



# Fixture Installation

**Orbital Shower Hatch Panel R3 (OS8733-E)**

5-06-0009

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# Thank you for your purchase

This manual applies to model OS8733-E

 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-0605DO0262.

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.

# Approved Waterproofing Membrane

## For installations outside of Sweden

The following chapter describes a general waterproofing membrane procedure for installing Orbital Shower in a wet-room area. Industry standards for how to apply waterproofing membrane in wet-room areas shall be applied.

## For installations in Sweden

Following waterproofing membranes are approved according to Swedish regulations. Choose one of the following and go to <http://publiccert.ri.se/sv/Product/Index/C900374?key=PID024128> for separate instructions of how to apply your chosen waterproofing membrane.



The following sealing layers for the Wallbox and floor luminaire are industry approved according to Säker Vatten industry standards (<https://www.sakervatten.se/branschreglerna>):

- Adda system F
- Ardex Tricom /A7+A8
- Bostik Pro
- Bostik Universal
- Casco Folie
- Centro CE TM#F System
- Ecodur foliesystem
- FF Kakel foliesystem
- GKH F-System
- KERABLOCK TEX 750
- Kerasafe+
- LIP Foliesystem 27
- Mapeguard WP 90, WP 200
- Midun foliesystem
- Mira Vapourmat
- PCI VG2014 Foliesystem
- Schönox WSF
- Sense Pro system F
- Sopro AEB 815
- Weber TEC Foliesystem
- ZebraSystem F1

## 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.

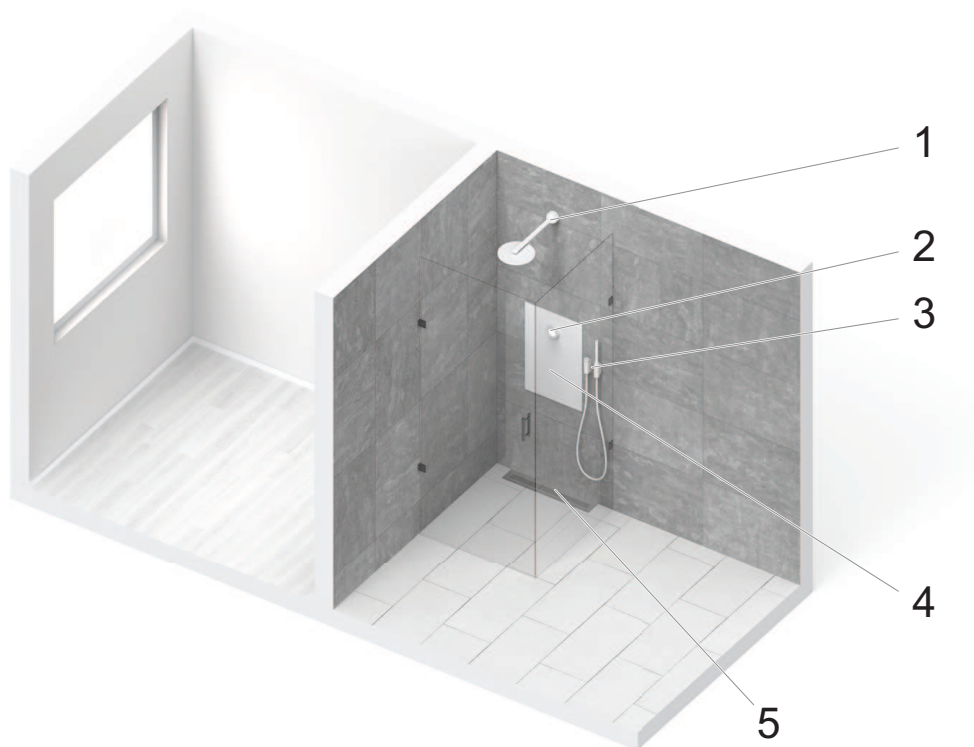
Repairs should only be carried out by Orbital Systems.

## Contact us

- [support@orbital-systems.com](mailto:support@orbital-systems.com)
- [www.orbital-systems.com](http://www.orbital-systems.com)

# System Overview

## Orbital Shower Hatch Panel 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 Wall Box (RSK 831 41 82)
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 Box (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/min
- 3 bar: 9.5 litres/min
- 4 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 CaCO<sub>3</sub>/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



## Shower Installation Overview



### **IMPORTANT**

The image is a principle sketch, and should not be used as an installation scenario.

The Wall Box must also be equipped with a leakage indicator.

Drain unit HxWxD: 192x812x184 mm

Drain connection: Ø75 mm

### **Available shower variants:**

**A:** Orbital Systems shower head & hand shower

**B:** Orbital Systems shower head

**C:** Third-party shower head & hand shower \*

**\* The following requirements are applicable when choosing third-party components. Contact Orbital Support for more detailed information.**

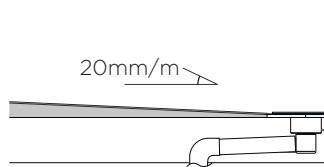
- They shall not have any flow restrictors.
- They should have as low back pressure as possible. Too much back pressure will result in weaker shower water flow, shorter filter lifespan and a higher pump sound.
- Preferably the shower heads and diverter individually have less than 1 bar back pressure at 12 litres/min water flow, and less than 0.7 bars at 10 litres/min.
- Orbital Systems recommends using diverters designed for wall integration that don't close the water path when switching between outlets. In other words, if the shower is running and the diverter is positioned between the two outlets, the water should still pour out of both of those outlets.

## Prerequisites for optimal recycling

The preparation of the shower area is **crucial** for efficient water recirculation. The following three key factors allow the shower to reach its full potential and maximize the water savings:

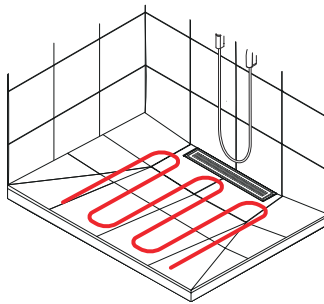
### Floor inclination

A proper inclination is crucial to ensuring the water flows efficiently toward the drain. We recommend creating a slope of 20 mm/m.



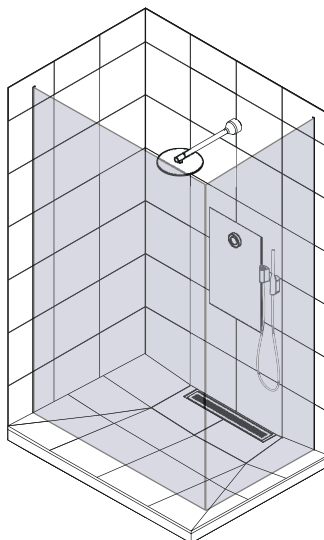
### Underfloor heating

Underfloor heating in the shower area helps reduce water cooling. We recommend placing the underfloor heating as close to the floor fixture as possible.



### A fully enclosed shower area

By creating a closed shower zone, heat losses are significantly minimized. It is essential to ensure that shower walls and doors go all the way down to the floor.



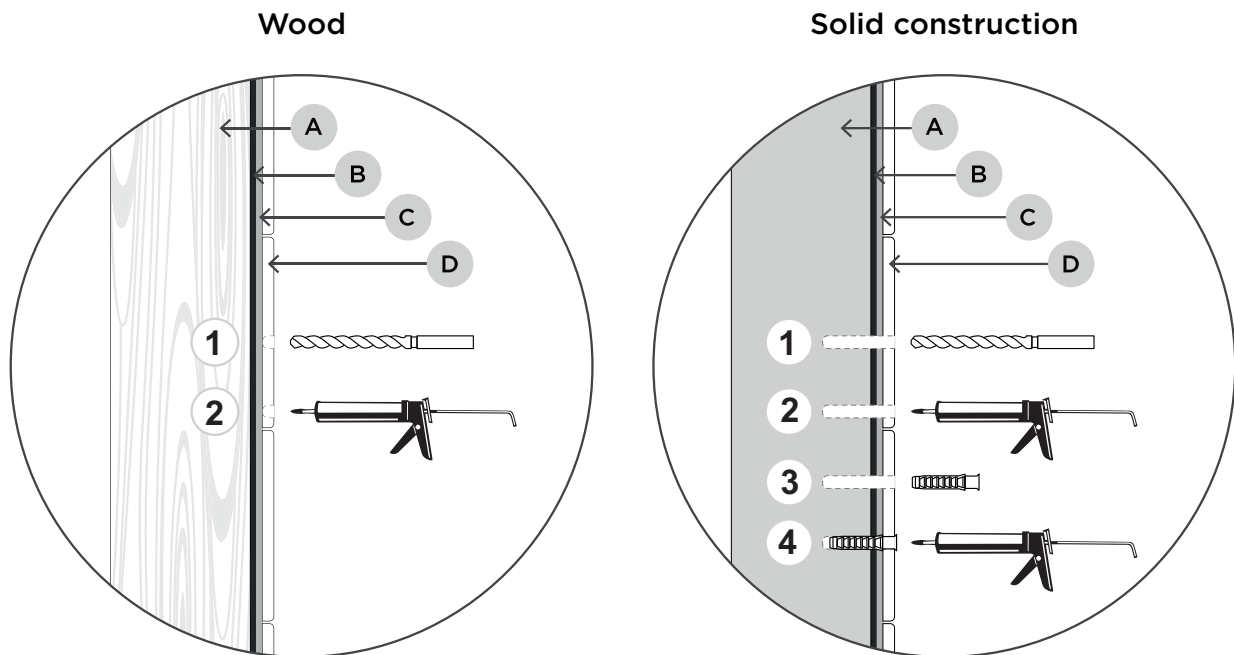
## Seal mountings in wet zone

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.

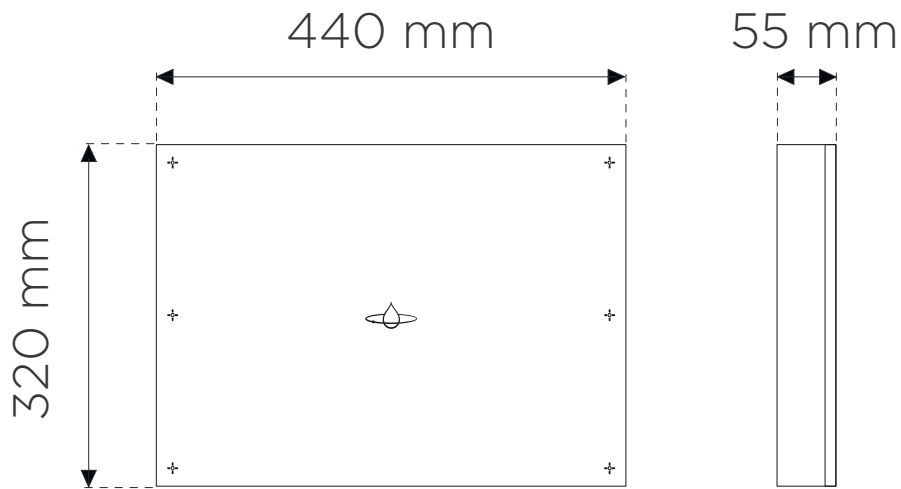


- **A:** Wood / Concrete
- **B:** Waterproofing membrane
- **C:** Tile adhesive
- **D:** Tile

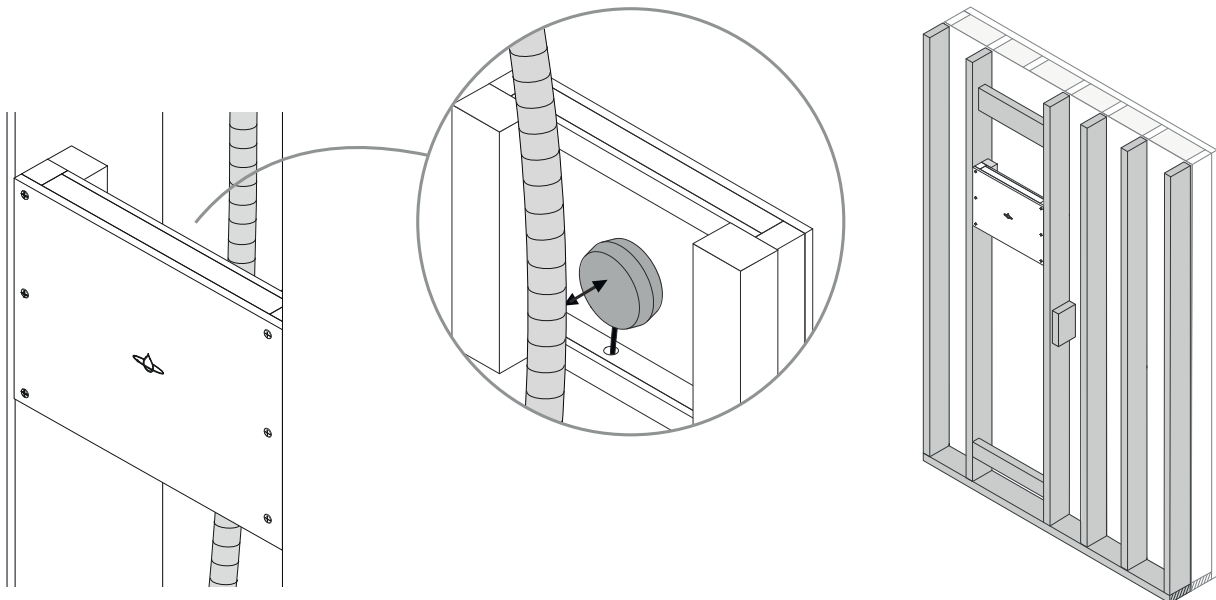
# Audio Installation

This information is relevant only for installations with Orbital Audio, which is an optional add-on product.

## Installation Measurements



- **Make sure that there is clear space around the exciter and that it is not touching any hoses installed behind the Audio Fixture.**
- To optimize the sound experience and reduce the risk of sound spreading to an adjacent room, we recommend building a new inner wall in the shower area.



# Fixture Installation

## Important installation steps

Read the following instructions carefully. The number is used as a reference in the installation steps where the instruction is applicable.



**1**

For installation in Sweden, carry out the installation according to the current industry regulations Säker Vatten:

- The drainage pipe must end in a wet zone area, including a moisture barrier and a floor drain, but cannot end inside the shower space. The inside diameter of the leakage indicator must be at least 20 mm. The outlet must not be placed closer than 60 mm from the waterproofing layer of the floor or adjacent wall.
- The drainage pipe must be installed with an inclination from the Wall Box down towards the floor.
- The sleeve must not be deformed. Deformation can cause water leakage.
- The line from the indication of leakage must be cleaned so that leaking water is not prevented from flowing out.



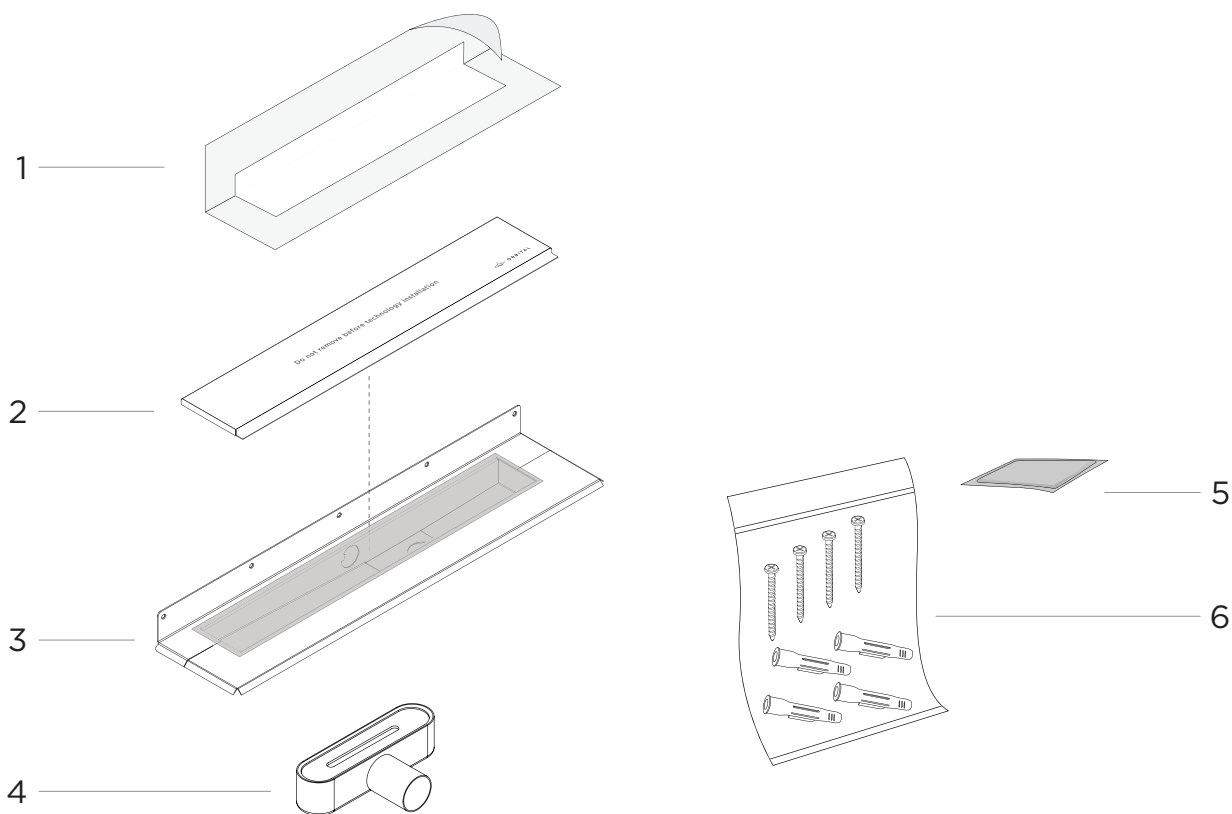
**2**

For installation in Sweden, carry out the installation according to the current industry regulations Säker Vatten:

- A waste water pipeline shall be laid with falls along the entire length of the pipeline.
- Wastewater pipes must be installed with regard to the movements that can be expected during the construction period and during operation. Fasteners for cables must be mounted and placed according to the supplier's installation instructions. A fastening device must be placed no more than 200 mm from the floor drain.
- On pipes that are to be cast in, fastening devices are placed according to the supplier's installation instructions, alternatively at all branch pipes, sockets, bends, deposits and on straight sections to a sufficient extent to prevent the pipe's position from changing.

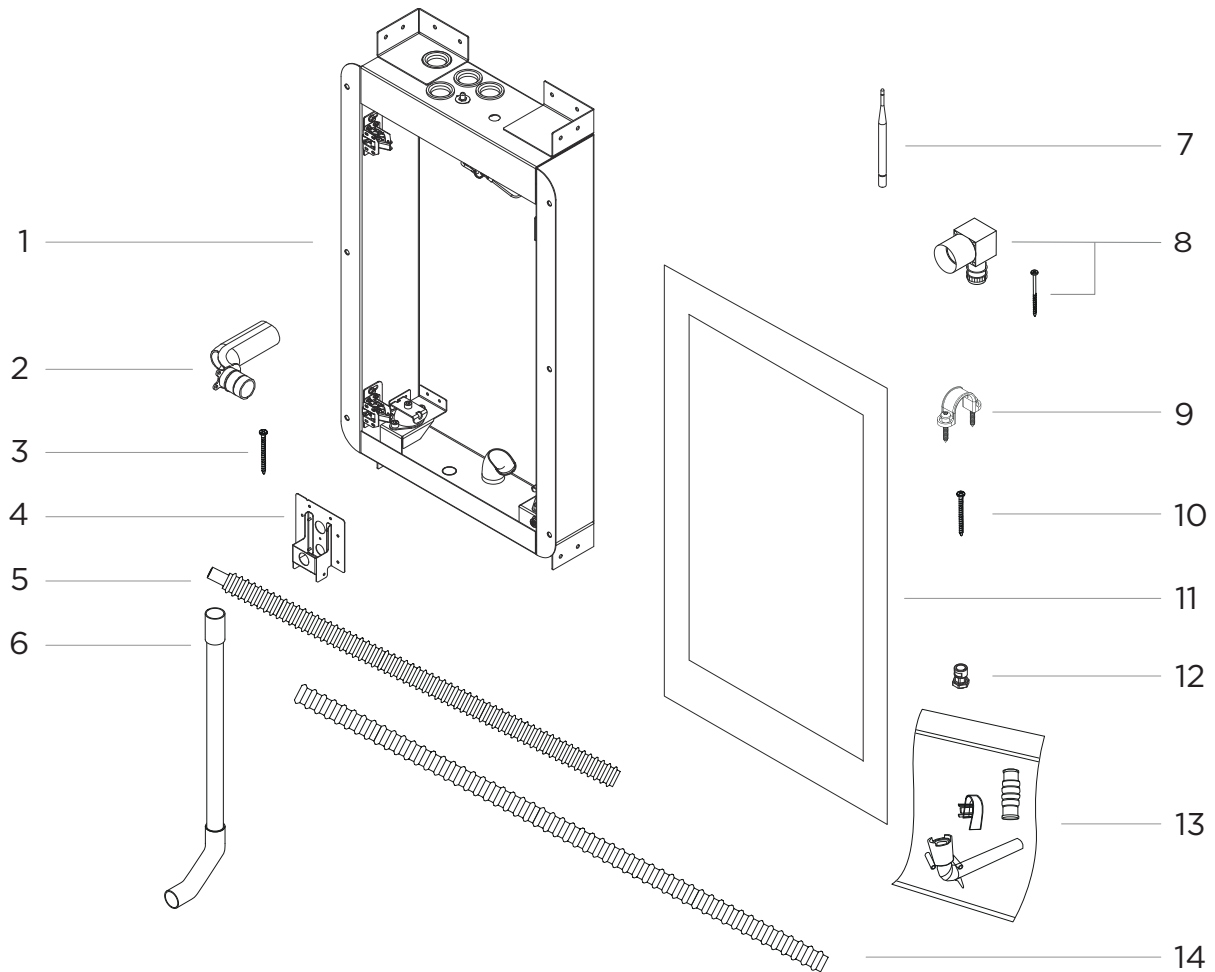
# Component Overview

## Fixture kit - Floor Fixtures



1. Drain waterproofing membrane, 1x
2. Tiling frame set, 1x
3. Drain unit (RSK 711 54 63), 1x + screws, 7x
4. Outlet unit (RSK 711 99 33), 1x
5. Cleaning wipe, 1x
6. Screw and plug kit, 1x

## Fixture kit - Wall fixtures (Head & Hand shower)



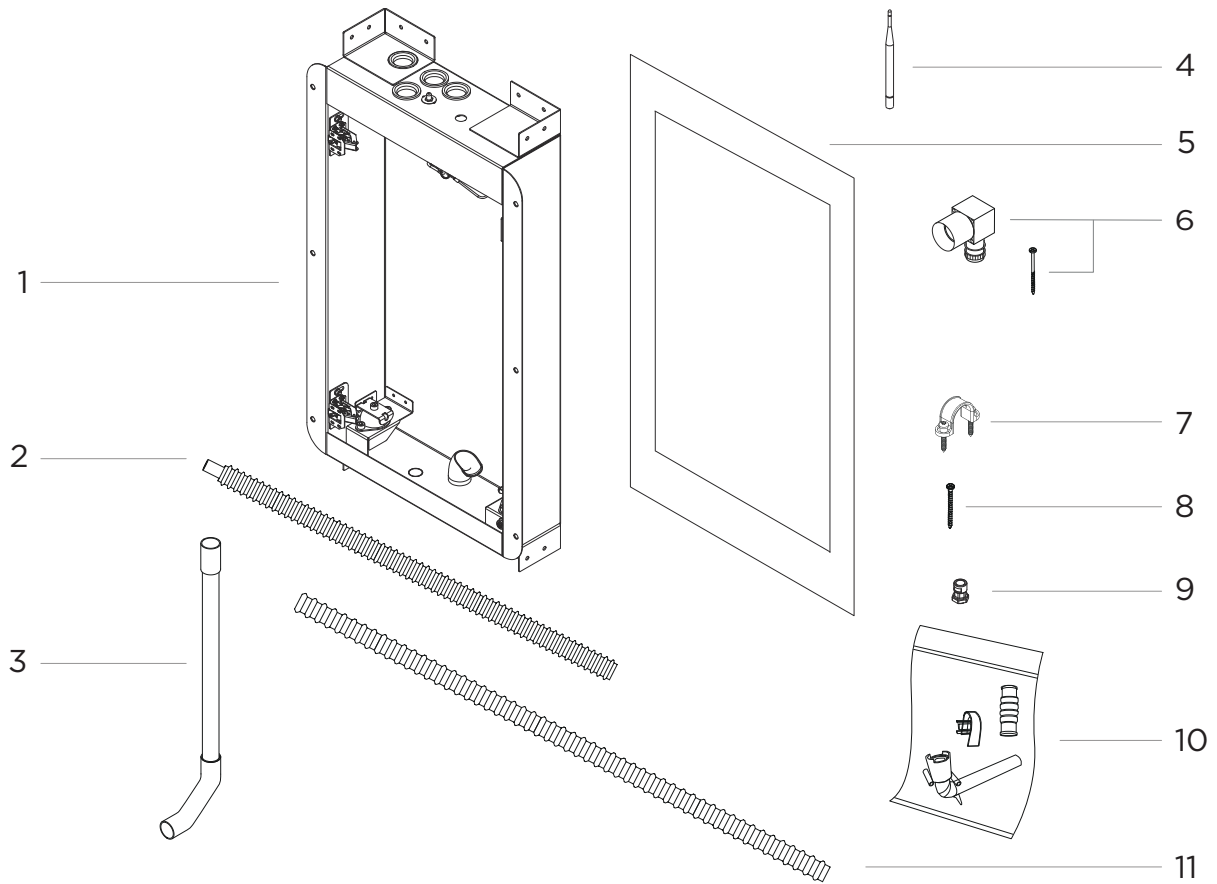
1. Wall Box (RSK 831 41 82), 1x
2. Conduit Elbow (RSK 187 79 99 / 188 27 00), 2x
3. Screws, 8x
4. Wall pistol mounting plate, 1x
5. Piping, PEX Hose with Conduit (RSK 188 23 36), 150 cm, 2x
6. Drain pipe, 1x
7. Wi-Fi Antenna, 1x
8. Wallbox UNI Push V2 (RSK 188 21 81/188 26 57) 1x, screws, 4x
9. Pipe clamps, 2x
10. Screws, 3x
11. Waterproofing membrane, 1x
12. Wall Box ethernet connector, 1x
13. LK Drainage bend V2 complete (RSK 188 26 11), 1x
14. Piping for the leakage indicator (RSK 187 06 65), 350 cm

### Provided by Customer:

- Waterproofing Conduit Membrane for diverter
- Waterproofing Conduit Membrane for shower head



## Fixture kit - Wall fixtures (Head shower)

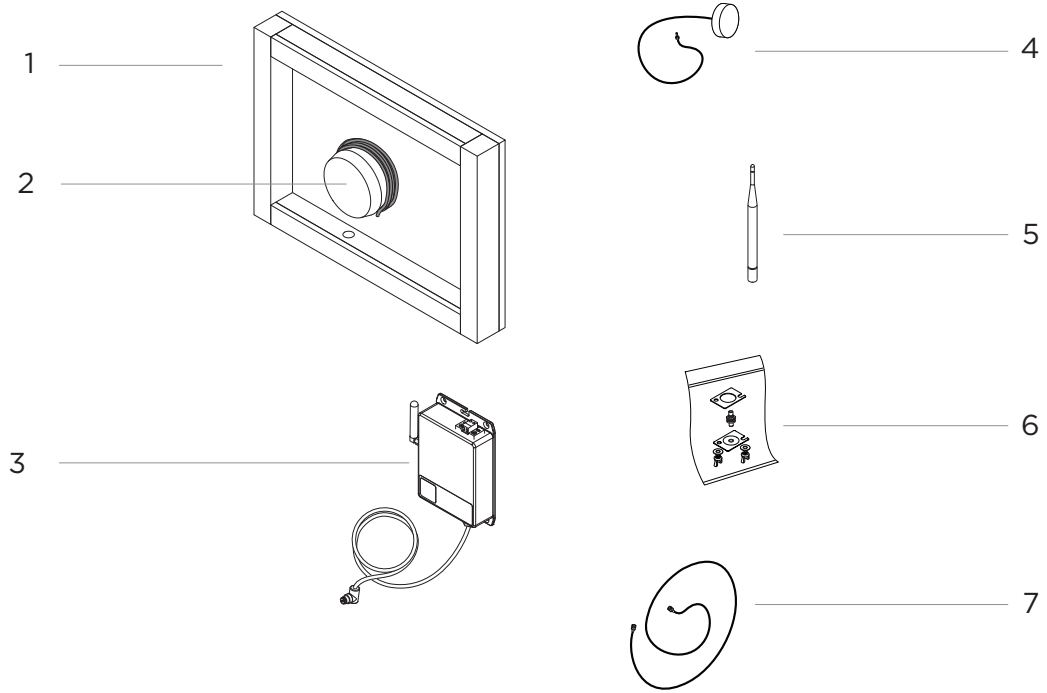


1. Wall Box (RSK 831 41 82), 1x
2. Piping, PEX Hose with Conduit (RSK 188 23 36), 100 cm
3. Drain pipe, 1x
4. Wi-Fi Antenna, 1x
5. Waterproofing membrane, 1x
6. Wallbox UNI Push V2 (RSK 188 21 81/188 26 57) 1x, screws, 4x
7. Pipe Clamps, 1x
8. Screws, 8x
9. Wall Box ethernet connector, 1x
10. LK Drainage bend V2 complete (RSK 188 26 11), 1x
11. Piping for the leakage indicator (RSK 187 06 65), 350 cm

### Provided by Customer:

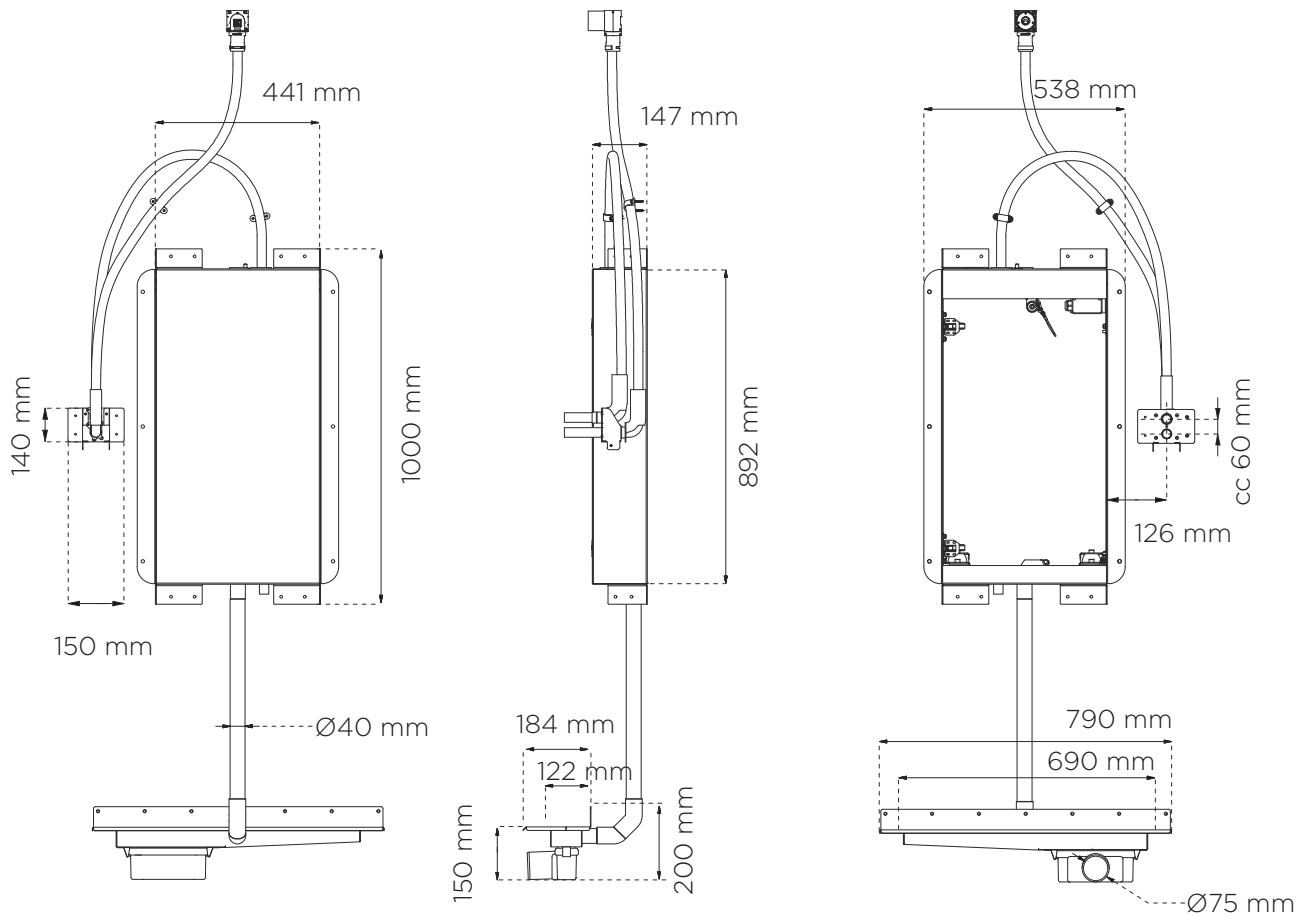
- Waterproofing Conduit Membrane for shower head

## Audio kit

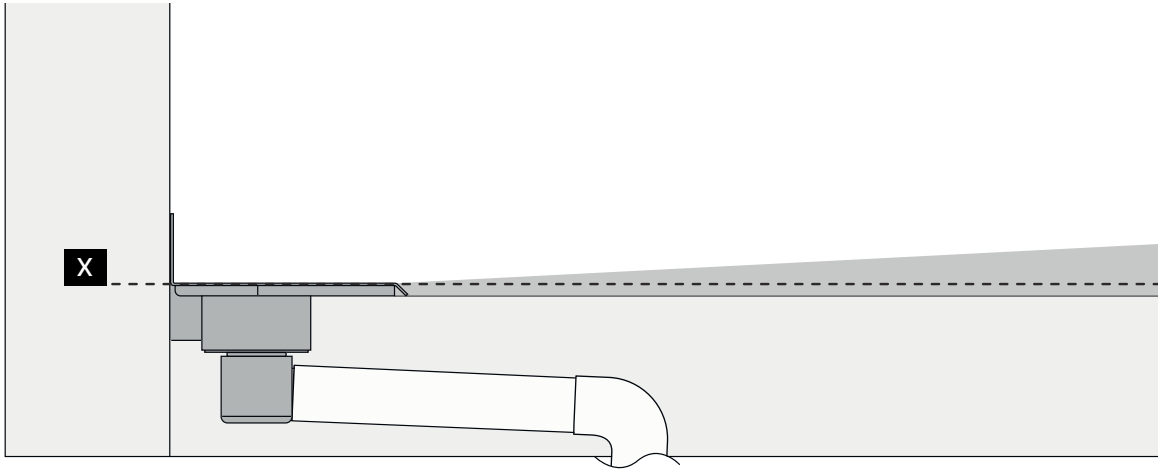


1. Audio Fixture
2. Speaker with speaker cable
3. Amplifier with amplifier cable and stub antenna
4. Puck antenna (only used for *Orbital Shower Hatch Cabinet*)
5. Rod antenna (only used for *Orbital Shower Hatch LK and Hatch Tiled*)
6. Assembly kit to the rod antenna
7. Cable to the rod antenna

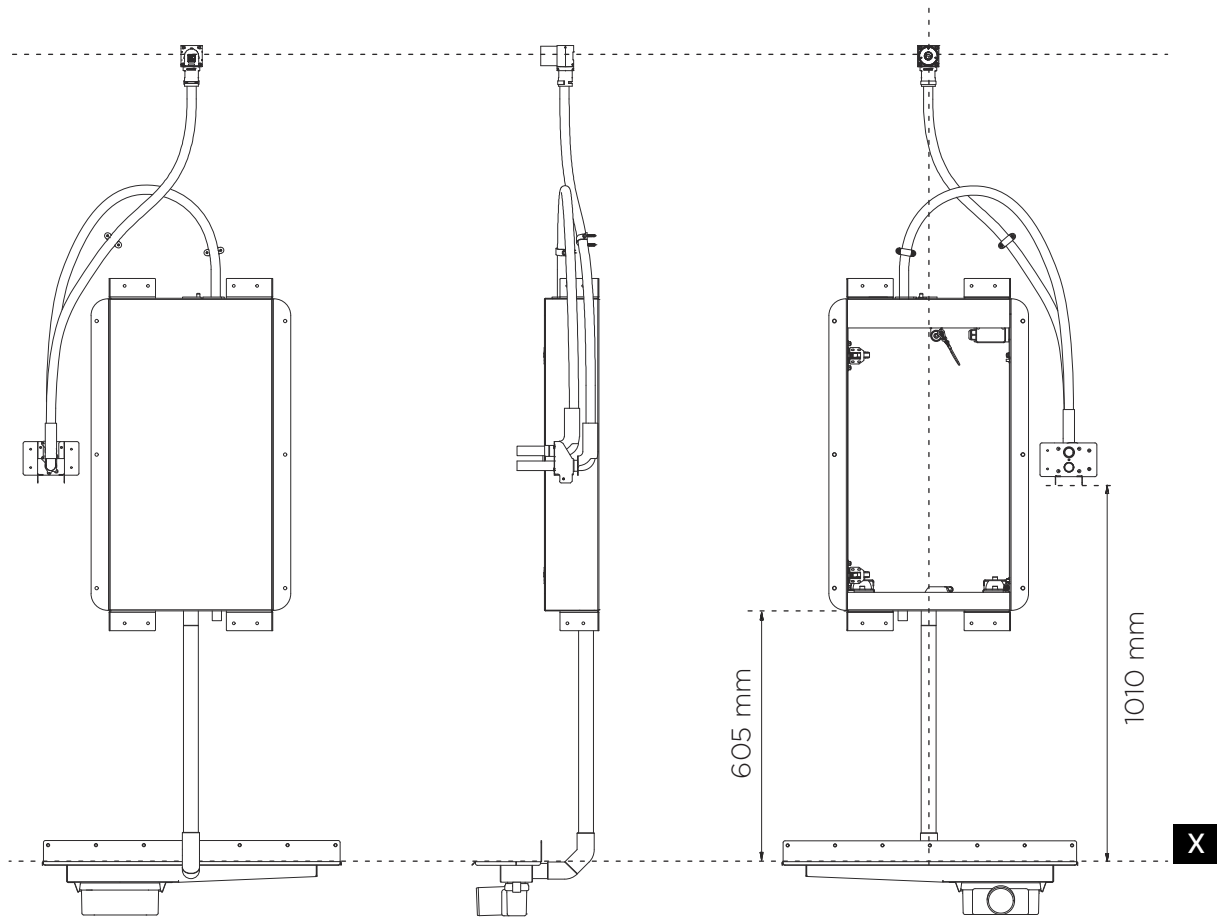
# Kit measurements



## Recommended installation measurements



Measurement **X** refers to the floor level where the waterproofing is connected to the floor drain flange. This mark will be used as the reference point in the shower area for other measurements in the installation.



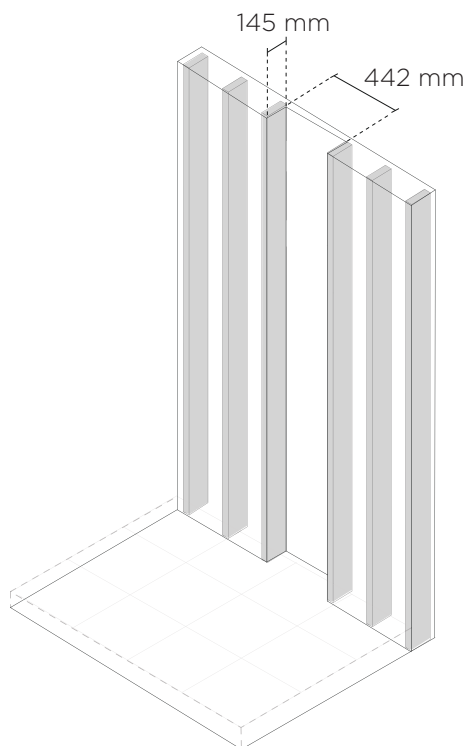
### IMPORTANT

- Incoming tap water can only be drawn in from the top.
- Leakage indicator must be mounted at least 60 mm from the floor or wall.

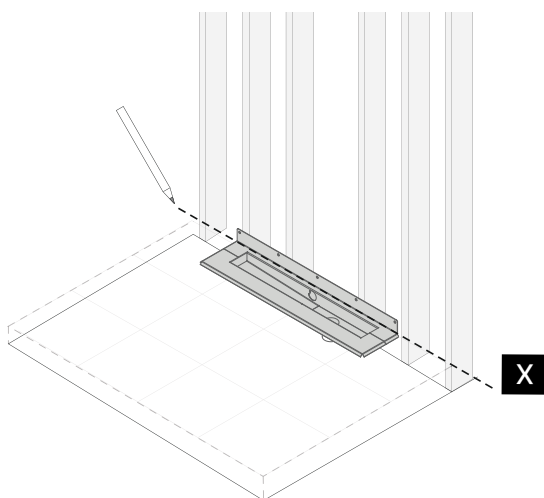
## Prepare shower area



1. Frame the shower area.



2. Mark the floor level where the waterproofing will be connected to the drain unit flange. This mark will be used as measurement "X" in the installation process to ensure that there is enough space for the drain unit.

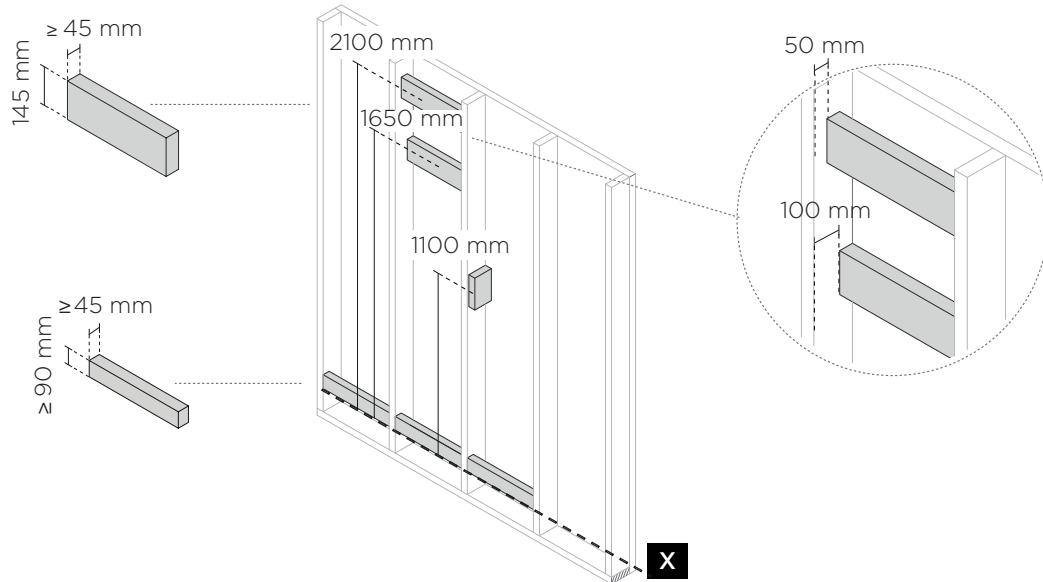


3. Install noggings.

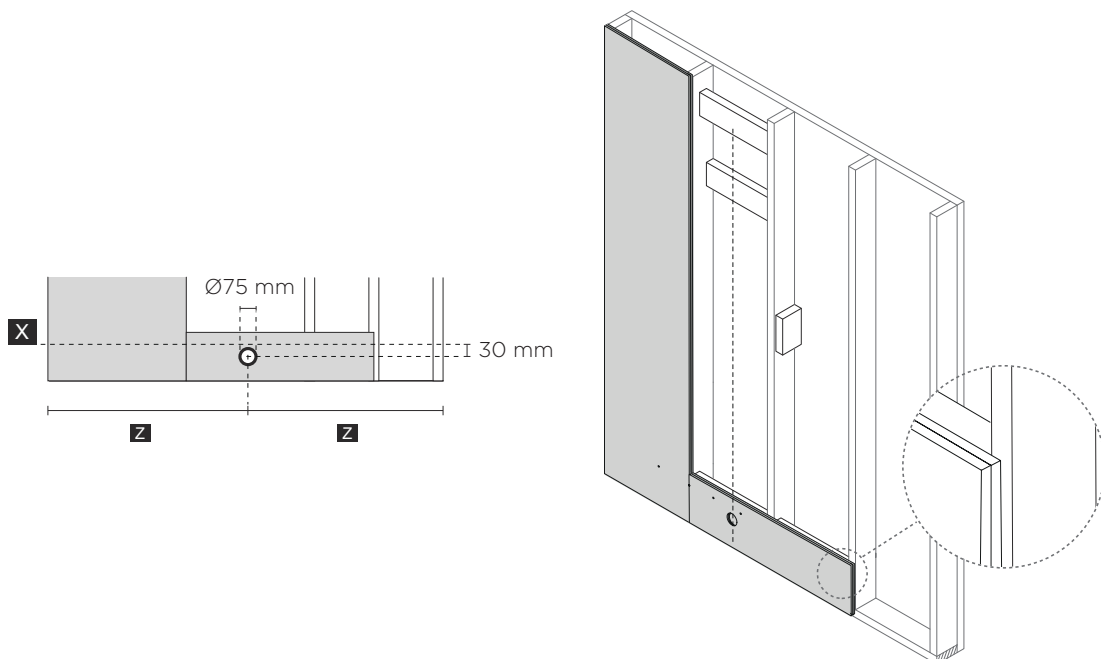


**CAUTION**

It is crucial that all noggin pieces are level and set according to recommended measurements to avoid misalignment in the shower installation.



4. Apply wall covering according to the illustration. Follow applicable industry standards.



**X** The floor level where the waterproofing is connected to the floor drain flange.

**Z** Drain unit is centered in the shower area.

# Install drain

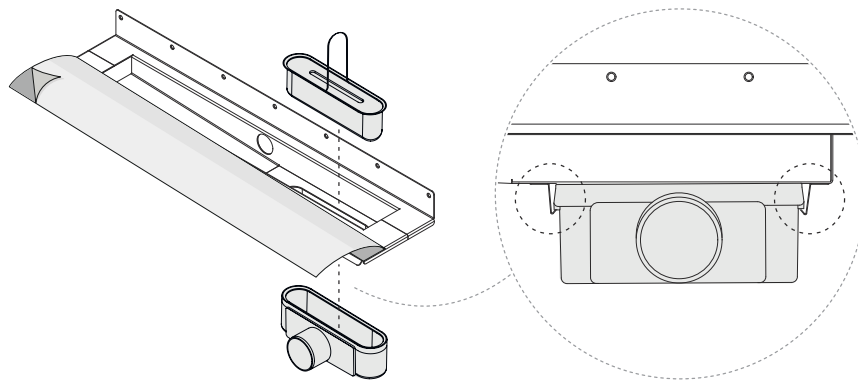
## Drain unit and outlet unit



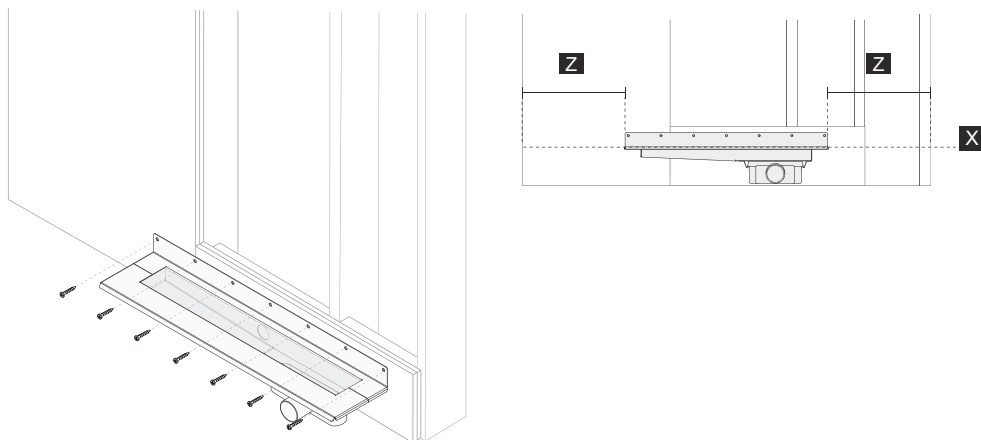
### CAUTION

- Plumbing and electrical installation should be performed according to industry rules.
- Do not remove the protective cover until the frame is being installed in a later step.

1. Secure the outlet unit in place using the two hooks at the bottom of the drain. Insert the water trap, and then fold the protective film back to cover the drain unit.



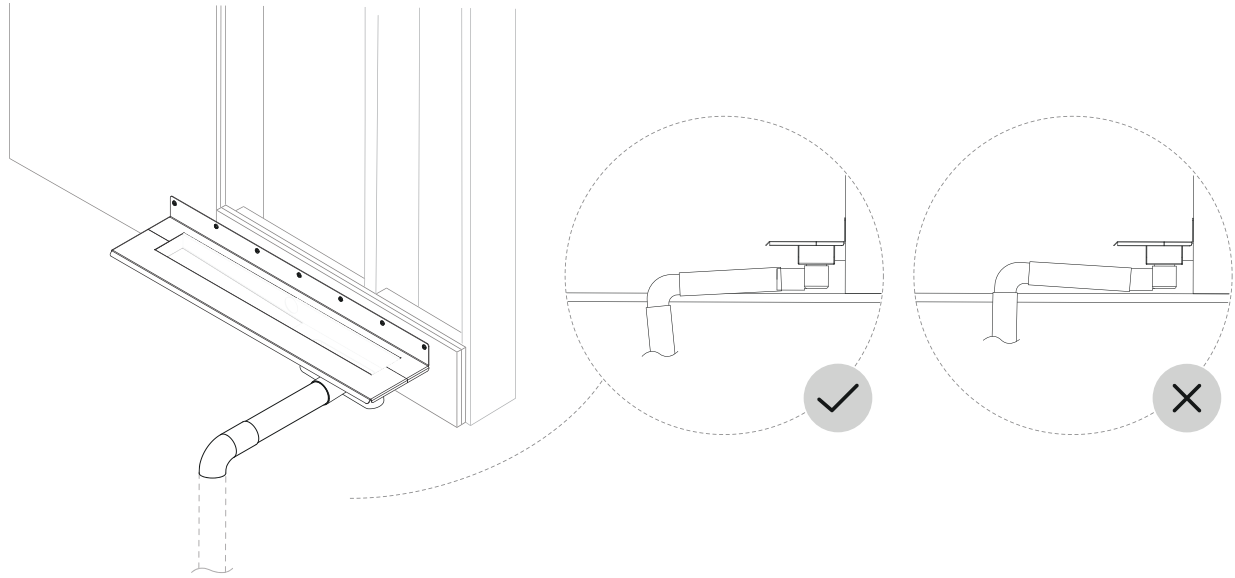
2. Use all supplied screws (7) to fasten the drain unit to the wall.



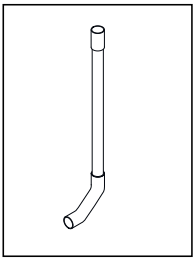
**X** The floor level where the waterproofing is connected to the floor drain flange.

**Z** Drain unit is centered in the shower area.

3. Connect the drain unit to the sewerage system as defined by industry rules.



## Drain piping



### Provided by Customer:

- Anchors



**2**

Perform the installation in accordance with current Industry Rules Säker Vatten Installation. See bulleted list **2** in chapter [Important installation steps \[14\]](#).



### **NOTICE**

Use the two 45 degree pipe elbows included in the kit for the drain unit. A 90 degree elbow will not be applicable.

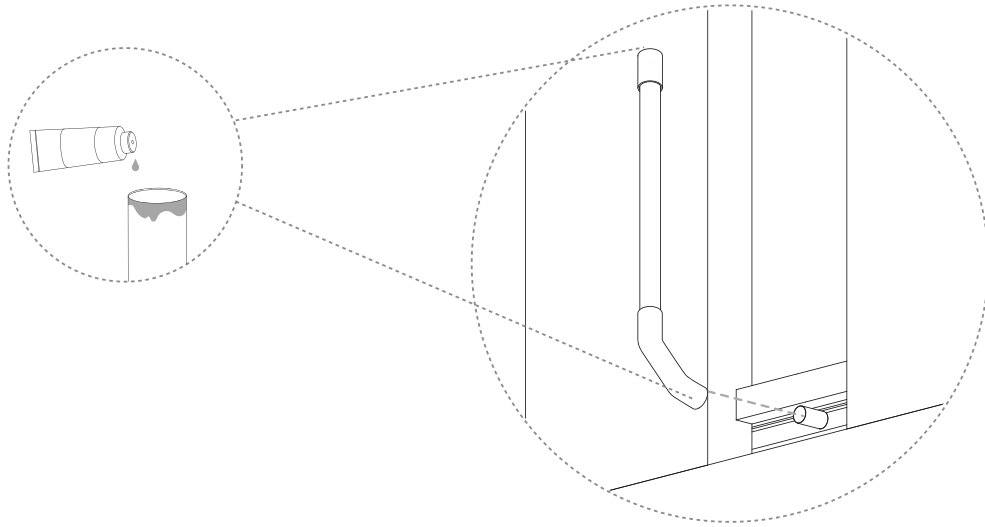


- 
1. Attach the drain pipe to the back of the drain unit.



**NOTE**

Apply silicone based lubricant when assembling.

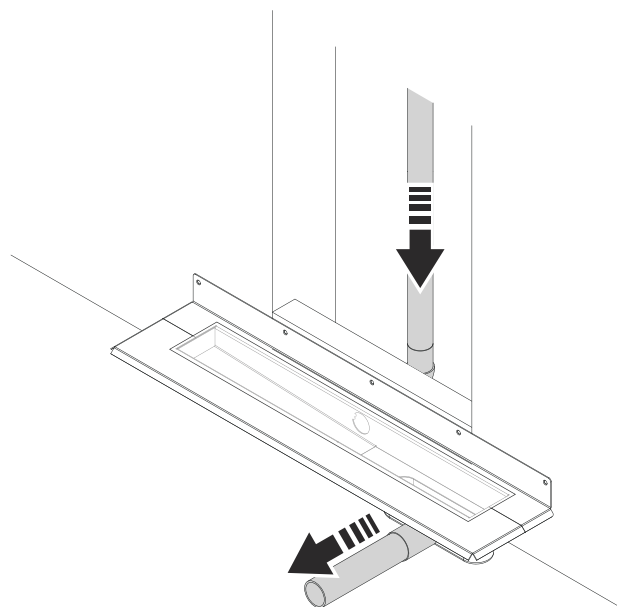


- 
2. Perform a leakage check to eliminate leakage.

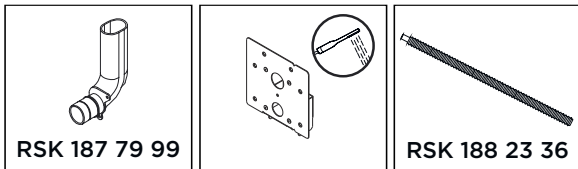


**CAUTION**

For installations in Sweden leakage test shall be performed. The drain must be sample flushed and inspected visually to ensure that the assembly is tight. The leakage test shall be documented.

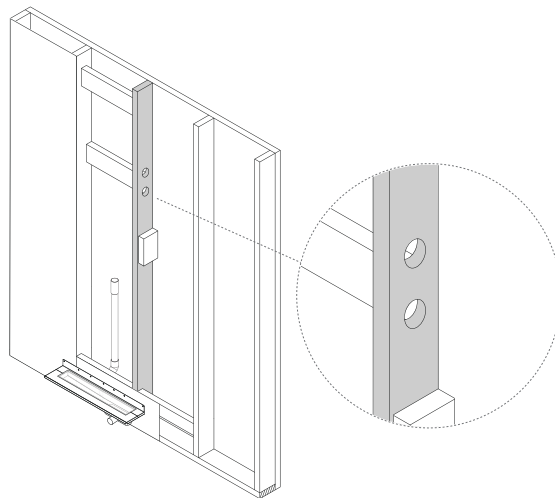


## Prepare for hand shower and diverter

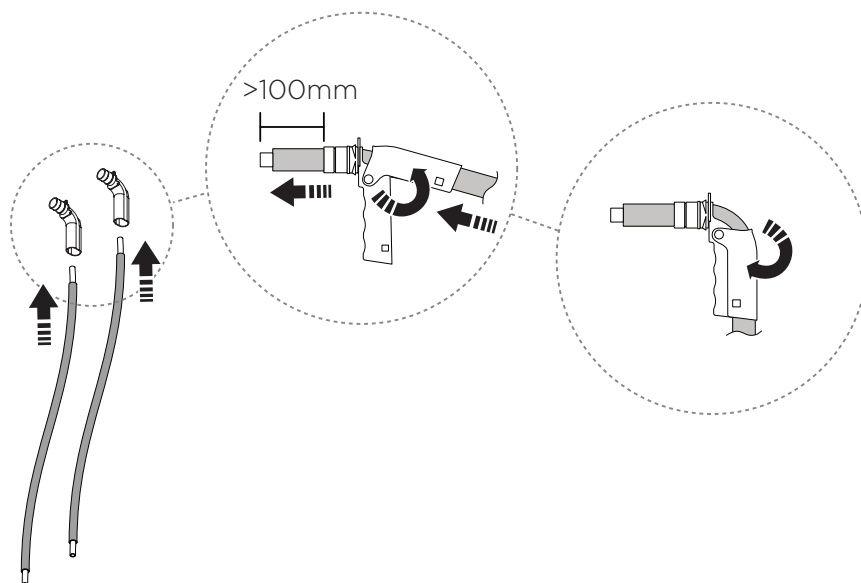


If installing Orbital Shower without the hand shower or with third-party components, please note that the following steps need to be adapted to the chosen installation scenario. When using third-party components, make sure to fulfill **Orbital's requirements** [10] and follow the supplier's instructions.

1. Drill holes in the stud between the diverter and the Wall Box.



2. Install the PEX pipes in the conduit elbows. The PEX pipes should protrude a minimum of 100 mm.

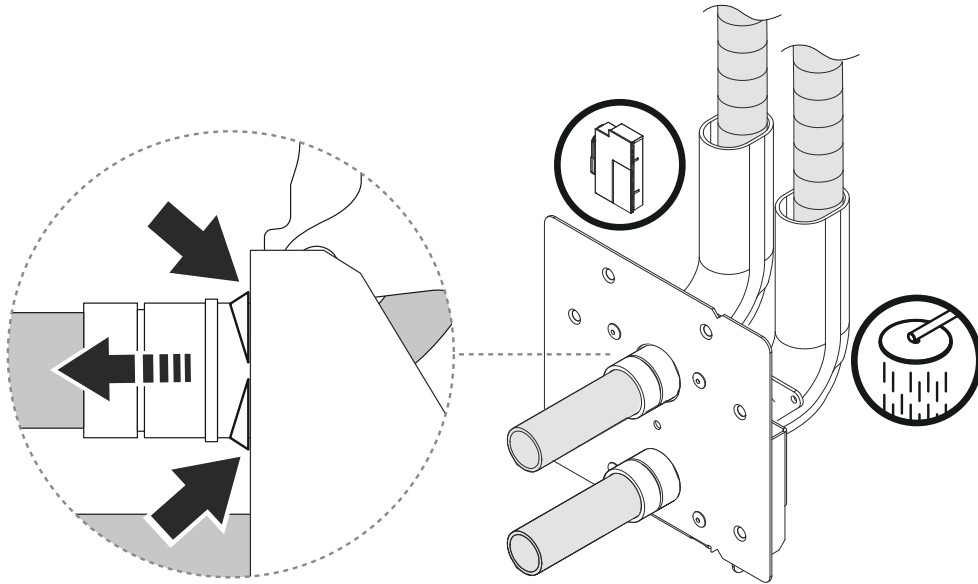


3. Install the conduit elbows into the wall fixture.

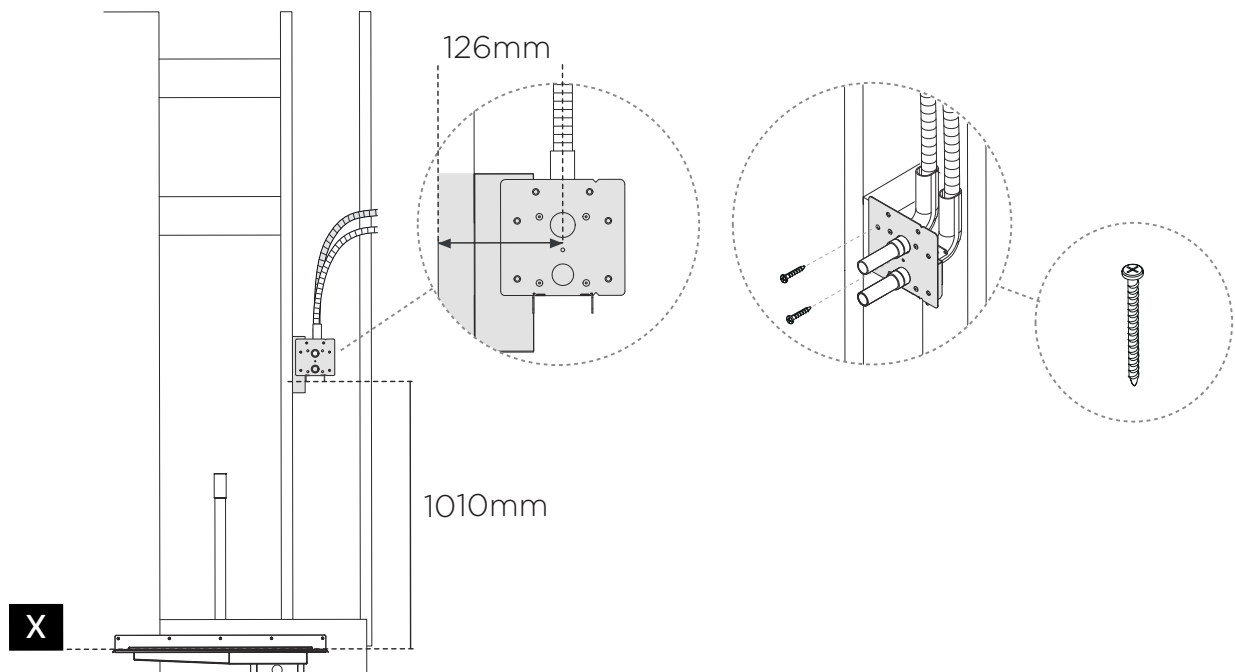


**CAUTION**

- The Core shall be connected to the top inlet.
- The shower head shall be connected to the bottom inlet.

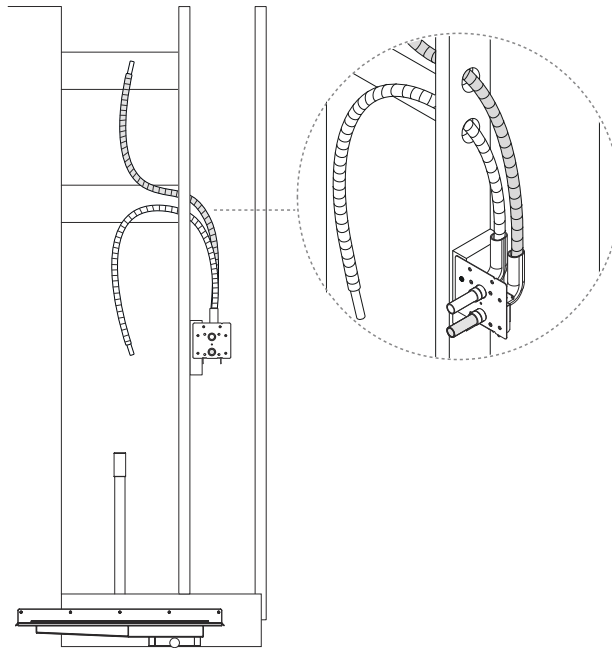


4. Mount the wall fixture to the stud.

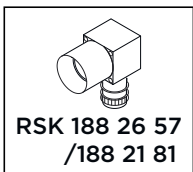


**x3** Countersunk stainless steel screw

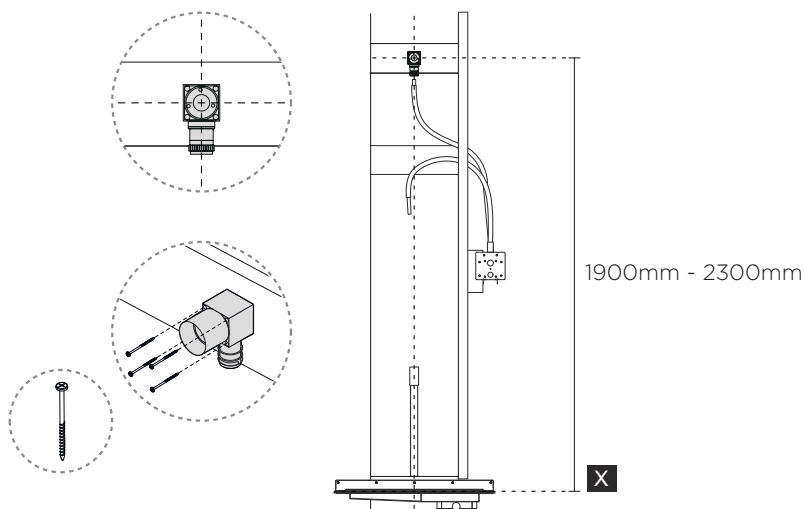
5. Pass the PEX pipes through the stud.



# Prepare Orbital Systems shower head

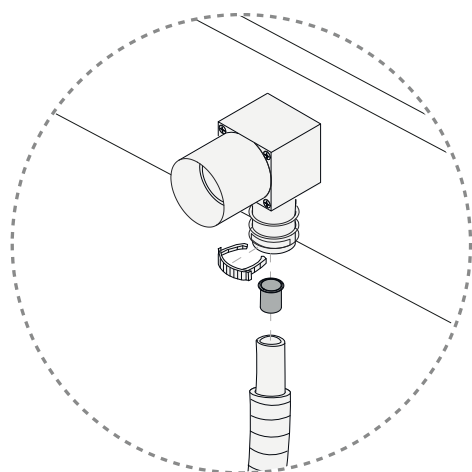


1. Measure and mark the placement of the wallbox UNI Push. Mount the wallbox with four screws from the front, and follow the provided instructions. Installation should be performed according to industry rules.

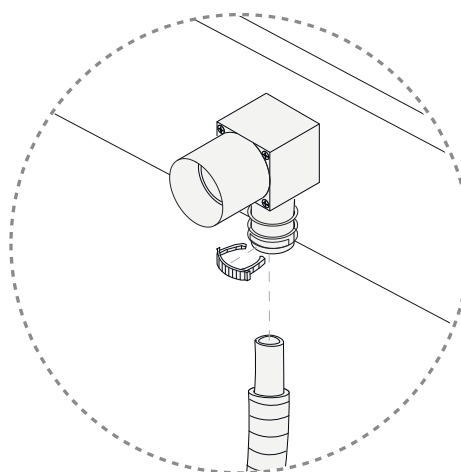


**x4** Pan head stainless steel screw

2. Make sure that the support sleeve is inserted into the pipe and that the pipe is fully inserted, and past the o-ring, into the wallbox UNI Push.

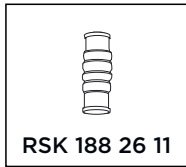
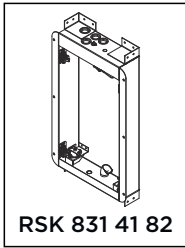


Wallbox UNI Push with external support sleeve

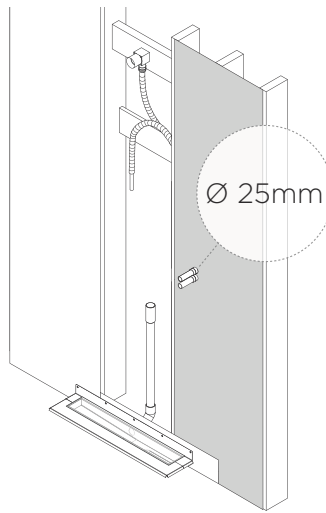


Wallbox UNI Push with integrated support sleeve

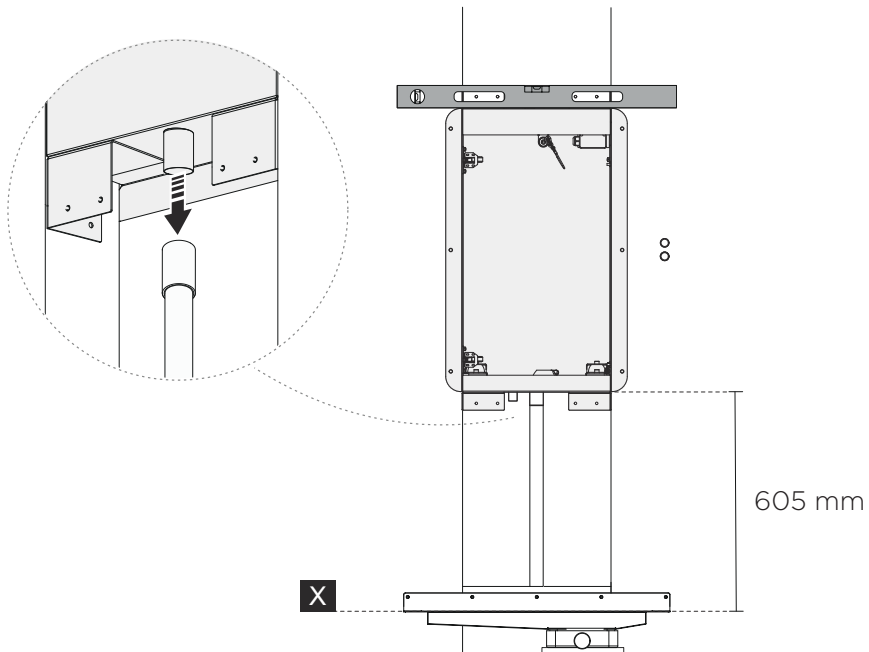
# Install Wall Box



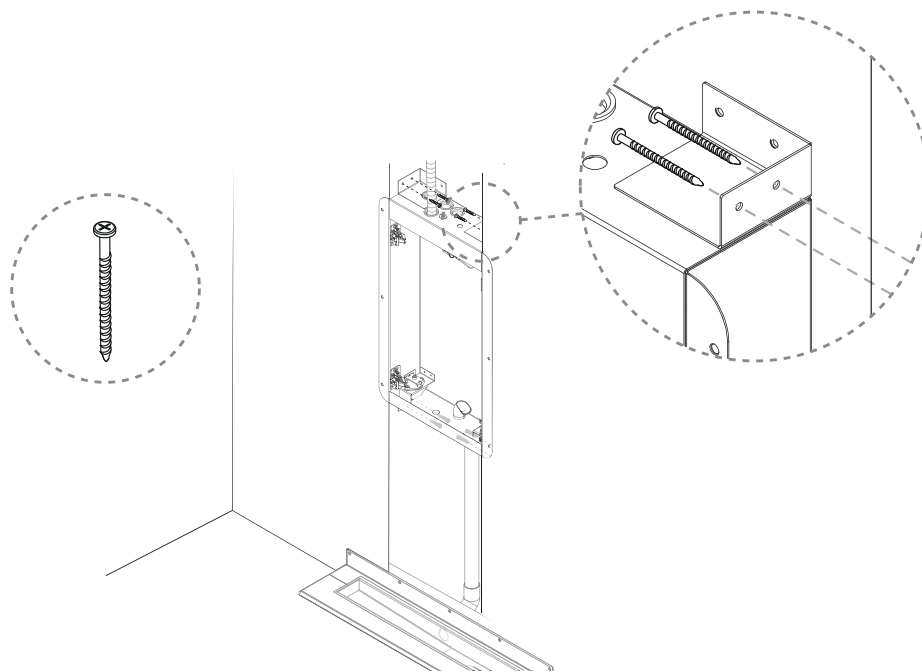
1. Apply wall covering in accordance with applicable industry standards. Drill the holes using a drill with a maximum diameter of 25 mm.



2. Lift the Wall Box into place and gently lower the cabinet's outlet into the drain pipe. Do not cut or extend the pipe.



3. Secure the Wall Box with the screws provided.



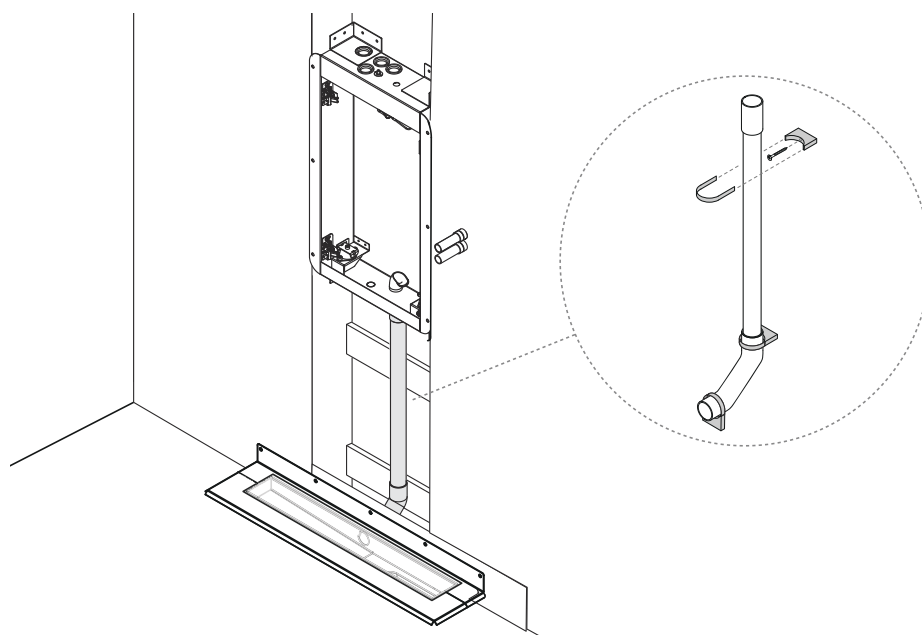
x8 Pan head stainless steel screw

4. Attach the pipe.

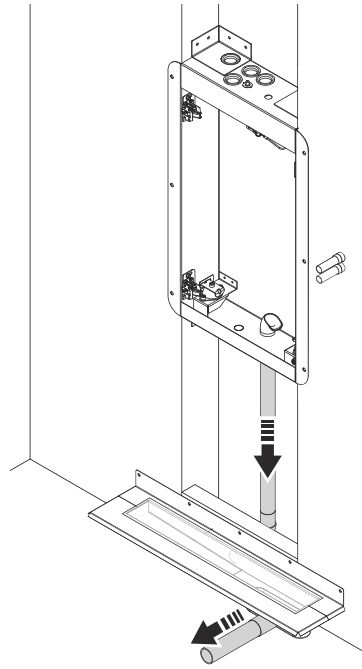


**2**

Perform the installation in accordance with current Industry Rules Säker Vatten Installation. See bulleted list **2** in chapter [Important installation steps \[14\]](#).

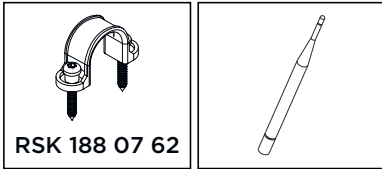


5. Perform a leakage check to eliminate leakage.





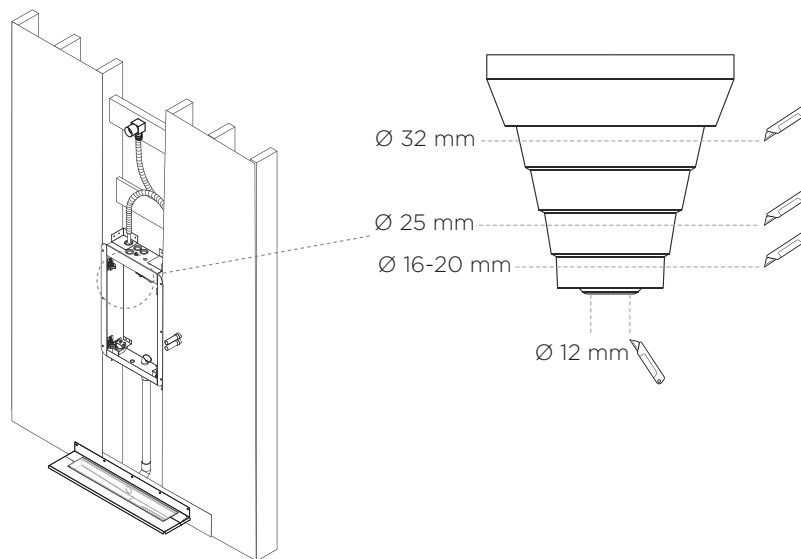
# Pipes & connections



## Provided by customer:

- PEX hose with conduit Ø25 mm, for incoming hot and cold water
- Power cable with conduit Ø16 mm
- Anchors

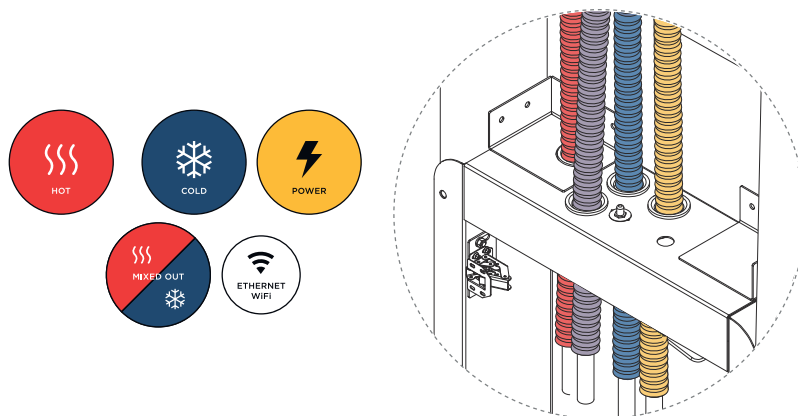
1. Cut the cones depending on the diameter of the conduit.



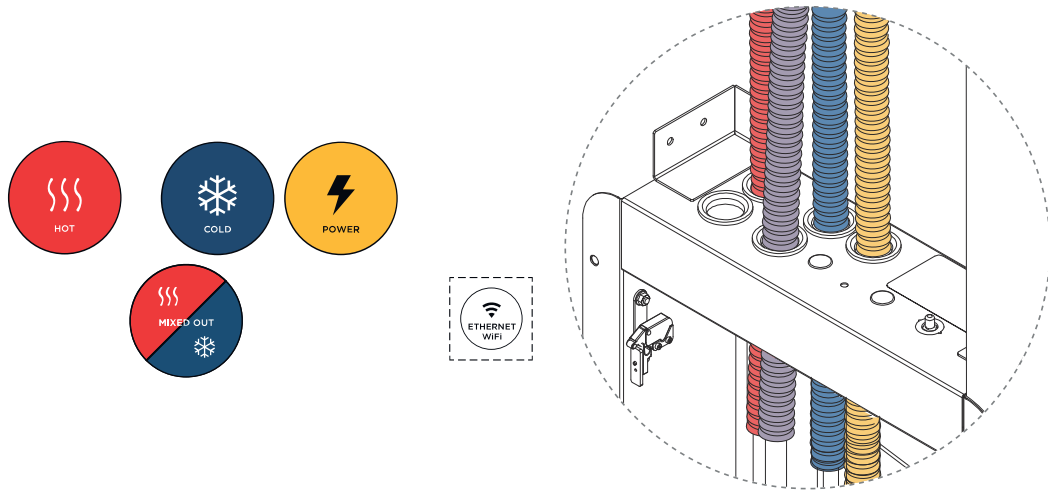
2. Draw the pipes to the correct position in the Wall Box.

*There are currently two versions of the Wall Box available. Double-check the sticker on top of the Wall Box to ensure the correct pipe placement.*

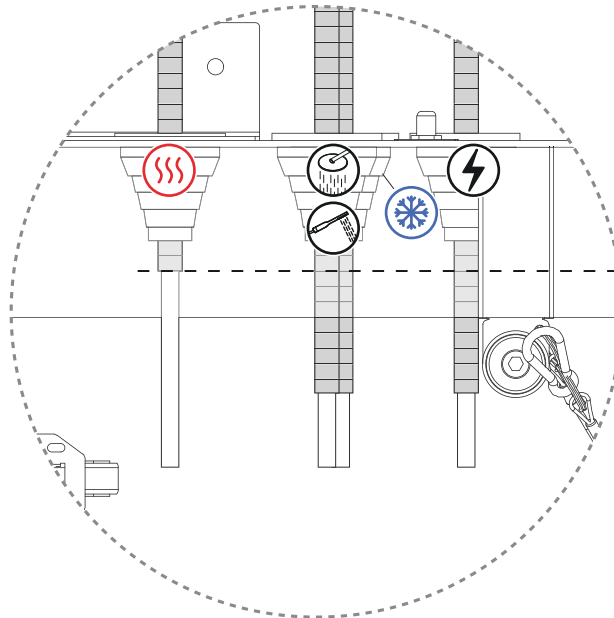
### Version 1



## Version 2



3. Cut the conduits at least 10 mm from the seal.

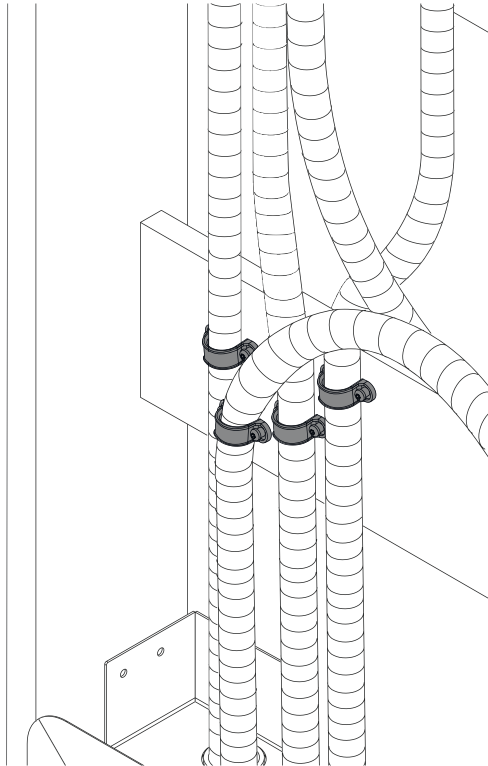


4. Anchor the pipes in accordance with applicable industry standards.



**NOTICE**

Anchors provided by Customer.

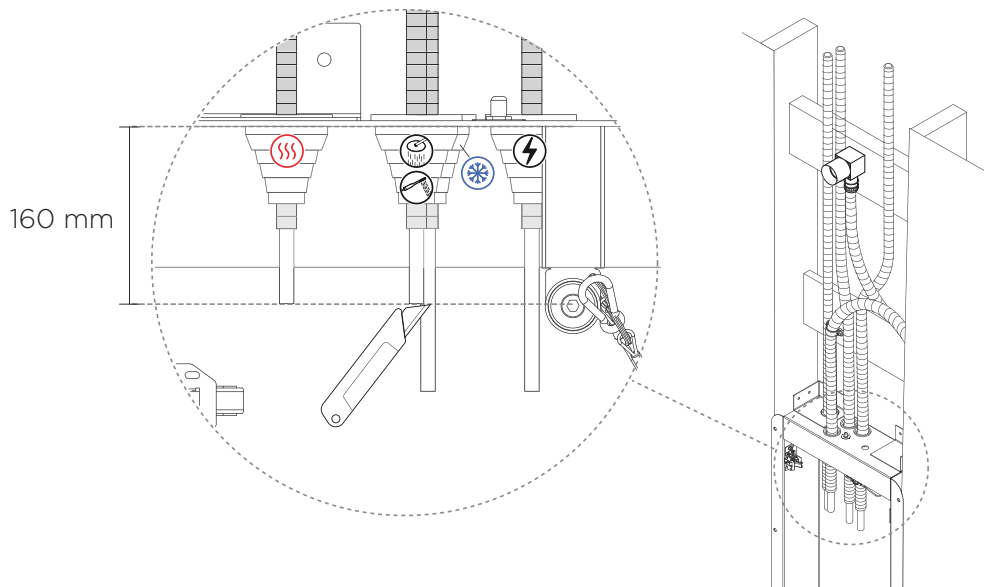


5. Cut the PEX.



**NOTICE**

Length might be adjusted depending on the chosen connector applied later.

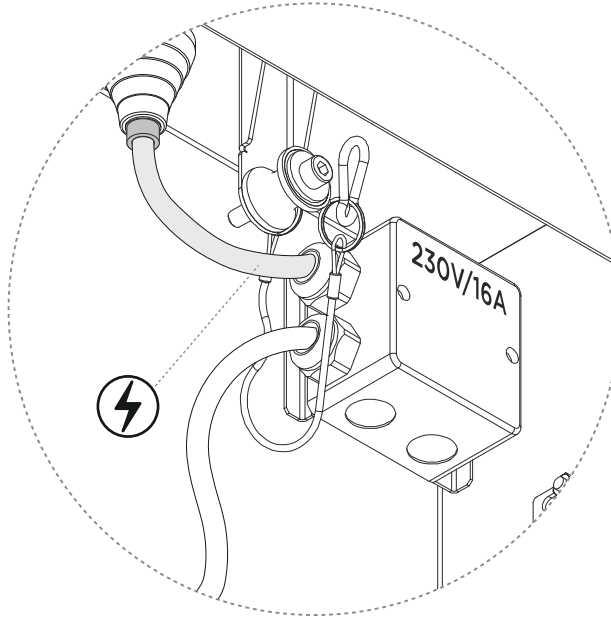


- 
6. Connect the electrical cable to the junction box.

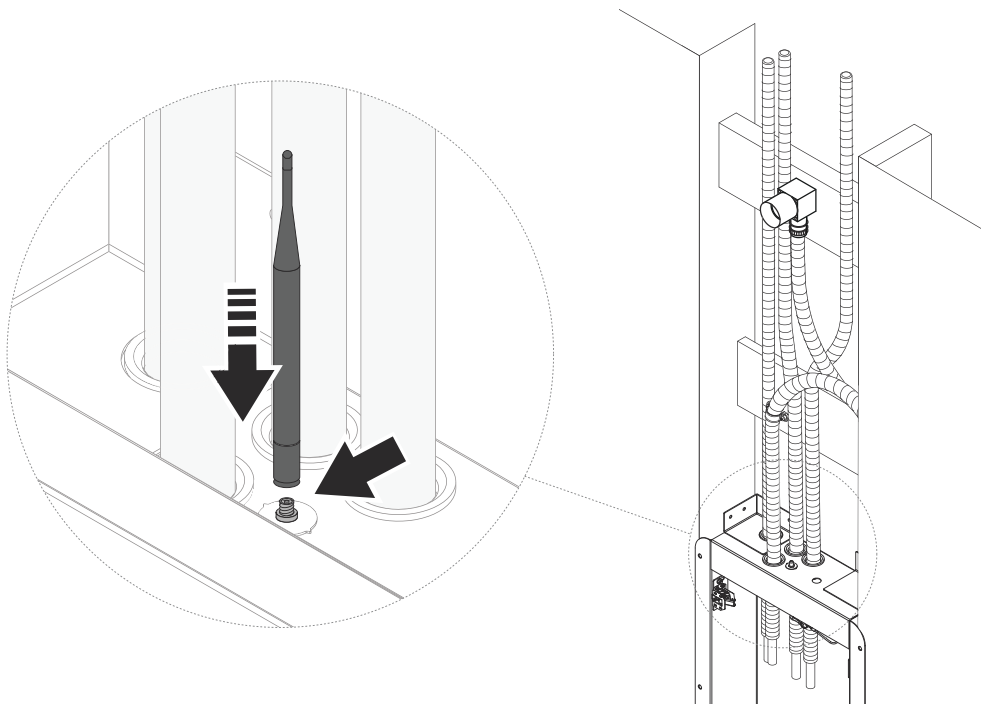


**WARNING**

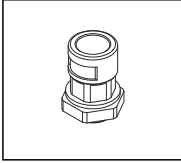
Electrical installation should be performed by a qualified electrician according to applicable industry standards and regulations.



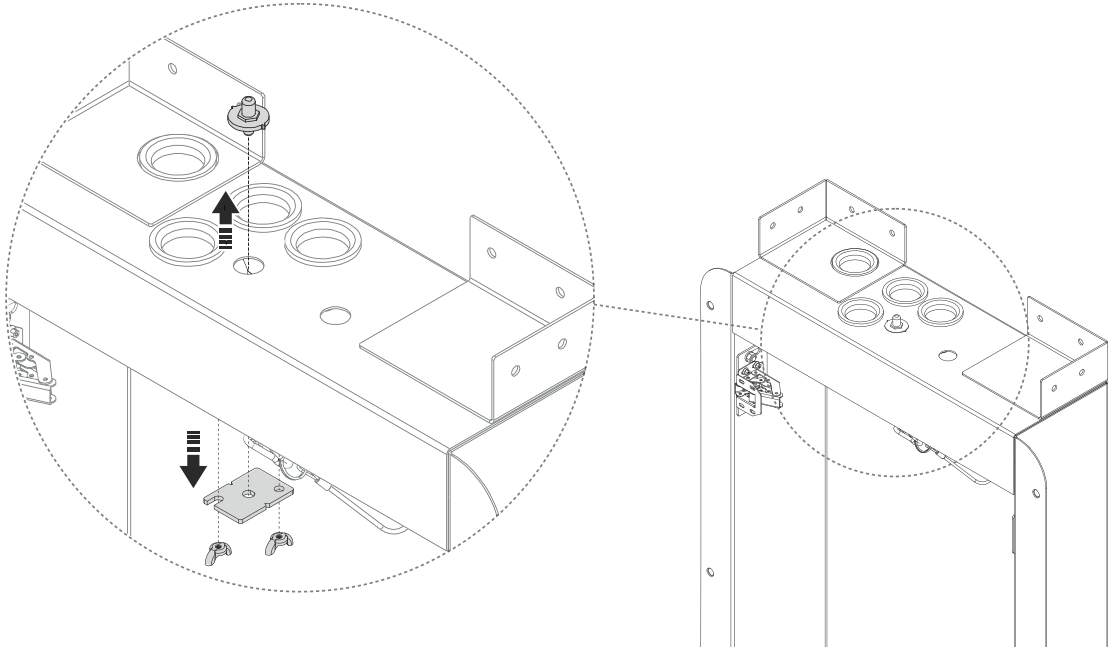
- 
7. Install the Wi-Fi antenna. If using an ethernet connection, see the next step.



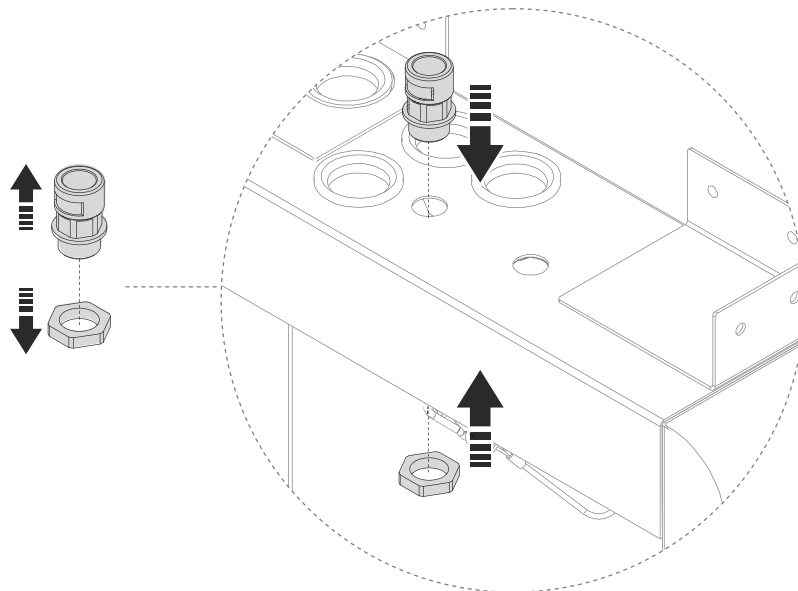
**8. Only valid for Orbital ethernet installation**



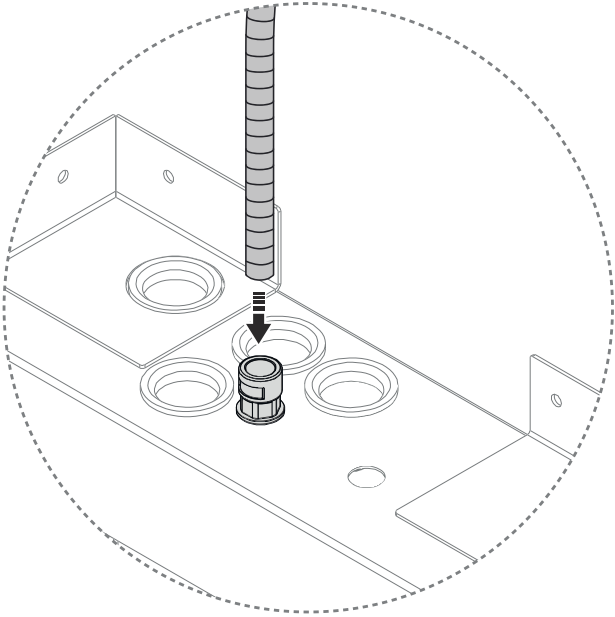
Unscrew the antenna bracket.



**9. Install the ethernet connector.**

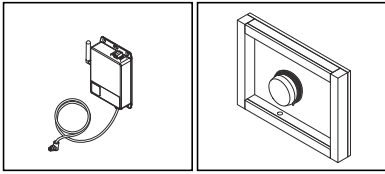


10. Connect the pipe to the connector.



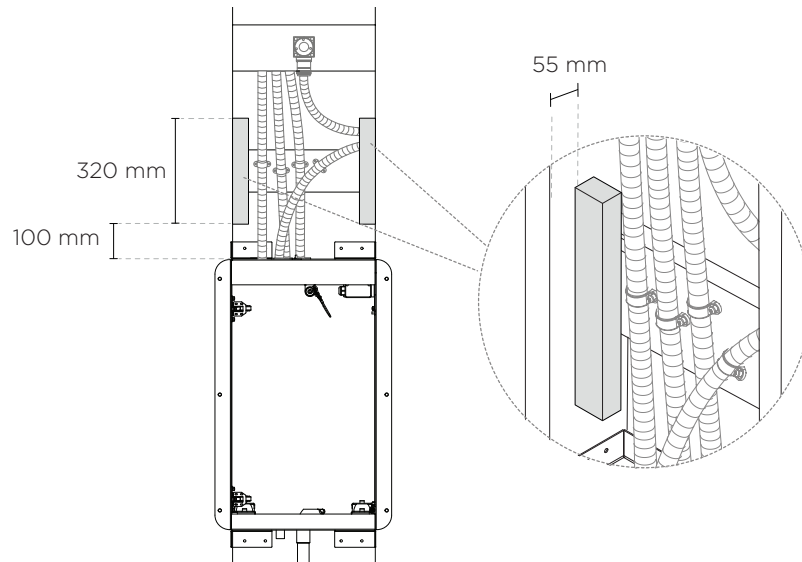
# Install Audio

Following steps are only valid for Orbital Audio

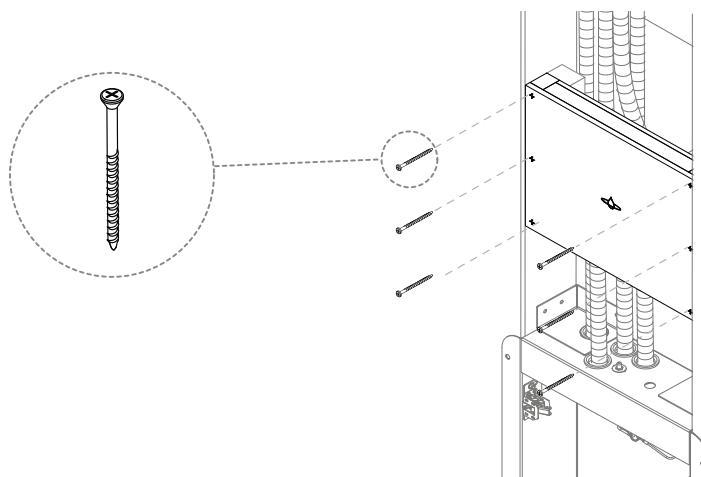


Check that the exciter is intact and attached to the back of Audio Fixture before starting the installation.

1. Install two studs in between the head shower and the Control Dial, where Audio Fixture will be placed. This placement gives the best conditions for the sound experience.



2. Place Audio Fixture in level with the front edge of the vertical studs. Pre-drill and attach with six stainless steel countersunk screws.

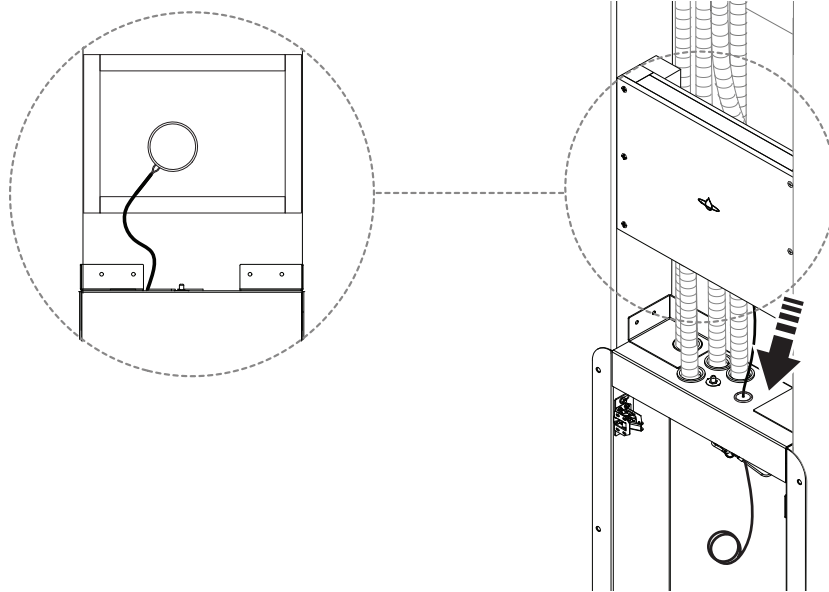


3. Draw the speaker cable from the back of Audio Fixture to the Wall Box.

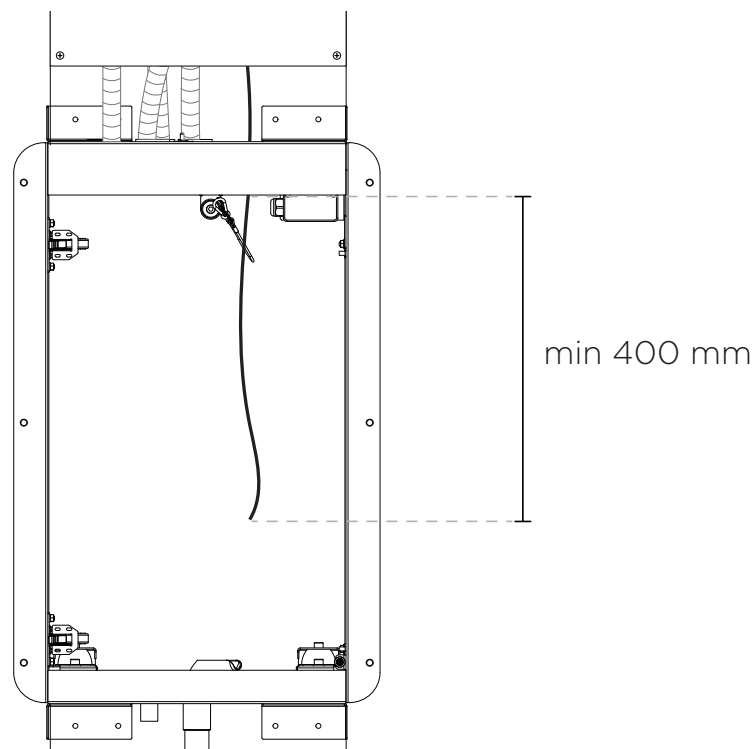


**CAUTION**

Use the supplied rubber plug.

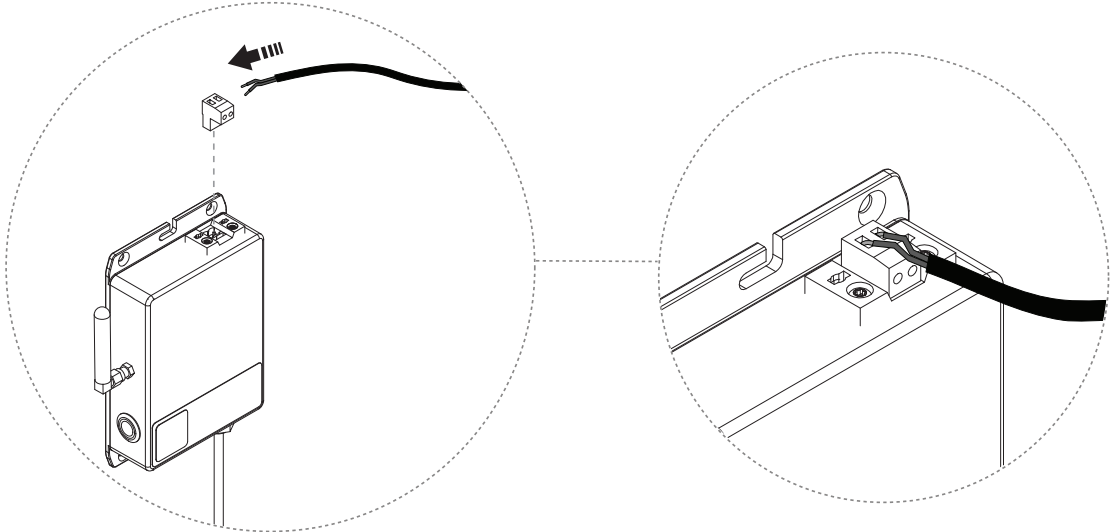


4. Cut the speaker cable to reach the amplifier, to a minimum of 400 mm.

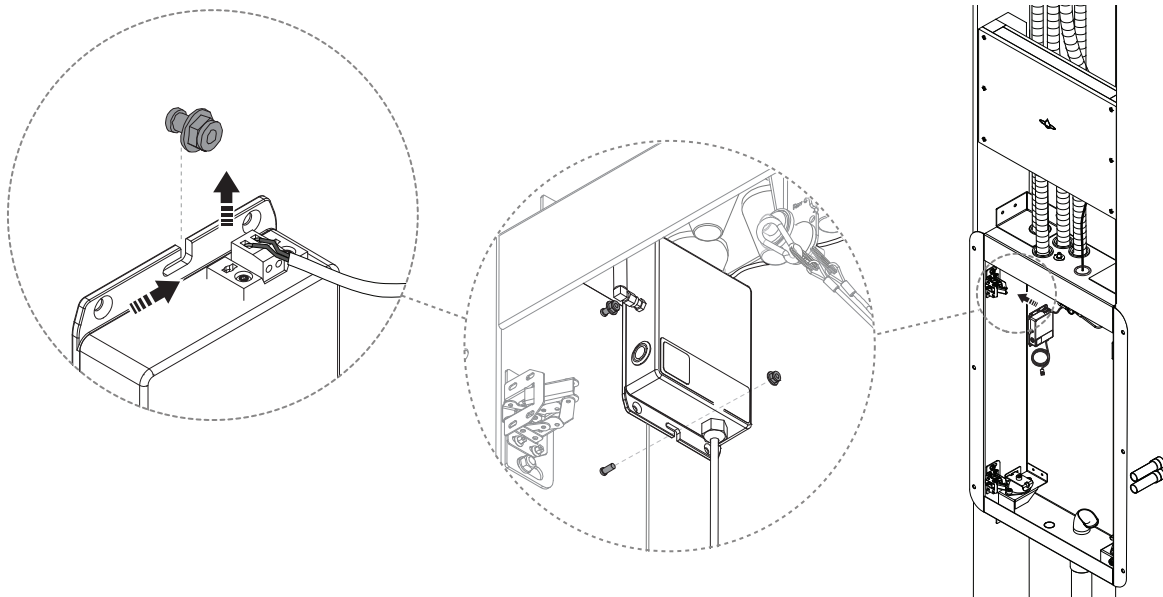




- 
5. Strip the speaker cable and attach it to the amplifier.

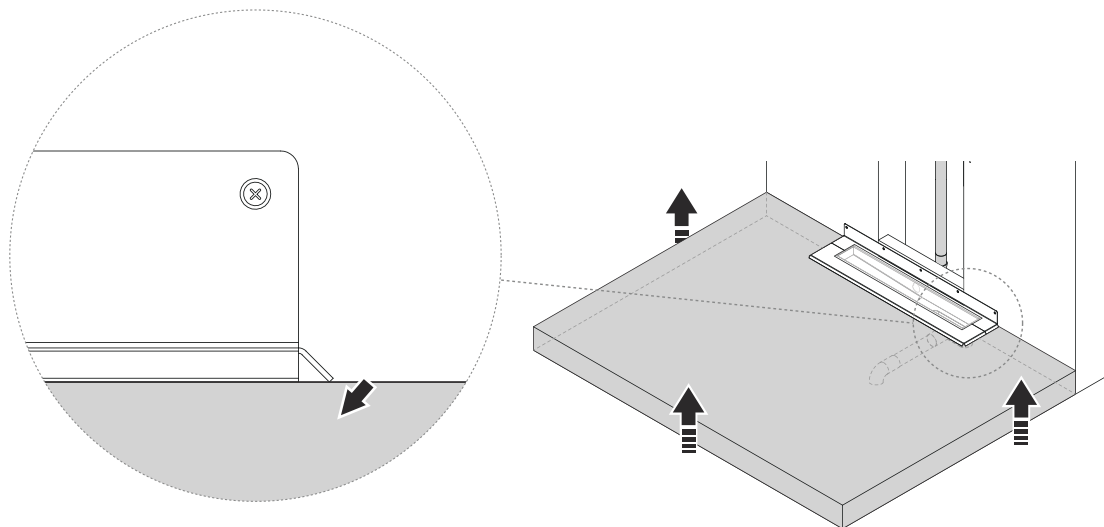


- 
6. Mount the amplifier in the Wall Box by loosening the nut from the lower bracket and threading the amplifier into the upper bracket. Attach the lower nut and tighten.

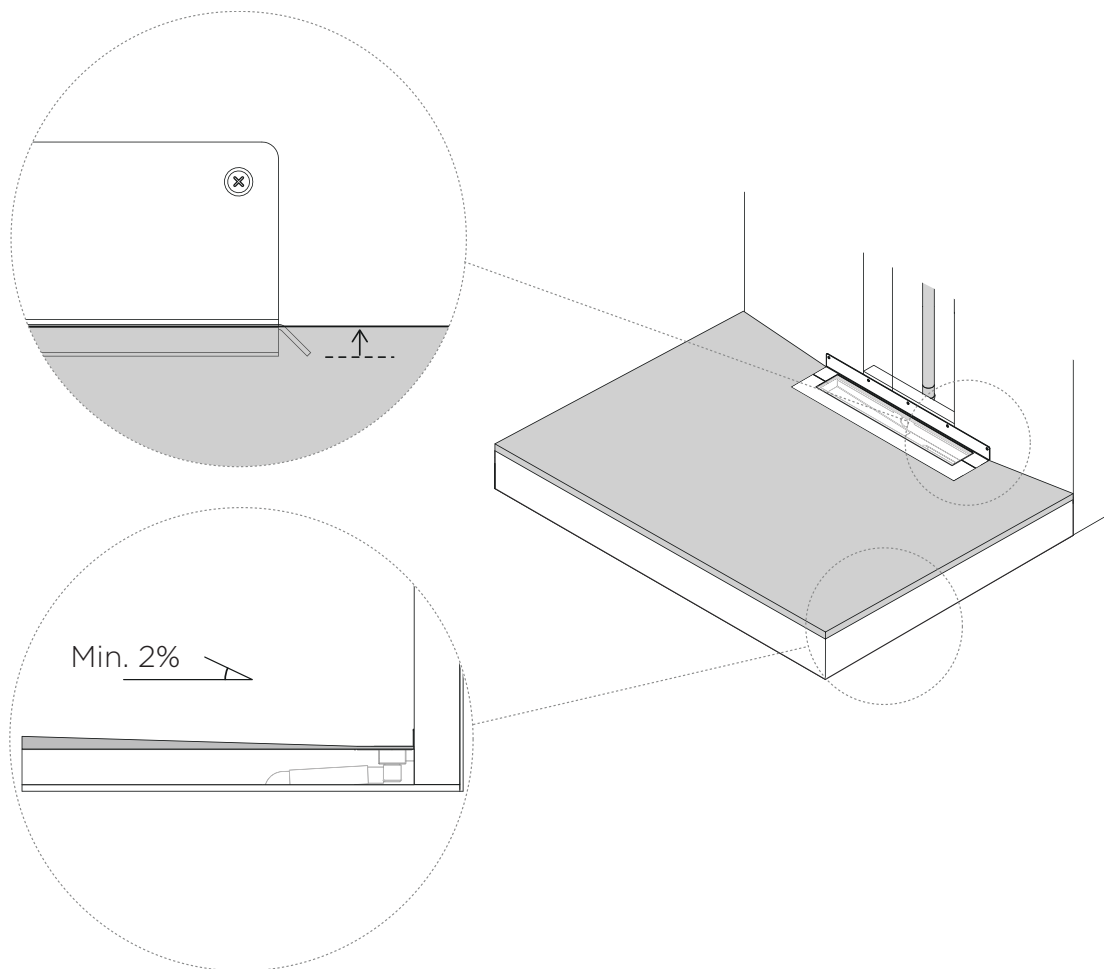


## Prepare for tiling

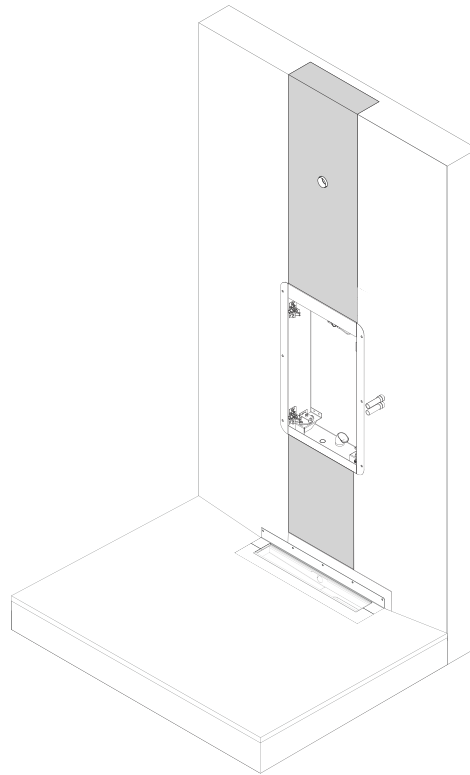
1. Raise the floor until it is level with the flange on the drain unit.



2. Form a step inclination towards the drain unit in accordance with applicable industry standards (min. 2% inclination). Make sure that the lowest part of the inclination is level towards the drain unit surface.



- 
3. Apply wall covering in accordance with applicable industry standards. Drill the holes using a drill with a maximum diameter of 25 mm.

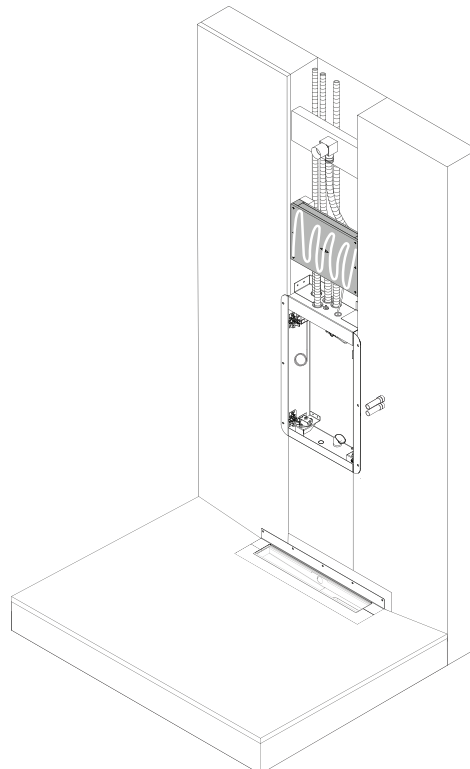


**Only valid for Orbital Audio installation**

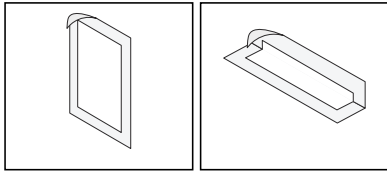


**CAUTION**

Make sure to apply construction glue to all wallboard layers.



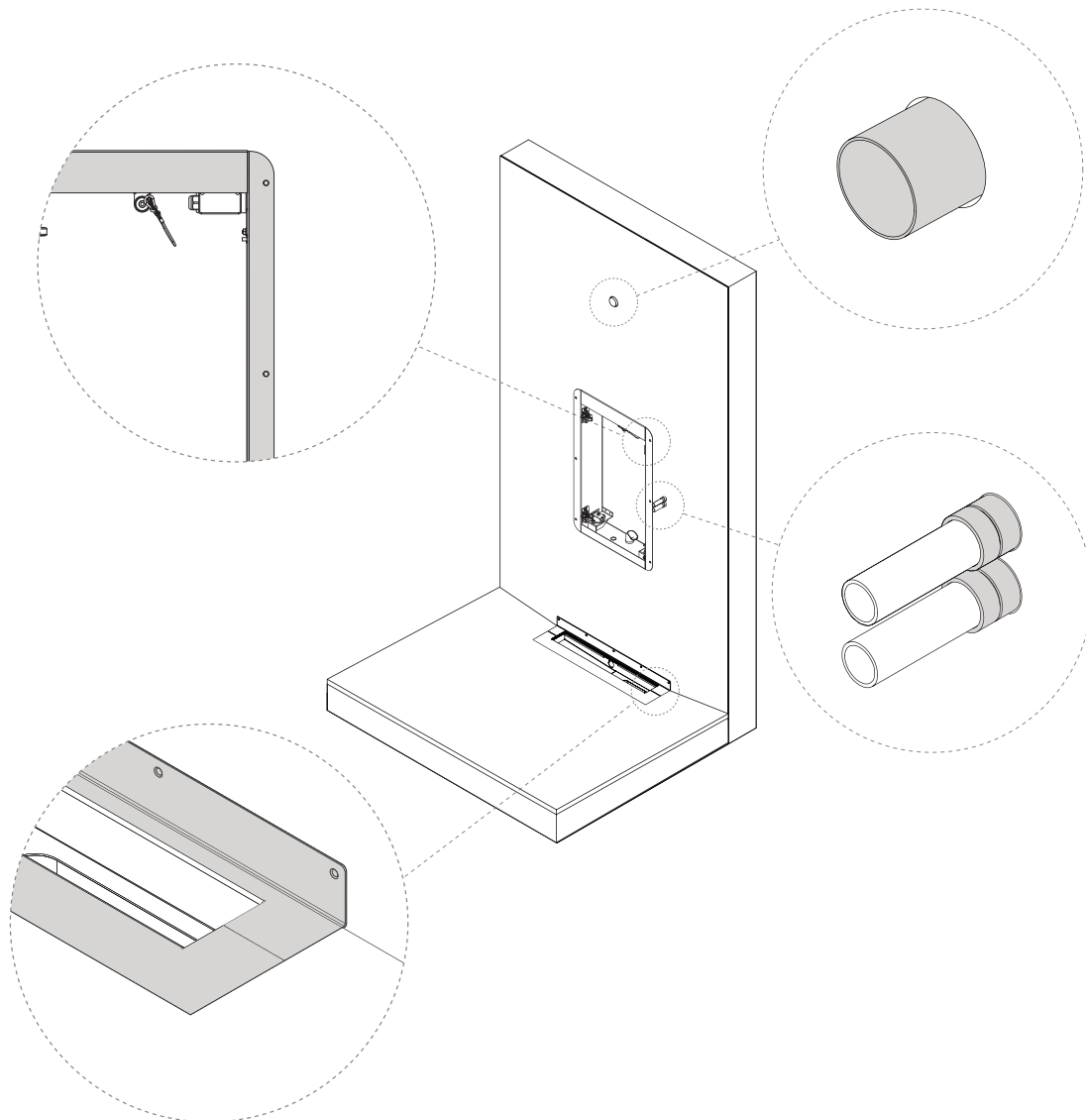
## Apply waterproofing membrane



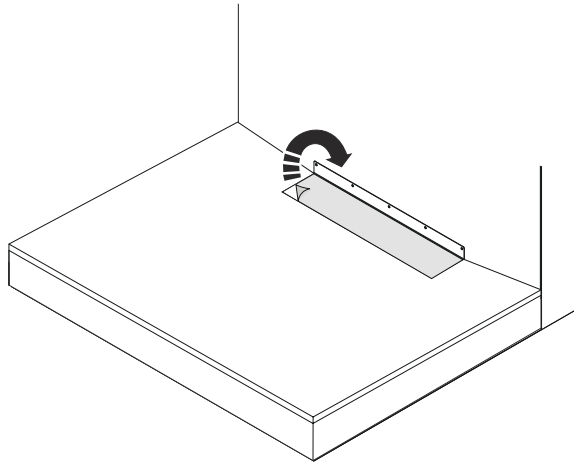
### Provided by Customer:

- Waterproofing conduit membrane for the diverter
- Waterproofing conduit membrane for the shower head

Waterproofing membrane shall be applied around two penetrations in the wall and on the metal flanges of the Wall Box and the drain unit.



- 
1. Remove the protective cover from the drain unit.

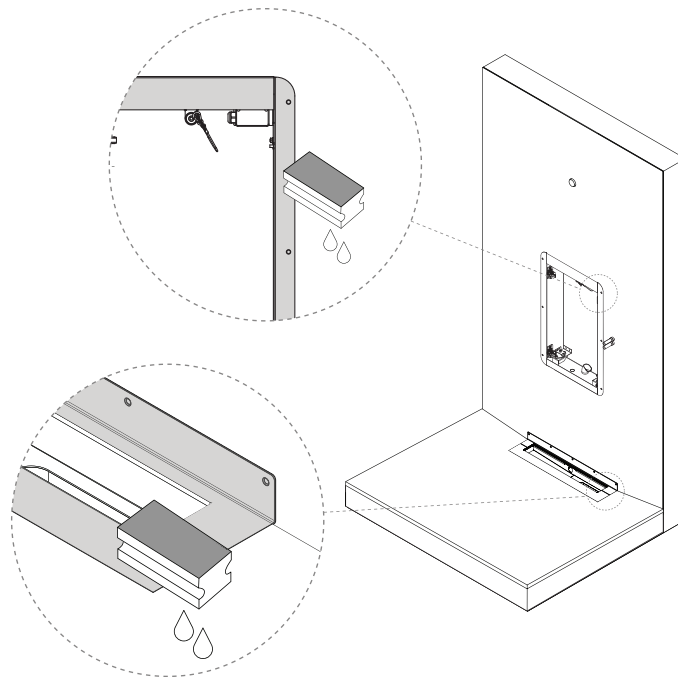


- 
2. Roughen the metal surface of the drain unit and the Wall Box and clean them with the included cleaning wipe.

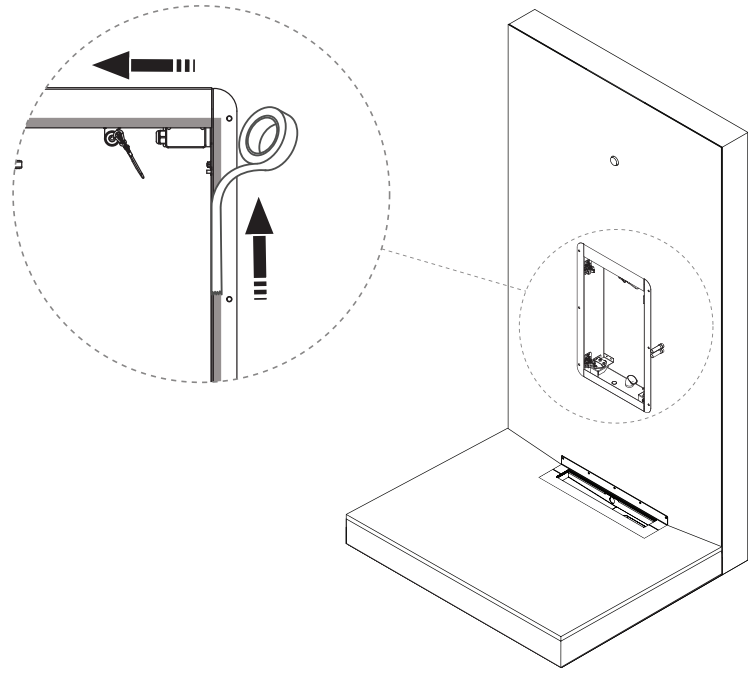


**NOTICE**

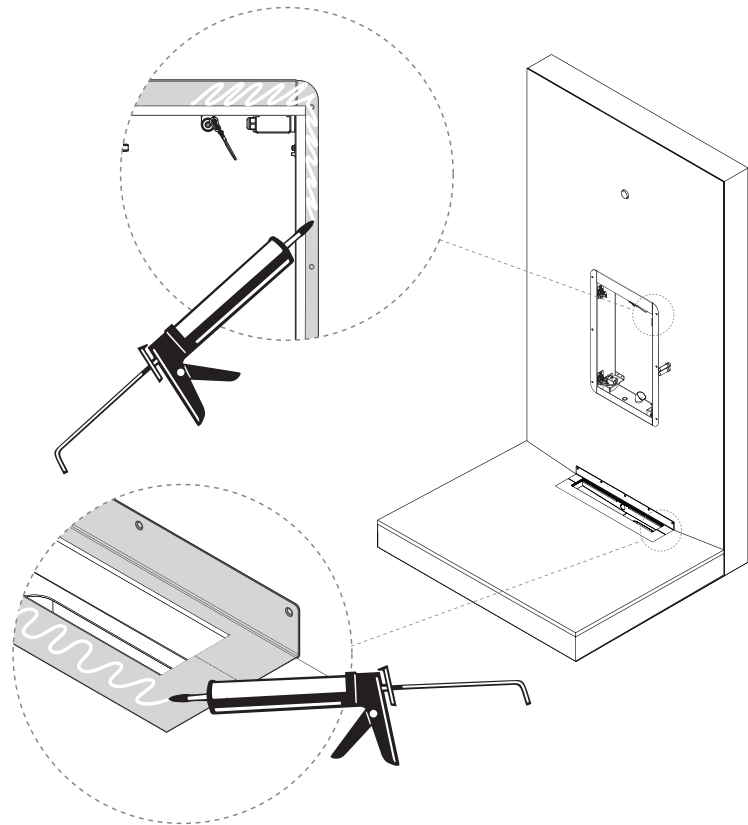
To achieve optimal bonding, all surfaces should be clean and free of adhesion reducing substances (e.g. dust, acid, grease).



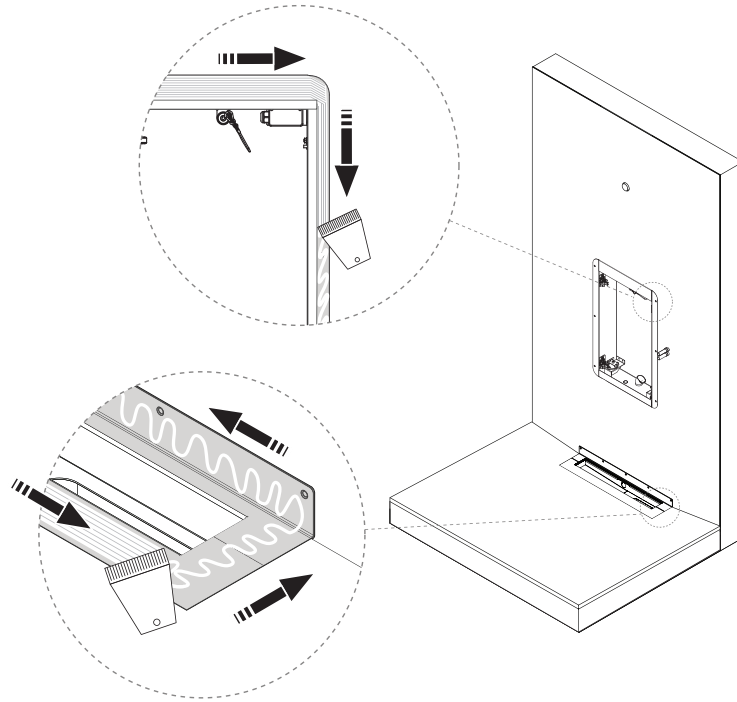
3. Mask the black lacquered part of the Wall Box flange with tape.



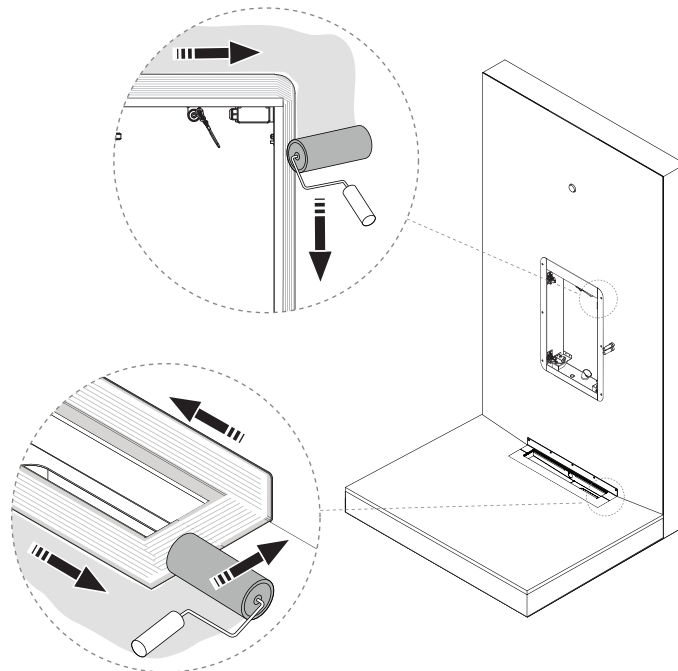
4. Apply waterproofing glue on the metal flanges of the Wall Box and drain unit.



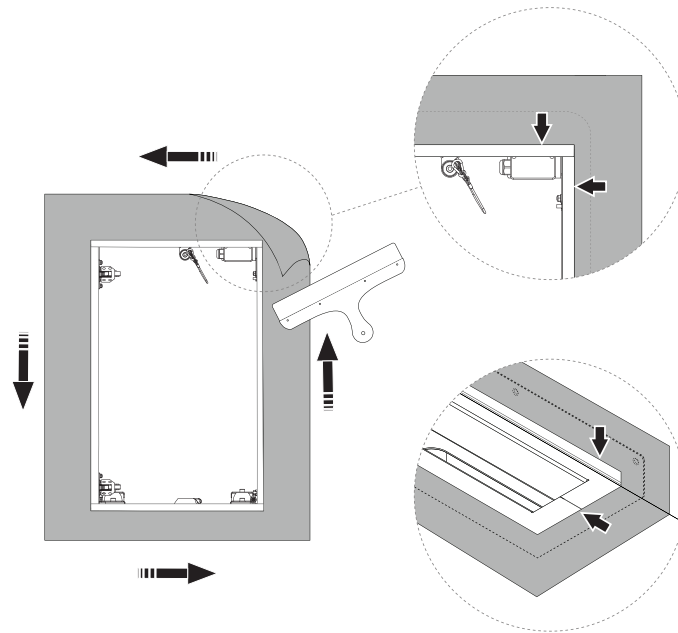
- 
5. Spread the waterproofing glue with a fine-toothed glue spreader or brush.



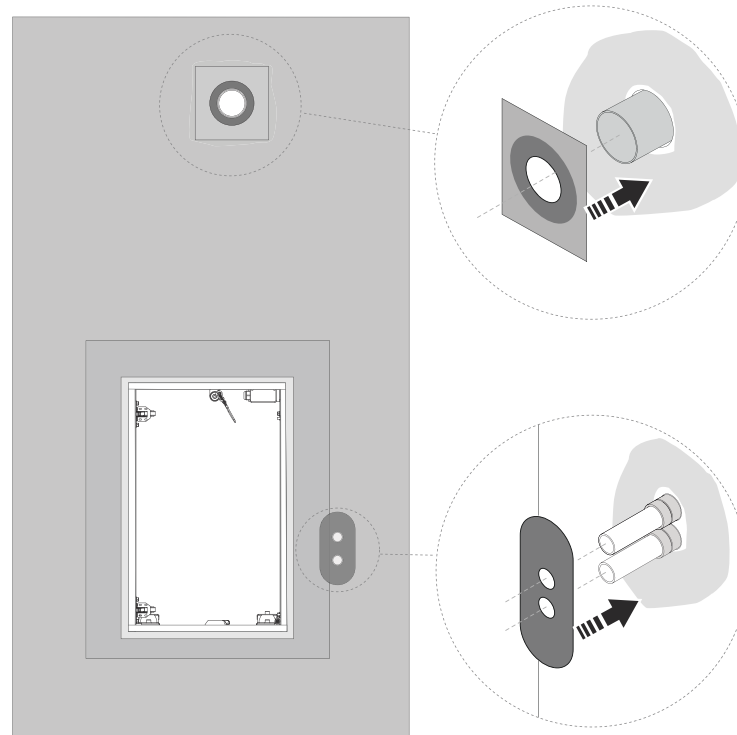
- 
6. Apply liquid membrane to the floor- and wall surfaces which the drain waterproofing membrane and the Wall Box waterproofing membrane are going to cover.



- 
7. Apply the enclosed waterproofing membranes around the Wall Box and the drain unit. Firmly apply pressure and remove air pockets using a smoothing tool. Make sure no blisters or creases occur. Cover both the floor and the wall when mounting the drain waterproofing membrane.

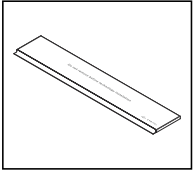


- 
8. Apply waterproofing conduit membrane according to the chosen manufacturer to seal the conduits from the wall. Ensure the remaining surfaces gets waterproofed according to the chosen waterproofing membrane manufacturer and applicable industry standards.



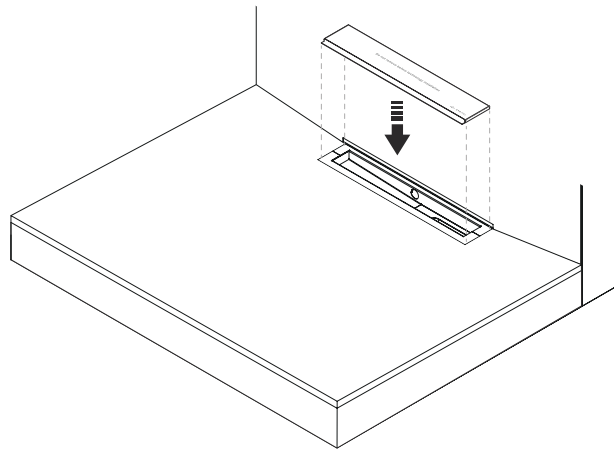


## Tiling

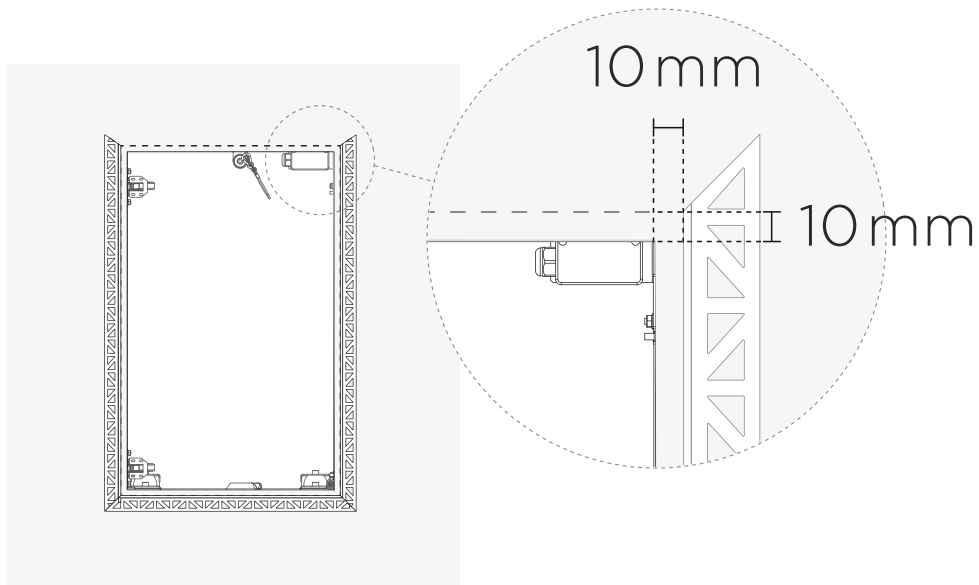


- The tile thickness on the wall and floor can be a maximum of 10 mm.
- Do not smear fix onto the black lacquered area on the Wall Box.

1. Install the tiling frame set.



2. Mount the tile trim 10 mm from the inside of the Wall Box on all four sides.

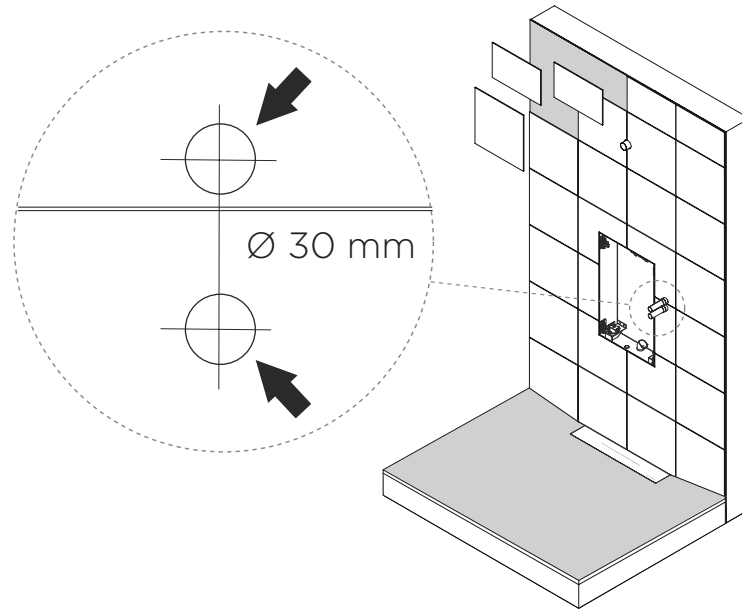


3. Tile the wall and floor, and cut holes in the tiles with a drill max of 30 mm.



**CAUTION**

- Do not cut the PEX Hoses, they need to stick out for coming installation steps.
- If using a drill larger than 30 mm in diameter, the diverter will not fully cover the holes.

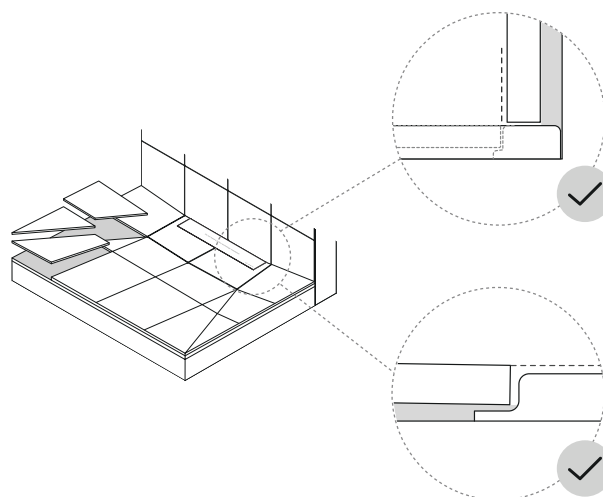


4. Make sure the tiles do not overlap the grating, allowing it to be removed.

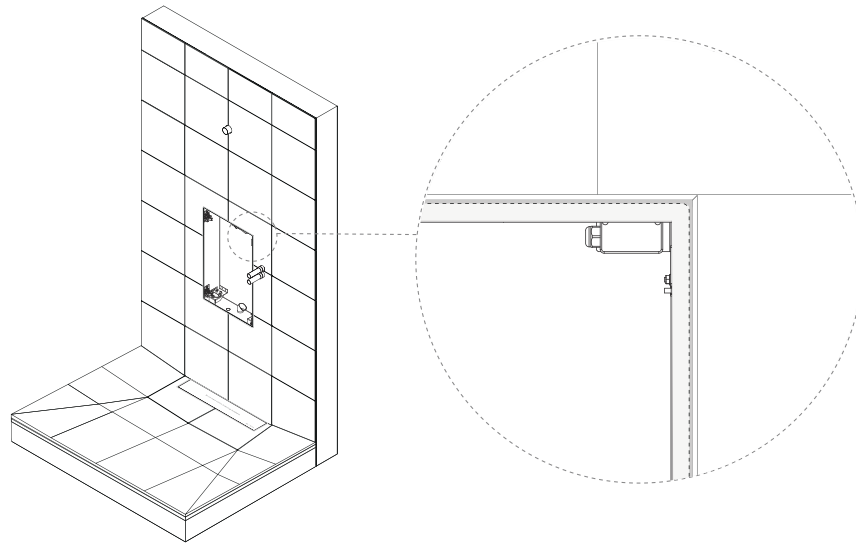


**NOTE**

The floor tiles must be level with or higher than the frame. To achieve this, they must be at least 8 mm thick.



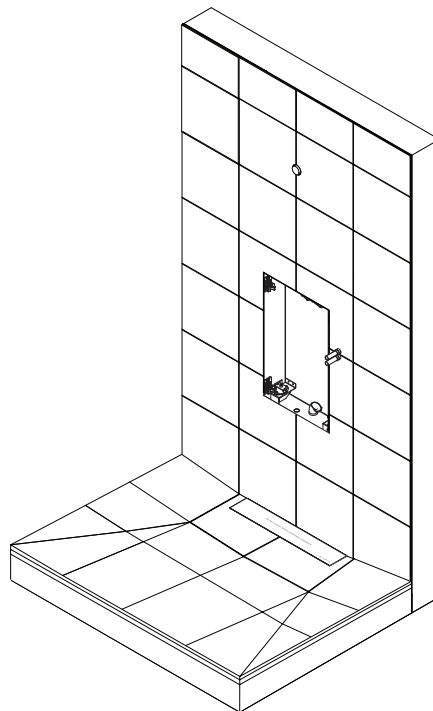
- 
5. Apply silicone sealant around the floor drain and in the rest of the bathroom. Place a thin silicone joint in the meeting with the tile strip and the Wall Box, mainly along the bottom side of the cabinet hole.



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**Fixture Installation completed.**

The next step is to install the Orbital Shower Core, Control Dial, shower head, and hand shower (including the diverter and hand shower holder). See the Technology Installation Manual for details.



# ORBITAL



CERTIFIED SPACE TECHNOLOGY