

RAIN HARVESTING

by Blue Mountain Co

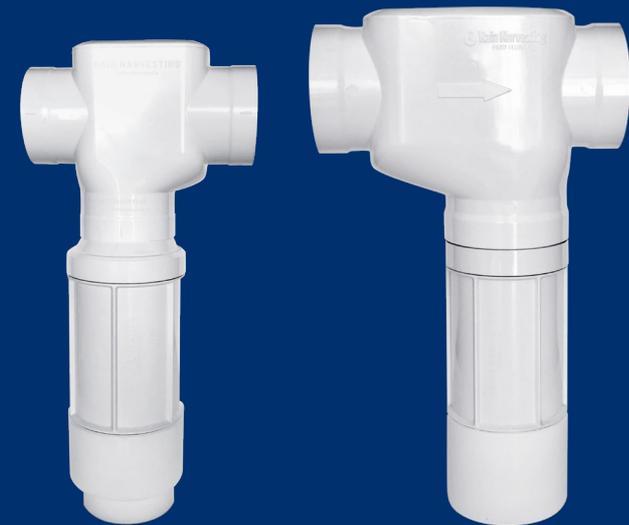
+61 (0)7 3248 9600

rainharvesting.com.au

RAIN HARVESTING

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First Flush Carrot



Installation and Specification Guide

PRODUCT DETAILS

The Carrot uses the First Flush Plus Tee to prevent dirty water from “skipping” over the First Flush unit and accidentally entering your rainwater tank.

The clever design of The Carrot means that you can install a First Flush device without the need for a traditional chamber. The Carrot resets itself after each rainfall event, giving you hassle-free peace of mind for capturing high-quality rainwater in your tank.

AU	WDDP31	100mm	USA	WDDP131	4”
AU	WDDP30	90mm	USA	WDDP130	3”
NZ	WDDP230	80mm			
SA	WDDP330	80mm			

FEATURES AND BENEFITS

- Diverts initial roof runoff rainwater containing particles of organic and inorganic matter.
- Patented First Flush Plus Tee prevents dirty water “skipping” over the traditional T-junction gap during heavy rainfall.
- Allows you to divert your First Flush without the need for a chamber.
- Adjustable settings let you choose how much water to divert and how often.

Installation

WHAT'S IN THE BOX?

- First Flush Plus tee
- Carrot housing
- Carrot Upper Collar with O-Ring
- Carrot Lower Slip Coupling
- Pipe wall brackets x 2
- Filling grommets (A & B)
- Draining grommets (0, 1, 2 & 3)
- Draining wick with grommet
- Wick blanking grommet
- Carrot spring
- Carrot seal
- Carrot flow diffuser
- Carrot
- Carrot filler frame

TOOLS/MATERIALS YOU MAY REQUIRE

- Tape measure
- Marker pen
- Saw
- Solvent weld glue
- Screws
- Drill or screwdriver

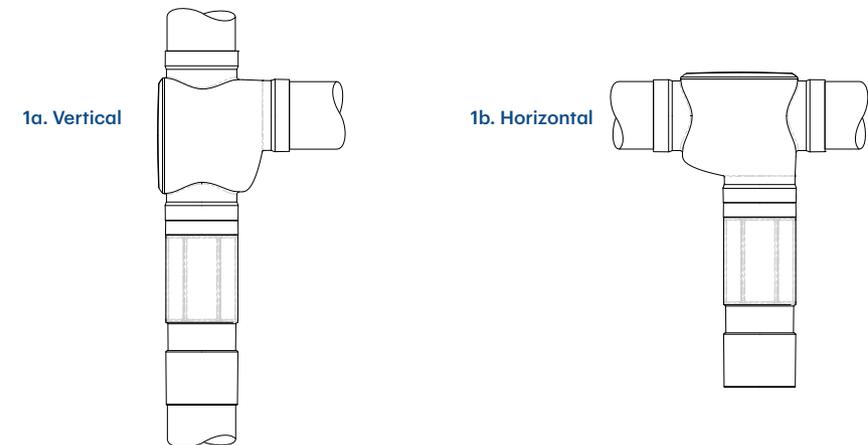
FIRST FLUSH CARROT 100MM

1. Your carrot will come pre assembled out of the box with Filling grommet A installed on the Carrot Filler Frame, and Draining grommet 2 installed on the Carrot. The Wick blanking grommet will be installed as standard. This default setup is a good starting off point to reliably divert an average amount of water with a longer reset time.
2. Determine the installation location for your Carrot First Flush Diverter. The First Flush Plus tee can be installed in the horizontal or vertical orientation to suit your installation. Note however that the Carrot Diverter Chamber itself must be installed in a vertical orientation.
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 Carrot.
Example: If you're installing your First Flush Carrot into a horizontal pipe, the arrow marking the direction of water flow should be oriented in the direction of flow (see Figure 1b). For installations using the tee in vertical positions, always ensure the arrow is pointed 'up' (see Figure 1a).
4. Measure your existing downpipe and cut to create space for the First Flush Plus tee. Ensure all cut edges are clean and smooth. Install your First Flush Plus tee in place by applying solvent weld glue to the incoming and outgoing sockets and pipe. Leave the lower socket for now. Insert the pipe into the incoming and outgoing sockets at either end of the First Flush Plus tee.
5. Apply solvent weld glue to the Carrot Upper Collar and the lower socket of your First Flush Plus Tee and insert it firmly in place.
6. Make sure the o-ring is located in the groove on the underside of the Upper Collar and screw the Carrot housing into position.
7. Slide the Carrot Lower Slip Coupling onto the outlet of the Carrot housing and install the

remaining pipework as required. Note that the First Flush Carrot will divert the first flush of water down this pipe, so routing this pipework to stormwater or another suitable location is necessary.

8. 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.
9. We recommend that for the first rainfall event you keep the default Filling and Draining grommets installed (Filling grommet A and Draining grommet 2). Once you have assessed the performance of the Carrot in your rainwater harvesting system, adjust the grommets to suit. Refer to the table in this guide for more information.

Figure 1
Suggested Installation Orientations



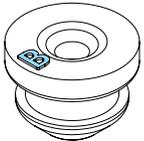
FIRST FLUSH CARROT 90MM

1. Your carrot will come pre assembled out of the box with Filling grommet A installed on the Carrot Filler Frame, and Draining grommet 2 installed on the Carrot. The Wick blanking grommet will be installed as standard. This default setup is a good starting off point to reliably divert an average amount of water with a longer reset time.
2. Determine the installation location for your Carrot First Flush Diverter. The First Flush Plus tee can be installed in the horizontal or vertical orientation to suit your installation (see Figure 1). Note however that the Carrot Diverter Chamber itself must be installed in a vertical orientation.
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 Carrot Diverter Chamber.
Example: If you're installing your First Flush Carrot into a horizontal pipe, the arrow marking the direction of water flow should be oriented in the direction of flow (see Figure 1b). For installations using the tee in vertical positions, always ensure the arrow is pointed 'up' (see Figure 1a).

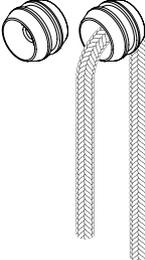
- Measure your existing downpipe and cut to create space for the First Flush Plus tee. Ensure all cut edges are clean and smooth. Install your First Flush Plus tee in place by applying solvent weld glue to the incoming and outgoing sockets and pipe. Leave the lower socket for now. Insert the pipe into the incoming and outgoing sockets at either end of the First Flush Plus tee.
- Apply solvent weld glue to the Carrot Upper Collar and the lower socket of your First Flush Plus Tee and insert it firmly in place. Make sure that the line on the top face of the Upper Collar is pointing away from the wall so that there is enough room to install and remove the Carrot Diverter Chamber
- Make sure the o-ring is located in the groove on the underside of the Upper Collar and screw the Carrot housing into position
- Slide the Carrot Lower Slip Coupling onto the outlet of the Carrot housing and install the remaining pipework as required. Note that the First Flush Carrot will divert the first flush of water down this pipe, so routing this pipework to stormwater or another suitable location is necessary.
- 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.
- We recommend that for the first rainfall event you keep the default Filling and Draining grommets installed (Filling grommet A and Draining grommet 2). Once you have assessed the performance of the Carrot in your rainwater harvesting system, adjust the grommets to suit. Refer to the table in this guide for more information.

FLUSHING GUIDELINES

How to choose your Filling Grommet

	Filling Grommet	
	A	B
		
Amount of dirty water diverted	More water diverted	Less water diverted

How to choose your Draining Grommet

	Draining Grommet				
	Wicking Grommet	0	1	2	3
					
First Flush reset frequency	Longest reset	Long reset	Medium	Quick reset	Quick reset
Amount of dirty water diverted	Least water diverted	Less water diverted	Medium	More water diverted	More water diverted
Maintenance frequency	Most regular maintenance	More regular maintenance	Medium	Less regular maintenance	Less regular maintenance

Should I choose the Wicking grommet?

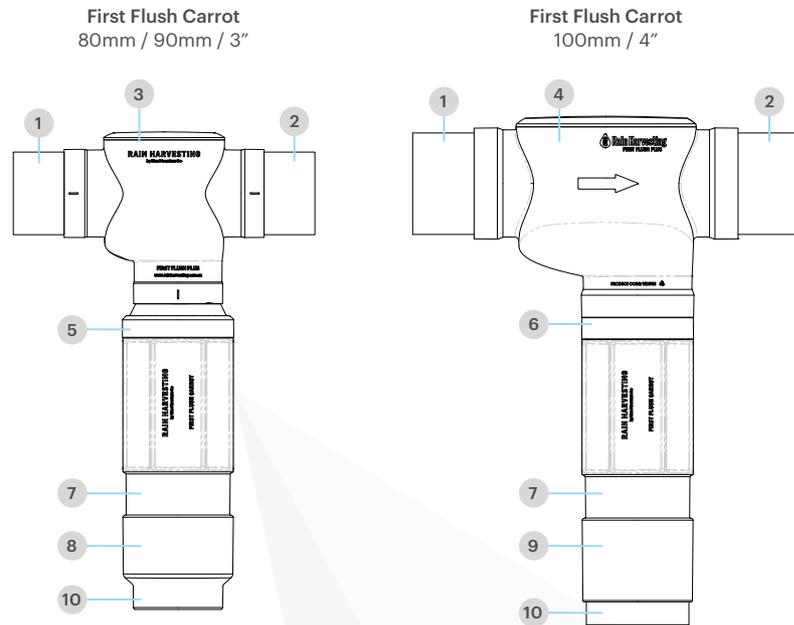
If you have very low rainfall intensities, the wicking grommet will provide the longest reset time, ensuring that you capture the most water possible. It will require more maintenance than the draining grommets (which is simple by just washing the wick out occasionally).

Examples:

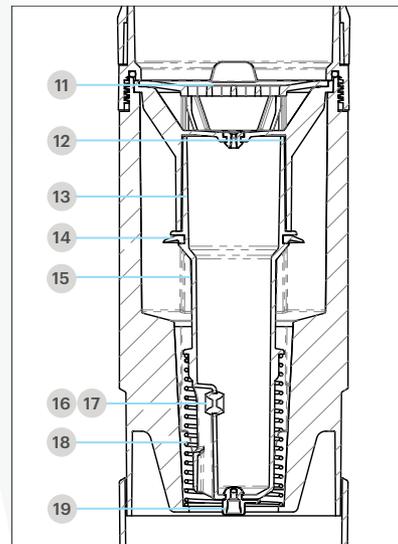
- You would use filling grommet B with Draining wick with Draining grommet 0 for very low rainfall intensity where you want to capture as much water as possible
- You would use filling grommet A with Draining grommet 3 for high rainfall intensity on a roof that has high pollution. However this setup would be less suitable for low intensity rainfall as the Carrot may continue to flush water for the entire rain event

NOTE: Some combinations of filling grommet and draining grommet are less compatible with typical rainfall events than others.

REFERENCE CHART



- 1 In-feed from the roof
- 2 To the tank
- 3 90mm First Flush Plus Tee
- 4 100mm First Flush Plus Tee
- 5 90mm Carrot Upper Collar with O-Ring
- 6 100mm Carrot Upper Collar with O-Ring
- 7 Carrot housing
- 8 90mm Carrot Lower Slip Coupling
- 9 100mm Carrot Lower Slip Coupling
- 10 To stormwater
- 11 Carrot Flow Diffuser
- 12 Filling Grommet
- 13 Carrot Filler Frame
- 14 Carrot Seal
- 15 Carrot
- 16 Draining Wick with Grommet
- 17 Wick Blanking Grommet
- 18 Carrot Spring
- 19 Draining Grommets



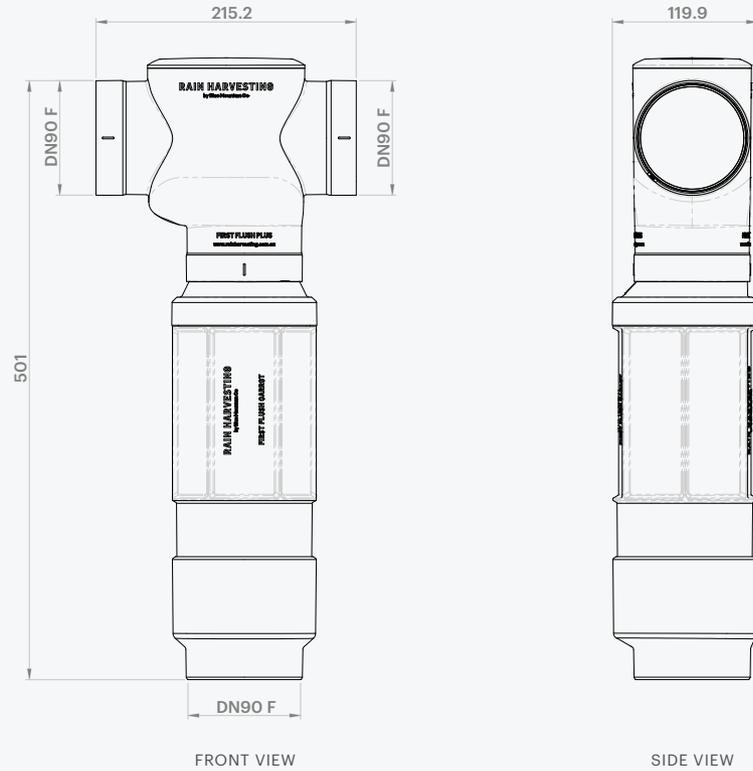
MAINTENANCE

It is important to periodically unscrew the Carrot housing and check the unit is functioning properly. Check that both the Filling Grommet and Draining Grommet have not become blocked. Also check that the spring is functioning correctly and all the internal seals are seated properly.

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.

PRODUCT DIMENSIONS

First Flush Carrot
80mm / 90mm / 3"



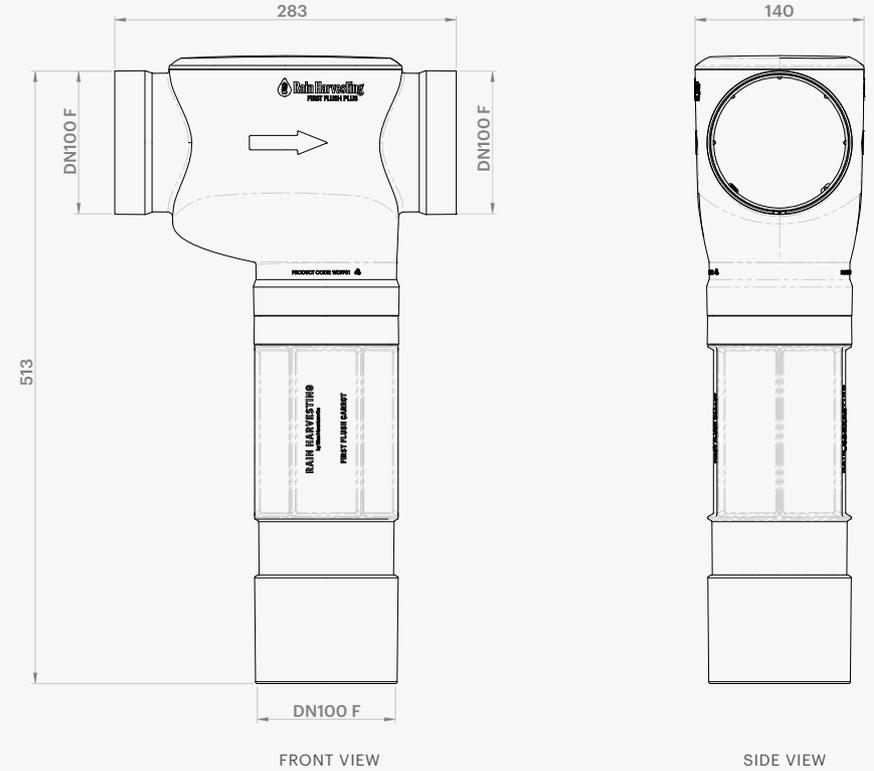
ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED.

Pipe Fitment

WDDP30	DN90 F	Fits with 90mm pipe
WDDP130	3" F	Fits with 3" SCH40 & SDR35
WDDP230 WDDP330	80mm F	Fits with 80mm pipe

PRODUCT DIMENSIONS

First Flush Carrot
100mm / 4"



ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED.

Pipe Fitment

WDDP31	DN100 F	Fits with 100mm pipe
WDDP131	4" F	Fits with 4" SCH40 & SDR35