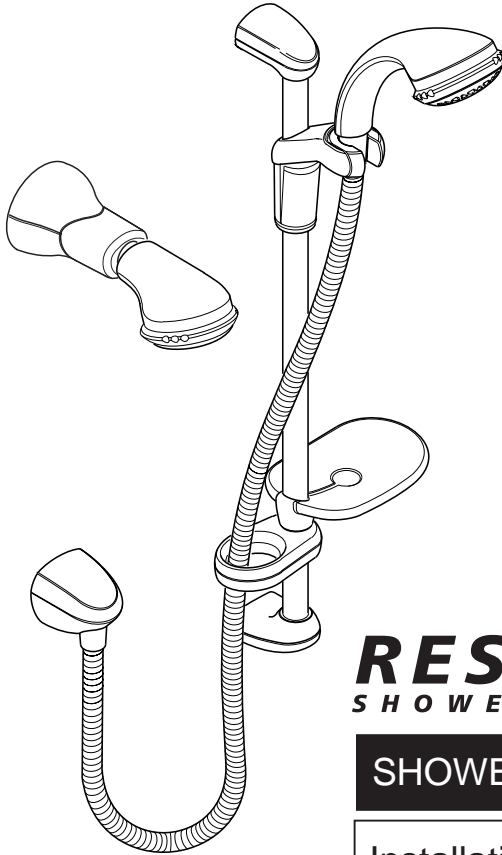


POWER RANGE

mira
SHOWERS



RESPONSE
SHOWER FITTINGS

SHOWER FITTINGS

Installation

Operation &

Maintenance Guide

THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER

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Thank you for purchasing a quality Mira product. To enjoy the full potential of your new product, please take time to read this guide thoroughly, having done so, keep it handy for future reference.

The Mira Response Power range of flexible and rigid shower fittings are precision engineered to give a satisfactory shower over a range of pressures. The fittings are suitable for pressures up to 5.0 bar (ev and biv) or 3.0 bar (bir), and pressures down to 0.4 bar.

Shower fittings covered by this guide:

Mira Response Exposed Variable Shower Fittings (ev)

An adjustable spray handset with three different spray actions (start, champagne, massage) and an economy setting*, supplied complete with flexible hose, adjustable clamp bracket assembly, slide bar and supports, soap dish and hose retaining ring. Suitable for connection to surface mounted shower controls only. Available in white, white/chrome, white/light golden or chrome finish.

Mira Response Built-in Variable Shower Fittings (biv)

Offering the same features as the Response ev but suitable for connection to concealed pipework supplies only. Available in white, white/chrome, white/light golden or chrome finish.

Mira Response Built-in Rigid Shower Fittings (bir)

An adjustable spray head with three different spray actions (start, champagne, massage) and an economy setting*, suitable for connection to concealed pipework supplies only. Available in white or chrome finish.

* The economy setting reduces the water flow to give economical use of water, whilst still giving an adequate shower performance. This setting performs best with most gravity, pumped, and mains pressure unvented systems. On electric showers and some combination boiler systems the economy setting will have no effect, and will give the same spray action as the start setting.

If you experience any difficulty with the installation or operation of your new shower fitting, then please refer to **Section 10 "Fault Diagnosis"**, before contacting Kohler Mira Limited. Our telephone and fax numbers can be found on the back cover of this guide.

1. WARNING!

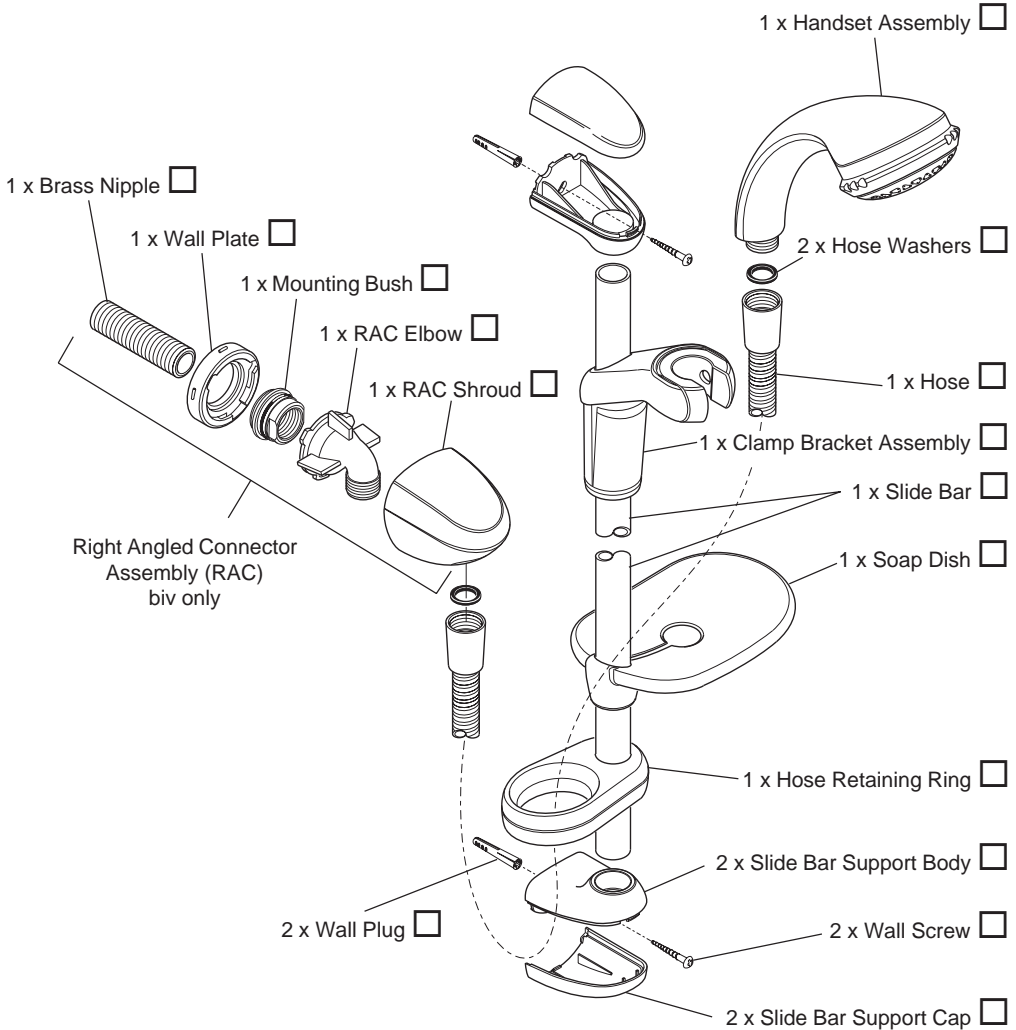
Products manufactured by us are safe and without risk provided they are installed, used and maintained in good working order in accordance with our instructions and recommendations.

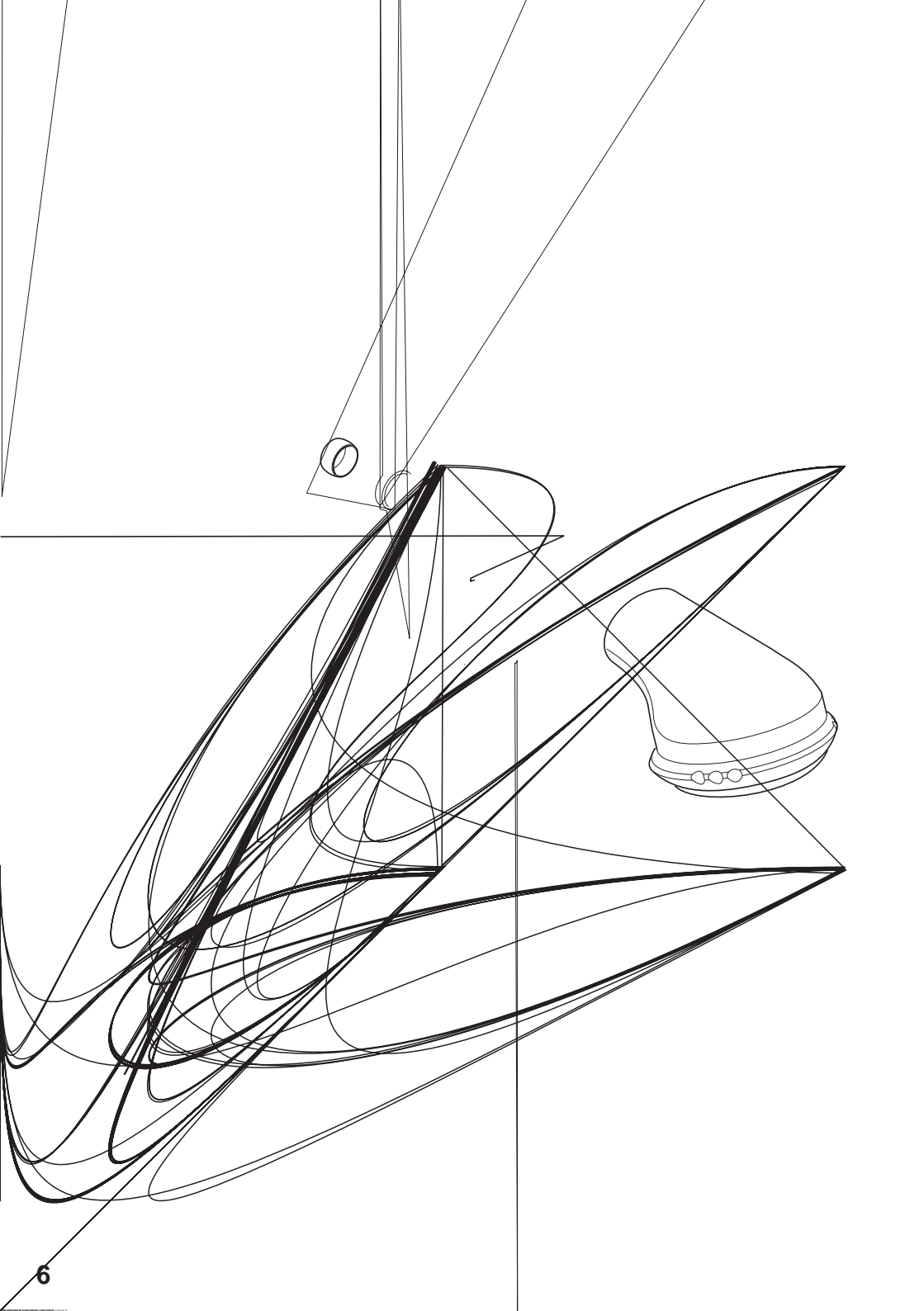
2. Caution!

- 2.1. Read all of these instructions.
- 2.2. Retain this guide for later use.
- 2.3. Pass on this guide in the event of change of ownership of the installation site.
- 2.4. Follow all warnings, cautions and instructions contained in this guide.
- 2.5. The plumbing installation must comply with the requirements of UK Water Supply Regulations/Bye-laws (Scotland), Building Regulations or any particular regulations and practices, specified by the local water company or water undertakers. The installation should be carried out by a plumber or contractor who is registered, or is a member of, an association such as:
 - 2.5.1. Institute of Plumbing (IOP), throughout the UK, Tel: 01708 472791.
 - 2.5.2. National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales, Tel: 01203 470626.
 - 2.5.3. Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF), Scotland and Northern Ireland, Tel: 0131 225 2255.
- 2.6. 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.
- 2.7. When this product has reached the end of its serviceable life, it should be disposed of in a safe manner, in accordance with current local authority recycling, or waste disposal policy.

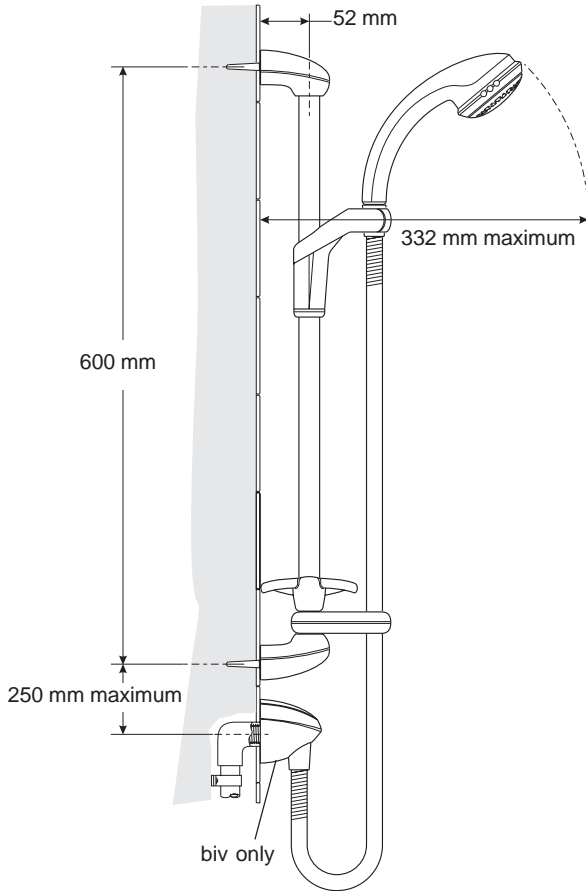
Tick the appropriate boxes to familiarize yourself with the part names and to confirm that the parts are included.

1. Mira Response ev and biv shower fittings

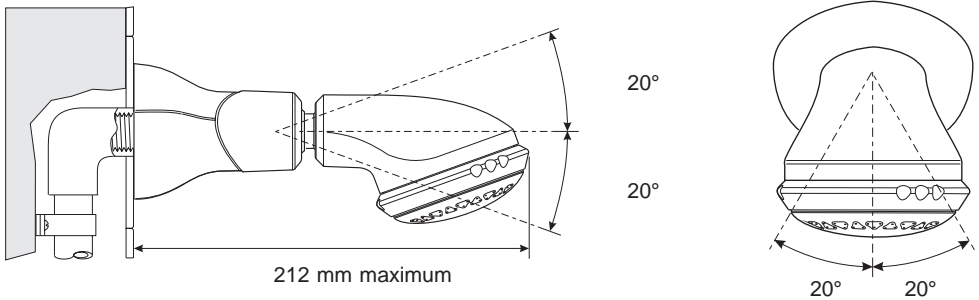




1. Mira Response ev and biv



2. Mira Response bir



1. Inlet Pressures.

For ev and biv fittings

- 1.1. Minimum maintained pressure: **0.4 bar**.
Maximum maintained pressure: **5.0 bar**.

Maintained pressures above the stated maximum could result in excessive spray forces and possible damage to the product.

For bir fittings

- 1.2. Minimum maintained pressure: **0.4 bar**.
Maximum maintained pressure: **3.0 bar**.

Maintained pressures above the stated maximum could result in excessive spray forces and possible damage to the product.

2. Flow rates

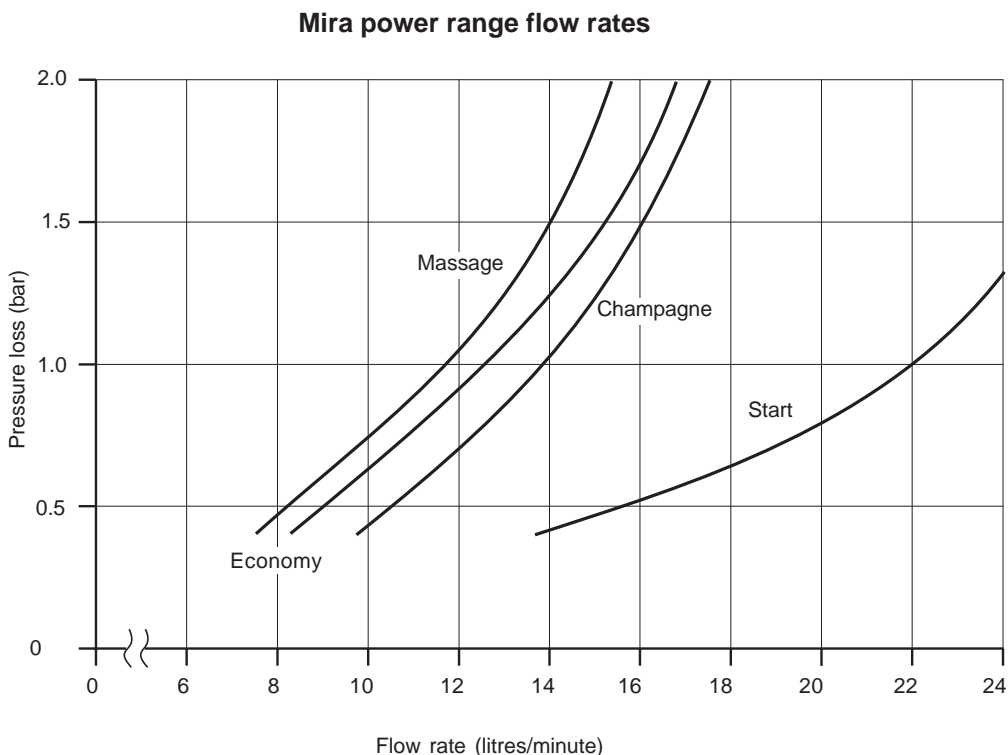
- 2.1. The typical flow rates for the power range at 1.0 bar pressure loss are:

Start	=	22.0 litres/minute
Champagne	=	13.8 litres/minute
Massage	=	11.8 litres/minute
Economy spray	=	13.2 litres/minute

3. Flow Performance Graphs

This is the typical pressure loss graph for the Mira Response power range only. There will also be an additional pressure loss through the shower control and outlet hose.

Pressure loss = Pressure difference between the inlet and outlet of the fitting.



1. Plumbing

Read the section “**Important Safety Information**” first.

- 1.1. Supply pipework **MUST** be flushed to clear debris before connecting the appliance.
- 1.2. A hose retaining ring is supplied to prevent the handset from dropping below the spill-over level of the bath or shower, which could lead to contamination from backsiphonage. The supplied hose retaining ring should meet the great majority of user requirements for shower installations with flexible outlet fittings. However, there will be occasions when the hose retaining ring will not provide a suitable solution. In these instances an **outlet** double checkvalve, e.g. the Mira DCV-H, **must** be fitted. The inclusion of the Mira DCV-H will increase the required supply pressure typically by 0.1 bar.
- 1.3. Avoid layouts where the shower hose will be sharply kinked. This may reduce the life of the hose.
- 1.4. **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).
- 1.5. **Do not** use excessive force when making connections.
- 1.6. **Do not** install the product in a position where it could become frozen.
- 1.7. For a gravity fed shower installation, the minimum pressure at the handset is 0.4 bar. To generate the minimum pressure and accommodate the pressure loss in the pipes and shower control, a head of water of 5 metres is required on a typical correct installation.

For a pump installation the minimum acceptable vertical distance between the base of the cold water storage cistern and the shower head to operate the pump’s flow switches, is typically 0.6 m (600 mm).
- 1.8. The shower fitting is connected to the bottom outlet of the shower control or right angled connector assembly as appropriate.

- 1.9.** When installing the shower fitting into a shower cubicle, it is best positioned to spray across the cubicle rather than towards the opening.
- 1.10.** Layout and sizing of pipework be such that when other services are used, pressures do not fall below the recommended minimum for that fitting as this will cause the spray pattern to collapse.
- 1.11.** Perceived sound levels of the handset, pump (if fitted) and spray impingement, will be affected by the spray pattern selected and flow rates.

Mira Response ev

1. Solid, dry-lined, stud partition, shower cubicle or laminated panel walls

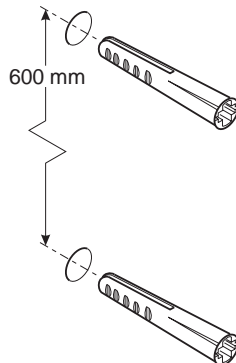
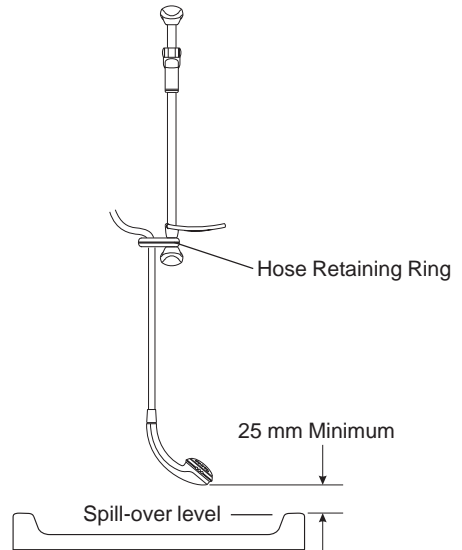
Read the section “Installation Requirements” first.

The slide bar should be fixed to the wall to one side of the product and at a convenient height for all the family. It should be positioned so that it discharges down the centre line of the bath, or across the opening of a shower cubicle and should be directed away from the shower control.

1.1. Decide on a suitable location for the slide bar avoiding buried cables and pipes. The position of the shower control and the shower fittings must provide a minimum gap of 25 mm between the spill-over level and the handset. This is to prevent backsiphonage. Alternatively the Mira **outlet** double check valve (DCV-H) can be fitted and is available as an accessory.

1.2. For solid walls drill two 6.0 mm diameter holes at 600 mm centres and insert the wall plugs.

Note! Special consideration should be given to the fixing arrangements when installing on to a dry lined, stud partition, shower cubicle or laminated panel wall structures. Installers may wish to obtain alternative proprietary cavity fixing, or choose other options, however, these methods of fixing are beyond the scope of this guide.

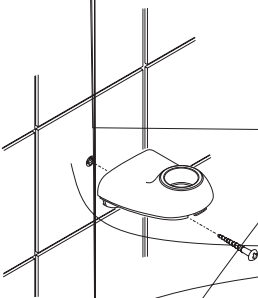
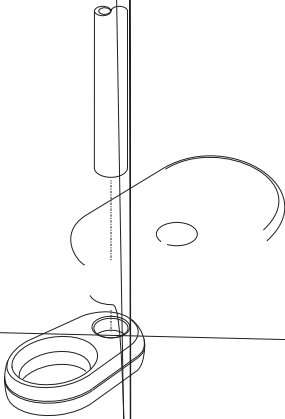


1.3. Depress the release button on the clamp bracket assembly and slide the clamp bracket assembly on to the slide bar. The slide bar has an indentation at one end that should engage in the lower slide bar support body.

1.4. Slide the soap dish on to the slide bar.

1.5. Slide the hose retaining ring on to the slide bar below the soap dish.

1.6. Use the screw provided to fix the bottom slide bar support body to the wall. Do not fully tighten the screw to make aligning the top slide bar support body easier.



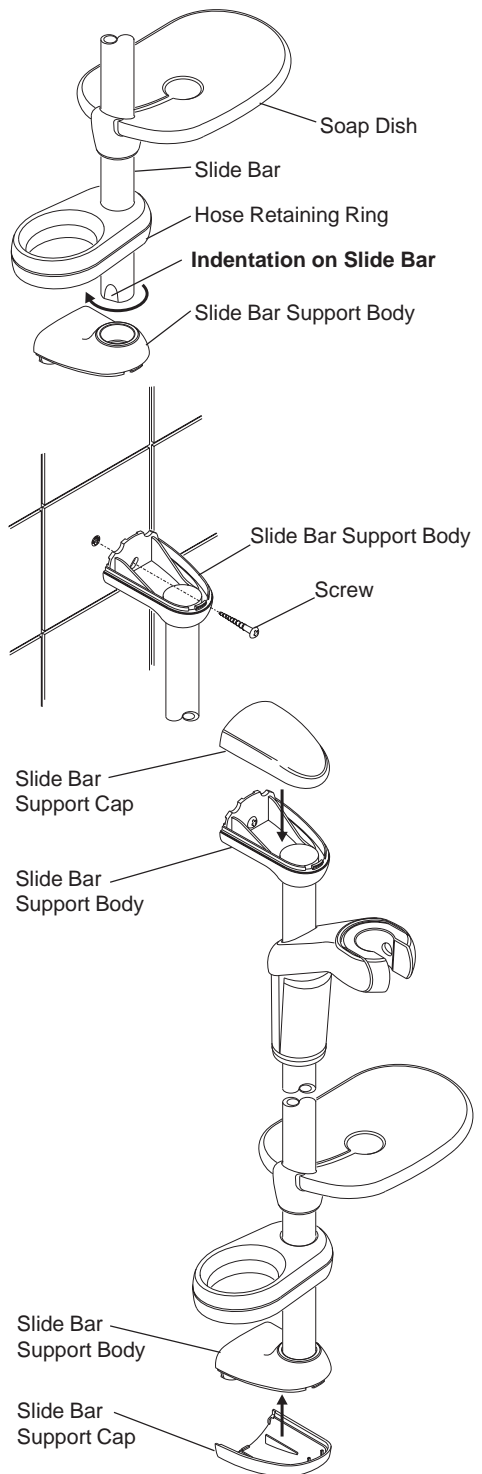
1.7. Push the slide bar, complete with the previously assembled components, into the recess in the bottom slide bar support body. Rotate the slide bar until the **indentation** engages in the slide bar support body.

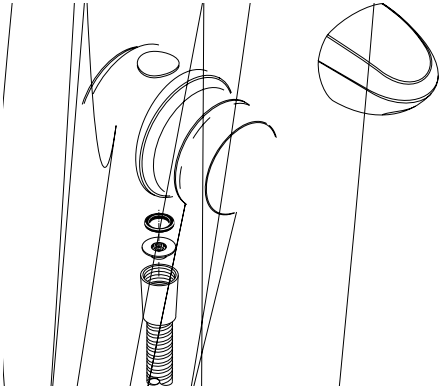
1.8. Push the top slide bar support body on to the slide bar and fix to the wall with the screw provided.

1.9. Fully tighten both screws.

1.10. Fit the slide bar support caps pushing them vertically onto the slide bar support bodies.

Note! To remove the slide bar support caps insert a suitable flat bladed screwdriver between the joint line at the rear, and carefully twist to remove the slide bar support cap.



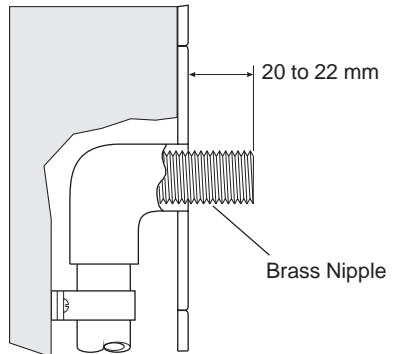
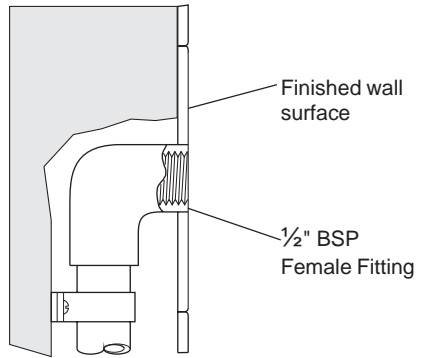
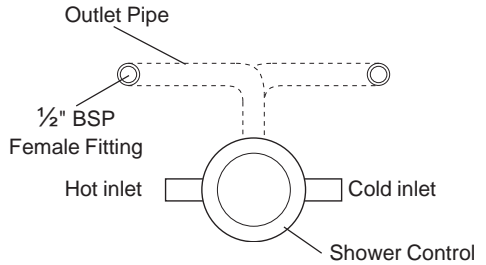


Mira Response biv

2. Solid and dry-lined walls

Read the section “**Installation Requirements**” first.

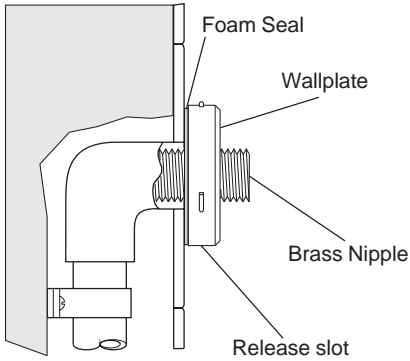
When the shower fitting is connected to the right angled connector assembly (RAC) it should be positioned above and offset to one side of the top outlet of the shower control. The RAC is offset to prevent the flexible hose from obstructing the temperature and flow control knobs of the shower control. The pipework between the shower control and the 1/2" BSP female fitting are not supplied as part of the shower fitting.



2.1. 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 up to 5 mm below the finished surface of the wall.

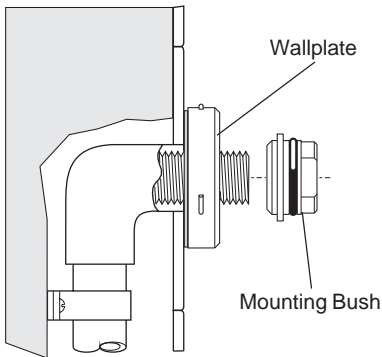
2.2. Apply liquid sealant or PTFE tape to the 1/2" BSP brass nipple. **Do not use paste.**

2.3. Screw the brass nipple into the female fitting, until it projects between 20 and 22 mm from the finished surface of the wall. If the brass nipple projects greater than 22 mm it will prevent the RAC elbow from engaging with the wallplate. If necessary, cut the brass nipple to the correct length and remove any burrs.

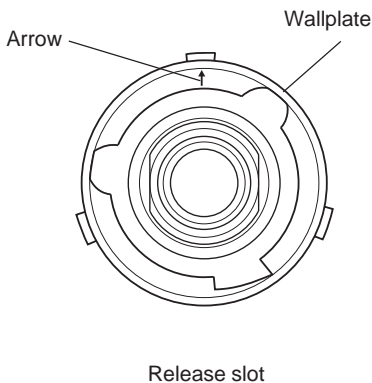


2.4. Place the wallplate over the brass nipple. Make sure that the foam seal abuts the finished wall surface.

2.5. Apply liquid sealant or PTFE tape to the exposed section of the brass nipple. **Do not use paste.**

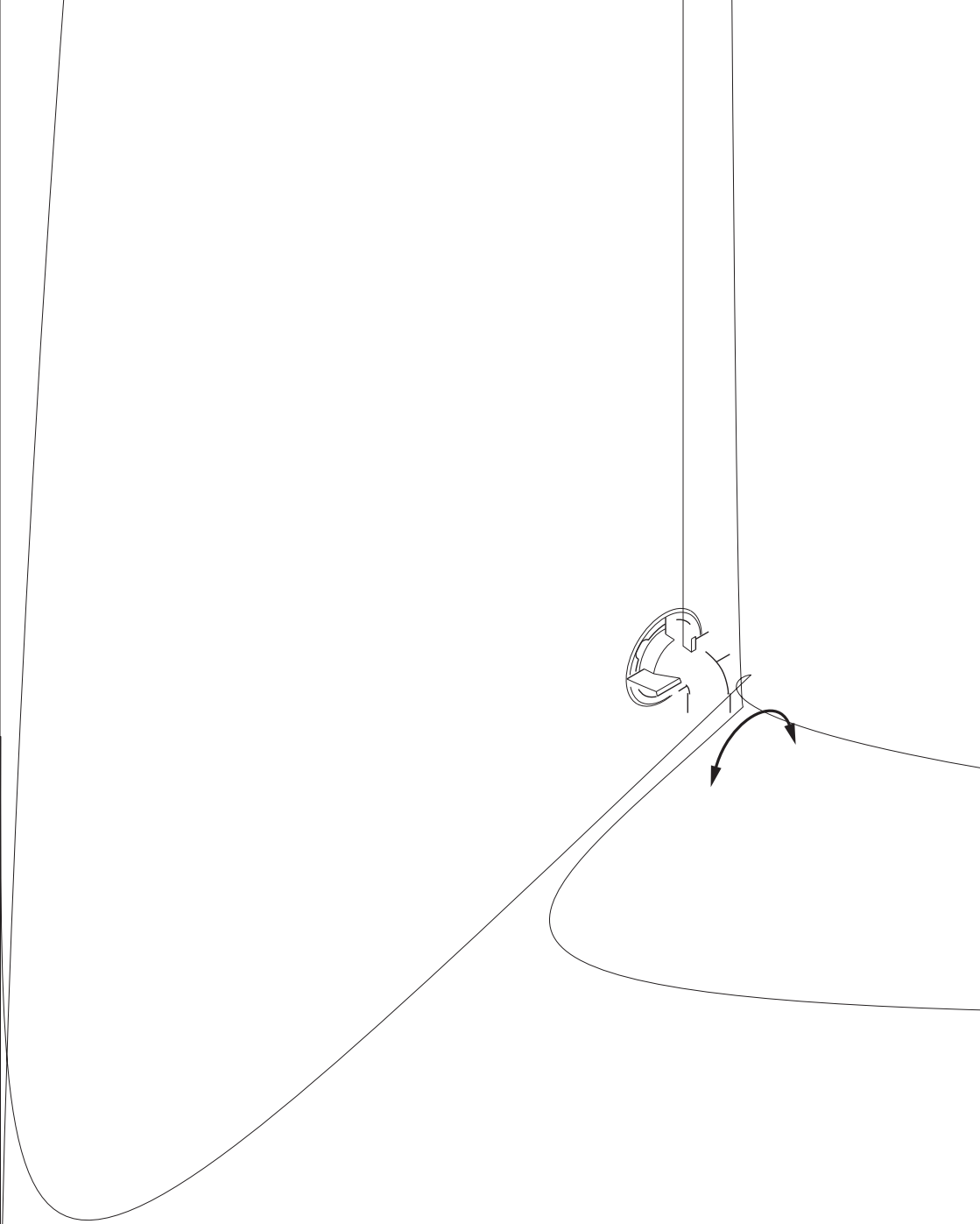


2.6. Screw the mounting bush on to the brass nipple until it clamps the wallplate loosely against the wall.



2.7. Rotate the wallplate to align the elbow release slot at bottom centre, and with the arrow pointing upwards.

2.8. Tighten the mounting bush to hold the wallplate in position. Flats are provided on the mounting bush for a 24 mm A/F spanner.



Mira Response biv

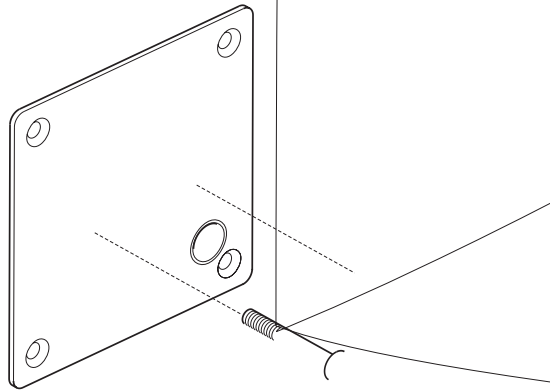
3. Shower cubicle, laminated panel or stud partition walls

Mira Response bir

4. Solid and dry-lined walls

Read the section “**Installation Requirements**” first.

The bir spray head should be positioned at a convenient height for all the family. It should be positioned so that it discharges down the centre line of the bath, or across the opening of the shower cubicle and it should be directed away from the shower control. The pipework between the shower control and the backplate nut is not supplied as part of the shower fitting.



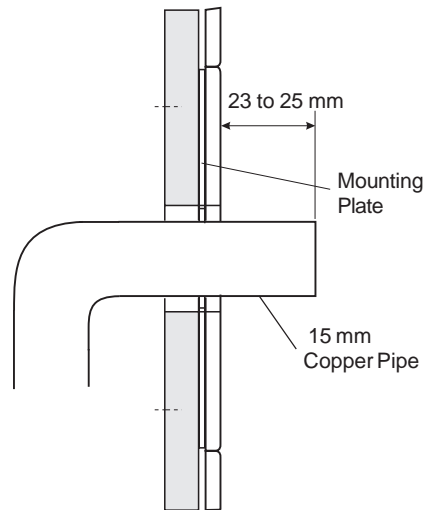
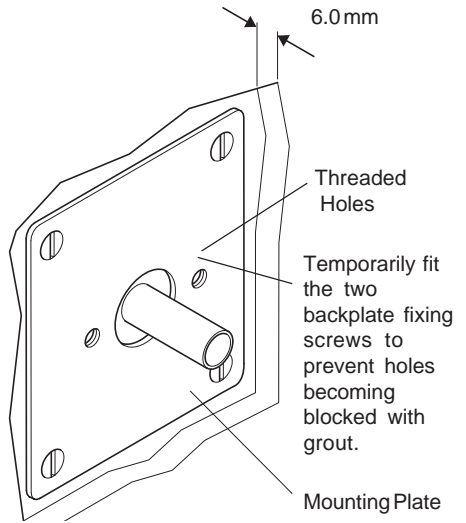
4.7. Drill the four mounting plate fixing holes. If necessary, make a recess approximately 6 mm deep to accept the mounting plate. Fit the four wall plugs supplied to the fixing holes.

4.8. Fix the mounting plate to the wall with four screws (not supplied). The two threaded holes must be horizontal.

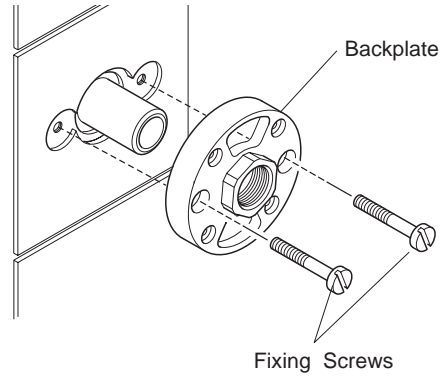
4.9. Temporarily fit the two backplate fixing screws into the mounting plate. This will prevent the fixing holes from becoming blocked with plaster or grout.

4.10. Finish the surface of the wall as required.

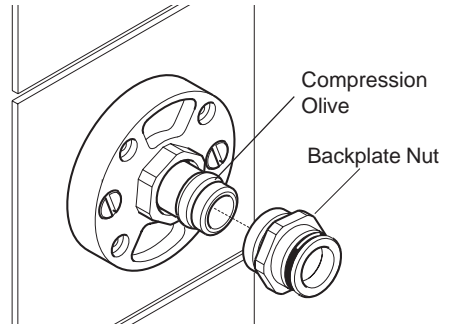
4.11. The copper pipe must protrude through the wall between 23 - 25mm from the finished surface of the wall. If the pipe protrudes further than 25mm it will prevent the backplate nut from engaging with the backplate. If necessary cut the pipe to the correct length and remove any burrs.



4.12. Fix the backplate to the wall using the two fixing screws.

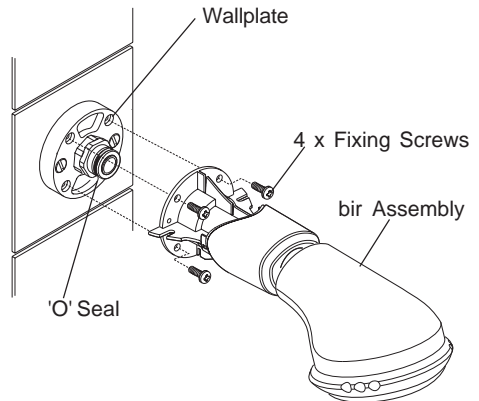


4.13. Fit the compression olive over the copper pipe and tighten the backplate nut into position. Flats are provided on the wallplate and backplate nut for a 24 mm A/F spanner.

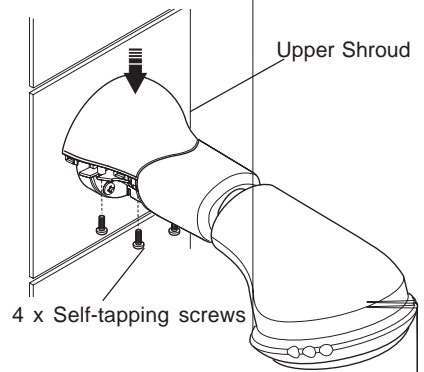


4.14. Ensure the 'O' seal is fitted on the backplate nut. Push the bir assembly over the backplate nut onto the wallplate.

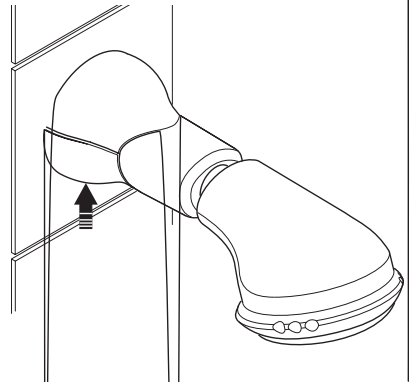
4.15. Fix the bir assembly to the wall plate using the four screws provided.



4.16. Fix the upper shroud to the bir assembly using the four self-tapping screws provided.



4.17. Snap the lower shroud into position.



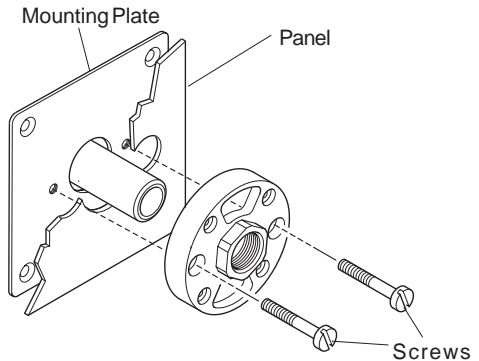
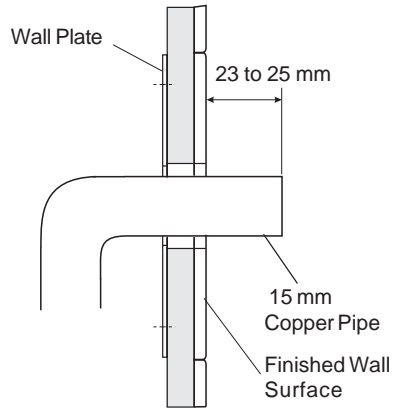
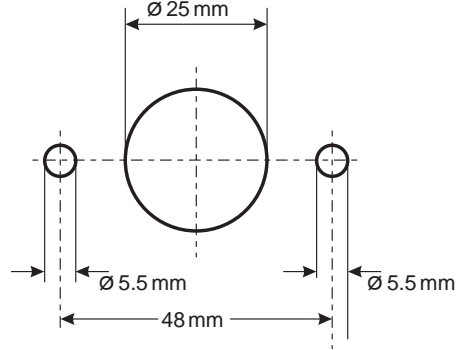
Mira Response bir

5. Shower cubicle, laminated panel or stud partition walls

Read the section “**Installation Requirements**” first.

The bir spray head should be positioned at a convenient height for all the family. It should be positioned so that it discharges down the centre line of the bath, or across the opening of the shower cubicle and it should be directed away from the shower control. The pipework between the shower control and the backplate nut of the shower head is not supplied as part of the shower fitting.

- 5.1. Cut a 25 mm hole in the panel and two 5.5 mm holes at 48 mm centres.
- 5.2. Feed the copper pipe through the mounting plate and panel. Ensure the pipe protrudes **at least 23 mm** from wall.
- 5.3. The copper pipe must protrude through the wall between 23 - 25mm from the finished surface of the wall. If the pipe protrudes further than 25mm it will prevent the backplate nut from engaging with the backplate. If necessary cut the pipe to the correct length and remove any burrs.
- 5.4. Hold the mounting plate in position behind the panel, place the backplate in front of the panel and insert the two backplate screws through the holes in the panel and fit them into the mounting plate and tighten.
- 5.5. To complete the installation of the bir fittings follow instructions 4.13. to 4.17. of "**Solid and Dry-lined Wall Installation**".



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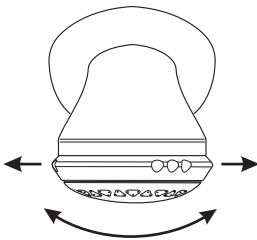
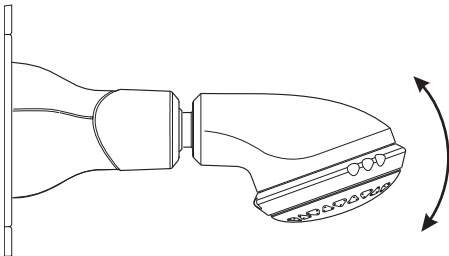
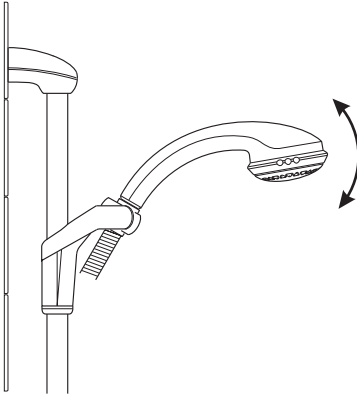
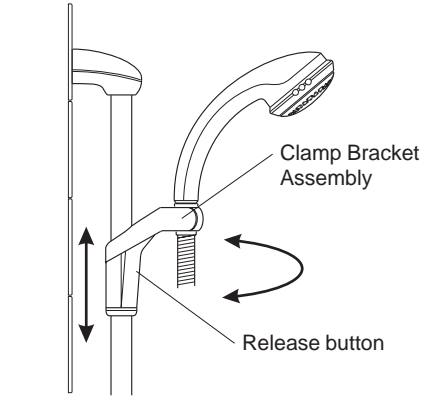
1.3. Message

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2. Height and direction adjustment



Mira Response ev and biv

2.1. Depress the release button and slide the clamp bracket assembly to the required position.

2.2. Move the handset to the required angle. A ratchet mechanism in the clamp bracket assembly holds the handset in the selected position. There are four positions.

Mira Response bir

2.3. Move the spray head to the required position. The spray head is adjustable in both the horizontal and vertical directions, and can also be rotated.

1. Cleaning

Many household cleaners contain abrasives and chemical substances, and should not be used for cleaning plated or plastic fittings. These finishes should be cleaned with a mild washing up detergent or soap solution, and then wiped dry using a soft cloth.

Spray plate assembly - external

- 1.1. Use your thumb or a soft cloth to wipe any limescale from the soft triangular nozzles and the front face of the spray plate assembly.

Spray plate assembly - internal

- 1.2. Remove the spray plate assembly. Refer to **Section 9, Maintenance: "2. Spray plate assembly-removal and installation"**.
- 1.3. Remove the 'O' seals.
- 1.4. Unclip the massage jet plate and remove the massage turbine.
- 1.5. Unscrew the aeration plate and remove the aeration ring and aeration mesh.
- 1.6. Clean all the components with a stiff brush. If necessary use a plastic kettle descaler in accordance with the manufacturer's instructions.
- 1.7. Refit the components in reverse order. Make sure that the aeration components are correctly aligned.
- 1.8. Install the spray plate assembly. Refer to **Section 9, Maintenance: "2. Spray plate assembly-removal and installation"**.





Read the section “**Important Safety Information**” first.

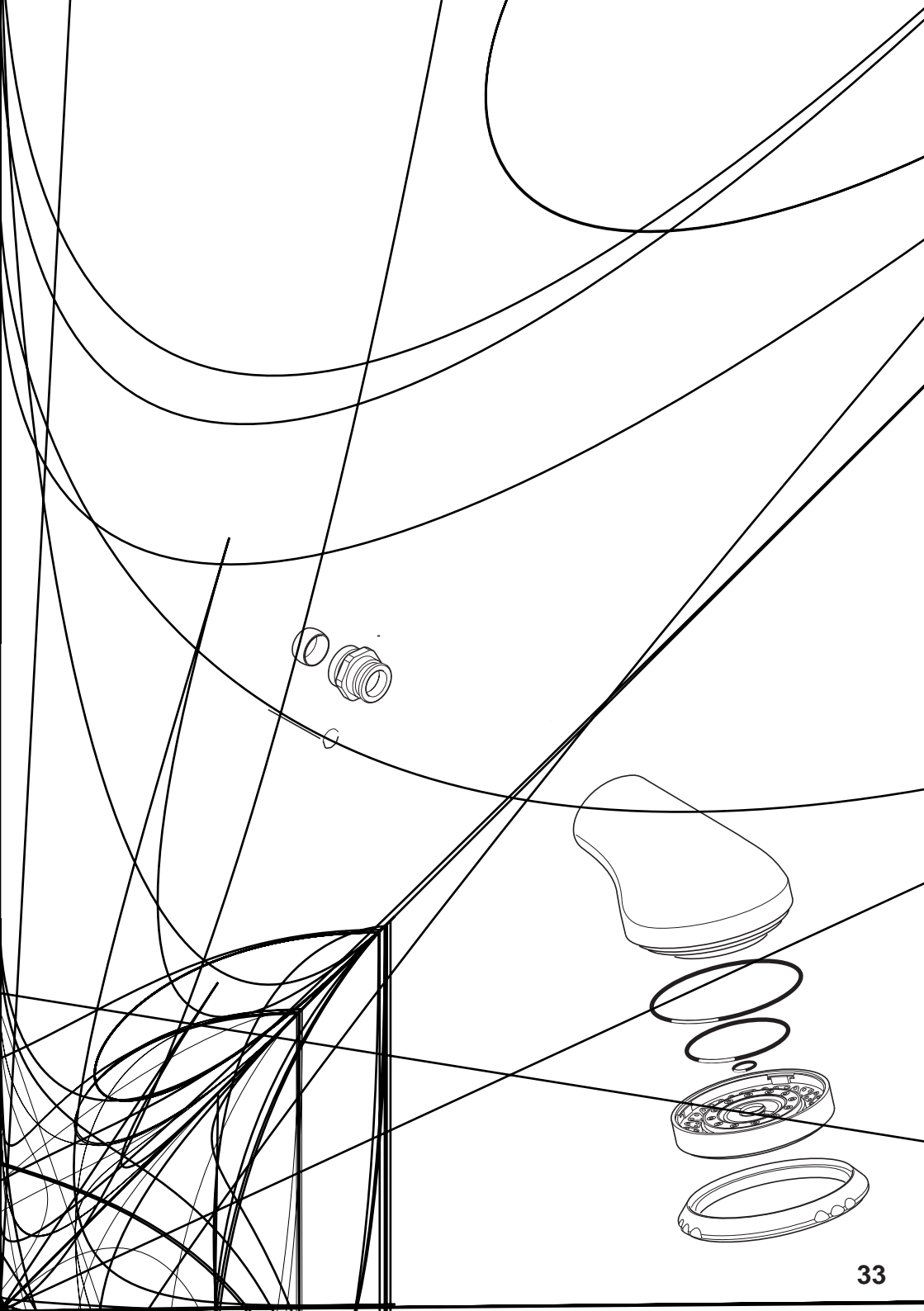
Providing the shower fitting has been correctly installed and is operated in accordance with the instructions contained in this guide, difficulties should not arise. If any maintenance is required then it must be carried out by a competent tradesperson for whom the fault diagnosis chart and maintenance instructions are provided. Before replacing any parts ensure that the underlying cause of the malfunction has been resolved.

Malfunction	Cause	Remedy
<p>No flow or low flow rate.</p>	<p>Spray plate assembly blocked.</p> <p>Hose blocked or twisted.</p> <p>Partially closed stop or servicing valve in supply pipe work to shower control.</p> <p>Head of water below minimum required.</p>	<p>Refer to Section 9, Maintenance: “1. Cleaning”.</p> <p>Clear blockage or release twist in hose.</p> <p>Open valve.</p> <p>Raise cistern or fit Mira pump.</p>
<p>Drip from spray plate assembly on handset or bir assembly.</p>	<p>A small amount of water may be retained in the shower fitting after the shower control has been turned off. This may drain over a few minutes.</p> <p>Defective seal(s) in the shower control.</p>	<p>This is quite normal. Changing the angle of the shower fitting may vary the draining time.</p> <p>Refer to the shower control Installation, Operation and Maintenance guide.</p>

Malfunction	Cause	Remedy
Shower temperature changes when spray action is adjusted.	Adjusting the spray action changes the flow of water. This may affect some shower controls and plumbing installations.	To minimise the effect make sure that the spray plate is clean. Refer to Section 9, Maintenance: “1. Cleaning” . If the malfunction persists refer to the shower control Installation, Operation and Maintenance Guide.
Flow rate from ev and biv too high.	Shower control does not have a separate flow control.	Fit an optional 9 litres/minute flow regulator. The use of the regulator will reduce the force and flow rate of the shower.
Flow rate from bir too high.	Shower control does not have a separate flow control.	Fit an optional flow regulator to the hot inlet of the shower control . The use of the regulator will reduce the force and flow rate of the shower. Refer to shower control Installation, Operation and Maintenance Guide for correct installation of the flow regulator.

1. Mira Response ev and biv spare parts list

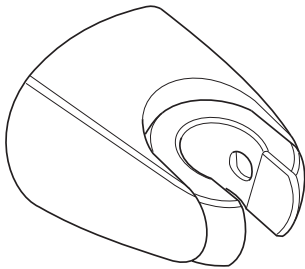
150.57	Hose - white
150.58	Hose - chrome
150.60	Hose - chrome (1.5 Metre length for bath/shower mixers)
150.67	Hose - light golden
150.69	Hose - light golden (1.5 Metre length for bath/shower mixers)
411.05	Adjuster Ring
411.21	Power Handset Assembly - chrome
411.22	RAC Mounting Pack
411.23	Clamp Bracket Assembly
411.30	Slide Bar Support Assembly
411.37	Service Pack 'O' Seals - components identified 'A'
411.46	RAC Shroud - white
411.53	Slide Bar - stainless steel
411.54	Slide Bar - white
411.55	Slide Bar - light golden
411.58	Hose Retaining Ring
411.64	Power Handset Assembly
411.66	Brass Nipple
411.90	RAC Shroud - light golden
411.91	Soap Dish Pack
411.94	Screw Pack
411.97	Power Spray Plate Assembly
413.22	Adjuster Ring - satin chrome
413.24	Clamp Bracket Assembly - chrome
413.30	Slide Bar Support Assembly - chrome
413.33	Hose Retaining Ring - chrome
413.34	Soap Dish Pack - chrome
413.57	RAC Shroud - chrome
413.59	Power Spray Plate Assembly - dark grey
413.63	Slide Bar - chrome
632.73	Hose Washer



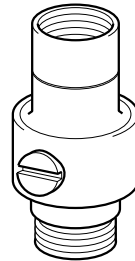
RF2 Fixed handset holder. A simple alternative or additional holder for a shower handset, available as an optional accessory from your Mira stockist.

DCV-H: An outlet double check valve, designed to prevent the backflow or backsiphonage of potentially contaminated water, through shower controls which are fitted with a flexible hose as part of the outlet shower fitting. The inclusion of the Mira DCV-H will increase the required supply pressure typically by 0.1 bar. Available as an optional accessory from your Mira stockist.

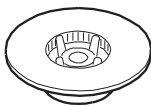
9 Litre/minute Flow Regulator, designed to limit the flow rate for the Mira Logic fittings in high pressure installations.



RF2 Fixed handset holder



DCV-H Outlet double check valve
(Part no. **110.55**)



9 Litre/minute Flow Regulator
(Part no. **146.84**)

Notes

Customer Service

Guarantee of Quality

Mira Showers guarantee products against any defect of materials or workmanship for one year from the date of purchase (2 years for Mira Select and 3 years for Mira Excel ranges).

To validate the guarantee, please return your completed registration card.

Within the guarantee period we will resolve defects, free of charge, by repairing or replacing parts or modules as we may choose.

To be free of charge, service work must only be undertaken by Mira Showers or our approved agents in Northern Ireland and Republic of Ireland.

Service under this guarantee does not affect the expiry date. The guarantee on any exchanged parts or product ends when the normal product guarantee period expires.

Not covered by this guarantee:

Damage or defects arising from incorrect installation, improper use or lack of maintenance, including build-up of limescale.

Damage or defects if the product is taken apart, repaired or modified by any person not authorised by Mira Showers or our approved agents.

This guarantee is in addition to your statutory and other legal rights.

Before using your shower

Please take the time to read and understand the operating and safety instructions detailed in this manual.

What to do if something goes wrong

If when you first use your shower it doesn't function correctly, first contact your installer to check that installation and commissioning are satisfactory and in accordance with the instructions in this manual. We are on-hand to offer you or your installer any advice you may need.

Should this not resolve the difficulty, simply contact our Customer Services who will give every assistance, and if necessary arrange for our service engineer to visit.

If later the performance of your shower declines, consult this manual to see whether simple home maintenance is required. Please call our Customer Services to talk the difficulty through, request service under guarantee if applicable, or take advantage of our comprehensive After-Sales service.

As part of our quality and training programme calls may be recorded or monitored

Mira Showers

Kohler Mira Ltd
Cromwell Road,
Cheltenham GL52 5EP.

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

www.mirashowers.com



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

mira
SHOWERS

After Sales Service

Our Customer Services Team is comprehensively trained to provide every assistance you may need: help and advice, spare parts or a service visit.

Spare Parts

We maintain an extensive stock of spares, and aim to have functional parts available for ten years from the date of final manufacture of the product.

Spares can be purchased from approved stockists or merchants (locations on request) or direct from Customer Services.

Spares direct will normally be despatched within two working days. Payment can be made by Visa or Access at the time of ordering. Should payment by cheque be preferred a pro-forma invoice will be sent.

Note! In the interests of safety, spares requiring exposure to mains voltages can only be sent to competent persons.

Service

Our Service Force is available to provide a quality service at a reasonable cost. You will have the assurance of a Mira trained engineer/agent, genuine Mira spares—and a 12 month guarantee on the repair.

Payment should be made directly to the Service Engineer/Agent, using Visa, Access or a cheque supported by a banker's card.

To contact us:

England, Scotland & Wales

Mira Showers Customer Services

Telephone: 01242 262888
8.30am to 5pm Working days (4.30pm Fri)
8.30 am to 12.30pm Saturday
E-mail: Mira_technical@mirashowers.com

Fax: 01242 282595
By Post: Cromwell Road
Cheltenham
Gloucester GL52 5EP

For Customers in Northern Ireland

Wm H Leech & Son Ltd

Telephone: 028 9044 9257 – Mon to Fri 9 am-5pm
Fax: 028 9044 9234 – 24 hours
Post: Maryland Industrial Estate
Ballygowan Road
Moneyreagh, Co Down
BT23 6BL

For Customers in Republic of Ireland

Modern Plant Ltd

Telephone: Dublin 01 4591344 – Mon to Fri 9 am to 5 pm
Fax: Dublin 01 4592329 – 24 hours
Post: Otter House
Naas Road
Clondalkin
Dublin 22