



INSTALLATION & OPERATING INSTRUCTIONS

Atmos Energy

(Thermostatic Concentric Mixer Valve with Overhead)

Atmos Fusion

(Thermostatic Concentric Mixer Valve with Riser Rail)

Service Line Number - 0845 505 2211



TMV2 Approval property of: Taizhou Guoren
Thermostatic Sanitaryware Co. Ltd

INTRODUCTION

This book contains all the necessary fitting and operating instructions for your MX thermostatic concentric mixer shower.

Please read these instructions carefully. Read through the whole of this book before beginning your installation.

The shower installation **MUST** be carried out by a suitably competent person and in the sequence of this instruction book.

Care taken during the installation will provide a long and trouble free life from your shower. For the best performance within the specified running pressure range, a minimum flow of 8 liters per minute should be available on both inlets.

This mixer valve is designed to operate on higher pressure systems found up to a maximum of 5 bar running pressure. The valve must not be subjected to water temperatures above 80°C. This mixer is also suitable for thermal storage, unvented systems and pumped gravity systems.

IMPORTANT: Before installing with a gas instantaneous water heater, make sure it is capable of delivering hot water at a minimum switch-on flow rate of 3 liters per minute. At flow rates between 3 and 8 liters per minute, the appliance must be capable of raising the water temperature to a minimum of 52°C.

The water temperature at the inlet to the mixer valve must remain relatively constant when flow rate adjustments are made (refer to the water heater operating manual to confirm compatibility with this mixer shower).

Inlet connections are to 15mm compression fittings.

SAFETY WARNINGS

Layout and sizing of pipework must be such that when other services are used, pressures at the shower control inlets do not fall below the recommended minimum.

DO NOT choose a position where the shower could become frozen.

DO NOT connect this mixer valve to any form of tap or fitting not recommended by the manufacturer.

The handset must be regularly cleaned to remove scale and debris.

Conveniently situated service valves in each inlet supply must be fitted as an independent method of isolating the shower should maintenance or servicing be necessary, these valves should not restrict the flow.

DO NOT operate the shower outside the recommended temperatures and pressures stated in this guide.

The British Burns Association recommends 37°C to 37.5°C as a comfortable bathing temperature for children. In premises covered by the Care Standards Act 2000, the maximum mixed water outlet temperature is 41°C.

Metal surfaces on the hot supply may become hot during operation.
Arrange to have the mixer valve regularly serviced by a suitably qualified person.

SITE REQUIREMENTS

The installation must be in accordance with Water Regulations Advisory Service (www.wras.co.uk).

Minimum running water pressure: 0.1 bar, but will operate better at a minimum of 0.5 bar.
Maximum running water pressure: 5 bar, (Static water pressure: 10 bar).

For your shower to perform well you should ensure that the pressure is as specified and a minimum flow of 5 liters per minute is available at both hot and cold inlets.

If a water supply is fed by a gravity then the supply pressure should be verified to ensure the conditions of use are appropriate for the valve.

NOTE: Water Regulations requires the handset to be 'constrained by a fixed or sliding attachment so that it can only discharge water at a point not less than 25mm above the spill over level of the relevant bath, shower tray or other fixed appliance'. A double check valve, or similar, MUST be fitted in the supply pipework to prevent back-flow.

The pressure at both the hot and cold water supplies to the mixer valve should be the same, and the installer should ensure that the flow is not affected by other taps elsewhere in the house. It is very important that for use in any mains pressure systems an expansion tank and a pressure reducing valve has been fitted to ensure the pressure does not exceed 5 Bar. This should be confirmed by the installation engineer or competent person before installation.

WATER TEMPERATURE REQUIREMENTS

Maximum hot water temperature = 80°C, Recommended maximum = 65°C.
Minimum hot water temperature = 55°C, Maximum cold water temperature = 25°C.

TEMPERATURE ADJUSTMENT RANGE

The mixed water temperature can be adjusted from cold through to hot. There is a safety stop preset at a set temperature of about 38°C.

In the event of failure of cold water system, the valve automatically reduces the flow of hot water to prevent scalding. It will only operate again once the flow of cold water has been resumed.

Before proceeding with the installation check all the components in the component list are present.

INSTALLATION

WARNING!

The mixer valve should be fitted only after all the pipework has been installed and ensure no pipes or wires are behind where the screws will be required.

Do not use jointing compounds on any of the pipe fittings. Do not solder fittings near the mixer valve as heat can damage the valves or seals. Always flush the system prior to installing the valve.

Before installing, make sure the mixer valve is kept in a clean place to prevent any rubbish etc. getting into the openings while fitting the pipework.

- The mixer valve is suitable for installation on a solid wall, a stud partition wall, dry lined wall or fixing to a cubicle or panel.
- The water pipes should be securely attached within the wall or panel to support the mixer valve and prevent movement or water noise after installation.
- The mixer valve hot water inlet has a red symbol next to the inlet and must be on the left hand side with the outlet pointing upwards.
- The mixer valve is designed to work at the same hot and cold water pressures. If this is not the case a flow controller (disc with small holes) can be fitted to the higher pressure supply to the valve. This is best done by testing each one to find out which gives the best results.
- The mixer valve will be installed in such a position that the maintenance of the TMV and its valves and the commissioning and testing of the TMV can be undertaken.

SITING OF THE MIXER VALVE

Position the mixer valve so that all controls can be comfortably reached while using the shower.

NOTE: Easily accessible suitable service valves (complying with Water Regulations Advisory Service www.wras.co.uk). MUST be fitted as close as practical to the valve, on the hot and cold water supplies to the shower as an independent means of isolating the water supplies should maintenance or servicing be necessary. These valves should not restrict the flow.

The supply pipework can be plumbed from above or below but must finish at the suitable connections, which should be 155mm centers. If installing into a stud partition etc. the pipework will need support.

Before fitting the mixer valve flush out the pipework in accordance with Water Regulations Advisory Service (www.wras.co.uk)

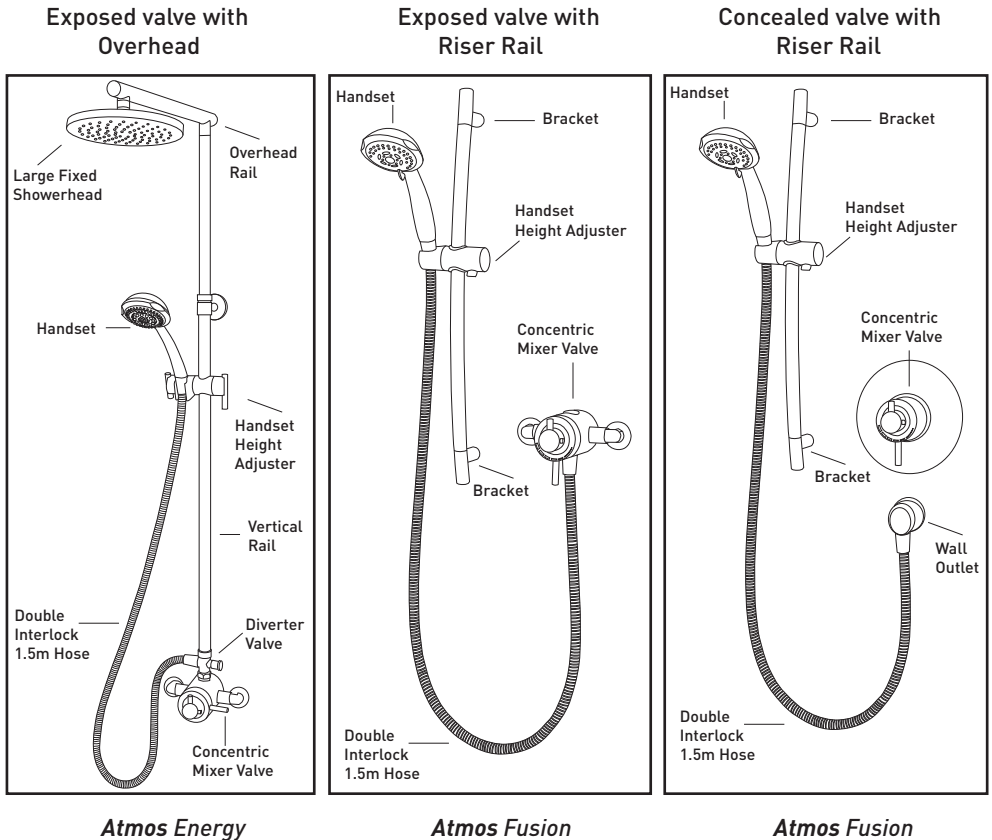
SITING OF THE SHOWER

Having established the position of the mixer valve so that all controls can be comfortably reached whilst using the shower, the handset and riser rail can be positioned either side of the valve. If using the overhead rail this must be fitted directly above the mixer valve. Make sure any cables and pipework are not behind the required screw holes.

There are three options available with this mixer valve:

- Exposed Valve with Overhead - **Atmos Energy**
- Exposed Valve with Riser Rail - **Atmos Fusion**
- Concealed Valve with Riser Rail - **Atmos Fusion**

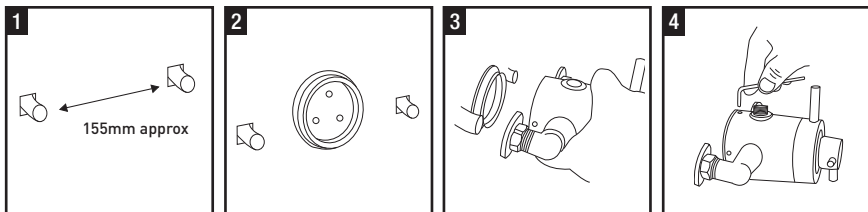
Consult the illustration below to make sure you check from the component list that all the parts for your system are supplied.



EXPOSED FITTING OF THE MIXER VALVE FOR *Atmos Fusion/Energy*

1. The supply pipework can be plumbed from above or below but must finish at the suitable connections which should be at 155mm centers. Connect the 15mm pipework using standard compression nut and olives supplied with the mixer valve. (See Fig 1).
- NOTE:** Make sure the mixer valve is kept in a clean place to prevent rubbish etc, getting into the openings while fitting the pipework.
2. Complete the fitting of the pipework and the tiling leaving the pipework as shown. Leave 155mm (+ or - 5mm) between centers and about 30mm out from the finished surface. (See Fig 2).
 3. Remove the back plate from the mixer valve by removing the retaining screws. Put the plate in the centre between the feed pipes and mark the screw positions, check this fits by holding the valve in position. Drill plug and screw the back plate to the wall. (See Fig 3).
 4. Fit the two flat valve nut covers to the nuts on the mixer valve and position the mixer valve onto the two water feed pipes and onto the wall bracket. To prevent moisture entering the wall put some silicone on the underside of the mixer valve nut covers. Carefully tighten up the compression nuts to hold the mixer valve in place. (See Fig 4).
 5. Make sure the mixer valve outlet is pointing in the correct direction (with the hot feed on the left side marked with a red indicator). Replace the locking screws to hold the mixer valve onto the wall plate.

NOTE: A spare fitting is provided to change from $\frac{1}{2}$ " BSP to $\frac{3}{4}$ " BSP on the outlet of the valve for where the double interlock hose is attached directly to the mixer valve using the $\frac{1}{2}$ " fitting.



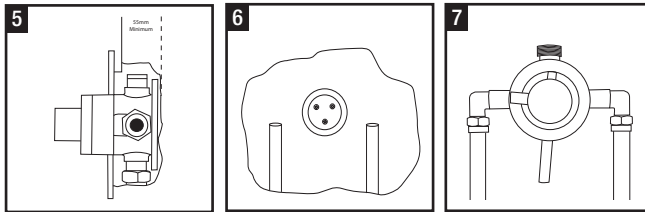
CONCEALED FITTING OF THE MIXER VALVE FOR *Atmos Fusion*

6. The fitting of the mixer valve is essentially the same as described for the exposed option, except that the mixer valve is fixed to the wall between 50mm and 70mm below the finished surface of the shower. A circular hole between 140mm and 173mm should be enough to fit the mixer valve. (See Fig 5).

7. The supply pipework can be plumbed from above or below but must finish at the suitable connections which should be at 155mm centers. Connect the 15mm pipework using standard compression nut and olives.

NOTE: You should measure the distance between the outlets on the mixer valve you are fitting to determine the exact distance.

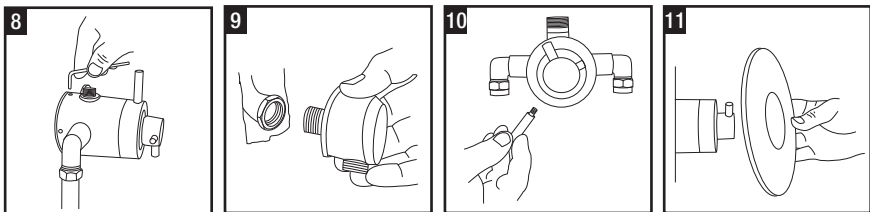
8. Complete the fitting of the pipework and the tiling leaving the pipework as shown. The wall plate should be attached firmly between 50mm and 70mm below the finished surface. Remove the back plate from the mixer valve by removing the retaining screws. Put the plate in the centre between the feed pipes and mark the screw positions, check this fits by holding the mixer valve in position. Drill plug and screw the back plate to the wall. (See Fig 6).



9. Position the mixer valve onto the two water feed pipes and onto the wall bracket. Tighten up the compression nuts to hold the mixer valve in place. (See Fig 7).

NOTE: Make sure the mixer valve outlet is pointing up and the hot feed is onto the left side marked with a red indicator.

10. Replace the locking screws to hold the mixer valve onto the wall plate. (See Fig 8)
11. A pipe must be fitted from the outlet of the mixer valve to the location of where you wish to position the wall outlet. This pipe must have a 1/2" female connection attached into which the wall outlet can be fitted. (See Fig 9).



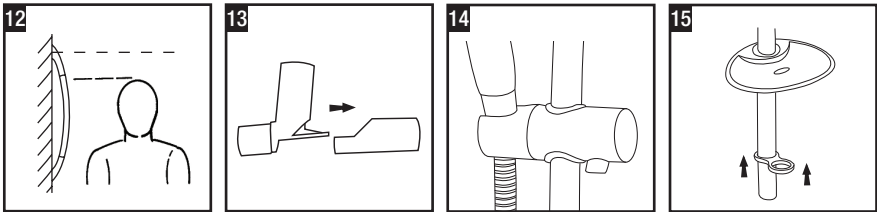
NOTE: Once the mixer valve and wall outlet are fitted, prior to fitting the trimplate disc ensure all connections are watertight. This can be done by reconnecting the water supplies and checking the connections when running the shower and when the shower is off.

12. The trimplate disc is fitted by unscrewing the handles and pushing it onto the mixer valve until flush with the tiles. (See Fig 10&11).
13. Fit riser rail as described in the riser rail fitting instructions. Silicone should be used to seal the outside edge of the trimplate disc to the tiles.

NOTE: Sufficient space should be left behind the trimplate disc to allow access to the elbows for servicing.

RISER RAIL FITTING FOR Atmos Fusion

14. Establish height of riser rail to suit users requirements. (See Fig 12).
15. Remove end bracket cover, to explore fitting point from upper of lower brackets. (See Fig 13).
16. Drill and plug the wall and fix the lower bracket without the rail locator notch. Fit rail through lower bracket. Place the remaining bracket on top of the rail making sure the slot in the rail is located into the bracket notch. Ensure the hole position is vertically aligned and mark the wall. Remove the rail then drill and plug the wall.
17. With the handset height adjuster on the left hand side, fit the soap dish then hose retaining ring onto the bottom of the rail assembly. (See Fig 14&15).
18. Replace the rail assembly through the lower bracket refit the top bracket ensure the slot or indent in the rail is located into the bracket notch and fix to the wall.



FITTING THE DOUBLE INTERLOCK HOSE AND HANDSET FOR Atmos Fusion

19. Connect one end of the double interlock hose to the outlet on the mixer valve or wall outlet, making sure that the sealing washer is in place, pass the double interlock hose through the hose retaining ring the screw onto the handset using the washer. (See Fig 16&17).

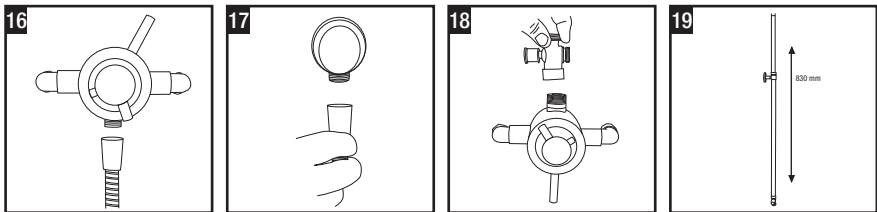
NOTE: It is the conical end of the double interlock hose which grips into the handset height adjuster. The handset will not fit in the height adjuster without the double interlock hose attached.

FITTING THE VERTICAL RAIL FOR *Atmos Energy*

20. Assemble the exposed mixer valve, fit the diverter valve to the mixer valve making sure sealing washer is fitted. (See Fig 18).
21. Loosely attach the vertical rail to the diverter valve and mark the position for the fixed bracket. You may wish to fit the shorter wall bracket connector to allow the rail to fit closer to the wall. (See Fig 19).

NOTE: Ensure the rail is vertically above the mixer valve using a spirit level.

22. Ensure there are no cables or pipework behind the wall bracket position. Remove the vertical rail and position the wall bracket in the marked position. Mark the 3 hole positions for the screws. Drill and plug the wall. (The wall plugs are suitable for most brick walls - use an appropriate masonry drill, but if the wall is plasterboard or a soft building block, use suitable wall plugs and a suitable drill bit, not supplied).
23. Secure the bracket mounting plate to the wall then push on the bracket cover.



FITTING THE HANDSET HEIGHT ADJUSTER AND HOSE RETAINING RING ON TO VERTICAL RAIL FOR *Atmos Energy*

24. Take the 10mm Allen key (supplied) and insert into the hexagon hole in the bottom of the vertical rail, unscrew brass threaded insert to remove the components by turning in a clockwise direction. (See Fig 20).

NOTE: This is a left hand thread.

25. With the lever on the right hand side and pointing down, slide the handset height adjuster onto the vertical rail and lock in place then slide on the hose retaining ring. (See Fig 21).
26. Replace the revolving nut ensuring the rubber o-ring seal is in place. Hand tighten using the Allen key.

FITTING THE OVERHEAD RAIL FOR *Atmos Energy*

27. The vertical rail is telescopic, unscrew the locking nut being careful not to damage the chrome plating. Pull the inner tube out from the outer one to the required length.

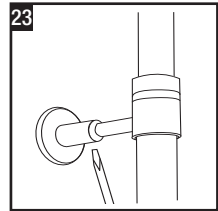
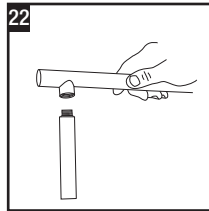
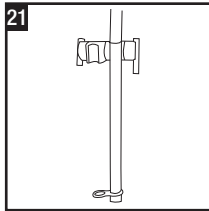
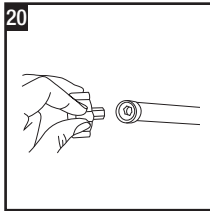
28. Attach the overhead rail to the vertical rail and screw until hand tight. The 'O' ring provides a seal so it does not need to be overtightened.

NOTE: Ensure the locking washer is on the vertical rail and do not tighten the locking nut between the two vertical tubes until the vertical rail has been completely fitted if desired it can be tightened at the desired height for use.

29. Screw the overhead rail assembly to the top of the diverter valve making sure the washer is fitted. Locate the overhead rod into the wall bracket and tighten the locking screw using the allen key supplied. (See Fig 22).

NOTE: There is a small amount of depth adjustment within the collar. Adjust the depth of the bracket before securing in place to the mounting plate.

30. Screw the large fixed showerhead to the overhead assembly, fit the hose and handset to the diverter (as described in point 17), Make sure the sealing washer is in place and screw tight to seal the joint. (See Fig 23).



COMMISSIONING AND ANNUAL MAINTENANCE TESTING

On commissioning carry out the following checks and tests:

- All the pipe work has been flushed through before fitting the valve
- The valve you have purchased matches the installation
- The supply pressures and temperatures are checked and all in the range specified in the instructions
- The isolation valves and strainers are fitted and clean of any unwanted material and do not restrict flow

Ensure both isolation valves are fully open. Turn the temperature control to cold and turn the flow on. Check the temperature is at the required minimum. Rotate the temperature controller gradually until it reaches the preset stop let it flow until the hot water has reached the valve and the temperature has stabilized. Check the temperature is $38^{\circ}\text{C} \pm 2^{\circ}\text{C}$. This is the valves factory preset.

Override the stop by pressing the button and rotate to maximum being careful to avoid scalding. Measure the temperature.

The valve should then be checked to confirm the water isolation performs correctly. Run the valve at the 38°C stop position. Check the water temperature. Turn off the feed of cold water using the isolation valve.

The water flow should fall to a very low flow, (possibly only a drip) after a few seconds. Collect the water after 5 seconds for 30 seconds and measure the temperature it should be below 46 °C +/- 2 °C . Turn on the cold water again and it should return after a few seconds to stabilise to 38 °C +/- 2 °C

Adjustment of the temperature settings is only to be carried out by a competent TMV engineer as it is a technically difficult operation in which the valve can be easily broken. It can be done by removing the handle on the temperature controller, (noting carefully the assembly of the components), rotating the internal stops a few degrees in the required direction and then reassembling. All the commissioning checks should be redone again to ensure it now meets the required specification before using the shower.

<u>PROBLEM</u>	<u>POSSIBLE CAUSE</u>	<u>SUGGESTED ACTION</u>
1. Water too hot.	A Temperature control is not correctly commissioned.	Adjust the temperature control - this is only a job for a suitably qualified person.
	B Not enough cold water flowing through shower.	Turn temperature control anti-clockwise.
	C Increase in the ambient cold water temperature.	Turn temperature control anti-clockwise.
	D Cold water supply blocked.	Turn off shower and consult a competent plumber.
	E High volume of cold water drawn off elsewhere.	Reduce the simultaneous demand from the supply.
	F Cold water filter blocked.	Remove valve and clean filters.
2. Water too cold.	A Temperature control is correctly commissioned.	Adjust temperature control.
	B Not enough hot water flowing through shower.	Turn the temperature control clockwise.
	C Decrease in the ambient cold water temperature.	Turn the temperature control clockwise.
	D Hot water filter blocked.	Remove valve and clean filters on the inlet.
	E Insufficient hot water supplies from the heating system.	Make sure the hot water is available by trying a hot water tap elsewhere in the house.
	F Hot water supply blocked or restricted.	Turn off shower and consult a suitably competent plumber.
G Pressure in excess of max recommended.	Fit pressure reducing valve.	

<u>PROBLEM</u>	<u>POSSIBLE CAUSE</u>	<u>SUGGESTED ACTION</u>
3. Water does not flow or shower pattern collapses when another outlet is turned on.	A Water supplies cut off	Check elsewhere in house and if necessary contact local water company.
	B Blockage in pipework.	Turn off shower and consult a suitably competent plumber.
	C Valve filters blocked by debris in water supply.	Remove valve and clean filters.
	D Showerhead blocked.	Clean Showerhead.
	E System not capable of supplying multiple outlet at the same time.	Reduce simultaneous demand. Check stop/service valves are fully open. Check if enough water pressure.
4. Shower controls noisy whilst in use.	A Running pressure in excess of maximum recommended.	Fit reducing disc to outlet of valve.
5. Shower will not shut off.	A Flow control cartridge worn.	Renew flow control cartridge see parts list.

COMPONENTS LIST

Atmos Fusion (HLY)

Description	Quantity
Brass Concentric Mixer Valve	1
Filter Washers& Plain Washer	1
Screw Pack, (3 screws + 3 plugs)	1
Allen key (small)	1
Valve Nut Covers	2
Concealed Valve Cover	1
Pressure Balance Kit (15mm)	1
Flow Restrictor + Washer	1
Wall Outlet	1
Curved Riser Rail	1
Riser Rail Fixing Bracket	2
Push-Button Height Adjuster	1
Screw Pack (2 screw + 2 plugs)	1
Multi Mode Handset	1
Hose Retaining Ring	1
1.5M Hose + Washers	1
Soap Dish	1
Fitting Instructions	1
TMV Registration Card	1

Atmos Energy (HLW)

Description	Quantity
Brass Concentric Mixer Valve	1
Filter Washers & Plain Washers	2
Screw Pack, (3 screws + 3 plugs)	1
Allen key (small)	1
Valve Nut Covers	2
Pressure Balance (15mm),	1
Flow Restrictor Kit	1
Allen key (10mm)	1
Vertical rail with wall plate	1
Screw Pack (3 screw + 3 plugs)	1
Flow diverter	1
Overhead Rail	1
Handset Height Adjuster	1
Shower Overhead	1
Multi Mode Handset	1
Hose Retaining Ring	1
1.5M Hose + Washers	1
Fitting Instructions	1
TMV Registration card	1

ACCESSORIES KIT SPARE PARTS

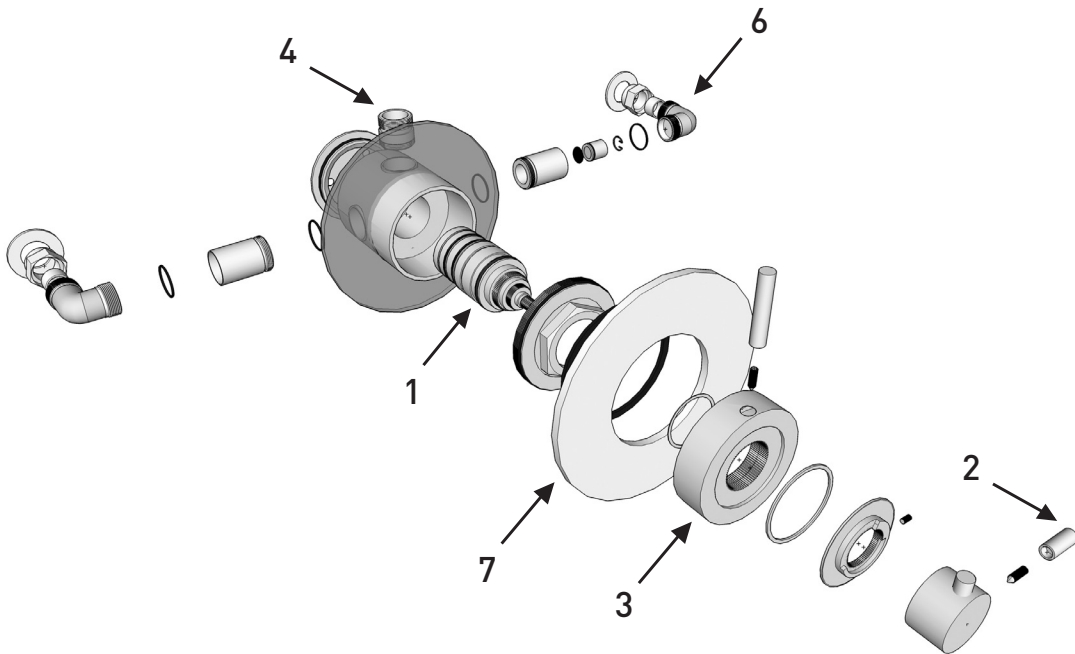
Atmos Fusion

36HLW	Mixer Valve
36HDD	Slice Handset
36ACR	Soap Dish
36ACN	Hose Retaining Ring
36HHA-B	Brackets
36ACA	Handset Height Adjuster
36AAZ	Wall Outlet
27DGB	Double Interlock 1.5M Hose
36HHA	Riser Rail

ACCESSORIES KIT SPARE PARTS

Atmos Energy

36HLW	Mixer Valve
36HDD	Slice Handset
36ACJ	Overhead Rail
36HHA-B	Vertical Rail with Wall Plate
36ACH-W	Vertical Rail Wallplate
36ACH-X	Vertical Rail locking Washer
36ACA	Handset Height Adjuster
36HEW	Large Fixed Showerhead
27DGB	Double Interlock 1.5M Hose
36HHA	Diverter Valve
36ACN	Hose Retaining Ring



VALVE SPARE PARTS LIST

- | | |
|---|---|
| 1. HLW1 Thermostatic Cartridge | 6. HLW6 Elbow Set, includes elbow, olive and nut |
| 2. HLW2 Temperature Control lever | 7. HLW7 Wall cover Plate |
| 3. HLW3 Flow Control lever | 8. 36ACK Valve Nut Cover |
| 4. HLW4 Outlet Connector with 'O' Rings | |
| 5. HLW5 Seal Kit (Includes all O rings, non-return valves, plastic spacers rings, filters/filter washers and spring clips (Not Shown)) | |

MX GROUP GUARANTEE

The MX Group guarantee this product for a period of 5 years, from date of purchase, against mechanical defects arising from faulty materials or from poor workmanship, providing the product has been installed by a competent person in accordance with the fitting instructions and the unit has been used for domestic use only.

The MX Group undertake to repair or replace, at their discretion, without charge, provided the product has been properly installed, maintained and operated in accordance with the operating instructions. Any component found to be defective during this period, as the result of misuse or damage, or the effects of scaling, will not be covered by this guarantee.

This product must not be modified, repaired or taken apart except by a person authorised by the MX Group.

What is not covered:

1. Breakdown due to:
 - a) Use other than domestic use by you or your resident family
 - b) Wilful act or neglect
 - c) Any malfunction resulting from the incorrect use or quality of water or incorrect setting of controls
 - d) Faulty installation
2. Repair costs for damage caused by foreign objects of substances or the inappropriate use of jointing compounds or blow torches.
3. Total loss of the product due to non-availability of parts or other reason, (MX will maintain stocks of spare parts for repair for at least 5 years from end of product line to cover this guarantee).
4. Compensations for loss of use of the product or consequential loss of any kind.
5. Call out charges where no fault has been found with the appliance.
6. The cost of repair or replacement of pressure relief devices, showerheads, hoses, riser rails and/or wall bracket, tiles, cubicles or any other parts installed at the same time.
7. The cost of routine maintenance, adjustments, overhaul modifications or loss or damage arising there from, including the cost of repairing damage, breakdown, malfunction caused by corrosion, furring, pipe scaling, limescale, system debris or frost.
8. Units installed other than in the United Kingdom and for domestic use.

This guarantee does not affect your statutory rights.

MX GROUP GUARANTEE SERVICE POLICY

In the event of you needing to contact the MX Group Customer Service Department, the following procedure should be followed:

1. Before telephoning on 0845 505 2211 the MX Group Customer Service Department you should ensure you have the model number (printed on the valve) and date of purchase your contact details and the postcode where the unit is installed.
2. The MX Group Customer Service Department will be able to tell you whether the fault can be simply rectified by the provision of a replacement part or arrange an on site visit by a Qualified Service Engineer.
3. If a service call is required it will be booked and the date of the call confirmed. You or a representative (over the age of 18 years) must be present during the entire engineers visit. The engineer will not be able to repair or replace or advise on product not supplied as part of the product.
4. A charge will be made in the event of an aborted service call by you, but not by us, or where a call under the terms of guarantee has been booked and failure is not related to product supplied by MX Group (i.e Scaling and furring, incorrect water pressure, or other plumbing problem unrelated to the normal function of the products).
5. If the product is no longer covered by the guarantee, a charge will be made for the site visit and for any parts supplied.
6. Service charges are based on the account being settled when work is complete, the engineer will then request payment for the invoice. If this is not made to the service engineer or settled within ten working days, and administration charge will be added.

SPARE PARTS

In the event that parts or maintenance is needed outside the guarantee MX will endeavour to help with this. Spare parts codes are given in the fitting instructions and by calling the Customer Service Department on 0845 505 2211 with the part code, they will be able to quote you to supply these parts.

Marleton Cross Limited Trading as The MX Group,
Alpha Close, Delta Drive, Tewkesbury Industrial Estate, Tewkesbury, Glos. GL20 8JF.
www.mx-group.com email: mixervalves@mx-group.com
Service line number: 0845 505 2211
06-11-LH