RAIN HARVESTING
by Blue Mountain Co

First Flush Max

w/ Catch-All Tee and Electronic Valve



Installation and Specification Guide

PRODUCT DETAILS

Divert more contaminants and take greater control over your water volume with this next generation First Flush Max w/ Catch-All Tee and Electronic Valve.

The Max Chamber increases the volume of water you can catch in a smaller area – thanks to its large diameter chamber. It means you can divert more water with less space, giving you the flexibility to fine tune your system easily.

We've also included the Catch-All Tee to ensure you only catch the best quality water, and the Electronic Release Valve to give you the ultimate control over how regularly your first flush diverter activates.

Code	Size	Country
WDDP21	90mm	**Australia**
WDDP621	75mm	**EU**
WDDP521	68mm	**UK**
WDDP221	80mm	**New Zealand**
WDDP121	3"	**USA**

Installation

WHAT'S IN THE BOX?

- Catch-All Tee
- Ball seat
- Sealing ball
- End coupling
- Primary Filter Screen
- Transparent, rapid release exit funnel
- Electronic Release Valve
- 90mm/3" pipe wall brackets x 2
- International Adaptors (WDDP621, WDDP521,WDP221 & WDDP121

To make Max Chamber:

- Max Chamber adaptor
- 100mm/4" end coupling
- 100mm/4" pipe wall brackets x 2

TOOLS/MATERIALS YOU MAY REQUIRE

- 90mm/3" or 100mm/4" pipe (for diversion chamber)
- Tape measure
- Marker pen
- Saw
- Solvent weld glue
- Screws
- Drill or screwdriver
- 2 new 1.5 volt AAA batteries

FIRST FLUSH MAX W/ CATCH-ALL TEE AND ELECTRONIC VALVE

1 - If you're using the Max Chamber adaptor to create your first flush diversion chamber, you will need to determine the length of 100mm pipe you require. As a general guide, 1 metre of 100mm pipe holds 8.8 litres of water. 3 feet of 4" pipe holds 2 gallons of water. Ensure all cut edges are clean and smooth.

2 - If you aren't using the Max Chamber adaptor, you will need to determine the length of 90mm (80mm or 3") pipe required for your first flush diversion chamber. As a rough guide, 1 metre of 90mm pipe holds approximately 5.9 litres of water. 1 metre of 80mm pipe holds approximately 4.6 litres of water. 3 feet of 3" pipe holds 1.2 gallons of water. Ensure all cut edges are clean and smooth.

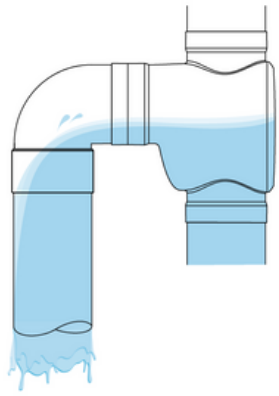
3 - The Catch-All Tee can be installed in the horizontal or vertical orientation to suit your installation. The outlet must be accessible for maintenance and inspection. (Refer to Figures 1a, 1b and 1c for suggested installation orientations).

4 - Select the orientation of the Catch-All Tee appropriate for your chosen installation point. This will determine which socket on the Catch-All Tee will attach to your diversion chamber.

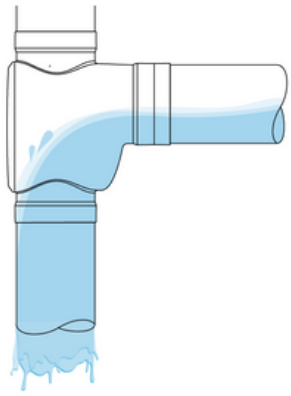
Figure 1

Suggested Installation Orientations

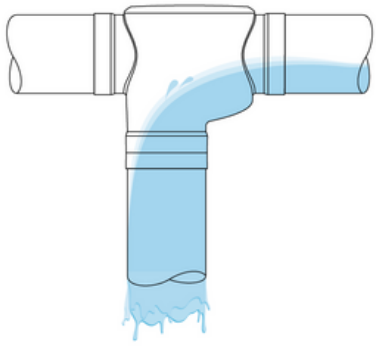
1a. Wet System or 'Charged'



1b. Vertical



1c. Horizontal



5 - Measure your existing downpipe and cut to create space for the Catch-All Tee. The outlet of your diverter must sit at least 150mm (6”) from the ground when fully assembled, so select your installation point and measure and cut accordingly. Ensure all cut edges are clean and smooth. Install your Catch-All Tee in place by applying solvent weld glue to the sockets and pipe. Insert the pipe into the sockets or socket adaptors at either end of the Catch-All Tee.

6 - Apply solvent weld glue to the threaded end coupling socket and one end of your diversion chamber pipe and insert it firmly into the end coupling. If you’re using 90mm pipe, you will need to use the 90mm end coupling socket (and adaptors if required). If you’re using the Max Chamber adaptor, you will need to use the 100mm end coupling socket (and adaptors if required).

7 - Apply solvent weld glue to the Max Chamber adaptor and glue it onto the upper end of your diversion chamber. If you aren’t using the Max Chamber adaptor you can disregard this step.

8 - Orient the ball seat so it will fit inside the Catch-All Tee socket that will attach to your diversion chamber. If you’re using 3” pipe for your diversion chamber, you will need to snap off the outer spacer ring from the ball seat

9 - With the ball seat in place, apply solvent weld glue to the upper end of your diversion chamber into your Catch-All Tee. The upper end of your diversion chamber will be either 90mm pipe or the Max Chamber adaptor, depending on which configuration you are using. Insert the upper end of your diversion chamber into the Catch-All Tee. If you are using the Max Chamber adaptor, make sure you align the indicator mark to point away from the mounting wall. This will ensure your First Flush unit will sit flush on the wall.

10 - Attach to the wall using the supplied brackets, supporting the unit until it is fully secured. The smaller brackets are for the standard diversion chamber. The larger brackets are for the Max Chamber. The upper bracket should sit directly under the Catch-All Tee where it will hold the weight of the unit.

11 - Place the ball inside your first flush chamber through the end coupling. Install the Primary Filter Screen, Transparent Rapid Release Exit Funnel with O-ring, and Electronic Release Valve by following the instructions in Figure 2 (next page).

Figure 2

Installing and setting up the Electronic Release Valve

2a - Insert the Primary Filter into the end of the First Flush chamber. It should fit snuggly into the socket on the end of the pipe.





2b - Install the Transparent Rapid Release Exit Funnel, ensuring the o-ring is seated correctly. It should be screwed up firmly to compress the o-ring.



2c - Attach the Electronic Release Valve by first installing the 25mm x 20mm (1" x 3/4") reducing adaptor and washer to the 25mm (1") thread of the screw cap.





2c - Remove the union from the valve and attach to the reducing adaptor with 20mm (3/4") washer in place.





2e - Attach the valve at the union and orientate dial for easy access.



2f - Remove the waterproof cover from the Electronic Release Valve.



2g - Ensure the reset interval and drain time control knobs are in the “RESET” and “CLOSED” positions. Carefully slide out the battery box and install two new 1.5-volt AAA batteries.





2h - Test the unit by turning the drain time knob to the “OPEN” position. You should hear the sound of the motor within 5 seconds. Turn the drain time knob back to the “CLOSED” position ready for setting.

NOTE: If you do not hear the sound of the motor, check that the batteries are installed correctly.







2i - Ensure that the reset interval and drain time knobs are in the “RESET” and “CLOSED” positions.

NOTE: The first time you program the Electronic Release Valve it will not begin to operate until after a time delay equal to the setting of the reset interval knob you select. The Electronic Release Valve starts to keep time when you set it. It is important that you set the timer at the hour you want it to operate. For example, if you want the Electronic Release Valve to operate at 07:00AM, you must physically set it at 07:00AM.

Set your reset interval and drain time according to the tables below, then replace the waterproof cover. A long reset interval will mean that the first flush diversion chamber empties less frequently, leading to higher rainwater yield. A short reset interval will mean that the first flush diversion chamber empties more frequently, resulting in a lower water yield. It should be noted, however, that differences in yield are minimal, so set your reset interval as appropriate for the pollution in your area.

Advance Release Valve Reset and Drain Time Settings

Suggested Reset Setting	Pollution Level
1 day	Very high
2 days	Very high
3 days	High
4 days	Medium
5 days	Medium
1 week	Low
2 weeks	Very Low
4 weeks	Very Low

Recommended drain time setting	Approx. First Flush Chamber size	
5 minutes	20 litres	5.3 gallons
10	40	10
20	80	20
30	120	30
45	180	50
60	240	60
75	300	80
100	400	100
125	500	130
150	600	160

POLLUTION FACTORS

The following factors can be used as a guide to determining the volume of water to be diverted.

POLLUTION FACTOR FOR THE ROOF	
MINIMAL POLLUTION	**SUBSTANTIAL POLLUTION**
DIVERT 0.5L PER M^2 (0.0123 GALLONS PER FT^2) Open field, no trees, no bird droppings, clean environment	**DIVERT 2L PER M^2 (O.0491 GALLONS PER FT^2)** Leaves and debris, bird droppings, various animal matter, e.g. dead insects, skinks, etc.

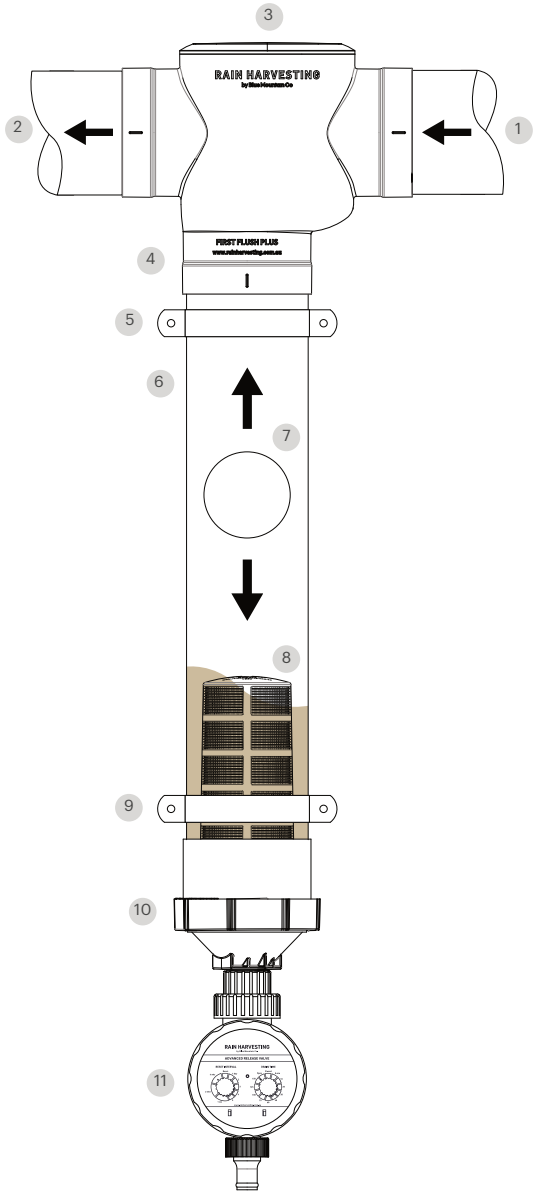
The above quantum are the results of preliminary testing. Individual site analysis and field testing is required to more accurately assess the quantum to be diverted in each individual case.

DIVERSION FACTOR FOR A FIRST FLUSH WATER DIVERTER	
MINIMAL POLLUTION	**SUBSTANTIAL POLLUTION**
M^2(or FT^2) ROOF AREA X POLLUTION FACTOR = LITRES TO BE DIVERTED	
Example for a minimal polluted roof of $100m^2$ $100m^2$ x 0.5 = 50 litres to be diverted **Example for a minimal polluted roof of $1000ft^2$** $1000ft^2$ x 0.0123 = 12.3 gallons to be diverted	**Example for a heavily polluted roof of $100m^2$** $100m^2$ x 2 = 200 litres to be diverted **Example for a heavily polluted roof of $1000ft^2$** $1000ft^2$ x 0.0491 = 49.1 gallons to be diverted

REFERENCE CHART

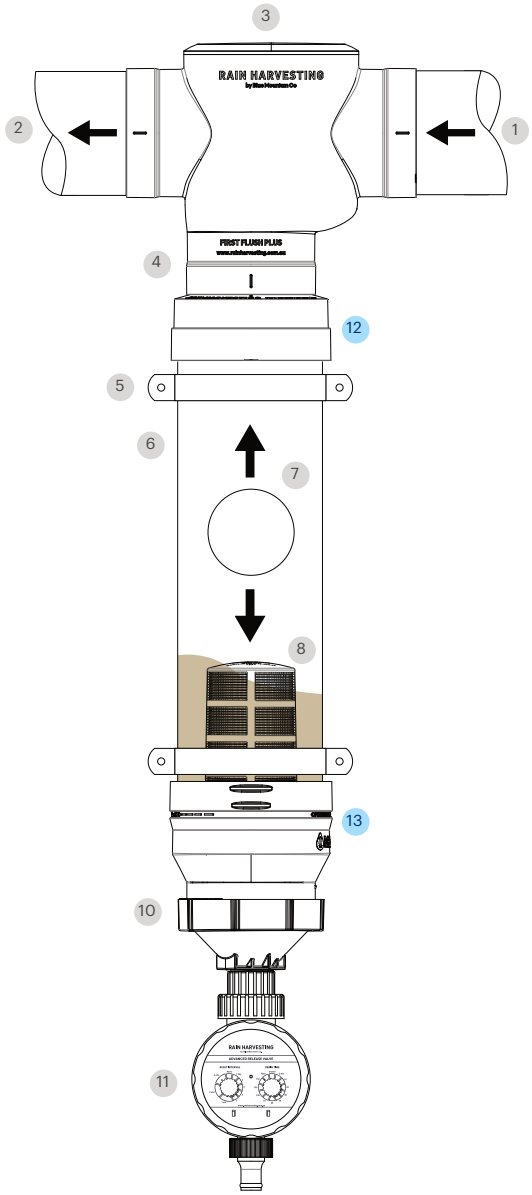
With 90mm standard diverter chamber

For NZ 80mm and USA 3” attachments, please refer to the Product Specifications section



With 100mm Max Chamber

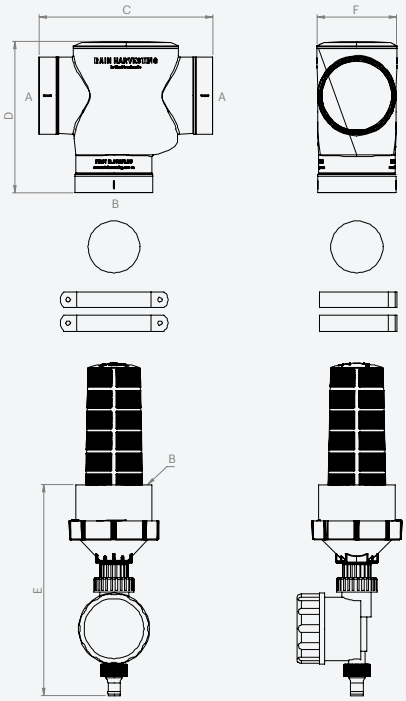
with Max Chamber upgrade parts attached



1	In-feed from the roof
2	To the tank
3	Catch-All Tee
4	Ball seat
5	Wall brackets
6	Diversion chamber
7	Sealing ball
8	Plastic Filter Screen
9	90mm End Coupling
10	Transparent, Rapid Release Exit Funnel
11	Electronic Release Valve
12	Max Chamber Adaptor
13	100mm End Coupling

Product Specifications

First Flush Max w/ Catch-All Tee and Electronic Valve



Dimensions & Pipe Fittings

Country	Code	SETUP	A	B	C	D	E	F
Australia	WDDP21	Regular	90 F	90 F	215	187	261	98
		Max Chamber		100 F	215	236	304	98
EU	WDDP621	Max Chamber	75 F	100 F	275	236	304	98
UK	WDDP521	Max Chamber	68 F	100 F	275	236	304	98
New Zealand	WDDP221	Regular	80 F	80 F	265	212	286	98
		Max Chamber	80 F	100 F	265	236	304	98
USA	WDDP121	Regular	3" SCH40 F	3" SCH40 F	8.46"	7.36"	10.28"	3.86"
			3" SDR35 F	3" SDR35 F	8.7"	7.48"	10.39"	3.86"
		Max Chamber	3" SCH40 F	4" SCH40 F	8.46"	9.29"	11.97"	3.86"
			3" SDR35 F	4" SDR35 F	8.7"	9.41"	12.09"	3.86"

All dimensions are in mm unless otherwise stated.

Fitting guide:

F = Female / Socket Fitting (Pipe fits inside)
M = Male / Spigot Gitting (Pipe size, fits into a socket)

Maintenance

It's important to ensure that your first flush diverter outlet remains clear of any debris. If your outlet becomes blocked, the chamber will not empty and the first flush of water will not be diverted when it rains.

To ensure the flow of water out through your diverter's outlet, periodically check the transparent, rapid release exit funnel for any build-up of matter (Remove primary filter and clean if required).

Periodically check that the Electronic Release Valve batteries have charge. This is indicated by the flashing light.

To protect your Electronic Release Valve from freezing or "winterising", remove the timer prior to the first frost or freeze and store it indoors until spring. Remember to remove the batteries from the battery compartment.

For best results and minimal maintenance, we recommend installing rain heads such as our Leaf Eater rain heads on all your downpipes to limit the volume and number of leaves and debris that reach your first flush diverter.

supported by RAIN HARVESTING

A common misconception about collecting rainwater is that all you need is a roof, a tank and some rain. This 'tanking' approach cannot always be relied on to deliver the volume – or quality – of water that you require. That is where we can help.

With some thought, your rain harvesting system can provide you with cleaner water and lots of it. Whether you're completely reliant on tank water or wanting to keep the garden green, our simple steps will help you achieve your goal.

The Rain Harvesting approach to rainwater collection involves using tested and proven products to make quality rainwater available for use in and around your property. You don't need much to get started and you will be surprised how easy it is to get the most out of your rainwater system.

How can we help you?

DISCLAIMER This product specification is not a complete guide to product usage. Further information is available from Rain Harvesting Pty Ltd and from the Installation and Operating Instructions. This specification sheet must be read in conjunction with the Installation and Operating Instructions and all applicable statutory requirement. Product specifications may change without notice. © Rain Harvesting Pty Ltd

RAIN HARVESTING

by Blue Mountain Co

For more information or to find out
how we can help, just give us a call on

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Or visit our website at

rainharvesting.com