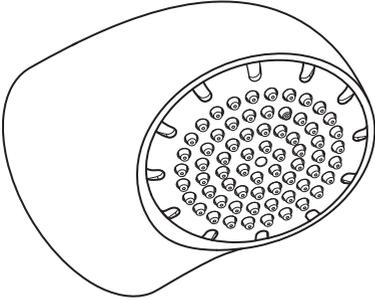
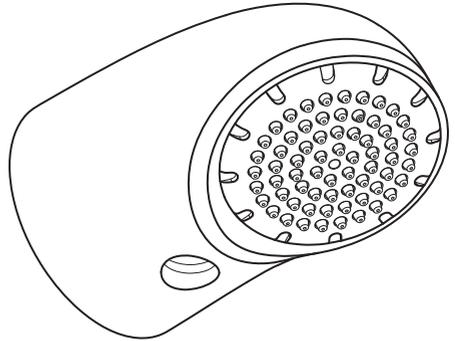


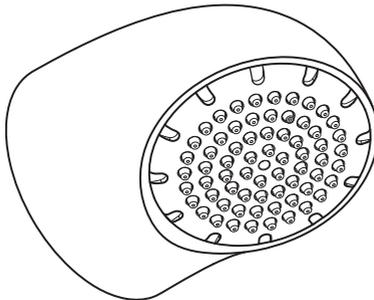
Vandal Resistant Fittings VR105 RC, VR145 RC, VR106 RC



VR105 RC



VR145 RC



VR106 RC

Installation Guide

Please leave these instructions with the user.



INTRODUCTION

The Rada Vandal Resistant (VR) range of shower fittings are suitable for single or multiple shower installations.

DESCRIPTION

A range of vandal resistant shower fittings to suit rear or rising pipework configurations. Rub clean (RC) spray nozzles to enable user removal of deposits during normal use. The entire spray plate assembly can be removed (tool supplied) to allow deeper cleaning and to access stainless steel filter.

A 9 L/min flow regulator for high system pressure or a passive flow restrictor for lower system pressures is incorporated in the shower fitting as standard. A 6 L/min regulator for system pressures more than 1.5 bar is also available as an option.

VR105 RC	Vandal resistant shower fitting with rub clean spray nozzles. Fitted with 9 L/min flow regulator. For connection to concealed pipework with 1/2" BSP fittings
VR106 RC	As VR105 RC, fitted with a 6 L/min flow regulator.
VR145 RC	Vandal resistant shower fitting with rub clean spray nozzles. Fitted with 9 L/min flow regulator. For connection to rising surface pipework, 15mm

SAFETY : WARNINGS

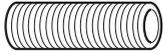
Rada products are precision engineered and should give continued superior and safe performance, provided:

1. They are installed, commissioned, operated and maintained in accordance with the recommendations given in this Manual.
2. Periodic attention is given, as necessary, to maintain the product in good functional order. Recommended guidelines are given in section: **'Maintenance'**.

PACK CONTENTS

Examine the contents of the pack and tick the appropriate boxes to familiarise yourself with the part names and to confirm that all parts are included.

VR105 RC / VR106 RC



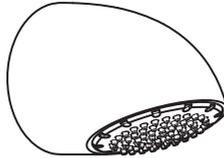
1 x 1/2 " BSP Nipple



1 x Hole Plug



1 x 'O' Ring



1 x Shower Fitting



2 x Wall Plugs



2 x Fixing Screws



1 x 2.5 mm Hexagonal Wrench



1 x 3 mm Hexagonal Wrench

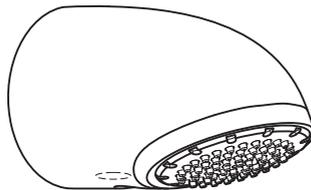


1 x Spray Plate Removal Tool

VR145 RC



1 x 'O' Ring



1 x Shower Fitting



2 x Wall Plugs



2 x Fixing Screws



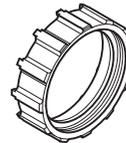
1 x Hole Plug



1 x 2.5 mm Hexagonal Wrench



1 x 3 mm Hexagonal Wrench



1 x Spray Plate Removal Tool

SPECIFICATION

Important Points:

1. The installation, commissioning and maintenance of this product must be carried out in accordance with instructions given in this Manual, and must be conducted by designated, qualified and competent personnel.
2. Installations must comply with **all** Local/National Water Regulations/Bye-laws (Scotland), Building and Plumbing Regulations.
3. Rada products are precision engineered and should give continued superior and safe performance, provided:
 - They are installed, commissioned, operated and maintained in accordance with these recommendations.
 - Periodic attention is given as necessary to maintain the product in good functional order. Recommended guidelines are given in the **MAINTENANCE** section.
4. **Warning!** Continued use of this product in conditions outside the limits listed in this section can severely affect the performance and reduce the effective service life, and can present potential risk to users.
5. **Disinfectants:** In applications where periodic system chemical disinfection is practised, chlorine can be used (calculated chlorine concentration of 50 mg/l [ppm] maximum in water, per one hour dwell time), at service interval frequency. Some chemical solutions can cause severe damage to plating, plastics and rubber and such procedures must be conducted strictly in accordance with the information supplied with the disinfectant and with all relevant Guidelines/ Approved Codes of Practice. If in any doubt as to the suitability of chemical solutions, refer to Kohler Mira Limited, or Local Agent.

Normal Operating Conditions:

- Daily usage of 1 - 6 hours.
- Installation and usage environment not subject to extremes of temperature, unauthorised tampering or wilful abuse.

Temperature Range: Designed to accept water supplied between 5°C - 65°C.

Pressure Range: Recommended minimum maintained pressure at the inlet of the fitting 0.1 bar. Maximum maintained pressure at the inlet of the fitting 5.0 bar (with flow regulator fitted).

Spray Performance: Minimum flow rate necessary to achieve a fully formed spray pattern is 6.0 L/min.

Installation Height: Recommended Showering Installation Height is 2 metres above the floor surface.

Connections:

VR105 RC and VR106 RC: 1/2" BSP parallel nipple (BS2779).

VR145 RC: Socket with 'O' seal to accept 15 mm pipe (push fit, bottom entry).

Composition/Manufacture: All materials are corrosion resistant

Spray Body: Brass, polished chrome finish

Mounting Bush/Inlet Nipple: Brass

Spray Plate Assembly: Engineering plastic and TPE Rubber nozzles

Flow Regulator: Engineering plastic

Strainer: Stainless steel

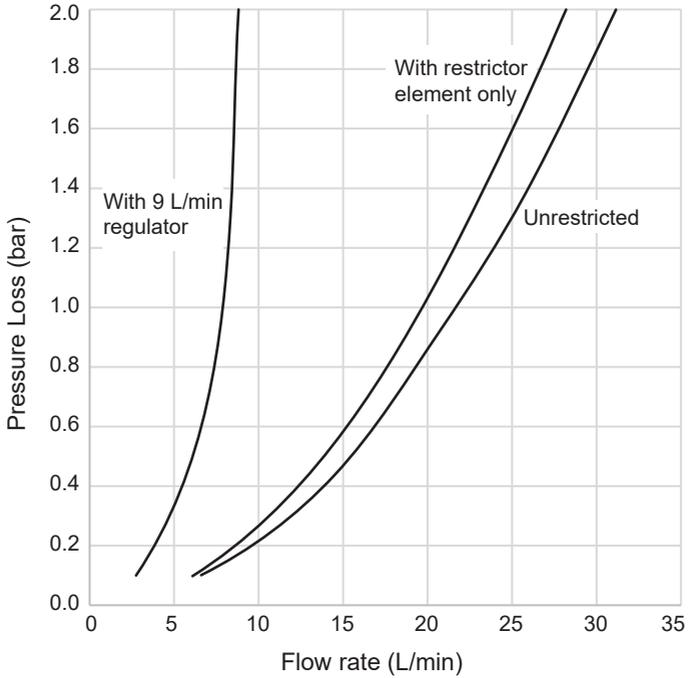
Rada Pipe: 15 mm x 700 mm stainless steel. (Optional extra)

'O' Seal: EPDM

All screws in contact with water are stainless steel.

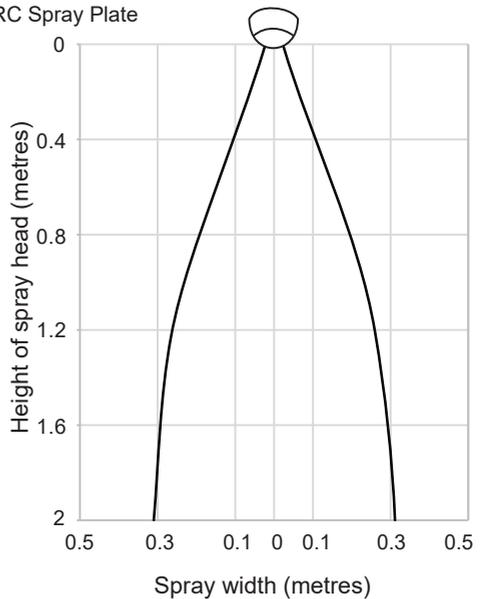
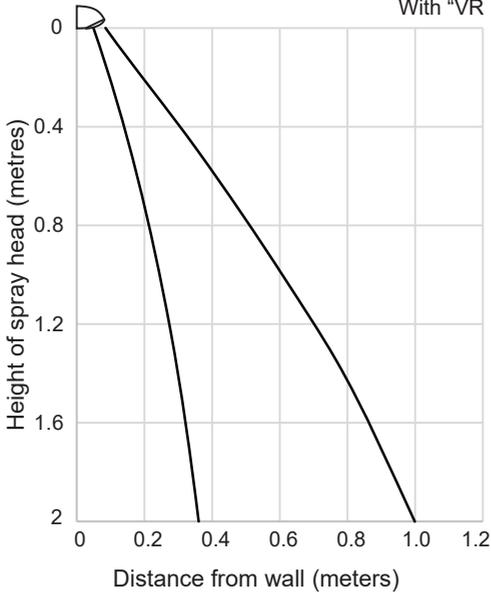
Pressure Loss/Flow Rate Curves

With "VR RC Spray Plate



Spray Patterns at 9 L/min

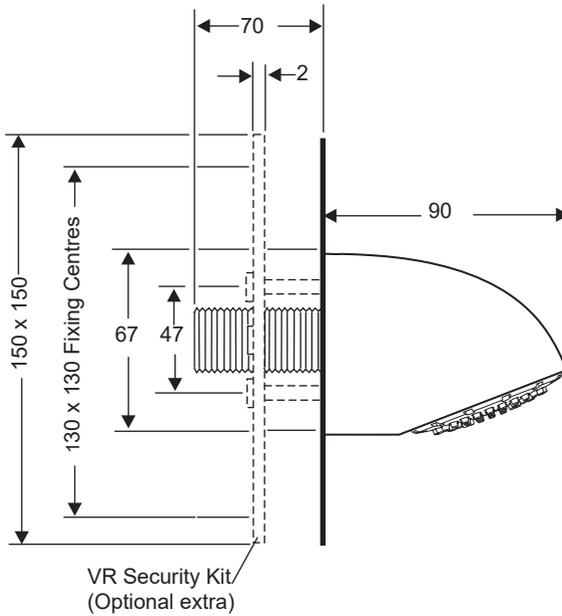
With "VR RC Spray Plate



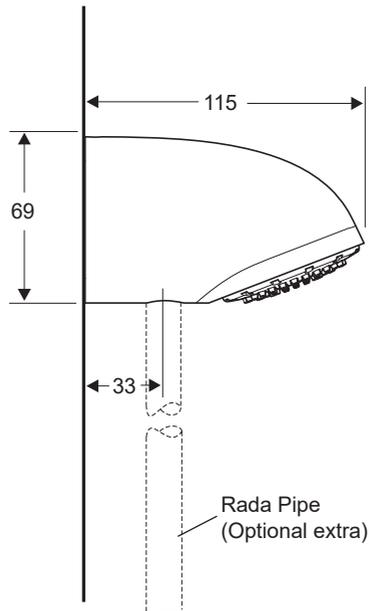
DIMENSIONS

VR105 RC

VR106 RC



VR145 RC



All dimensions in millimetres

INSTALLATION

General

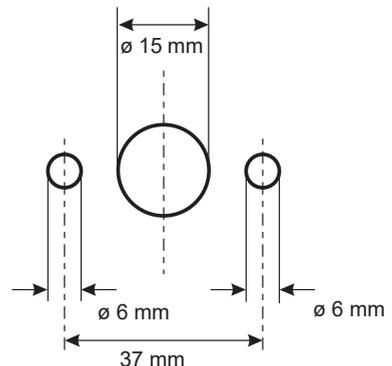
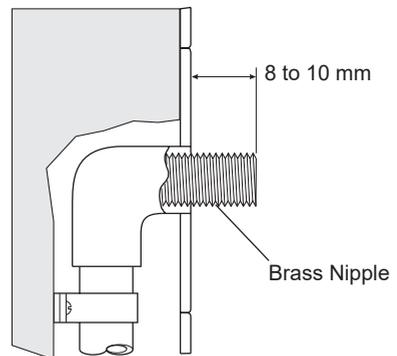
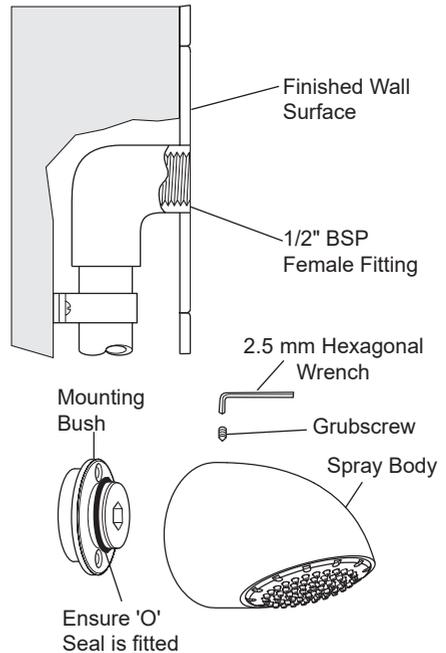
Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

1. Supply pipes must be flushed to clear debris before connecting the shower fittings. Layout and sizing of pipework must be such that when other services are used, pressures do not fall below the recommended minimum at the shower head causing the spray pattern to collapse.
2. Avoid a position in which the product could become frozen.
3. **DO NOT** fit any form of flow control in the outlet pipework if the shower fitting is installed in conjunction with a product that requires the fitting to act as a vent (e.g. an electric shower).
4. **DO NOT** use excessive force when making connections.
5. Maintained pressures above 2 bar at the shower head, could result in excessive spray forces.
6. All models have a mounting bush, which is secured to the wall with two screws (wall plugs and screws provided, suitable for standard masonry). The spray body is retained on the mounting bush by a recessed hexagon-drive grubscrew (Hexagonal Wrench supplied).
7. The VR shower fitting may be bolted through the mounting bush onto the VR Security Kit (optional), which is mounted within the wall or behind a panel, for extra mounting security.

VR105 RC / VR106 RC

1. The supply pipe from the shower control must terminate at the wall surface with a 1/2" BSP female thread. The end of the fitting must be flush with, or below the finished surface of the wall.
2. Undo the grub screw on the spray body with the 2.5 mm hexagonal wrench supplied, and remove the mounting bush.
3. Screw the brass nipple into the female fitting, until it projects between 8 and 10 mm from the finished surface of the wall. If necessary, cut the brass nipple to the correct length and remove any burrs.
4. Screw the mounting bush onto the brass nipple until the back of the mounting bush is flush with the wall.
5. Mark the position of the two fixing holes and remove both the mounting bush and the brass nipple.
6. Drill the two fixing holes and fit the wall plugs supplied.

Warning! Before drilling make sure there is no pipework or cabling in the wall behind the marked hole positions.
7. Apply liquid sealant or PTFE tape to the 1/2" BSP brass nipple. **Do not use paste.**
8. Screw the brass nipple back into the female fitting.
9. Screw the mounting bush onto the brass nipple using a 12 mm A/F hexagonal wrench (not supplied) and secure it with the fixing screws provided.
10. Check the 'O' seal is fitted to the mounting bush.
11. Fit the spray body to the mounting bush and secure with the grub screw.
12. If necessary fit the hole plug.



VR145 RC

1. Undo the grub screw on the spray body with the 2.5 mm hexagonal wrench provided, and remove the mounting bush.

2. Place the mounting bush on the wall and mark the fixing hole positions.

3. Drill the fixing holes and fit the wall plugs supplied.

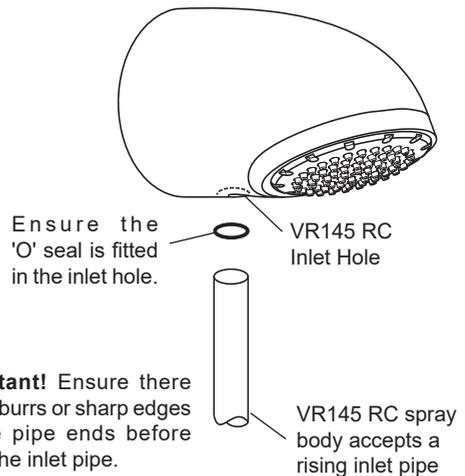
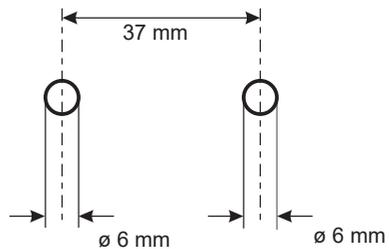
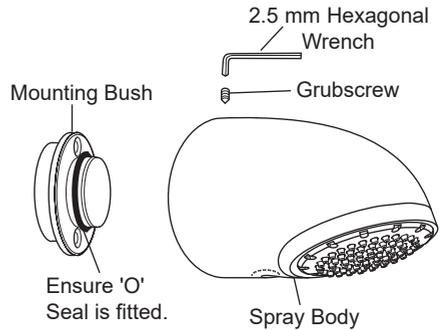
Warning! Before drilling make sure there is no pipework or cabling in the wall behind the marked hole positions.

4. Secure the mounting bush to the wall.

5. Ensure the 'O' seal is fitted to the mounting bush. Fit the spray body to the mounting bush and secure with the grub screw.

6. Check the 'O' seal is fitted in the spray body inlet hole.

7. Ensure there are no burrs or sharp edges on the ends of the 15 mm inlet pipe and fit the inlet pipe to the spray body. The pipe should not be inserted more than 40 mm into the spray body



MAINTENANCE

General

Rada products are precision engineered and should give continued superior and safe performance, provided:

1. They are installed, commissioned, operated and maintained in accordance with our recommendations
2. Periodic attention is given as necessary to maintain the product in good functional order.

Maintenance

Maintenance must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

External surfaces may be wiped clean with a soft cloth and, if necessary, a mild washing-up type detergent or soap solution can be used.

Warning! Many household and industrial cleaning products contain mild abrasives and chemical concentrates, and should **not** be used on polished, chromed or plastic surfaces.

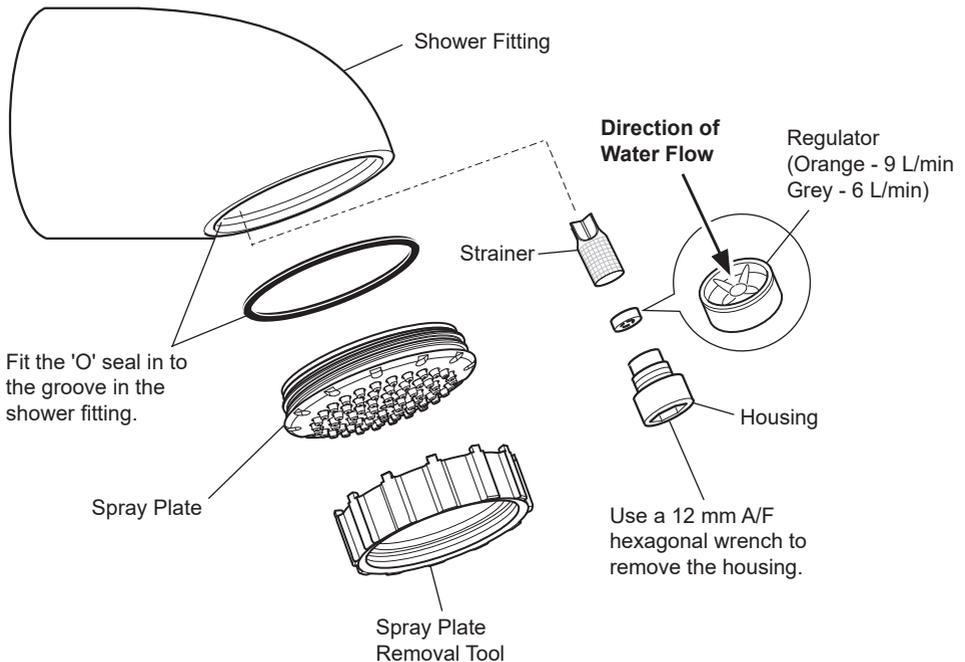
Use only silicone based lubricants with this product.

All models include a removable mesh strainer which protects the flow regulator and spray plate from debris. This will need periodic cleaning, dependent upon the cleanliness of the supplies. The spray cartridges are removable for cleaning (for extra security, the fixed spray plate can only be removed using the Hexagonal Wrench provided), and will require periodic descaling, dependent upon the hardness of the water supplies.

Refer to section: '**Spare Parts**' to order any spare parts.

Procedure to change or remove the flow regulator

1. Using removal tool, align the drive features with those in the spray plate and unscrew in an anticlockwise direction.
2. Use a 12 mm A/F hexagonal wrench (not supplied) and unscrew and remove the flow regulator from the shower fitting (refer to illustration).
3. Remove or replace the flexible flow regulator.
4. Assemble the restrictor/strainer and spray plate in the reverse order of removal.
Note: Fit the 'O' seal in to the groove in the shower fitting and **NOT** on to the spray plate.

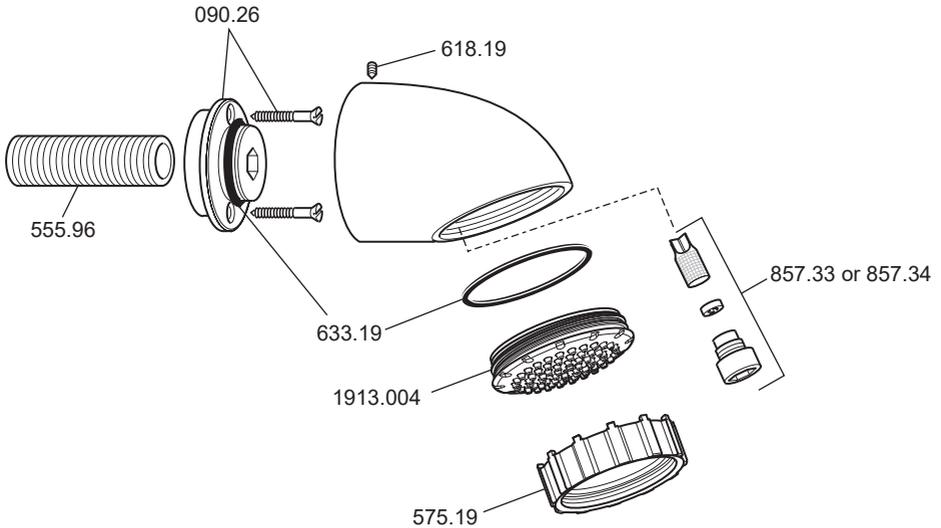


Remove Flow Regulator

SPARE PARTS

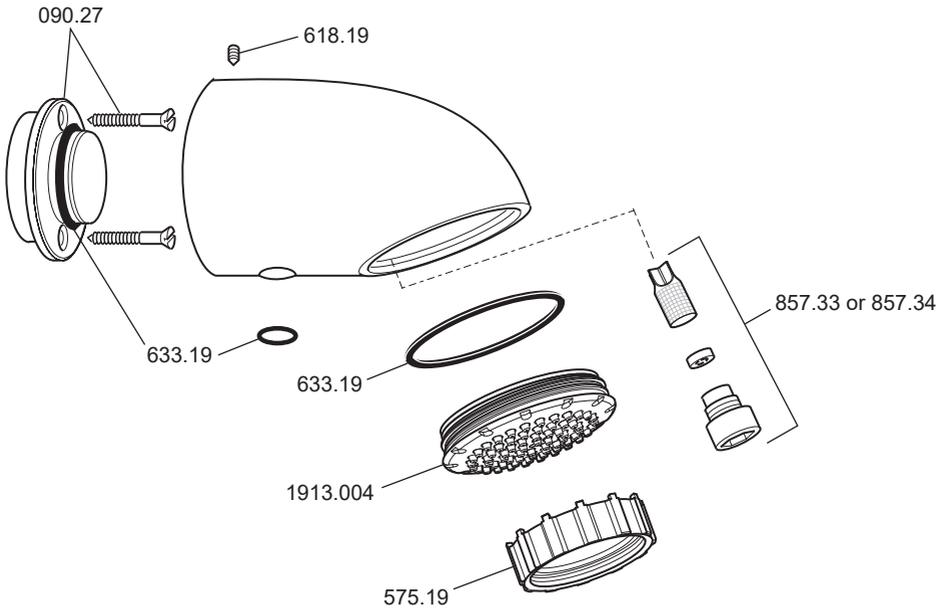
1. VR105 RC / VR106 RC

857.33	9 L/min Flow Regulator Assembly (with orange restrictor)
857.34	6 L/min Flow Regulator Assembly (with grey restrictor)
090.26	Mounting Bush
618.19	Grub Screw
633.19	VR 'O' Seal Pack
1913.004	SP - Spray Plate Assembly
555.96	Nipple
575.19	Spray Plate Removal Tool



2. VR145 RC

- 857.33 9 L/min Flow Regulator Assembly (with orange restrictor)
- 857.34 6 L/min Flow Regulator Assembly (with grey restrictor)
- 090.27 Mounting Bush
- 618.19 Grub Screw
- 633.19 VR 'O' Seal Pack
- 1913.004 SP - Spray Plate Assembly
- 575.19 Spray Plate Removal Tool



NOTES

CUSTOMER CARE

Customer Services Guarantee

Your product has the benefit of Rada's comprehensive parts and labour manufacturer's guarantee which commences from date of purchase. Full guarantee terms and conditions can be found at www.radacontrols.com or contact your in region Rada representative or sales agent for further details.

Contact Us

If your product is not working correctly please refer to this manual for fault diagnosis and to check that it is installed and commissioned in accordance with our instructions. If this does not resolve the issue, then please contact our specialist teams who will be happy to help.

For UK based customers support please contact Rada Customer Services

T: + 44 (0)344 571 1777 Please note: UK calls cost 7p per minute plus your phone company's access charge

E: RadaCustomerServices@RadaControls.com

www.radacontrols.com

For customers based in the Republic of Ireland please contact our Rada Service agent

T: + 353 (0) 1 531 9337

E: CustomerServiceEire@mirashowers.com

For customers based in all other geographical regions please get in touch with your local Rada representative or agent whose contact details can be found by visiting our website www.radacontrols.com/en/contact-us/find-a-partner

Services

Our UK Rada Customer Service Team can provide **pre-specification** information as well as details on the **UK Rada product Commissioning Service and Maintenance Service Plans** whilst our nationwide team of field-based technicians are here to help if you need a **Reactive Service Call**. We stock a full range of Rada spare parts and fittings which can be purchased over the telephone.

Note! Regional services do vary please speak to your Rada representative or Sales agent for information on service provisions provided in your area.

Rada is a registered trade mark of Kohler Mira Limited.

The company reserves the right to alter product specifications without notice.

Registered Office:
Cromwell Road,
Cheltenham,
Gloucestershire
GL52 5EP

EU Importer address
K/E S.A.S.
3 rue de Brennus,
93631, La Plaine Saint-Denis,
France

