



Fixture Installation

Orbital Shower Basic R3 (OS8733-E)

5-06-0010

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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.

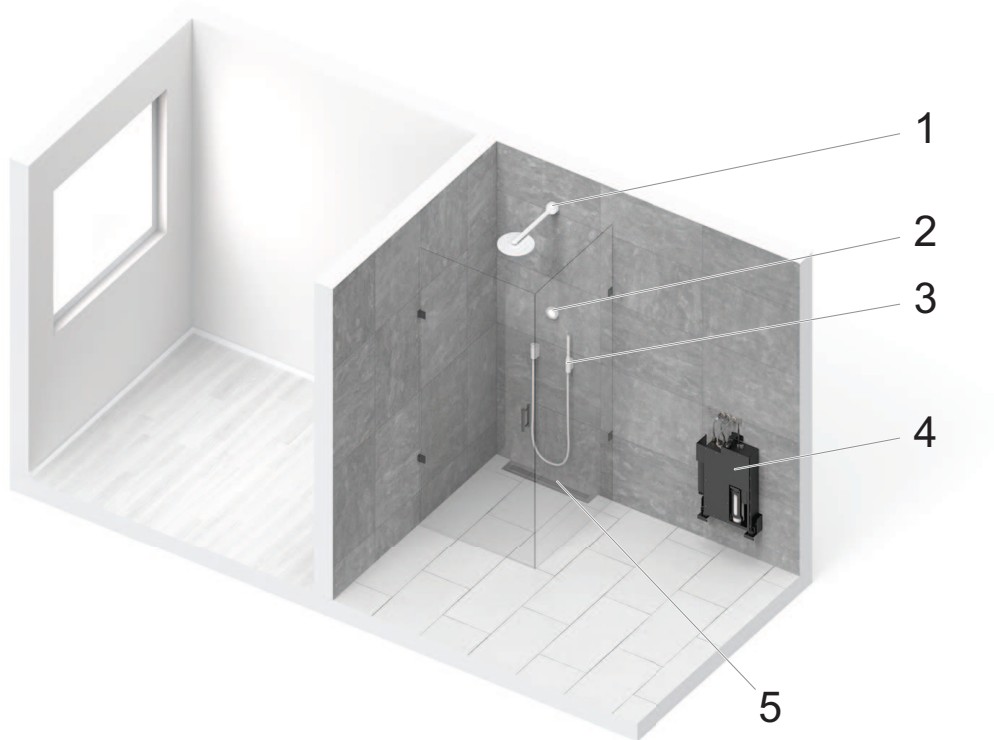
Repairs should only be carried out by Orbital Systems.

Contact us

- support@orbital-systems.com
- 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 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 mm² (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 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

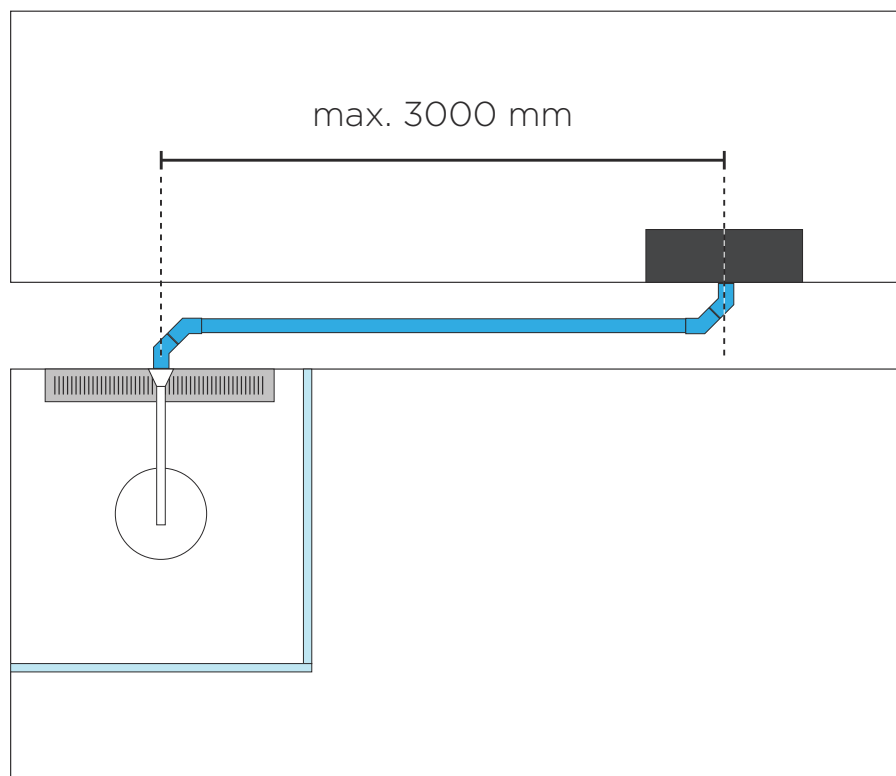
Installation Overview

Orbital Shower Installation Options

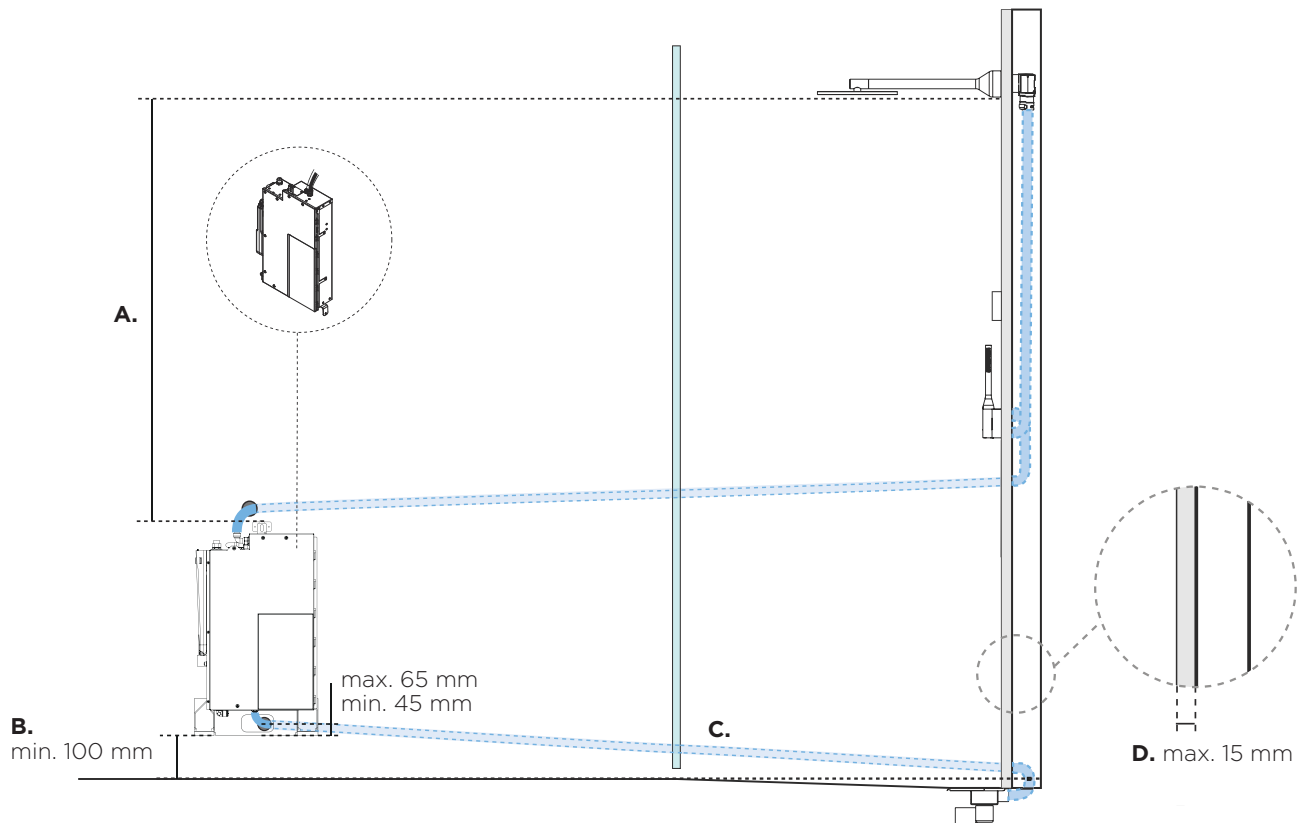
The distance between the center of the Orbital Shower Core and the center of the drain unit must not exceed 3000 mm.

When installing the Basic model, the Orbital Shower Core is installed outside the shower area. The limitation in the distance, ensuring full system functionality, is a maximum of 3000 mm. The kit only allows for mounting on a wall.

Any bends in the sleeves and conduits going to and from the Orbital Shower Core must be achieved using 45° angles. For example, to achieve a 90° bend, two 45° bends need to be used. When installing the Orbital Shower, no more than six 45° bends (a maximum of three 90° bends) can be used in total. These limitations apply to both horizontal and vertical bends.



Orbital Shower Installation Requirements

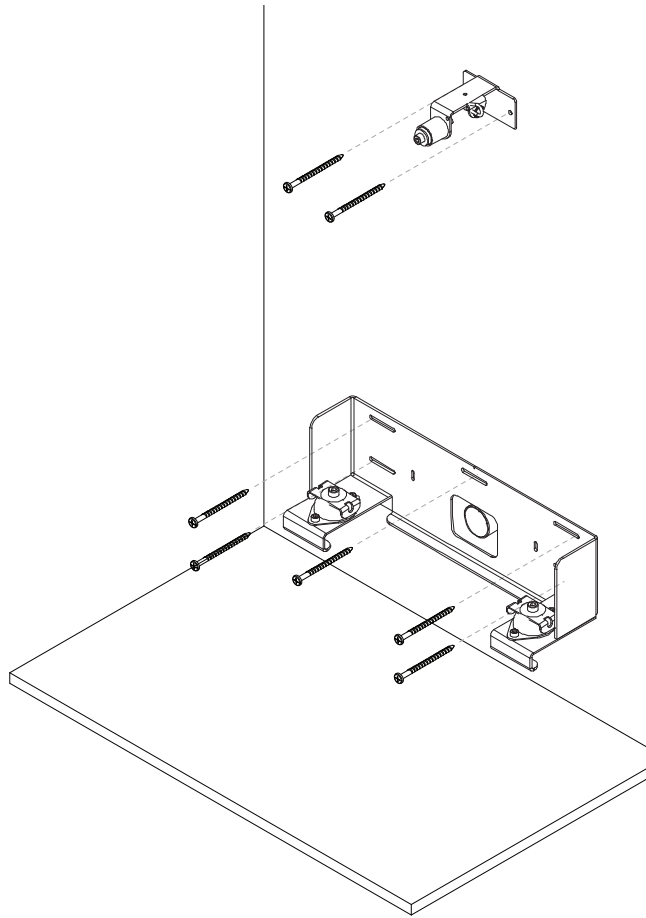


The following constraints apply to the configuration of system components:

- A.** The top of the Orbital Shower Core must be placed lower than the bottom of the head shower.
- B.** The Orbital Shower Core must be positioned a minimum of 100 mm above the finished floor level.
- C.** The piping between the Orbital Shower Core and the drain unit has to be built with a slope towards the drain unit and a maximum distance of 3000 mm.
- D.** The total thickness of wall surface materials must not exceed 15 mm (e.g. 10 mm tile + 5 mm tile adhesive).

Wall Installation

The weight of the Orbital Shower Core is approx. 25 kg. The surrounding structure must be able to support the forces that will stress the attachment points.



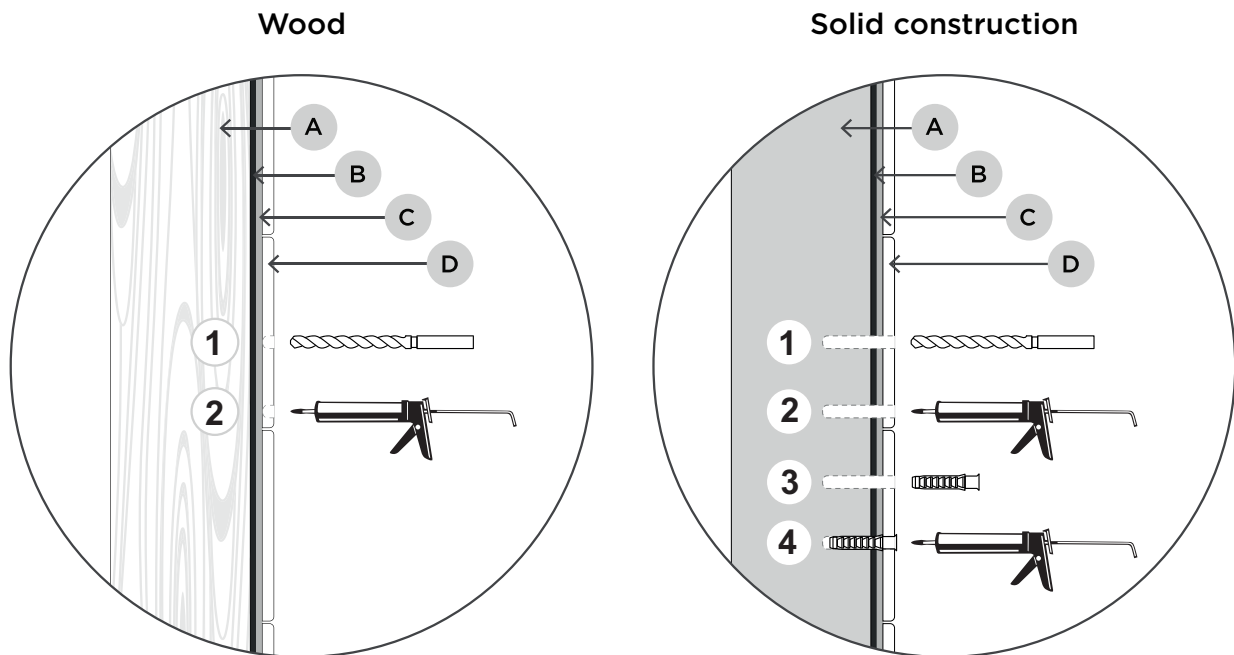
Seal mountings in wet zone

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.



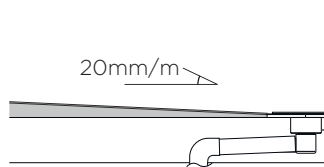
- **A:** Wood / Concrete
- **B:** Waterproofing membrane
- **C:** Tile adhesive
- **D:** Tile

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:

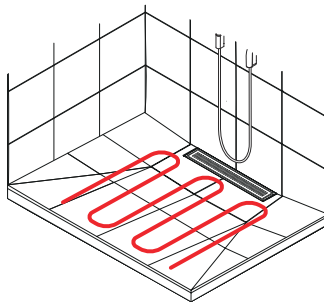
Floor inclination

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



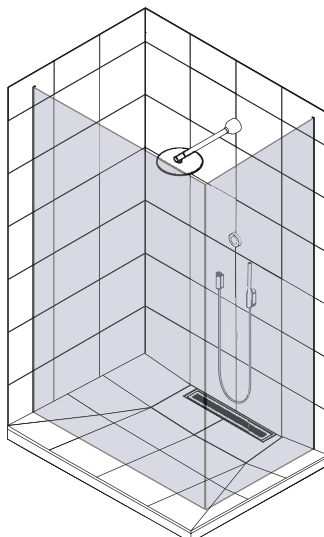
Underfloor heating

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

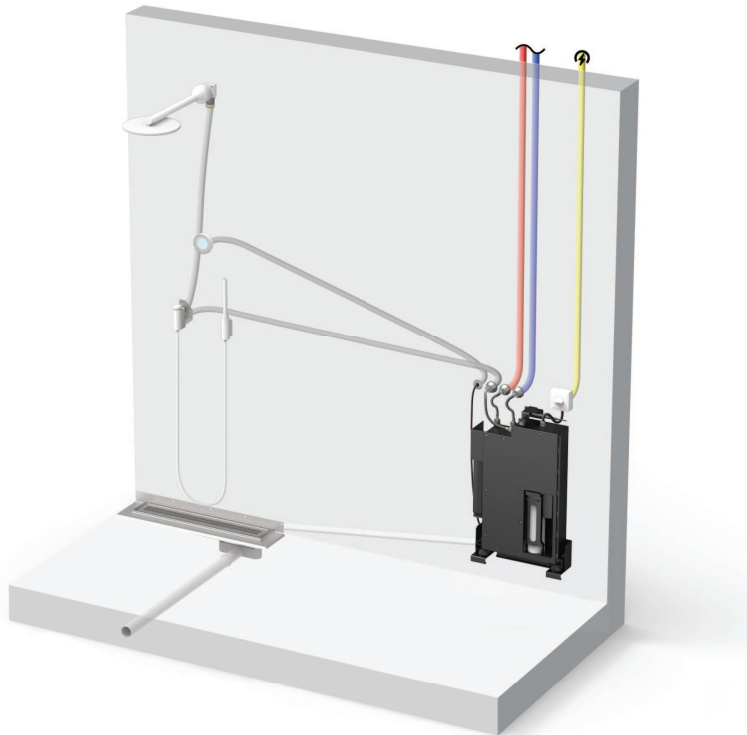


A fully enclosed shower area

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.



Shower Installation Overview



IMPORTANT

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

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.**

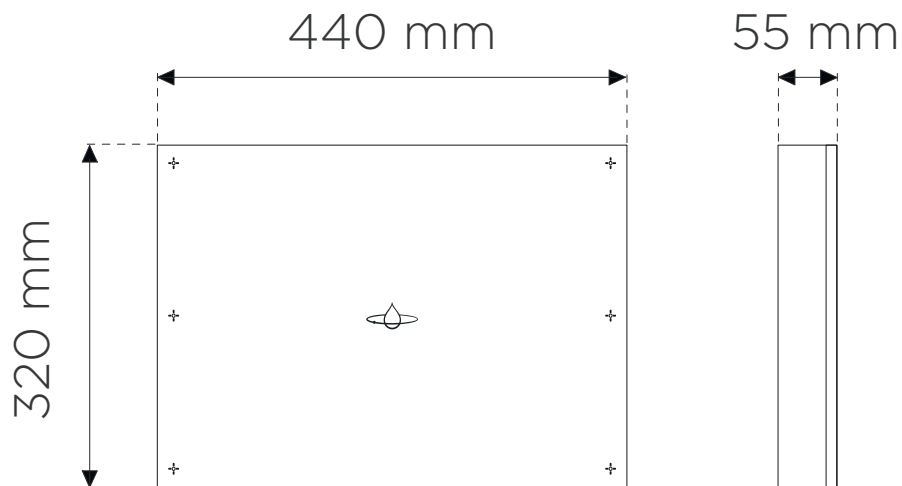
- They shall not have any flow restrictors.
- They should have as low back pressure as possible. Too much back pressure will result in weaker shower water flow, shorter filter lifespan and a higher pump sound.
- Preferably the shower heads and diverter individually have less than 1 bar back pressure 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.

Audio Installation

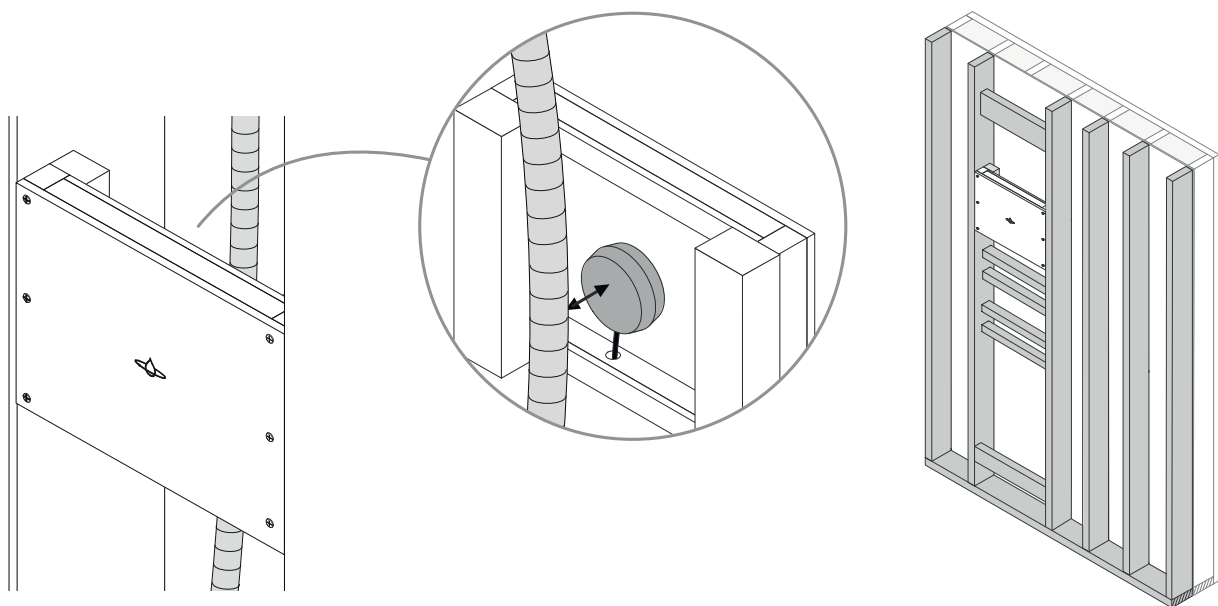
This information is relevant only for installations with Orbital Audio, which is an optional add-on product.

Installation Measurements

In the scenario displayed in this manual, the Audio Fixture is positioned horizontally. It can also be placed vertically. Note that it should always be placed in the shower area.



- **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.



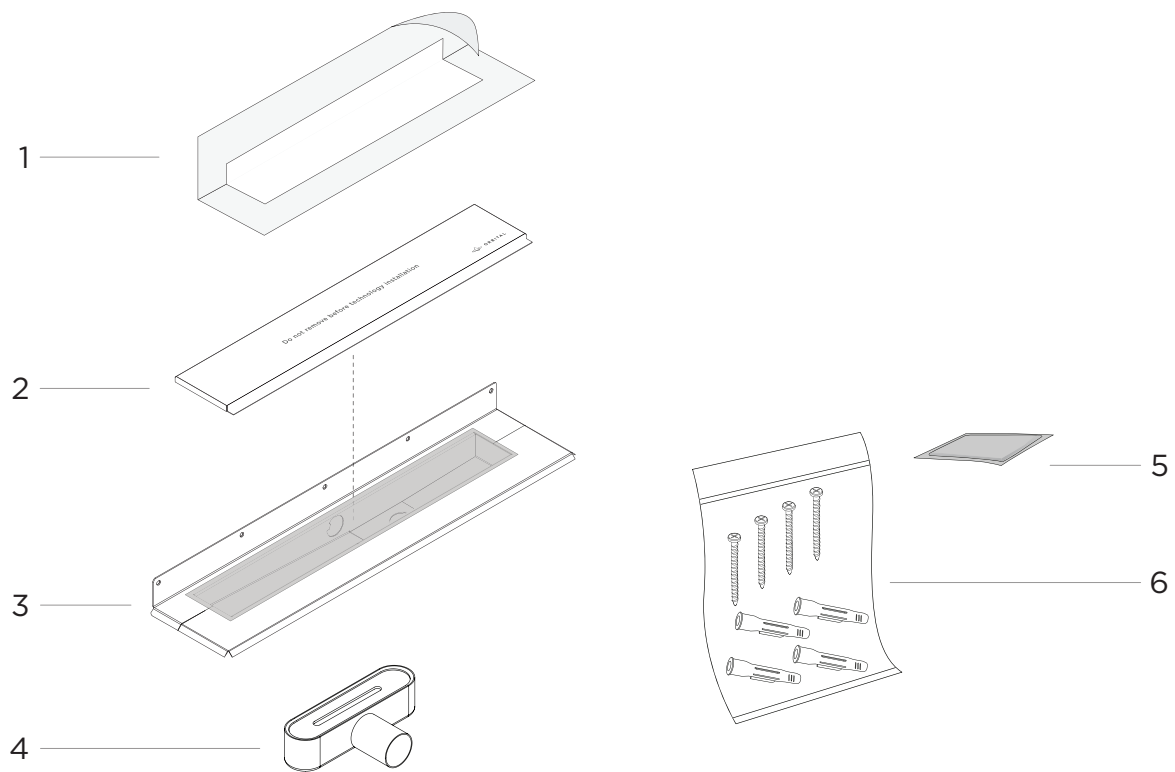
1

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

- 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.

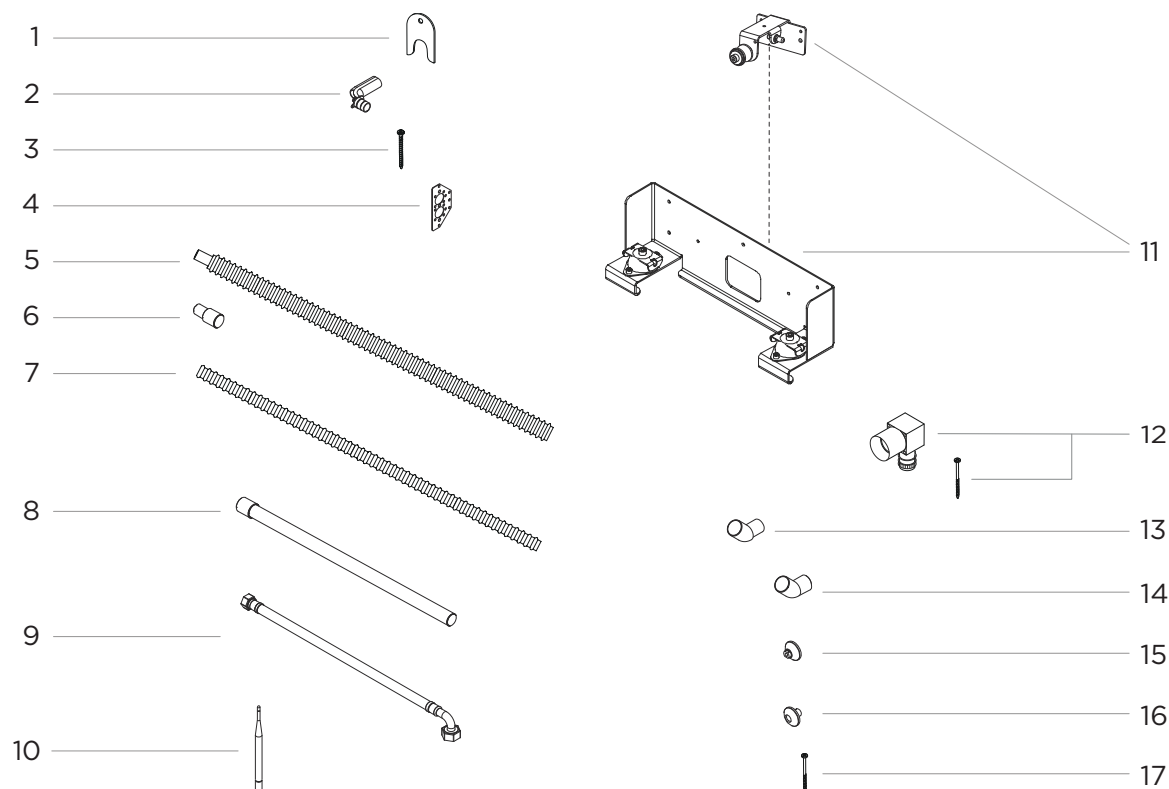
Component Overview

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

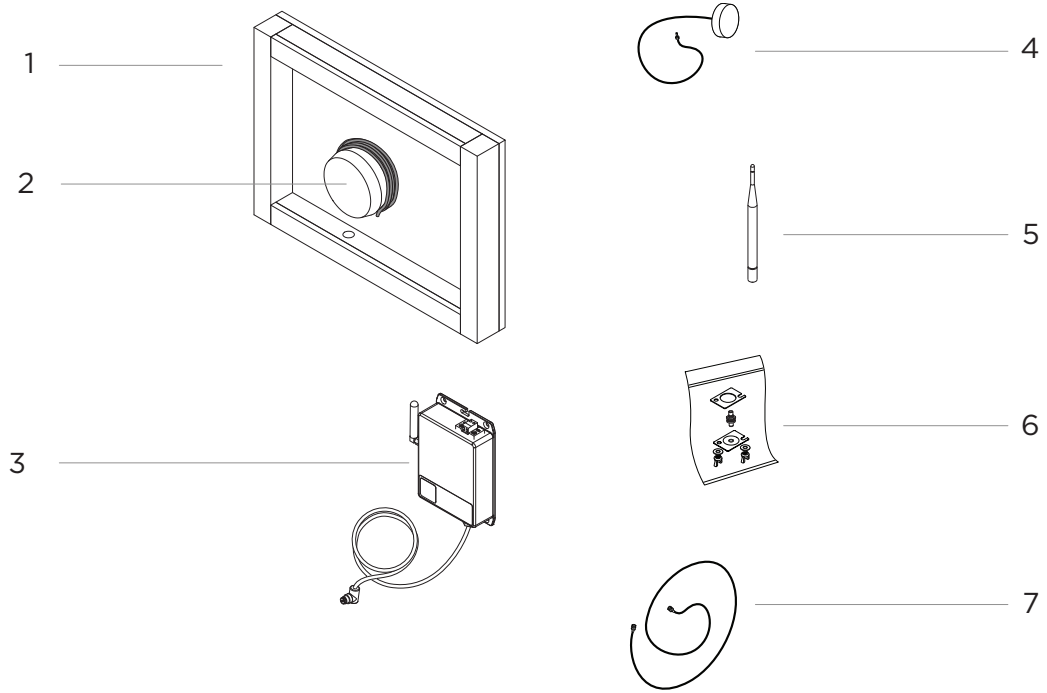


1. Retainer conduit (RSK 188 21 50), 10x (Head & Hand) / 5x (Head)
2. Conduit elbow (RSK 187 79 99 / 188 27 00), 5x (Head & Hand) / 3x (Head)
3. Screw, 6x (Head & Hand) / 4x (Head)
4. Fixture + countersunk screws, 3x (Head & Hand) / 2x (Head)
5. Piping, PEX hose with conduit (RSK 188 23 36), 550 cm
6. Reducer 50-40 mm (RSK 291 03 56)
7. Piping, conduit for the Control Dial (RSK 187 06 65), 350 cm
8. Pipe 50mm, 100 cm with sleeve (RSK 283 20 03), 3x
9. Braided hose, 1x
10. Wi-Fi antenna, 1x
11. Core Wall Mounting - top bracket (RSK 384 95 38) + bottom bracket (RSK 384 95 38)
12. Wallbox UNI Push V2 (RSK 188 21 81/188 26 57) 1x, screws, 4x
13. Fitting, 40 mm x 45°, M-F (RSK 291 03 41), 2x
14. Bend, 50 mm x 45°, M-F (RSK 283 20 31), 6x
15. Mixer bracket (RSK 188 26 81), 1x
16. Conduit end cap (RSK 187 71 96), 1x
17. Screws, 6x

Provided by Customer:

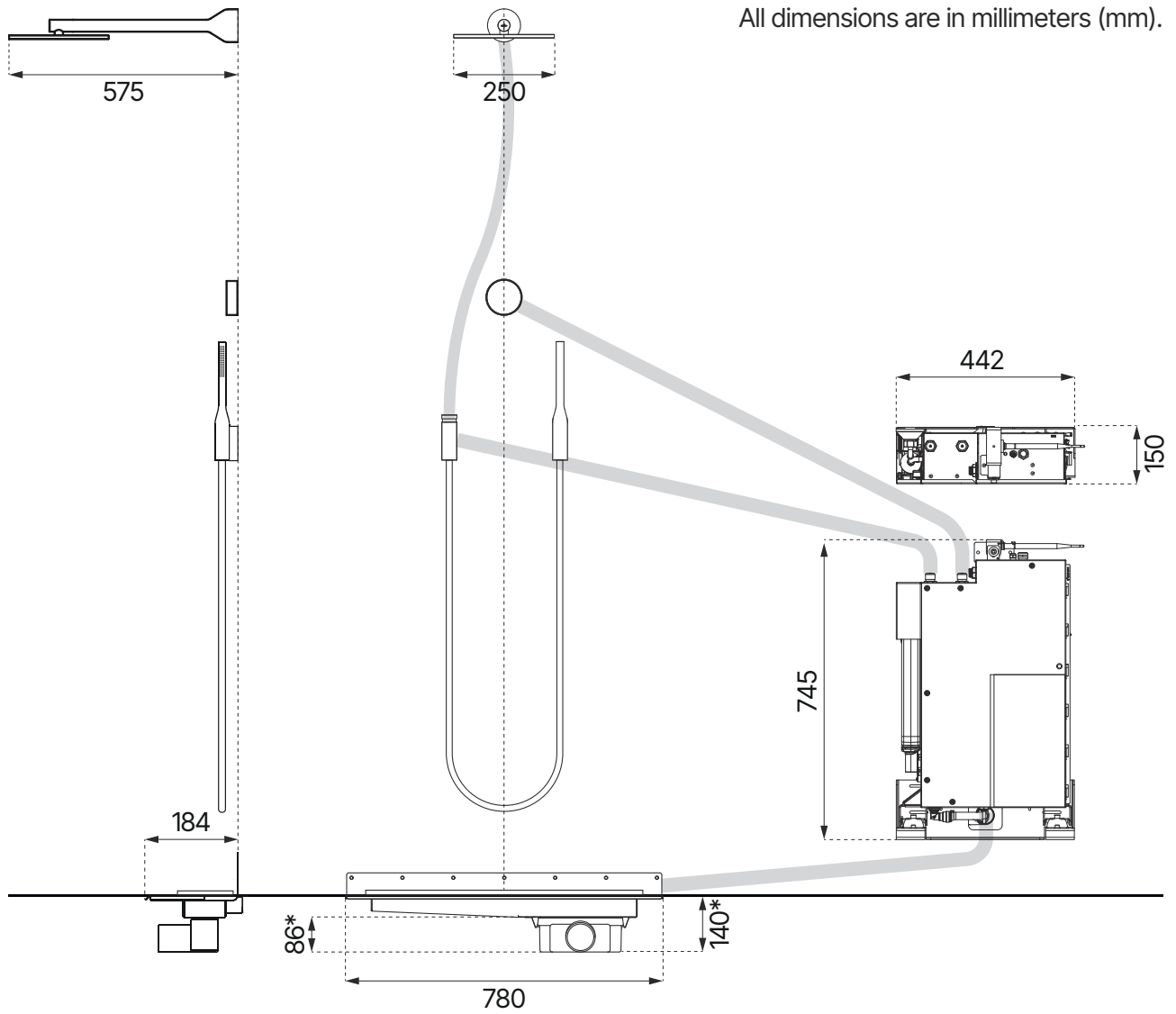
- Waterproofing conduit membrane for the diverter
- Waterproofing conduit membrane for the shower head
- Waterproofing conduit membrane for the Control Dial
- Waterproofing conduit membrane for the pipe to the Orbital Shower Core

Audio kit



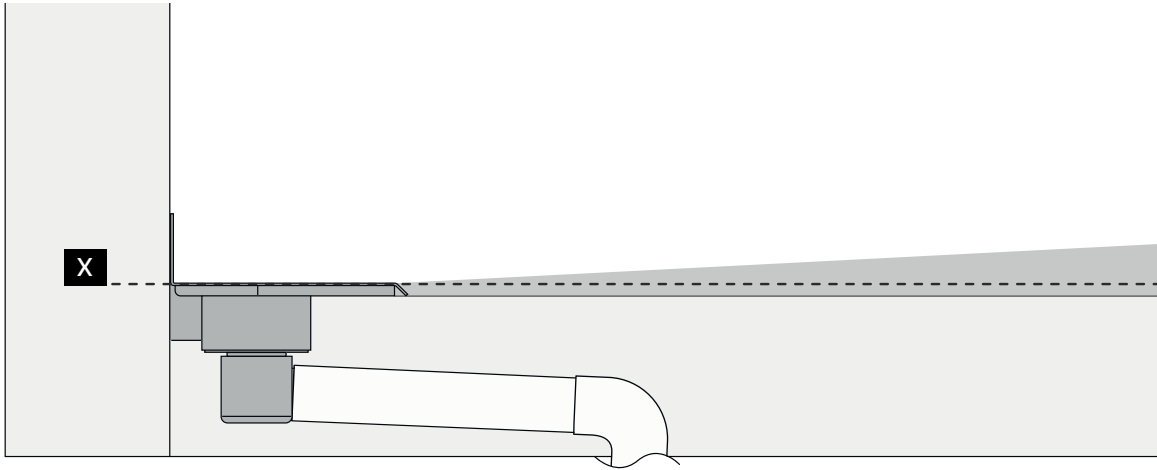
1. Audio Fixture
2. Speaker with speaker cable
3. Amplifier with amplifier cable and stub antenna
4. Puck antenna (only used for Orbital Shower *Hatch Cabinet*)
5. Rod antenna (only used for Orbital Shower *Hatch LK* and *Hatch Tiled*)
6. Assembly kit to the rod antenna
7. Cable to the rod antenna

Kit measurements

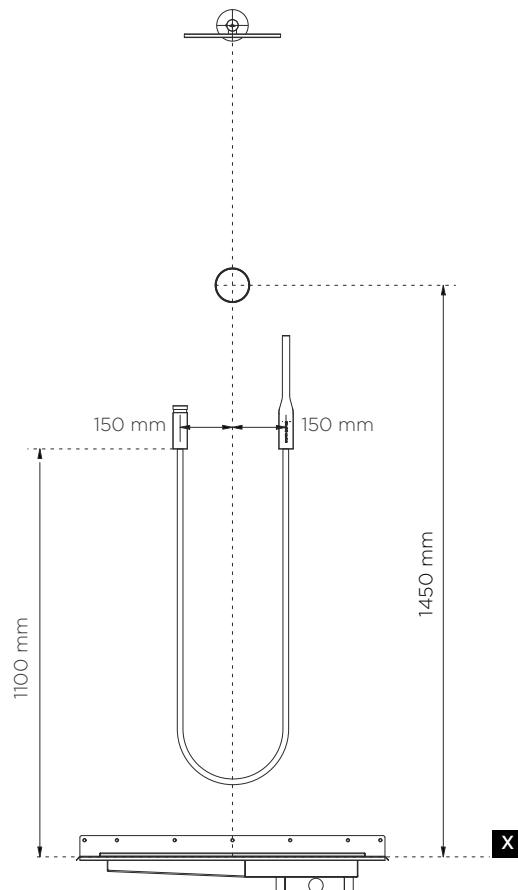


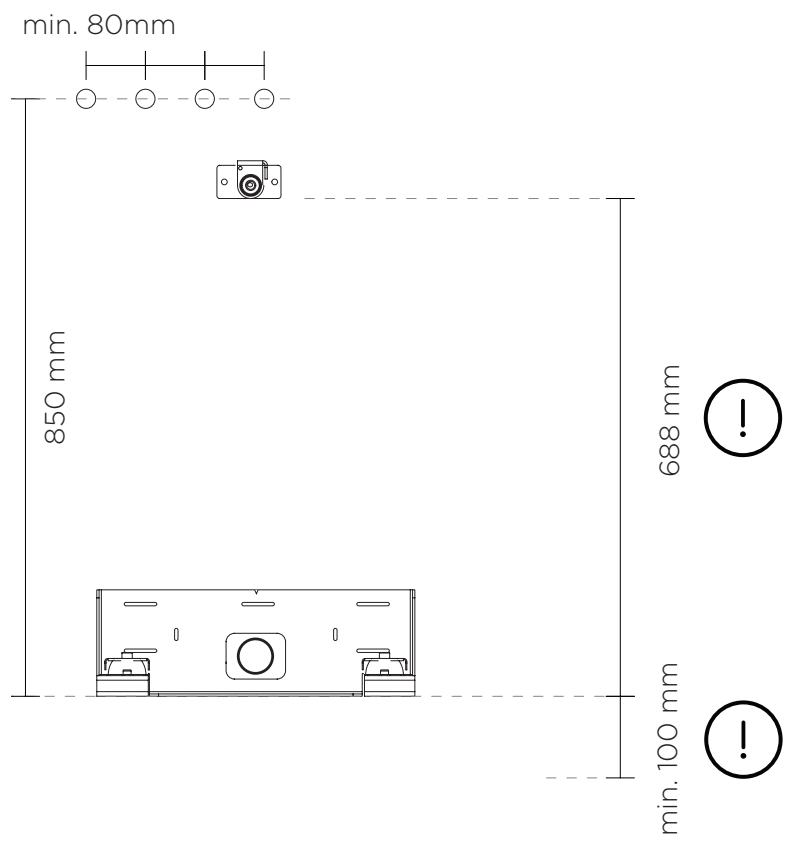
*The included water trap has a height of 86 mm, but several interchangeable options are available, with heights starting from 52 mm. Options with different outlet sizes and directions are also available.

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.

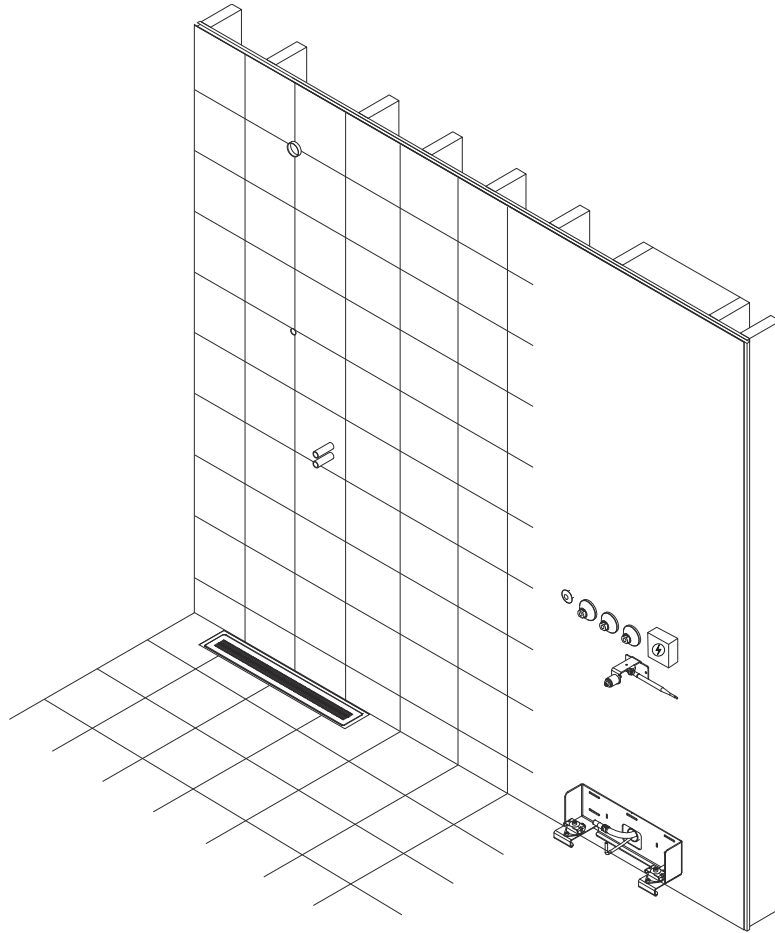




Installation scenario displayed in manual

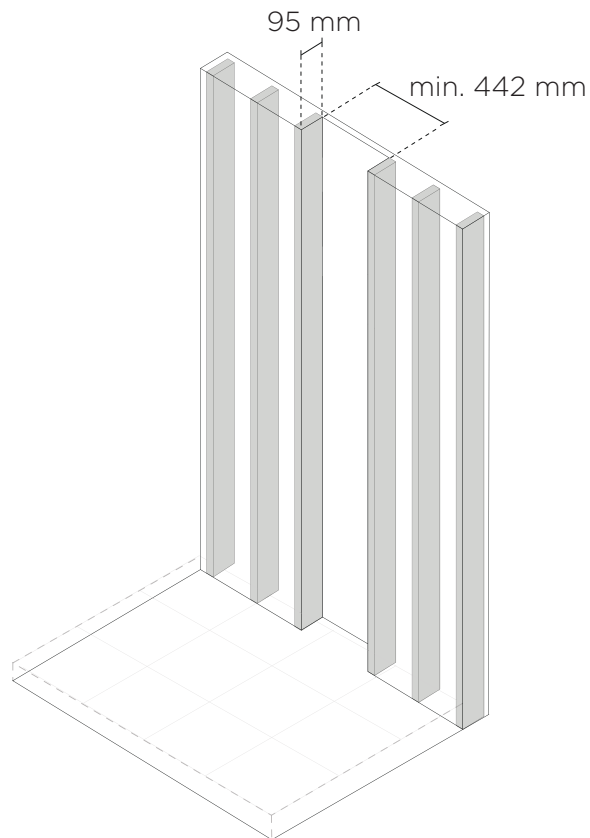
Adjust lengths and bends on hoses and cables depending on the installation scenario.

See section [Orbital Shower Installation Options \[9\]](#) and [Orbital Shower Installation Requirements \[10\]](#) in the chapter [Installation Overview \[9\]](#) for requirements on maximum lengths and maximum number of conduit bends.

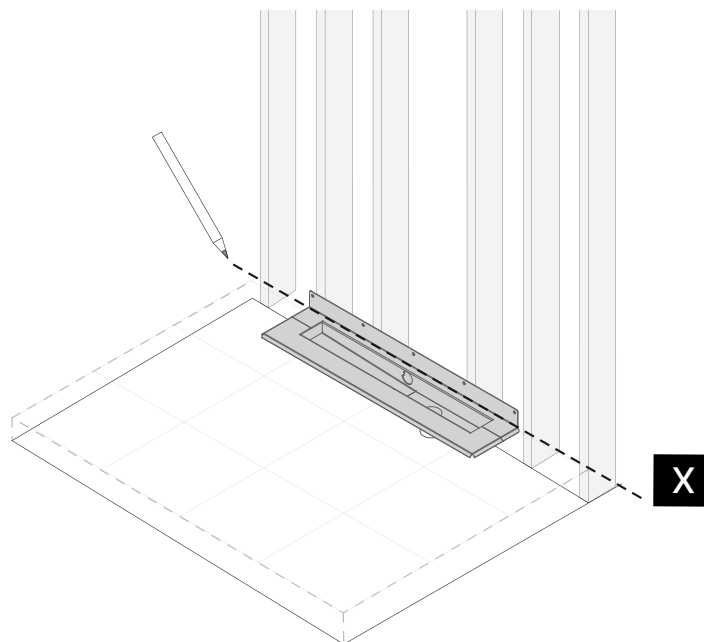


Prepare shower area

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.

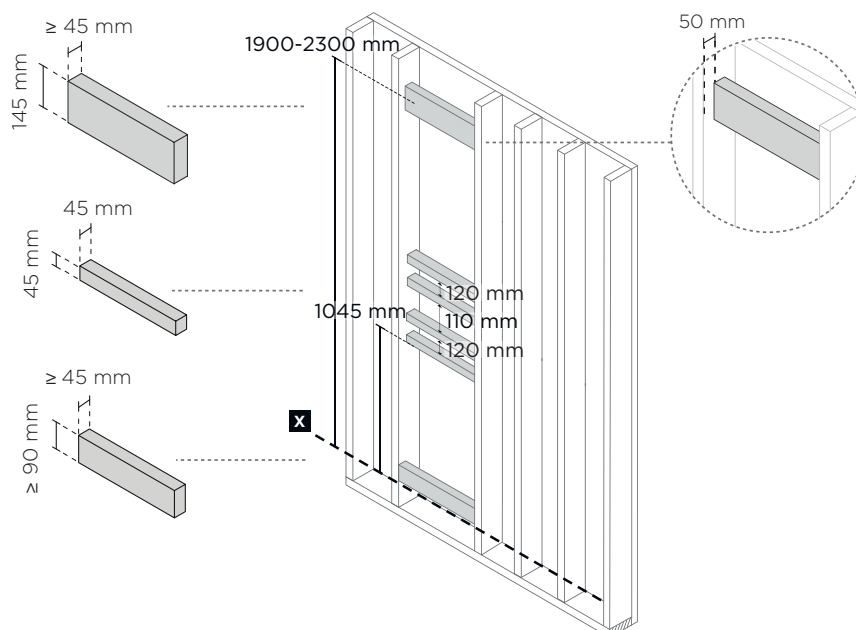


3. Install noggins.



CAUTION

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

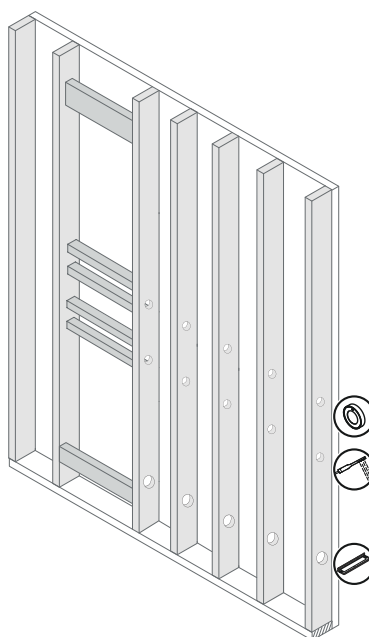


4. Drill holes in the studs in between the shower area and the place where the Core will be installed.



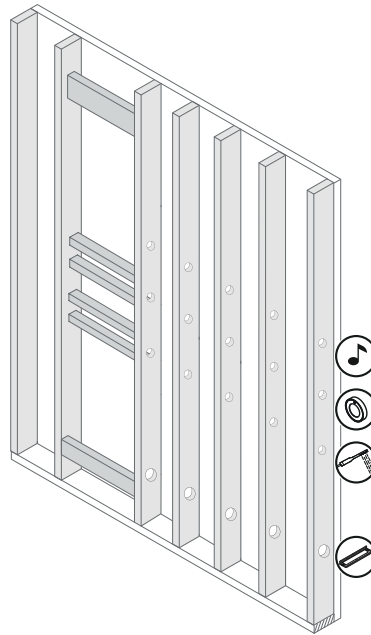
NOTICE

Adjust slot in studs and wall covering depending on hand shower and Control Dial placement.

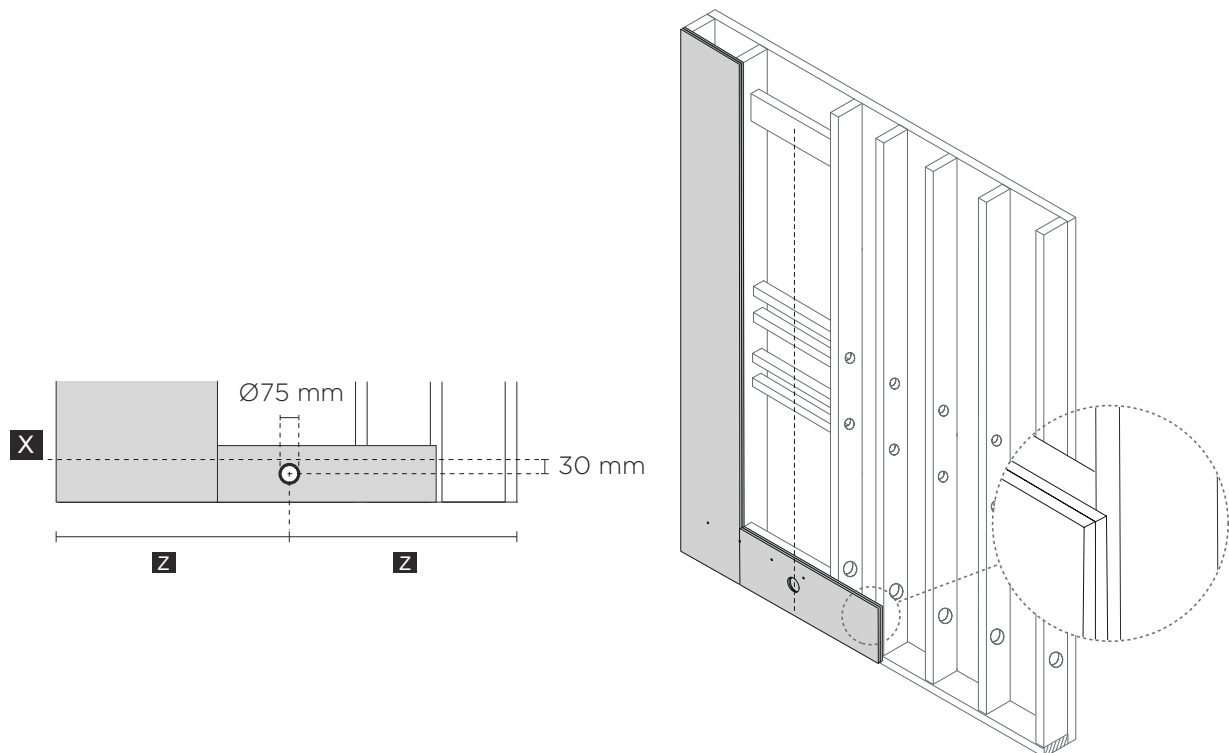


Only valid for Orbital Audio installation

Drill additional holes for the speaker cable.



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

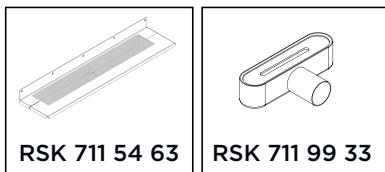


X The floor level where the waterproofing is connected to the floor drain flange.

Z The hole is centered in the shower area.

Install drain

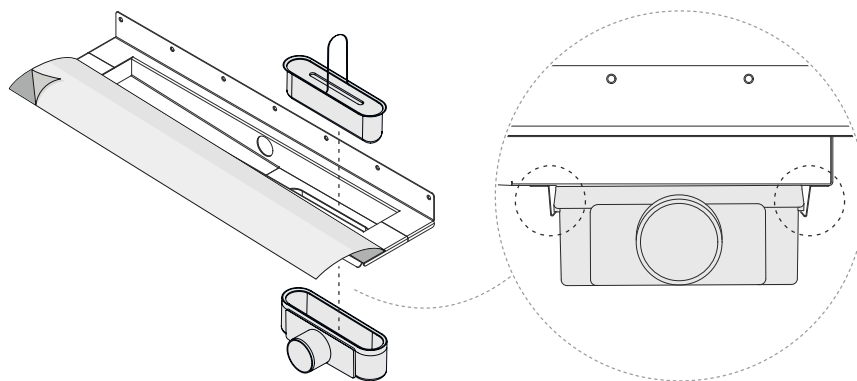
Drain unit and outlet unit



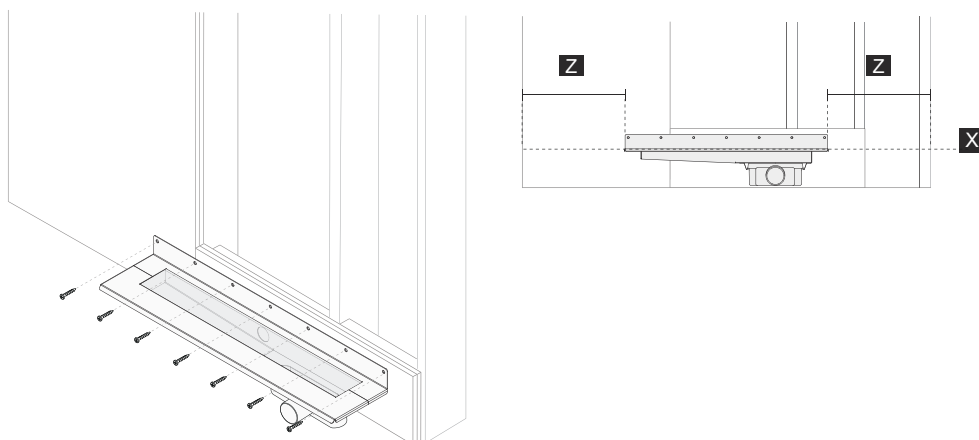
CAUTION

- 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.



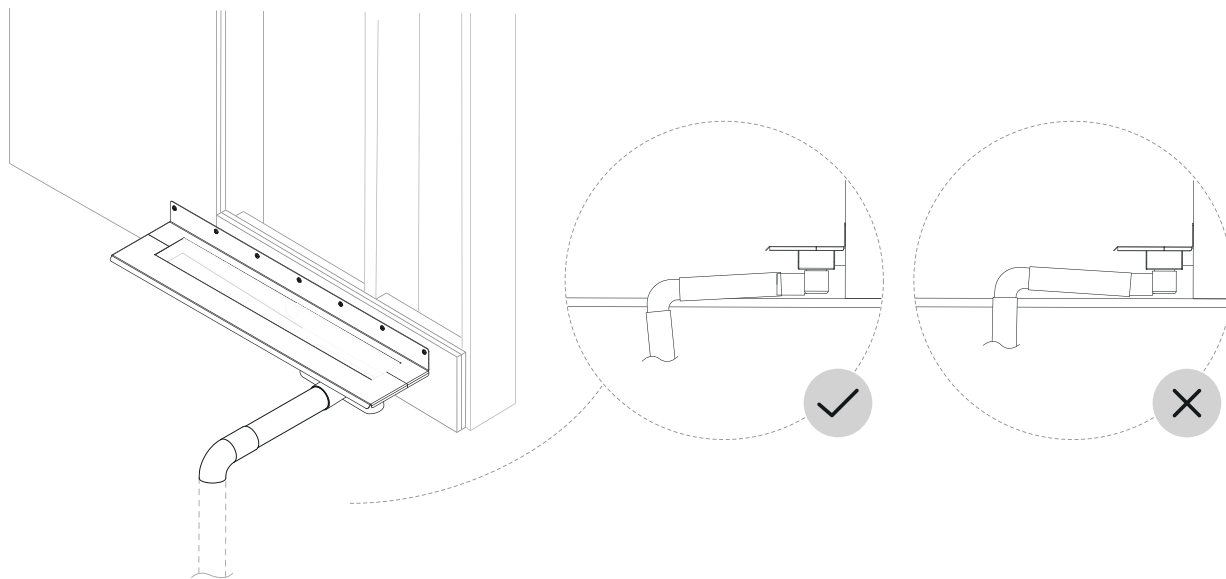
2. Use all supplied screws (7) to fasten the drain unit to the wall.



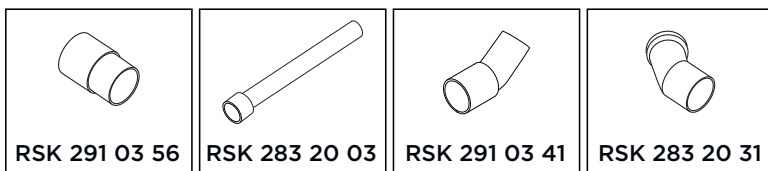
X The floor level where the waterproofing is connected to the floor drain flange.

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



1

Perform the installation in accordance with current Industry Rules Säker Vatten Installation. See bulleted list **1** in chapter [Important installation steps \[17\]](#).



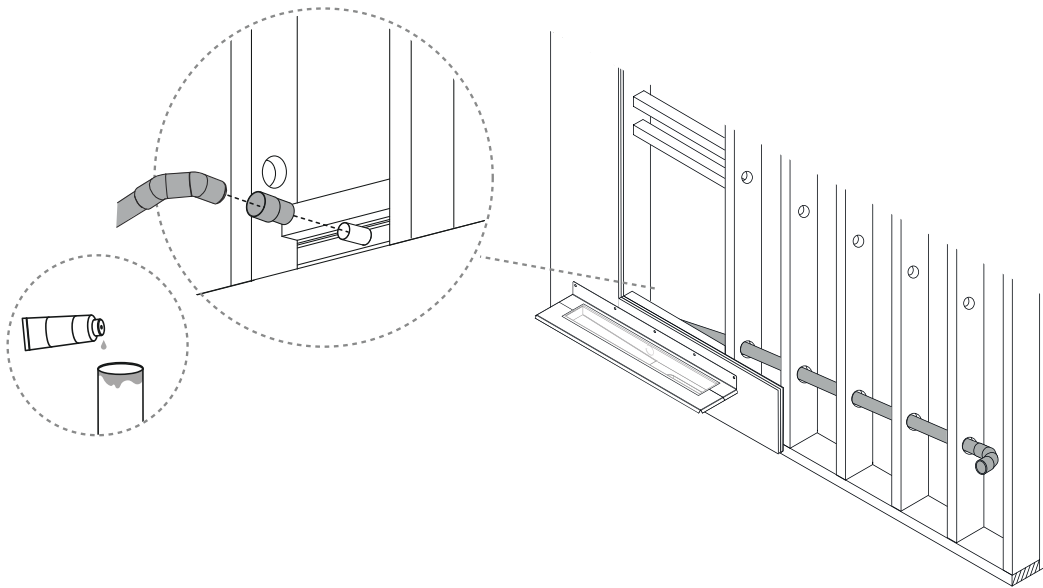
NOTICE

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

-
1. Install the drain pipe between the drain unit and the location where the Core will be installed.

**NOTE**

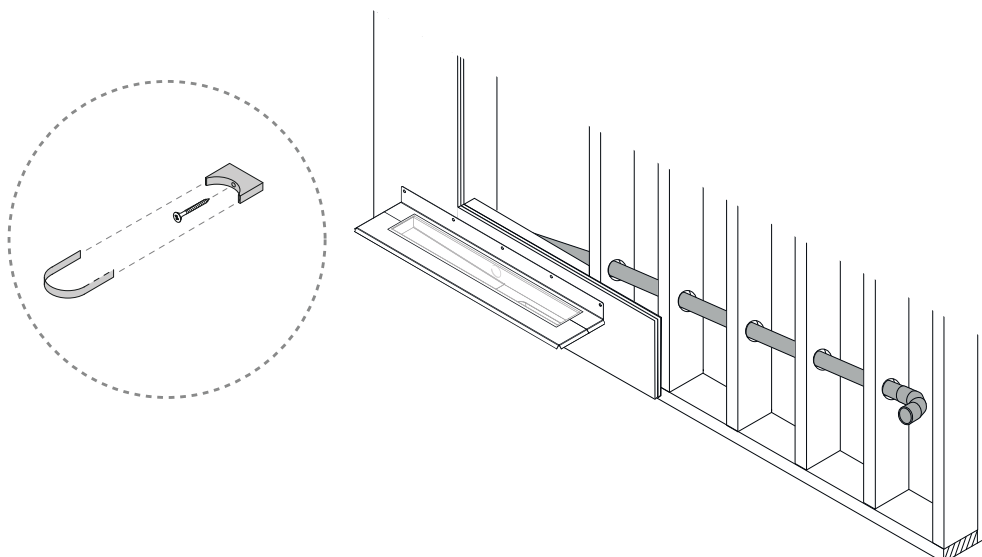
Apply silicone based lubricant when assembling.



-
2. Anchor the pipes and fittings according to industry rules.

**CAUTION**

Make sure to fasten and anchor the pipes and fittings so they cannot move or be separated.

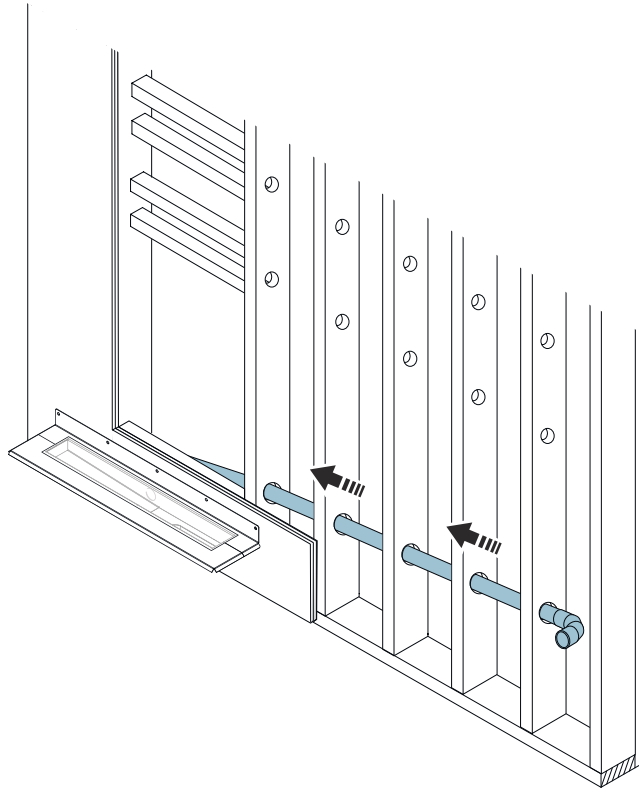


3. Perform a leakage check to eliminate leakage.

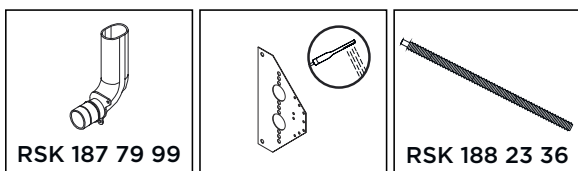


CAUTION

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.

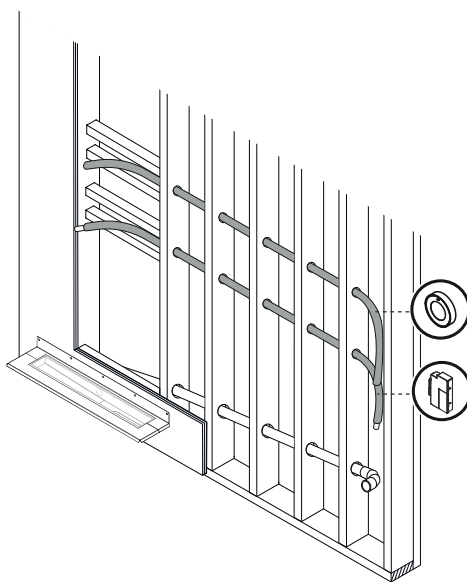


Prepare for hand shower and diverter

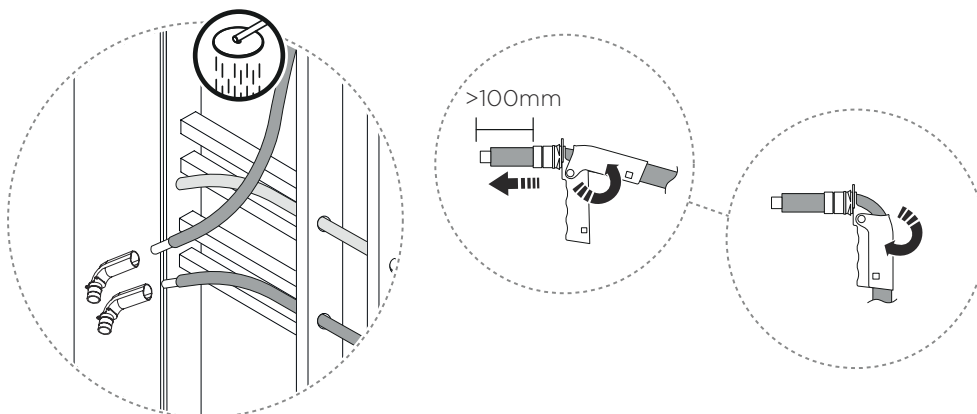


If installing Orbital Shower without the hand shower or with third-party components, please note that the following steps need to be adapted to the chosen installation scenario. When using third-party components, make sure to fulfill **Orbital's requirements** [15] and follow the supplier's instructions.

1. Draw the PEX pipes from the shower area to the position where the Core will be installed.



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

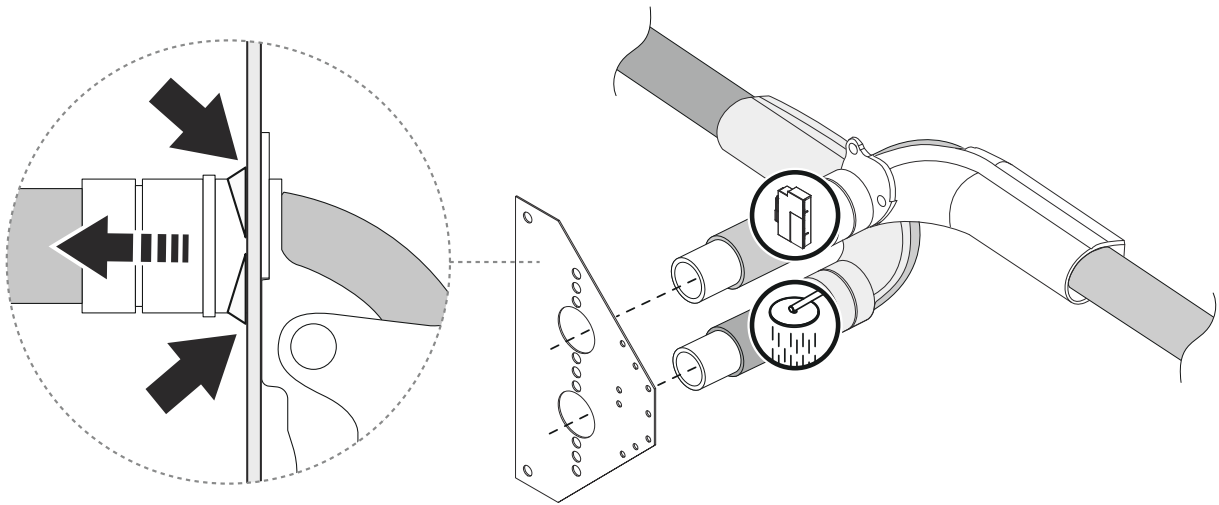


3. Install the conduit elbows into the wall fixture.

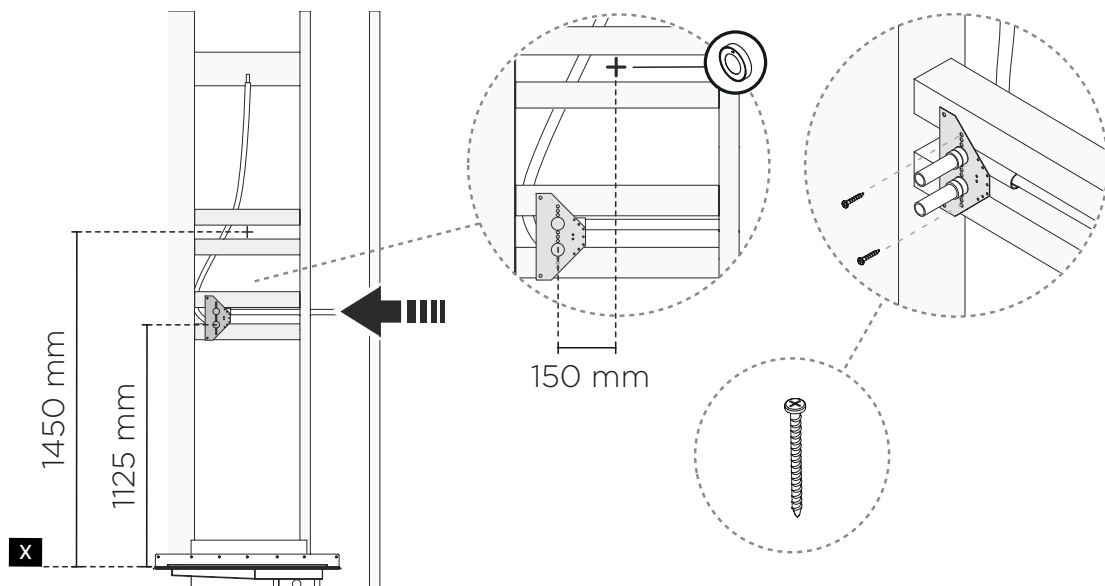


CAUTION

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

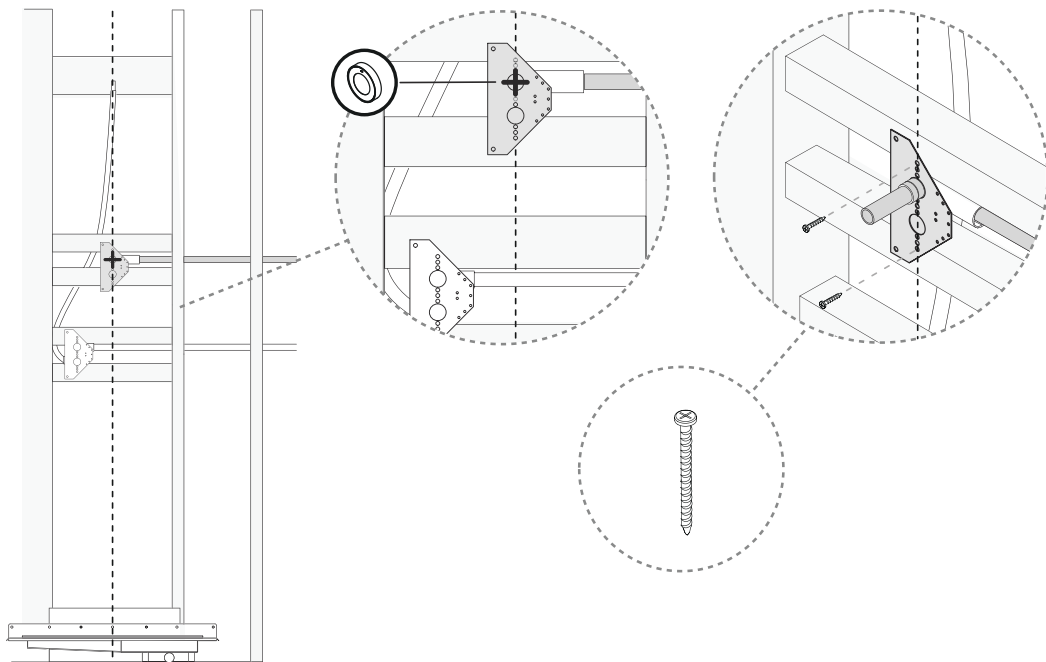


4. Mount the wall fixture to the noggin.



x2 Countersunk stainless steel screw

5. Mount the wall fixture for the Control Dial pipe. Make sure the shower head and the Control Dial are vertically centred.

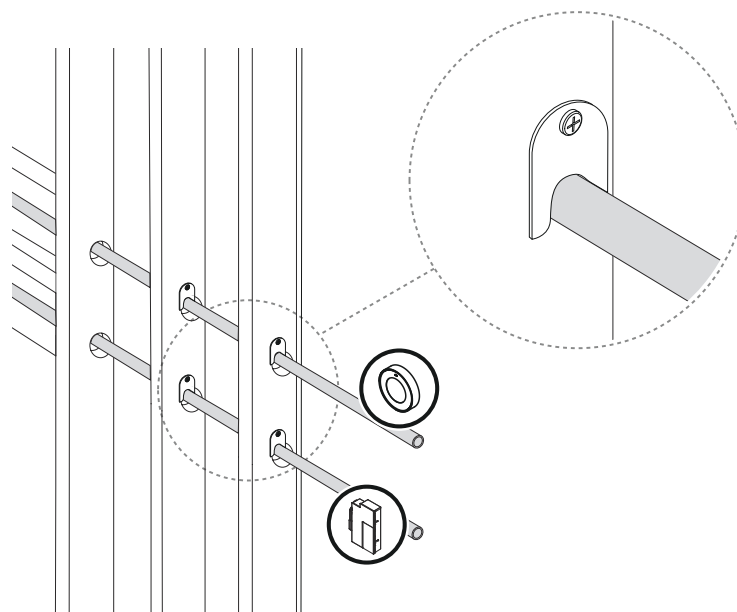


x2 Countersunk stainless steel screw

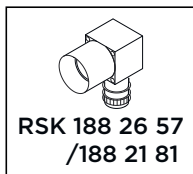
6.



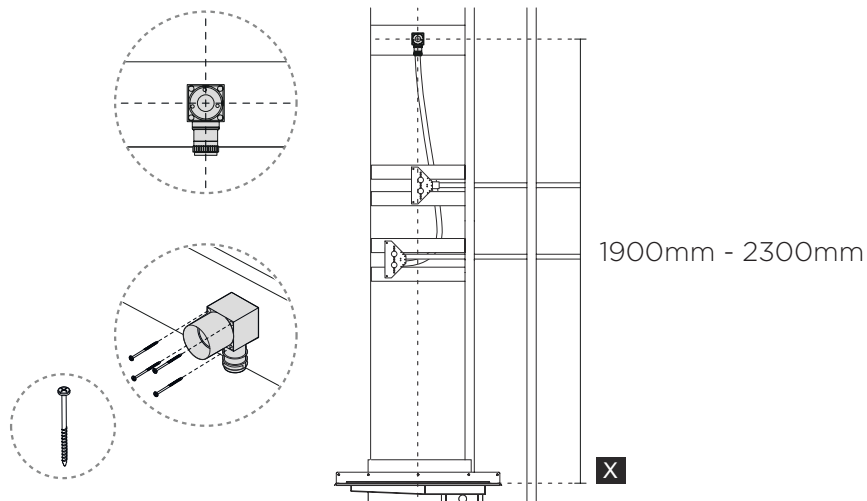
Anchor the Control Dial and diverter piping according to industry rules.



Prepare Orbital Systems shower head

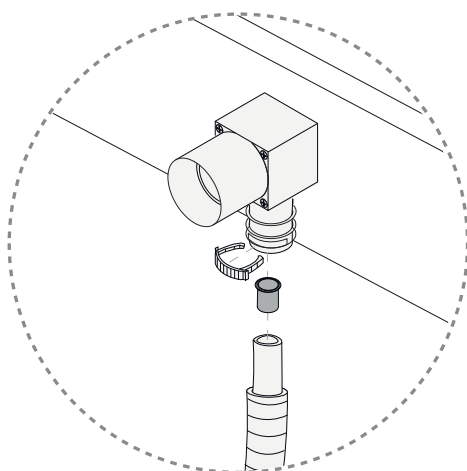


1. Measure and mark the placement of the wallbox UNI Push. Mount the wallbox with four screws from the front, and follow the provided instructions. Installation should be performed according to industry rules.

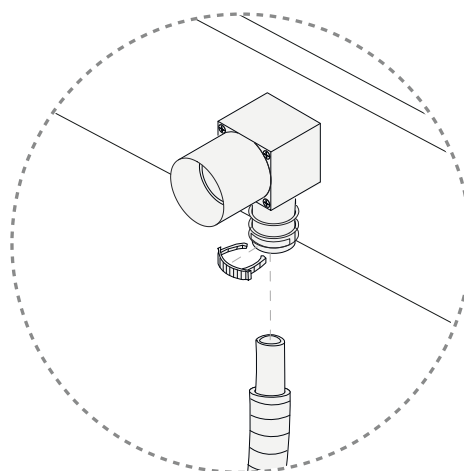


x4 Pan head stainless steel screw

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.



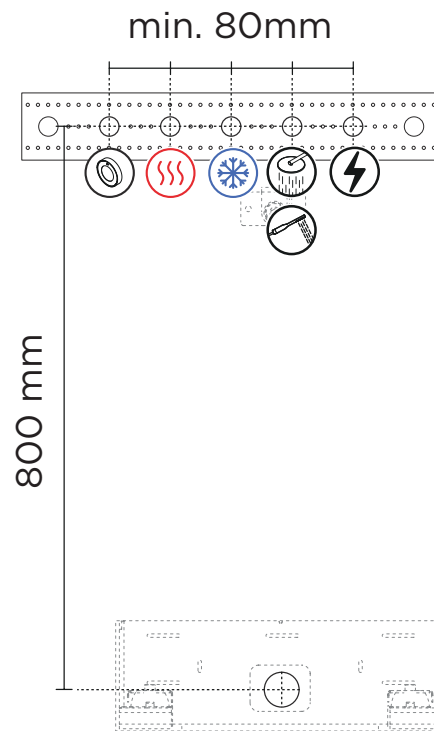
Wallbox UNI Push with external support sleeve



Wallbox UNI Push with integrated support sleeve

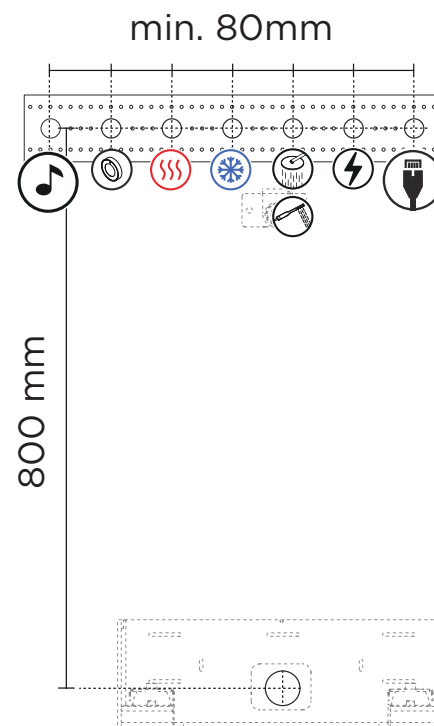
Pipes & connections

- Draw incoming water and electricity. Draw cables and conduits to the correct positions.



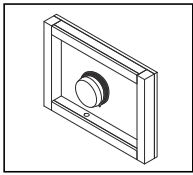
Only valid for Orbital Audio or Ethernet installation

Draw the cables to their positions.



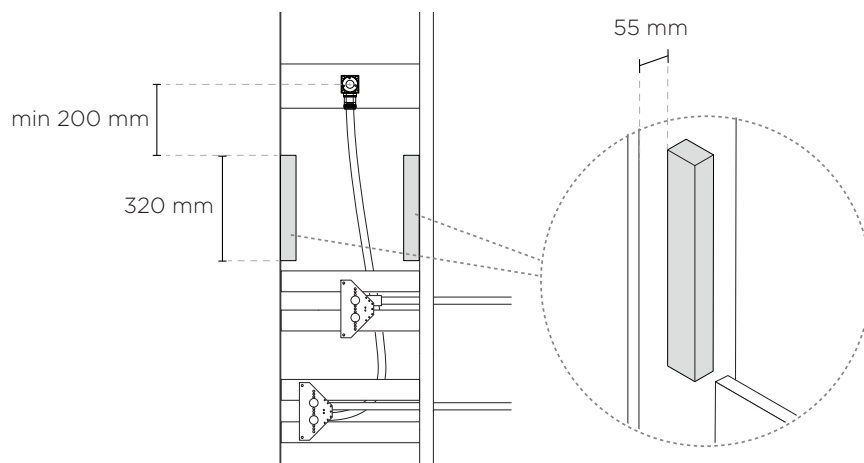
Install Audio

The following steps are only valid for Orbital Audio

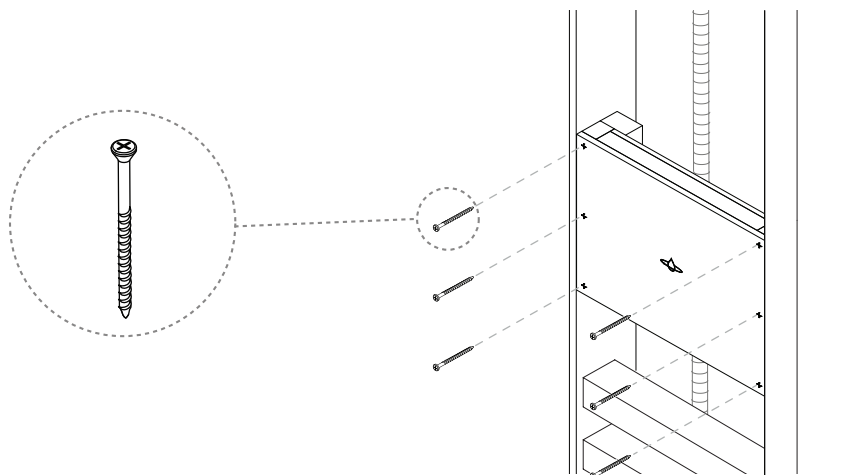


Check that the exciter is intact and attached to the back of Audio Fixture before starting the installation.

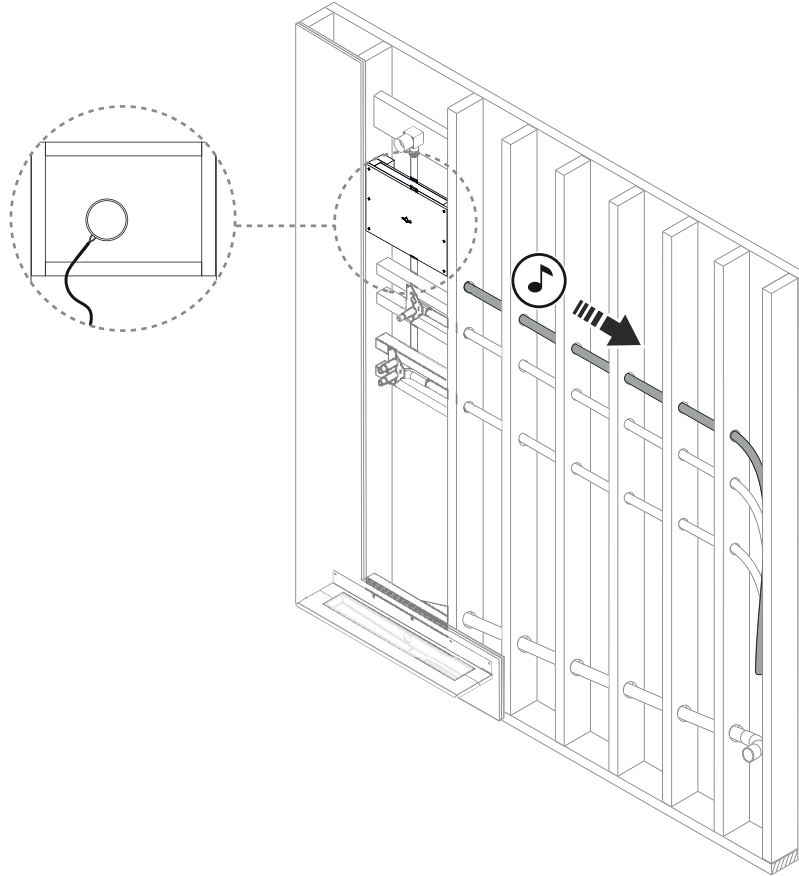
1. Install two studs in between the head shower and the Control Dial, where Audio Fixture will be placed. This placement gives the best conditions for the sound experience.



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



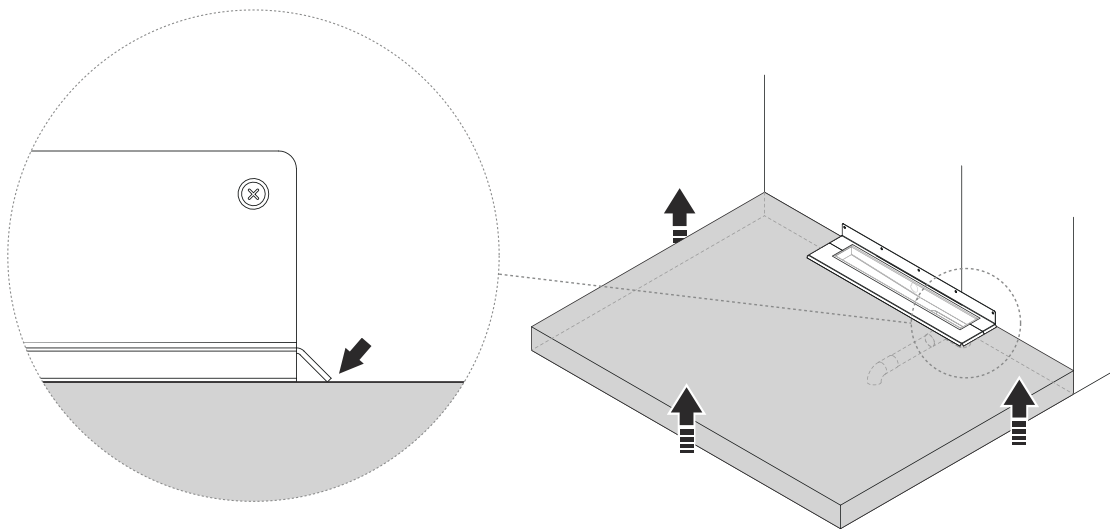
-
- 3.** Draw the speaker cable from the back of Audio Fixture to the Core position.



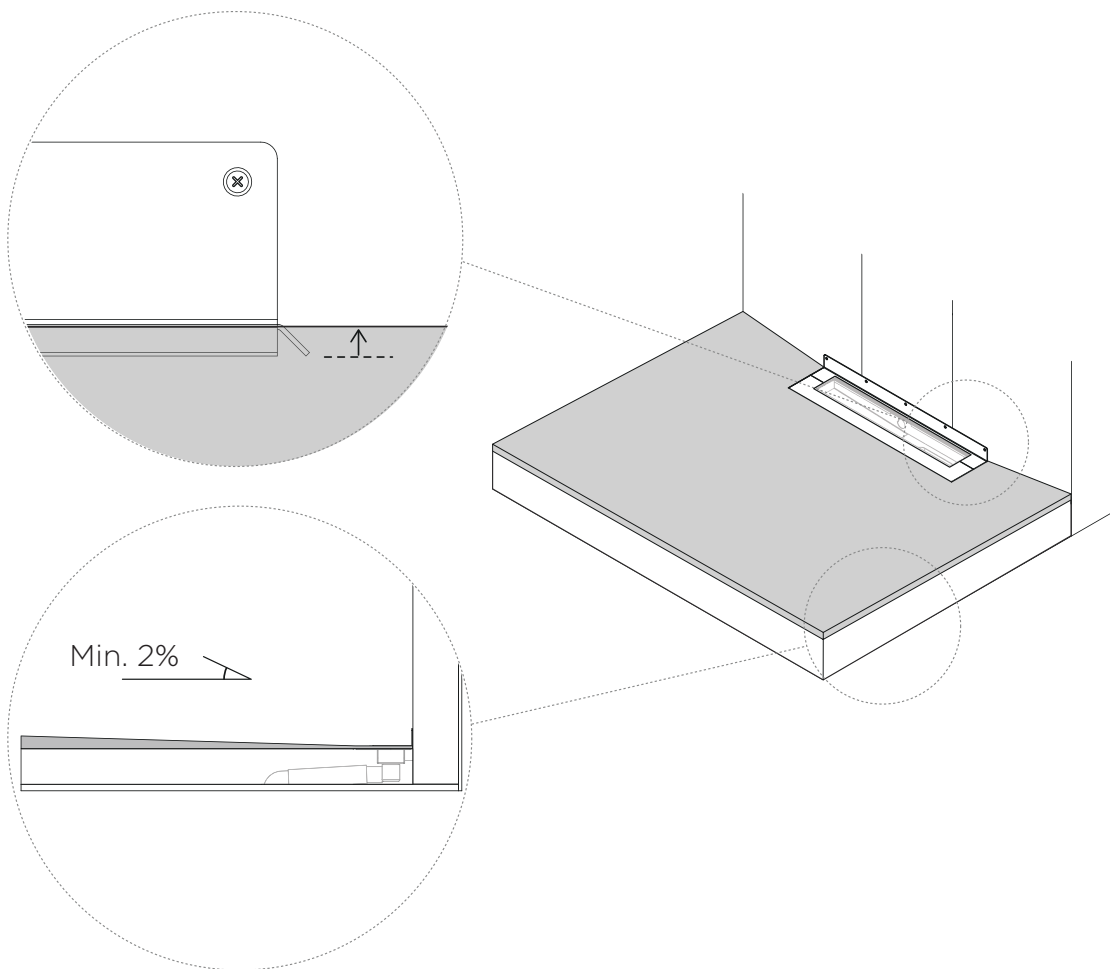
The Audio installation process continues in chapter [Install Core Wall Mounting \[47\]](#).

Prepare for tiling

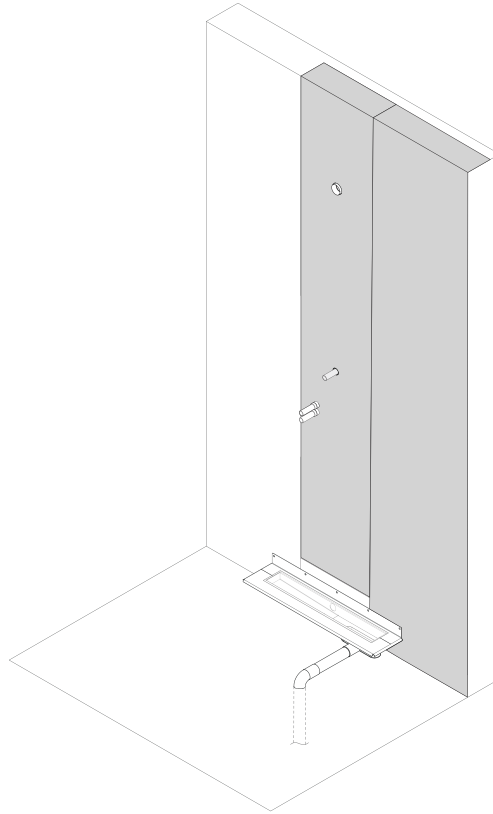
1. Raise the floor until it is level with the flange on the drain unit.



2. Form a steep 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.

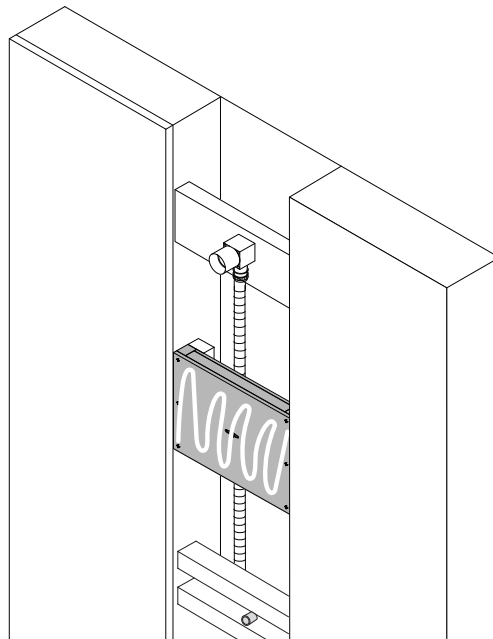


Only valid for Orbital Audio installation

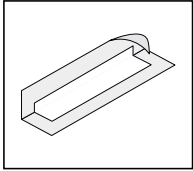


CAUTION

Make sure to apply construction glue to all wallboard layers.



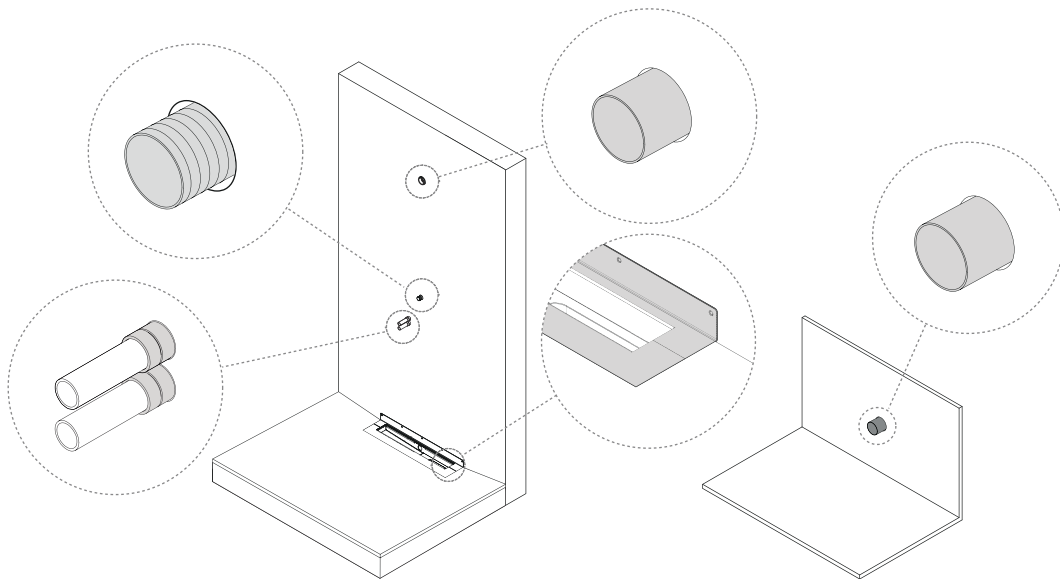
Apply waterproofing membrane



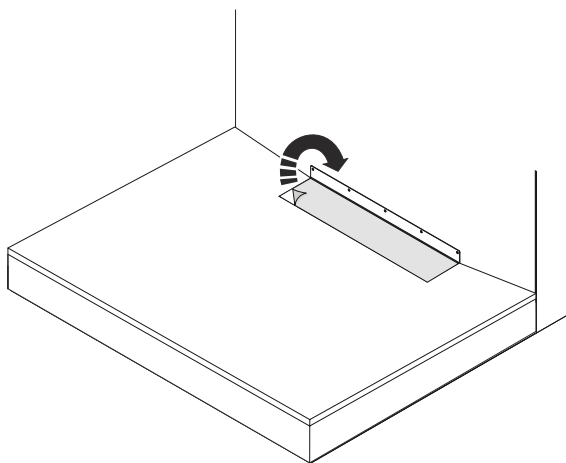
Provided by Customer:

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

Waterproofing membrane shall be applied around 5 penetrations on the floor and wall.



1. Remove the protective cover from the drain unit.

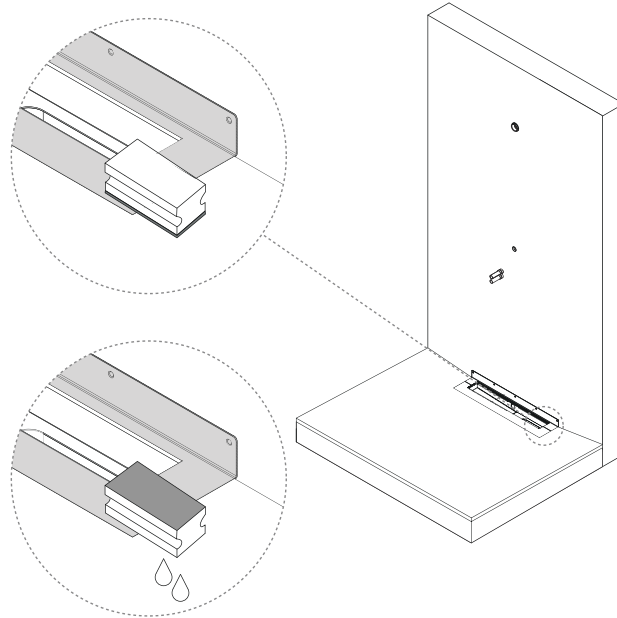


-
2. Roughen the metal surface of the drain unit and clean it with rubbing alcohol or similar.

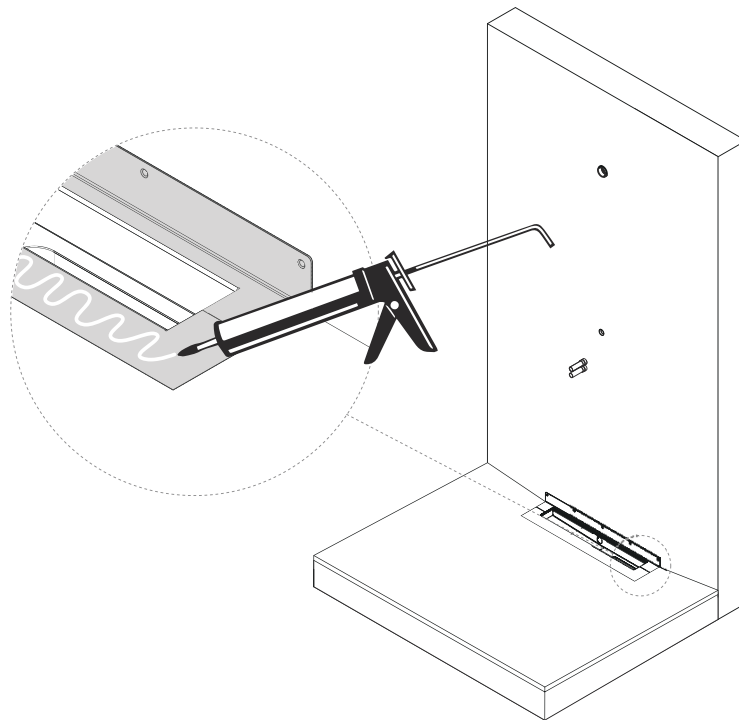


NOTICE

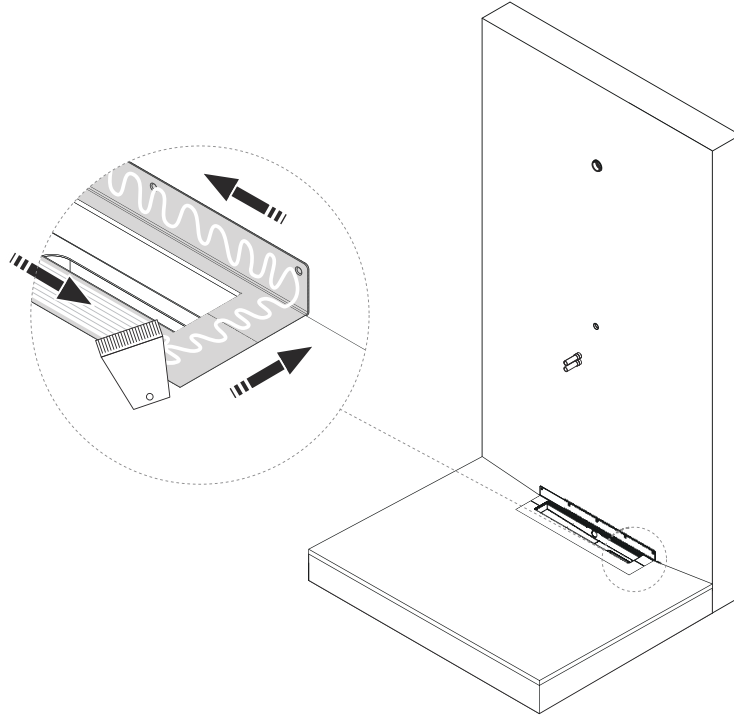
To achieve optimal bonding, all surfaces should be clean and free of adhesion reducing substances (e.g. dust, acid, grease).



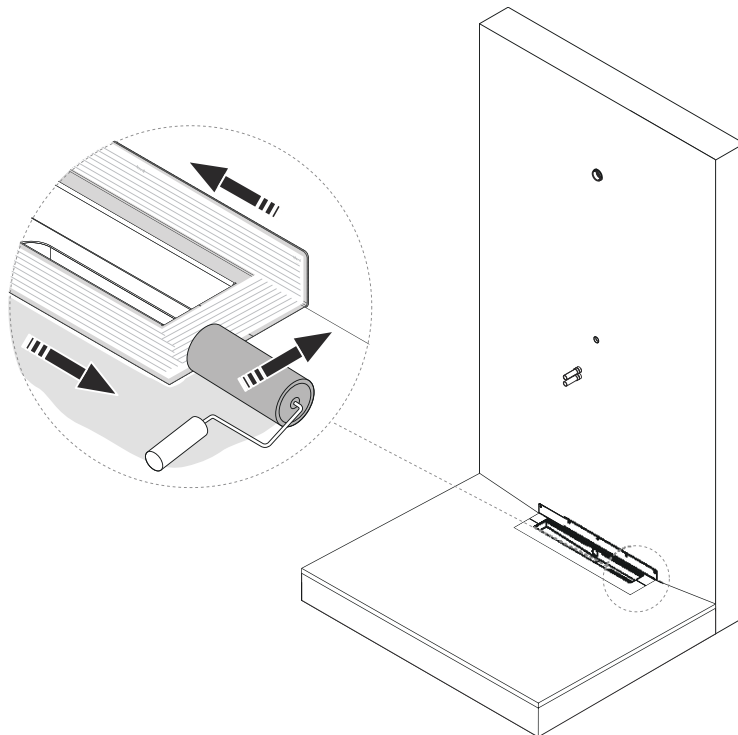
-
3. Apply waterproofing glue to the drain unit's metal flange.



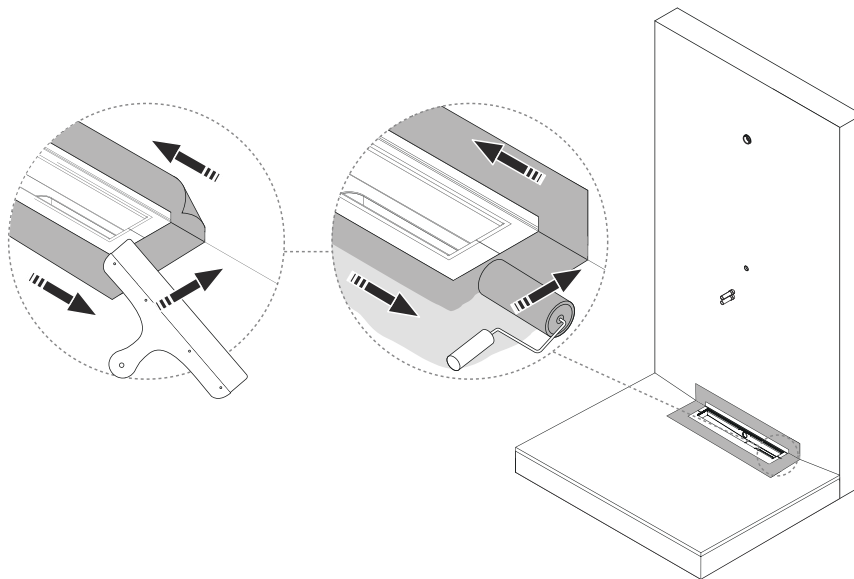
-
4. Spread the waterproofing glue with a fine-toothed glue spreader or brush.



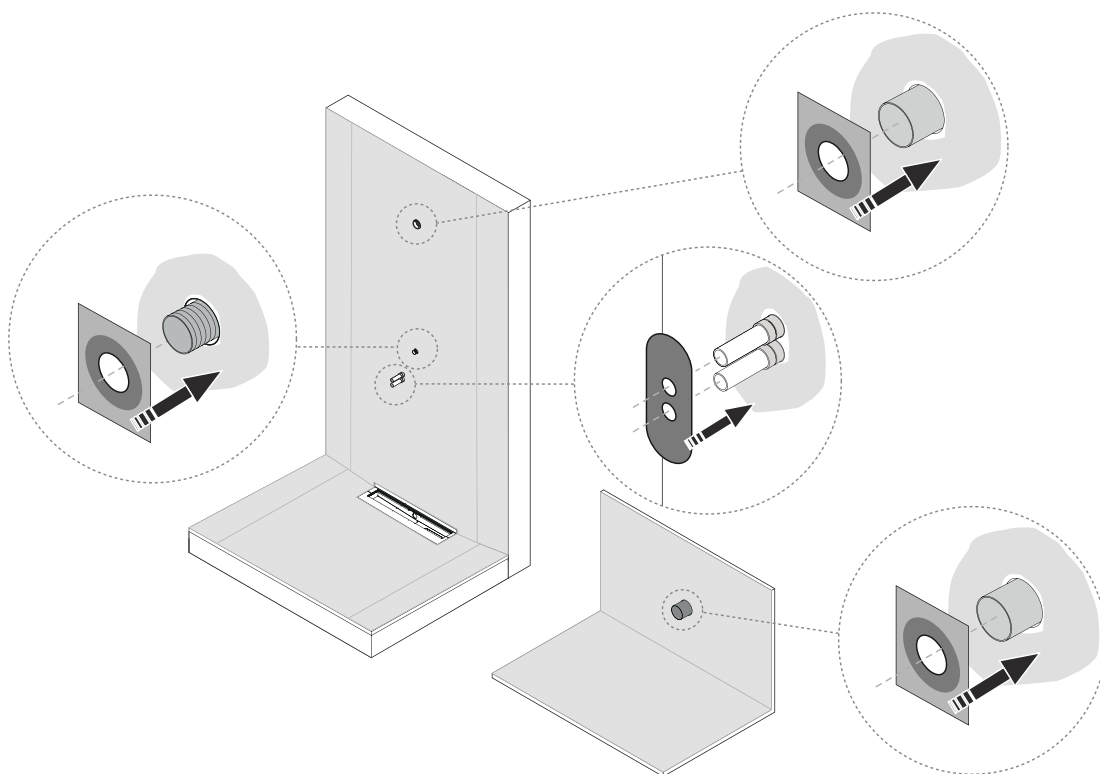
-
5. Apply liquid membrane to the floor- and wall surface, which the drain waterproofing membrane is going to cover.



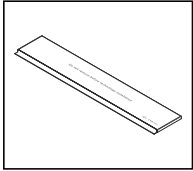
-
6. Apply the drain waterproofing membrane around the drain unit. When mounting the drain waterproofing membrane, make sure to cover both the floor and the wall. Firmly apply pressure and remove air pockets using a smoothing tool. Make sure no blisters or creases occur.



7. 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.

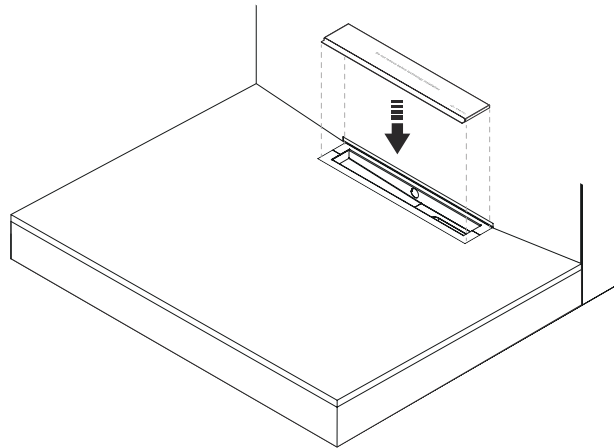


Tiling



The tile thickness on the wall and floor can be a maximum of 10 mm.

1. Install the tiling frame set.

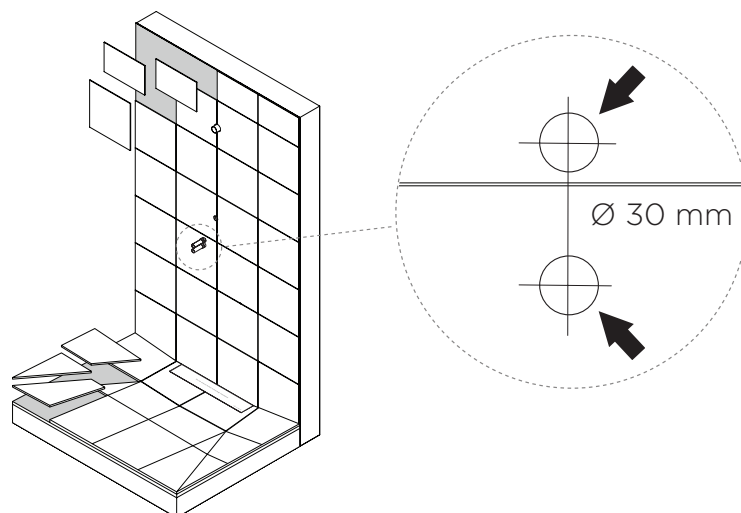


2. Tile the wall and floor, and cut holes in the tiles with a drill max of 30 mm.



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.

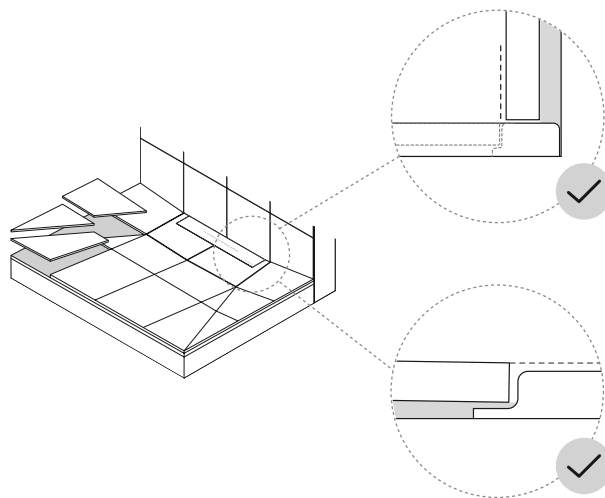


-
3. Make sure the tiles do not overlap the grating, allowing it to be removed.

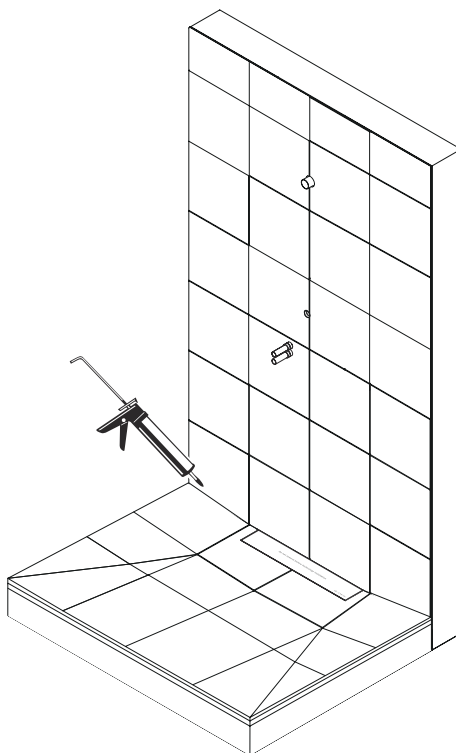


NOTE

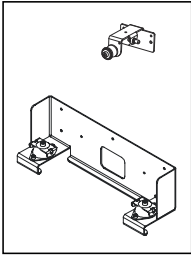
The floor tiles must be level with or higher than the frame. To achieve this, they must be at least 8 mm thick.



-
4. Apply silicone sealant around the floor drain and in the rest of the bathroom.



Install Core Wall Mounting

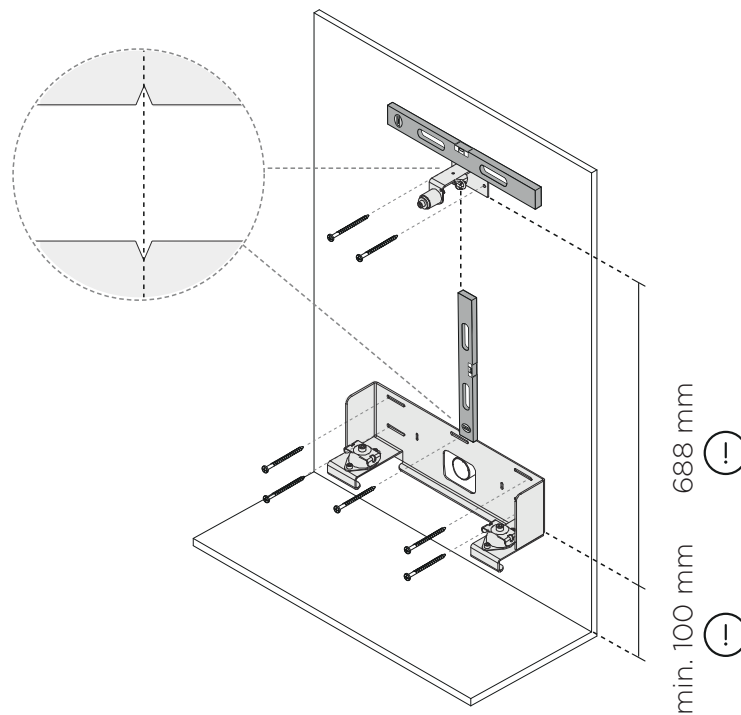


1. Measure and align the placement of the Core Wall Mounting, and secure it in place.



CAUTION

- Seal drill holes according to industry rules. See section [Seal mountings in wet zone \[12\]](#) for instruction.
- The weight of the Core is approx. 25 kg. The wall construction must be able to support this load.



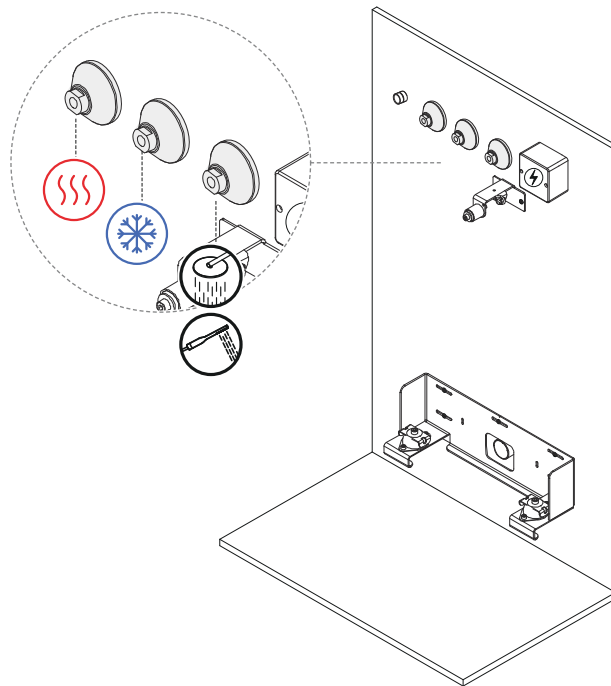
x7 Pan head stainless steel screw

-
2. Use mixer brackets to anchor the conduits.



NOTICE

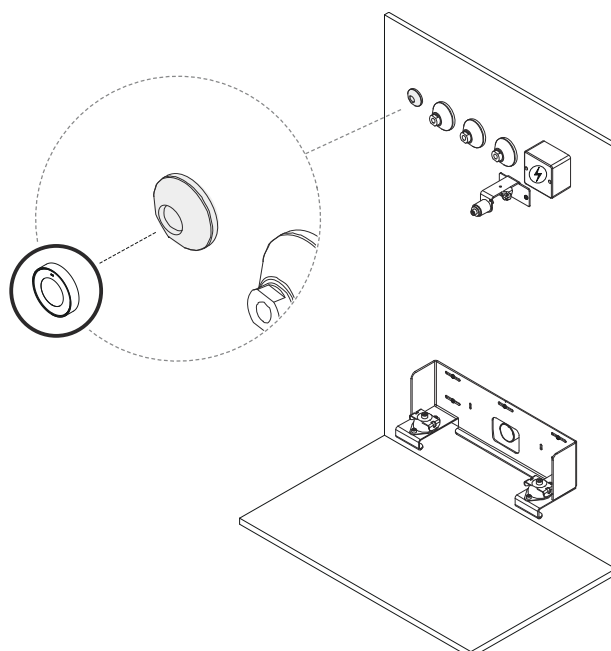
Wall conduits for incoming water and electricity are supplied by the customer.



-
- 3.

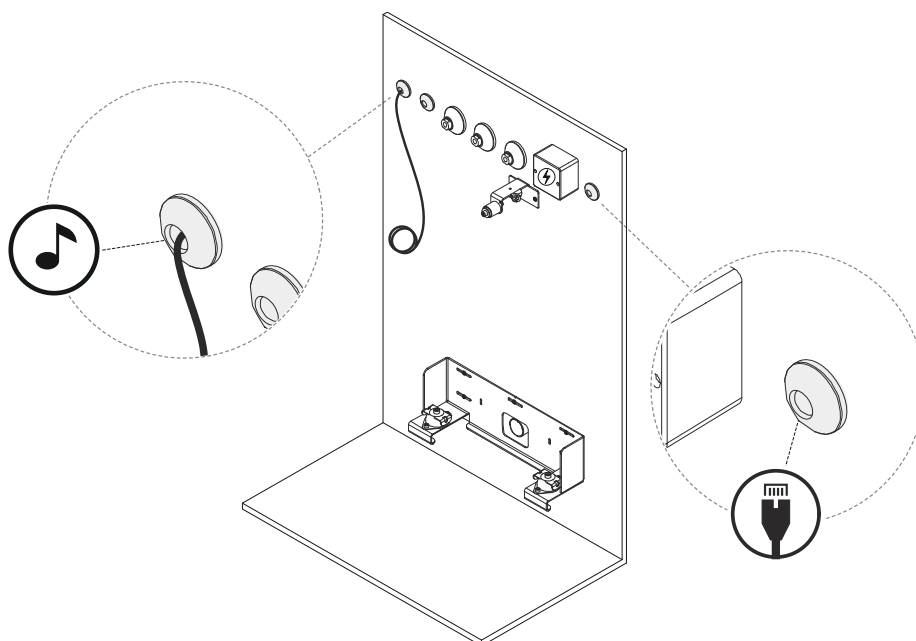


Anchor the piping for the Control Dial with the conduit end cap.

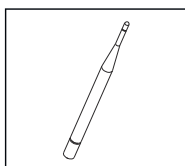


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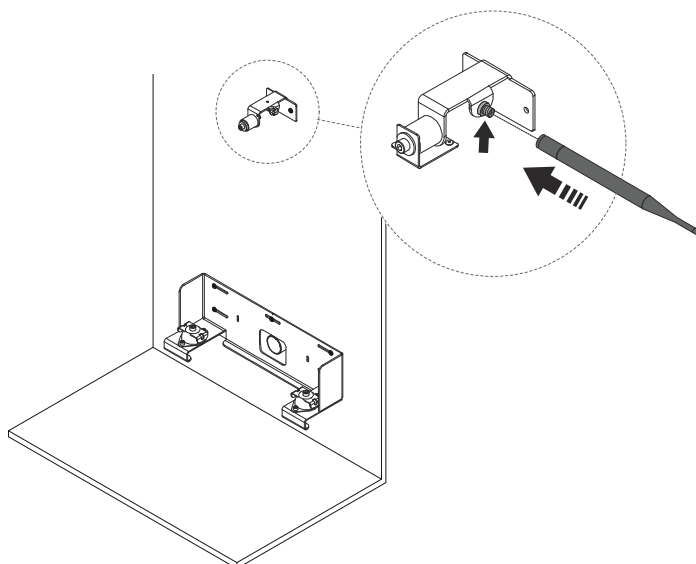
Anchor the pipe going to the Audio fixture and the pipe containing the ethernet cable if applicable.



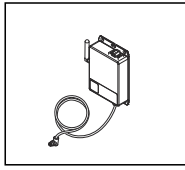
4.



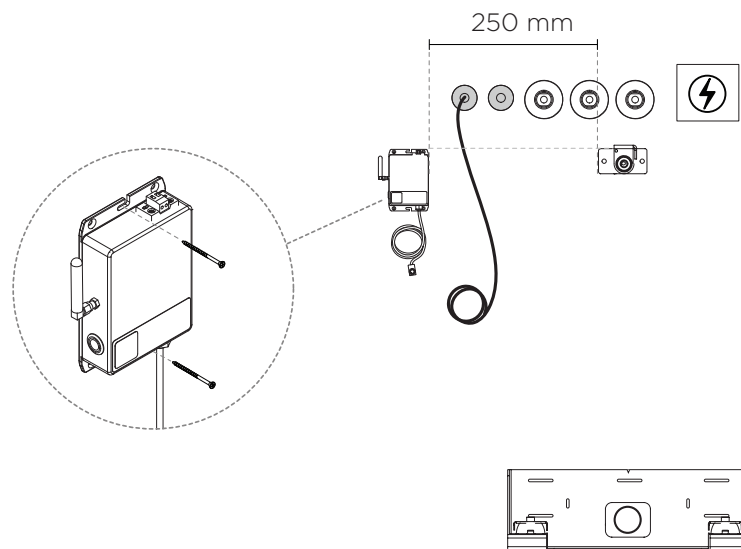
Mount the Wi-Fi antenna to the top bracket.



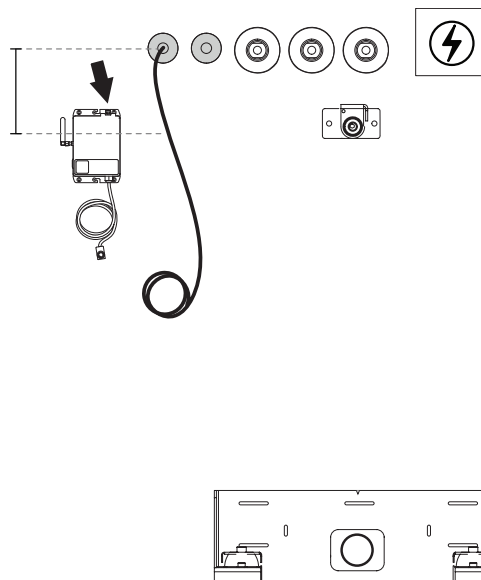
5. The following steps are only valid for Orbital Audio



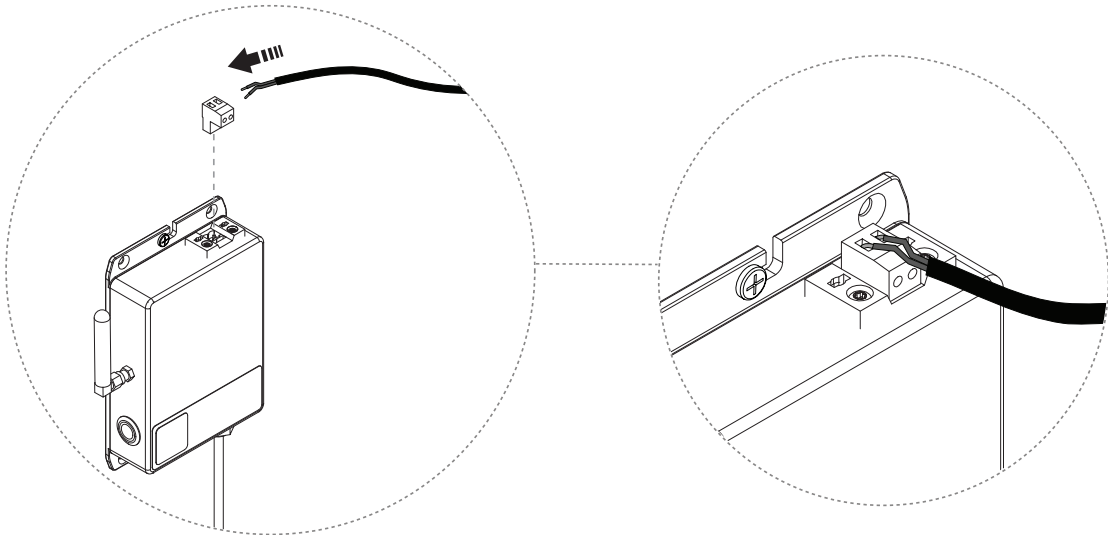
Mount the amplifier with two screws next to the Core Wall Mounting.



6. Cut the speaker cable, so it reaches the top of the amplifier.

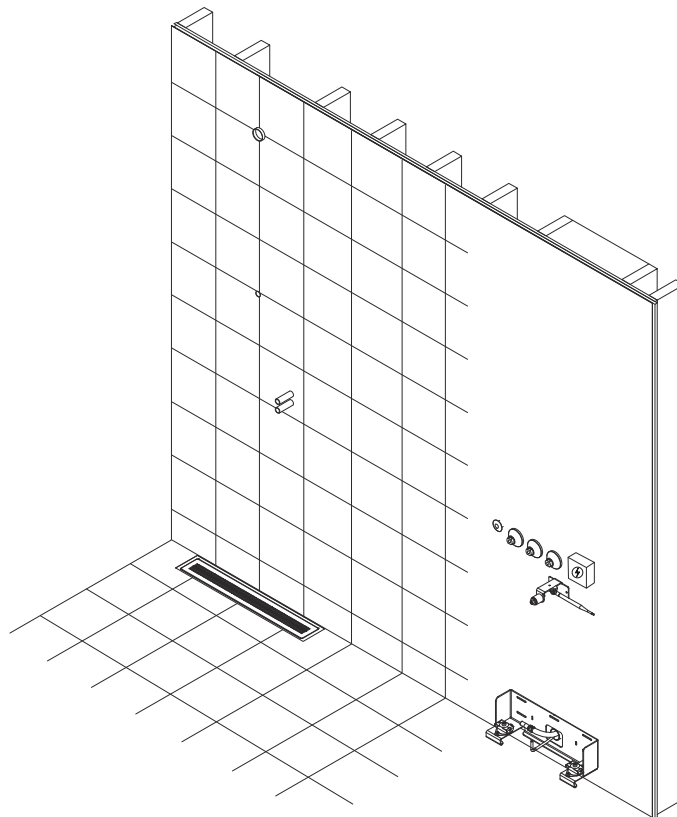


-
7. Strip and attach the cable to the amplifier.



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



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