



# iSYSTEM<sup>™</sup> SMART **INSTALLATION GUIDE**

# **SMART** INSTALLATION

# **IMPORTANT INFORMATION**

#### Safety information

This appliance can be used by children aged from 3 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance.

Cleaning and user maintenance shall not be made by children without supervision.

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

ALL PRODUCTS REQUIRING AN ELECTRICAL CONNECTION MUST BE INSTALLED BY A QUALIFIED PERSON FOLLOWING THE LATEST **REVISION OF THE ELECTRICAL** WIRING REGULATIONS, BOTH NATIONAL AND LOCAL AND **CERTIFIED TO CURRENT BUILDING REGULATIONS.** 

This system should be installed so that other taps or appliances operated elsewhere within the premises do not significantly affect the flow. The Aqualisa SmartValve™ must not be

reference, and information regarding primary outlet selection.

used with a hot water supply temperature of over 65°C. If the maximum hot water temperature is likely to rise above 65°C then a Thermostatic Blending Valve must be used. The Aqualisa SmartValve™ is supplied factory pre-set at maximum temperature of 45°C. The maximum temperature is fully adjustable to suit site conditions. If adjusted, we recommend the outlet temperature is set to a MAXIMUM of 46°C.

The Aqualisa SmartValve™ must be installed in an accessible location for servicing and maintenance. The Aqualisa SmartValve<sup>™</sup> must not be installed in situations where either the ambient temperature is likely to exceed 40°C or where freezing may occur. The controller must not be installed in situations where the ambient temperature is likely to fall below 5°C or rise above 40°C.

We do not recommend the use of a controller in steam therapy facilities. This appliance must be earthed. Cables must be protected by a suitably sized conduit or trunking to avoid risk of damage and to allow removal for service and maintenance purposes. Failure to install this way may invalidate the warranty. Ensure that the conduit is run to avoid the controller fixing holes.

Installation of the standard (unpumped) Aqualisa SmartValve<sup>™</sup> (for balanced high pressure and unvented



Please note arrow on isolation valve to indicate direction of flow.

DO NOT use compression fittings on the inlet and outlet spigots as this will invalidate the warranty if fitted.

Surface mounted cables must also be protected by a suitable approved conduit, even in a loft, where there may be a risk of damage from vermin.

The power lead must only be replaced by the manufacturer or their accredited agent. The controller is supplied from a safety low voltage source. This product is suitable for domestic use only.

#### Installation of the pumped Aqualisa SmartValve<sup>™</sup> (for gravity stored systems) The pumped Aqualisa

SmartValve<sup>™</sup> shower system is designed to operate up to a maximum static pressure of 100kPa ((1 bar)(10 metres head)(14.5psi)). Under no circumstances must the pumped Aqualisa SmartValve™ be connected directly to the water main or in line with another booster pump. The minimum actual capacity of the cold water storage cistern should be not less than 225 litres (50 gallons). The capacity of the hot water cylinder must be capable of meeting anticipated demand.

systems, combination boiler systems and separately pumped gravity systems) Pressures: The standard (unpumped) Aqualisa SmartValve™ is designed to operate up to a maximum static pressure of 700kPa ((7 bar)(100psi)). Where pressures are likely to exceed 700kPa ((7 bar)(100psi)), a pressure reducing valve must be fitted to the incoming mains supply. A setting of 400kPa ((4 bar)(60psi)) is recommended. It should be noted that daytime pressures approaching 600kPa ((6 bar)(80psi)) can rise above the stated maximum overnight.

### Special notes for

combination boiler systems The appliance must have a minimum domestic hot water rating of 24kW and be of the type fitted with a fully modulating gas valve. If in any doubt, please contact the appliance manufacturer before installation commences.

#### DUE TO PERFORMANCE CHARACTERISTICS OF COMBINATION BOILERS, SEASONAL INLET TEMPERATURE CHANGE WILL AFFECT THE AOUALISA SMARTVALVE™

OUTLET FLOW RATE RESULTING IN VARYING SHOWER FLOW

RATE AND FLOW CONTROL RANGE. INLET TEMPERATURE CHANGE MAY ALSO CAUSE THE TEMPERATURE DISPLAY TO FLASH; THIS IS NOT NECESSARILY CHANGING THE OUTLET TEMPERATURE. DUE TO THE PERFORMANCE CHARACTERISTICS OF COMBINATION BOILERS, **OPERATION OF THE BOOST BUTTON OR INCREASING** THE FLOW RATE SETTING ON THE SHOWER CONTROLLER MAY NOT OFFER SIGNIFICANT CHANGE IN OUTPUT FLOW RATE.

#### Special notes for separately pumped gravity systems and universal/negative head pumps (for divert systems) We recommend a **MINIMUM**

pump rating of 1.5 bar. For optimum performance a 2.5 bar pump should be used for all separately pumped installations. A twin ended pump is required for use with

single outlet products. A universal/negative head type twin ended pump (works on both positive and negative head conditions) MUST be used with divert products.

The minimum actual capacity of the cold water storage cistern

should be not less than 225 litres (50 gallons). The capacity of the hot water cylinder must be capable of meeting the anticipated demand.

#### THIS PRODUCT IS NOT SUITABLE FOR USE WITH A SINGLE ENDED PUMP.

## Shower Heads

The range of shower heads has been designed for use with Smart systems. Installation of any shower heads other than these may result in poor shower performance. If at any stage during installation you have any questions then please contact the Aqualisa Customer Service Department on 01959 560010 for advice.

#### Connections

This product incorporates 15mm 'push-fit' type connections. Tube should be cut using a rotary type cutter and lubricated using a silicone grease, petroleum jelly, or similar, prior to insertion into the fitting. 15mm pipework must be used to connect the product. If plastic pipe is used, the tube insert must not increase the tube diameter or extend the cut-off length by more than 2mm.

#### THESE FITTINGS ARE NOT SUITABLE FOR STAINLESS STEEL TUBE. COMPRESSION FITTINGS MUST NOT BE USED.

#### Pipe sizing CHECK PIPE SIZE

**REQUIREMENTS FOR** CONNECTIONS TO OUTLETS AND ACCESSORIES.

Long pipe runs, on both the inlet and outlet, will reduce the flow rate at the shower head, 22mm pipework should be used on inlets and reduced down to 15mm as close to the valve as possible to reduce pressure loss and help maintain flow rate. If using 15mm pipe, copper pipe is preferred. To optimise performance minimise the number of elbows used. If long pipe runs are unavoidable on the outlet, and a diverter is used, use copper pipe rather than plastic. If plastic pipe is used, minimise the number of elbows as the pipe inserts are very restrictive.

#### Flushing

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

**Declaration of Conformity** Aqualisa Products Limited declares that the Aqualisa SmartValve<sup>TM</sup> and supplied controller, in conjunction with pairing remotes and diverter, complies with the essential requirements and other relevant provisions of the Low Voltage Directive (2014/35/EU), the EMC Directive (2014/30/EU) and the RED Directive (2014/53/EU).

## After installation

Familiarise the end user with the operation of this product and hand them all literature. Complete and post the guarantee card or register online at www.aqualisa.co.uk

#### Guarantee

Aqualisa products are supplied complete with a 1 year parts and labour guarantee that can be upgraded by registering the product with Aqualisa. See www.agualisa.co.uk/guarantee for details.

DO NOT use a compression fitting or soldered joint to connect the outlet pipe to the top of the exposed product. The black push fit elbow provided MUST be used. This connection MUST be sited in a position that is safely accessible for commissioning, servicing and maintenance purposes. Failure to meet these requirements will invalidate the warranty.

o secure the control, tighten the captive screw at the base of the control using a small Posidriv screwdriver.

Slide the ceiling plate up to the ceiling to cover the entry hole.

Proceed overleaf to sections Aqualisa SmartValve™ Setup followed by Controller



## AQUALISA

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Please note that calls may be recorded for training and

quality purpose The company reserves the right to alter, change or modify the product specifications without prior warning Trademark of Aqualisa Products Limited.



# **SMART** INSTALLATION



is suitable for baths up to a maximum thickness of 24mm.	Symptom	Possible cause	Action
vailable on our website www.aqualisa.co.uk/installation-videos e QR code on the reverse of this guide.	Controller LEDs flashing when power turned on to the Aqualisa SmartValve™	Start up sequence and controller configuration in process (controller specific)	No action required - sequence and configuration can last to 2 minutes. Wait until LEDs go out and then the control is ready to use.
nove the overflow filler outlet from the de.	Controller unresponsive - No Lights / Blank	Power supply turned off to Aqualisa SmartValve <sup>TM</sup>	Check power supply is turned on - Green power light shou illuminated on the Aqualisa SmartValve <sup>TM</sup> .
		Data cable connection	Check that the connector is in the correct orientation and pushed home and that the wiring schematics are as per the
	Pump noisy and low / no flow	Air lock (for Gravity fed systems only)	wiring diagram. For models utilising an adjustable head kit; disconnect the handset from the hose, lower the hose into the shower tra
remove the bath waste clicker assembly nd set aside.			or bath, set the temperature to fully cold and then start the shower. As the water starts to flow and increase in volume gradually increase the temperature. If the flow starts to splutter, stop moving the temperature control until the flor again stabilises, then continue to move the dial towards the hottest setting.
			Isolate hot and cold feeds to the Aqualisa SmartValve <sup>™</sup> , disconnect from the inlet spigots and then using the isolat valve bleed through the hot and cold supplies.
the waste assembly and the bath base.			Release the outlet pipework from the outlet isolation valve the Aqualisa SmartValve <sup>TM</sup> . Using an appropriate connection flexi or length of pipe connect to the isolation valve so that can be discharged into a bucket or suitable receptacle. Stat shower and bleed through until air is cleared. It may be rece to have the controller set at a cooler temperature setting until the hot water starts to bleed through, then gradually increase the temperature. NOTE: If the product fitted use the Aqualisa diverter, then ensure that this is taken out of plumbing configuration but remains connected to the Aqu
ath and secure to the waste body		Postriction in	Smartvalve™ via the 2m data cable.
	Low / no flow	Restriction in waterway	Check for debris in the inlet filters of the Aqualisa SmartValve™. IMPORTANT: Water must be isolated.
a suitable trap (not supplied).	Low / no flow	Incorrect Aqualisa SmartValve™ fitted	If water supplies are gravity fed, the PUMPED Aqualisa SmartValve™ must be used (unless a separate stand alone pump is being utilised).
a suitable trap (not supplied).		Water supply issue	For Standard Aqualisa SmartValve <sup>™</sup> - Ensure water is turned on at the mains and at the servicing valve in the supply. Ensure isolation valves are fully open.
r washer is correctly aligned between y and bath wall.		Mixed water supplies	For standard Aqualisa SmartValve <sup>™</sup> - ensure hot and cold supplies are from the mains water supply.
		Check filters	Check for debris in the inlet filters of the Aqualisa SmartValve <sup>™</sup> , diverter and Fixed Head connection washer IMPORTANT: Water must be isolated
		Incoming mains water pressure or flow too low	After confirming that the filters are clear, check with the l water authority.
er is correctly aligned, pass the ugh the bath and secure to the		Connectors and water supply feeds to the Aqualisa SmartValve <sup>TM</sup> are restrictive	Refer to IMPORTANT INFORMATION sections: Connections and Pipe sizing.
		Separate, stand alone pump not activating (Standard Aqualisa SmartValve <sup>TM</sup> only)	Ensure sufficient flow to activate the flow switches of the For Aqualisa divert products a twin ended universal (negative head) pump must be used. Refer to IMPORTAN INFORMATION section.
nking plug and attach the flexible nection.		Aqualisa SmartValve™ pump not activating	Refer to Setting Water System Mode section, ensure mod set to normal or ECO gravity setting.
be used to guarantee	Unable to adjust or control temperature	Reversed inlet water supplies (i.e. Hot supply feeding cold inlet and vice-versa)	Ensure correct water supply to specified inlet connection.
	Fluctuating water temperature	Incorrect setting on Logic Module of Aqualisa SmartValve™	If hot water supply is from a combination boiler - the Logi module mode MUST be set to COMBI.
the blended supply pipe ensuring a suitable non restrictive blied) is fitted in line with current Water Supply Regulations.		Airlock in water supplies (for gravity fed systems only)	See "Air lock" in Possible Cause section.
ISION KIT		Hot water temperature too high	Ensure hot water supply temperature is below 65°C (mini 55°C for stored water and 50°C for combination boilers).
, a 900mm waste pipe conversion kit is available from the e department, part number 910064. Please contact our			Check data cable connections.
nent on 01959 560010.		Combination boiler unable to meet demand	Check that the hot water temperature is stable at another flowing outlet (e.g. bath hot tap - run at maximum flow ra additionally run a cold outlet at 1/3 of a maximum flow rat
d remove the waste pipe from the	Temperature too low	Low hot water temperature	Check that domestic hot water temperature is a minimum 55°C for stored water and 50°C for combination boilers.
		Logic Module temperature setting too low	Refer to section: Controller Commissioning Instructions.
	Temperature too Iow - Controller temperature ready	Mixed water supplies	Water supplies MUST be from the same source: MUST N be gravity hot and mains cold.
sealing washer from the waste pipe and set aside.	display does not stabilise	Unbalanced water supplies	For mains fed systems the cold and hot feeds should be as e balanced as possible - especially for HP unvented systems.
n of ct		Combination boiler unable to meet demand	Check the hot water temperature is stable at another high flowing outlet (e.g. bath hot tap - run at maximum flow ra additionally run a cold outlet at 1/3 of a maximum flow rat
suring	Controller remains illuminated after switching shower off	Poor cable connection	Check data cable connections are making good contact ar fully inserted (this includes installations where a wired rem is fitted).
	Water flows from incorrect outlet (divert	Pipework configured incorrectly	Refer to sections: Diverter Outlet and Diverter Primary O Set Up.
er waste pipe into position over the outlet, and secure it in place	models only)	Primary outlet setting not configured	Refer to sections: Diverter Outlet and Diverter Primary C Set Up.
d to be softened by running it under hot water, to ensure it	Flow will not switch	Communications	Check that 2m patch lead is connected between Aqualisa SmartValve™ and diverter.

For further information and advice contact Aqualisa Customer Helpline or refer to the Troubleshooting sections in the User Guide.