

# SmarTap

Greener Safer Smarter

## INSTALLATION GUIDE



Welcome,

Thank you for using SmarTap – an advanced digital shower system. Careful adherence to the installation procedures and maintenance practices set out in this manual will ensure many years of outstanding performance from your new shower.

Please note,

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by any means, electronic, mechanical, photo reproductive, recording or otherwise without the prior written permission of SmarTap Ltd.

This guide is subject to periodic review, update, and revision. Customers are cautioned to make sure that the guide's information applies to the system they are using.

This product performs as described in this guide when assembled, operated, maintained, and repaired in accordance with the instructions provided. Do not repair this product or any of its parts other than in accordance with written instructions provided by SmarTap Ltd.

# SmarTap

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## Introduction

This guide provides the information necessary to install and operate the SmarTap digital shower system in a safe and efficient manner.

**Please read and understand this guide before operating the system.** It is mandatory to follow the instructions in the guide and the technical description in order to avoid damage to the system.

If any part of this guide is not clear, please contact SmarTap Technical Support at [support@smartap-tech.com](mailto:support@smartap-tech.com) for clarification.

## Warnings / Cautions / Notes

The manual includes several kinds of comments, marked with specific statements and aimed to attract user attention to a specific type of information.

The definitions of Warnings, Cautions and Notes used in this document are as follows:

### WARNING



A WARNING HIGHLIGHTS AN ESSENTIAL OPERATING OR MAINTENANCE PROCEDURE, PRACTICE, CONDITION, STATEMENT, ETC., WHICH, IF NOT STRICTLY OBSERVED, COULD RESULT IN INJURY OR DEATH OF PERSONNEL, OR LONG TERM HEALTH HAZARDS.

### CAUTION



A CAUTION HIGHLIGHTS AN ESSENTIAL OPERATING OR MAINTENANCE PROCEDURE, PRACTICE, CONDITION, STATEMENT ETC., WHICH, IF NOT STRICTLY OBSERVED, COULD RESULT IN DAMAGE TO, OR DESTRUCTION OF, EQUIPMENT OR LOSS OF EFFECTIVENESS.

### NOTE



A NOTE HIGHLIGHTS OR CLARIFIES AN ESSENTIAL SYSTEM DESCRIPTION, OPERATING OR MAINTENANCE PROCEDURE, CONDITION OR STATEMENT.



## Important Safeguards

Please read these instructions carefully before installation.

### Read Instructions

All the safety and operating instructions should be read before system is unpacked and installed.

### Retain Instructions

The safety and operating instructions should be retained for future reference.

### Follow Instructions

All installation and configuration instructions should be followed.

#### WARNING



THE WARRANTY WILL BE VOID IF THE PRODUCT IS NOT INSTALLED ACCORDING TO THESE INSTRUCTIONS. SMARTAP WILL NOT BE LIABLE FOR LOSS OR DAMAGES RESULTING FROM IMPROPER INSTALLATION OR USE OF THE PRODUCT THAT IS NOT IN ACCORDANCE WITH THE INSTRUCTIONS SPECIFIED BELOW.



#### NOTE

THE CONTENTS OF THIS GUIDE ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

## Safety Instructions



#### WARNING

DO NOT USE THE E-VALVE SYSTEM BEFORE READING AND UNDERSTANDING THIS GUIDE

## WARNING



UNAUTHORIZED MODIFICATION MAY CAUSE POOR PERFORMANCE OF THE E-VALVE. DO NOT MAKE MODIFICATIONS TO THE VALVE AS THIS COULD ADVERSELY AFFECT THE PERFORMANCE OF THE VALVE AND VOID THE WARRANTY. SMARTAP WILL NOT BE LIABLE UNDER ITS WARRANTY OR OTHERWISE FOR PERSONAL INJURY OR DAMAGE CAUSED BY AN UNAUTHORIZED MODIFICATION.

## WARNING



PRODUCT MUST BE INSTALLED BY QUALIFIED AND CERTIFIED PERSONNEL, IN ACCORDANCE WITH ALL CURRENT RELEVANT STATUTES AND REGULATIONS IN YOUR COUNTRY.

## WARNING



ALL SHOWERS REQUIRING AN ELECTRICAL CONNECTION MUST BE INSTALLED BY QUALIFIED PERSONNEL FOLLOWING THE RELEVANT REGULATIONS IN YOUR COUNTRY AND CERTIFIED TO CURRENT BUILDING REGULATIONS.

## WARNING



BEFORE ANY ELECTRICAL CONNECTIONS ARE MADE, THE ELECTRICITY SUPPLY MUST BE TURNED OFF AT THE MAINS SWITCH. ALL ELECTRICAL INSTALLATION MUST BE CARRIED OUT ONLY BY QUALIFIED PERSONNEL.

## CAUTION



BE CAREFUL WHILE UNPACKING; THE SYSTEM IS FRAGILE.

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## Installation Guidelines

### CAUTION



THE E-VALVE SHOULD BE INSTALLED IN AN ACCESSIBLE LOCATION FOR MAINTENANCE (AND NO WARRANTY CLAIM CAN BE CONSIDERED OR LIABILITY ACCEPTED BY SMARTAP IF LACK OF ACCESSIBILITY HAS PREVENTED MAINTENANCE).

### CAUTION



THE E-VALVE MUST NOT BE INSTALLED IN PLACES WHERE EITHER THE AMBIENT TEMPERATURE IS LIKELY TO EXCEED 40°C OR WHERE FREEZING MAY OCCUR.

THE DIAL CONTROLS MUST NOT BE INSTALLED IN PLACES WHERE THE AMBIENT TEMPERATURE IS LIKELY TO FALL BELOW 5°C OR RISE ABOVE 60°C.

### CAUTION



TO PREVENT DAMAGE IN THE EXISTING INFRASTRUCTURE IT IS MOST RECOMMENDED TO CHECK FOR HIDDEN PIPES OR CABLES BEFORE DRILLING ANY HOLES.

PIPES ON BOTH INLET AND OUTLETS SHOULD BE AS SHORT AS POSSIBLE IN ORDER TO AVOID REDUCTION OF FLOW RATE AT THE CONNECTED OUTLETS.

## Labels and Symbols

The e-Valve system has the following labels and symbols.

<b>Model: E-VALVE</b>	 <b>v1015250149</b>
13.5 Vdc, 50W Max from AC/DC adapter: in: 100-240ac, 50-60Hz, 1.2A Max; out: 13.5Vdc, 3.71A	     <b>SmarTap company</b>

Symbol	Description
	Read the Installation manual
	Manufacturer
	Class III Appliance
	Read all documents including the User's Guide
<b>IPx6</b>	IPx6 Water projected by a nozzle (6.3 mm) against enclosure from any direction shall have no harmful effects.
	Not for general waste
	CE conformity marking



## Technical Specifications

### Absolute Maximum Ratings

<b>Working pressure</b>	1 – 9 bar
<b>Overpressure</b>	16 bar
<b>Burst pressure</b>	35 bar
<b>Hot water temperature</b>	70 C°
<b>Ambient temperature</b>	5 – 60 C°
<b>Relative humidity</b>	90% non-condensing

### Recommended Conditions

<b>Working pressure</b>	2 – 5 bar
<b>Hot water temperature</b>	50 – 65 °C
<b>Cold water temperature</b>	10 – 25 °C
<b>Set point temperature</b>	Cold water or 35 – 45°C

### Performance at Recommended Conditions

<b>Temperature accuracy</b>	±0.5°C
<b>Flow accuracy</b>	±5% of Full Scale
<b>Hydraulic performance</b>	Complies with EN1111 standard

### Miscellaneous

<b>Supplied user interface cable length</b>	9m
<b>Operational voltage</b>	100 – 240V ~ 50 – 60Hz Safety: EN 60335-1 :2012, EN60335-2-105:2005
<b>Standards</b>	EMC: EN 55014-1, EN 55014-2 CE, RoHS, WRAS

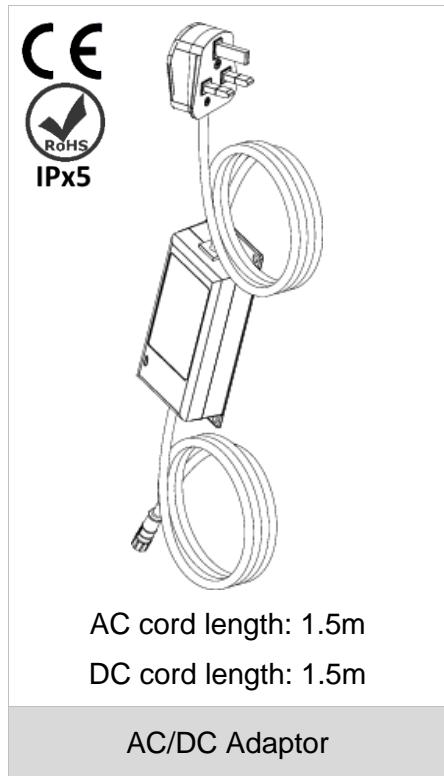
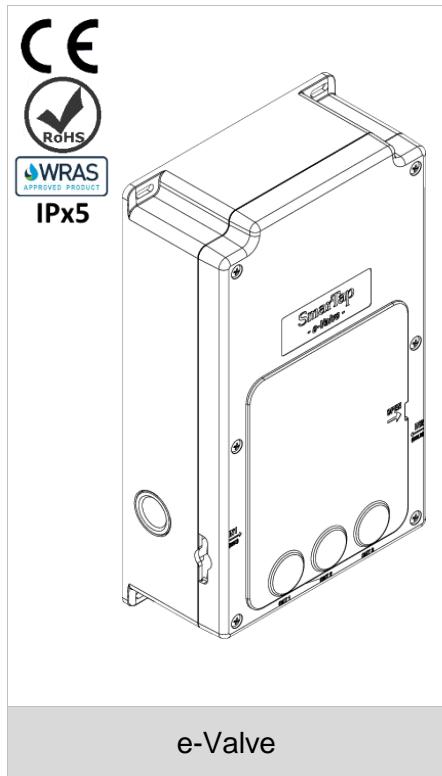


### WARNING

DO NOT USE THE SYSTEM IF THESE CONDITIONS ARE NOT MET.

## Package Contents

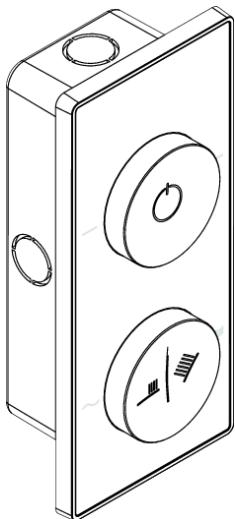
The SmarTap Digital Shower system package includes the following components:



# SmarTap



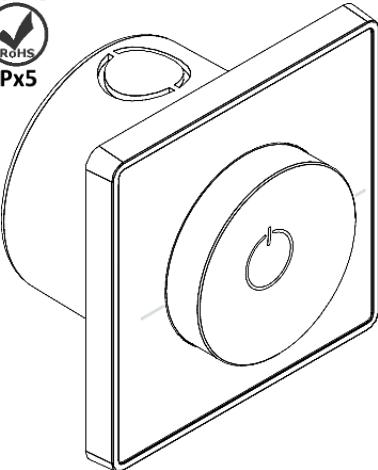
RoHS  
IPx5



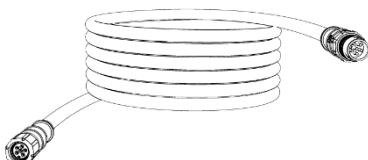
Two Dial controller



RoHS  
IPx5

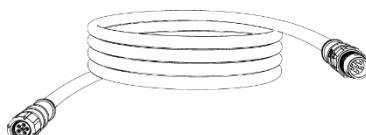


(If applicable) One Dial controller



- 6 pin interface cable 9 m length
- IP67 compatible

Two Dial controller cable



- 6 pin interface cable 7m length
- IP67 compatible

(If applicable) One Dial controller cable

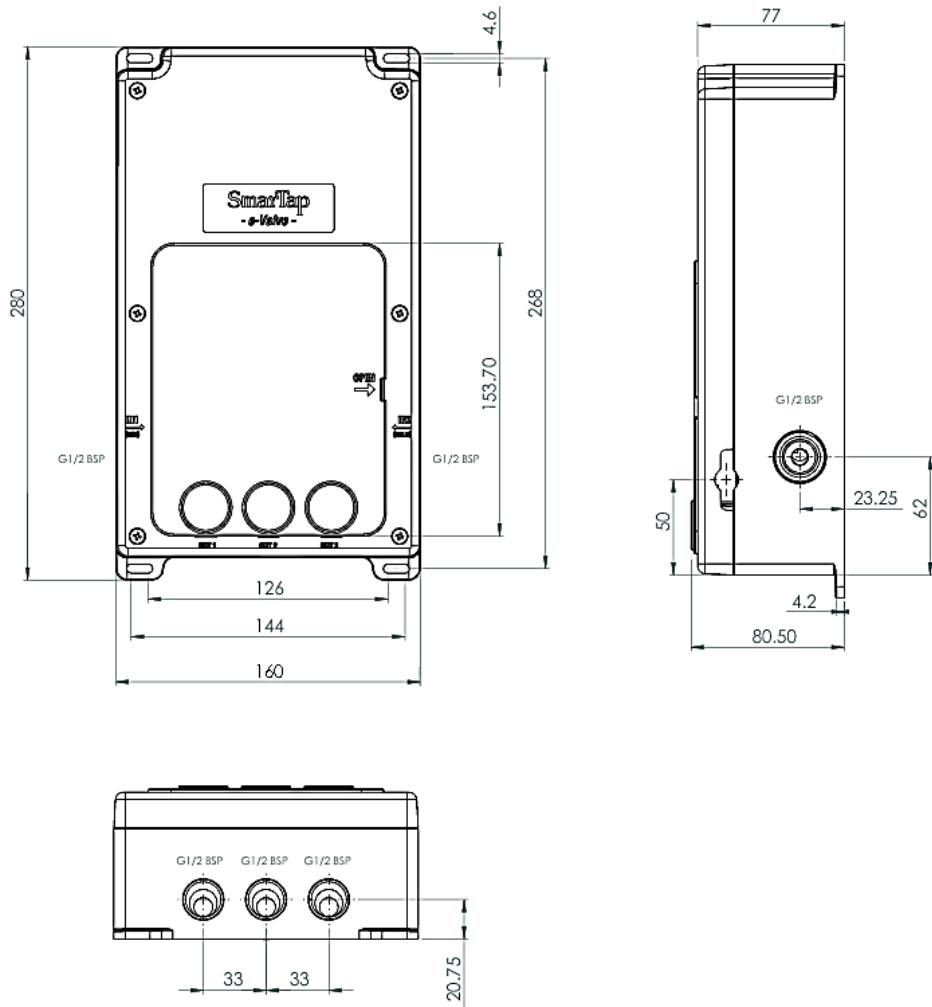


## WARNING

IF THE SYSTEM PARTS SHOW ANY KIND OF MECHANICAL DAMAGE, DO NOT USE THE SYSTEM AND CONTACT A SMARTAP REPRESENTATIVE FOR SERVICE.

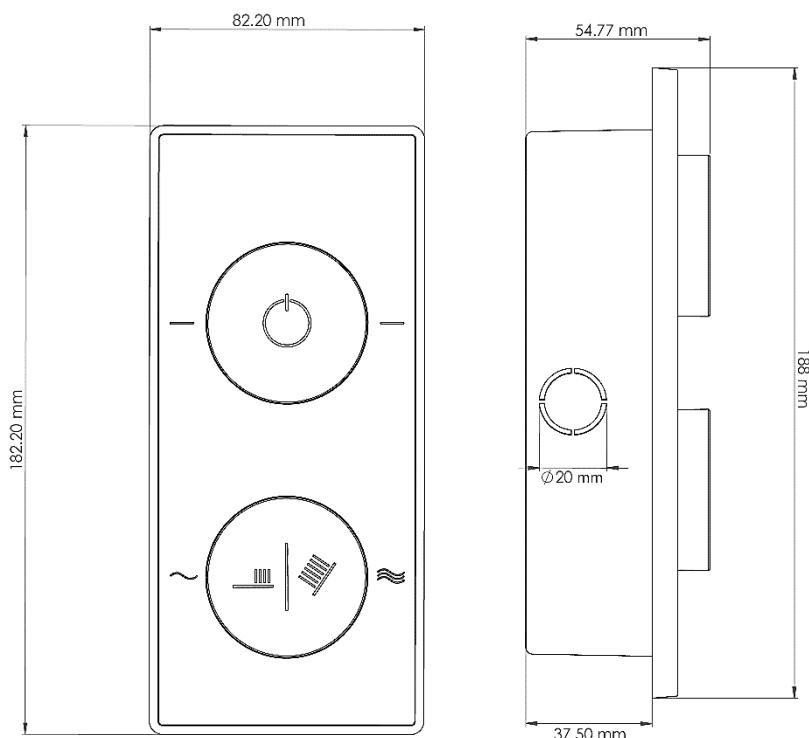
## System Dimensions & Mechanical Specifications

### e-Valve



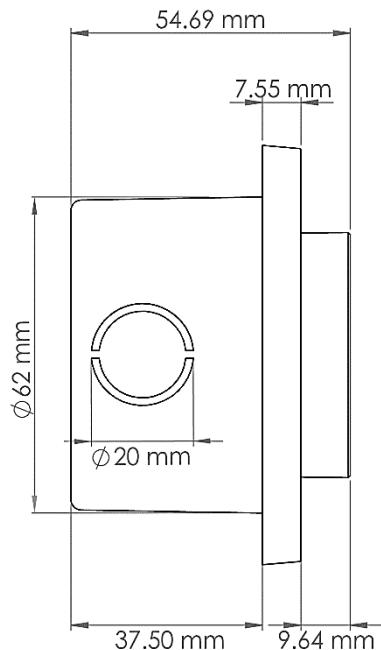
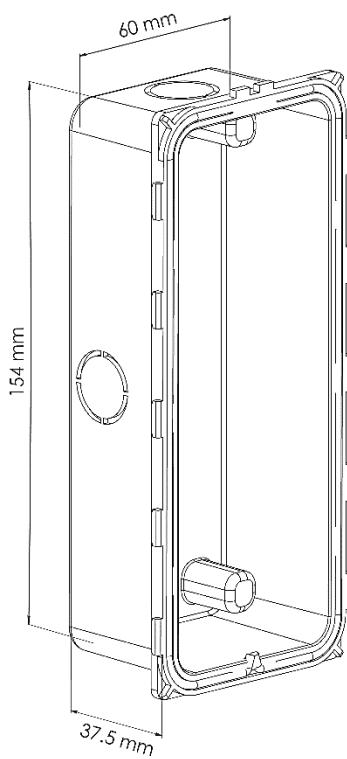
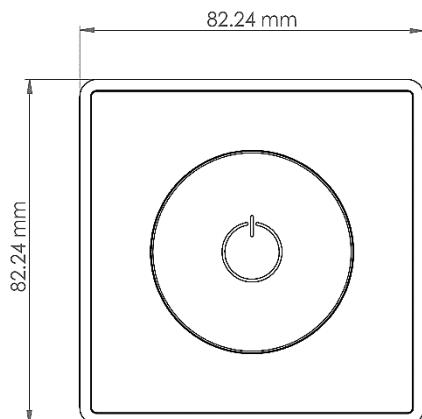
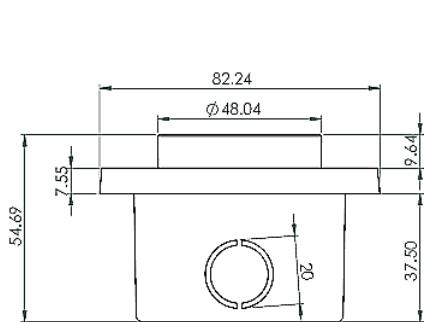
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## Two Dial Controller



SmarTap

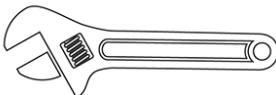
## One Dial Controller



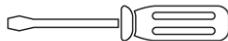
# SmarTap

## Tools

For installation of the SmarTap digital shower product, you will need the following tools:



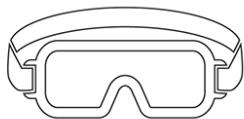
Adjustable wrench



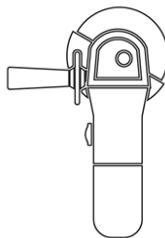
Flat screwdriver



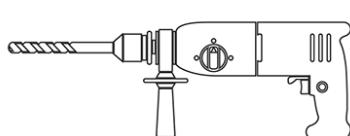
Phillips screwdriver



Glasses



Grinder

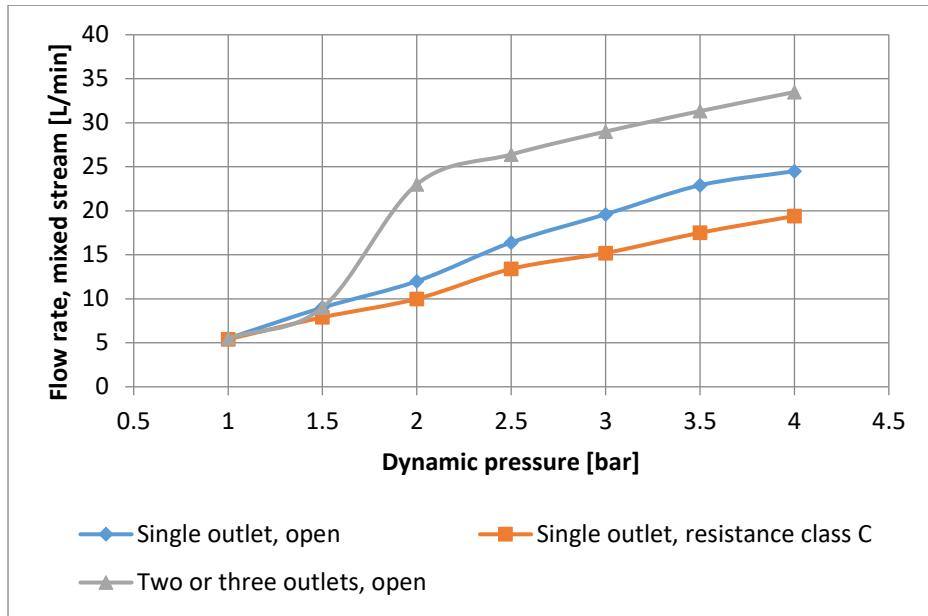


Drill

- (If Applicable) For the One Dial controller, use a 62mm hole saw.

## Hydraulic Characteristics

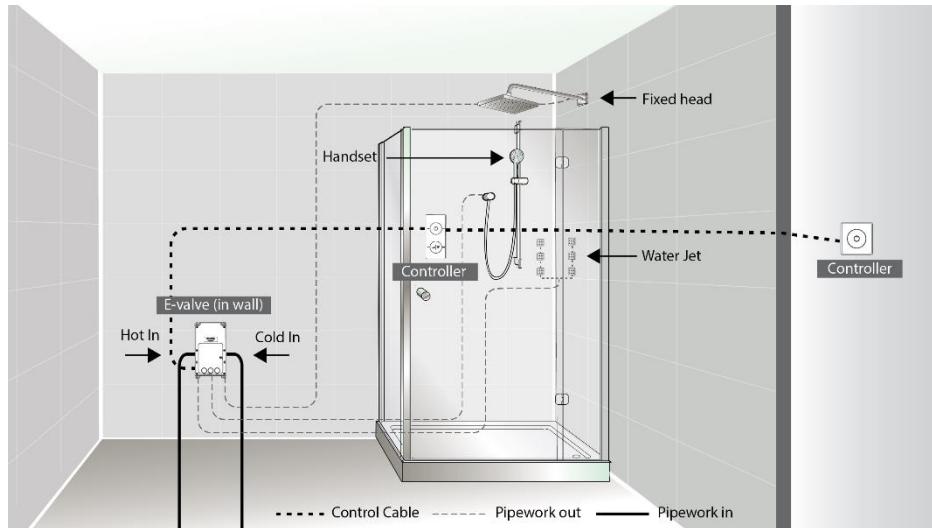
Typical flow rate performance of e-Valve at various inlet and outlet conditions





## Installation Options

**Shower - Concealed Installation (In wall): Fixed head, Handset, Water Jets**



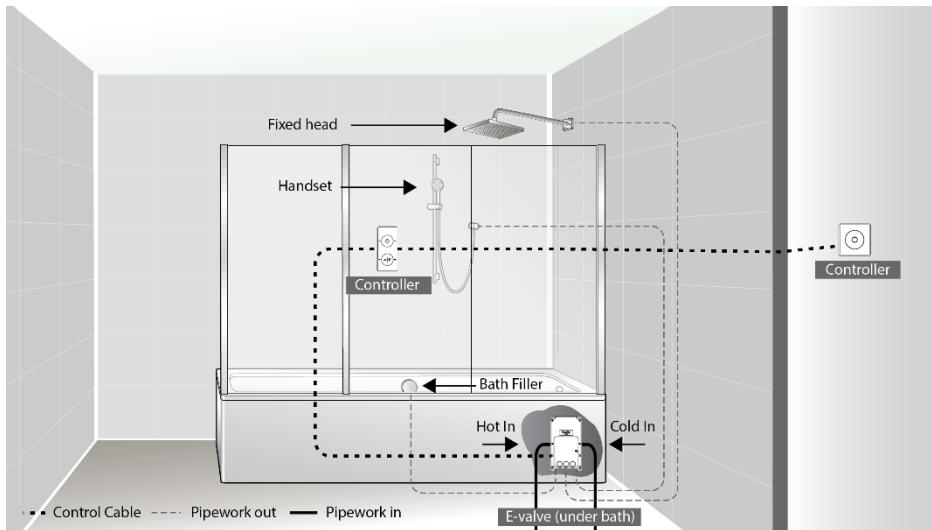
### WARNING



THE POWER CABLE MUST BE SECURED AND CHASED INTO THE WALL. IT MUST NOT BE LEFT EXPOSED TO KEEP IT PROTECTED IN THE EVENT OF A POSSIBLE LEAK.

PLEASE MAKE SURE THAT THE CABLE IS INSTALLED BY A QUALIFIED ELECTRICIAN.

## Bath - Concealed Installation (Under bath): Fixed head, Handset, Bath overflow filler



### WARNING

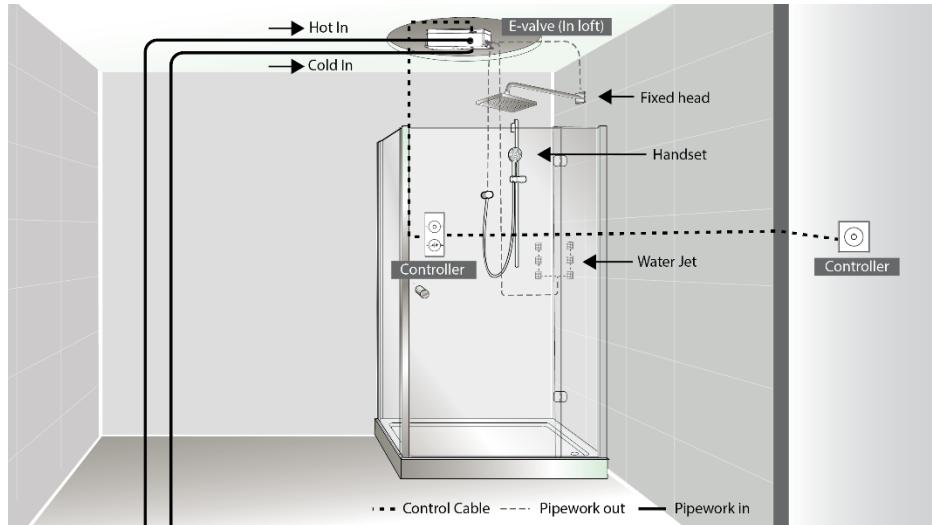


THE POWER CABLE MUST BE SECURED AND CHASED INTO THE WALL. IT MUST NOT BE LEFT EXPOSED TO KEEP IT PROTECTED IN THE EVENT OF A POSSIBLE LEAK.

PLEASE MAKE SURE THAT THE CABLE IS INSTALLED BY A QUALIFIED ELECTRICIAN.

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## Shower – Loft Mounted: Fixed head, Handset, Water Jets



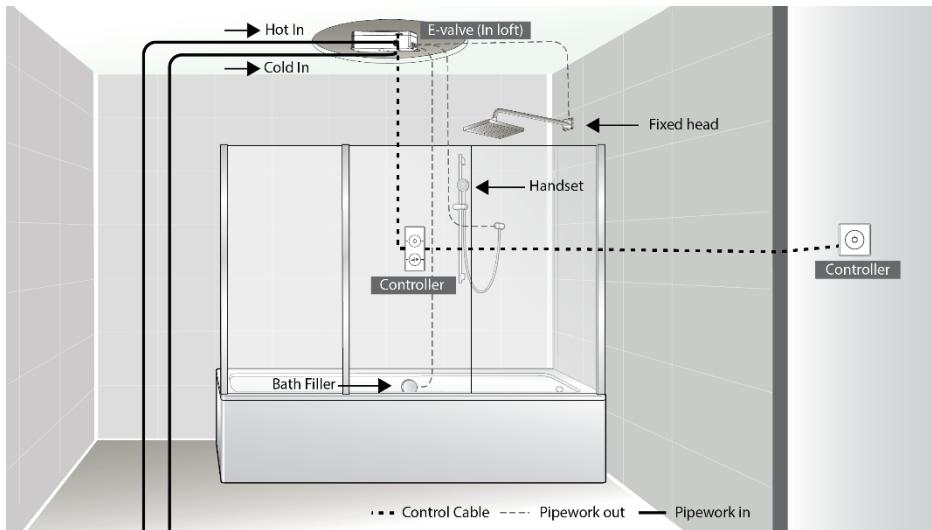
### WARNING



THE POWER CABLE MUST BE SECURED AND CHASED INTO THE WALL. IT MUST NOT BE LEFT EXPOSED TO KEEP IT PROTECTED IN THE EVENT OF A POSSIBLE LEAK.

PLEASE MAKE SURE THAT THE CABLE IS INSTALLED BY A QUALIFIED ELECTRICIAN.

## Bath – Loft Mounted (Under bath): Fixed head, Handset, Bath overflow filler



### WARNING

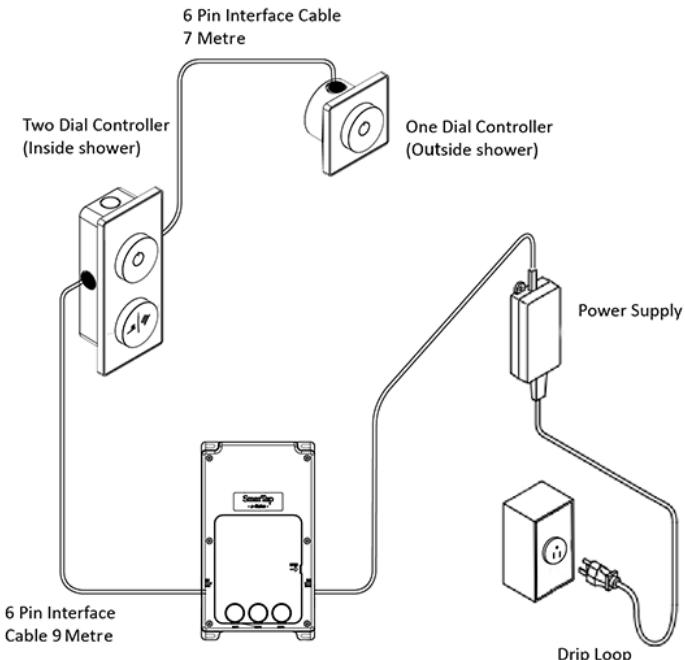


THE POWER CABLE MUST BE SECURED AND CHASED INTO THE WALL. IT MUST NOT BE LEFT EXPOSED TO KEEP IT PROTECTED IN THE EVENT OF A POSSIBLE LEAK.

PLEASE MAKE SURE THAT THE CABLE IS INSTALLED BY A QUALIFIED ELECTRICIAN.

## Plan System Layout

Determine the locations of all required components before beginning installation.



1. Prepare the installation location for the e-Valve.



**NOTE**

LEAVE EXTRA 15 CM SPACE ON EACH SIDE FOR FUTURE CABLE CONNECTIONS.

2. Prepare installation location for controllers.
3. Prepare installation location for the AC/DC power supply.



**CAUTION**

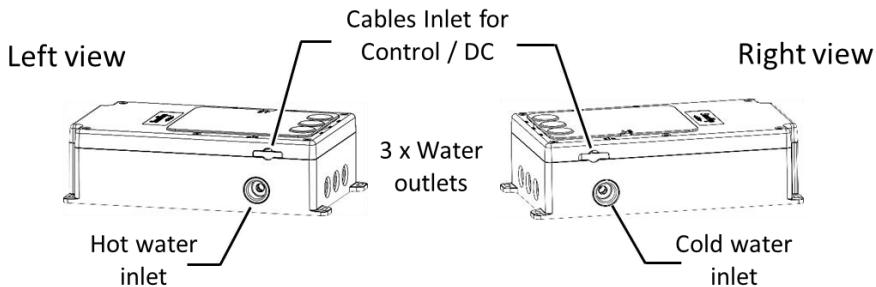
FOR VERTICAL INSTALLATION: THE POWER SUPPLY MUST BE INSTALLED ABOVE THE E-VALVE.

Step 1 Prepare locations for e-Valve unit ,controllers and Power supply

## Prepare for Installation

## e-Valve Unit Terminals

Water inlet and outlet connectors are located on the sides of the e-Valve unit.



## Pipework Considerations



### **WARNING**

IF A BOOST PUMP IS USED TO FEED THE E-VALVE, MAKE SURE THAT THE SAME PUMP FEEDS BOTH HOT AND COLD INLET. IT IS STRICTLY PROHIBITED TO FEED ONLY ONE OF THE E-VALVE INLETS BY A BOOST PUMP, OR TO FEED ITS INLETS WITH TWO SEPARATE BOOST PUMPS.



### **NOTE**

USE PIPEWORK OF A SUFFICIENT DIAMETER TO OBTAIN THE FLOW RATES SUPPORTED BY THE E-VALVE. PLEASE REFER TO HYDRAULIC CHARACTERISTICS FOR THE SUPPORTED FLOW RATES.

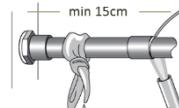
# SmarTap

## SP and PEX pipe

1. Insert G<sub>1/2</sub> BSP male connectors into all unit inlets and outlets (x 5).
2. Proceed to installation procedure.

## Copper pipes

1. Weld a copper pipe to a male fitting.



### **WARNING**



IT IS FORBIDDEN TO WELD DIRECTLY NEXT TO THE UNIT. MINIMUM DISTANCE FROM E-VALVE BODY IS 15CM. USE WETTED RAG TO PREVENT UNIT FROM RECEIVING DIRECT HEAT FROM THE WELDING TORCH

2. Connect the male fitting to the e-Valve terminals.

## Prepare Infrastructure

Prepare the Hot and Cold water inlet pipes.

Run the outlet applicable pipes from the e-Valve unit to the outlet.



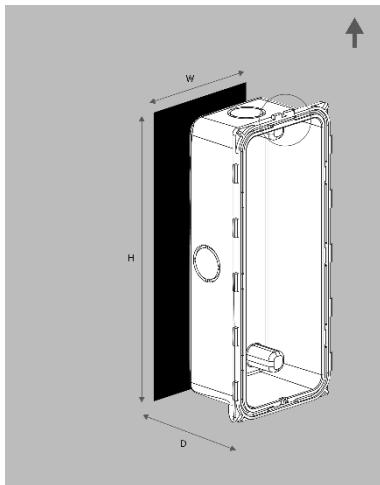
### NOTE

MARK ON EACH PIPE ITS DESIGNATION.

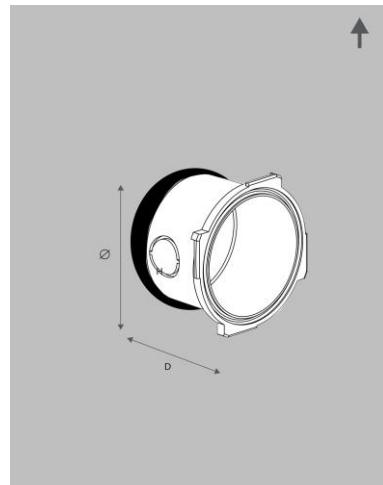


### CAUTION

MAKE SURE THAT THE PIPEWORK IS  
PERPENDICULAR TO THE E-VALVE SO THAT THERE IS  
NO STRAIN ON THE FITTINGS.



Prepare the mounting location according to the Two Dial controller junction box dimensions.



Prepare the mounting location according to the One Dial controller junction box dimensions.



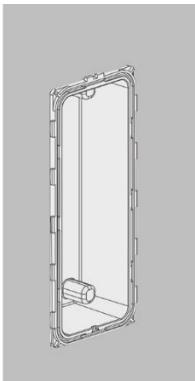
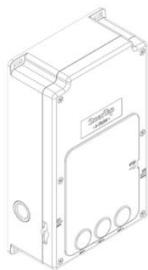
### NOTE

FOR DRY-WALL INSTALLATION, CUT THE WIDTH AND HEIGHT DIMENSIONS IN THE WALL.

Step 2 Prepare the Two Dial controller mounting position

Step 3 Prepare the One Dial controller mounting position  
(If applicable)

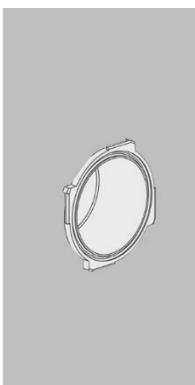
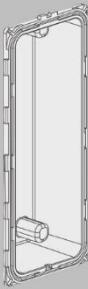
# SmarTap



Run the Two Dial control cable from the location of the e-Valve unit to the location of the Two Dial controller – female end on e-Valve side , male end on controller side

- Use 20mm Electrical conduits.
- Leave Extra cable at the e-Valve side.

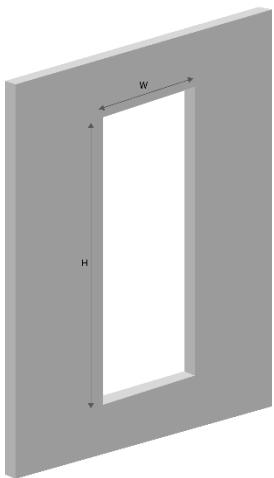
## Step 4 Run Two Dial control cable



Run the One Dial control cable from the location of the Two Dial controller to the location of the One Dial controller - female end on Two Dial controller side. Male end on One Dial controller side.

- Use 20mm Electrical conduits.
- Leave extra cable inside the conduit.

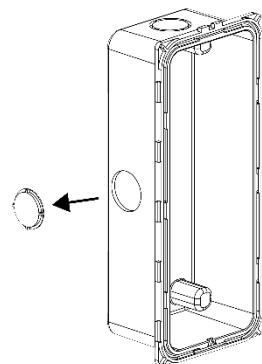
## Step 5 Run One Dial control cable (If applicable)



Make a rectangular cut in the tile according to the dimensions of the Two Dial junction box.

<b>Height (H)</b>	154 mm
<b>Width (W)</b>	60 mm

Step 6 Prepare the tile



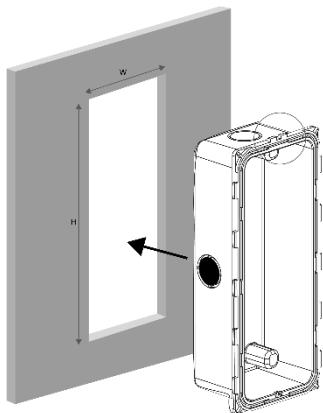
Use a knife to remove the round brackets of the junction box to enable wiring connection.

Remove the one that is closest to the Conduit cable.

If Applicable – Remove another bracket for the additional cable to the One Dial controller.

Step 7 Remove bracket

# SmarTap



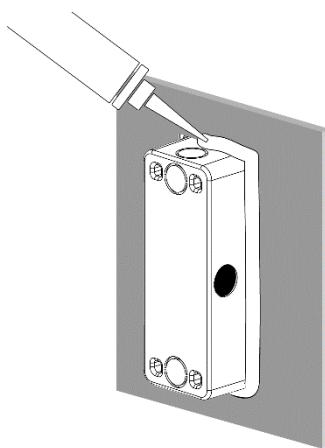
Insert the Two Dial electrical junction box into the tile. Press on the box until the outer setting touches the tile.

**CAUTION**

THE UP ARROW  
INSIDE THE BOX  
AND THE  
CONTROLLER LOCK  
MECHANISM ON THE  
SETTING (IMAGE)  
SHOULD POINT TO  
THE CEILING.



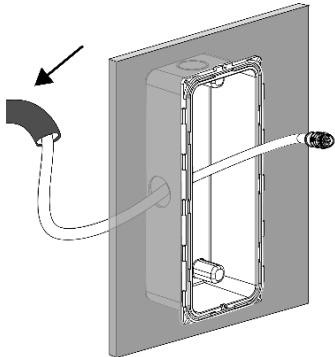
Step 8 Insert the junction box



Attach the Two Dial junction box to the tile with silicone/glue from the inside.

- Apply a thick layer of compound to fully seal the internal components.

Step 9 Seal the junction box

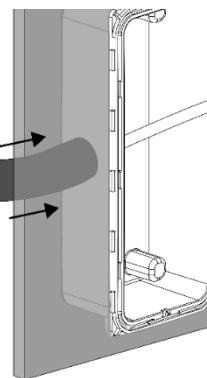


Insert control cable into the hole.



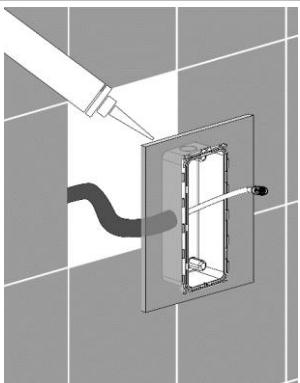
**CAUTION**  
LEAVE 10 CM OF  
CABLE OUTSIDE THE  
BOX AND SECURE  
THE CABLE.

Step 10 Insert cable



Insert the conduit to the interface of the junction box.  
Leave a few centimeters inside the box.

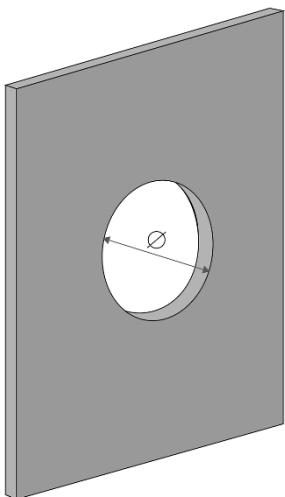
Step 11 Connect conduit



Step 12 Insert tile into the wall

Finish the tiling of the wall or  
continue to the next step.

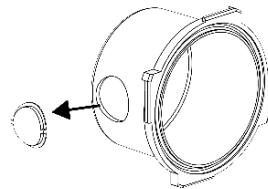
# SmarTap



(If applicable) Make a round cut in the tile according to the dimensions of the One Dial junction box.

<b>Diameter</b>	62 mm
-----------------	-------

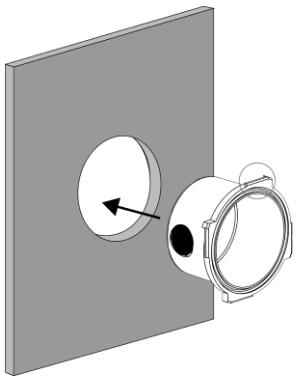
Step 13 Prepare the tile



Use a knife to remove the round brackets of the junction box to enable wiring connection.

Remove the one that is closest to the Conduit cable.

Step 14 Remove bracket



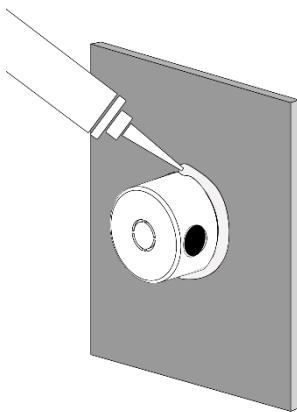
Insert the One Dial electrical junction box into the tile. Press on the box until the outer setting touches the tile.

### CAUTION



THE CONTROLLER  
LOCK MECHANISM  
ON THE SETTING  
(IMAGE) SHOULD BE  
PARALLEL TO THE  
FRAME OF THE TILE.

Step 15 Insert the junction box

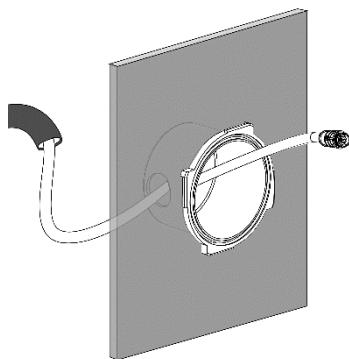


Attach the One Dial junction box to the tile with silicone/glue from the inside.

- Apply a thick layer of compound to fully seal the internal components.

Step 16 Seal the junction box

# SmarTap



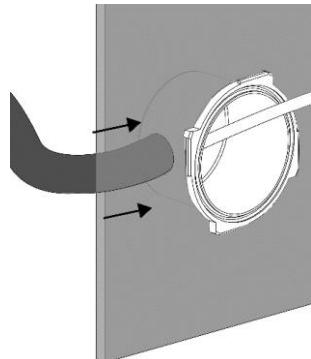
Insert the control cable into the hole.



**CAUTION**

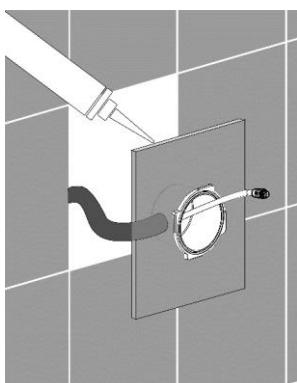
LEAVE 10 CM OF CABLE OUTSIDE THE BOX AND SECURE THE CABLE.

Step 17 Insert cable



Insert the conduit to the interface of the junction box. Leave a few centimeters inside the box. .

Step 18 Connect conduit

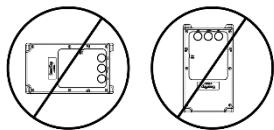
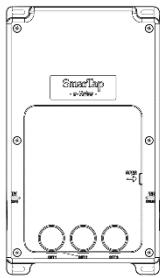


Step 19 Insert tile into the wall

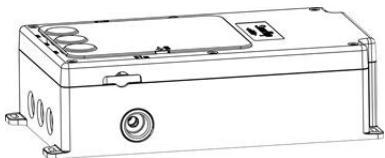
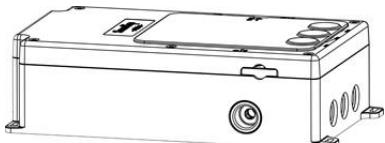
Finish the tiling of the wall or continue to the next step.

## Connect e-Valve and Connect Pipes

Mount the e-Valve in its location and according to the wall type.



Vertical installation



Horizontal installation

Step 20 e-Valve installation



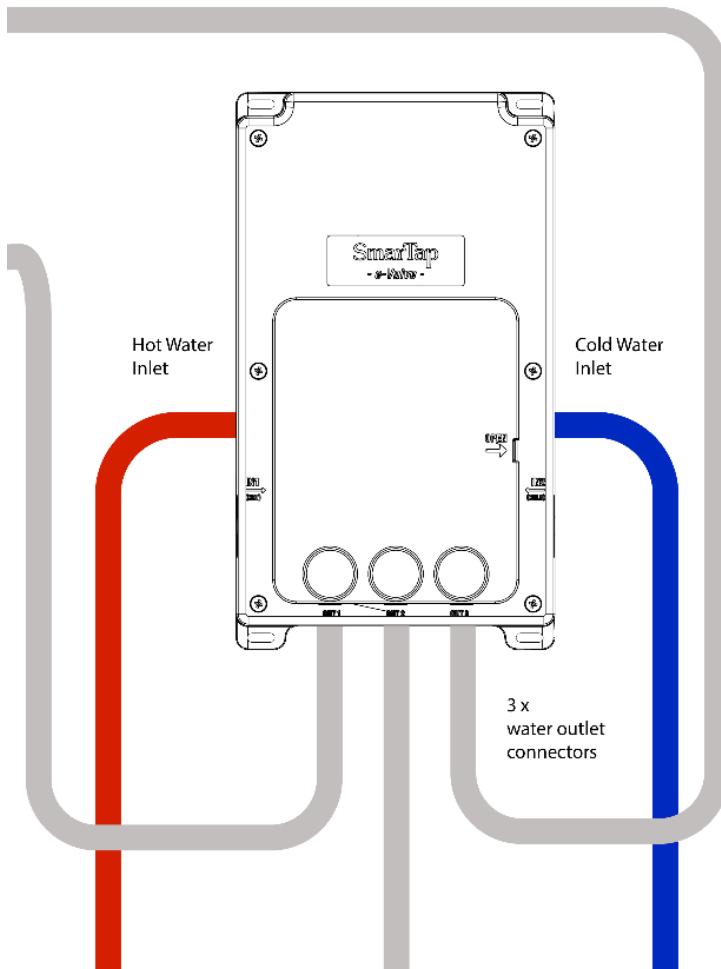
### CAUTION

PREWASH THE HOT AND COLD INLET PIPES  
BEFORE CONNECTING THE PIPES TO THE E-  
VALVE

Step 21 Prewash inlet pipes

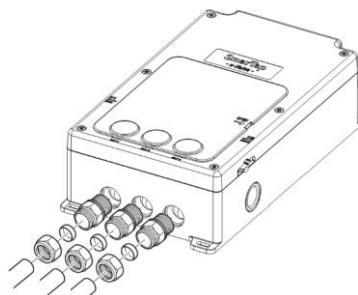
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Connect the pipes to the e-Valve, according to the figure below.



## WARNING

MAKE SURE THAT THE HOT/COLD INLET IS CONNECTED TO A WATER INLET BY THE TEXT "IN1 (HOT)"/"IN2 (COLD)" ON THE E-VALVE BOX.



Connect the outlet pipes according to the marking on the pipes.

### **CAUTION**



IF THERE ARE UNUSED OUTLETS, SEAL THEM WITH A 1/2" MALE PLUGS AND RECONFIGURE THE OUTLETS' CONFIGURATION FROM THE APPLICATION (SEE SECTION "SOFTWARE OUTLETS CONFIGURATION")

### **NOTE**



BY DEFAULT, THE DIVERTING FUNCTION OF E-VALVE WILL CYCLE THE OUTLETS IN THE FOLLOWING ORDER: OUT1 → OUT2 → OUT3. OUT1 IS THE DEFAULT OUTLET. CONNECT THE DIFFERENT OUTLETS ACCORDINGLY.

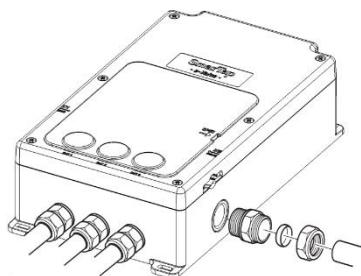
### **CAUTION**



MAKE SURE THAT THE PIPEWORK IS PERPENDICULAR TO THE E-VALVE SO THAT THERE IS NO STRAIN ON THE FITTINGS.

Step 22 Connect outlet pipes

# SmarTap



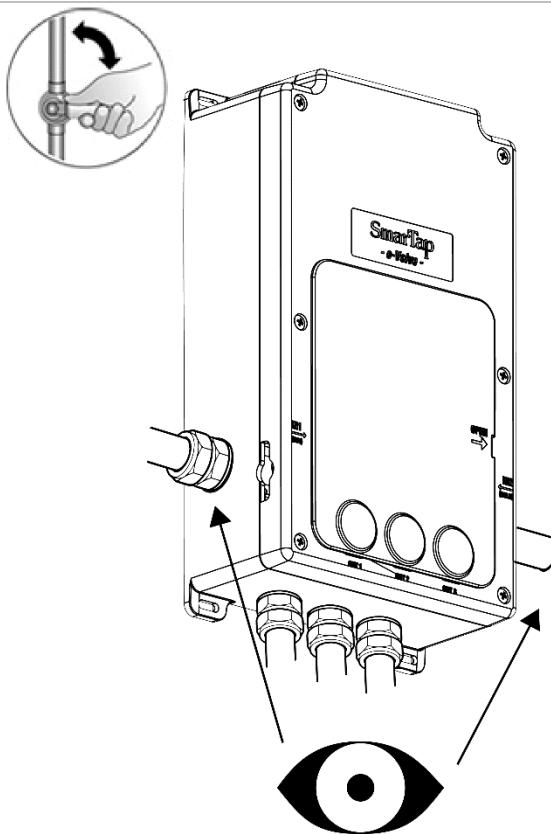
Connect hot water and cold water inlet pipes.



## CAUTION

MAKE SURE THAT THE PIPEWORK IS  
PERPENDICULAR TO THE E-VALVE SO THAT THERE  
IS NO STRAIN ON THE FITTINGS.

Step 23 Connect inlet pipes

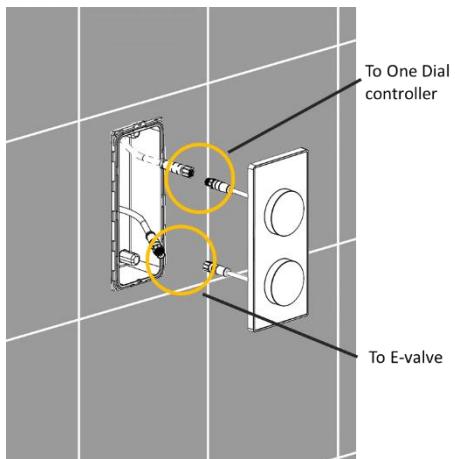


1. Open water main valve.
2. Conduct visual inspection for leaks on the inlet pipes.
3. Close water main valve.

#### Step 24 Test inlets for leaks

Proceed to next step after outlets are installed and tiles attached.

## Connect Controllers



Connect the cables to the Two Dial controller:

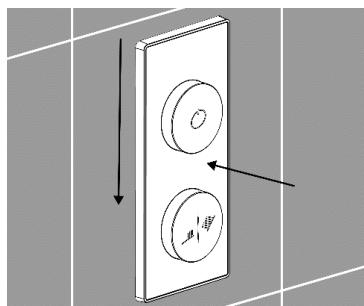
- Two Dial controller – e-Valve.
- Two Dial controller – One Dial controller (If applicable).



### CAUTION

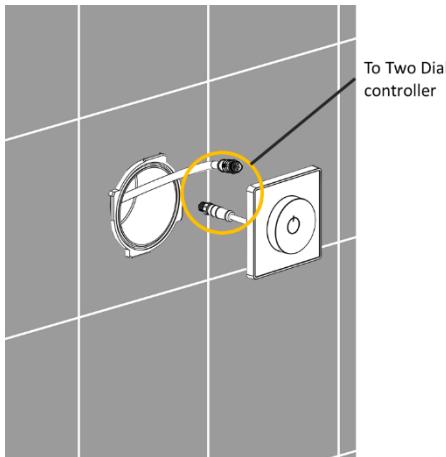
MAKE SURE THAT THE O-RING OF THE JUNCTION BOX IS IN PLACE

#### Step 25 Connect cables to the Two Dial controller



1. Attach the controller to junction box.
2. Pull down to lock it in place.

#### Step 26 Connect Two Dial controller to the wall



Connect the cables to the Two Dial controller:

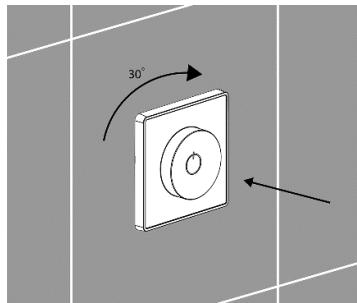
- Two Dial controller – One Dial controller (If applicable).

**CAUTION**



MAKE SURE THAT THE O-RING OF THE JUNCTION BOX IS IN PLACE.

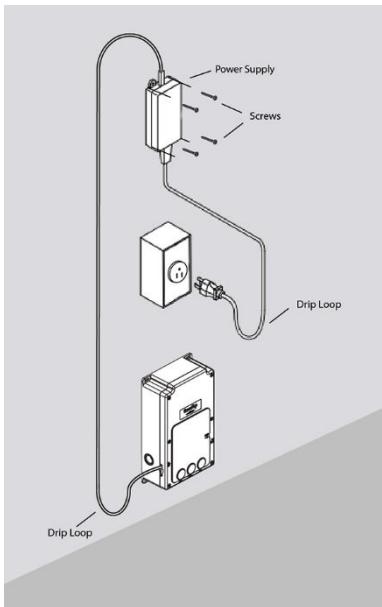
**Step 27 Connect cables to the One Dial controller**



1. Attach the controller to the junction box.
2. Rotate clockwise to lock it in place

**Step 28 Connect One Dial controller to the wall**

## Install Power Supply



Vertical installation

1. Hold the power supply up to the installation location:
  - a. Make sure that the AC cord will reach the electrical outlet.
  - b. Make sure that the DC cord will reach the e-Valve DC cable inlet.

**CAUTION**



MAKE SURE THAT YOU HAVE ENOUGH SPARE CABLE FOR MAKING DRIP LOOPS ON BOTH ENDS.

2. Mark the hole locations.
3. Secure the power supply with the screws to the wall.

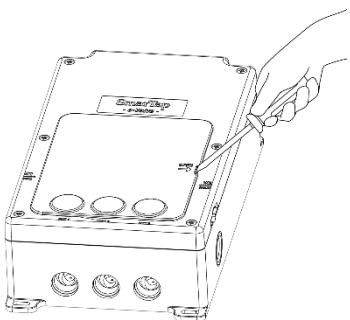
**CAUTION**



DO NOT PLUG THE POWER SUPPLY INTO THE ELECTRICAL OUTLET AT THIS TIME.

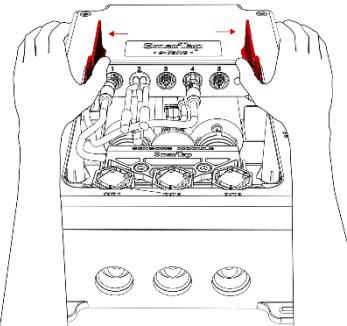
Step 29 Power supply installation

## Connect Cables to e-Valve



To remove the e-Valve cover use a flat screwdriver. Insert it in the designated place and twist clockwise.

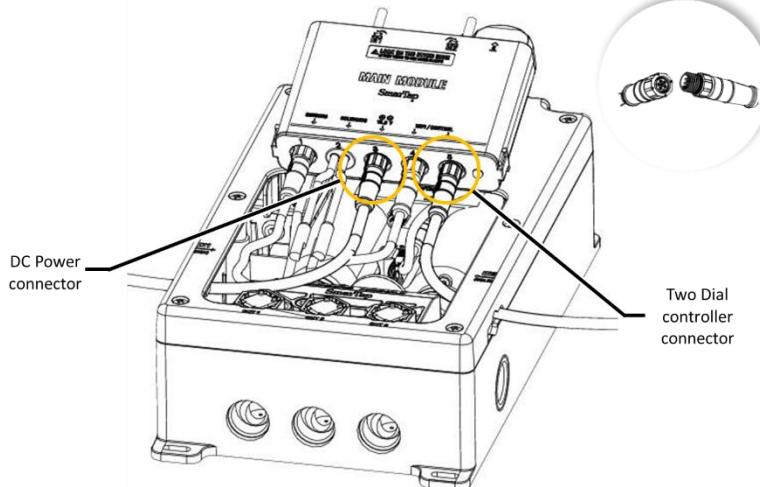
Step 30 Remove e-Valve box cover



1. Press on the two red handles to release the electronics box.
2. **Gently** pull out the box. Be careful, other cables are connected to it.

Step 31 Remove electronics box

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1. Insert the cable into the e-Vale through the cable inlet holes on the sides of the e-Valve.
2. **Gently** connect the cable connector to an applicable interface on the main module. To do so, align the projection of the cable's connector to the receptacle keyway slot of the interface.

## WARNING



THERE IS ONLY ONE WAY TO CONNECT EACH CABLE.  
MAKE SURE THAT THE CABLE CONNECTOR IS FULLY  
INSERTED INTO THE INTERFACE.

3. Screw connector closed to finger tightness. NO TOOLS NEEDED.

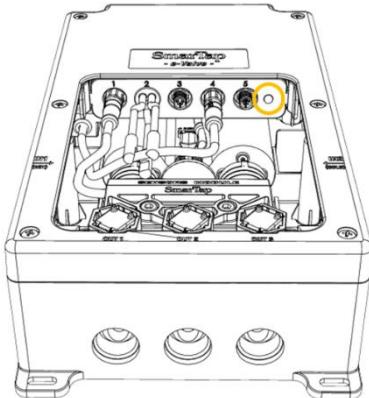
Step 32 Connect cables

Insert the electronics box gently until you hear the “Click” sound.

## Step 33 Insert electronics box

1. Connect the e-Valve power supply into the power plug.
2. Make drip loops on both ends of the power supply cable.

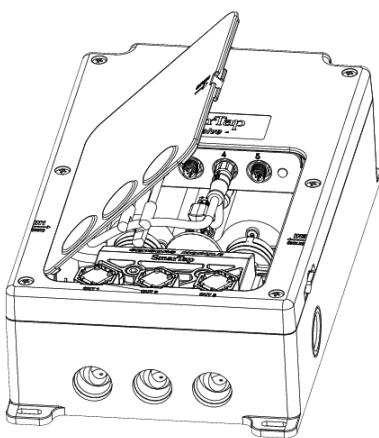
## Step 34 Connect e-Valve to electric source



Wait until the e-Valve finishes the Internal test. (Internal test should take about 30 seconds).

- Inspect LED color:
  - Green light – Continue to the next step.
  - Red light – go to section *Troubleshooting*.

## Step 35 Confirm operation



## Step 36 Close the cover



## Software Outlets Configuration

Please refer to the enclosed document titled:

# GUIDELINES FOR PAIRING SMARTAP E-VALVE WITH SMARTPHONE APPLICATION



### CAUTION

IF A SEALED OUTLET IS NOT DISABLED USING A SOFTWARE CONFIGURATION TOOL, THE DEVICE MAY NOT FUNCTION PROPERLY.



### CAUTION

ALL OUTLETS THAT ARE NOT CONNECTED MUST BE PROPERLY SEALED. OTHERWISE IN-WALL LEAKAGE MAY OCCUR.

## Final Inspection

- Initial check:
  - Make sure that the internal and external check-valves (if any) of the inlets are open and the system is pressurized in both inlets.
  - Make sure that the hot water that is supplied to the e-Valve reaches a sufficient temperature ( $> 40^{\circ}\text{C}$ ).
- Operation check:
  - Turn on the system. Press on the *power* dial on one of the controllers.
  - Wait a couple of minutes for the water temperature to stabilize.
  - Check the hot water, make sure that the water is comfortably hot ( $38^{\circ}\text{C}$ ).
  - Use the Flow dial to toggle between outlets.
  - Make sure the water runs continuously through the available outlets, over the whole toggling cycle.
  - Make sure that there are no leaks near the e-Valve inlet and outlet terminals.

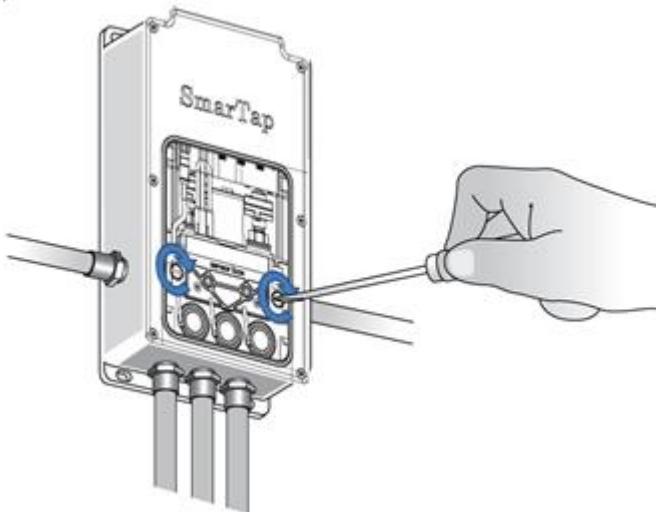
## Maintenace

The system is designed to perform self-checks during normal operation. If a malfunction occurs or if maintenance is required, the user will be notified by dedicated colors and blinking patterns on the Two Dial and the One Dial controllers. If there is a notification that is not covered in this manual, please contact SmarTap for further assistance.

### NOTE



E-VALVE IS EQUIPPED WITH INTERNAL STOP-VALVES. USE A FLAT SCREWDRIVER TO CLOSE OR OPEN THE STOP VALVES. THE INTERNAL STOP VALVES ARE IN OPEN POSITION BY DEFAULT. CLOSE THE STOP VALVES WHEN WETTED MODULES MAINTENANCE IS NEEDED.



## Backup Battery Maintenance

The system includes a backup battery that ensures that the water will not flow through the system, even if the main power supply fails. Once in a while, depending on frequency of the power failures, this battery must be replaced.

### Backup battery replacement indication

When the battery charge level drops below a certain level, the system will notify user when the e-Valve is turned off: the dials will illuminate with a yellow light and the flow dial will blink in an alternating pattern. This indicates that the battery must be immediately replaced. However, the e-Valve will still work normally.

When the battery charge level reaches a critical level, the dials will illuminate with a red light, the flow dial will blink in an alternating pattern and the system will not allow the water to flow. This indicates that the battery must be immediately replaced to continue using the e-Valve.

### Choosing the right replacement battery

We recommend you use **9V Lithium (non-rechargeable) batteries, model EVE CR9V-P by EVE**. Other non-rechargeable 9V Lithium options include:

Manufacturer	P/N
GP	GPCR-V9
Energizer	LA522
Duracell	DL1604
Ultralife	U9VL-J-P

### WARNING



- NEVER USE RECHARGEABLE BATTERIES WITH THIS PRODUCT.
- NEVER USE ALKALINE OR CARBON ZINC BATTERIES WITH THIS PRODUCT.

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## Backup battery replacement procedure

To replace the backup battery, do as follows:

1. Disconnect the e-Valve from the main power supply.
2. Remove e-Valve box cover and wait until the internal LED indicator switches off (See Step 30).
3. Remove electronics box (See Step 31).
4. Pull out the red backup battery case from the electronics box.



### CAUTION

THERE IS A CABLE ATTACHED TO THE BATTERY CASE.



### NOTE

PRESS WITH YOUR THUMB ON THE ELECTRONICS BOX TO OVERCOME THE INITIAL RESISTANCE ASSOCIATED WITH THE BATTERY CASE LOCKING MECHANISM.

5. Remove the old battery and disconnect the contacts pad.
6. Insert a new battery and connect the contacts pad to it.
7. Insert the battery case into the electronics box.



### CAUTION

WHEN YOU INSERT THE BATTERY CASE INTO THE ELECTRONICS BOX, MAKE SURE THAT YOU HEAR A "CLICK" SOUND. THIS WILL ENSURE THAT THE CASE IS SECURED INSIDE THE ELECTRONICS BOX.

IF YOU DO NOT HEAR THE "CLICK" SOUND, MAKE SURE THAT THE ASSOCIATED O-RING IS NOT JAMMED BETWEEN THE WALLS OF THE ELECTRONICS BOX AND THE BATTERY CASE.

8. Insert the electronics box gently into the e-Valve. (See Step 33).
9. Close e-Valve box cover. (See Step 34).

## Troubleshooting

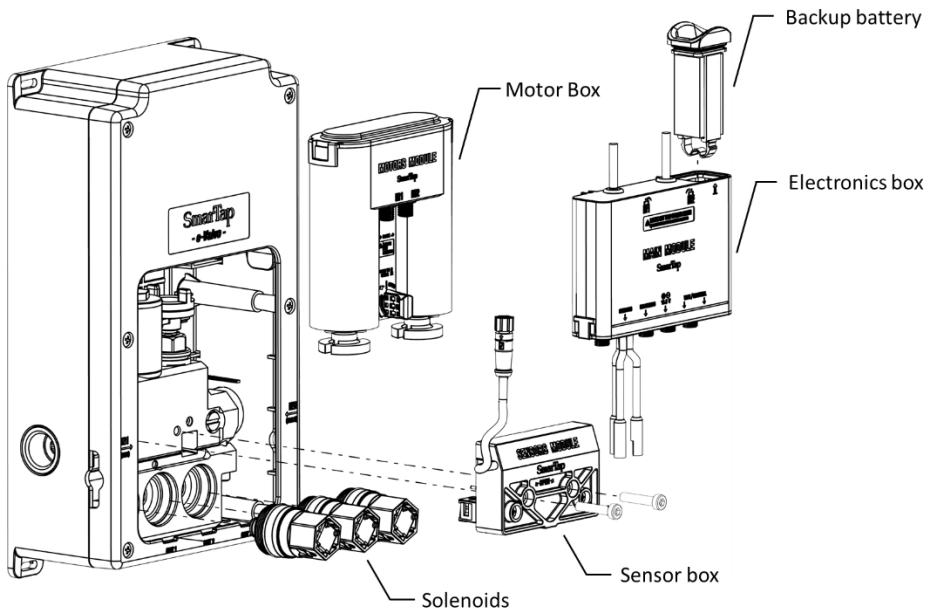
Issue	Guidelines to a solution
The dials do not light after turning the system on	<ul style="list-style-type: none"> <li>■ Make sure that the system is connected to the main power supply</li> <li>■ Make sure that there is no power supply failure</li> <li>■ Make sure that the dials are connected to the electronics box through dedicated cable</li> </ul>
The dials light but the water is not running	<ul style="list-style-type: none"> <li>■ Make sure that both check valves are open</li> <li>■ Make sure that the internal LED color on the electronics box is green</li> <li>■ Make sure that the outlets are configured properly; all valid outlets should not be sealed</li> <li>■ Make sure that the inlet pressure is sufficient</li> <li>■ Unplug the system from the main power supply, wait for 1 minute and plug it back again</li> </ul>
The flow rate is insufficient	<ul style="list-style-type: none"> <li>■ Make sure that the outlets are not stuck with lime scale or debris</li> <li>■ Make sure that the inlet pressure is sufficient</li> <li>■ Consult SmarTap regarding the possibility to service the internal filter</li> </ul>
The system is alternatively stopping and starting the water flow when ON	<ul style="list-style-type: none"> <li>■ Make sure that the inlet pressures are within the specified absolute maximum rating limits</li> <li>■ Make sure that the hot and cold inlets are not mixed</li> </ul>
The water starts running but stops after few seconds	<ul style="list-style-type: none"> <li>■ If a boost pump is installed, make sure that it works properly</li> <li>■ Make sure that both inlets are fed either by the main water supply or by a single two-channel boost pump</li> </ul>
The dials illuminate in yellow/red and the flow dial blinks in an alternating pattern.	<ul style="list-style-type: none"> <li>■ Replace battery (refer to "Backup battery replacement procedure" section).</li> <li>■ Contact SmarTap</li> </ul>

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Electronics box LED  
is red

- Disconnect the system from the main power supply
- Open the e-Valve cover and remove the electronics box
- Check connection of all cables, especially the sensors cable
- Return the box back to the e-Valve, close the cover and connect the power supply
- IF the problem remains, contact SmarTap

## System Components



## Notices

### Warranty

Your digital shower system is covered by a manufacturer's warranty against any defect under normal operational circumstances for 5 years.

This warranty covers defects in products or workmanship directly related to this product when installed, maintained and operated in accordance with the instructions supplied.

Installation, maintenance and operation that is not in accordance with the instructions provided, unsuitable conditions and product modifications will invalidate the warranty.

# SmarTap

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