



Installation, Operation and Maintenance Manual

SPAH2O Electronic Shower Valve

SPAH2O is intended to be used with fixtures marked for use with automatic compensating valves rated at 2.2 GPM or higher flow rates.

SPAH2O is compatible with iSteamX controls with software version 1.7.70 and higher. Contact MrSteam Technical Service at 1-800-767-8326 regarding software updates.

IMPORTANT: Leave this material with the homeowner

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SPAH2O

ELECTRONIC SHOWER VALVE

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SAFETY INFORMATION

This installation manual contains essential information to make a full installation of the system. This manual includes a description of the system functions and capabilities, contingencies and alternate modes of operation, and step-by-step procedures. Please read it carefully.

The shower installation must be carried out by a qualified professional following the sequence of this instruction book. Care taken during the installation will provide a long, trouble-free life for your shower.

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

WARNING (items 1-2)

1. To prevent a shock hazard Do not install **SPAH2O** inside the shower or steam room.
2. All electrical wiring to be installed by a qualified licensed electrician in accordance with National and Local codes.

CAUTION (items 3-8)

3. **SPAH2O** is capable of controlling three outlets, to reduce the risk of leaking any unused outlets **MUST** be capped.
4. To prevent leaking or damage to the valve Do not install the **SPAH2O** outside.
5. To prevent leaking or damage to the valve Do not install the **SPAH2O** in a location where water may freeze.
6. To prevent damage Do not solder piping or fittings within 12 inches of the **SPAH2O** as heat can transfer along the pipework and damage components.
7. To prevent damage Do not use excessive force when making plumbing connections.
8. All plumbing connections must be completed before making the electrical connections.

IMPORTANT NOTE: (items 9-10)

9. Shower set up must be run from the iSteamX control before using the **SPAH2O**
10. **SPAH2O is intended to be used with fixtures marked for use with automatic compensating valves rated at 2.2 GPM or higher flow rates.**
11. **SPAH2O is provide with a 30 foot cable that connects to the iSteamX hub, contact MrSteam to purchase an optional 60 foot cable (104548-60). The maximum cable length is 60 feet.**

STANDARDS & CERTIFICATIONS: HYDRAULIC

PRESSURE BALANCE STANDARDS

ASSE #1016 - Performance requirements for automatic compensating valves for individual showers and tub/shower combinations Including: 4.6.4 - Pressure and temperature variation test T type

THERMOSTATIC STANDARDS

Pr EN-1111 (2015) - Sanitary Tapware - Thermostatic Mixing Valves. Including:

- 13.2 - Determination of flow rate
- 13.5.1 - Temperature control operation
- 13.5.2 - Flow rate reduction
- 13.5.3 - Cold supply failure and restoration
- 13.5.4 - Supply pressure variation
- 13.5.6 - Temperature Override Stops

ASSE #1016 - Performance requirements for automatic compensating valves for individual showers and tub/shower combinations Including: 4.6.5 - Pressure and temperature variation test T type

STANDARDS & CERTIFICATIONS: ELECTRIC

CE

- EMC: EN 55014-1, EN 55014-2
- Safety: EN 60335-1
- RoHS: EN 63000:2018



USA

- FCC: CFR title 47, Part 15, SubPart B

CANADA

- EMC: CAN ICES-3 (Issue 6)

FCC INFORMATION (for USA Customers)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation

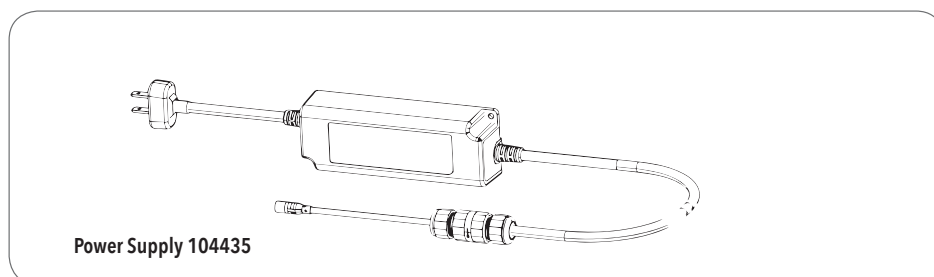
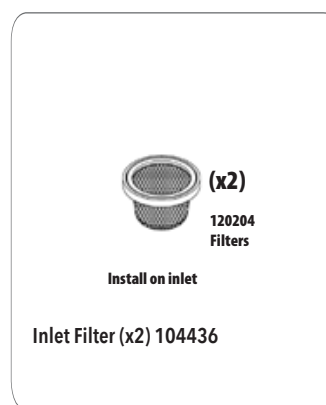
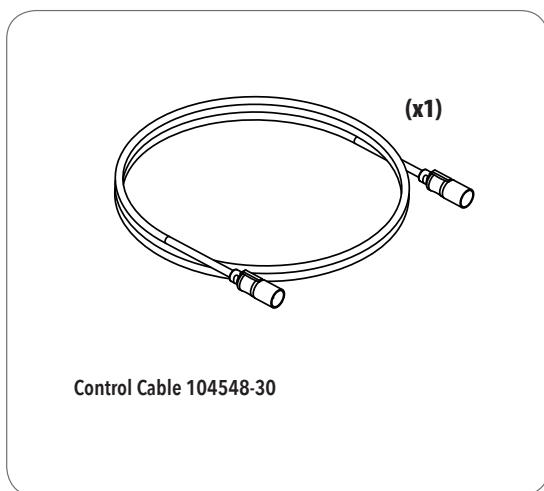
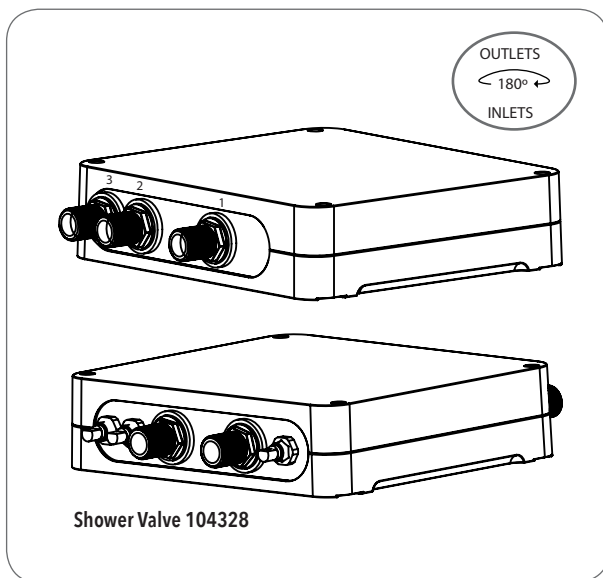
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to connect the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



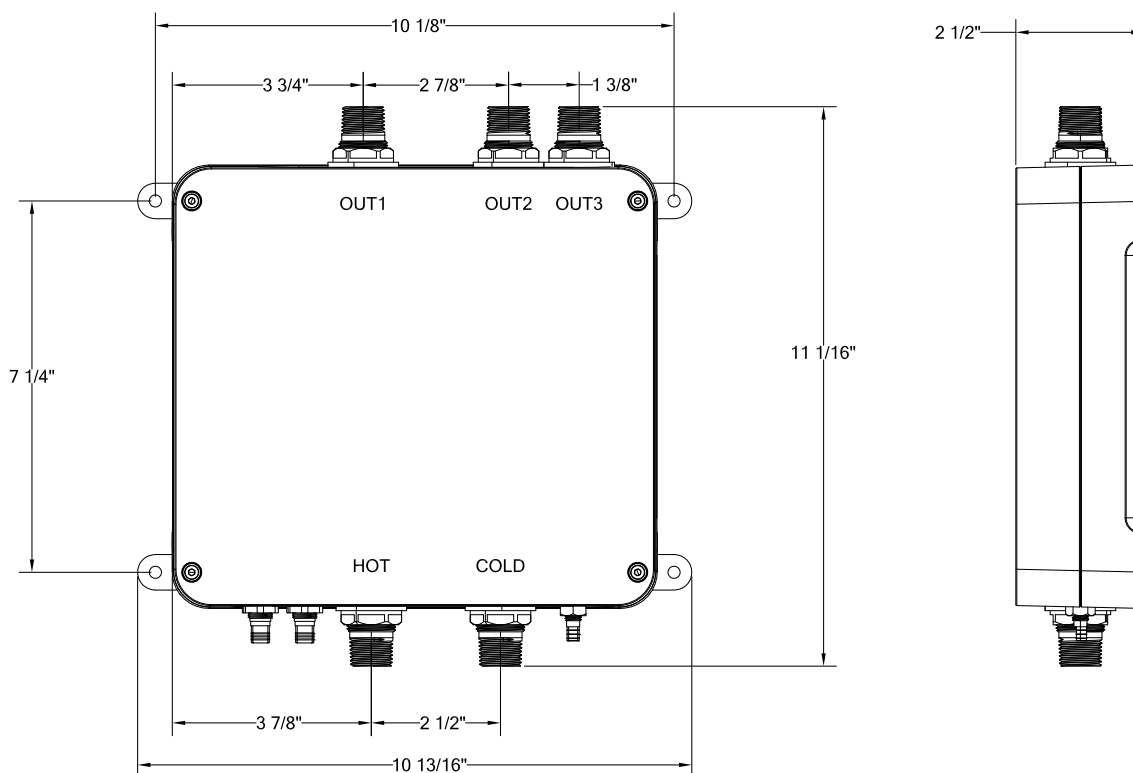
WARNING Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

COMPONENTS LIST

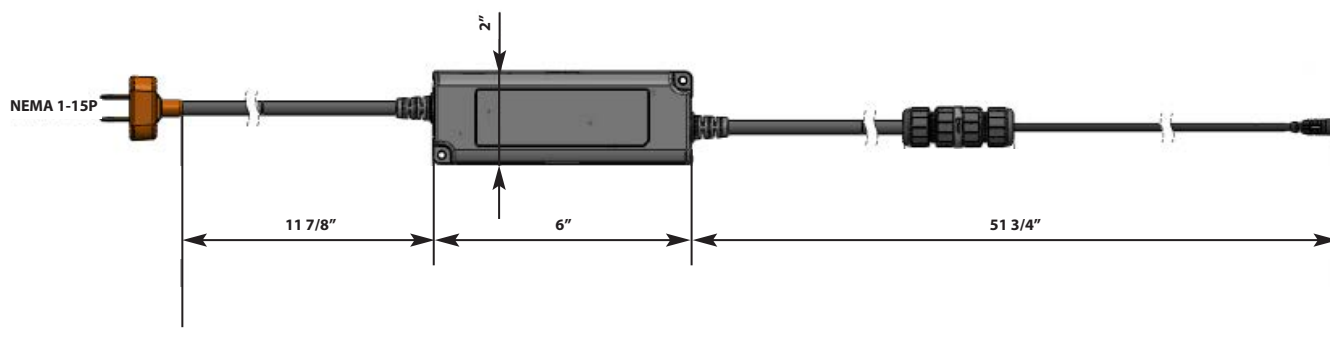


DIMENSIONS

Shower Valve



Power Supply Kit



TECHNICAL SPECIFICATIONS

General		
Technology	Patent pending	
Maximum load	36 W. (Stand-by 1W)	
Rated Impulse voltage	12 V	
Ingress Protection Rating	IP54	
Water Connections	1/2" NPT	
Weight	4.5 lbs	
Temperature	Minimum	Maximum
Input hot water range	110 °F	149 °F
Input cold water range	32 °F	80 °F
Mixed maximum	118 °F	
Mixed maximum	Full cold	
Optimum control range	90 °F - 111 °F	

Pressure		
Maximum dynamic	20 psi	
Minimum dynamic	73 psi	
Recommended dynamic	43 psi	
Maximum differential supply	5 psi	
(Durability) Burst	508 psi	
(Durability) Leakage	290 psi	
Flow Rate (3 Bar Free Flow)	Minimum	Maximum
Mixed Water 1 outlet open	1.1 gpm	5.5 gpm
Mixed Water 2 outlet open	1.1 gpm	7.4 gpm (total)

ENVIROMENTAL WORKING CONDITIONS

- Ambient temperature: from +5° C to +60° C
- Relative humidity: from 30% to 95%

AC/DC Power Adaptor (power supply)

AC/DC Power Adaptor	
AC Input Voltage	110-240 VAC, 50/60 HZ
DC Output Voltage	12 VDC (+/- 10%). 5.0 A
Power	60W
IP	IPX4

SPA20 is compatible with iSteamX controls with software version 1.7.70 and higher. Contact MrSteam Technical Service at 1-800-767-8326 regarding software updates.

SPA20 is intended to be used with fixtures marked for use with automatic compensating valves rated at 2.2 GPM or higher flow rates.

INSTALLATION CONSIDERATIONS

The **SPA20** must be installed in an accessible location for servicing and maintenance. Provide an access panel to allow future maintenance of the **SPA20**.

The **SPA20** must not be installed with either of its sides facing downwards. The cover does not need to be dismantled.

The power supply must be separately switchable. The **SPA20** operate from a very low voltage source (12 Vdc.)

The system can work with unbalanced inlet pressures of up to 5 bar. Pressure stabilizers are not required to compensate pressure variations between cold and hot water inlets.

Filters and check valves must be installed at the water inlets.

Flush pipes thoroughly before and after installation.

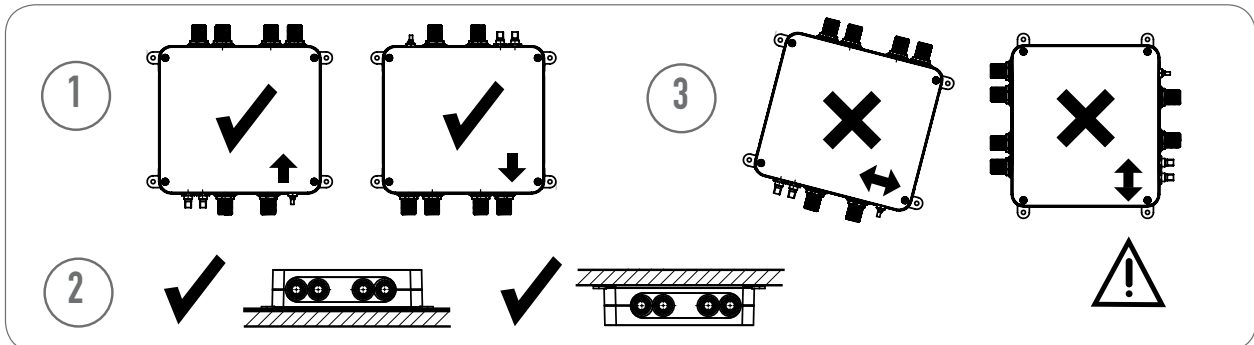
Not flushing the water supply pipe or not installing filters may cause damage to the valves by debris, which will cause the system to malfunction. Debris damage is not covered by the warranty.

It is recommended installing isolating valves upstream of the **SPA20** to facilitate servicing.

The **SPA20** must not be installed in situations where either the ambient temperature is likely to exceed 65 °C or where freezing may occur.

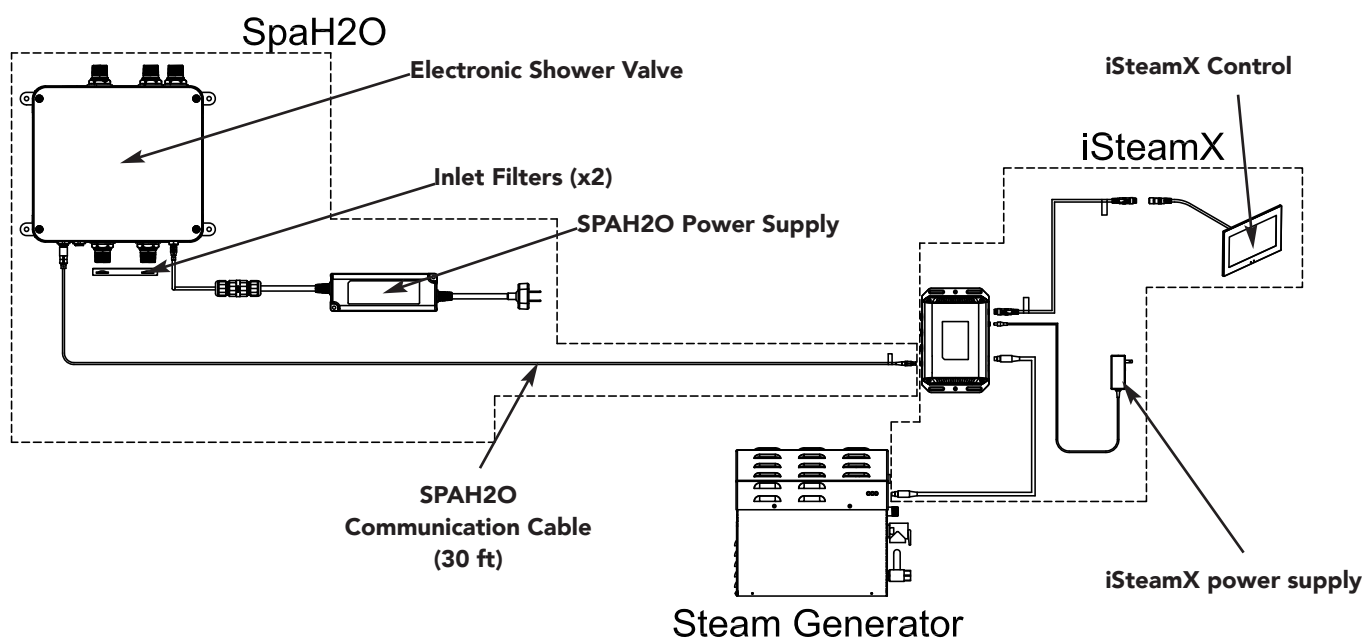
When the installation is finished it is highly recommended to check that all connections are watertight.

CAUTION



1. Mounting on a vertical or horizontal surface with inlets pointing up or down/front or back.
2. The **SPA20** should be mounted in open wall installation as a utility closet or attic.
3. Do not install the **SPA20** on the wall with either of its sides facing downwards or diagonally.

TYPICAL INSTALLATION

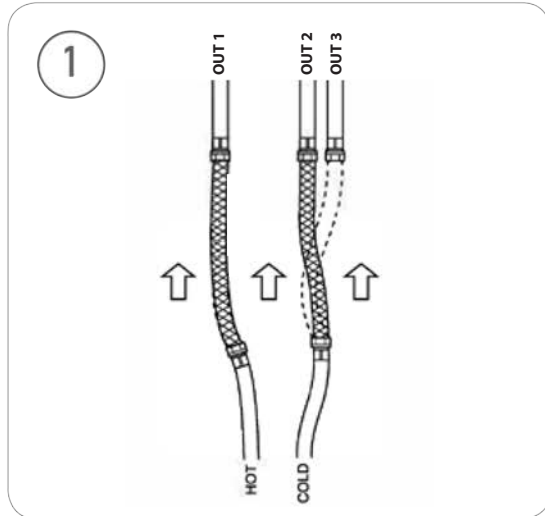


*All drawings are for illustrative purposes only
iSteamX and Steam Generator are NOT included with SPAH2O*

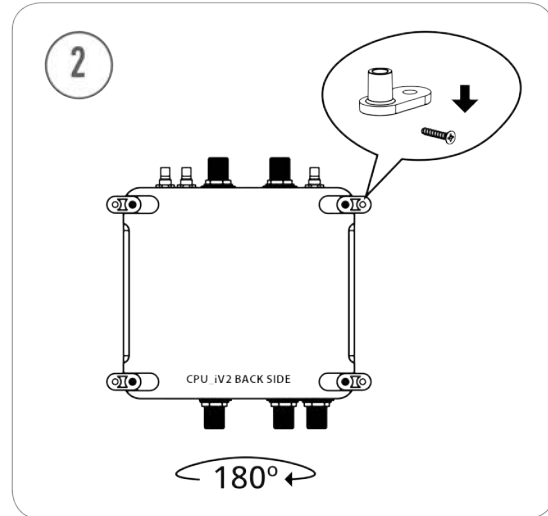
INSTALLATION GUIDELINES

! CAUTION SPAH20 is capable of controlling three outlets, to reduce the risk of leaking any unused outlets **MUST** be capped.

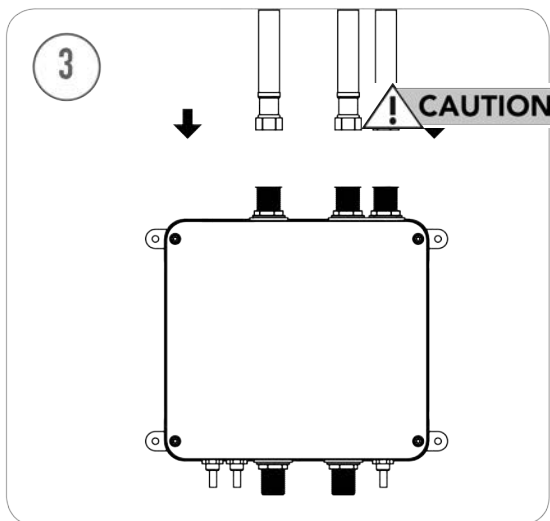
NOTE: The installation technician must follow the installation guidelines, respecting the areas and making sure about the equipotential union of the device.



Remove filters and terminal elements such as showers. Connect cold water supply directly to the first shower feed pipe. Flush for at least 5 minutes. Repeat the procedure for the hot water supply and the entire shower feed pipes.



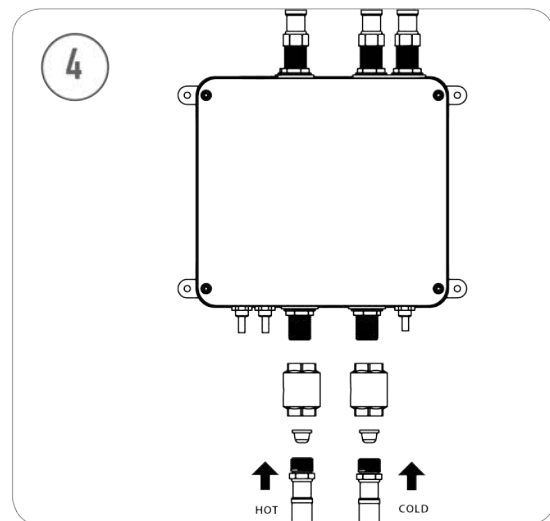
Rotate the mounting feet to the deployed position and attach the valve to the wall using the appropriate screws.



Connect outlet plumbing to the valve. No valves or diverters shall be installed between the valve and the in-shower fixtures. Output 1 must always be plumbed.

! WARNING To prevent damage Do not solder piping or fittings within 12 inches of the SPAH20 as heat can transfer along the pipework and damage

IMPORTANT NOTE: SPAH20 is intended to be used with fixtures marked for use with automatic compensating valves rated at 2.2 GPM or higher flow rates.

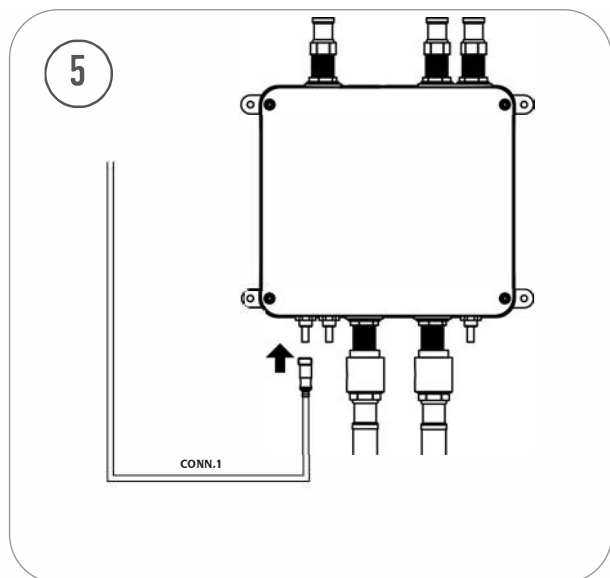


Install filters and connect supply lines. Supply pressure must be at least 20 psi and not exceed 73 psi. The recommended pressure is 43 psi, install pressure reducing valves as required.

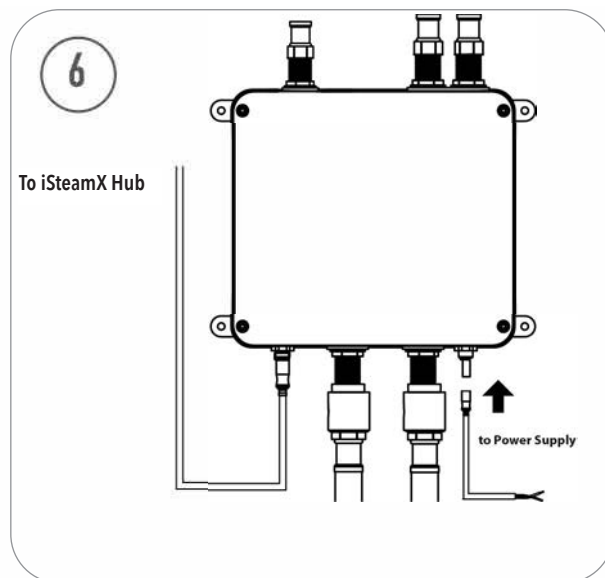
Test all connections for leaks.

! WARNING To prevent damage Do not solder piping or fittings within 12 inches of the SPAH20 as heat can transfer along the pipework and damage

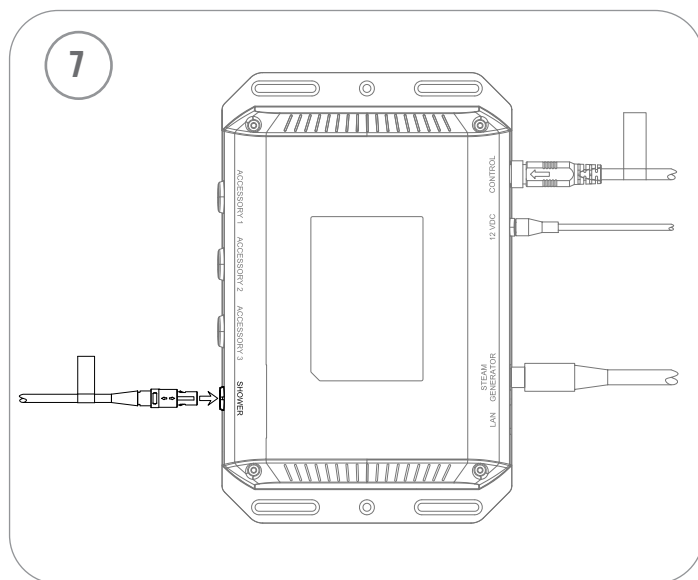
INSTALLATION GUIDELINES



Plug the communication cable into the connector labeled Conn. 1 Control on the valve



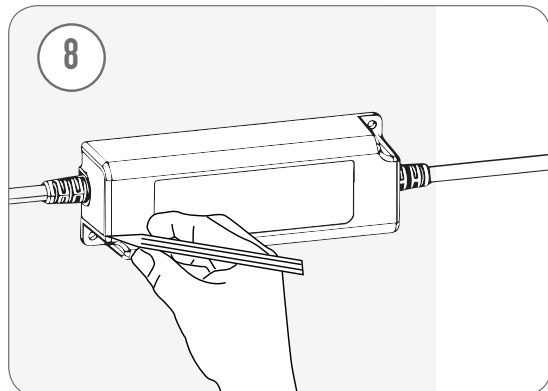
Plug the power supply into the connector labeled Conn. 3 12 VDC



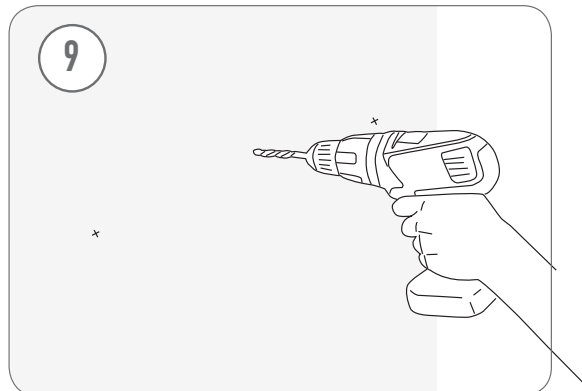
Plug the communication cable from the valve in the connector labeled SHOWER on the iSteamX Hub.

INSTALLATION GUIDELINES

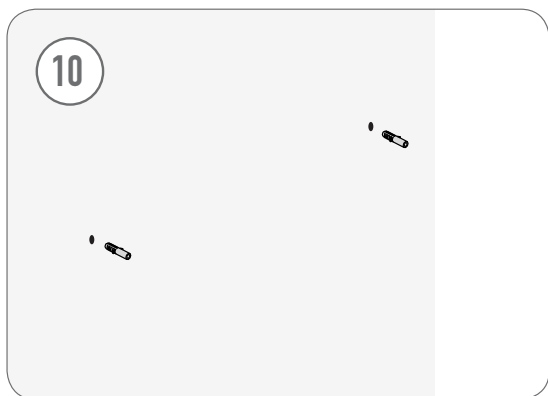
Power Supply



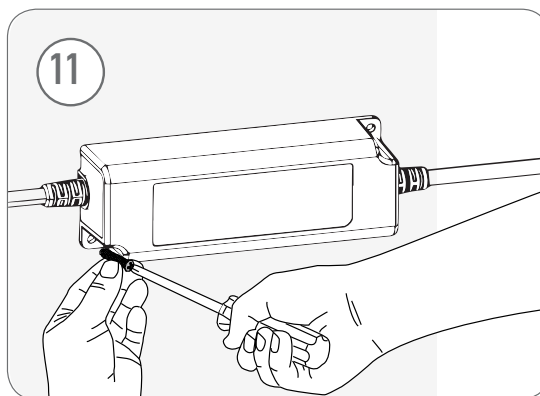
Mark the position of the holes with a pencil.



Make the holes in the wall with the appropriate measures.



Put the screw studs on the wall



Plug the power supply into a 120 volt outlet.

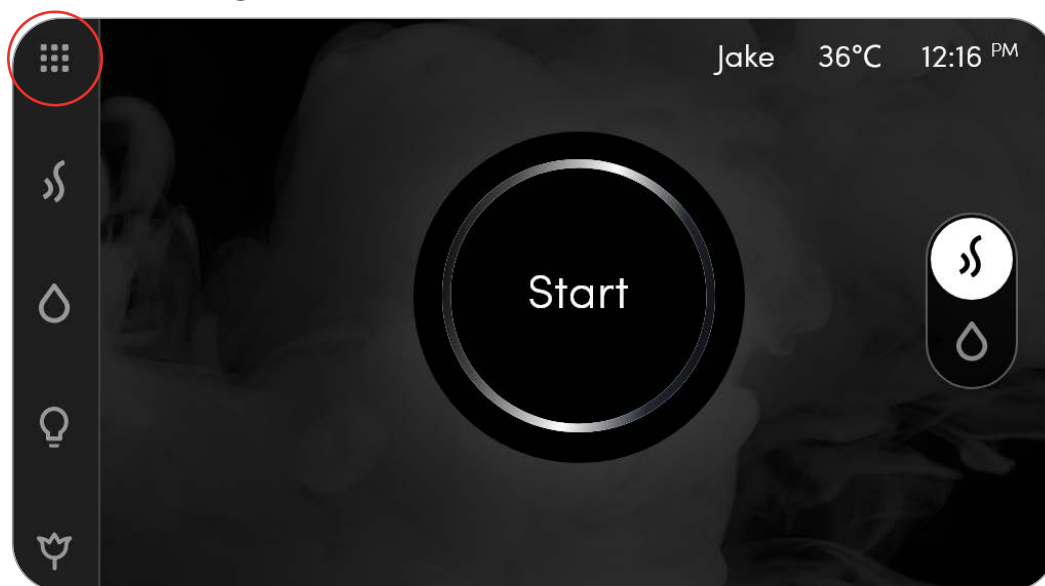
START UP OPERATION

! CAUTION For proper operation, a learning mode must be initiated from the iSteamX prior to using SPAH2O.

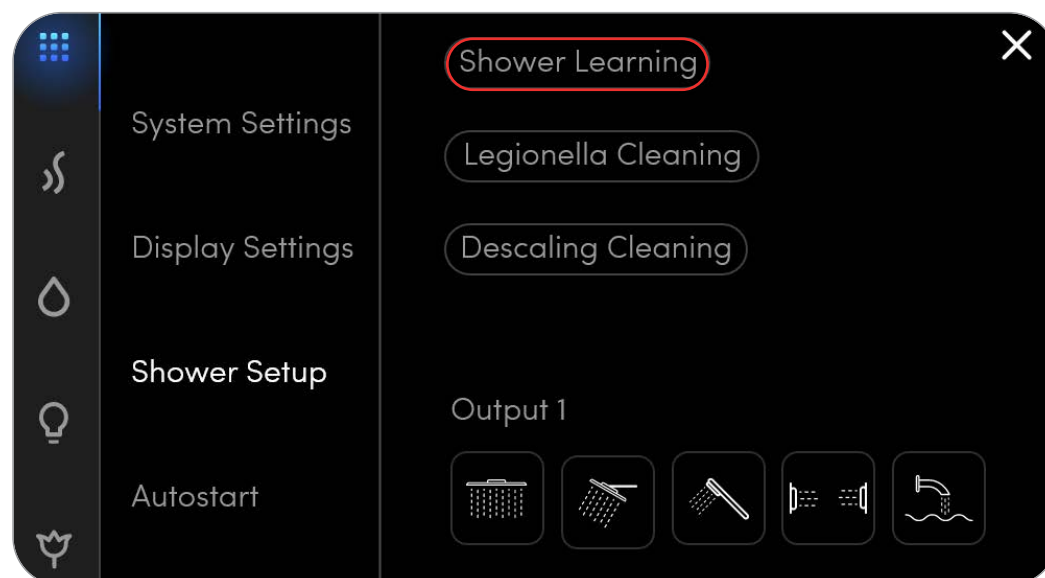
! CAUTION Ensure any unused shower valve outlets are capped prior to using the learning mode

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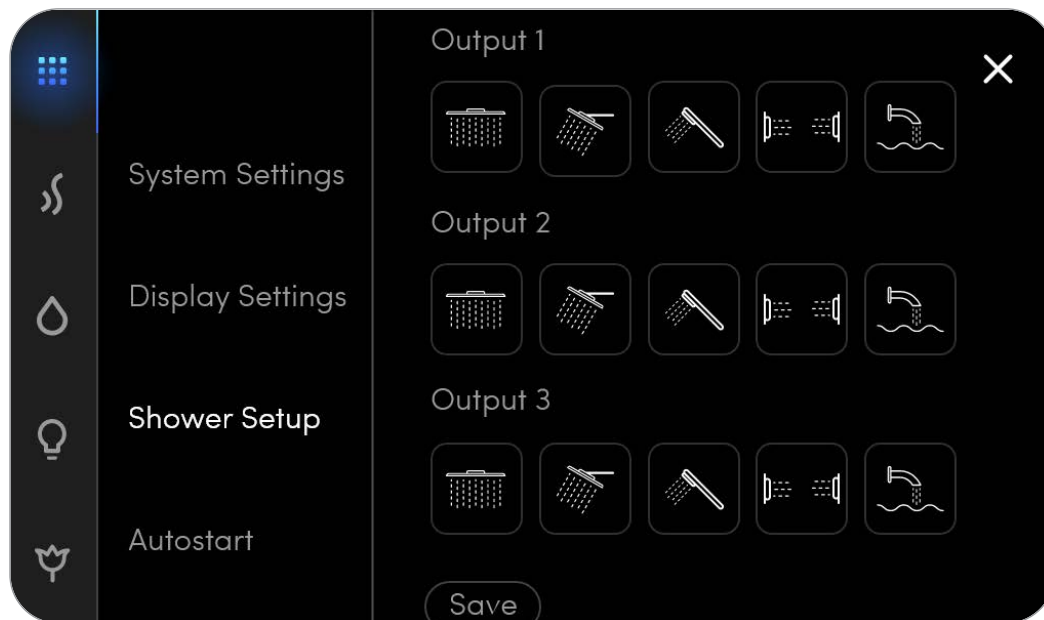
Shower Learning



From the start screen, navigate to the features menu by pressing the features icon



Navigate to Shower Setup in features menu and press Shower Learning. The hot and cold supply must be on and the shower fixtures MUST be connected. The control will display a message that says the shower learning is in progress. While the learning is taking place the outputs will open and close to learn the flow characteristics of each fixture.



Once the shower leaning has been completed, each output can be assigned a fixture icon (note each may only be used once) Select the icon the corresponds to the output, once the selections are made press SAVE. Note: If an output is not plumbed you will not be able to make a selection for it

OPERATION



Navigate to the shower user interface using the steam / shower toggle

OPERATION



Press the ON/OFF button to start and stop the shower. The shower value will always start output 1.

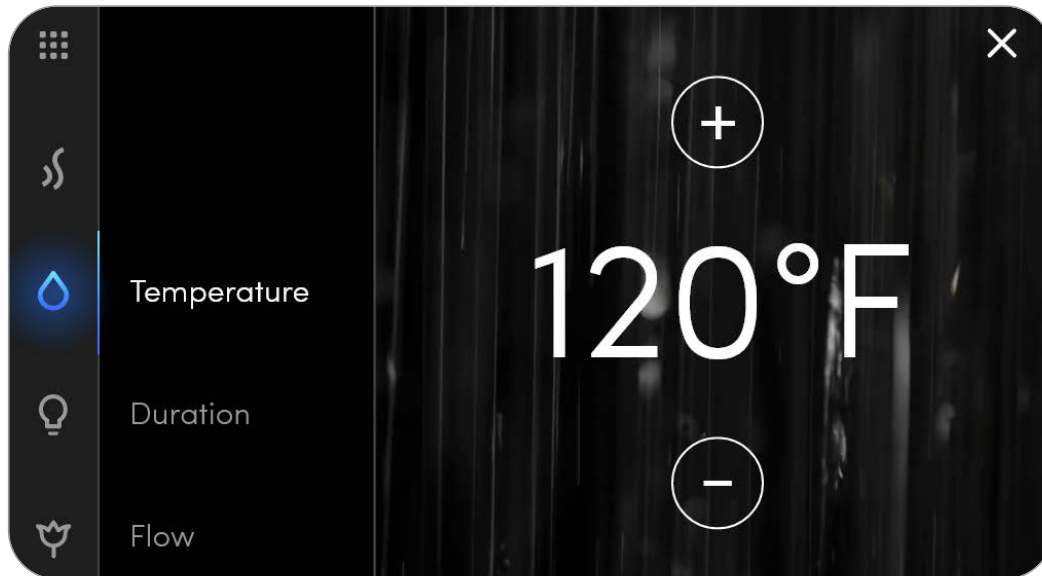
Press the water droplet icon to navigate to the temperature/flow adjustment screen

SPAH20 can have 2 outlets open at a time. To open a second outlet press the icon representing that output. Pressing the icon of an active outlet will turn it off. If two outlets are open, pressing the icon for a 3rd outlet will close the two open outlets and open the third

To turn the SPAH2O off, turn off the individual outlets or press the ON/OFF button.

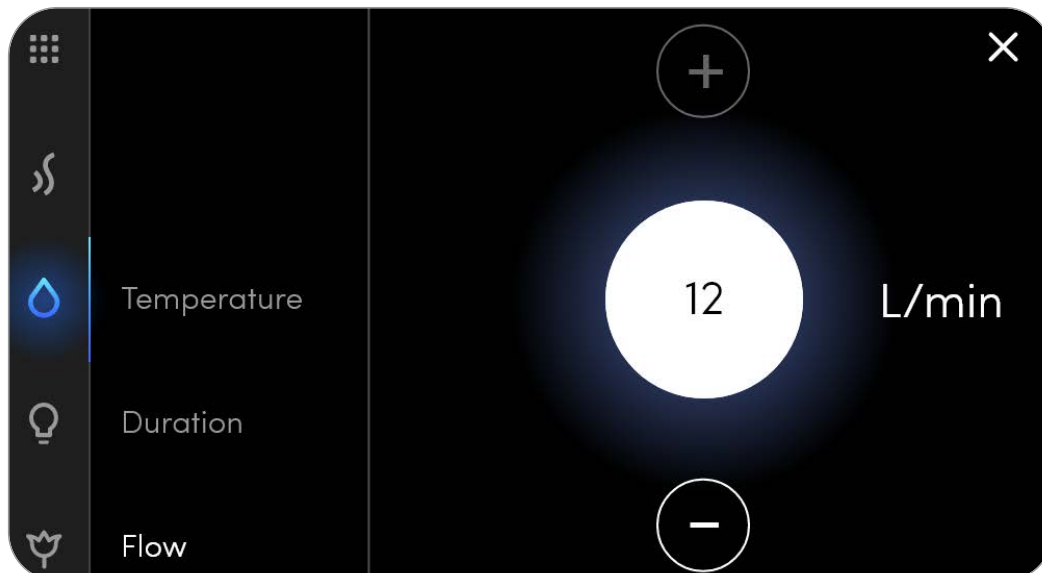
IMPORTANT NOTE: SPAH2O automatically turns off after 20 minutes

OPERATION



Tap Temperature to adjust the temperature of the shower. Use the + and – buttons to adjust the temperature.

NOTE: The maximum allowable set point temperature is 118 *F. iSteamX will not allow a temperature to be set above what the valve is capable of based on water supply temperatures and fixtures flowrates.



Tap Flow to adjust the volume of the shower. Use the + and – buttons to adjust the volume.

Note: maximum allowable flow rate is 5.5 gpm (21 L/min) for one output and a total of 7.4 gpm (28 L/min) when two outputs are open iSteamX will not allow the user to set a flow rate higher than the rating of the fixture. iSteamX will not allow a flow rate which is not achievable based on the temperature setting and in supply temperatures and flow rates.

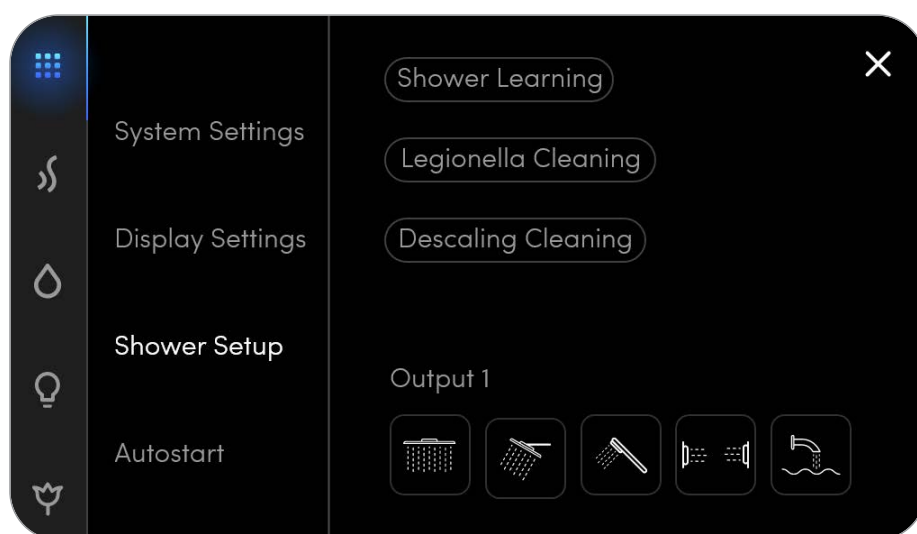
REF.	TYPE OF ALARM	DESCRIPTION	RECOMMENDED ACTION
AL 1	Cold water leakage	Device on standby mode detects cold water leakage. This means that the cold water valve is not properly closed, probably due to dirt accumulated inside it.	Run the automatic clean-up program. If the problem persists replace the device.
AL 2	Hot water leakage	Device on standby mode detects hot water leakage. This means that the hot water valve is not properly closed, probably due to dirt accumulated inside it.	Run the automatic clean-up program. If the problem persists replace the device.
AL 3	Cold water failure	The system, on standard operation mode, detects lack of cold water. This may be due to a problem in water supply or entrance blockage due to dirty filters, for example. If this problem occurs, the system will close immediately according with safety standards on EN1111.	Check for cold water supply interruption. Make sure water is reaching equipment inlets. If the problem persists, remove filters at the entrance and clean or replace.
AL 4	Hot water failure	The system, on standard operation mode, detects lack of hot water. This may be due to a problem in the water supply or entrance blockage due to dirty filters, for example. If this problem occurs, the system will give only cold water.	Check for hot water supply interruption. Make sure water is reaching equipment inlets. If the problem persists, remove filters at the entrance and clean or replace.
AL 5	Insufficient hot water temperature	Hot water is reaching the device at a temperature below the temperature set by the user +4 ° C. This is the minimum temperature for hot water needed to ensure proper operation for the temperature requested. If this problem occurs, the system won't close, it will give the maximum temperature it can. This may be due to the boiler is not working properly, not working at all, or the temperature of the boiler is being too low.	Check if boiler is operating properly and if it is heating water to the right temperature.
AL 6	Cold water temperature too high	Cold water is reaching the device at a temperature over 28°C. This is the maximum temperature for cold water needed to ensure proper operation over the optimum temperature control range. If this problem occurs, the system won't close, it will continue working giving the temperature it can. This may be due to weather conditions overheating cold water in the network. If this is not the case, it could be due to a reflux of hot water into cold water pipes.	If the problem is due to external weather conditions, there is no possible solution other than installing a cooler for cold water. If this is not the reason, check if hot water is returning into cold water pipes. In this case, you would have to install non-return valves at the entrance of all mixers (electronic and non-electronic, thermostatic and nonthermostatic) on the same network.
AL 7	Temperature sensor malfunction	One of the temperatures read by the sensors is outside normal operating range. Due to a break in the sensor itself or a problem in the electronic board.	Replace device.
Er 1	Communication error	The keyboard has lost communication with the equipment. This may be due to a bad connection or bad condition of connector cable. It may also be due to too high interference from the mains.	Check cable and connectors condition. If the problem persists, it may be due to interference. Try connecting the power supply to another point in the network.

INSTALLATION & MAINTENANCE

- Avoid installing the system into enclosed locations with extreme environmental conditions.
- Install filter and check valves. Inspect them periodically and replace them if necessary.
- Activate, using the iSteamX, the Automatic descaling program once a month to remove internal impurities.
- Thermal disinfection can be directly activated using the touchpad (no changes in the installation or the device are required to run this program). It is highly recommended to be performed at least once a year. By pressing Legionella Cleaning.

WARNING Scald hazard, ensure the shower is empty during thermal disinfection. **DO NOT** enter shower until thermal disinfection is complete.

- Review the temperature of the boiler or/and the home water facility if any warning / error is displayed on the iSteamX.
- Indoor use only.



All drawing are for illustrative purposes only

www.mrsteam.com

Products, information and specifications are subject to change without notice.

Please call Sales & Support at 1.800.76.STEAM (East Coast) or 1.800.72.STEAM (West Coast) for more information.

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