

AQUALISA

Axis[®]

Thermo
Concealed valve



Shower system

Adjustable height head
AX0111

Thermo concealed valve
AX3100



Aquavalve 609 Thermo (C609.01T) with Varispray adjustable height head (99.40.01)

Components



Literature not shown

Important information

Introduction

The Axis Thermo valve is designed for built in and concealed panel mount installations and provides close temperature stability and fail safe protection with approved gravity or pumped systems and balanced high pressure systems. A cold inlet flow regulator is provided for use with instantaneous (multipoint) gas water heater and combination boiler applications.

If at any stage during installation you have any questions then please contact the Aqualisa customer helpline on 01959 560010 for advice.

Safety information

This product must be installed by a competent person in accordance with all relevant Water Supply Regulations.

The Axis Thermo valve is suitable for domestic household use only.

Flushing

Some modern fluxes can be extremely corrosive and, if left in contact, will attack the working parts of this unit. All soldering must be completed and the pipe work thoroughly flushed out in accordance with Water Supply Regulations prior to connection of the product.

Connections

The Axis valve incorporates 'push-fit' type connections suitable for use with 15mm British Standard copper tube.

Tube should be cut using a rotary type cutter and lubricated using a silicone-based lubricant or petroleum jelly (Vaseline or similar) prior to insertion into the fitting. Supply lines must be flushed clear of any debris before installation of the unit.

THESE FITTINGS ARE NOT SUITABLE FOR STAINLESS STEEL TUBE

Isolating valves

Suitable isolation valves such as gate valves must be fitted to both supplies in accordance with the Water Supply Regulations and our terms of warranty. Due to their restrictive characteristics, stopcocks and ball type valves that reduce the pipe bore size must not be used on gravity or gravity pumped installations.

Filters

To ensure ongoing optimum performance the internal control mechanism 'cartridge' is protected by a two-part filter system. Debris accumulation may result in reduced flow from the shower head and noisy operation.

As this condition is not covered by our standard warranty terms, it is suggested that the cartridge be removed and the filters checked by a competent person. In the event of any difficulties please contact the Aqualisa customer helpline for assistance.



Siting

For optimum performance, with gravity fed systems the distance between the bottom of the storage cistern and the shower head should not be less than 1m (when using an adjustable shower kit). If using a fixed head, the highest point of the pipe work must be below the underside of the cistern. Please refer to the system layouts on the reverse of this guide.

Pump installation

UNDER NO CIRCUMSTANCES MUST A PUMP BE FITTED DIRECTLY TO THE WATER MAIN

A pump must only be used to boost the pressure from tank-fed supplies. A typical layout is shown on the reverse of this guide.

Important information

Stored water capacities

The minimum capacity of the cold storage cistern should be less than 225 litres (50 gallons). The capacity of the hot cylinder must be capable of meeting the anticipated demand.

Pressures

The Axis Thermo valve is designed to control static pressure up to 10 bar. Where pressures are likely to exceed 10 bar a pressure reducing valve (PRV) must be fitted into the incoming mains supply. A setting of 3 bar is recommended. It should be noted that daytime pressures approaching 8 bar can rise above the stated maximum overnight.

A suitable PRV is available from Aqualisa.

Gravity fed hot and cold supplies

Services must be installed according to good plumbing practice having regard to pipe sizing, long pipe runs and low-head situations.

The cold supply for the valve assembly must be taken directly from the cold water storage system. The hot supply may be taken from the vent/draw off pipe of the hot water cylinder at a point below the cylinder connection or alternatively from the underside of the horizontal draw off.

Rising pipe work must not be connected into the horizontal draw-off from the cylinder or to any point in the vent/draw off pipe above the cylinder connection.

CYLINDER TEMPERATURE IN EXCESS OF 65°C MAY RESULT IN POOR SHOWER PERFORMANCE

To minimise pressure loss we recommend that the hot and cold supplies are run in 22mm as close as is reasonably possible to the mixing valve before reducing to 15mm.

Combination boiler/multipoint system

The gas water heater must be capable of raising the temperature of the incoming water by 35°C and delivering a flow rate of no less than 9 litres (2 gallons) per minute to the shower valve. This is sufficient to operate one outlet point at a time.

The Aqualisa Thermo cartridge is designed to operate from the mains at a maximum pressure of 10 bar. If the mains pressure exceeds 10 bar a 'drop tight' PRV must be fitted on the supply pipe after the main stopcock.

The cold supply can be taken from the nearest convenient mains supply and the hot supply can be taken from the nearest hot water draw-off point. Account must be taken of the pressure drops that will occur when other draw-off points are used while the shower is in use. Pipe work can generally be run in 15mm.

A typical layout is shown on page 12 of this guide.

Balanced high-pressure system

The Aqualisa Thermo cartridge is designed to operate with unvented hot water storage systems up to a maximum pressure of 10 bar. A PRV must be used if either supply exceeds 10 bar. The cold water supply must be drawn from the same mains supply as that to the hot water system (down stream of the cylinder manufacturers pressure limiting valve, where supplied) and the hot supply from the nearest convenient draw-off point. Account must be taken of pressure drops that may occur when other draw-off points are used while the shower is in use.

Pipe work can generally be run in 15mm.

A typical layout is shown on page 12 of this guide.

Step-by-step instructions



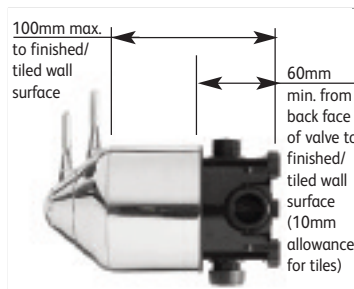
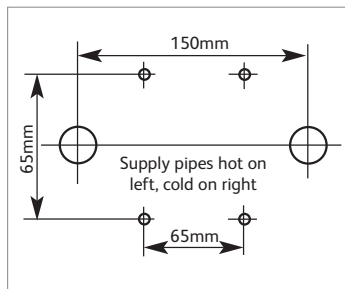
In addition to the guide below it is essential that the written instructions overleaf are read and understood and that you have all the necessary components (shown on reverse) before commencing installation. Failure to install the product in accordance with these instructions may adversely affect the warranty terms and conditions. Do not undertake any part of this installation unless you are competent to do so. Prior to starting ensure that you are familiar with the necessary plumbing regulations required to install the product correctly and safely.



The Axis Thermo valve is supplied with masonry fixings intended for use with a wall of solid construction only. If the unit is to be installed on a wall of different construction then please use alternative fixings as required.

1

In most cases for hollow wall fixing it will be necessary to first install a suitable sound fixing surface within the cavity area before fixing the valve. A hole $\varnothing 130\text{mm} \times 150\text{mm}$ is required to install the valve and to gain access to the inlet elbows and outlet connector. The valve needs to be mounted to the depth shown at the following centres. The distance between the 15mm inlet pipe centres is 150mm as shown.



2

Mark the position for the four fixing points as outlined above.

3

Carefully remove the valve from its packaging and retain the mortar guard for later use.

4

Remove the on/off lever assembly, if fitted from the valve by carefully pulling the assembly free (a screw is used to secure the assembly to the valve upon replacement, this is supplied in the screw pack).



5

Set the temperature control to full cold (9 o'clock) prior to removing the four screws securing the temperature lever assembly. Carefully remove the assembly to reveal the temperature preset override ring (yellow) and the temperature preset location ring (white). Neither of these parts need to be removed for installation. However, if they are removed then please take note of their orientation on the valve prior to removal (shown above).



6

Carefully remove the shroud from the valve assembly. The temperature override housing (white) does not need to be removed in order for the valve to be installed. If the housing is removed then please take note of its orientation on the valve.



7

Fit the elbows to the body hand tight, ensuring that the rubber washers are correctly engaged (these are supplied in the screw pack).

8

If the valve is to be installed for use with a gas fired instantaneous (multipoint) water heater or a combination boiler the cold water flow regulator must be fitted at this stage by insertion into the cold water port as shown (the flow regulator is supplied in its own pack).



9

The Axis Thermo valve is supplied with an outlet cap on the bottom of the valve allowing for a top outlet connection. The bottom outlet can be used by simply removing the cap and repositioning it on the top outlet. If the cap is removed please ensure that when replaced the washer in the cap is in place and that the cap is done up tight.

10

Fit the outlet connector ensuring that the rubber washer is correctly engaged (supplied in the screw pack), on the required outlet ensuring a tight fit. Position the valve and check the four fixing positions and that there is adequate space available around both inlet elbows and the outlet connector. Prepare the wall fixings as required. Secure the valve assembly to the fixing surface using the screws provided (if suitable).



11

Using a silicone-based lubricant, lubricate the supply pipe ends and whilst supporting the elbows push home the supply pipes ensuring the correct orientation for the inlet pipes (HOT left and COLD right as shown on the valve). Push the valve fully home until a definite stop is reached. Tube insertion depth is 25mm (1”).



12

Using a suitable tool, tighten both the elbow nuts and the outlet connector nut until water tight.

13

The installation should now be checked for leaks. Cap off the outlet assembly. Loosely fit the on/off lever assembly and turn it fully clockwise to ensure that the valve is fully turned off.



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The on/off shaft is manufactured with a flat area. The corresponding flat area in the on/off lever must be in alignment before the knob can be fitted.

14

Turn on the supply and check for any leaks upstream of the valve. Slowly open the control and check for leaks downstream of the valve. If all is sound, again turn the on/off control fully clockwise and turn off the supply.

15

Place the mortar guard around the valve and fill in the chase. Once the in-filling material has set, carefully remove the polystyrene to expose the valve body.

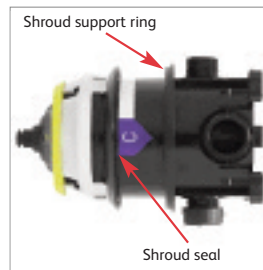
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THE MORTAR GUARD MUST BE USED



16

Refit the temperature preset override ring (yellow) and the temperature preset location ring (white) if removed prior to installation, taking care to fit the override ring in the correct orientation as outlined in step 5. Before replacing the shroud ensure that the shroud seal is in the correct position as shown.



17

Replace the shroud ensuring that it is fully fitted against the shroud support ring as shown.



18

Using a silicone-based lubricant, petroleum jelly or liquid soap, lubricate the wall plate seal. Apply a thin bead of silicone mastic into the groove on the rear of the wall plate and carefully push the wall plate into position ensuring correct horizontal alignment of the Aqualisa logo.



19

Depress the maximum temperature stop button and replace the temperature control lever assembly in the correct position – full cold (9 o'clock). The temperature lever is keyed to allow it to only be replaced in the correct orientation as shown. Replace the four screws to secure the lever assembly to the valve.



20

Refit the on/off control lever to the valve ensuring the correct alignment with the valve shaft as outlined in step 13. To fully secure the on/off control lever to the valve use the screw supplied in the screw pack.



21

Fit the valve end cap (supplied in a separate bag) to the on/off lever ensuring correct alignment of the fixing pins. A click will confirm that the cap has been fitted correctly.



After installation...

Commissioning

The Axis Thermo valve is pre-set to a safe maximum shower temperature. During use, the action of the stop button may be overridden by depressing it as the temperature control is rotated. Should it be necessary to reset the maximum temperature position please observe the following procedures.

1. Ensure that the hot water system is at normal maximum temperature.
2. Turn the temperature control lever to the full cold position (9 o'clock).
3. Remove the on/off control lever assembly by first removing the valve end cap and then removing the central screw before pulling the lever free.
4. Remove the temperature control lever screws and pull the lever clear.
5. Carefully remove the preset override ring (yellow) and reset in the appropriate direction to increase (clockwise) or decrease (anti-clockwise). Each graduation equates to approximately 0.5°C.
6. Follow steps 19-20 to refit the temperature lever and the on/off lever. Do not refit the end cap at this stage.
7. Test the shower by turning it on and slowly increasing the temperature, at your predetermined point the button should pop up and prevent further movement.
8. Repeat the above process if the maximum temperature requires further adjustment.
9. Replace the valve end cap to the on/off lever ensuring correct alignment of the fixing pins.

After installation

Run through the valve operation with the purchaser and hand them this guide. Complete and post the Axis guarantee card.

Cleaning

Your Axis Thermo valve should be cleaned using only a soft cloth and washing up liquid.

DO NOT USE ABRASIVE CLEANERS.

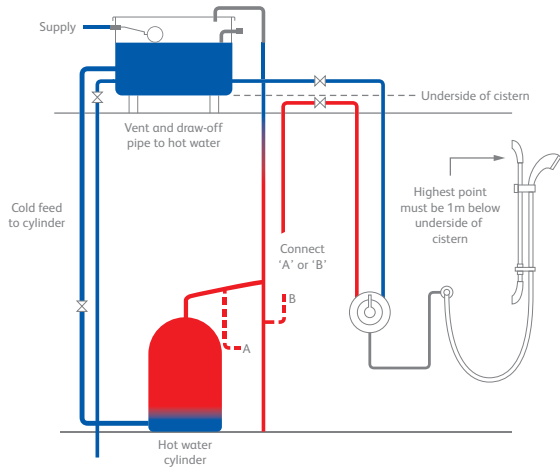
Trouble shooting guide

Trouble shooting guide

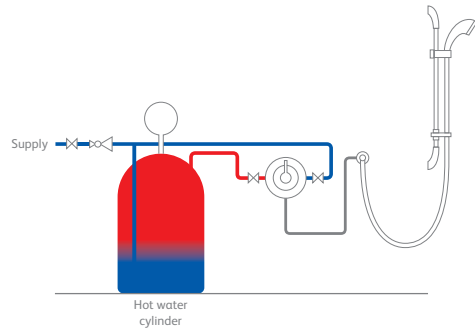
Symptom	Possible cause	Action
Water output is either all hot or all cold	Reversed inlet supplies	Check that the supplies correspond with the inlet markings
Water output is not hot enough	The temperature of the hot water cylinder is too low (gravity, pumped or balanced high pressure systems) Water flow through the hot water appliance is too fast	The cylinder temperature should be at least 15°C hotter than the blend Check the flow rate recommendations with the heater recommendations
Flow rate is poor and water temperature is low	Airlock in the hot water supply (gravity, pumped or balanced high pressure systems)	Check that the pipe work is laid out in accordance with correct practices, paying particular attention to potential air-traps
Water temperature swings regularly between hot and cold	Regulator has not been fitted (multipoint or combination boiler) Cold water pressure is too high (multipoint or combination boiler)	Fit regulator If the static water pressure exceeds 7 bar (100 psi) install a pressure reducing valve (PRV) in accordance with the installation guide
Poor flow rate	Debris in the shower head, filters or in the cold inlet regulator (multipoint or combination boiler) Shower hose is twisted	Check for debris and clear as necessary

Typical installations

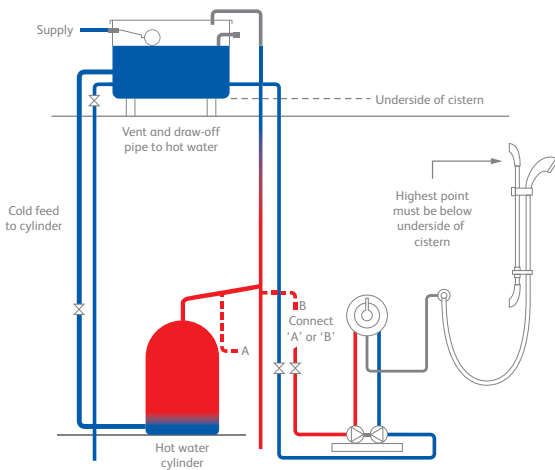
Typical gravity system installation



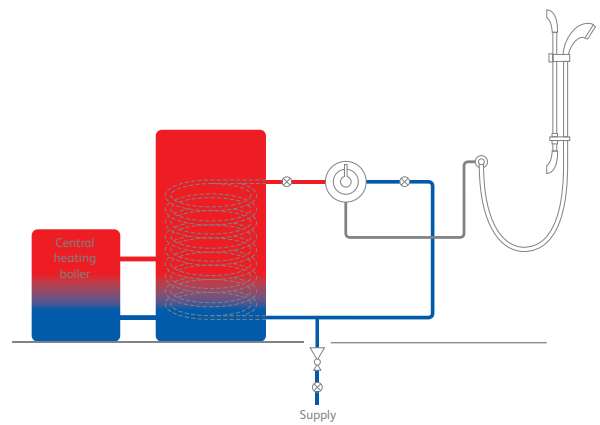
Typical Thermal storage unit system installation



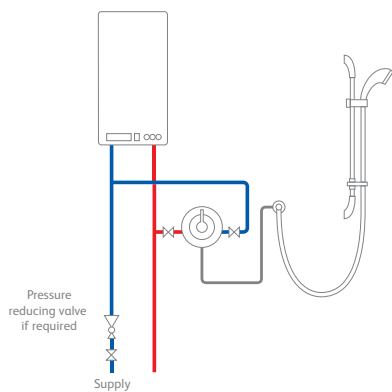
Typical pumped system installation



Typical UHW system installation



Typical combination boiler installation





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