

first flush™ DOWNSPOUT WATER DIVERTER

Product: Downspout First Flush Water Diverter

Code: 3" - WDDS99
4" - WDDS98

Prevents the first flush of rainwater, which may contain contaminants from the roof, from entering the tank.



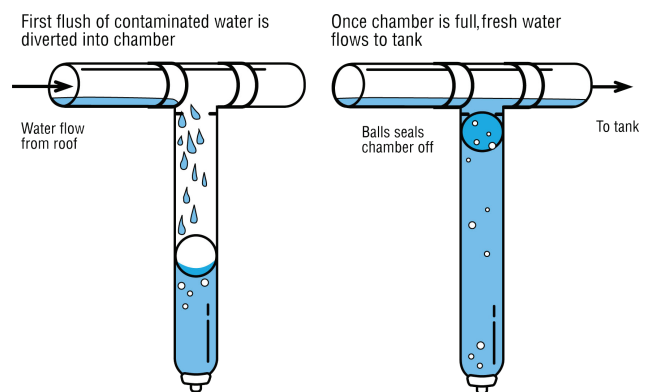
Product Description

Downspout First Flush Water Diverters improve water quality and reduce tank maintenance by preventing the first flush of water, which may contain roof contaminants, from entering the tank. They help ensure cleaner water is available for use, which protects rainwater pumps and internal household appliances such as clothes washing machines, toilets, hot water systems, etc.

Downspout First Flush Water Diverters, such as the 3" and 4" kits, are installed at each downspout that supplies water to the tank. They utilise a dependable ball and seat system - a simple automatic system that does not rely on mechanical parts or manual intervention. As the water level rises in the diverter chamber, the ball floats, and once the chamber is full, the ball rests on a seat inside the diverter chamber preventing any further water entering the diverter. The subsequent flow of water is then automatically directed along the pipe system to the tank.

Features and Benefits

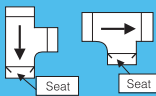
- Prevents sediment, bird droppings, spiders, insects, mosquito eggs and debris from entering the rainwater tank/cistern.
- Improves water quality, protects pumps and internal appliances.
- Ideal to use in conjunction with a rain head.
- Easy installation, just add pipe and glue.
- No mechanical parts.
- Low maintenance.



Installation

- Determine the length of Diverter Chamber #4.
Consider as a guide that each:
 - 3 foot section of 3" Schedule 40 PVC pipe holds approx. 1.5 gallons of water.
 - 3 foot section of 4" Schedule 40 PVC pipe holds approx. 2 gallons of water.
 Fit the longest length of pipe possible, making sure the Screw Cap #10 is at least 6" from the ground to allow for removal and cleaning.
- Place the ball Seat #9 into the Tee Junction #6 ensuring the narrow end of the ball seat points down into the Diverter Chamber #4. Apply glue to the Diverter Chamber #4 and fit up against the Ball Seat #9 and hold until the glue sets. (Optional: Use a 45° bend adaptor to allow easier removal of the Screw Cap #10). Glue the Socket #14 to the bottom end of the Diverter Chamber #4.

IMPORTANT: Insert the ball seat into the 'T' small end down into the chamber.



When the junction is fitted like this be sure to check that the flow from the roof is as shown.

- Fix the assembled chamber directly to the wall in the desired position using the Wall Brackets.
- Connect a Male & Female (M&F) Elbow #8b (if required) to the Chamber Outlet #8 and connect the downpipe #3. Fit an elbow to the InFeed pipe #2 (if required) and connect to the bottom of the selected rain head.
- Select the appropriate Flow Control Valve #11 and insert into the Hose Connector #16, making sure the valve is inserted with the side marked "TOP" still showing. Start by using the Control Washer with the smallest gauge hole (lowest number). Try a larger gauge Control Washer if experiencing blockages. Place the Filter Screen #13

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 – divert 0.0125 gallon per square feet of roof area
Open field, no trees, no bird droppings, clean environment.

Substantial Pollution – divert 0.05 gallon per square feet of roof area
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

Square Foot Roof Area X Pollution Factor = Gallons to be diverted.

Example for a minimal polluted roof of 1000 square feet
1000 square feet x 0.0125 = 12.5 gallons to be diverted.

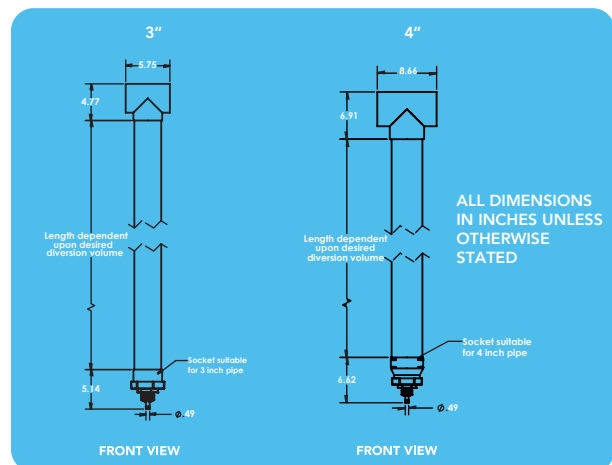
Example for a heavily polluted roof of 1000 square feet
1000 square feet x 0.5 = 500 gallons to be diverted.

into position from the outside of the Screw Cap #10 and then attach the Hose Connector #16.

An extra filter screen that helps stop the Control Valve blocking is available from your local store. Ask for the "Optional Stainless Steel Primary Screen" (Product Code: WDAC02). This filter is fitted in addition to the Plastic Filter Screen #13. To install: After completing step 5, insert the Keeper Ring #1a into the Screen Cap #10 and then place the Optional Stainless Steel Primary Screen on top of the Keeper Ring #1a. Proceed to step 6.

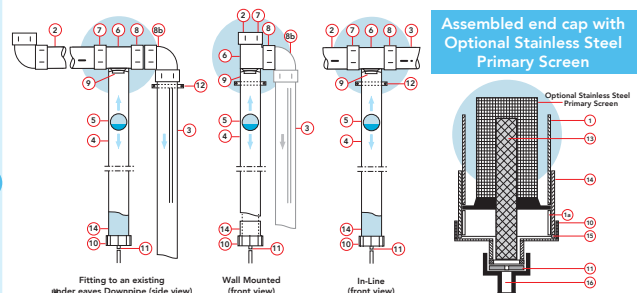
- Place the Sealing Ball #5 into the Diverter Chamber #4 and attach the assembled Screw Cap #10 to the Socket #14.

First Flush Water Diverters should be installed at each downspout that supplies water to the tank.



REFERENCE CHART

1	Diverter Chamber	5	Sealing Ball	11	Flow Control Valve
1a	Keeper Ring for Optional Stainless Steel Primary Screen	6	Tee Junction	12	Pipes/Wall Brackets
		7	Chamber inlet	13	Plastic Filter Screen
		8	Chamber outlet	14	Socket
2	In-feed from the roof	8b	Elbow	15	'O' Ring Seal
3	To the tank	9	Ball seat	16	Hose Connector
4	Diverter chamber	10	Screw cap		



Maintenance

Installing a rain head 'upstream' of the water diverter will significantly reduce maintenance. Periodically remove and clean the following components:

- #16 Hose Connector, #11 Flow Control Valve and #13 Plastic Filter Screen. Make sure the hole in the Control Valve is clear. If experiencing blockages of the Control Valve #11, select

a larger number Control Washer (different sized washers are provided), and order the "Optional Stainless Steel Primary Screen" (Product Code: WDAC02)

- #10 Screw Cap, #1 Optional Stainless Steel Primary Screen and #1a Keeper Ring

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.