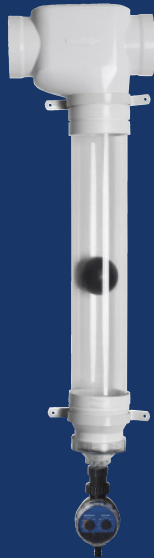


**RAIN HARVESTING**  
by Blue Mountain Co

# First Flush Advanced Downpipe



## PRODUCT DETAILS

The revolutionary First Flush Advanced diverts more contaminants and gives you greater control over water volume.

**WDDP20** 100mm  
**WDDP120** 4"  
**WDDP220** 80mm/100mm

## FEATURES AND BENEFITS

- Diverts water containing particles of organic and inorganic matter into collection chambers installed on each downpipe.
- Patented First Flush Plus tee prevents dirty water “skipping” over the traditional T-junction gap during heavy rainfall.
- Customisable Diverter Chamber pipe length.
- Transparent, Rapid Release Exit Funnel allows for easy visual inspection and draws sediment into the exit flow for reduced buildup and blockages.
- Advanced Release Valve allows you to program how frequently the first flush chamber empties and reduces maintenance.

# Installation

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## WHAT'S IN THE BOX?

- First Flush Plus tee
- Ball seat
- End coupling
- 2 100mm / 4" pipe wall brackets
- Sealing ball
- Transparent, Rapid Release Exit Funnel
- Advanced Release Valve
- Primary Filter Screen

## TOOLS/MATERIALS YOU MAY REQUIRE

- 100mm pipe (for diversion chamber)
- Tape measure
- Marker pen
- Saw
- Solvent weld glue
- Screws
- Drill or screwdriver
- 2 new 1.5 volt AAA batteries
- 2 100mmx90mm in pipe reducers (for 90mm pipe installations)

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## 100MM

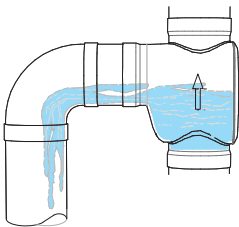
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1. Determine the length of 100mm (4") pipe required for your first flush diversion chamber. As a rough guide, 1 metre of 100mm (3ft of 4") pipe holds approximately 8.8 litres (2.3 gallons) of water. Ensure all cut edges are clean and smooth.
2. The First Flush Plus tee can be installed in the horizontal or vertical orientation to suit your installation. The outlet and Advanced Release Valve must be accessible for maintenance and inspection. (Refer to Figures 1a, 1b and 1c for suggested installation orientations).

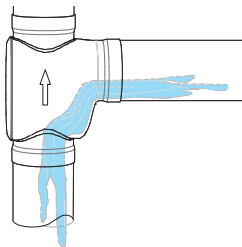
Figure 1

### Suggested Installation Orientations

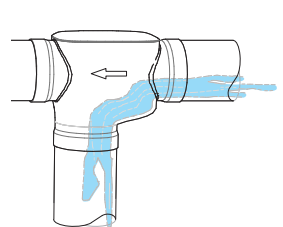
1a. Wet System or 'Charged'



1b. Vertical



1c. Horizontal



3. Select the orientation of the First Flush Plus tee appropriate for your chosen installation point. This will determine which socket on the First Flush Plus tee will attach to your

diversion chamber. (Example: if you're installing your First Flush Advanced into a horizontal pipe, the arrow marking the direction of water flow should be oriented in the direction of flow (see Figure 1c). For installations using the tee in vertical positions, always ensure the arrow is pointed 'up' (see Figure 1a/1b).)

4. Orient the ball seat so it will fit inside the First Flush Plus tee socket that will attach to your diversion chamber, then apply solvent weld glue and press it hard up inside the socket.
5. If you are attaching your First Flush Advanced to existing 90mm downpipes, install both 100x90mm socket in pipe reducer into the remaining First Flush Plus tee sockets. If you are attaching your First Flush Advanced to existing 100mm downpipes, the reducers are not required.
6. Measure your existing downpipe and cut to create space for the First Flush Plus tee. The outlet of your diverter must sit at least 150mm (5.9") 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 First Flush Plus T-junction 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 First Flush Plus tee.
7. Apply solvent weld glue to the end coupling socket and one end of your 100mm (4") diversion chamber pipe and insert it firmly into the end coupling.
8. Apply solvent weld glue to the socket of the ball seat and the other end of your 100mm diversion chamber pipe then insert it firmly into the socket and against the ball seat.
9. Attach to the wall using the supplied brackets, supporting the unit until it is fully secured. The upper bracket should sit directly under the First Flush Plus tee where it will hold the weight of the unit.
10. Place the ball inside your first flush chamber through the end coupling. Install the Primary Filter Screen, Transparent Rapid Release Exit Funnel, and Advanced Release Valve by following the instructions in Figure 2.

Figure 2  
**Installing and setting up the Advanced Release Valve**

2a. Insert the Primary Filter into the end of the First Flush chamber. It should fit snugly 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 Advanced 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.



2d. 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 Advanced 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 Advance 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 Advance 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 Advance 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	Recommended drain time setting	Approx. First Flush chamber size	
1 day	Very high	5 minutes	20 litres	5.3 gallons
2 days	Very high	10	40	10
3 days	High	20	80	20
4 days	Medium	30	120	30
5 days	Medium	45	180	50
1 week	Low	60	240	60
2 weeks	Very Low	75	300	80
4 weeks	Very Low	100	400	100
		125	500	130
		150	600	160

### DIVERSION CHAMBER SIZE

Determine the length of 100mm (4”) pipe required for your first flush diversion chamber. As a rough guide, 1 metre of 100mm (3ft of 4”) pipe holds approximately 8.8 litres (2.3 gallons) of water.

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## POLLUTION FACTORS

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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
<b>DIVERT 0.5L PER M<sup>2</sup></b> Open field, no trees, no bird droppings, clean environment	<b>DIVERT 2L PER M<sup>2</sup></b> 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
<b>M<sup>2</sup> ROOF AREA X POLLUTION FACTOR</b> = <b>LITRES TO BE DIVERTED</b>	
<b>Example for a minimal polluted roof of 100m<sup>2</sup></b> 100 x 0.5 = 50 Litres to be diverted	<b>Example for a heavily polluted roof of 100m<sup>2</sup></b> 100 x 2 = 200 Litres to be diverted

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## MAINTENANCE

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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.

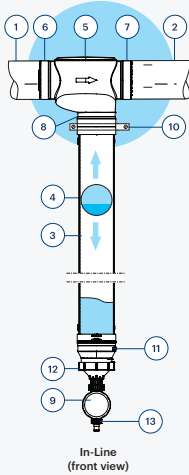
To ensure the flow of water out through your diverter's outlet, periodically check the transparent, rapid release exit funnel for any build-up of matter (Remove primary filter and clean if required).

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

To protect your Advanced 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.

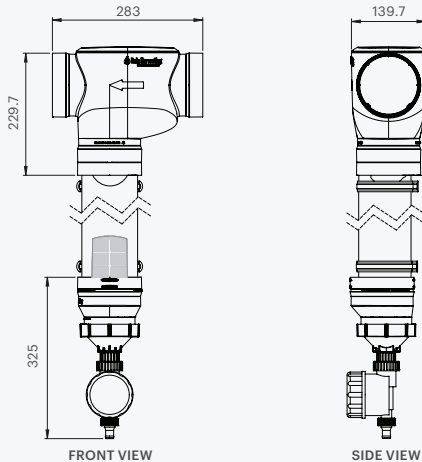
For best results and minimal maintenance, we recommend installing rain heads such as our Leaf Eater rain heads on all your downpipes to limit the volume and number of leaves and debris that reach your first flush diverter.

## REFERENCE CHART



1	In-feed from the roof	8	Ball seat
2	To the tank	9	Advanced Release Valve
3	Diverter Chamber	10	Pipe/Wall Brackets
4	Sealing Ball	11	End Coupling
5	First Flush Plus Tee	12	Transparent, Rapid Release Exit Funnel
6	Chamber Inlet	13	25mm x 20mm reducing adaptor
7	Chamber Outlet		

## PRODUCT DIMENSIONS



ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED.

### Pipe Fitment

WDDP20	DN100 F	Fits over 100mm pipe
WDDP220	80mm	Fits over 80mm pipe
WDDP120	4" SCH40	Fits over 40" SCH40 pipe

**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