

# **Technology Installation**

Orbital Shower Basic R3 (OS8733-E)

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## Thank you for your purchase

This manual applies to model OS8733-E

1 Read the Safety Guide before starting the installation or before operating the shower.

Thank you for purchasing the Orbital Shower from Orbital Systems. To enjoy the full potential of the shower please read and follow the procedures in this manual. Make sure that you fully understand how to operate this shower and make sure that it is properly maintained in accordance with the instructions given in this manual. Do not discard this manual, keep it handy for future reference. This manual is valid for all shower models. When applicable, the manual will only display the Orbital Systems shower head & hand shower variant.

### **Prerequisites and Approvals**

Orbital Shower is designed and type approved according to the Swedish requirements in Swedish National Board of Housing and Building & Planning regulations (BBR). The system is type approved according to RiSE C900373 & C900374, Kiwa 1513; 0753 and Kiwa safety certificate K100686/02. Connection safe W 540 DVGW CERT AS-0605D00262.

Orbital Shower is CE-marked based on certificate and test reports from third party labs.



If industry regulations and instructions in this manual are followed, Orbital Systems guarantees a functional shower system.

### Warranty

For Warranty and Liability for Defects information, please visit Orbital Systems web https://orbital-systems.com.



#### Service

Orbital Systems and our team of expert staff are available to assist you if you require product advice, experience any problems, need to purchase spare parts or to set up a service appointment.

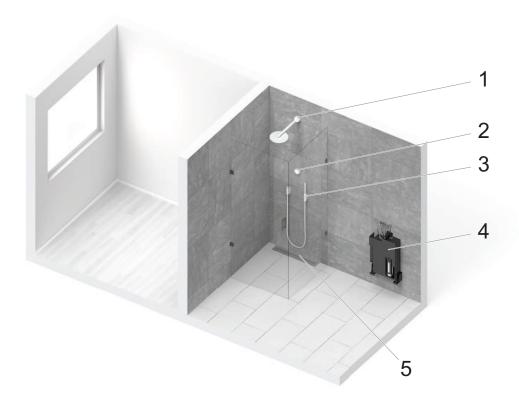
Repairs should only be carried out by Orbital Systems.

#### Contact us

- support@orbital-systems.com
- www.orbital-systems.com

## **System Overview**

#### Orbital Shower Basic R3 (OS8733-E)



- 1. Shower head
- 2. Control Dial
- 3. Hand shower kit (hand shower, diverter and holder)
- 4. Orbital Shower Core (RSK 835 91 20) and Core wall mounting (RSK 384 95 38)
- 5. Drain unit (RSK 711 54 63) and outlet unit (RSK 711 99 33)

Preparation and installation of the shower area (including piping, connections, water proofing and tiling), installation of wall brackets (4) and drain (5) are included in the Fixture installation manual.

Installation of the Orbital Shower Core (4), Control Dial (2), shower head (1) and hand shower kit (3) are included in the Technology installation manual. Operation of the shower is included in the User Guide.

## **Installation Overview**

## **Installation System Requirements**

#### Connectivity

Internet connection: Password protected Wi-Fi 2,4 GHz / 5 GHz or

Ethernet.

**Electrical Supply** 

Residual circuit breaker: One breaker per Orbital Shower Core

Power supply: One Phase, 230VAC / 50-60 Hz / 16A \*

Mains supply wire: Min. 2.5 mm<sup>2</sup> (rated for 16A circuit)

Plumbing / Water

Incoming tap water supply

connections:

Separate hot and cold, 2x female G 1/2" swivel

nut.

Incoming cold water temp.

(min-max):

4-25°C

Incoming hot water temp.

(min-max):

50-65°C

Maximum working pressure

tap water:

PN10

Incoming water pressure

(min-max):

2-10 bar

The supply pressure is the fundamental

requirement for the shower flow:

2 bar: 7.5 litres/min3 bar: 9.5 litres/min4 bar: 11 litres/min

Recommended water supply

flow:

9 litres/minute per inlet hot and cold

Water hardness (min-max): 3°dH-14°dH, or a total hardness of 53-250 mg

CaCO3/litres

Water iron content: <0,3mg/litre

\* Using a lower fuse results in lower water flow:

10A = 6 litres/min

13A = 8 litres/min

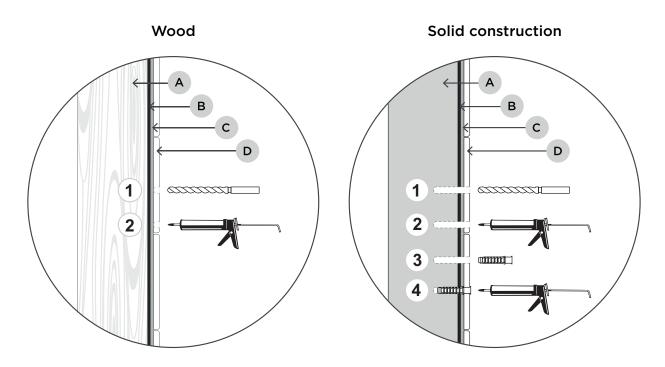
16A = 12 litres/min

### Seal mountings in wet zone

Seal the drill holes in accordance with applicable industry standards.

### (!) CAUTION

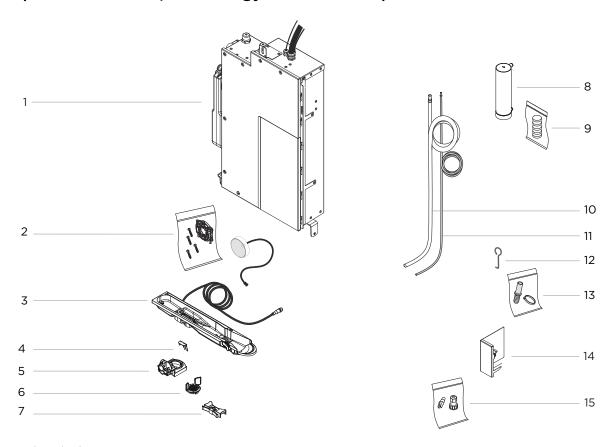
Installations in Sweden must be carried out in accordance with the current Industry Rules Safe Water Installation. All mountings in the wet zone must be sealed against the waterproofing layer of the wall or floor. Material for sealing must adhere to the substrate and be water-resistant, mold-resistant and aging-resistant.



- A: Wood / Concrete
- **B:** Waterproofing membrane
- C: Tile adhesive
- **D:** Tile

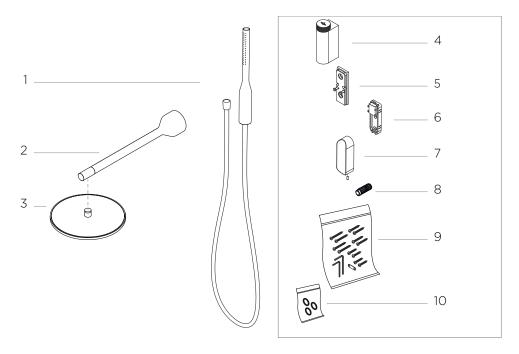
## **Install Orbital Shower Core**

#### Component Overview, Technology kit - Core components



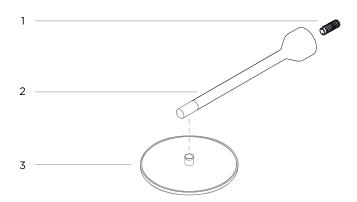
- 1. Orbital Shower Core, 1x
- 2. Control Dial, 1x (incl fixture 1x, screws 4x)
- 3. Sensor Tank, 1x
- 4. Clip, 1x
- 5. Sensor Tank dock, 1x
- 6. Sensor Tank lock, 1x
- 7. Spring lock, 1x
- 8. Filter Capsule, 1x
- 9. Descale tablets, 1x
- 10. Recirculation hose, 1x
- 11. Flush hose, 1x
- 12. Grating tool, 1x
- 13. Flush hose kit, 1x
- 14. Air gap tank cover, 1x
- 15. Ethernet kit, 1x

#### Component Overview, Technology kit - Black or white shower heads & diverter



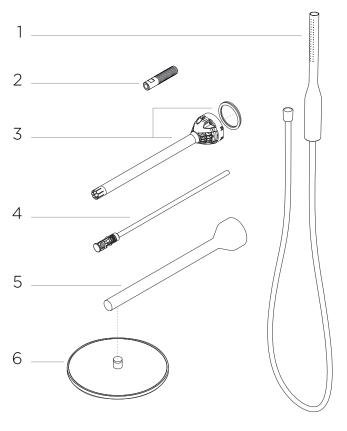
- 1. Hand shower with hose, 1x
- 2. Head shower arm, 1x
- 3. Shower head, 1x
- 4. Diverter body, 1x
- 5. Diverter wall plate, 1x
- 6. Hand shower holder, 1x
- 7. Hand shower holder cover, 1x + set screw, 1x
- 8. Threaded adapter, 1x
- 9. Screw and tool kit, 1x
- 10. O-ring kit, 1x

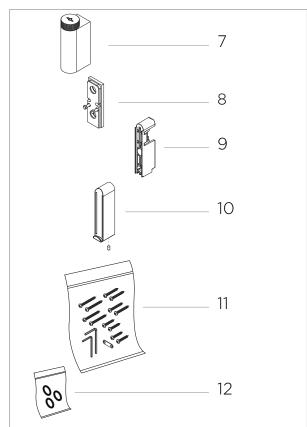
#### Component Overview, Technology kit - Black or white shower head



- 1. Threaded adapter, 1x
- 2. Head shower arm, 1x
- 3. Shower head, 1x

#### Component Overview - Metallic shower heads & diverter



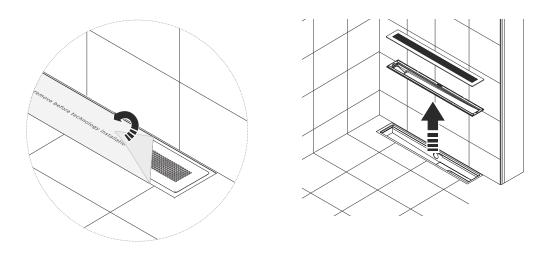


- 1. Hand shower with hose, 1x
- 2. Threaded adapter, 1x
- 3. Head shower arm insert with support ring, 1x
- 4. Head shower internal PEX pipe, 1x
- 5. Metal cover, 1x
- 6. Shower head, 1x
- 7. Diverter body, 1x
- 8. Diverter wall plate, 1x
- 9. Hand shower holder, 1x
- 10. Hand shower holder cover, 1x + set screw, 1x
- 11. Screw and tool kit, 1x
- 12. O-ring kit, 1x

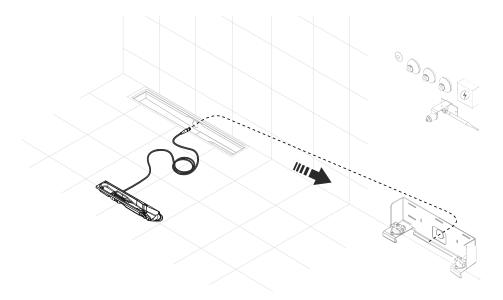
## Install the sensor cable, flush hose and recirculation hose



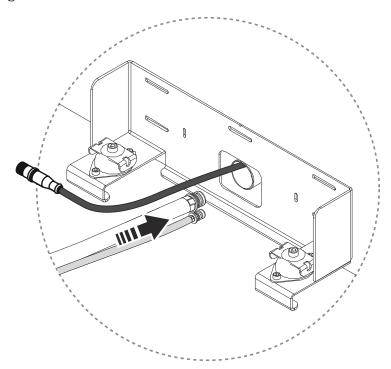
**1.** Remove the protective film and lift up the Grating and Funnel. Set them aside.



- 2. Route the sensor cable through the drain pipe. Keep the connector protection cover on
  - i NOTICE
    It is recommended to use fish tape to route the cables through the pipes.

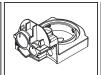


**3.** Route the flush hose and recirculation hose through the drain pipe, inserting them with the couplings first.



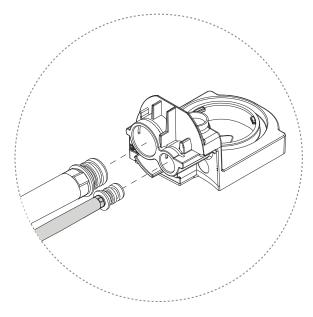
## **Install Sensor Tank dock**



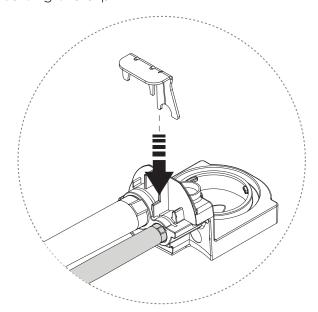




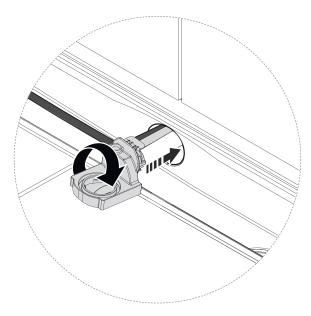
1. Apply lubricant to the o-rings and connect the hoses to the Sensor Tank dock.



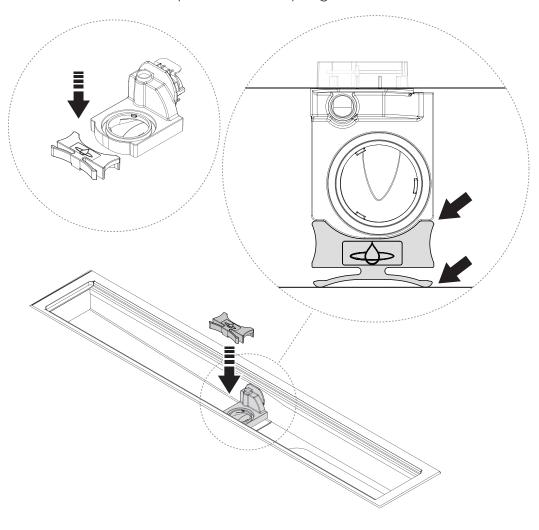
2. Lock the hoses by inserting the clip.



**3.** Insert the Sensor Tank dock into the connection pipe. Rotate it in place, and push it all the way in.



**4.** Lock the Sensor Tank dock in place with the spring lock.

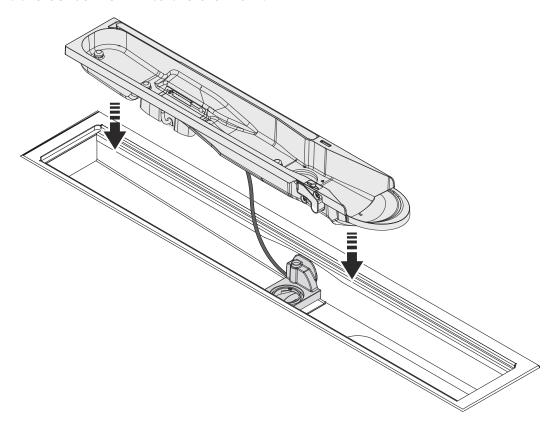


### **Install Sensor Tank and Sensor Tank lock**



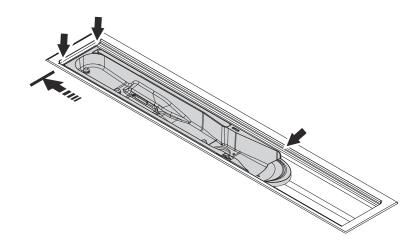


1. Insert the Sensor Tank into the drain unit

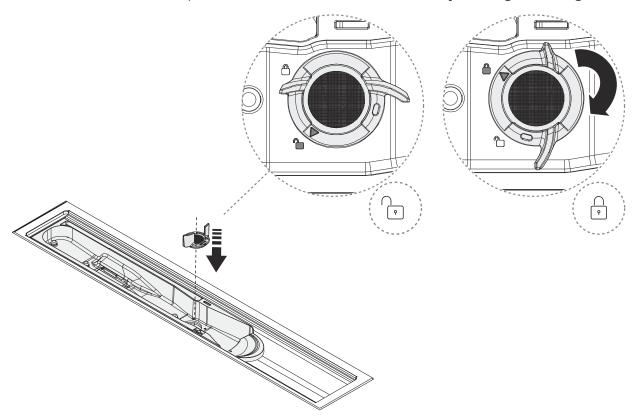


- 2. Make sure the Sensor tank is aligned correctly.
  - (!) CAUTION

    The Sensor Tank should be fully pushed down and sit level.



**3.** Lock the Sensor Tank in position with the Sensor Tank lock by turning it 90 degrees.

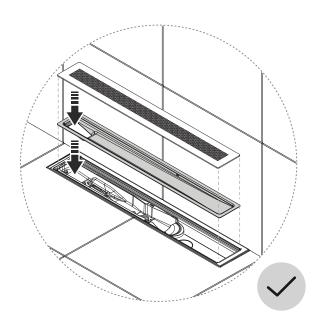


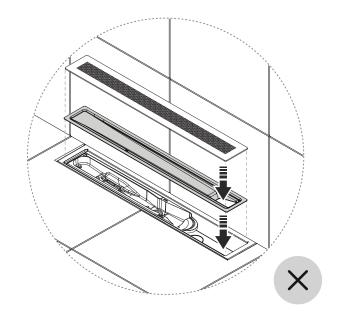
## **Install Funnel**



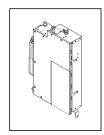
## (i) NOTICE

Place the Funnel with the hole oriented to the left! Placing the hole oriented to the right will disable recirculation.



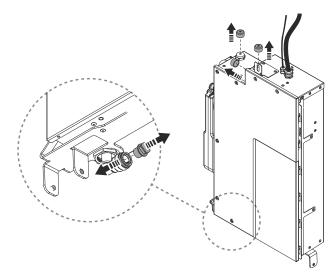


### **Install Orbital Shower Core**





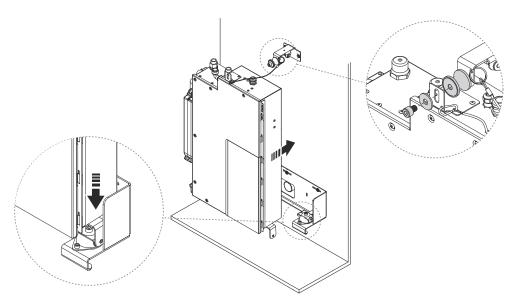
**1.** Remove the four transport plugs.



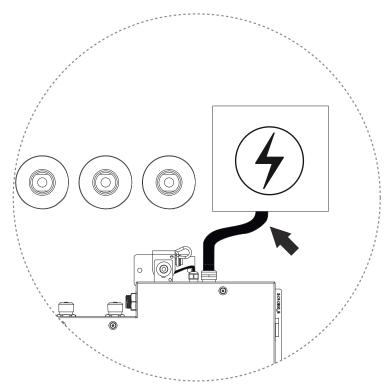
2. Insert the Core into the Top and Bottom Bracket Assembly, and secure the safety wire.

## () CAUTION

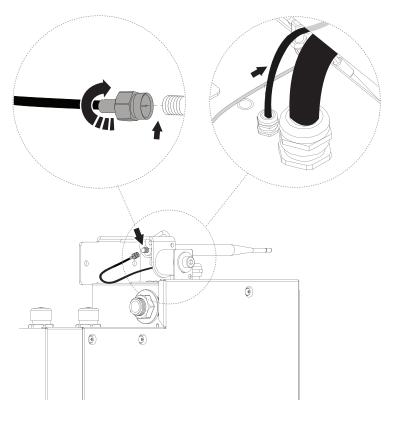
- Heavy equipment. Orbital Shower Core weighs approx. 25 kg
- Make sure that hoses and cables do not get pinched.



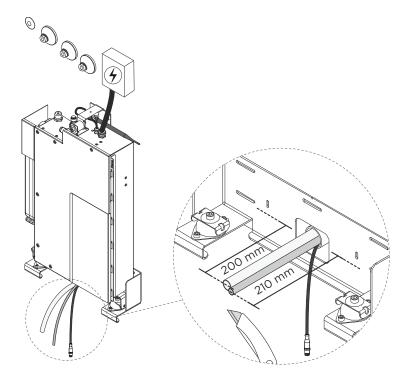
**3.** Connect the power cable to the junction box.



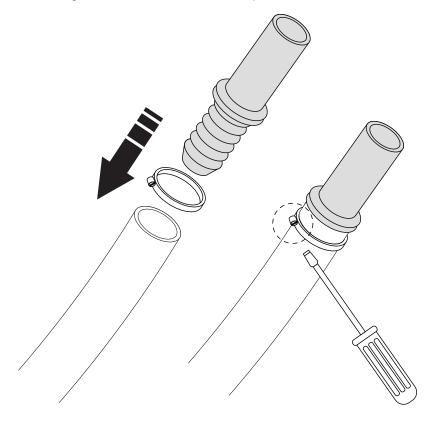
**4.** Connect the antenna cable to the Wi-Fi antenna.



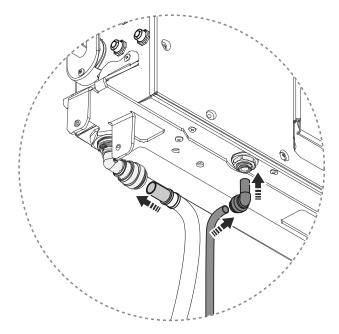
**5.** Cut the recirculation hose and flush hose according to the measurements in the illustration.



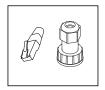
**6.** Apply fitting grease to the separate hose coupling, push all the way into the circulation hose and tighten with the hose clamp.



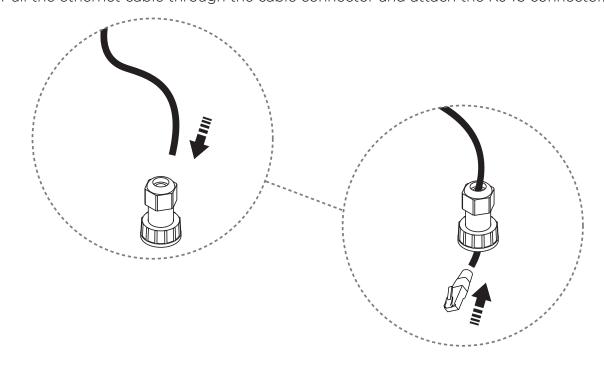
7. Connect the recirculation hose and flush hose to the bottom of the Core.



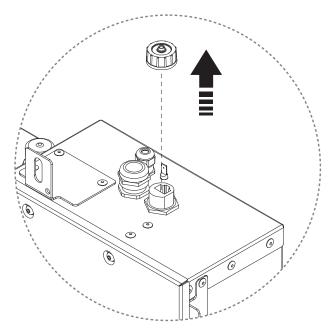
### 8. Only valid for Orbital ethernet installation



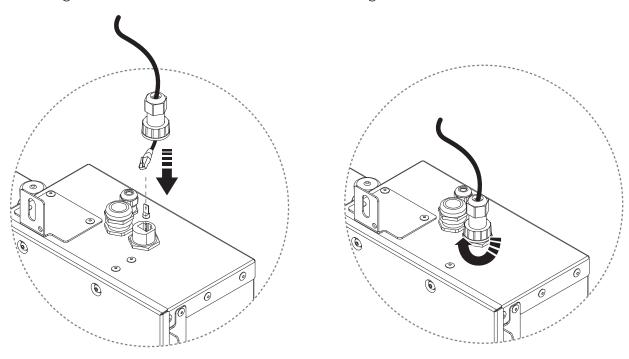
Pull the ethernet cable through the cable connector and attach the RJ45 connector.



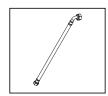
9. Unscrew the protective cover.



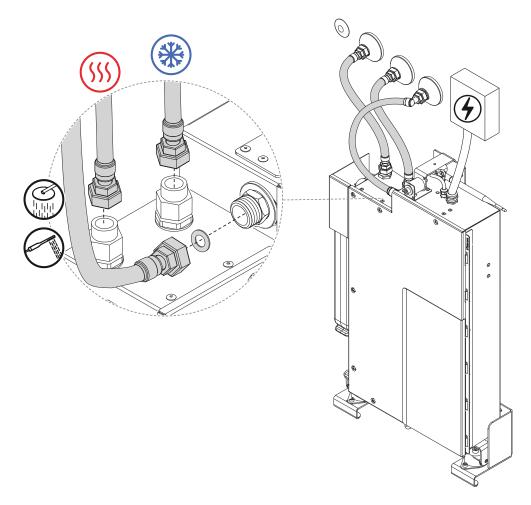
**10.** Hand tighten the cable connectors to avoid damage.



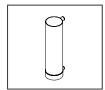
### Install the hose connections



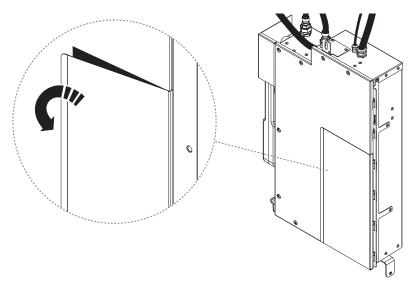
- Connect incoming and outgoing water to the Core.
  - (!) CAUTION Install the hose connections according to industry rules.



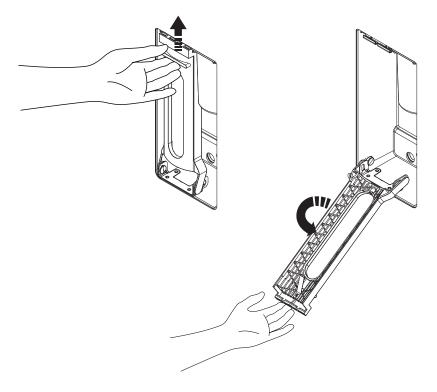
# Add the Filter Capsule



1. Open the filter hatch on the Core.



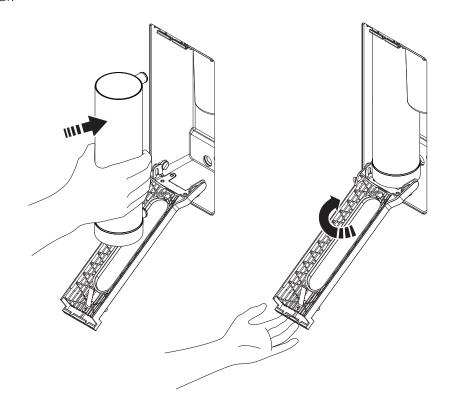
2. Release the filter holder.



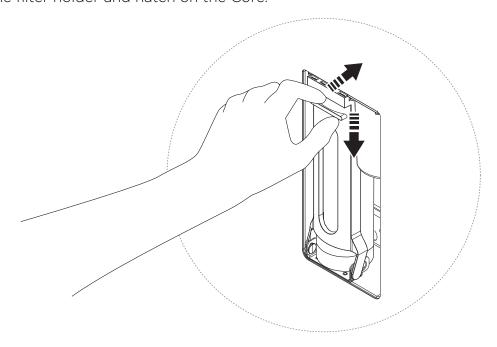
3. Insert the Filter Capsule.

## (!) RISK OF LEAKAGE

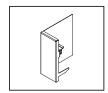
Make sure the Filter Capsule is inserted all the way in, or leakage may occur.



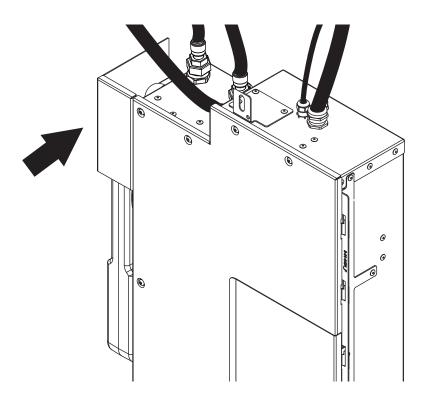
**4.** Close the filter holder and hatch on the Core.



# Install the air gap tank cover



Attach the cover to the air gap tank by snapping it onto the magnetic plate.



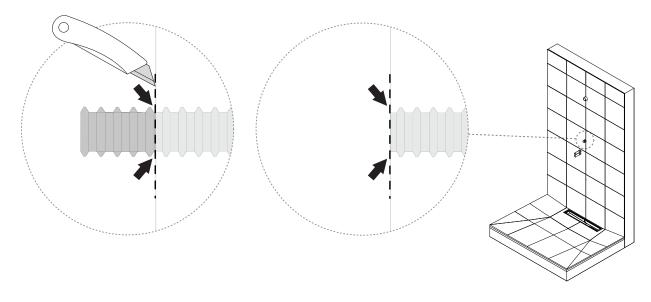
## **Install Control Dial**



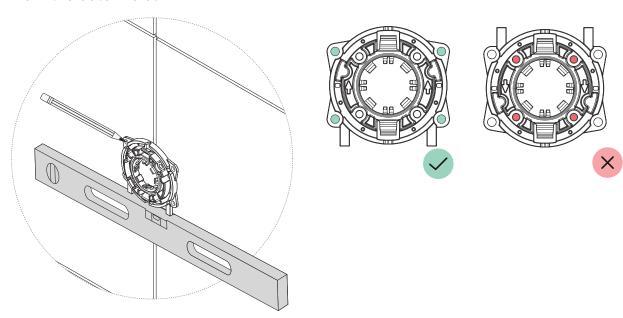
## (i) NOTICE

Do not remove the protective cover from the Control Dial until the installation is completed.

1. Cut the conduit flush to the tile surface.



**2.** Level the fixture and make sure it is centred on the hole in the wall. Measure and mark the outer holes.

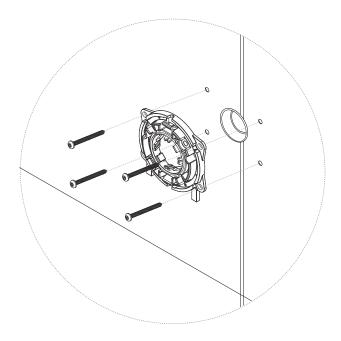


**3.** Drill 4 holes in the marked locations, and mount the bracket with the screws supplied.

### (!)

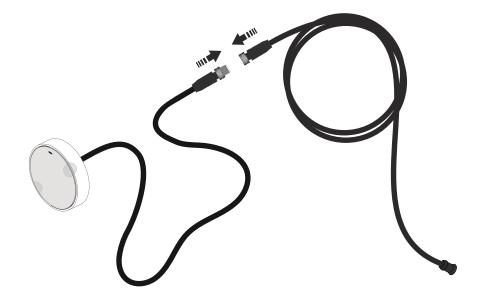
#### **CAUTION**

- Only drill through the tile itself, no deeper.
- Seal drill holes according to industry rules. See section Seal mountings in wet zone [8] for instruction.



**x4** TX screw A4 (38 mm)

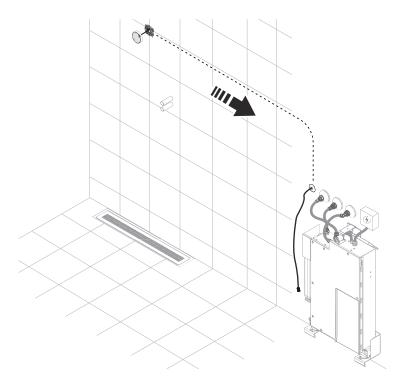
4. Connect the Control Dial cable to the extension cord.



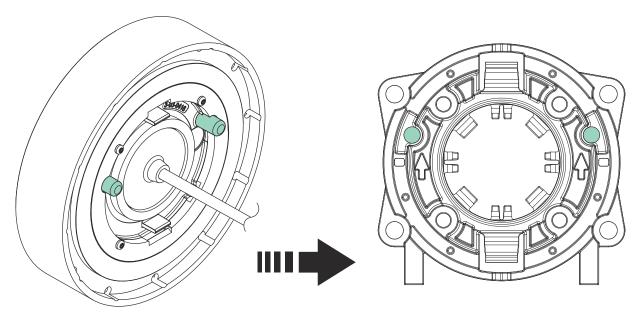
5. Pull the cable through the conduit.

## $\bigcirc$ i NOTICE

It is recommended to use fish tape to route the cables through the pipes.



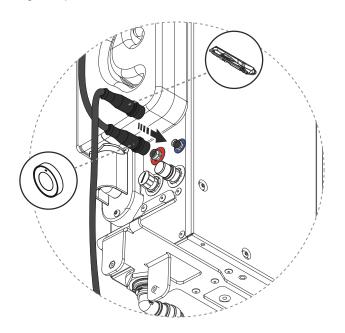
**6.** Position the Control Dial according to the "up marking" before assembly. Snap the Control Dial onto the fixture, and make sure to align the brackets according to the arrows.



**7.** Connect the Control Dial cable to the red connector. Proceed by connecting the Sensor Tank cable to the blue connector.

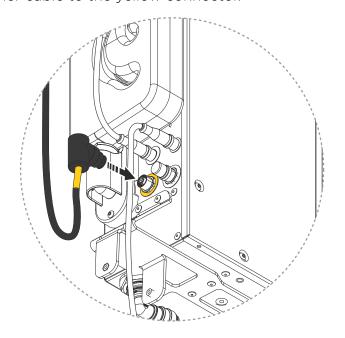
### (!) CAUTION

Make sure to have correct alignment between key and slot in connectors. This must be done with attention to prevent damage to the pins. Make sure locking ring snaps and connector is locked.



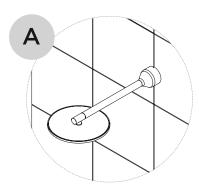
#### 8. Only valid for Orbital Audio Installation

Connect the amplifier cable to the yellow connector.

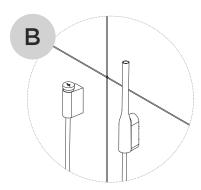


### **Next Step**

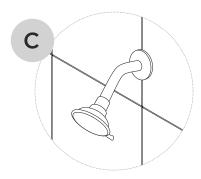
**Orbital Shower Core installation completed.** The next step depends on the shower variant:



Follow the steps valid for Orbital Systems shower head. For black or white shower heads, see Installing the black or white shower head [33]. For metallic shower heads, see Installing the metallic shower head [36].



Follow the steps valid for Orbital Systems hand shower Installing the diverter and hand shower [41] and Installing the black or white hand shower holder [46] for black or white hand shower, or Installing the metallic hand shower holder [49] for metallic hand showers.

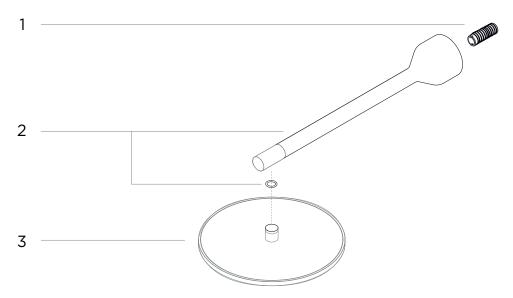


If installing Orbital Shower with third-party components, adapt the following steps to the supplier's instructions.

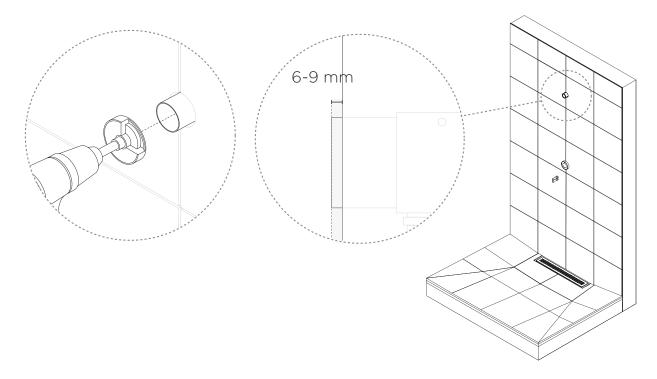
## Installing the black or white shower head

For the metallic shower head, see Installing the metallic shower head [36].

#### **Component Overview**



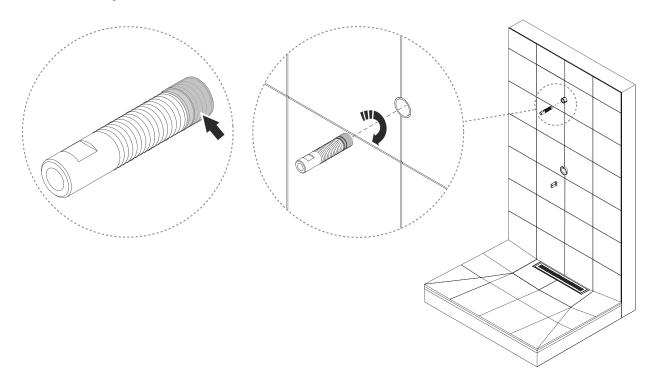
- 1. Threaded adapter
- 2. Shower head arm with gasket
- 3. Shower head
- 1. Cut the Wallbox UNI Push so that it protrudes 6-9 mm. We recommend using the LK Wallbox Cutter UNI.



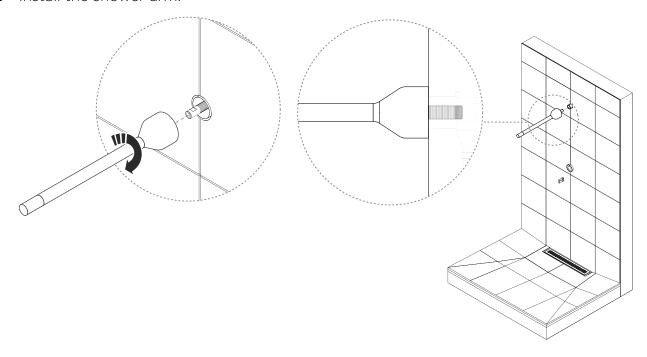
2. Fit the threaded adapter into the UNI Push wallbox.

## (i) NOTICE

Cover the end of the threaded adapter with thread sealant to avoid leakage.



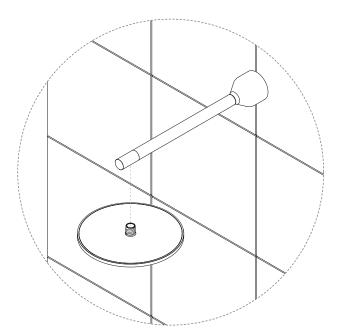
**3.** Install the shower arm.



**4.** Fit the shower head onto the shower head arm.

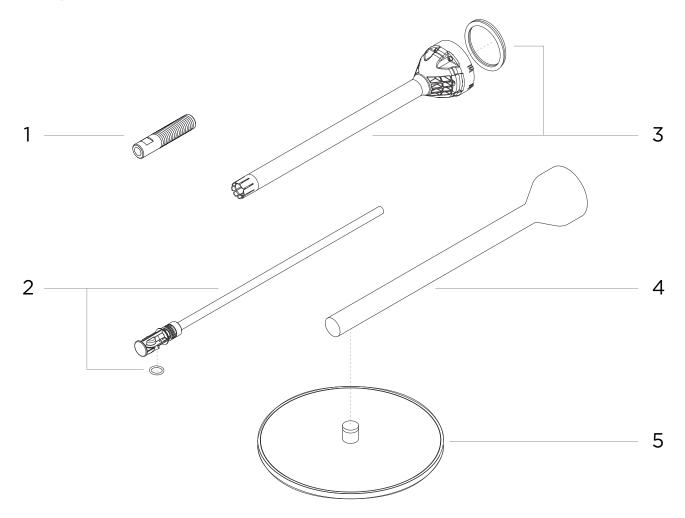


Make sure the gasket is in place, not to cross thread, and not to overtighten.



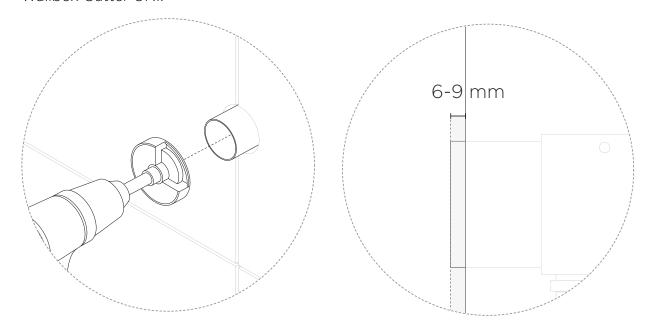
# Installing the metallic shower head

### **Component Overview**



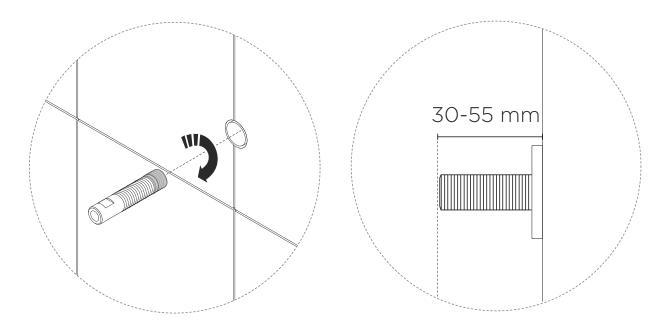
- 1. Threaded adapter
- 2. Head shower internal PEX pipe with gasket
- 3. Head shower arm insert with support ring
- 4. Metal cover
- 5. Shower head

1. Cut the wallbox UNI Push so that it protrudes 6-9 mm. We recommend using the LK Wallbox Cutter UNI.



- 2. Fit the threaded adapter into the UNI Push wallbox, so that it protrudes 30-55 mm from the wall surface. Cut it if needed.
  - (i) NOTE

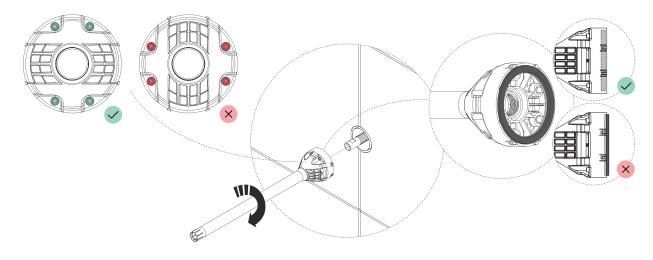
    Cover the end of the threaded adapter with thread sealant to avoid leakage.



**3.** Fit the head shower arm insert onto the adapter and screw it in fully until it meets the wall.

#### (!) CAUTION

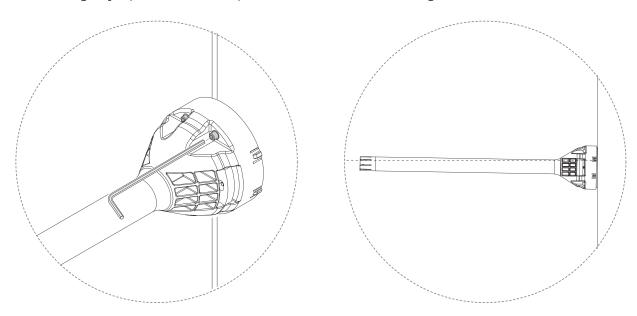
Ensure the support ring is in place with the rubber side facing the wall. When the head shower arm is screwed on, the support ring should be fully recessed and not protrude from the base.



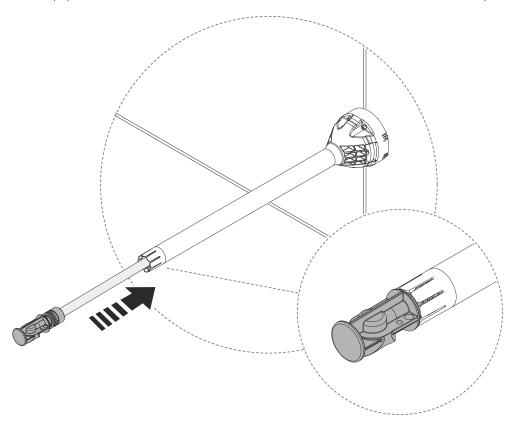
**4.** If the arm angle needs adjustment, loosen it about half a turn from the wall, then use the set screws to adjust the angle.

#### (i) NOTE

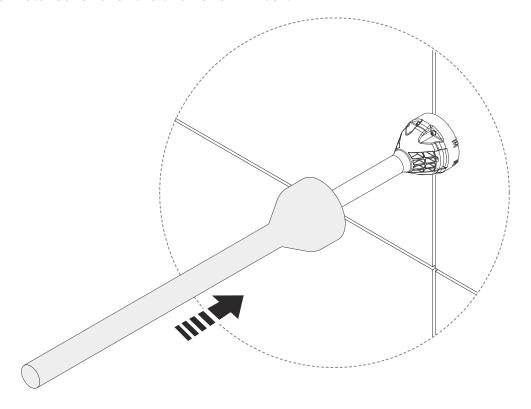
The head shower will add some weight. Adjust the angle of the arm slightly upwards to compensate for the added weight.



5. Push the PEX pipe into the shower arm insert. Be careful not to break the pins.



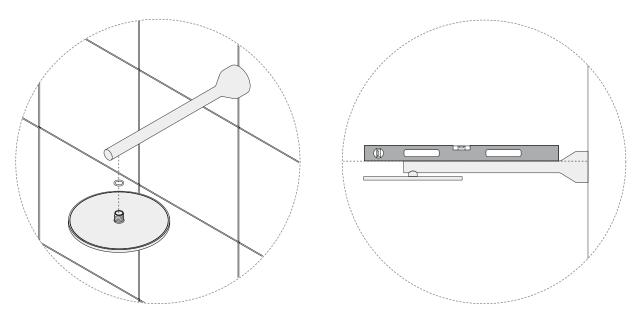
**6.** Fit the metal cover over the shower arm insert.



7. Fit the shower head onto the shower head arm. Check the angle with a spirit level.

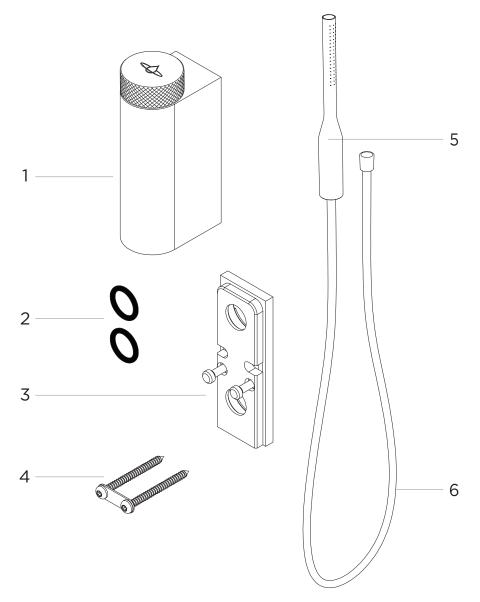
## () CAUTION

Make sure the gasket is in place, not to cross thread, and not to overtighten.



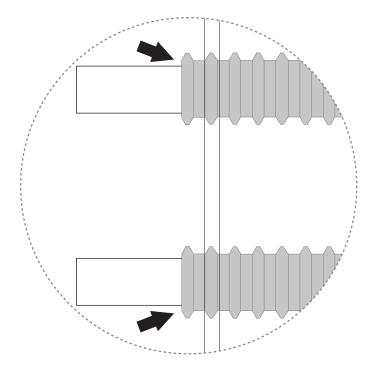
# Installing the hand shower Installing the diverter and hand shower

#### **Component Overview**



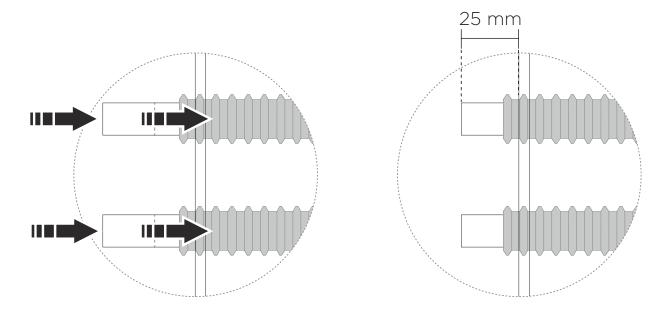
- 1. Diverter body, x1
- 2. O-ring, x2
- 3. Diverter wall plate, x1
- 4. TX25 screw, x2 and twin washer, x1
- 5. Hand shower, x1
- 6. Shower hose, x1

1. Cut the conduits to a minimum of 6 mm and a max of 9 mm outside of the tile surface.

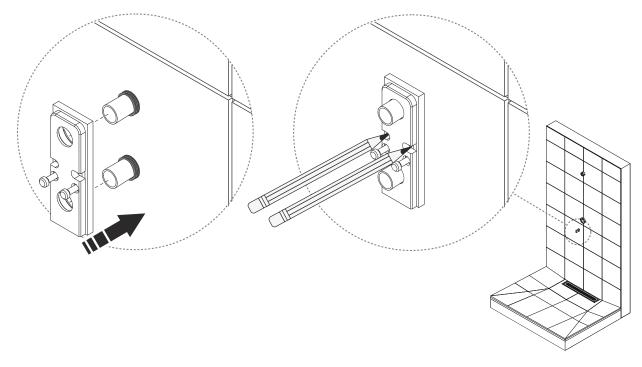


- **2.** Push the PEX pipes in until it stops, and cut them 25 mm outside the tile surface. Deburr and calibrate the pipes.
  - (! CAUTION

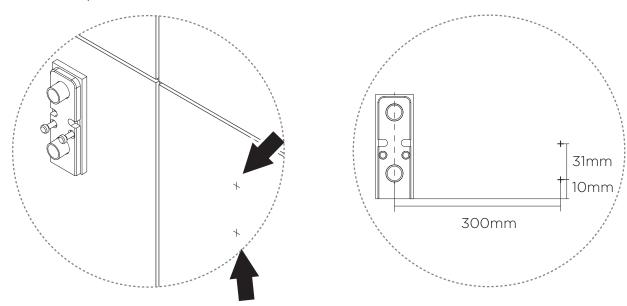
    It's important that the PEX hoses are pushed in all the way to 'stop' before cutting.



**3.** Measure and mark the hole positions for the diverter.



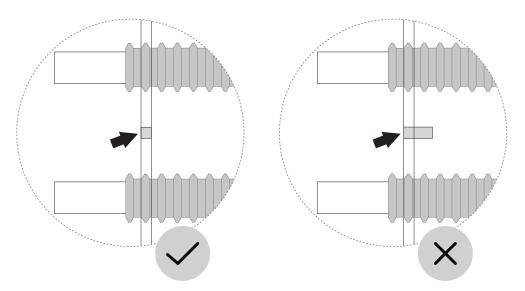
**4.** Mark hole positions for the hand shower holder.



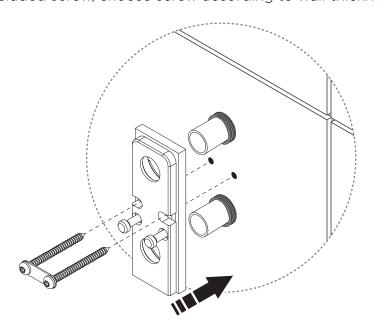
**5.** Drill four holes (6 mm) in marked locations.

## () CAUTION

- Only drill through the tile itself.
- Seal drill holes in accordance with applicable industry standards. See section Seal mountings in wet zone [8] for instructions.

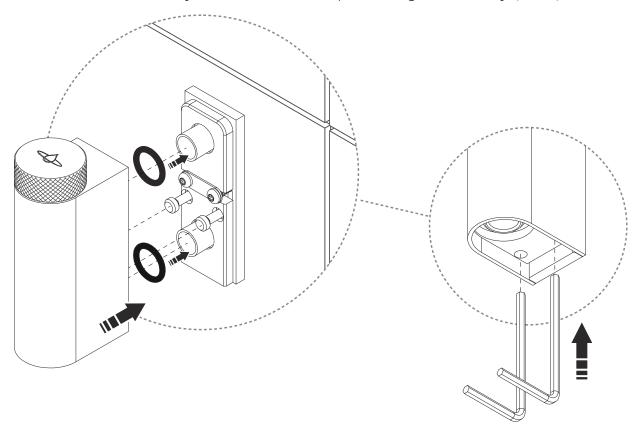


- **6.** Mount the diverter wall plate.
  - CAUTIONUse 2x included screw, choose screw according to wall thickness.

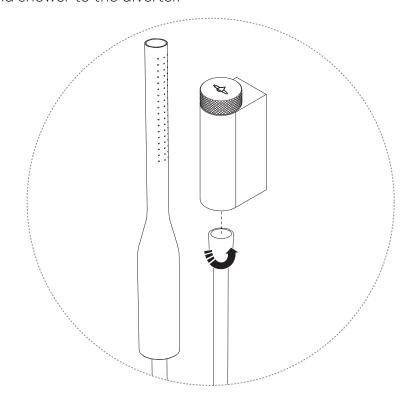


- x2 TX25 stainless steel screw
- **x1** Twin washer

7. Secure the diverter body to the diverter wall plate using an Allen key (3mm).



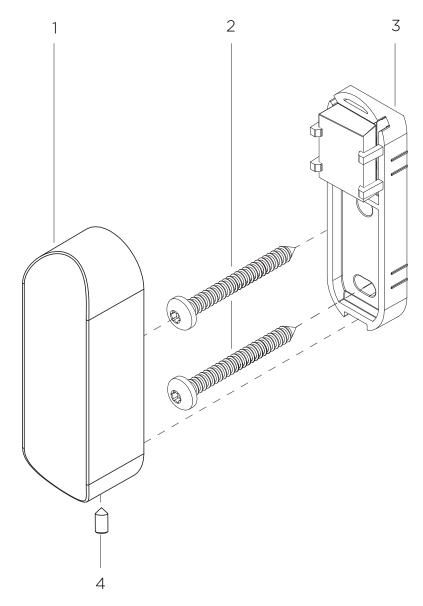
8. Install the hand shower to the diverter.



## Installing the black or white hand shower holder

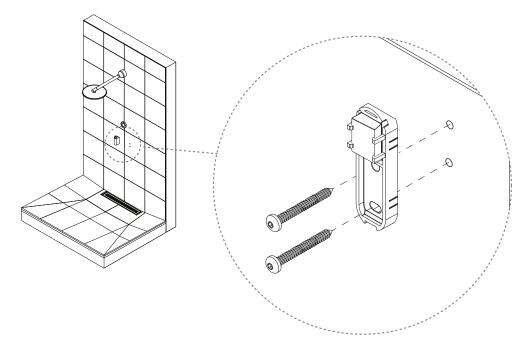
For the metallic hand shower, see Installing the metallic hand shower holder [49].

#### **Component Overview**

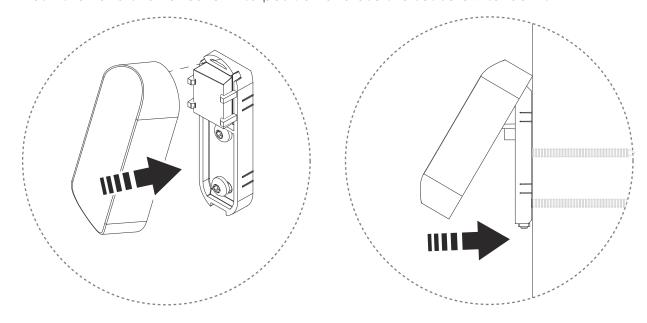


- 1. Hand shower cover
- 2. T25 stainless steel screw 50 mm (5.5 mm), x2
- 3. Hand shower bracket
- 4. M4 x 8 set screw

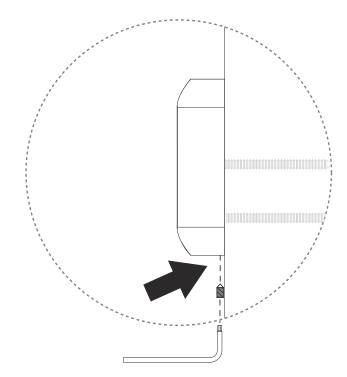
1. Install the hand shower bracket.



- x2 T25 stainless steel screw 50 mm (5.5mm)
- 2. Push the hand shower cover into position and use the set screw to lock it.

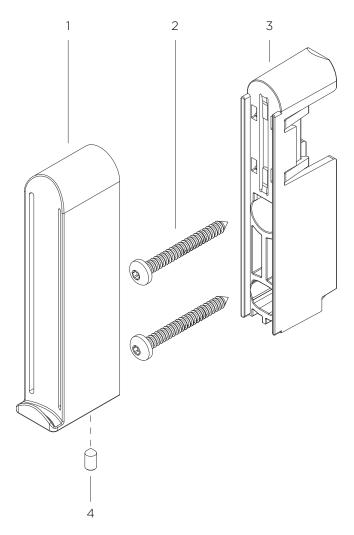


- **3.** Use the set screw to lock it.
  - i NOTICE
    Use Torx T8 L key tool in kit



## Installing the metallic hand shower holder

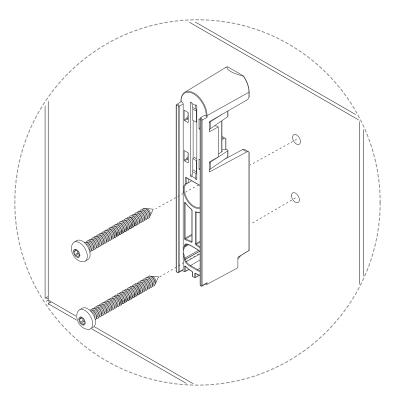
#### **Component Overview**



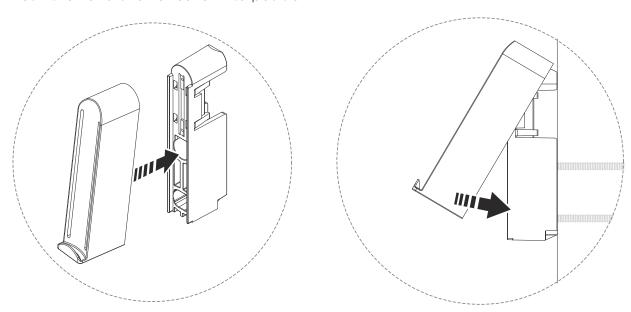
- 1. Hand shower cover
- 2. T25 stainless steel screw 50 mm (5.5 mm), x2
- 3. Hand shower bracket
- 4. M4 x 8 set screw

- 1. Install the hand shower bracket.
  - () CAUTION

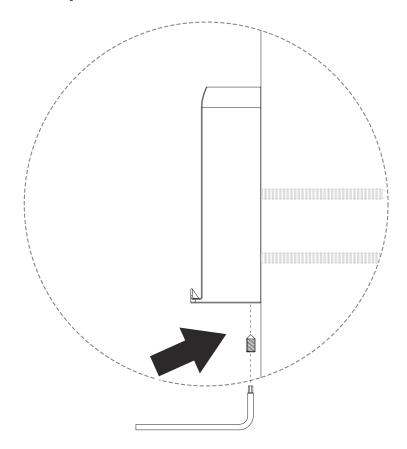
    Be careful when tightening the screws to avoid deforming the bracket.



- x2 T25 stainless steel screw 50 mm (5.5mm)
- 2. Push the hand shower cover into position.



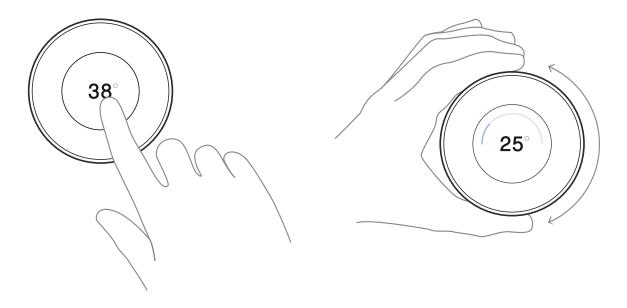
- **3.** Use the set screw to lock it.
  - i NOTICE
    Use Torx T8 L key tool in kit



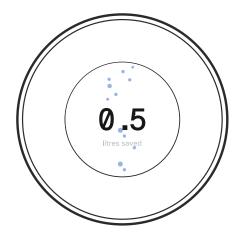
## Verify the shower

The final step is to start the shower to verify that it works as intended.

- 1. Turn on the power and water supply. It takes about 1 minute for the Core to start up.
- 2. Start the shower and set the temperature to 25 °C.



**3.** Let the shower run, and check that the recirculation starts within 5 minutes. This should be displayed on the Control Dial screen.



**4.** Inspect all water connection points for leakage. Carefully check each connection point to ensure there are no leaks.

## ORBITAL

