

# Rain Harvesting Systems

Safer solutions for rainwater collection



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Safe solutions for the collection,

## 1 Spouting & Downpipes

Marley spouting systems and downpipes are key components in a Rain Harvesting System. Fit roof gutters and downpipes in compliance with Building Code E1 and Marley installation instructions. Ensure adequate fall is provided for and the correct number of downpipes are installed. Marley PVC spouting and downpipes do not rust, therefore metal contaminants from the gutter do not end up in water storage tank.



## 2 Leaf Diverters

Leaf and debris diversion rainheads should be fitted where water is captured for storage in tanks or as a debris removing device in urban areas. As the water flows from a gutter it brings the small pieces of debris with it. As water washes over the angle screen of the leaf diversion system the debris is forced away and the water continues through the screen.



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## 3 Downpipe Diverter

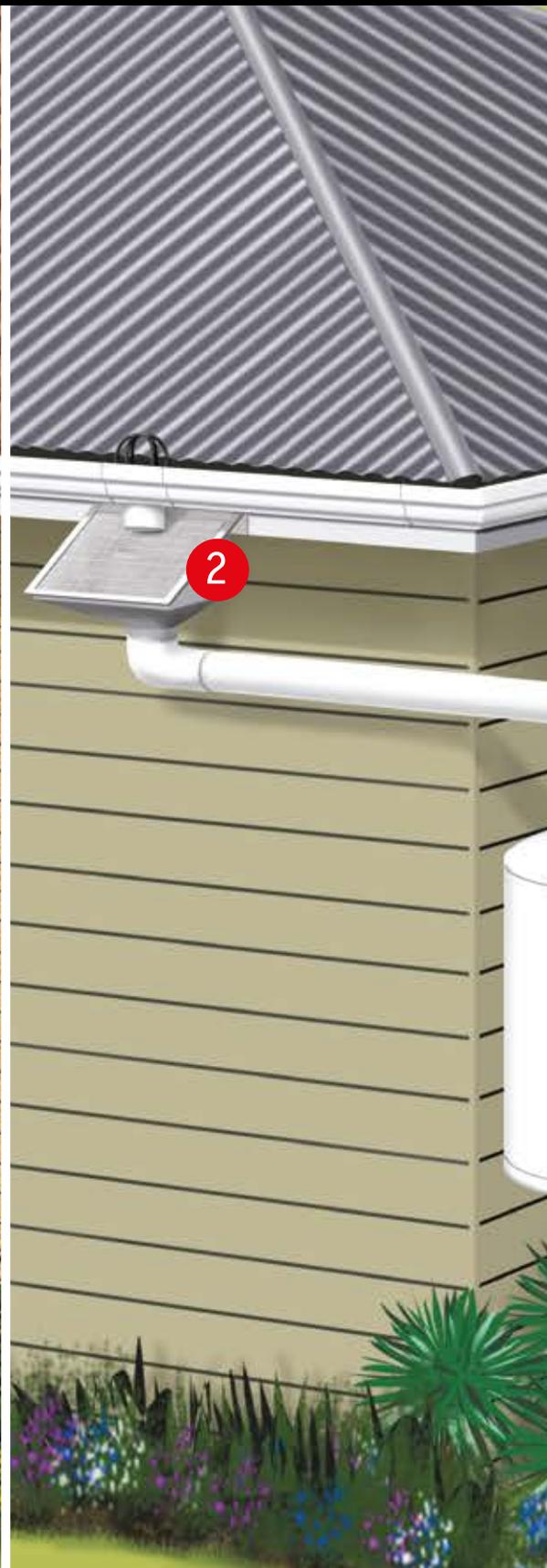
The Marley Downpipe Diverter can be installed easily to PVC downpipes allowing collection of fresh rainwater for tank filling, garden watering etc. to reduce dependence on town supply.



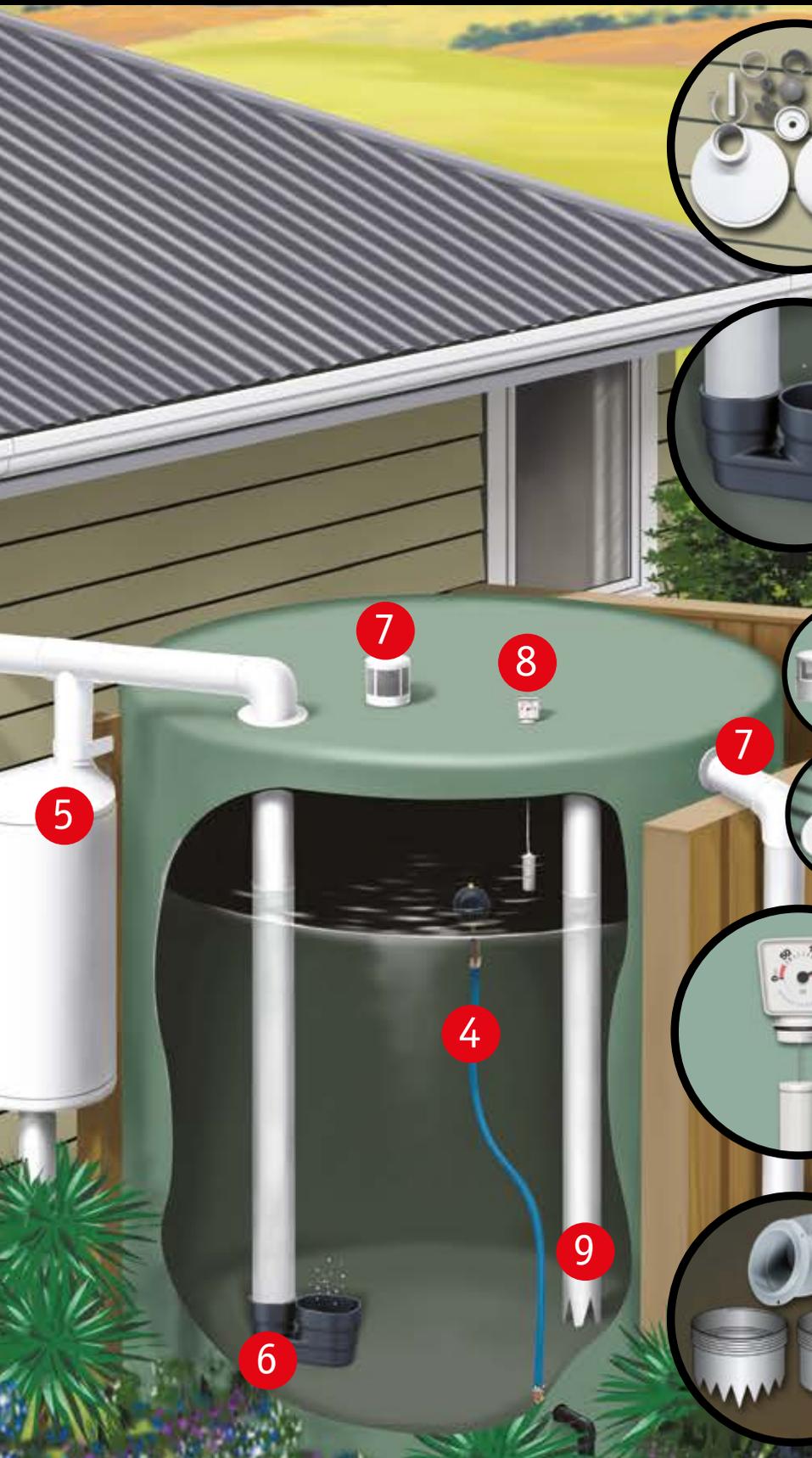
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## 4 Floating Out-take Kit

This is connected to the tank outlet to the house and ensures you are drawing the cleanest water in the tank. The Floating out-take floats inside the tank, suspended just below the water surface where the cleanest water lies.



# storage and distribution of rain water.



## 5 First Flush Diverter

The First Flush Diverter reduces pollution of tank water by diverting the first flush of contaminated water away from the tank.



## 6 Calmed Inlet

Provides a calmed inlet for rainwater entering the storage tank. The calmed Inlet avoids distributing sediment in the bottom of the tank.



## 7 Vent Cowls, Flap Valves & Overflow

Vent Cowls reduce the possibility of pressurising inside the tank allowing a flow of fresh air into the tank, so the water can breathe. Fitting insect proof flap valves and tank overflows to a storage tank ensures the tank is vented allowing air to circulate while protecting it from insects.



## 8 Tank Gauges

Used to measure water levels in the tank.



## 9 Tank Vacuum Kit

By fitting a Tank Vacuum Kit, when the tank fills up the overflow will be sucked from the bottom of the tank (from the "Anaerobic Zone" - dirty zone).

# Marley Rain Harvesting Products; safer solutions for the collection, storage and distribution of rain water.

## HOW SAFE IS THE WATER YOU ARE COLLECTING?

When collecting rainwater as a partial or total source for a water supply it is essential the design of the system meets the need for potable (safe drinking) water.

Water collected from a roof and stored and distributed from a water tank, can contain a nasty range of pollutants that can contaminate your water, for example bacteria from bird droppings, insects, rotting debris, airborne dusts (containing heavy metals).

The Marley Rain Harvesting System comprises of a number of unique and cost effective components that are designed to work with the Marley PVC range of spouting and downpipes to help make tank water as clean as possible. However, it is advisable to have your tank water analysed to check its potability.

## 7 STEPS TO RAIN HARVESTING POTABLE WATER;

1. Ensure the roof surface is suitable for collecting potable water
2. Ensure spouting is installed according to Building Code, allowing for adequate fall and installing suitable expansion outlets or gutter outlets to make certain water does not pond in the gutter
3. Install debris diverter rainheads with screens to direct leaf litter and larger debris items out of the flow of the water
4. Fit an appropriate sized first flush diverter, to divert the first most contaminated rain water from entering the tank
5. Attach tank overflows and vent flaps to tanks to ensure the tank is vented properly allowing air to circulate
6. Attach insect screens to rainheads and tanks to prevent insects and vermin entering the tank
7. To assist in cleaning the tank, install a tank vacuum kit to suck water from the bottom of the tank (anaerobic zone - dirty 'zone') when the tank is full to overflowing.

## RAIN HARVESTING SYSTEM COMPONENTS

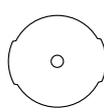
### Filtration and Diversion Products

	Leafslide Rainhead Urban Leafslide Available in copper/titanium <b>Code: RWLS, RWLS.COP, RWLS.TTN</b>		Leaf Catcher Rain Head 90/100mm Dual Fit <b>Code: RH8117</b>		Downpipe Diverter <b>Code: RWDD</b>
	Leaf Beater Rain Head 80/120mm <b>Code: RH8120</b>		Leaf Eater Rain Head 80/90mm Rainharvesting <b>Code: RH8119</b>		Outlet Strainer <b>Code: RWST</b>

### First Flush Diverter Products

	90/100mm Dual Fit First Flush Water Diverter Post or Wall KIT (Kit only add 300 diam pipe to suit volume required) <b>Code: RH8121-1</b>		90mm First Flush Water Diverter - Downpipe <b>Code: RH8119-5</b>
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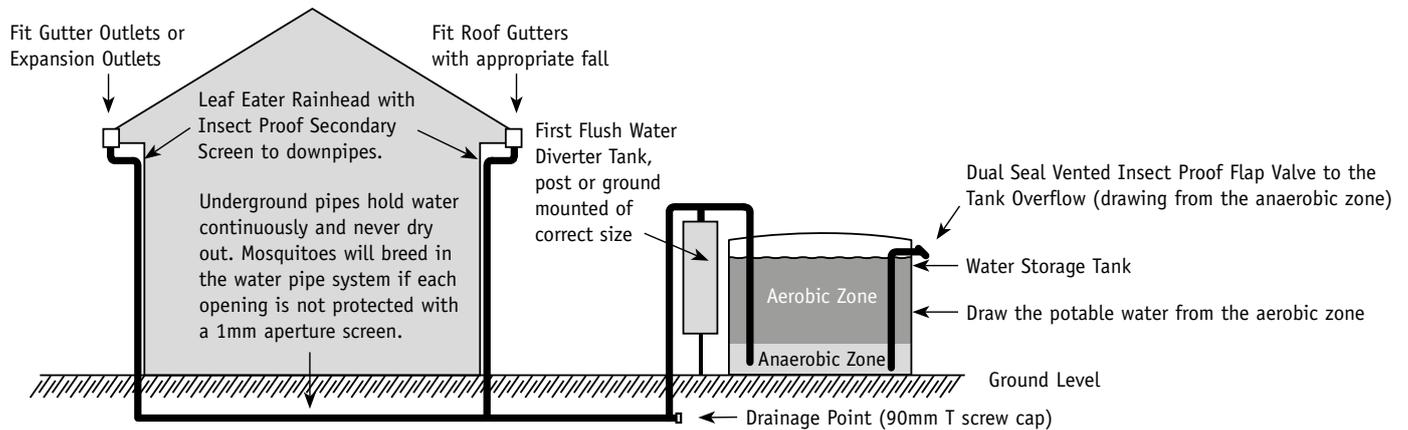
### Tank Improvement Products

	90mm diameter Insect Proof, Vented Flap Valve PVC/Stainless Steel <b>Code: RH8119-3</b>		Plain Tank Overflow Outlet 90mm X 90 degree bend M&F <b>Code: RH8124-2</b>		Floating Out-take Collar <b>Code: RHF0.C</b>		Tank Gauge <b>Code: RHMG</b>
	90mm 304 Stainless Steel M&F Insect Proof Screen (Fits RH8123, RH8124-1, RH 8124-2) <b>Code: RH8116</b>		50mm diameter Vent Cowl PVC & S/Steel Insect Proof Screen <b>Code: RH8119-9</b>		Floating Out-take <b>Code: RHF0</b>		
	Flanged Tank Overflow Outlet 90mm X 90 degree bend M&F <b>Code: RH8124-1</b>		90mm Tank Vacuum Kit - Poly/F-Glass/Flat wall Tank <b>Code: RHFVT90</b> Concrete Tanks <b>Code: RHCONTV90</b>		Calmed Inlet <b>Code: RHCI</b>		

Choosing the most suitable components for a rain harvesting system will be based upon whether the tank is set up as a wet or dry system.

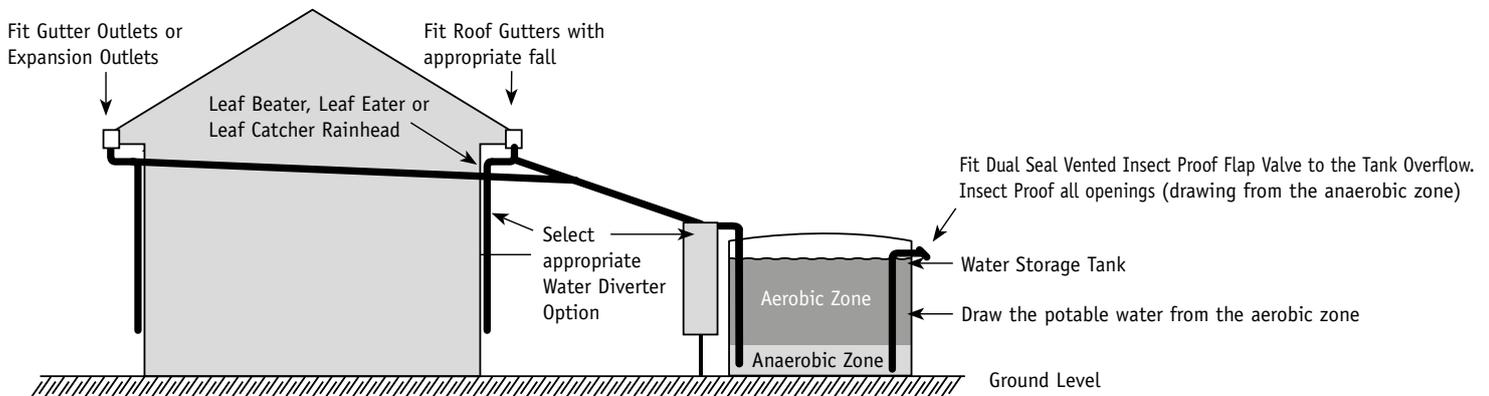
**A TYPICAL "WET" SYSTEM (syphonic system)**

A "Wet" System is a system where the pipes are fitted in such a way that when the rain stops the pipes to the tank do not drain out. They hold water. With this type of system, the pipes must be fitted with screens at each end to ensure that insects cannot enter and breed in the system. A "wet" system needs to be fitted with a First Flush Water Diverter at the tank, with a capacity equal to that of the pipes plus whatever amount is to be diverted from the roof. To lessen the amount of water to be diverted at the tank, a Downpipe First Flush Water Diverter can be fitted on the building to take the required first flush from the roof.



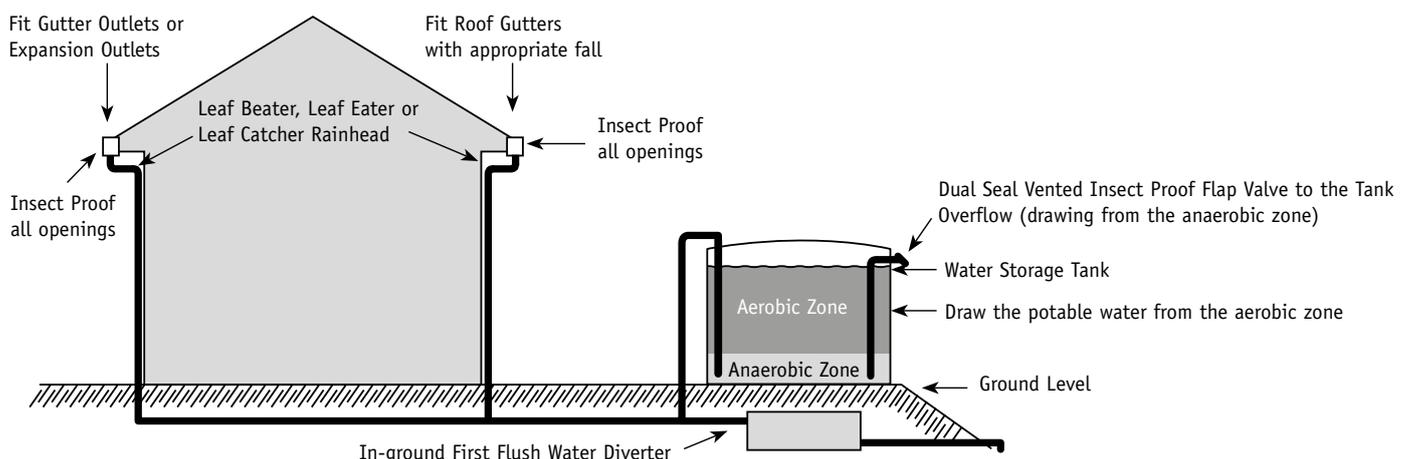
**A TYPICAL "DRY" SYSTEM**

A "Dry" System is a system where the pipes drain out and dry out after rain. A system where pipes do not hold water after the rain stops. Large buildings normally make it near impossible to have "dry" systems. For slightly sloping sites an In-Ground First Flush Water Diverter will turn a "wet" system into a "dry" system.



**A TYPICAL "WET" SYSTEM CONVERTED TO A "DRY" SYSTEM**

For slightly sloping sites an In-Ground First Flush Water Diverter will turn a "wet" system into a "dry" system.



Regular maintenance is extremely important. Clean rainhead and filter screens. Check to ensure that all insect proofing is in place and is effective. Check that the roof is free from overhanging branches and that there are no snags in the roof gutter.

## LEAF DIVERTERS

Leaf and debris diversion rainheads should be fitted where water is captured for storage in tanks or as a debris removing device in areas on reticulated water.

As the water flows from the spouting it brings the small pieces of debris with it and as water washes over the angle screen of the leaf diversion system the debris is forced away and the water continues through the screen.

### LEAF SLIDE



The leafslide has been designed for ease of installation. The filter box has anchor tabs provided for screwing or nailing it to the wall or fascia. The leafslide has a standard 90mm stormwater outlet which is easily adapted to fit Marley downpipe.

Best performance is achieved by using 65mm diameter downpipe above the filter screen.

**Dimensions** - 135mm in width, 145mm in depth, 282mm in height.

### LEAF EATER - for high rainfall areas



The ultimate high performance rainhead for use in heavy rainfall areas. Primary screen of 6mm aperture and an insect proof secondary stainless steel screen of 0.995mm.

To install mount the main box evenly under the gutter outlet or expansion outlet by securing it to the fascia with pop rivets or screws, making sure the backing plate fits snugly up to the bottom edge of the gutter but not between the fascia and back of the gutter.

Place the insect screen in the main box over the outlet ensuring that the screen clips into place. Replace the primary screen, making sure the screen fits inside the front lip of the Leaf Eater®, and secure in place with the clips provided. The Leaf Eater® is now ready for connection to the downpipe. Do not glue the Leaf Eater® to the down pipe. Secure downpipe with a screw for easy replacement.

**Dimensions** - 275mm in width, 188mm in depth, 289mm in height.

### LEAF BEATER - for low rainfall areas



A high performance rain head with a 4mm aperture adjustable elliptical primary screen. Sheds leaves from the gutter onto the ground. Comes complete with an integrated directional gutter outlet and an insect proof stainless steel low flow rate secondary screen. For midmounting remove the top directional outlet. Bevel the entry downpipe at 60° and allow 50mm clearance between the pipe and screen.

**Dimensions** - 211mm in width, 183mm in depth, 280mm in height.

### LEAF CATCHER - gutter or wall mounted



A budget leaf and debris catcher with two horizontal internal screens.  
Screen one: 6mm aperture screen  
Screen two: 0.955mm stainless steel insect proof screen.

Cleaning - Simply lift the screen out and empty and replace when cleaned. Perfect for low rain fall, low leaf areas where tank water is required. Fits both 90 and 100mm PVC pipe.

**Dimensions** - 210mm in length, 290mm wide and 190mm in depth.

### DOWNPIPE DIVERTER



The Marley Downpipe Diverter can be installed easily to Marley PVC downpipes allowing collection of fresh rainwater for tank filling, garden watering, etc. The Downpipe Diverter is especially useful for those wishing to reduce dependence on reticulated water. The Downpipe

Diverter should not be used in a 'wet system'.

**Dimensions** - 80mm pipe that can easily be adapted to fit all Marley downpipe profiles.

#### Installation Instructions

Cut a 320mm gap in the downpipe, join the Downpipe Diverter to the enclosed attachment. Attach the Diverter to the downpipe, starting at the top with the diverter offset slightly, then push up and across. Let the Diverter then slide down into the downpipe.

**To Use** - Simply lower the side arm and ensure it is clipped in and on a downwards slope.

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