tank outlet and screw on the brass tee.
- Step 3. Reconnect the tap.
- Step 4 •Reconnect the attachment to the brass tee making sure that the level lines are facing the front.



- Step 5 Connect a tube to the outlet on the Bottomless Rainwater Tank Attachment (on the left hand side), and position the other end of the tube so that the mains water will flow into the tank.



- Step 6. Connect the mains water supply to the inlet on the Bottomless Rainwater Tank Attachment (on the right hand side).



- Step 7. Insert the clear vertical tube into the fitting on top of the Bottomless Rainwater Tank Attachment. The tube should reach the top of the rainwater tank so that it doesn't overflow when the tank is full.



- Step 5. Turn on the mains water supply and your rainwater tank is now bottomless.

When then the water level in the rainwater tank fallen to low level (as indicated on the Bottomless Rainwater Tank Attachment), mains water starts filling the tank until the water level reaches the high level. The water level cycles between the low level and the high level until it rains and the tank start filling with rainwater.



3. Gravity feed irrigation from a bottomless rainwater tank

Think twice before you buy a pump for your rainwater tank!

Having purchased and installed the Bottomless Rainwater Tank Attachment, you are now ready to design and install an automatic irrigation system using your bottomless rainwater tank. The first and most important decision that you have to make is whether to use a gravity feed system or a pressurised system with a pump.

For most garden applications, a gravity feed system is preferable to a pressurised system. Before the invention of measured irrigation, gravity feed irrigation had the problem that the amount of water delivered to a plant depended on the water level in the rainwater tank. With measured irrigation the amount of water delivered to a plant is totally independent of the water level in the tank. In fact the water pressure can vary dramatically during the irrigation event and the water usage does not change.

For more information about measured irrigation, I recommend that you look at the Measured Irrigation website: <http://www.measuredirrigation.com.au>

Before you buy a pump for your rainwater tank, consider the following ten points comparing pressurised irrigation with gravity feed measured irrigation.

Pressurised irrigation	Gravity feed measured irrigation
Your rainwater tank needs a high pressure pump (for example, 500 watts) and so the cost of electricity will be substantial.	No pump is needed.
Pressure compensating (PC) drippers are required to control the flow rate and hence the volume of water emitted by each dripper.	Non pressure compensating (NPC) drippers are required. The volume of water emitted by each dripper is controlled directly and is independent of the flow rate. NPC drippers (or dripline) are cheaper than PC drippers.
Sprinklers can be used.	Low pressure sprinklers are required (for example, Wobbler Sprinklers).
Many irrigation zones may be required in order to maintain adequate pressure in each zone	Since the water usage is independent of pressure, a single zone can be used.
Unless sensors are used, the water usage does not respond automatically to the prevailing weather conditions.	The water usage responds automatically to the prevailing weather conditions.
The irrigation scheduling is controlled by an irrigation controller or timer.	The irrigation scheduling is controlled by the prevailing evaporation and rainfall.
Hose clamps are necessary.	Hose clamps are not needed due to low pressure.
A power supply is required for the pump and the irrigation controller.	No power supply is required if you use the Unpowered Measured Irrigation Controller.
Irrigation uniformity is not a problem on sloping or uneven ground.	Irrigation uniformity may be a problem on sloping or uneven ground.
Uses sophisticated technology.	Uses simple technology and so there are fewer things to go wrong.