

NEW

# Rainwater Roof Outlets

## The simple solution to flat roof drainage



### Introduction

The Marley roof outlets are three-piece components manufactured in uPVC and consist of a funnel shaped body, clamping ring and grating. Marley flat roof outlets are the logical design choice when considering roof drainage in commercial, domestic and industrial applications. They are also suitable for roof balconies. They are easy to install and compatible with most types of roofing materials - including Butynol, Rubber & PVC Membranes, Fibreglass Resin Systems, Bituminous Felts and Hot Asphalt.

The outlet features an integral, ribbed clamping ring and a pre-drilled flange for quick, secure anchorage.

The grating design offers efficient filtering and is easily removed for cleaning and maintenance.

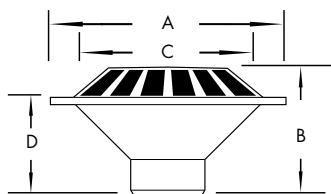
The roof outlets are durable, lightweight and offer highly efficient flat roof drainage. Working on the rainfall intensity of 75mm per hour, a single 150mm size outlet, for example, can drain a roof area of up to 515m<sup>2</sup>(10.72 litres per second).

### Benefits

- Compatible with most flat roofing materials, including Butynol, Rubber & PVC Membranes, Fibreglass Resin Systems and Bituminous Felts.
- Quick and easy to install.
- Non corrosive and maintenance free.
- Positively clamps membrane.
- Reliable seal.
- Large opening to easily dress in membranes.

### Product Details

Size	Code	Colour	A	B	C	D
100mm	RV369	Grey	280	157	214	122
150mm	RV482	Grey	380	170	250	148



### Roof Outlet Drainage Data

Maximum roof area that can be drained by one outlet (with or without box gutter)

Normal Outlet Size	100mm		150mm	
	75	100	75	100
Average Rainfall Intensity (ARI)	75	100	75	100
Max depth of flow at edge of outlet	m <sup>2</sup>			
35mm	380	260	515	350
32mm	330	225	440	300
25mm	230	160	310	210
19mm	150	100	200	140
13mm	85	60	95	65

Note: These values are based upon:

- Rainfall intensity of 75mm per hour (Typically Wellington & Christchurch)
- Rainfall intensity of 100 mm per hour (Typically Auckland)
- Absence of abutting vertical walls rising above roof level

# Rainwater Roof Outlets

The Marley Rainwater Roof Outlets are quick and easy to install and offer highly efficient flat roof drainage.

## Installation Instructions

1. Check the appropriate size and the number of outlets required are correct for the roof area.
2. Ensure the roof has suitable fall to the outlets.
3. Cut an appropriate shape hole to give full support to the sloping sides of the body and flange. Recess the flange to minimize ponding.
4. Fit the outlet to the roof making sure the spigot is vertical.
5. Screw firmly in place using 38mm No 8 Stainless Screws.
6. Ensure the outlet is positively connected to the downpipe.
7. All roofs and balconies should be designed with suitable overflow devices in the event of a blockage of the roof outlet.

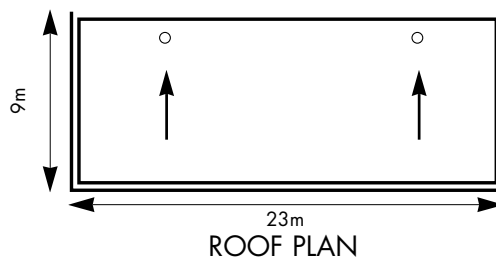
NB: It is important to prevent upthrust of the vertical rainwater pipe due to thermal movement from breaking the joint between the outlet and roof finish. Thermal movement can be accommodated by anchoring a push-fit socket with a socket bracket and allowing a 10mm expansion gap between spigot end and socket depth. A maximum of 4m between expansion joints should be allowed for. It may be necessary to provide a warning pipe to indicate blockage on internal rainwater systems.

## General Membrane Installation Detail

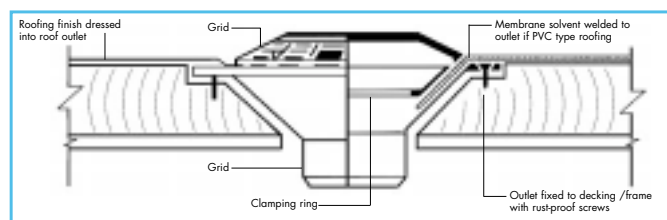
1. Fit Marley roof outlet as per installation instructions above.
2. Remove grating and clamping ring.
3. Seal flange to roof area with a lapping tape and adhesive/sealant to give a 50mm cover.
4. The roof membrane should be neatly dressed right down the sloping sides of the outlet into the pipe.
5. Apply sealant/adhesive before final fitting of the membrane to the outlet.
6. Fit retainer clamping ring and screw down firmly to clamp roof membrane.
7. Finish coating the roof membrane as required right into the outlet.
8. Re fix grating into position with fixing bolts.

## Typical Site Work Detail

To determine Marley Roof Outlet and downpipe sizes for flat roofs, the following example illustrates the use of the drainage data table:



1. Both the NZBC E1 and AS/NZS3500.3 should be used in designing the performance requirements of the outlets.
2. Calculate roof area:  $23 \times 9 = 207$  sq.m.
3. Determine the ARI for the location of the building.
4. Determine the gradient of the roof to the outlet to establish outlet capacity.
5. Consult table and select outlet size appropriate to roof area, ARI and Gradient. It is more advantageous to have more than one unit as the safety due to blockage is markedly improved.
6. From the design required check outlet positions and drain size to service roof drains:



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