

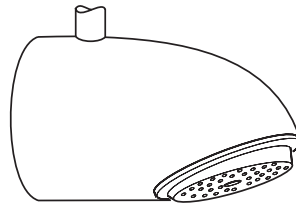
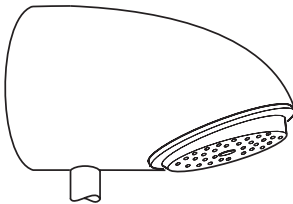
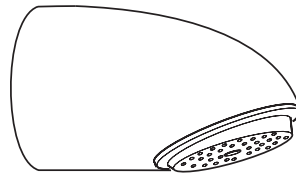
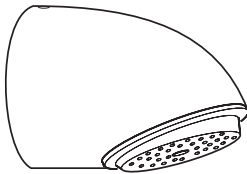
rada

CONTROLS

VANDAL RESISTANT FITTINGS

VR105, VR125, VR145
(VR106, VR115 Export only)

PRODUCT MANUAL



IMPORTANT

Installer: This Manual is the property of the customer and must be retained with the product for maintenance and operational purposes.

INDEX

	Page
INTRODUCTION	3
DESCRIPTION	3
SAFETY WARNINGS	3
PACK CONTENTS	4
SPECIFICATION	
Important Points	5
Normal Operating Conditions	5
Pressure Loss/Flow Rate Curves	7
DIMENSIONS	8
INSTALLATION	
General	9
VR105/VR106	9
VR115	11
VR125/VR145	12
MAINTENANCE	
General	14
Maintenance	14
Procedure - Changing or Removing the Flow Regulator	14
SPARE PARTS	16
ACCESSORIES	18
CONTACTS	19
CUSTOMER CARE	Back Cover

INTRODUCTION

The Rada Vandal Resistant (VR) range of shower fittings are suitable for single or multiple shower installations. The VR125 may also be used for foot wash applications.

DESCRIPTION

A range of vandal resistant shower fittings to suit all pipework configurations. Adjustable spray, hard water and high performance cartridges are available as accessories.

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 Vandal resistant shower fitting with fixed spray plate (spray angle can be set at 18.5° or 24.5° from vertical). For connection to **concealed** pipework with 1/2" BSP fittings.
(Export only)

VR106 Vandal resistant shower fitting with fixed spray plate (spray angle can be set at 18.5° or 24.5° from vertical). For connection to **concealed** pipework with 1/2" BSP fittings. Fitted with a 6 l/min flow regulator.
(Export only)

VR115 Vandal resistant shower fitting with fixed spray plate (spray angle can be set at 18.5° or 24.5° from vertical). For connection to **concealed** pipework with 15 mm compression fittings.

VR125 Vandal resistant shower fitting with fixed spray plate (spray angle can be set at 18.5° or 24.5° from vertical). For connection to **falling** surface pipework.

VR145 Vandal resistant shower fitting with fixed spray plate (spray angle can be set at 18.5° or 24.5° from vertical). For connection to **rising** surface pipework.

SAFETY : WARNINGS

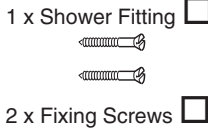
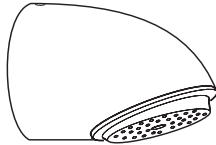
Rada products are precision engineered and should give continued superior and safe performance, provided:

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 the **MAINTENANCE** section.

PACK CONTENTS

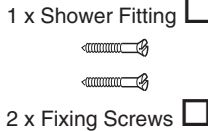
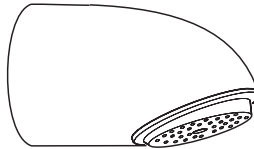
4 Examine the contents of the pack and tick the appropriate boxes to familiarise yourself with the part names and to confirm that all parts are included.

VR105/VR106

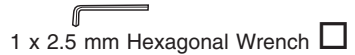
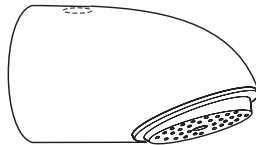
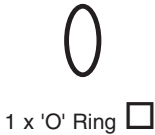


(VR105 only)

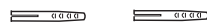
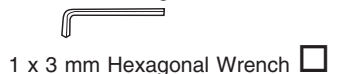
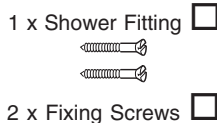
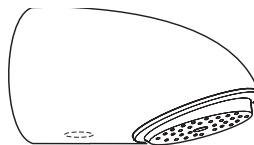
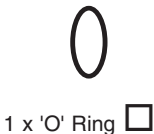
VR115



VR125



VR145



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 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. 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 are considered as:

- 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.

Connections: **VR105/VR106:** 1/2" BSP parallel nipple (BS2779).

VR115: 15 mm compression.

VR125: Socket with 'O' seal to accept 15 mm pipe
(push fit, top entry).

VR145: 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 Cartridges: Engineering plastic.

Flow Regulator: Engineering plastic.

Strainer: Stainless steel.

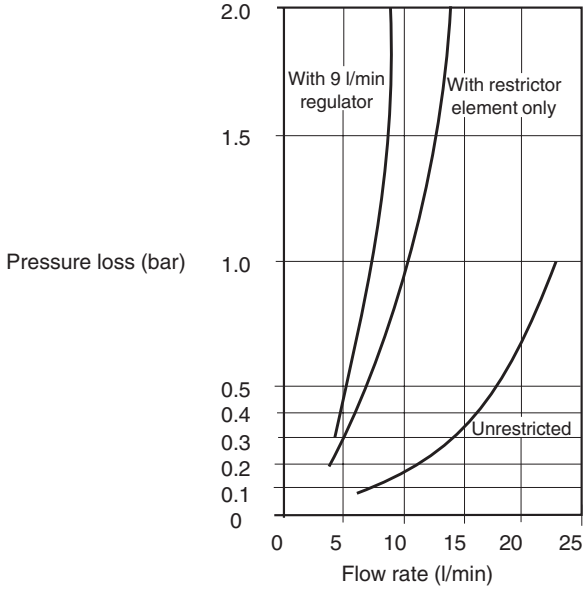
VR Security Kit: Plated mild steel. (Optional extra).

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

All screws in contact with water are stainless steel.

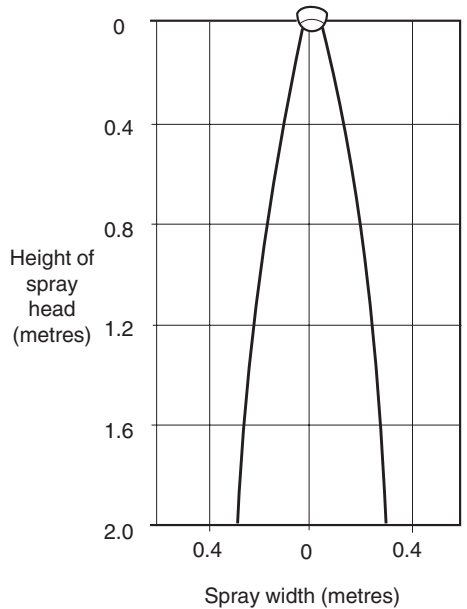
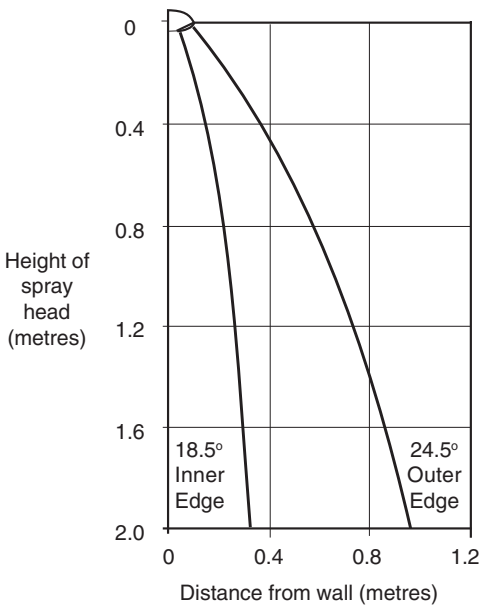
Pressure Loss/Flow Rate Curves

With 'VR' spray plate



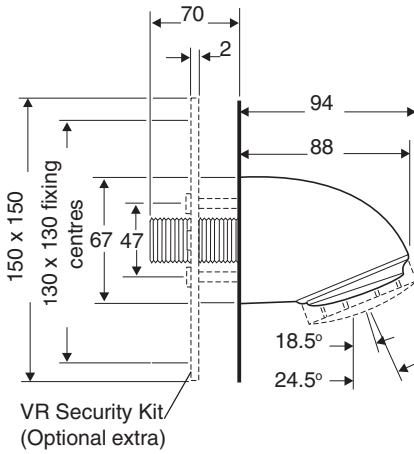
Spray Patterns at 9 l/min

VR105 with 'VR' spray plate

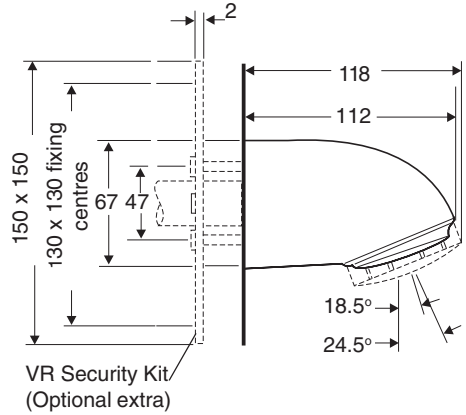


DIMENSIONS

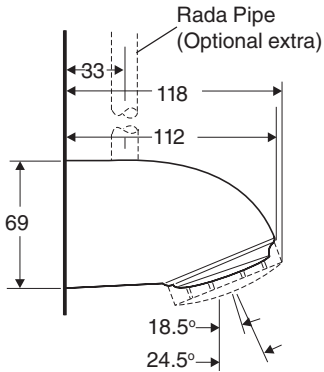
VR105/VR106



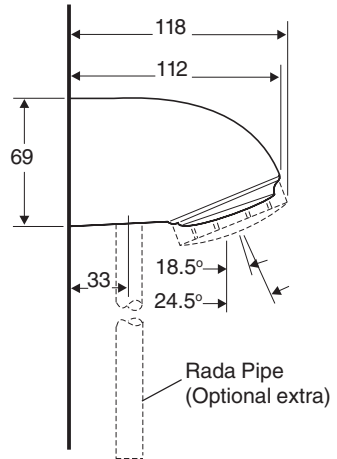
VR115



VR125



VR145



All dimensions in millimetres

INSTALLATION

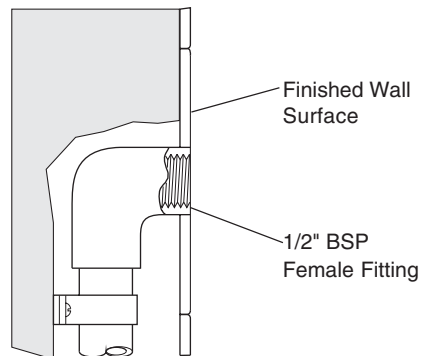
General

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

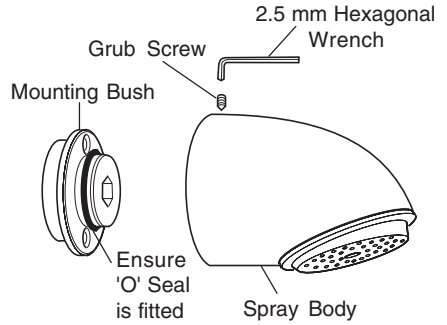
1. Supply pipes must be flushed to clear debris before connecting the shower fittings. Layout and sizing of pipework must be such that when other services are used, pressures do not fall below the recommended minimum at the shower head causing the spray pattern to collapse.
2. Avoid a position in which 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/VR106

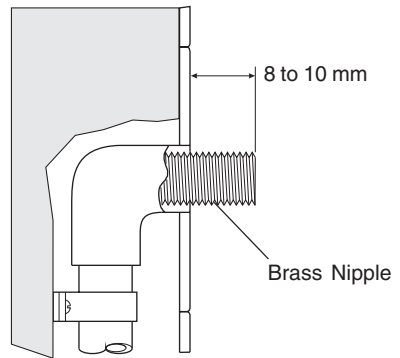
1. The supply pipe from the shower control must terminate at the wall surface with a 1/2" BSP female thread. The end of the fitting must be flush with, or below the finished surface of the wall.



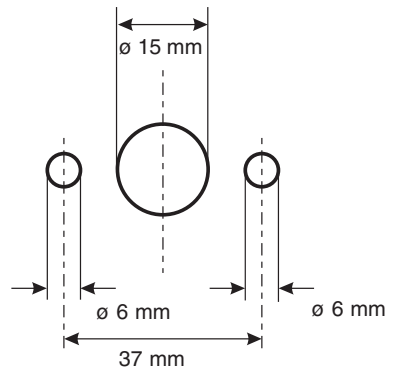
- Undo the grub screw on the spray body with the 2.5 mm hexagonal wrench supplied, and remove the mounting bush.



- 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.
- Screw the mounting bush onto the brass nipple until the back of the mounting bush is flush with the wall.



- Mark the position of the two fixing holes.
- Remove both the mounting bush and the brass nipple.
- Drill the two fixing holes and fit the wall plugs supplied.



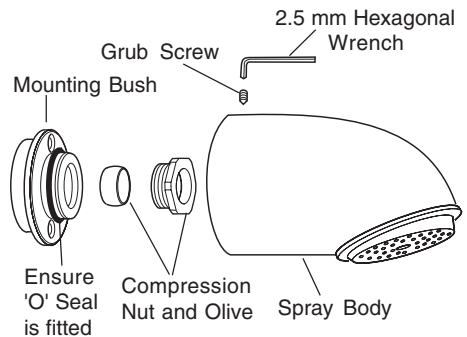
Warning! Before drilling make sure there is no pipework or cabling in the wall behind the marked hole positions.

- Apply liquid sealant or PTFE tape to the 1/2" BSP brass nipple. **Do not use paste.**
- Screw the brass nipple back into the female fitting.

10. 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.
11. Check the 'O' seal is fitted to the mounting bush.
12. Fit the spray body to the mounting bush and secure with the grub screw.
13. If necessary fit the hole plug.

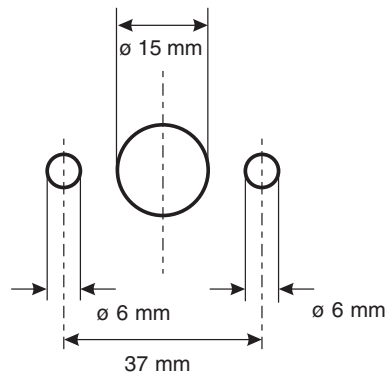
VR115

1. The VR115 fits directly onto a 15 mm pipe projecting through the wall. Ensure this inlet pipe extends 15 mm to 40 mm from the finished wall surface. Remove any burrs from the end of the pipe.
2. Undo the grub screw on the spray body with the 2.5 mm hexagonal wrench supplied, and remove the mounting bush.
3. Undo the compression nut and olive.



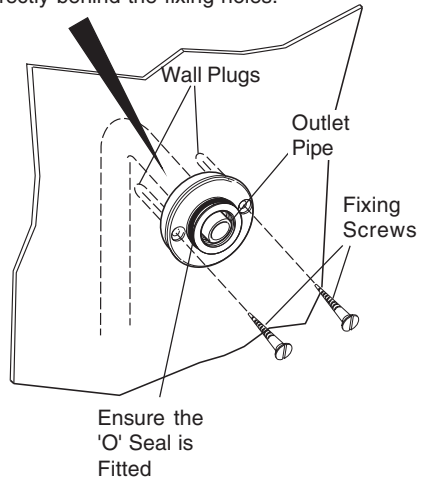
4. Slide the mounting bush on to the pipe and mark the position of the fixing holes.
5. Remove the mounting bush and drill the two fixing holes. Fit the wall plugs supplied.

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



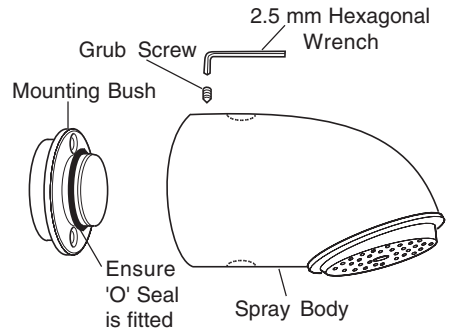
6. Secure the mounting bush to the wall.
7. Slide the olive and compression nut over the inlet pipe and screw the compression nut to the mounting bush. Ensure the 'O' seal is fitted to the mounting bush.
8. Fit the spray body to the mounting bush and secure with the grub screw.

Warning! Ensure there is no pipework or cabling in the wall directly behind the fixing holes.

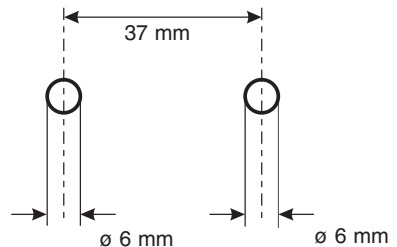


VR125/VR145

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

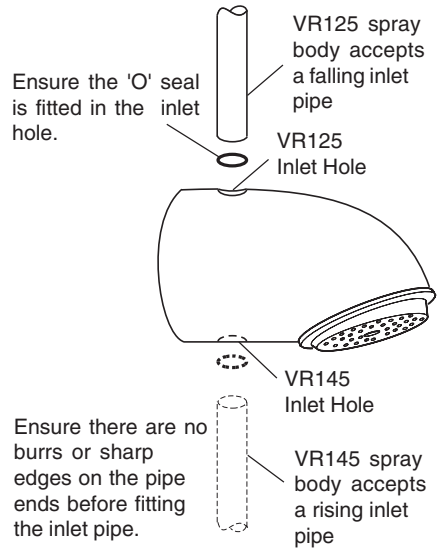


2. Place the mounting bush on the wall and mark the fixing hole positions.
3. Drill the fixing holes and fit the wall plugs supplied.



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.

When ordering spare parts, please state product type, i.e. Rada VR105, 106, 115, 125 or 145 shower fitting and identify part name and number. Refer to the **SPARE PARTS** section.

Procedure - Changing or Removing the Flow Regulator

1. Use the 3 mm A/F Hexagonal Wrench (supplied) with the fitting and remove the screw at the centre of the spray plate, remove the spray plate. If the 300R or 400R spray cartridge is used, remove the cartridge by turning fully anticlockwise. If the 310R spray cartridge is used, pull off the plastic retaining trim and turn the cartridge fully anticlockwise.
2. Use a 12 mm A/F Hexagonal Wrench (not supplied) and unscrew and remove the flow regulator from the shower fitting (refer to Figure 1).

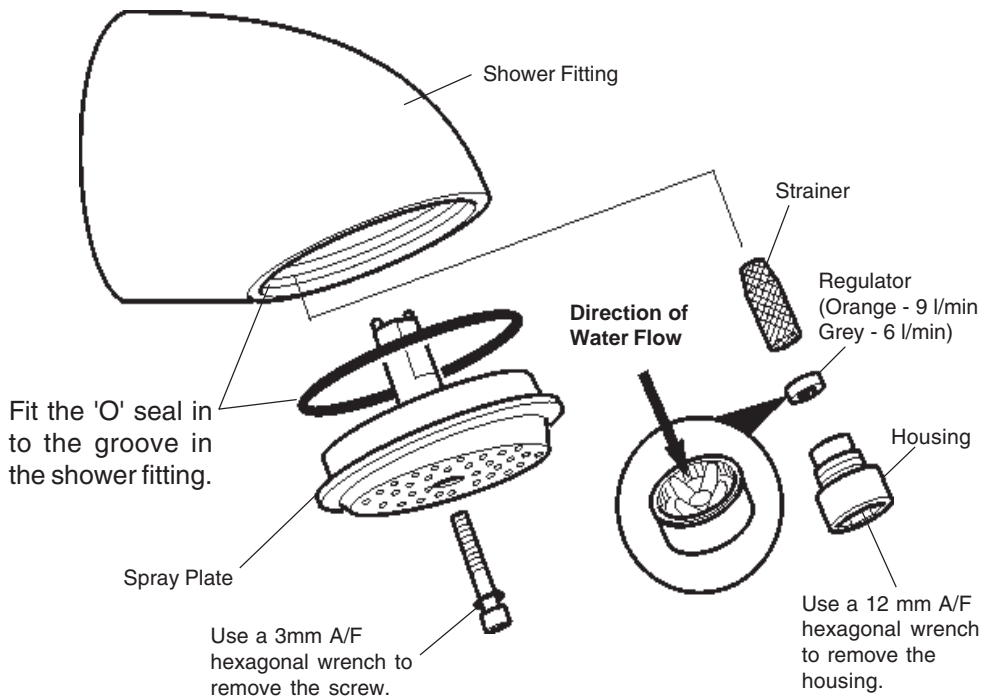
3. Remove or replace the flexible flow regulator.

Note! The flow regulator must be removed if the 400R spray cartridge is used.

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.

The flow regulator must be removed if the 400R spray cartridge is used.

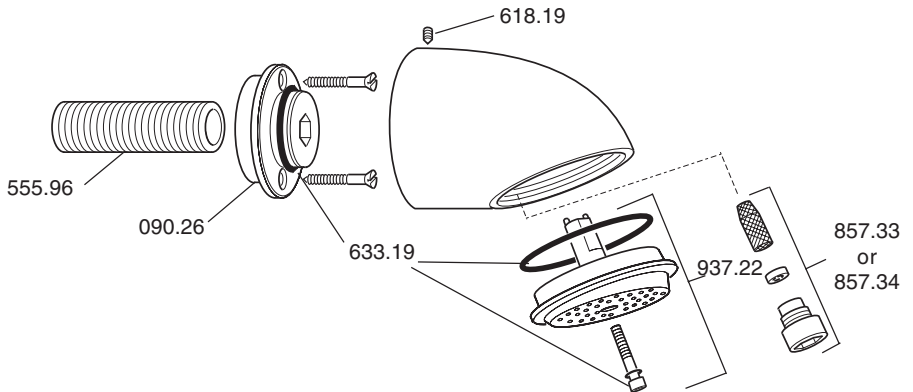


Removing Flow Regulator
Figure 1

SPARE PARTS

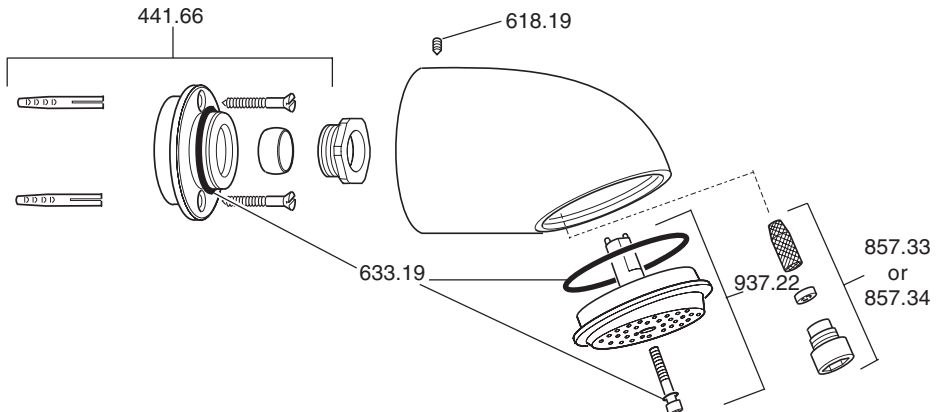
1. VR105/VR106 Spare Parts

090.26	Mounting Bush
555.96	Nipple
618.19	Grub Screw
633.19	VR 'O' Seal Pack
857.33	9 l/min Flow Regulator Assembly (with orange restrictor)
857.34	6 l/min Flow Regulator Assembly (with grey restrictor)
937.22	VR Spray Plate



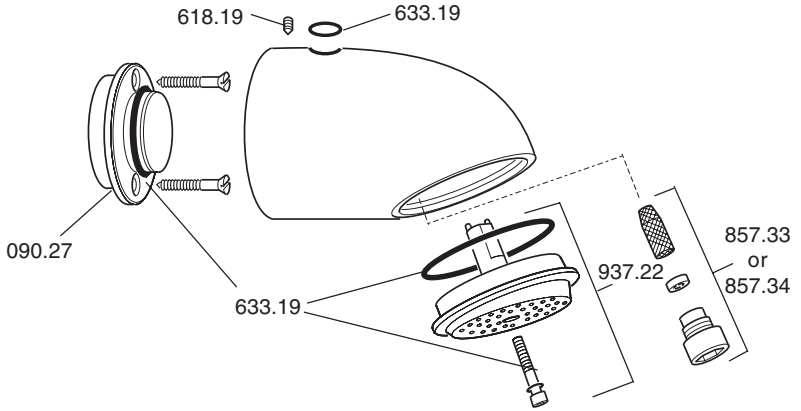
2. VR115 Spare Parts

441.66	Backplate Assembly
618.19	Grub Screw
633.19	VR 'O' Seal Pack
857.33	9 l/min Flow Regulator Assembly (with orange restrictor)
857.34	6 l/min Flow Regulator Assembly (with grey restrictor)
937.22	VR Spray Plate



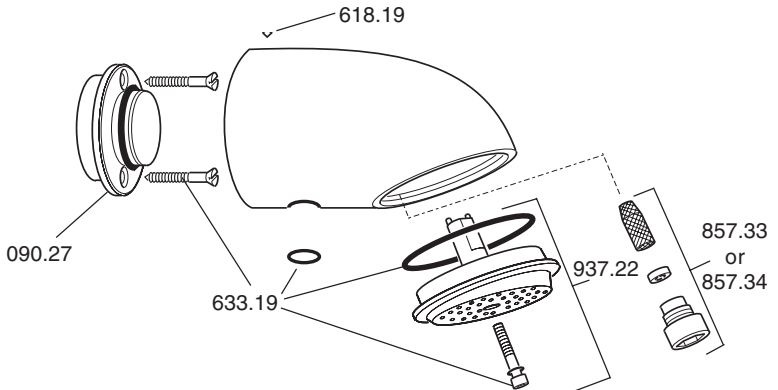
3. VR125 Spare Parts

- 090.27 Mounting Bush
- 618.19 Grub Screw
- 633.19 VR 'O' Seal Pack
- 857.33 9 l/min Flow Regulator Assembly (with orange restrictor)
- 857.34 6 l/min Flow Regulator Assembly (with grey restrictor)
- 937.22 VR Spray Plate

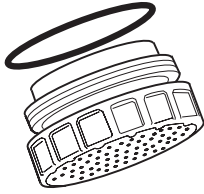


4. VR145 Spare Parts

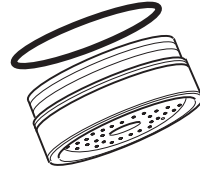
- 090.27 Mounting Bush
- 618.19 Grub Screw
- 633.19 VR 'O' Seal Pack
- 857.33 9 l/min Flow Regulator Assembly (with orange restrictor)
- 857.34 6 l/min Flow Regulator Assembly (with grey restrictor)
- 937.22 VR Spray Plate



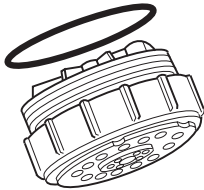
ACCESSORIES



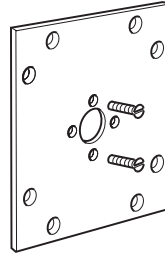
300R Adjustable Spray Cartridge
(Part No. **098.87**)
with 'start', 'active' and 'relax' modes
(chrome finish).



310R Hard Water Spray Cartridge
(Part No. **098.88**)
self-draining with 'push-clean' action
(chrome finish).



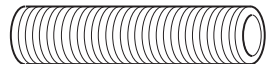
400R High Performance Spray Cartridge
(Part No. **098.89**)
with 'start', 'pulsate' and 'champagne' modes
(white finish). Minimum pressure 0.5 bar.
Requires removal of the flow regulator.



VR Security Kit
(Part No. **936.94**)
concealed mounting plate offering even
greater security, for use with VR105.



Rada Riser Pipe
(Part No. **936.03**)
stainless steel, 15 mm x 700 mm
supply pipe for use with VR125/145.



AD35 Extended Connection Nipple
(Part No. **555.74**)
250 mm x 1/2" BSP parallel nipple
(to BS2779)

Note! For 'high risk' applications, the 300R, 310R and 400R spray cartridges are not recommended as the cartridges may be removed without the use of tools.

All accessories are available from Approved Technical Stockists and builders/plumbers merchants.

NOTES

CUSTOMER CARE

Guarantee

This product is guaranteed against any defect of materials or workmanship for one year from the date of purchase, provided that the product has been installed correctly and used in accordance with the instructions supplied.

Any part found to be defective during the guarantee period will be replaced or repaired - at our option - without charge, provided that the product has been properly used and maintained.

Routine cleaning and maintenance should be carried out in accordance with the instructions supplied.

The product should not be modified or repaired except by a person authorised by Rada.

Your statutory rights are in no way affected by this guarantee.

After Sales Service - how we can help you

We have a network of fully trained staff ready to provide assistance, should you experience any difficulty operating your Rada equipment.

Spare Parts

All functional parts of Rada products are kept for up to ten years from the date of final manufacture.

If during that period, our stock of a particular part is exhausted we will, as an alternative, provide an equivalent new product or part at a price equating to the cost of repair to the old, bearing in mind the age of the product.

Customer Care Policy

If within a short time of installation the product does not function correctly, first check with the operation and maintenance advice provided in this Manual to see if the difficulty can be overcome.

Failing this, contact your installer to ensure that the product has been installed and commissioned in full accord with our detailed installation instructions.

If this does not resolve the difficulty, please ring your nearest Rada contact who will give every assistance and, if appropriate, arrange for the local Service Engineer or Agent to call on a mutually agreeable date.

Contact:

Kohler Mira Ltd
Cromwell Road,
Cheltenham,
England, GL52 5EP, UK.
Tel.: + 44 (0) 1242 221221
Fax.: + 44 (0) 1242 221925

SPECIFICATION ENQUIRIES

Tel.: + 44 (0) 1242 282527
Fax.: + 44 (0) 1242 282404
e-mail: Rada_Technical@mirashowers.com

Rada is a registered trade mark of Kohler Mira Ltd.

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



BS EN ISO 9001 : 1994
Reg. No. FM 14648

rada
CONTROLS