

Ecotherm thermostatic bar shower valve & kit

INSTALLATION INSTRUCTIONS



INSTALLER: After installation please pass this instruction booklet to user

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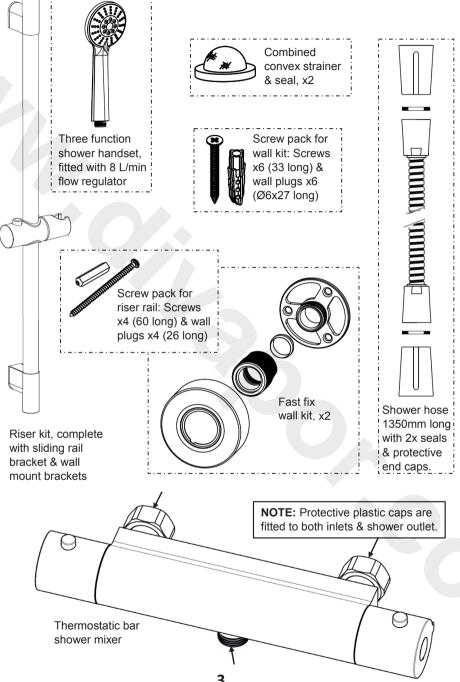
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Product overview

This Ecotherm product is an exposed two-hole thermostatically controlled shower, designed to provide the user with comfortable and consistent showering temperatures. This product will provide water from ambient cold up to the pre-set safe maximum temperature.

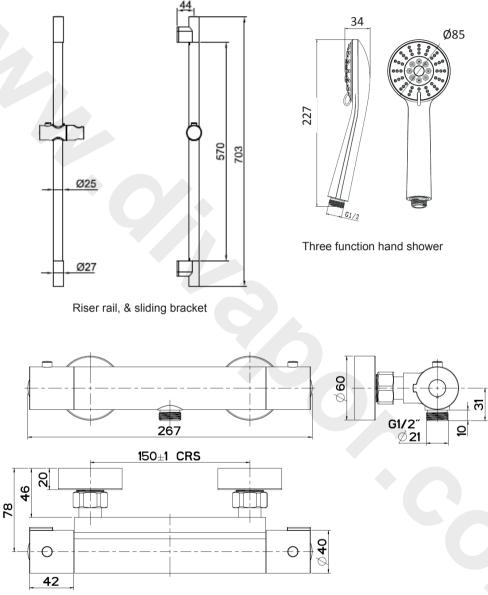
This thermostatic shower mixer is manufactured to the highest standards.

1. PRODUCT BOX CONTENTS



2. PRODUCT DIMENSIONS

Dimensions are in millimetres & may vary within permitted tolerances.



Complete bar shower mixer valve

3. INTRODUCTION

The fittings covered by these instructions should be installed in accordance with the Water Regulations published in 1999*. Ideal Standard strongly recommends that these fittings are installed by a professional fitter.

*A guide to the Water Supply (Water Fittings) Regulations 1999 and the Water Byelaws 2000, Scotland is published by WRAS (Water Regulations Advisory Scheme) Unit 13, Willow Road, Pen-y-Fan Industrial Estate, Crumlin, Gwent, NP11 4EG. ISBN 0-9539708-0-9

These thermostatic shower mixers are designed to be installed on normal UK low pressure storage tank fed systems, unvented high pressure systems, modulating instantaneous water heaters or modulating combination (combi) boilers. They are suitable for all pumped applications.

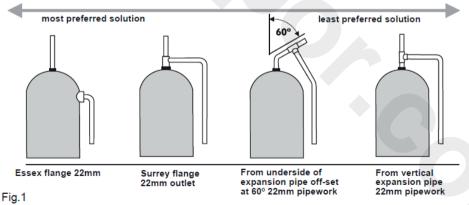
WATER REGULATIONS

Hot and cold water supply pressures must be reasonably balanced and from a common source - both from storage or both from a supply pipe. (IRN 101). This mixer will function within specification on unequal pressures up to a ratio of **2:1**, but it is not recommended that the cold supply be connected to the rising main and hot to the tank fed supply as the pressure differential is likely to exceed the **2:1** ratio. (See table 1) The minimum pressure for correct operation is **0.2 bar** (2m head). Pressure head is measured as the vertical distance between the bottom of the cold water storage tank which feeds the hot water system and the highest point on the shower spray plate. When installing with a shower pump the use of a secondary tapping from the cylinder is highly recommended.

Figure 1 shows the various methods of connecting the hot water pipe to the cylinder - the most preferred on the left and the least preferred on the right.

The fitting should be so installed as to be readily accessible for examination, repair, replacement or operation. (IRN 111).

The temperature of the hot water must not exceed 85°C but the installer's attention is drawn to code of practice BS 6700 which recommends that stored hot water should normally never exceed 65°C. For correct operation of the valve, a minimum of 55°C is required.



Preferred arrangements for cylinder tapping

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

4. SUPPLY CONDITIONS

Table 1 Conditions of use

	BSEN1111	
Operating pressure range:	High Pressure	
Maximum static pressure	10 bar	
Flow pressure hot and cold	0.5 to 5.0 bar	
Hot supply temperature	55 to 65°C	
Cold supply temperature	5 to 20°C	
Temperature differential characteristic (TDC)	10 °C	

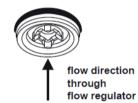
Flow rate table

Pressure (Bar)	Flow Rate (Litres per Min)	
0.2	5.6	
0.5	8.1	
1	11	
2	15.2	
3	18	
4	21.5	
5	23.8	

MODULATING COMBI BOILER

This thermostatic shower valve is designed for use with modulating combination boilers.

When installing on a modulating combination boiler it is sometimes possible for the interaction of a thermostatic valve with the combi to cause the boiler to cut out and cut in again. With the result that the water will become alternatively cold and hot. To overcome this, a 4 L/min flow regulator should be fitted upstream of the thermostatic valve. It should be fitted in any 15mm compression fitting in the dedicated cold supply pipe.



It is important to choose a compression fitting located in a position which is accessible after installation and it must be fitted the correct way round for the direction of flow. The regulator can be fitted in either the inlet or outlet side of the compression fitting. If fitting in an outlet side, ensure the o-ring is seated fully in the visible rebate around the edge of the regulator. Use the tip of a small screwdriver or similar to achieve this. Ensure the tail of the pipe is not fouling the regulator (shorten if required) and do up the compression fitting as normal. In a minority of cases, where the boiler is of a type which stores a small quantity of very hot water, it may also be necessary to fit a 4 l/min flow regulator in the hot supply. These can be obtained from Customer Care (A962570NU).

Service valves MUST be fitted to the supply pipes to permit future maintenance. Strainers (mesh filters) are integral to the mixer body.

These should be fitted as close as is practicable to the water supply inlets of the thermostatic shower valve. See section 19 for more details.

Both service valves & strainers should be installed in an easily accessible location.

5. WATER REGULATIONS

CATEGORIES OF RISK

The water regulations published in 1999* take a new approach to backflow in that they look at different categories of risk. The installer must assess the risk from the various categories of fluid in adjacent appliances before determining the level of backflow protection required for a particular installation. Figures 3 & 4 describe the protection required in various installations.

CATEGORY 3 RISK

Water in a shower tray, basin or bathtub is considered to be a fluid category 3 risk which is a fluid which represents a slight health hazard if it were to find it's way back into the supply pipe. For this reason it must not be possible for any flexible shower head to be able to enter any adjacent washbasin, bath or shower tray unless appropriate protection is employed. (See Figure 3). If it is desired to allow the hand spray to be used inside say a bathtub or a basin it is essential that double check valves be fitted to the inlet on both

hot and cold supplies to the thermostatic valve. Alternatively single check valves can be fitted at the inlets and an additional check valve should be fitted in the valve outlet

No check valves need be fitted if the hand spray is prevented from reaching closer than 25mm of the spill over level of any such fixture.

CATEGORY 5 RISK

Water in a Sink, WC or Bidet is considered to be a fluid category 5 risk which is a fluid which represents a serious health hazard if it were to find it's way back into the supply pipe. For this reason it must not be possible for any flexible shower head to be able to enter any adjacent Sink, WC or Bidet. If the flexible hose to be fitted could reach into any such vessel, the requirements to the system design are so onerous it is better not to fit a flexible. Rather, a fixed overhead showerhead should be considered. (See Figure 4).

It will also be seen that this risk could change should the hose be taken out of the restraining device or should a longer replacement hose be fitted at a later date. Installers and householders are advised to take account of these factors when fitting replacement hoses.

For pumped applications the pipe supplying the pump must not in addition supply an ascending spray bidet.

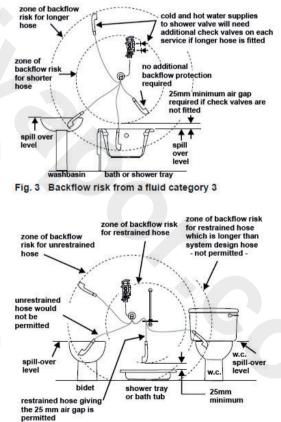


Fig. 4 Backflow risk from a fluid category 5

6. PRE-INSTALLATION NOTES

Product box contents. Ensure you have all the parts shown in section 1.

Product dimensions. Check the dimensions shown in section 2, ensuring the mixer will fit on the intended wall. Plan the fitting location of the shower kit.

Product location. Mixer should be positioned in a suitable location within the showering area. Allow sufficient space around the mixer to permit easy operation of the handles and facilitate easy cleaning. Consider also space to permit cartridge removal for maintenance.

Service Valves. A pair of service valves (for isolating both water supplies) MUST be fitted to permit future maintenance of this product. These should be fitted as close as practicable to the water supply inlets of the mixer & in an easily accessible location. Service valves are not supplied with this product, see section 19.

Supply conditions. Ensure required water supply temperatures & pressures are met. Performance of mixers operating outside these conditions cannot be guaranteed. See section 4.

Mounting. Product is supplied with a pair of wall mount escutcheons. Mixers are intended to be installed on a solid wall or panel. Supply pipes are to be preinstalled at 150mm horizontal centres.

Water Supply Pipes. Both hot & cold water supply pipes should be securely attached to a wall using suitable fixing clips. Supply pipes must be Ø15mm for the fixing kit supplied.

Flow regulation. There are no flow regulators fitted inside the mixer body. The base of the shower hand set has an 8 L/min flow regulator fitted.

Strainers (mesh filters) & check valves. Strainers are integral to the inlet seals are intended to protect the check valves from water borne debris. These are fitted inside the inlets of this shower mixer

Shower Kit. This product is supplied with a shower kit. The flexible shower hose from this kit can be screwed onto the G1/2" shower outlet nipple located on the underside of the mixer body. Ensure adequate steps are taken to secure the shower hand set and the arrangements comply with water regulations.

Mixer Controls. The mixer has dual control handles, the right handle allows temperature adjustment of the water, the left handle permits flow control of the mixed water, see section 9.

IMPORTANT: Ensure that any old / existing thermostatic mixing valves (TMVs) that may be fitted in the supply pipes are removed



DO NOT apply heat near this product. Heat generated by soldering could damage plastic parts and seals

7. SHOWER VALVE INSTALLATION



The thermostatic mixing valve must be installed in such a position that maintenance of the TMV and its valves and the commissioning and testing of the TMV can be undertaken.



IMPORTANT BEFORE CONNECTION, FLUSH WATER THROUGH PIPEWORK TO REMOVE ALL DEBRIS ETC. WHICH COULD DAMAGE THE VALVE MECHANISM

Product is supplied with a pair of wall mount escutcheons. Mixers are intended to be installed on a solid wall or panel. Both hot & cold water supply pipes should be securely attached to a wall using suitable fixing clips.

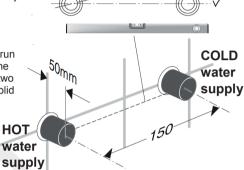


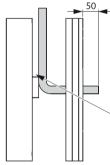
1st fix: pipe installation

Two 15mm water supply pipes need to be run within the wall cavity at 150mm centres apart to the intended fitting location of the shower mixer. Cut two holes of diameter 20-25mm in the wall board or solid wall. Ensure pipes are level.

During this "first fix" leave 50mm of pipe length protruding from the finished surface (tiles, aquaboard or similar).

Hot supply pipe should be on the left hand side and the cold on the right.



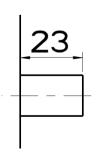


Leave more than 50mm of pipe protruding if the wall is to be tiled. The pipes can be temporarily capped to allow restoration of water supplies for pressure testing of pipe joints etc...

Tile closely to the supply pipes

Pipework should be supported in the cavity, to prevent the pipes slipping backwards during final assembly.

When the bar shower is ready to be fitted (after tiling if applicable). Both supply pipes should be trimmed to the final size of 23mm from the finished mounting surface.





3

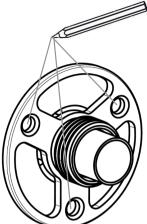
Place the mounting brackets over the protruding supply pipes, recheck pipes are still 150mm apart and level.

Mark the three screw hole positions through the mounting brackets onto the mounting surface.

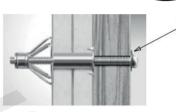
Ensure that the positions of the holes will not result in damage to the pipework inside the wall cavity during drilling.



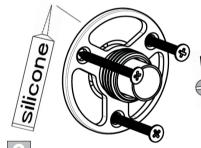
Drill holes appropriate for your choice of fixings into the mounting surface. The screws & wall plugs supplied can be used if they are suitable. Tap the wall plugs into the mounting surface until flush.



Note:-For plasterboard duct it will be necessary to fit extra strong cavity anchor plasterboard fixings as shown.



Cavity anchor plasterboard fixing

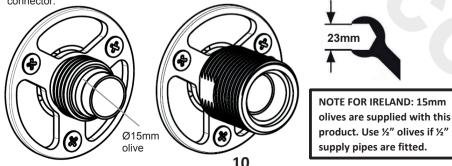


Apply a smear of silicone sealant to the rear of the brackets and push them over the pipework.

Screw both brackets to the wall. Check that the correct pipe spacing of 150mm has been maintained.

Clean off excess sealant and flush the pipes to remove any trapped debris.

Fit the olives to the pipes prior to screwing the two G3/4"connectors into the wall mount plate using an adjustable spanner (23mm on the two flats). The connectors will have to be securely screwed in - to form the necessary compression joint between the olive, wall plate and connector.



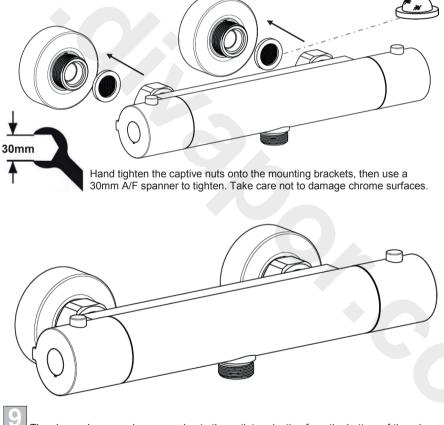




When the sealant has set, fit the covers by screwing them onto the adaptors until they are flush with the wall. The covers only need to be hand tight.

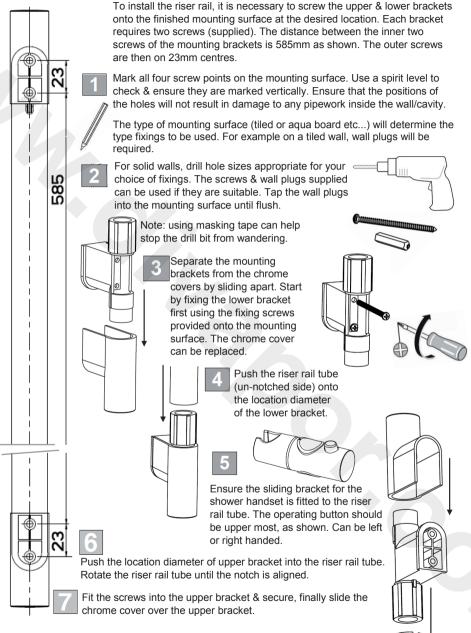
NOTE: First remove the protective plastic caps which are fitted to both inlets & the shower outlet of the mixer

Ensure the sealing washers are placed within the captive nuts of the shower mixer. The domed strainer should point towards the wall .Fit the shower mixer to the mounting bracket as shown.

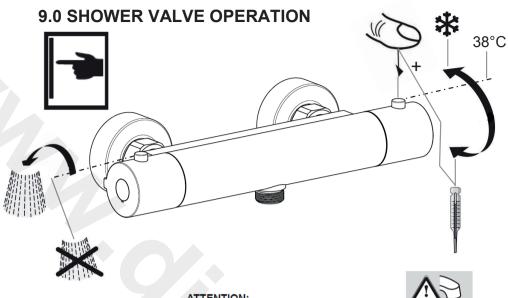


The shower hose can be screwed onto the outlet projecting from the bottom of the mixer. Ensure the flat seal is fitted inside the hose nut. Turn on the water supplies & check all joints for leaks.

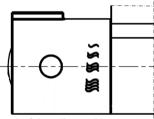
8 RISER KIT INSTALLATION



One side of the shower hose should be screwed onto the bottom of the shower handset. The other side should be screwed onto the shower outlet on the underside of the shower valve.



ATTENTION: TEMPERATURES HIGHER 40°C CAN BE HARMFUL TO YOUR HEALTH.



Left handle controls water flow rate.

- This handle is shown above parked in the off position.
- Rotating this handle backwards (anti-clockwise) commences water flow. By rotating the handle further backwards to the stop, it will increase the flow to the maximum of the product.
- To turn off the flow, rotate handle upwards up to the top stop.

Left handle markings for flow (top view).

Right handle controls water temperature.

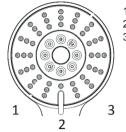
- This handle is shown above parked in the nominal 38°C temperature "stop" position.
- At this temperature "stop" position mixed water is delivered up-to about 38°C.
- To obtain cooler water rotate handle backwards (clockwise).
- To obtain higher water temperature, press the button and then rotate this handle forwards (anti-clockwise).
- After pressing the override button, maximum water temperature available from the mixer is the nominal 44°C pre-set at the factory.

→ 38° - ○ ₩ ○

Right handle markings for temperature (top view).

DO NOT FORCE HANDLES BEYOND THE DESCRIBED MOVEMENT RANGES OTHERWISE THIS MAY RESULT IN DAMAGE TO BOTH VALVES AND HANDLES.

9.1 SHOWER HANDSET FUNCTIONS



- 1. Outer spray.
- 2. Full spray.
- 3. Massage.

Three function hand shower The small lever on the handset can be rotated in either direction to select the different jet-spray patterns.

9.2 SHOWER HEIGHT ADJUSTMENT



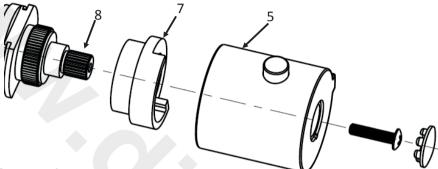
To adjust the height of the shower handset, simply press & hold the button on the top of the bracket. Slide the bracket along the rail to the desired height & then release the button to lock at this position

10.0 HANDLE REMOVAL

10.1 MAXIMUM TEMPERATURE STOP

Maximum hot water is obtained by pressing the override button & going pass the 38°C marker.

This shower mixer is factory set with the temperature stop at max. 44°C.If after commissioning, the maximum temperature should be checked & adjusted if necessary.



To set maximum temperature:

- A. Remove the temperature handle (5) (right hand side), see section 10.0
- **B.** With the temperature stop (7) still fitted to the cartridge spindle (8) turn the cartridge spindle to adjust the water temperature. Turning anticlockwise will increase the maximum temperature output setting whilst turning the spindle clockwise will decrease it.
- C. Refit the handle so the handle-stop meets the right hand side of the stop on the temperature stop.
- D. Turn on the flow control handle and wait for a few moments. Test the temperature of the water. Repeat this sequence until maximum desired temperature is achieved.

11. MAINTENANCE

The fitting of isolation valves is required as close as is practicable to the water supply inlets of the thermostatic mixing valve. The thermostatic cartridge seldom fails and the possibility of blocked filters should be investigated before contemplating replacing it. Small particles of debris may still find their way past the strainers to the thermostatic cartridge. These should be cleaned and refitted. See section 16 on cartridge replacement.

11.1 Thermostatic Cartridge Ageing

Following many years of normal service you may notice the following:

- 1. The need to carry out more frequent adjustment of mixed temperature.
- 2. The thermostatic element may not pass the CWI test.

These issues could be due to the ageing of the thermostat which loses some expansion capability over time.

These are the principle objectives of testing, as they serve to indicate to maintenance staff the declining performance capability of the thermostatic cartridge.

For this reason the audit testing flow chart highlights that 2nd Instance CWI test failure or 2nd instance mixed deviation even with stable 'as commissioned' supply conditions and correct inlet supply Δt 's, is potentially the first indication of the need to replace the cartridge.

12. COMMISSIONING & PERIODIC CHECKS

The following procedures should be carried out after installation and every 12 months after to ensure that the valve is functioning correctly.

Check that:

- 1. The application of the thermostatic valve matches the approved designation.
- 2. The supply pressures are within the recommended range for the application.

3. The supply temperatures are within the permitted range for the application and comply with the guidance for prevention of Legionella.

4. The mixed temperature is as required for the application.

Record:

- 5. Each hot and cold supply. (Make a note of the measuring device used).
- 6. The mixed water temperature at the outlet device.

Isolate:

7. The cold supply to the mixing valve and record the mixed water temperature after about 5 seconds. The temperature should not exceed the value given in table (2) below.

Table 2 A guide to maximum temperature sets

Application	Mixed water temperature	Permitted maximum temperature rise during site testing
Shower	41°C	43°C

Note: 46°C is the maximum mixed water temperature from a bath tap. The maximum temperature takes account of the allowable temperature tolerances inherent thermostatic mixing valves and temperature loss in metal baths. It is not a safe bathing temperature for adults and children.

The British Burns Association recommends 37°C-37.5°C as a comfortable bathing temperature for Children.

In premises covered by the Care Standards Act 2000, the maximum mixed water temperature is 43°C

13. FREQUENCY OF REGULAR SERVICING

The purpose of servicing regularly is to monitor the performance of changes in system and valve set up. This may require the need to adjust either the supply system or the valve. The product should be checked and tested 12 months after commissioning.

Firstly measure the water temperature at the shower outlet.

Carry out the cold water supply isolation test by isolating the cold water supply to the TMV, wait for 5 seconds if water is still flowing check that the temperature is below 46C. If there is no significant change to the set outlet temperature (+/-2°C or less change from the original settings) and the fail-safe shut off is functioning, then the valve is working correctly and no further service work is required.

Notes:

A residual flow is permitted during the commissioning or the annual verification (cold water supply isolation test), then this is acceptable providing the water temperature is no more than 2°C above the designated outlet temperature.

Temperature readings should be taken at the normal flow rate after allowing for the system to stabilize.

The sensing part of the thermometer probe must be fully submerged in the water that is to be tested.

Any TMV that has been adjusted or serviced must be re-commissioned and retested in accordance with the instructions detailed above.

14. COLD WATER ISOLATION (CWI) TEST

CWI test is a guide to showing the performance of the thermostat.

Prior to CWI test:

- Make sure the supply temperatures are within the ranges 55 to 65°C for hot, & 5 to 20°C for cold.
- To perform a CWI test:
- Turn the product on using the flow handle, & rotate handle to max, giving 100% flow.
- The temperature handle should be positioned such that it gives 40°C to the outlet.
- 1. Record the steady state temperature of both hot and cold water supplies. Note the Δt .
- Record the temperature of the mixed water at the outlet (preferably unscrew the shower hand set) should be within range 40±1°C.
- 3. Isolate the cold water supply (using inline service valve).

If the flow ceases, CWI test passed. An ongoing reduced fine flow of water (pencil stream) from the mixed water outlet is also acceptable as a pass.

Restore the cold supply & recheck the temperature at the mixed water outlet once stabilised.

If the flow has not reduced, the product has failed the CWI test. Product requires maintenance, cartridge should be removed, cleaned & retested.

Additionally, clean all filters, ensure check valves are working, and make sure all isolating valves are fully open.

15. HANDY MAINTENANCE TIPS

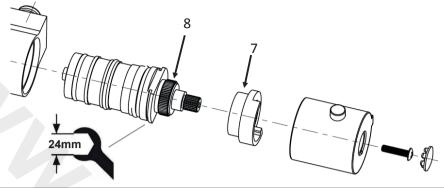
Here are a few handy tips which may be helpful when dismantling the mixer for maintenance or repair:

- Isolate both HOT & COLD water supplies first. Use the inline service valves fitted.
- Fully open the flow handle. Unscrew the shower hose from the underside of the product.

This will permit water drain down mixer & release water pressure from the outlet.

- Use correct size tools. Take care not to damage chromed surfaces.
- · When unscrewing cartridges, expect some trapped water to escape from the mixer.
- · Clean all parts before refitting, especially strainers (mesh filters).
- Ensure parts are re-assembled in the correct 'reverse' sequence.
- Observe torque settings, where specified.
- Restore both water supplies. Refit shower hose.
- Check all joints for leaks upon completion.
- Run water through the mixer for a few seconds to purge-out any trapped air.

16. THERMOSTATIC CARTRIDGE REPLACEMENT



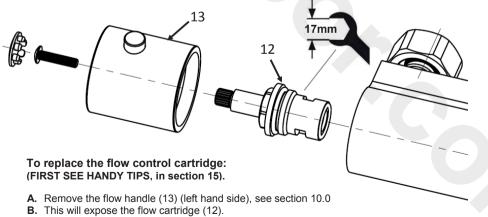
This thermostatic cartridge is protected from water borne debris by mesh filter screens. These should be checked and cleaned before contemplating replacing the cartridge.

To replace the thermostatic cartridge: (FIRST SEE HANDY TIPS, in section 15).

- A. Remove the temperature handle (right hand side), see section 10.0
- **B.** Slide off the temperature stop (7) from the cartridge spline. This will expose the thermostatic cartridge (8).
- C. Unscrew the cartridge with 24mm A/F spanner and replace if necessary.

To clean the screens remove the O-rings. The screens will then slide off. When clean replace the screens. The O-rings should be lightly greased with a WRAS approved silicone grease (e.g. Klueber Unisilikon GBU2).

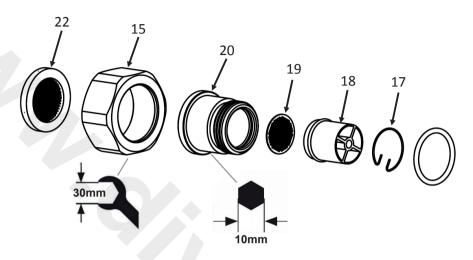
17. FLOW CARTRIDGE REPLACEMENT



C. Unscrew cartridge with 17mm A/F spanner and replace if necessary.

18. CHECK VALVES REPLACEMENT

Check valves and strainers (mesh filters) should be regularly serviced particularly in hard water areas. The check valves along with the strainers are located in the retaining nut.



To replace the check valves: (FIRST SEE HANDY TIPS, in section 15).

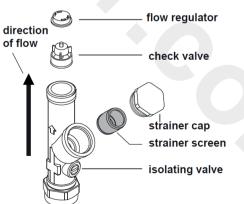
- A. Separate the shower valve from the wall mounts by undoing the captive nuts (15). Use 30mm A/F spanner (take care not to damage chromed surfaces).
- B. Remove shower valve from wall. Clean & keep the sealing washers (22) safe.
- **C.** The check valves are housed inside the retaining inserts (20) within the inlet bores.
- D. Use 10mm hexagonal key undo the retaining inserts (20). Note: THREAD IS LEFT HAND.
- E. Use a pair of "long nose pliers" to squeeze the tangs of the retaining ring (17) & lift out.
- F. Gently pull out the check valves (18): check & clean or replace if necessary. Observe the flow direction of the check valve.
- G. Remove & clean the secondary finer strainer (19) (mesh filter).
- H. Reassemble the parts in reverse sequence.

19. INLINE SERVICE VALVES

Service valves (not supplied with this product) MUST be fitted to permit future maintenance.

They are also needed to perform the cold water isolation test.

These should be fitted as close as is practicable to the water supply inlets of the thermostatic shower valve & be in an easily accessible location.



An in-line combined service valve (shown here) can be purchased by contacting Customer Care.

Spares code E960613NU contains a pair of these valves, suitable for 15mm supply pipes.

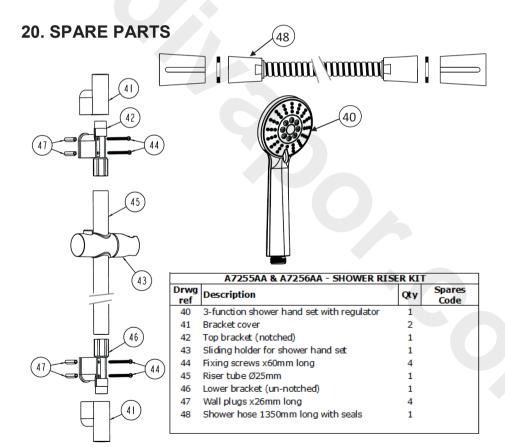
This valve also contains a flow regulator and check valve (which can be removed if not required).

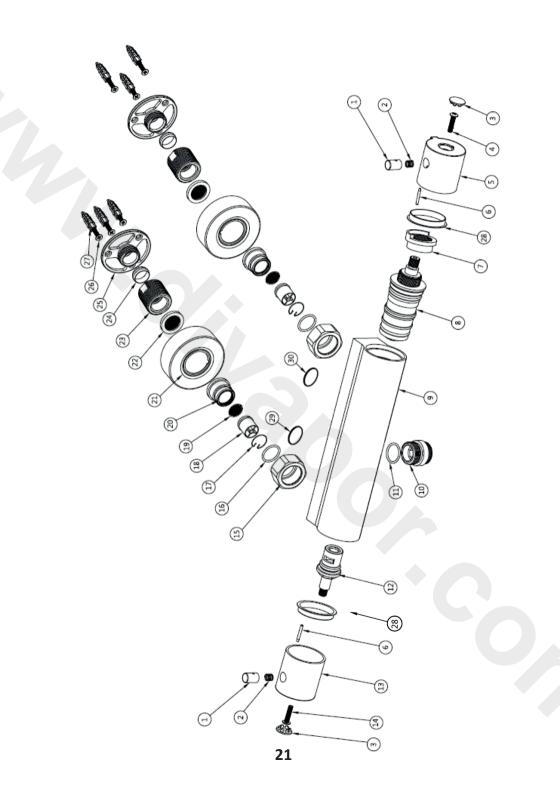


Alternatively, basic in-line service valves with "isolating only" feature (shown here) are available under spares code S9005AA.



For more information on spare parts why not visit our spare website www.fastpart-spares.co.uk





SPARE PARTS LIST

A7255AA & A7256AA - BAR SHOWER MIXER						
Drwg ref	Description	Qty	Spares Code			
1	Handle button	2				
2	Spring for button	2				
3	Handle end cover cap	2				
4	M4x16 Screw - therm handle	1				
5	Thermostatic handle	1				
6	Pin for handle button	2				
7	Therm handle temperature stop ring	1				
8	Thermostatic cartridge	1				
9	Bar shower valve body	1				
10	1/2" shower outlet connector	1				
11	O-ring Ø18x2	1				
12	On-off flow cartridge 1/4 turn ceramic disc	1				
13	Flow handle	1				
14	M4x12 Screw - flow handle	1				
15	Inlet coupling nut	2				
16	O-ring Ø15x1.8	2				
17	Snap ring Ø16x1	2				
18	Check valve DW15/DN10-GF (PAIR)	2	A962594NU			
19	Filter screen flat - fine mesh	2				
20	Check valve housing	2				
21	Cylindrical wall shroud	2				
22	Combined convex filter screen & seal	2				
23	Fast wall fixing connector G3/4"	2				
24	Copper olive Ø15mm	2				
25	Fast wall fixing bracket	2				
26	Wall screw	6				
27	Wall plug	6				
28	Handle bush	2				
29	Hot water sticker	1				
30	Cold water sticker	1				



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21. CLEANING CHROME SURFACES





Whilst this product has a high quality durable chrome finish, it should nevertheless be treated with care.

When cleaning chromed products use only a mild detergent, rinse & wipe dry with a soft cloth. Ideally clean after each use to maintain appearance.

Never use abrasive, scouring powders or scrapers. Never use cleaning agents containing alcohol, ammonia, hydrochloric acid, sulphuric acid, nitric acid, phosphoric acid or organic solvents. Use of incorrect cleaning products / methods may result in chrome damage which is not covered by the manufacturer's guarantee.

22. GUARANTEE

This mixer body & chrome finish are offered with a 5-year guarantee against defects in manufacture. The thermostatic cartridge, flow cartridge, shower handset, hose, & riser rail parts are covered with a 2-year guarantee.

This mixer must be fitted by a competent installer. If in doubt seek advice from a qualified professional.

The guarantee requires the product be used in the manner for which it was intended and that it is installed & maintained in accordance with the fitting instructions and local water bylaws. The guarantee covers products for domestic use.

Ensure this product is fully tested before concealing joints into the wall. On installation ensure that the valve and valve inlet threads can be removed or serviced in accordance with water regulations.

The guarantee is invalidated should the valve be damaged by water borne debris. Make sure that supply pipes are clear of any debris prior to installation, this is particularly important on new plumbing installations. In the unlikely event that this product should fail during the guarantee period we will either replace the faulty part or the complete unit as appropriate.

This guarantee excludes normal wear and tear. This guarantee covers failure of the thermostatic cartridge within the first 2 years of purchase. Replacement cartridges are available to purchase by contacting the Customer Care Help Line. Failure to follow the terms outlined above will invalidate this guarantee. Proof of purchase will be required to validate any guarantee claims.



CUSTOMER CARE HELP LINE 0870 129 6085

CUSTOMER CARE FAX 01482 499611

E-MAIL UKcustcare@idealstandard.com

Ideal Standard International NV Corporate Village - Gent Building Da Vincilaan 2 1935 Zaventem Belgium Ideal Standard pursues a policy of continuing improvement in design and performance of its products.

This is therefore reserved to vary specification without notice.

Ideal Standard is a division of:

Ideal Standard (UK) Ltd.

Ideal Standard, The Bathroom Works, National Avenue Kingston-Upon-Hull, HU 4HS, England.

www.idealstandardinternational.com

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