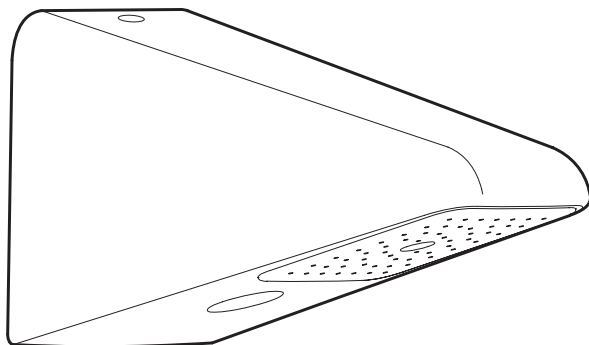




VR2-CC

VR2-RS

VR2-ES



## PRODUCT MANUAL

### IMPORTANT

**INSTALLER:** THIS MANUAL IS THE PROPERTY OF THE CUSTOMER AND MUST BE RETAINED WITH THE PRODUCT FOR MAINTENANCE AND OPERATIONAL PURPOSES.

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If you experience any difficulty with the installation or operation of your new Shower Fittings, please refer to '**Fault Diagnosis**', before contacting Kohler Mira Ltd. Our telephone and fax numbers can be found on the back cover of this guide.

# INTRODUCTION

Rada Shower Fittings are specified to meet the highest standards of safety, comfort and economy as demanded by today's users. All Rada products are designed, manufactured and supported in accordance with accredited BS EN ISO 9001:2000 Quality Systems.

Design Registration	000793401-0017
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# DESCRIPTION

## Product Range (covered by this guide):

The Rada VR2-CC, VR2-RS and VR2-ES are vandal resistant showerheads, designed for use in all non-domestic applications.

A 9 l/min flow regulator (orange) is fitted as standard. Alternatively, a 6 l/min regulator (grey) is also supplied and can be substituted for further savings in water and energy consumption.

## Rada VR2-RS and VR2-CC

Vandal resistant shower fitting with fixed spray plate (spray angle can be set at 10° or 20° from vertical). For connection to concealed pipework with 15 mm compression fittings (VR2-CC), or 1/2" BSP parallel nipple (VR2-RS).

## Rada VR2-ES

Vandal resistant shower fitting with fixed spray plate (spray angle can be set at 10° or 20° 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 section: '**Maintenance**'.
3. **Safety:** Anyone who may have difficulty understanding or operating the controls of any shower should be attended whilst showering. Particular consideration should be given to the young, the elderly, the infirm or anyone inexperienced in the correct operation of the controls.

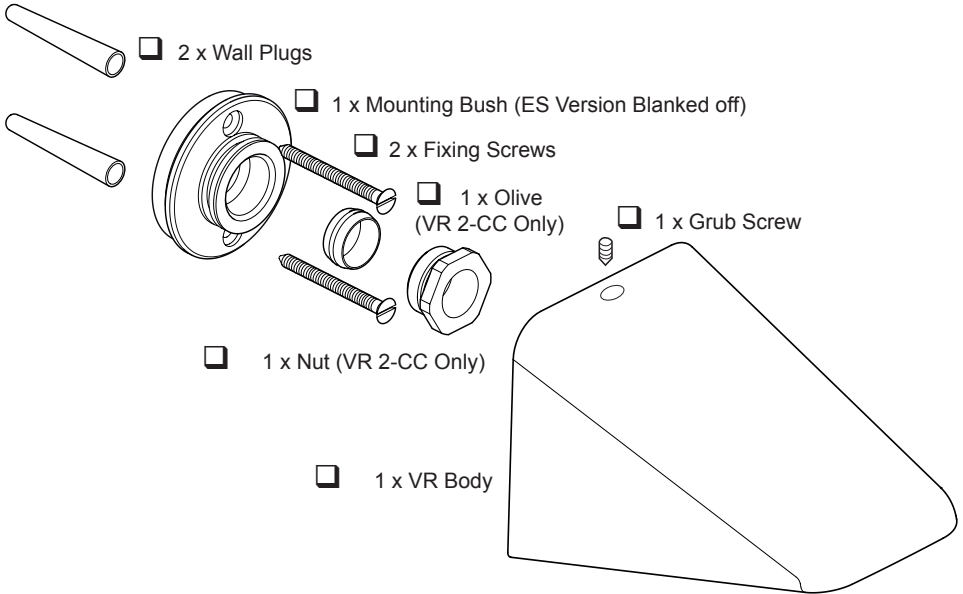
# PACK CONTENTS

Tick the appropriate boxes to familiarise yourself with the part names and to confirm that the parts are included.

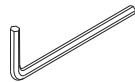
**Rada VR2-CC**

**Rada VR2-RS**

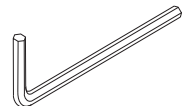
**Rada VR2-ES**



1 x 2.5mm Hexagonal Wrench



1 x 3mm Hexagonal Wrench



1 x L/min Flow Regulator



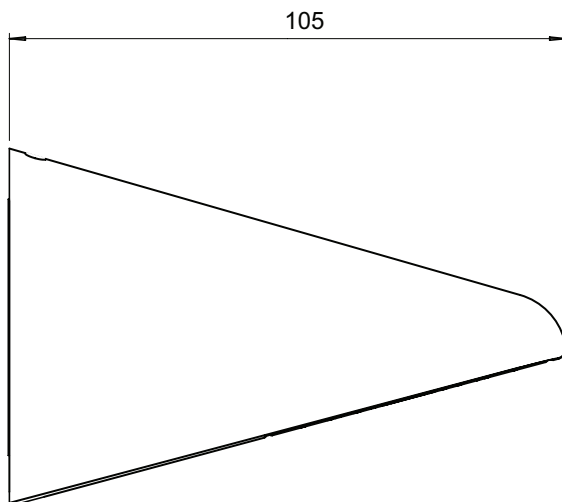
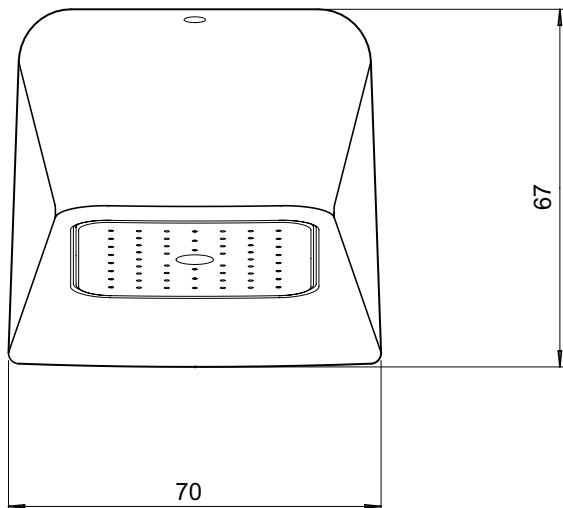
1 x 1/2" BSP Parallel Nipple (VR 2-RS)

# DIMENSIONS

Rada VR2-CC

Rada VR2-RS

Rada VR2-ES



Dimensions in Millimetres

# SPECIFICATIONS

## 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:

- 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 fitting 1.5 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 2.0 l/min.

**Installation Height:** Recommended installation height is 2 metres above the floor surface.

**Connections:** **VR2-CC:** 15 mm compression.  
**VR2-RS:** 1/2" BSP Supply.  
**VR2-ES:** Socket with 'O' seal to accept  
15mm 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:** Engineering plastic.

**Flow Regulator:** Engineering plastic.

**Strainer:** Stainless steel.

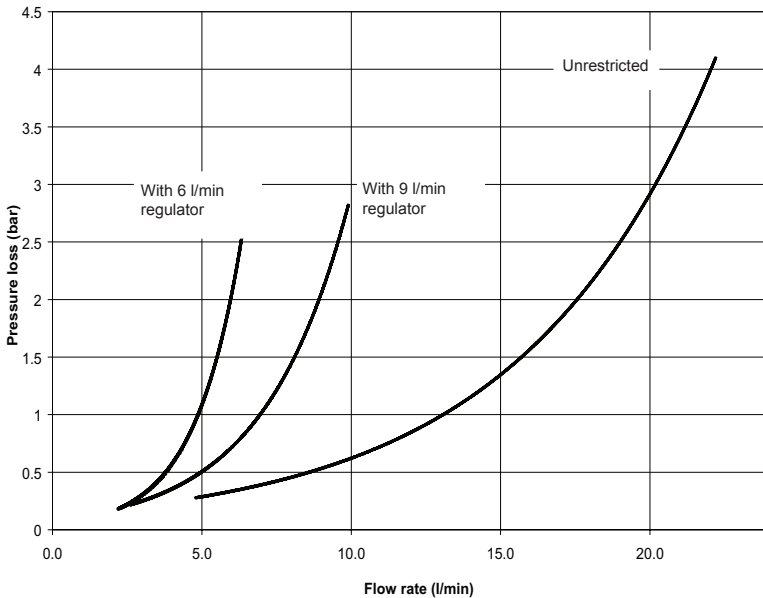
**Security Kit:** Plated mild steel (Optional extra).

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

All screws in contact with water are stainless steel.

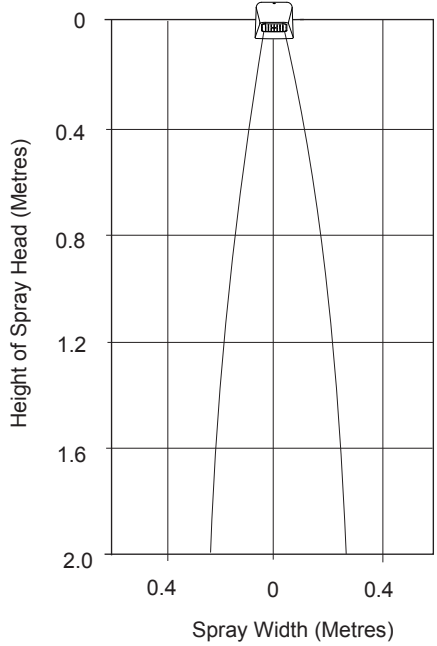
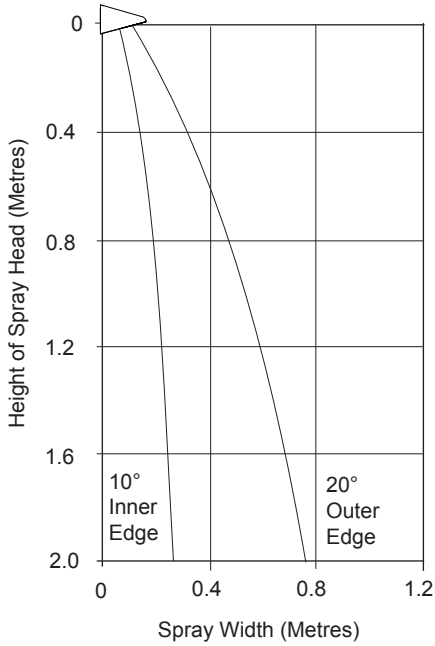
### Pressure Loss/Flow Rate Curves

With 'VR' spray plate



# Spray Patterns at 9 l/min

VR2 spray plate



# INSTALLATION

## General

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

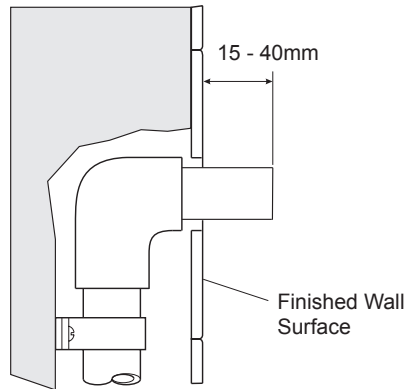
Installations must comply with Water Regulations (Bye-Laws, Scotland), and any Local Regulations and Building Regulations in force at the time of installation.

Before installation carefully inspect the new fixture for any signs of damage.

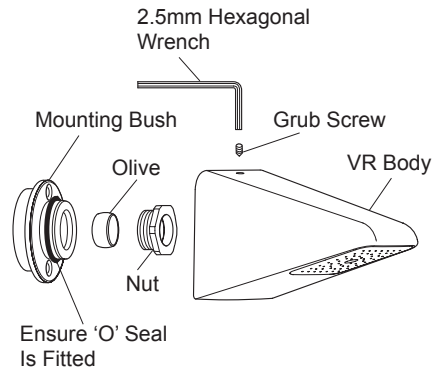
1. Supply pipes must be flushed to clear debris before connecting the shower fittings. Layout and sizing of pipework must be such that when other services are used, pressures do not fall below the recommended minimum at the shower fitting causing the spray pattern to collapse.
2. Avoid a position in 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 fitting, 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 Rada VR2-CC, VR2-RS and VR2-ES may be bolted through the mounting bush onto the Rada VR Security Kit (optional), which is mounted within the wall or behind a panel, for extra mounting security.

## Rada VR2-CC

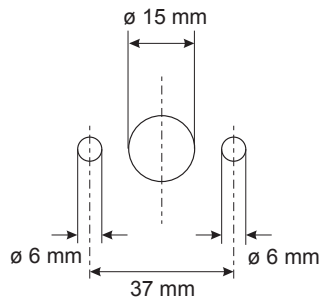
1. The Rada VR body fits directly onto a 15 mm pipe projecting through the wall. Ensure this inlet pipe extends 15mm to 40mm from the finished wall surface. Remove any burrs from the end of the pipe.



2. Undo the grub screw on the shower fitting with the 2.5mm hexagonal wrench supplied, and remove the mounting bush.
3. Undo the nut and olive.

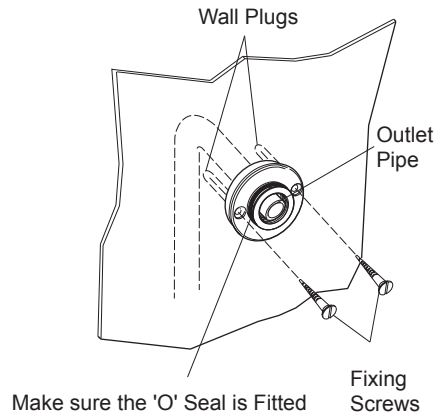


4. Slide the mounting bush onto the pipe and mark the position of the fixing holes.
5. Remove the mounting bush and drill the two fixing holes. Fit the wall plugs supplied.

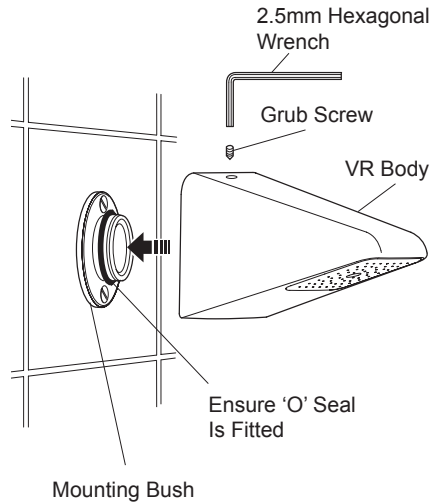


**Warning!** Before drilling make sure there is no pipework or cabling in the wall behind the marked hole positions.

6. Secure the mounting bush to the wall with the fixing screws.
7. Slide the olive and nut over the inlet pipe and screw the nut to the mounting bush. Ensure the 'O' seal is fitted to the mounting bush.

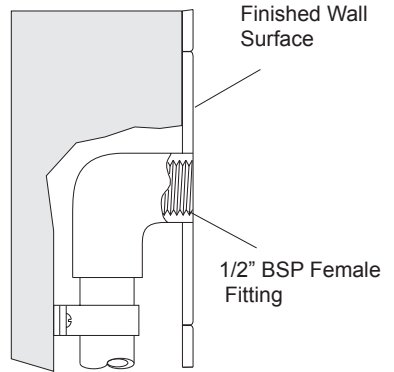


8. Fit the VR body to the mounting bush and secure with the grub screw with the 2.5mm hexagonal wrench supplied.

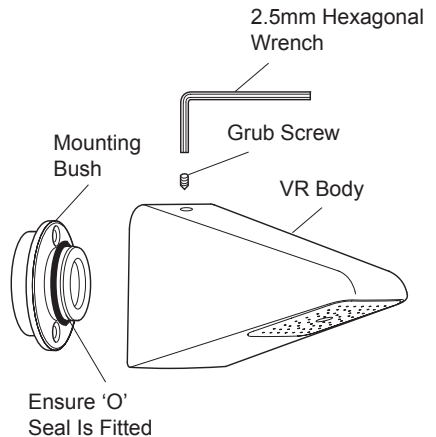


## Rada VR2-RS

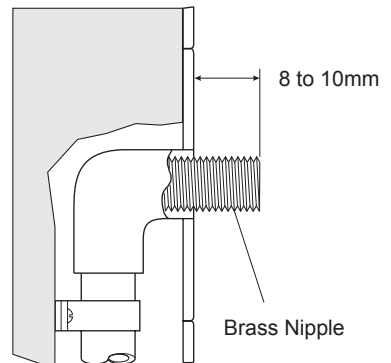
1. The supply pipe from the VR body must terminate at the wall surface with a 1/2" BSP female thread. The end of the fitting must be flush with, or below the finished surface of the wall.



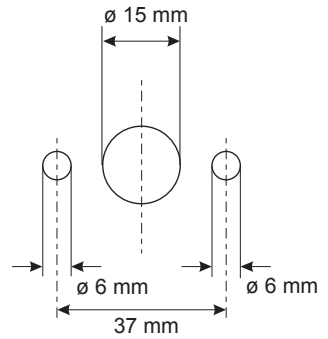
2. Undo the grub screw on the shower fitting with the 2.5mm hexagonal wrench supplied, and remove the mounting bush.



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.

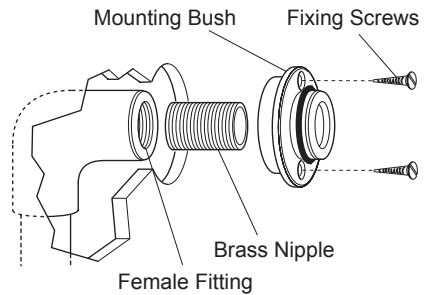


4. Screw the mounting bush onto the brass nipple until the back of the mounting bush is flush with the wall.
5. Mark the position of the two fixing holes.
6. Remove both the mounting bush and the brass nipple.
7. Drill the two fixing holes and fit the wall plugs supplied.

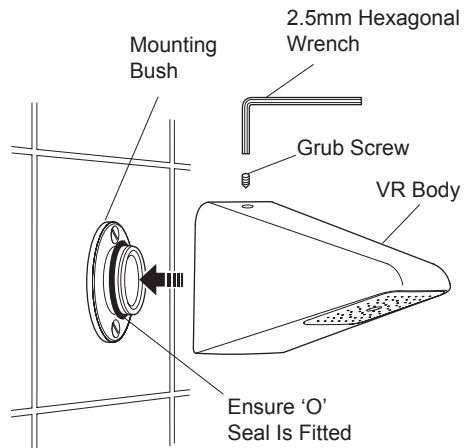


**Warning!** Before drilling make sure there is no pipework or cabling in the wall behind the marked hole positions.

8. Apply liquid sealant or PTFE tape to the 1/2" BSP brass nipple. **Do not use paste.**
9. 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.

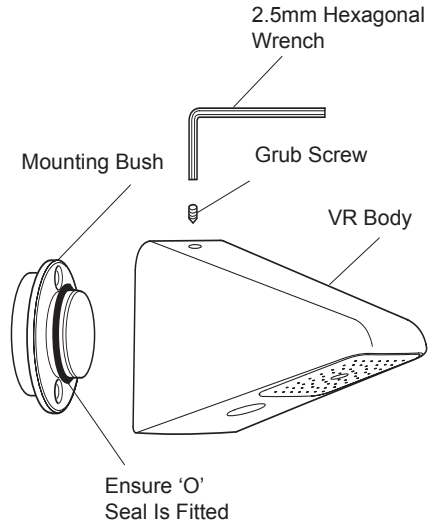


11. Check the 'O' seal is fitted to the mounting bush.
12. Fit the spray body to the mounting bush and secure with the grub screw.



## Rada VR2-ES

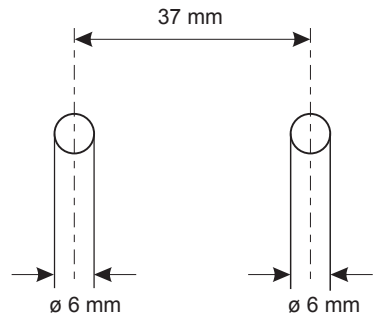
1. Undo the grub screw on the VR body with the 2.5 mm hexagonal wrench provided, and remove the mounting bush.



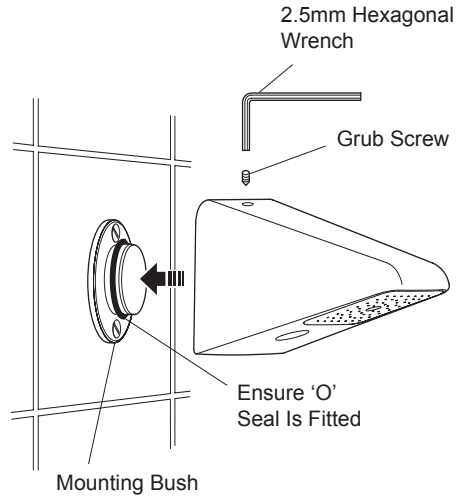
2. Place the mounting bush on the wall and mark the fixing hole positions.

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

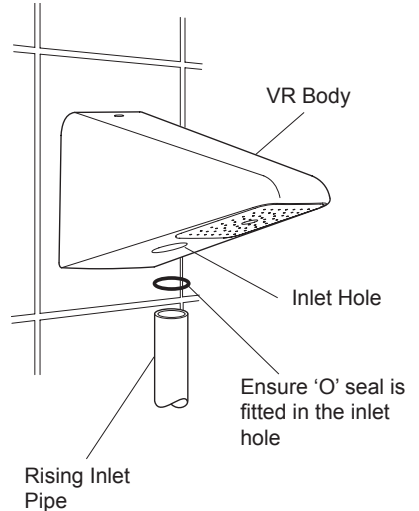
**Warning!** Before drilling make sure there is no pipework or cabling in the wall behind the marked hole positions.



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 shower fitting 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.



# 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.**

**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 VR2-CC, Rada VR2-RS or Rada VR2-ES and identify part name and number. Refer to section: '**Spare Parts**'.

## Procedure - Changing or Removing the Flow Regulator

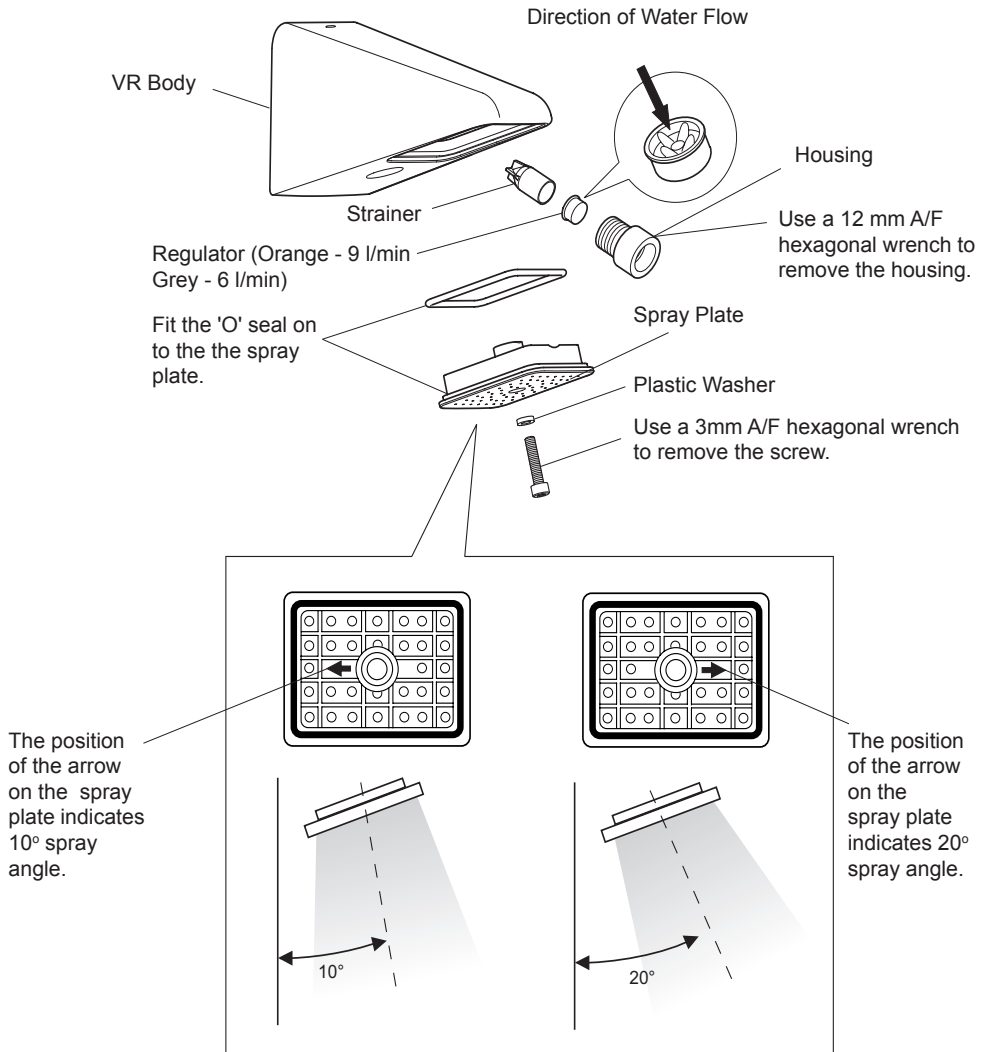
1. Use the 3 mm A/F Hexagonal Wrench (supplied) with the VR body and remove the screw at the centre of the spray plate, remove the spray plate.
2. Use a 12 mm A/F Hexagonal Wrench (not supplied) and unscrew and remove the flow regulator from the shower fitting (refer to illustration).
3. Remove or replace the flow regulator.
4. Assemble the restrictor/strainer and spray plate in the reverse order of removal.

**Note!** Do not overtighten the spray plate retaining screw.

**Note!** Fit the 'O' seal on to the spray plate.

## Procedure - Changing Spray Plate Angle

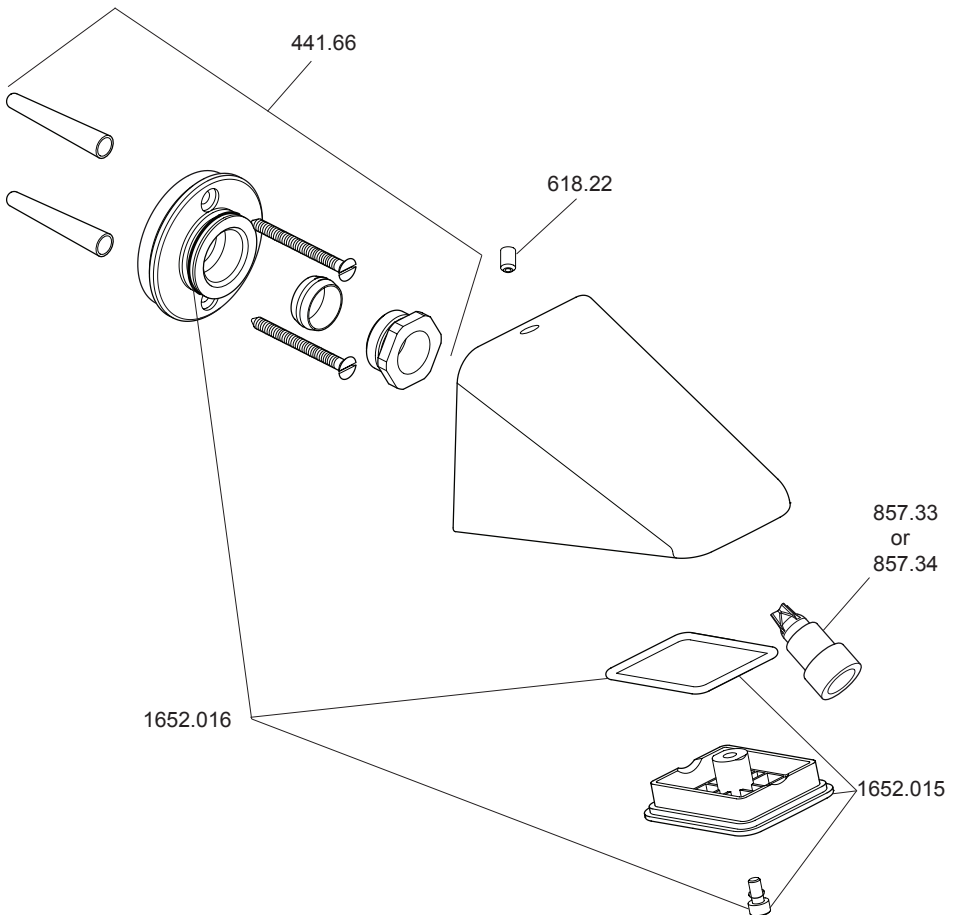
1. Use the 3 mm A/F Hexagonal Wrench (supplied) with the VR body and remove the screw at the centre of the spray plate. Remove and rotate spray plate through 180° to give the minimum angle spray of 10°.
2. Assemble the spray plate in the reverse order of removal.  
**Note!** Do not overtighten the spray plate retaining screw.  
**Note!** Fit the 'O' seal on to the spray plate.



# SPARE PARTS

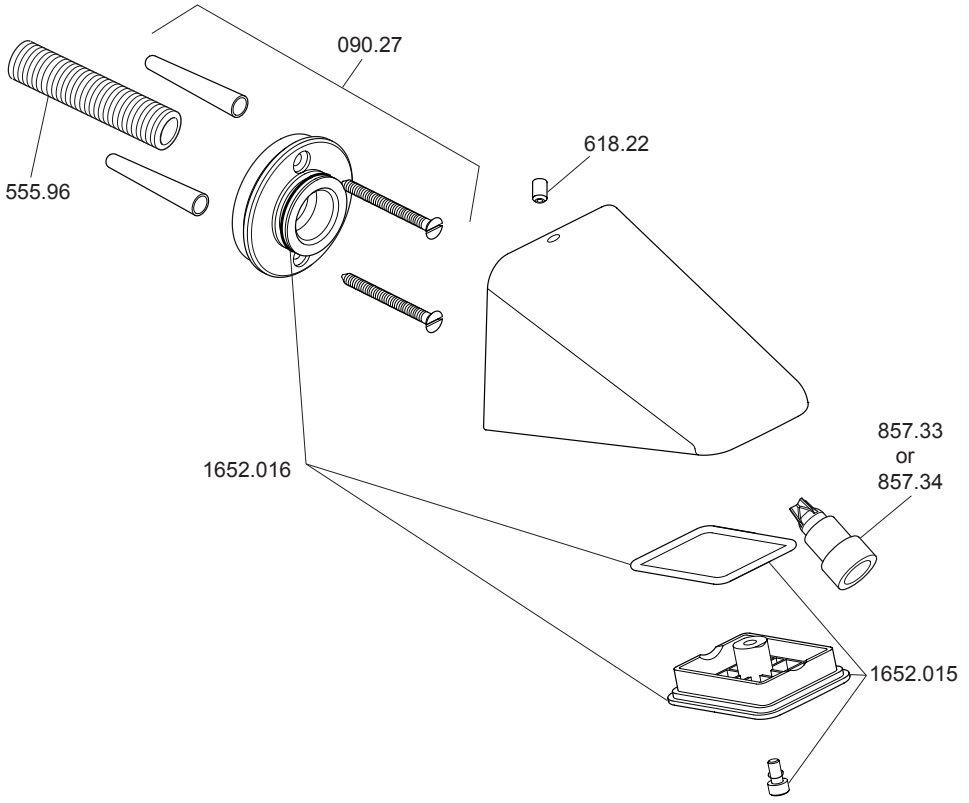
## Rada VR2-CC

441.66	Mounting Bush
618.22	Grub Screw
857.33	9 l/min Flow Regulator Assembly (with orange restrictor)
857.34	6 l/min Flow Regulator Assembly (with grey restrictor)
1652.015	Spray Plate Chrome
1652.016	VR Squared Seal Pack



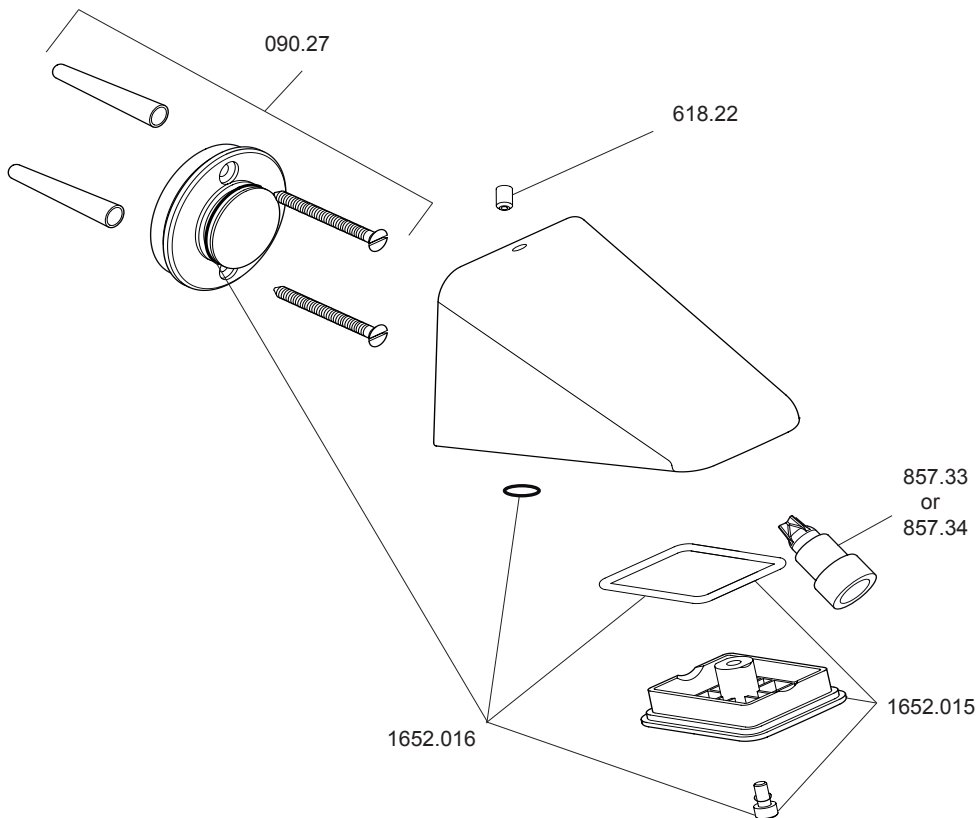
# Rada VR2-RS

- 090.27 Mounting Bush
- 555.96 Nipple
- 618.22 Grub Screw
- 857.33 9 l/min Flow Regulator Assembly (with orange restrictor)
- 857.34 6 l/min Flow Regulator Assembly (with grey restrictor)
- 1652.015 Spray Plate Chrome
- 1652.016 VR Squared Seal Pack

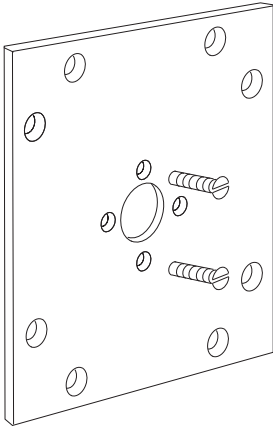


## Rada VR2-ES

090.27	Mounting Bush
618.22	Grub Screw
857.33	9 l/min Flow Regulator Assembly (with orange restrictor)
857.34	6 l/min Flow Regulator Assembly (with grey restrictor)
1652.015	Spray Plate Chrome
1652.016	VR Squared Seal Pack

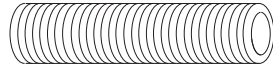


# ACCESSORIES



VR Security Kit  
(Part No. 936.94)

concealed mounting plate  
offering even greater security,  
for use with VR2-RS.



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



Rada Riser Pipe  
(Part No. 936.03)  
stainless steel, 15 mm x 700 mm supply  
pipe for use with VR2-ES.

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

# NOTES

# NOTES

# CUSTOMER CARE

## Guarantee of Quality

Kohler Mira Limited guarantee this product against any defect in materials or workmanship for a period of two years from the date of purchase.

To be covered by this guarantee, service work must only be undertaken by Kohler Mira Limited or by their approved agents.

## Not covered by this guarantee

Damage or defects arising from incorrect installation, improper use or failure to maintain in accordance with the instructions in this product manual, including the build-up of limescale. Defects or damage if the product is taken apart, repaired or modified by a person not authorised by Kohler Mira Limited or by their approved agents.

## 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.

All spares are guaranteed for 12 months from date of purchase. Spares that have been supplied directly from us can be returned within one month from date of purchase, providing that they are in good order and the packaging is unopened.

**Note!** Returned spares will be subject to a 15% restocking charge and authorisation must be obtained before return.

## Customer Care Policy

If within a short space of time of installation the product does not function correctly, first check with the operation and maintenance advice provided in this Product Manual to see if the difficulty can be overcome. Failing this, contact your installer to make sure 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 you every assistance and if appropriate, arrange for your local service engineer or agent to call on a mutually agreeable date.

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## Contact:

### Thornthwaite Technologies Pty Ltd

Howthorn House, 79 Victoria Avenue,

Chatswood, Sydney,

New South Wales, **AUSTRALIA**

Tel: 029 417 4466

Fax: 029 417 5231

[www.thornthwaite.com.au](http://www.thornthwaite.com.au)



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The company reserves the right to alter  
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[www.radacontrols.com](http://www.radacontrols.com)

