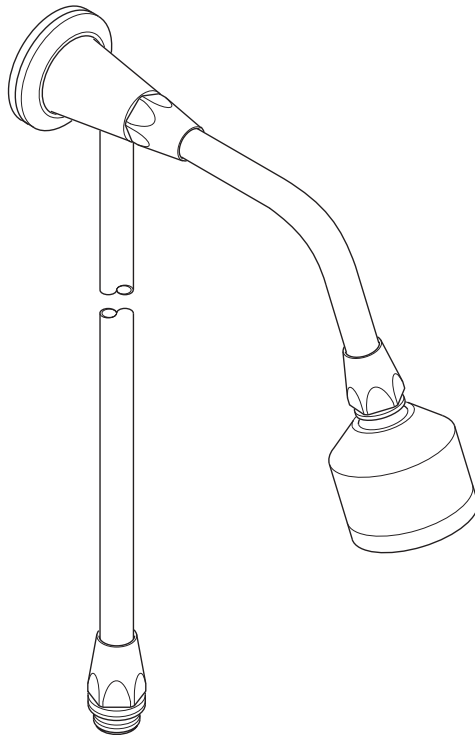


rada

CONTROLS

er-s 310

PRODUCT MANUAL



IMPORTANT

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

INTRODUCTION

The Rada er-s 310 is a rigid shower fitting precision engineered to give a satisfactory shower at all pressures down to 0.06 bar; (0.6 metre head). The shower fittings are suitable for connection to a surface mounted shower control or pipework.

DESCRIPTION

A self drain and push clean shower head, resists scale formation and ensures easy cleaning. Supplied complete with stainless steel vertical pipe and stainless steel shower arm. Suitable for use with a surface mounted shower control or pipework, with a pipework centre distance of 33mm from the finished wall surface.

The shower head is fitted with a high capacity (HC) spray plate to allow more flow and is recommended for use with gas water heaters. A low capacity (LC) spray plate is included suitable for pressures between 0.06 to 0.09 bar.

The horizontal arm can be switched around for alternative spray angles or projection.

SAFETY : WARNINGS

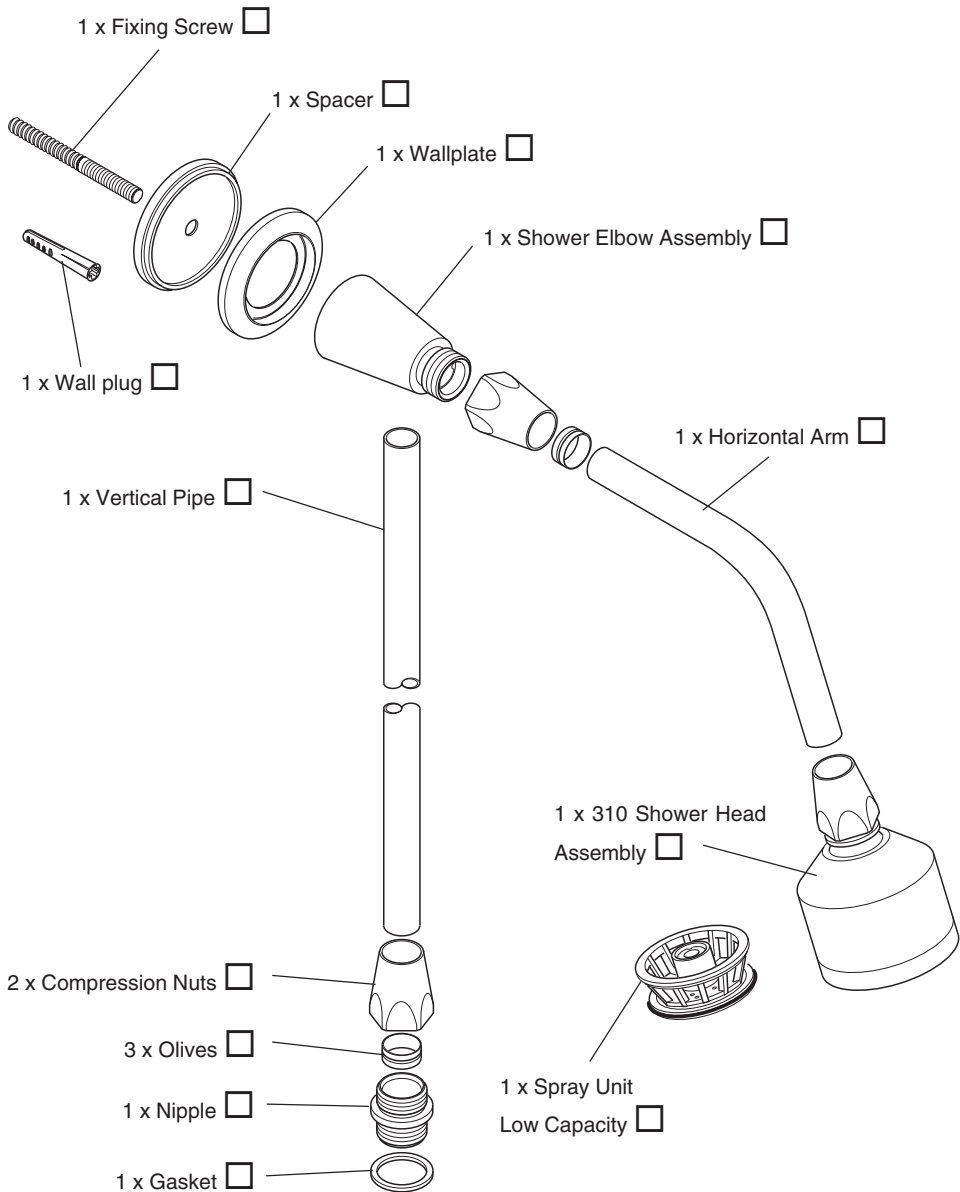
Rada products are precision-engineered and should give continued superior and safe performance, provided:

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.
3. **Cleaning:** Many household and industrial cleaning products contain abrasives and chemical concentrates and should **not** be used for cleaning plated or plastic surfaces. These finishes should be cleaned with a mild washing up detergent or soap solution, and then wiped dry using a soft cloth.
4. **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.

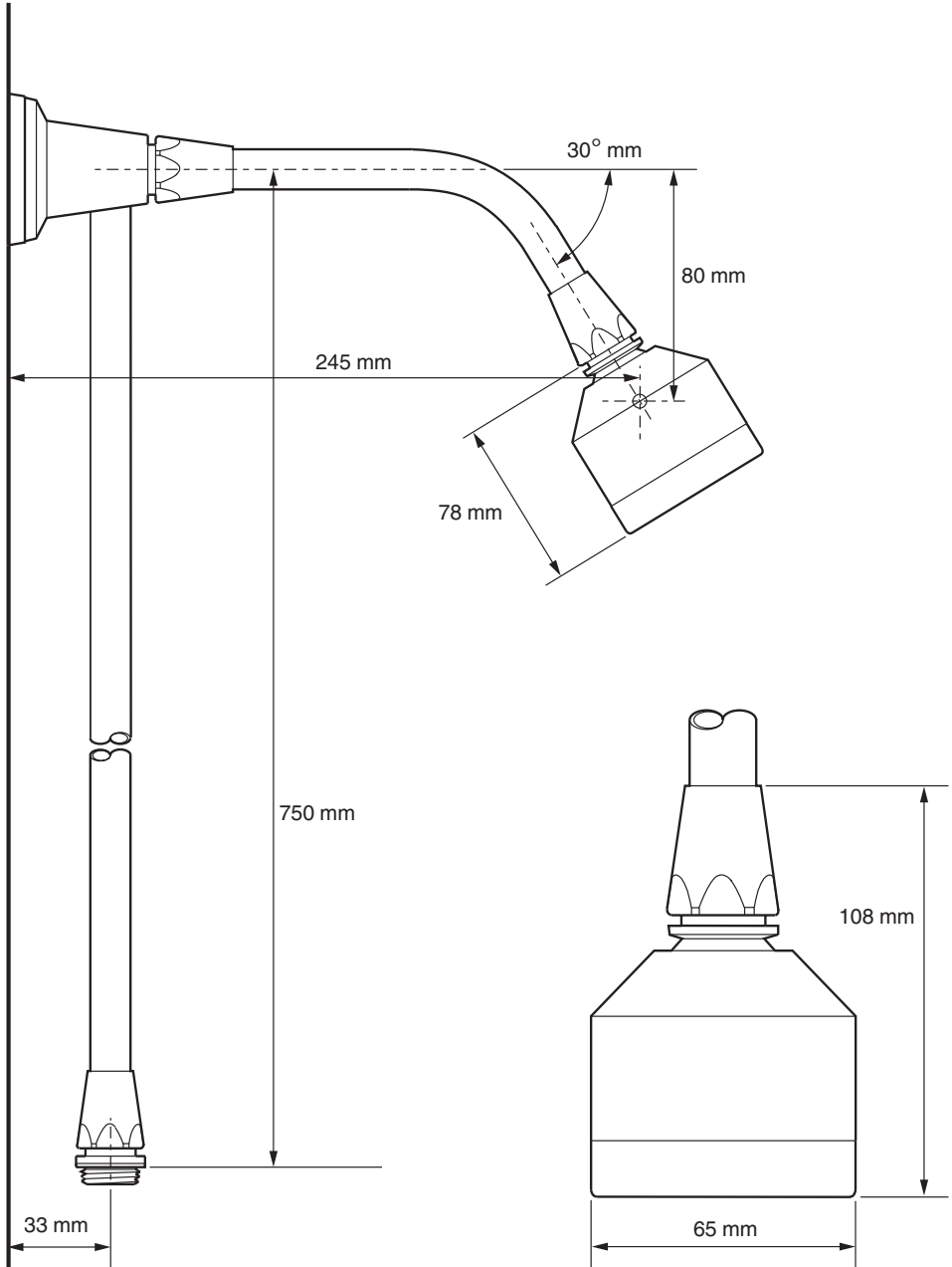
INDEX

	page
PACK CONTENTS	4
DIMENSIONS	5
INSTALLATION	
General	6
Procedure	6
OPERATION	9
FAULT DIAGNOSIS	10
MAINTENANCE	
General	11
Maintenance Procedures	11
Maintenance Procedures - Cleaning the Spray Plate	11
Maintenance Procedures - To Change the Spray Unit	12
SPARE PARTS	
Spare Parts List	14
Spare Parts Diagram	15
CUSTOMER CARE	Back Cover

PACK CONTENTS



DIMENSIONS



INSTALLATION

General

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

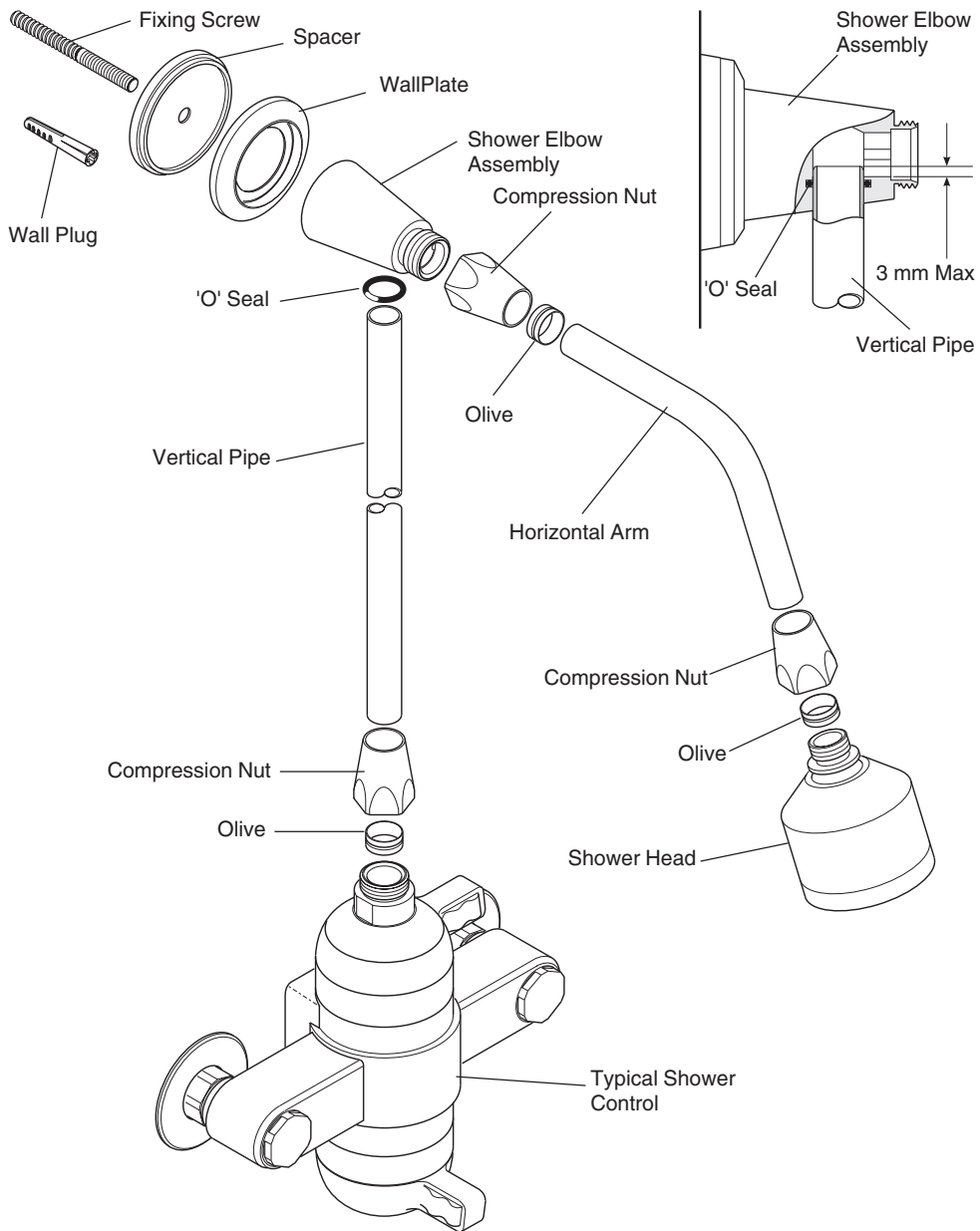
1. Supply pipes must be flushed to clear debris before connecting the shower fittings. Layout and sizing of pipework must be such that when other services are used, pressures do not fall below the recommended minimum causing the spray pattern of the shower fitting to collapse.
2. Avoid a position in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

Procedure (Refer to Figure 1)

1. A fixing position should be chosen to suit the installation, whether it be over a bath or shower cubicle.
2. For a gravity installation, the minimum vertical distance between the base of the cistern and the shower head must be 0.6m, when using low capacity spray plates and minimum resistance pipework.
3. Place the gasket on the nipple (1/2" BSP). Screw in the nipple using a 12mm A/F hexagon wrench (not supplied). Ensure the compression taper faces uppermost.

Note! The gasket and the nipple are included in the pack contents and are only required for connection to some shower controls.

4. Insert the vertical pipe into the opening of the nipple. Use the pipe to determine the final height of the shower head. Should the vertical pipe require to be cut to length, then adjustments should be made to the pipe end which is inserted into the nipple. Damage to the shower elbow assembly 'O' seal will result if a sharp ended pipe is inserted into it.
5. Fit the shower elbow assembly over the vertical pipe end taking care not to damage the shower elbow assembly's internal 'O' seal.



er-s 310 Shower Fittings Installation
Figure 1

6. Position the shower elbow assembly such as to leave a maximum of 3mm of pipe end projecting into the shower elbow assembly beyond the internal 'O' seal (Refer to Figure 1).

Note! If the vertical pipe is pushed too far up into the shower elbow assembly then this will result in either a low flow or no flow of water when the shower is operated.

7. Use the shower elbow assembly as a template and mark the wall surface. Mark the final position of the single fixing point by finding the dead centre of the marked outline.
8. Drill and plug the marked fixing hole.
9. Screw the double threaded wall screw into the shower elbow assembly (parallel thread) then fit the shower elbow assembly, wallplate and spacer (if required) to the wall.

Note! There are two lugs in the outlet of the shower elbow assembly to allow a tool to be used to tighten the fitting.

Note! The spacer is only required to compensate for any offset due to a partially tiled wall surface.

10. Push the vertical pipe fully into the shower elbow assembly. If necessary rotate the vertical pipe and shower assembly to the 5 o'clock position to avoid fouling the shower control nipple.
11. Place the compression nut and olive over the vertical pipe end. Fit the vertical pipe into the nipple and carefully tighten the compression nut.

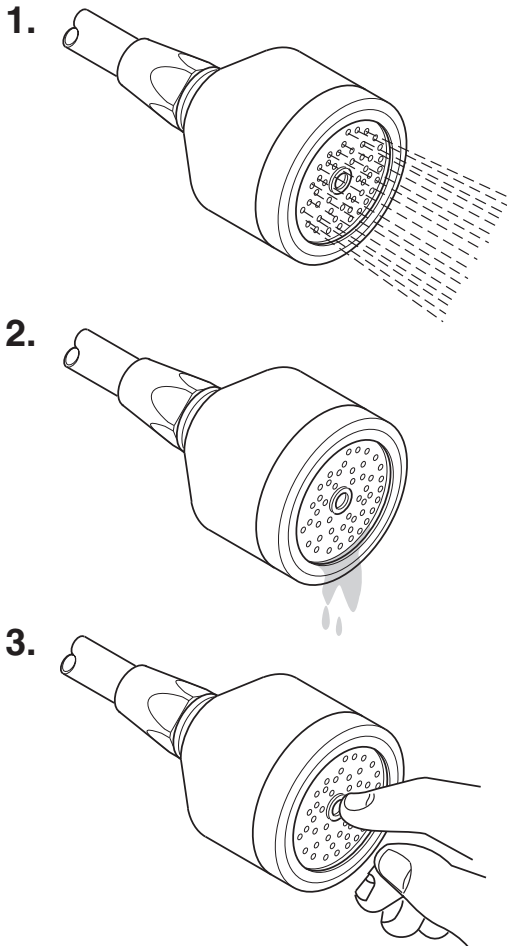
Note! Care must be taken when tightening compression nuts so that you do not damage the plated surfaces.

12. Slide the remaining compression nut and olive over the horizontal arm and make the connection by carefully tightening the compression nut onto the shower elbow assembly.
13. Remove the spray unit from the shower head to access a 12mm A/F socket (refer to **MAINTENANCE** for removal procedure). Use a 12mm A/F hexagon wrench (not supplied) to prevent the ball swivel from rotating whilst tightening. Remove the compression nut and olive (if fitted) from the shower head. Slip the compression nut and olive over the horizontal arm pipe end. Carefully tighten the compression nut onto the shower head.
14. Refit the appropriate 310 spray unit into the spray unit retainer. Grip the shower head body and screw the spray unit retainer clockwise into the shower head. Snap the retainer trim into place.

OPERATION

The er-s 310 shower head has three operating modes.

1. Flow of water will automatically push the spray plate forward, sealing against the spray unit retainer and showering can then commence.
2. Turning off the flow of water will automatically allow the spray plate to retract to the rest position, any residual water will be drained away.
3. Pressing the spray plate causes a series of pins to push any residual scale from the holes which can then be wipped away.



Principle of Operation
Figure 2

FAULT DIAGNOSIS

Symptom	Cause/Rectification
1. Reduced or no flow.	<ul style="list-style-type: none"> a. Vertical pipe, Ref. page 8, para. 6. b. Reduced flow. Check pressure from mixer.
2. Poor or no spray pattern.	<ul style="list-style-type: none"> a. Holes in spray plate blocked. Press spray plate. b. Inner 'O' seal damaged. Renew inner 'O' seal. Check that the supply pressure is not too high. c. Insufficient supply pressure.
3. Leaking from shower head.	<ul style="list-style-type: none"> a. Seals worn. Renew seals. b. Scale on swivel ball. Descale.

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. Guidelines for frequency are given below.

Maintenance Procedures

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.

When ordering spare parts, please state product type, i.e. Rada er-s 310 shower fitting and identify part name and number. Refer to the **SPARE PARTS** section.

Maintenance Procedures - Cleaning the Spray Plate

(Refer to Figure 3)

1. To remove retainer trim, twist anti-clockwise and pull at the same time.
2. Unscrew anti-clockwise the spray unit retainer and remove. Leave the inner 'O' seal in the shower head.
3. Remove spray unit from the spray unit retainer.
4. Either clean with a stiff brush or dip into a proprietary inhibited (suitable for plastic kettles) descaler, used in accordance with the manufacturers instructions.
5. Do not use metal probes to clear spray holes.
6. Refit the spray unit into the spray unit retainer.
7. Screw in clockwise the spray unit retainer.
8. Snap retainer trim into place.

Maintenance Procedures - To Change the Spray Unit

(Refer to Figure 3)

1. To remove the retainer trim, twist anti-clockwise and pull at the same time.
2. Unscrew the spray unit retainer and remove. Leave the inner 'O' seal in the shower head.
3. Remove the high capacity spray unit from the spray unit retainer.
4. Fit the low capacity spray unit into the spray unit retainer.
5. Screw the spray unit retainer into the shower head.
6. Snap retainer trim into place.

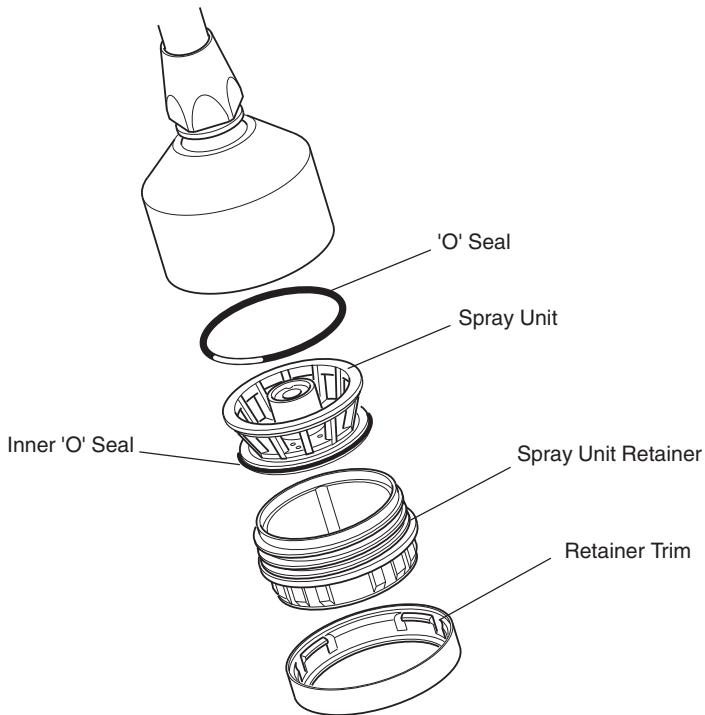


Figure 3

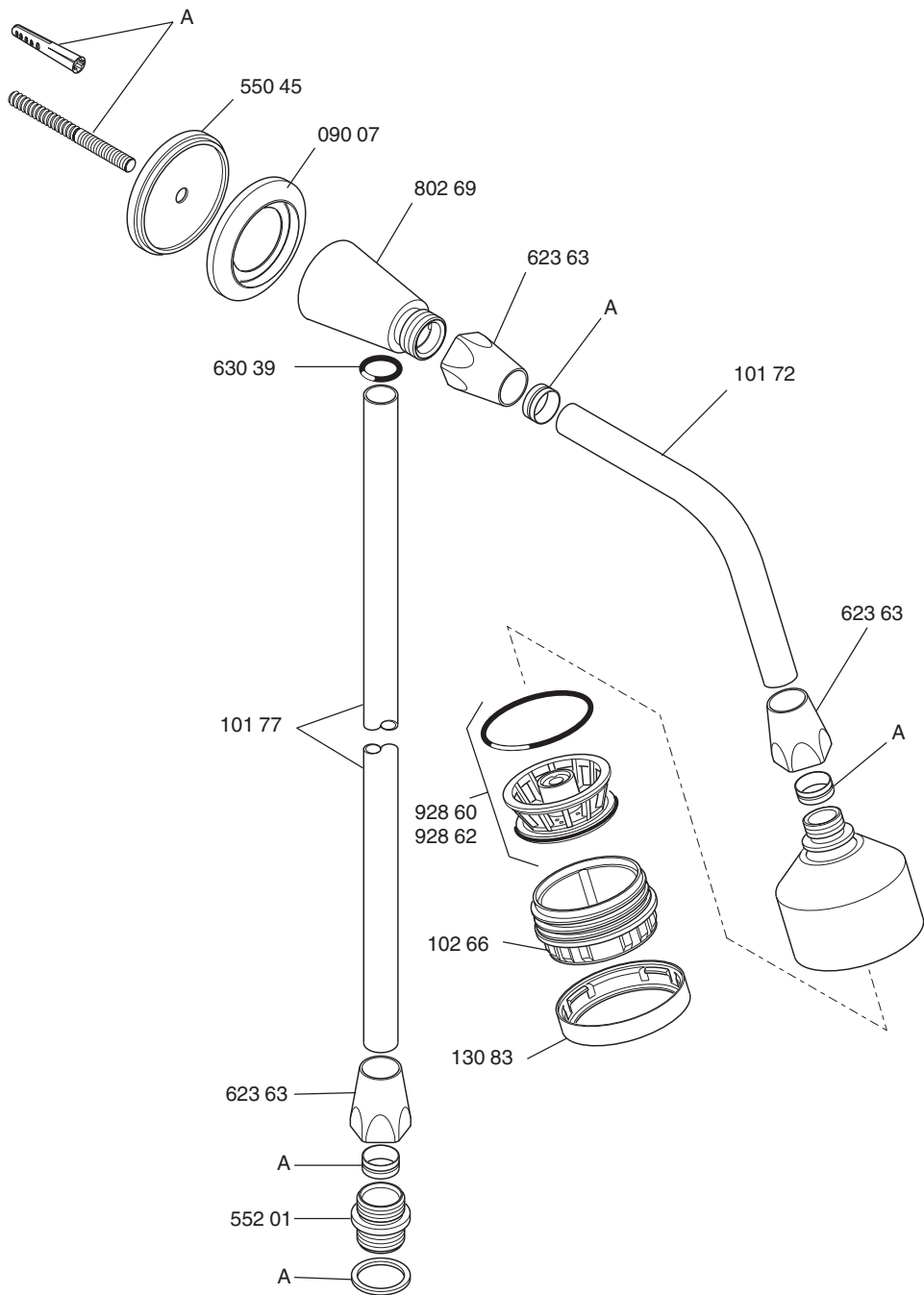
SPARE PARTS

SPARE PARTS

Spare Parts List

090 07	Wallplate
101 72	Horizontal Arm (15mm)
101 77	Vertical Pipe (15mm)
102 66	Spray Unit Retainer
130 83	Retainer Trim
550 45	Spacer
552 01	Nipple (1/2" BSP)
623 63	Compression Nut
630 39	'O' Seal (vertical pipe)
641 19	Gasket
802 69	Shower Elbow Assembly
928 60	Spray Unit, Low Capacity
928 62	Spray Unit, High Capacity (not shown)
934 12	Component Pack (items identified 'A')

Spare Parts Diagram



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 Limited
Cromwell Road,
Cheltenham, England,
GL52 5EP, UK.

Tel.: + 44 (0)1242 221221 Fax.: + 44 (0)1242 221925

Rada is a registered trade mark of Kohler Mira Limited.
The company reserves the right to alter product specifications
without notice.



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