



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 be displaying 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 and DVGW CERT W 540 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 rules 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/branschregler-na>):

- 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.se/terms-conditions>.



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
- Europe: +46 (0)40 619 55 50

System Overview

Orbital Shower Basic R3 (OS8733-E)



1. Shower Head (optional)
2. Control Dial
3. Hand Shower Kit (Hand shower, Diverter and Holder) (optional)
4. Shower Unit (RSK 835 91 20) and Wall brackets (RSK 384 95 38)
5. Drain Unit (RSK 711 54 63) and Outlet unit (RSK 711 99 33)

Preparation and installation of 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 Shower unit (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.

The installation kit contains components for either Wi-Fi connection OR Ethernet depending on what has been specified in the shower order.

Electrical Supply

Residual circuit breaker: One breaker per Shower Core
Power supply: One Phase, 230VAC / 50 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

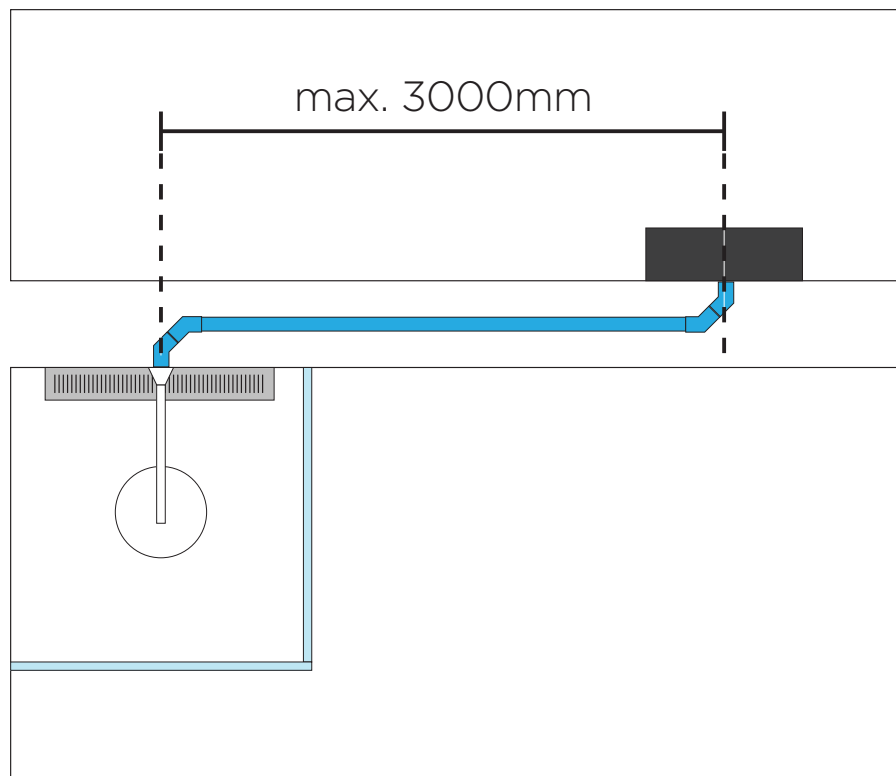
Water hardness (min-max): Required: 3°dH-10°dH

Recommended: 6°dH-10°dH (or a total hardness of 110-180mg CaCO₃/litre)

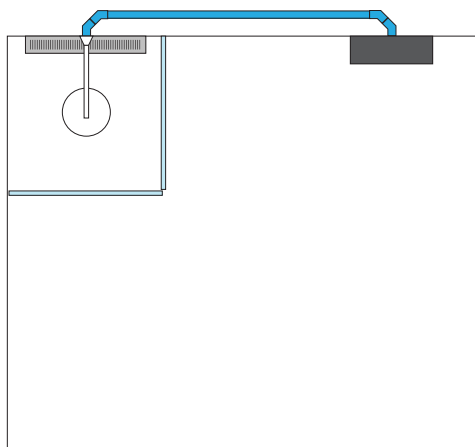
Water iron content: <0,3mg/litre

Installation Overview

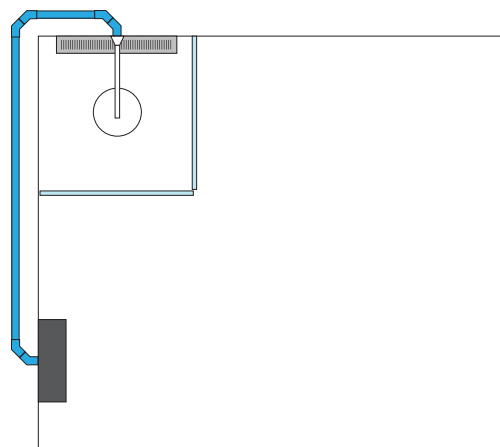
Orbital Shower Installation Options



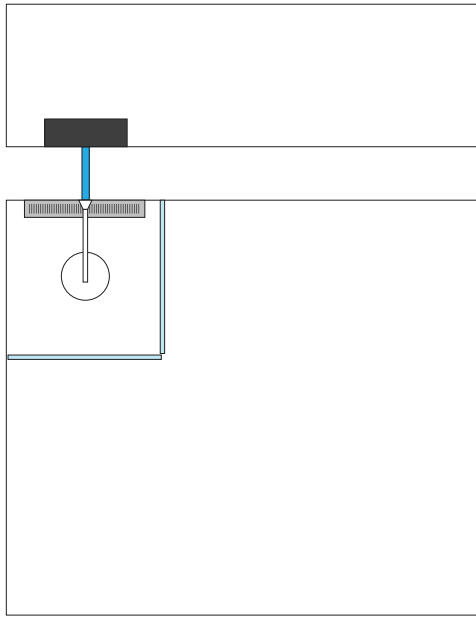
The distance between the center of the Orbital Shower Core and the center of the Drain Unit must not exceed 3000 mm.



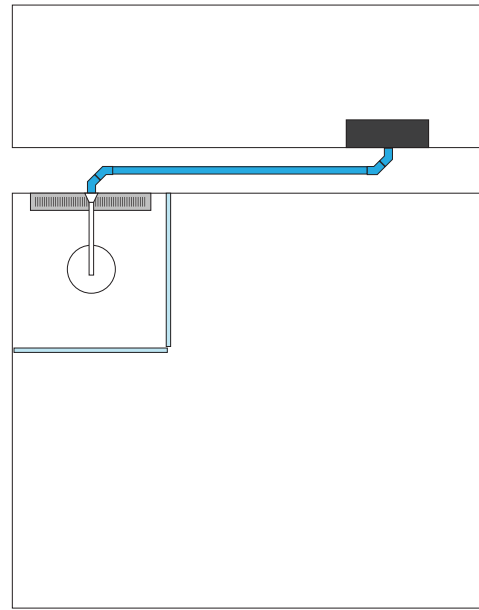
Orbital Shower Core placed on the same wall as the Drain Unit and Shower Head.



Orbital Shower Core placed on a wall perpendicular to the Drain Unit and Shower Head.



Orbital Shower Core placed in a separate room. The room must be heated and have a waterproof floor.



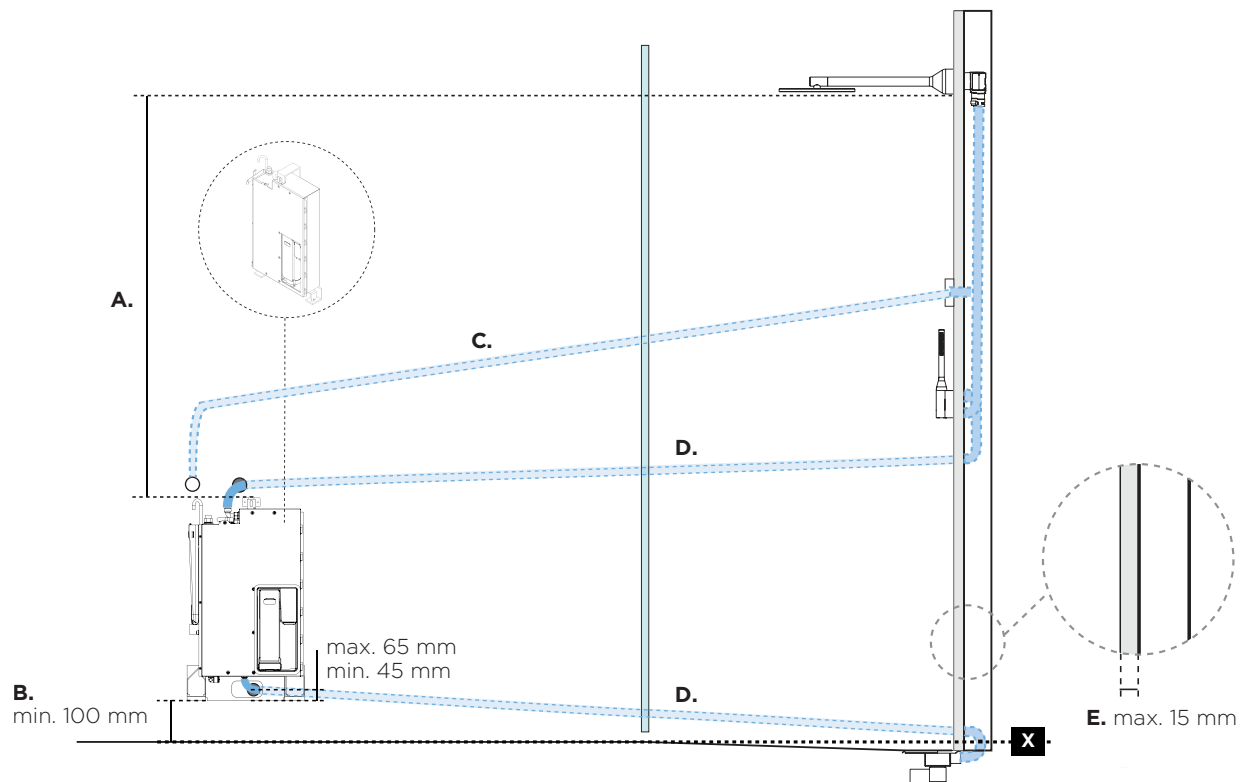
Orbital Shower Core placed in a separate room. The room must be heated and have a waterproof floor.

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

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

Orbital Shower Installation Requirements

W 450mm, H 750mm, D 150mm



X Finished floor height where it is level.

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.** Orbital Shower Core must be positioned minimum 100 mm above the top of the Drain Unit Frame.
- C.** Total distance between the Control Dial and Orbital Shower Core cannot exceed 3000 mm.
- D.** The piping between the Orbital Shower Core, any Shower Heads and the Drain Unit has to be built with a consistent slope towards the Drain Unit. Total distance between the Orbital Shower Core and the Drain Unit cannot exceed 3000 mm.
- E.** The maximum thickness of wall tiles and tile grout cannot exceed 15 mm (wall tile max. 10 mm, tile grout max. 5 mm).

Wall Installation

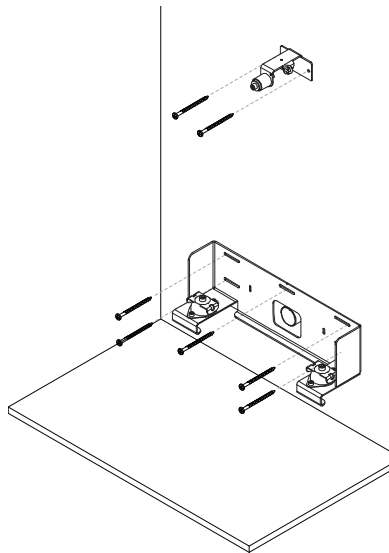
The weight of the Orbital Shower Core is approx. 25 kg. The surrounding structure must be able to support the forces that will stress the attachment points.



IMPORTANT

Leakage indication shall be placed with a slope along its entire length and end in a room with waterproof floors where you can easily detect a leak. The pipe should not end in place for bathing or showering. Inside diameter of the wire for indication of leakage must be at least 20 mm. The outlet should not be placed near more than 60 mm from the waterproofing layer of the floor or adjacent wall.

The pipe for indication of leakage must be cleaned so that leaking water is not prevented from flowing out. A cabinet must be placed frost-free on the construction warm side inside the plastic foil or the steam brake.



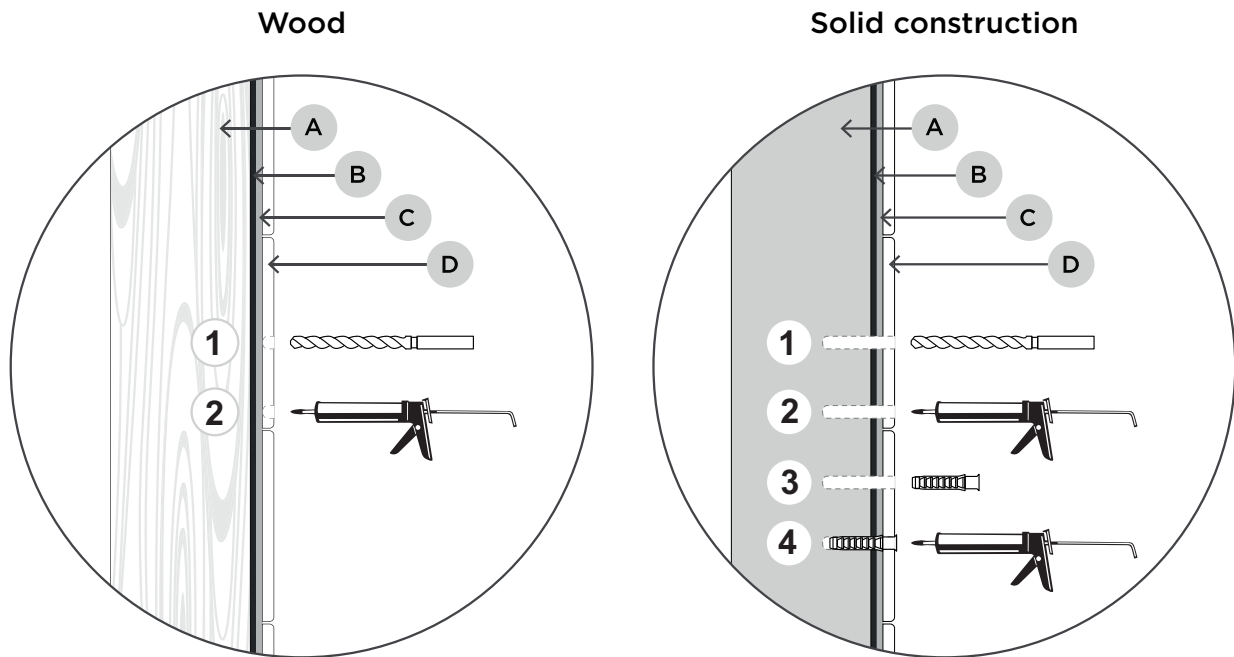
Seal mountings in wet zone



CAUTION

For installation in Sweden according to current Industry Rules Safe Water Installation. All mountings in the wet zone must be sealed against the water-proofing layer of the wall or floor. Material for sealing must adhere to the substrate and be water-resistant, mold-resistant and aging-resistant.

Seal the drill holes according to industry rules.

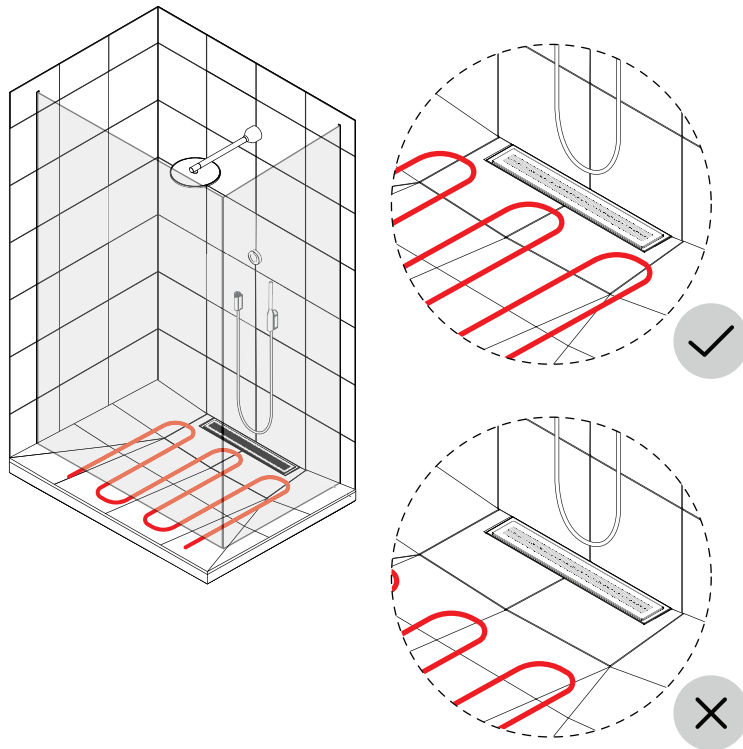


- **A:** Wood / Concrete
- **B:** Waterproofing membrane
- **C:** Tile adhesive
- **D:** Tile

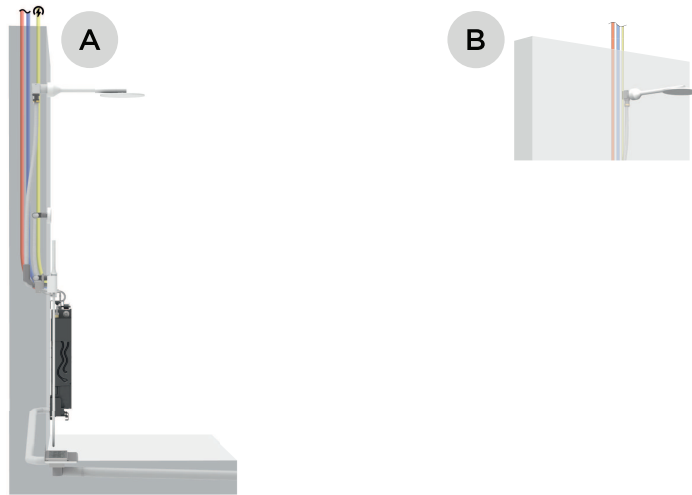
Recycling Optimisation Site Suggestion

Recommended installation

A fully enclosed shower area with floor heating is recommended to optimize recirculation rates.



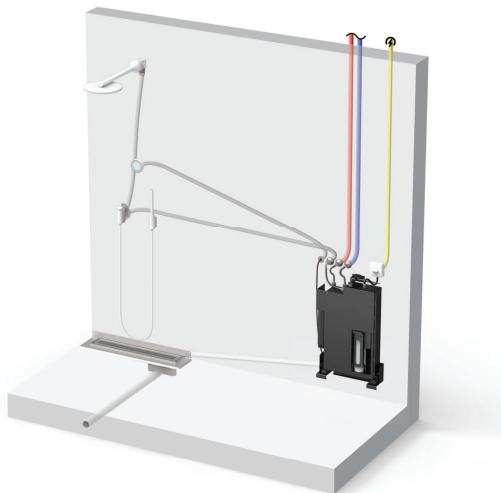
Shower Installation Overview



Available shower variants:

A: Orbital Systems Shower Head & Hand Shower

B: Orbital Systems Shower Head



IMPORTANT

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

Cabinet must also be equipped with a leakage indicator.

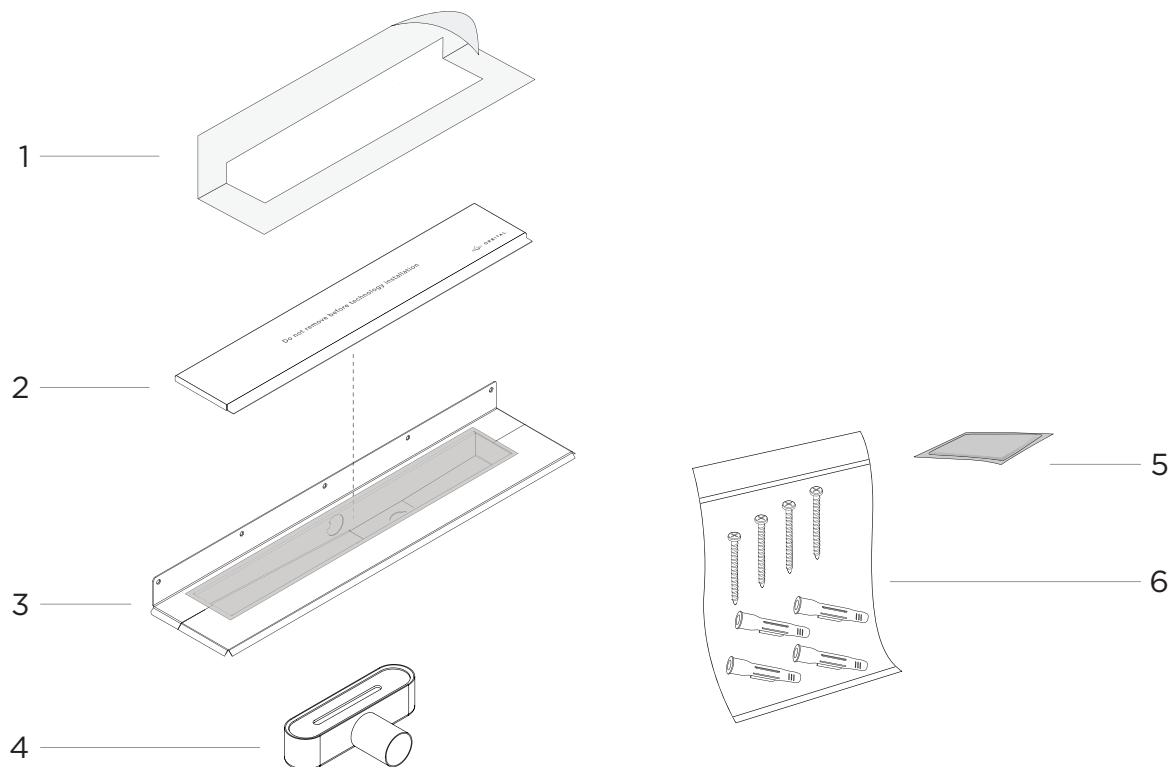
Drain Unit HxWxD: 192x812x184 mm

Drain Connection: Ø75 mm

Fixture Installation

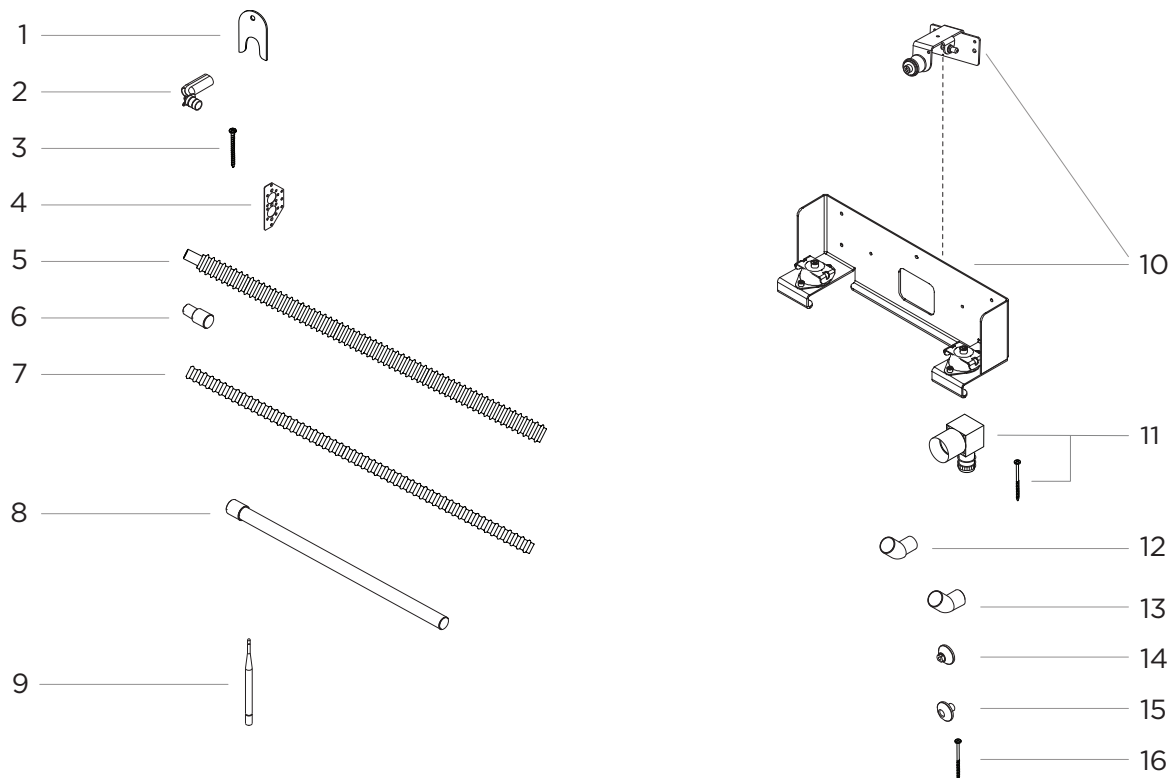
Component Overview

Fixture kit - Floor Fixtures



1. Drain Waterproofing membrane, 1x
2. Tiling frame set, 1x
3. Drain Unit (RSK 711 54 63), 1x + screws, x7
4. Outlet Unit (RSK 711 99 33), 1x
5. Cleaning wipe, 1x
6. Screw and plug kit, 1x

Fixture kit Wall fixtures

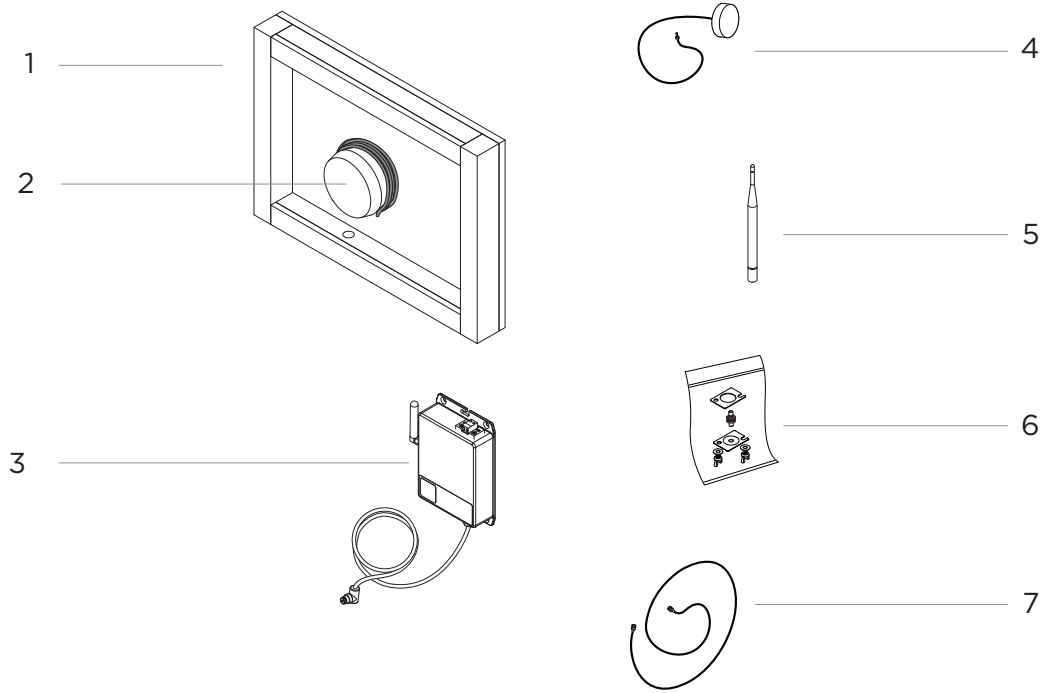


1. Retainer Conduit (RSK 188 21 50), 10x (Head & Hand)/ 5x (Head)
2. Conduit Elbow (RSK 187 79 99 / 188 27 00), 5x (Head & Hand)/ 3x (Head)
3. Screw, 6x (Head & Hand)/ 4x (Head)
4. Fixture + countersunk screws, 4x (Head & Hand)/ 3x (Head)
5. Piping, PEX Hose with Conduit (RSK 188 23 36), 550 cm
6. Reducer 50-40 mm (RSK 291 03 56)
7. Piping, Conduit for Control Dial (RSK 187 06 65), 350 cm
8. Pipe 50mm, 100 cm with sleeve, 3x (RSK 283 20 03)
9. Wi-Fi Antenna, 1x
10. Top Bracket Assembly (RSK 384 95 38) + Bottom Bracket Assembly (RSK 384 95 38)
11. Wallbox UNI Push V2 (RSK 188 21 81/ 188 26 57) x1, screws, 4x
12. Fitting, 40 mm x45°, M-F, 2x (RSK 291 03 41)
13. Bend, 50 mm x 45°, M - F, x6 (RSK 283 20 31)
14. Mixer Bracket (RSK 188 26 81), 1x
15. Conduit End Cap (RSK 187 71 96), 1x
16. Screws, 6x

Provided by Customer:

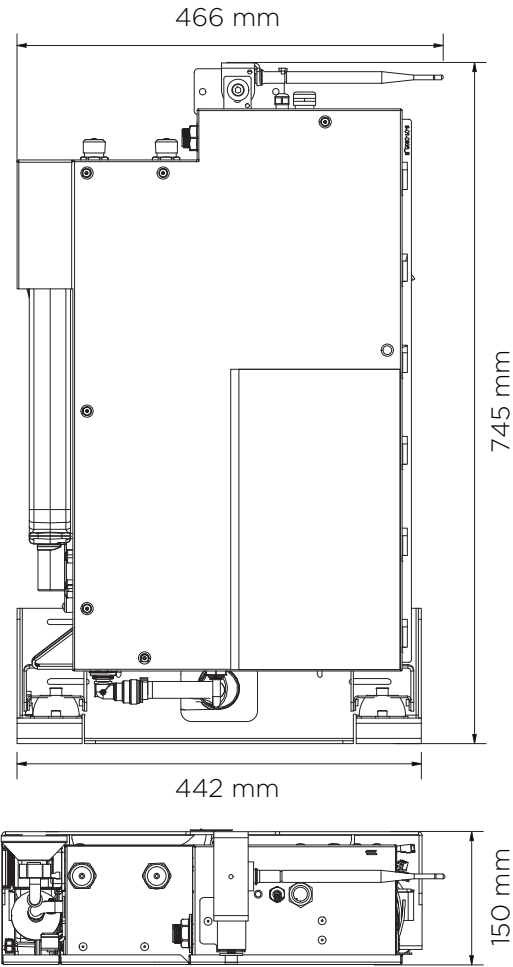
1. Waterproofing Conduit Membrane for Diverter
2. Waterproofing Conduit Membrane for Shower Head
3. Waterproofing Conduit Membrane for Control Dial
4. Waterproofing Conduit Membrane for Pipe to Orbital Shower Core

Audio kit

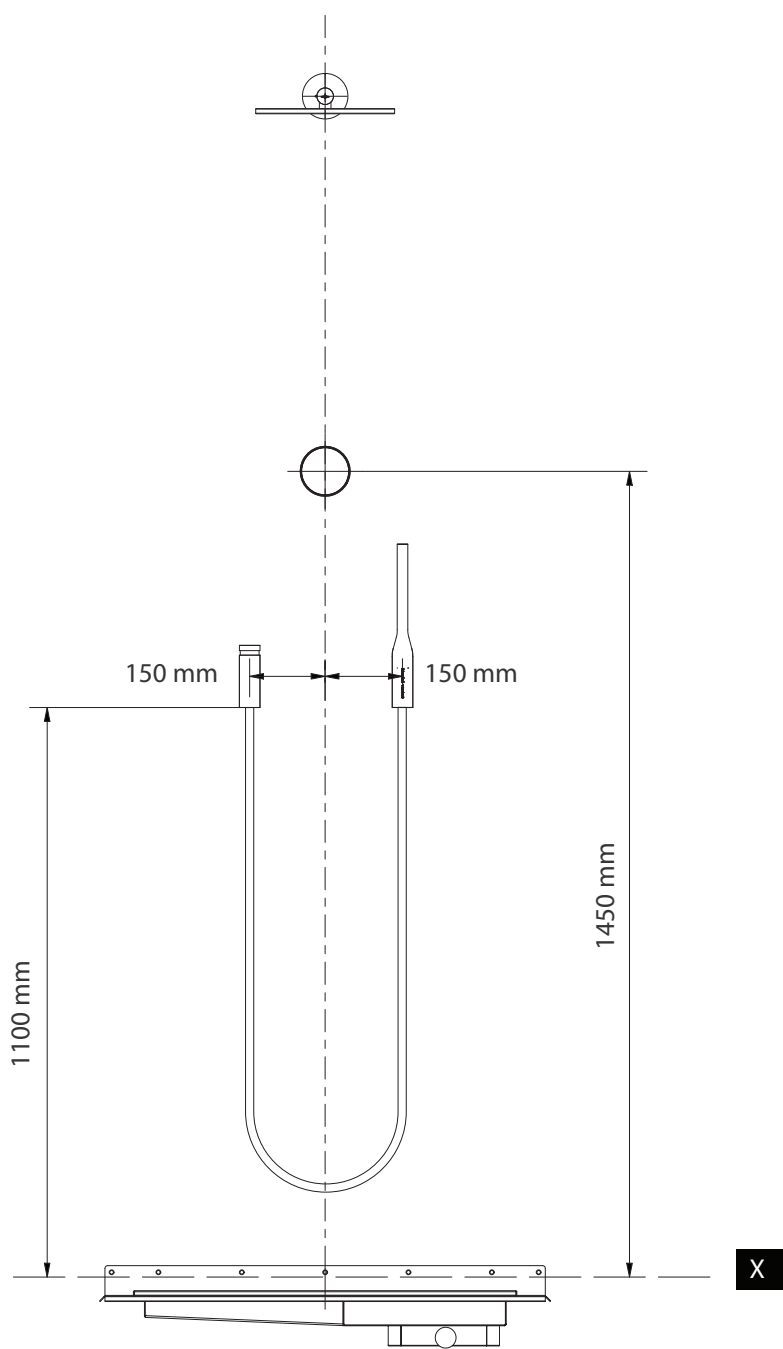


1. Audio fixture
2. Speaker with speaker cable
3. Amplifier with amplifier cable and stub antenna
4. Puck antenna (only used for *Orbital Shower Cabinet*)
5. Rod antenna (only used for *Orbital Shower Hatch*)
6. Assembly kit to the rod antenna
7. Cable to the rod antenna

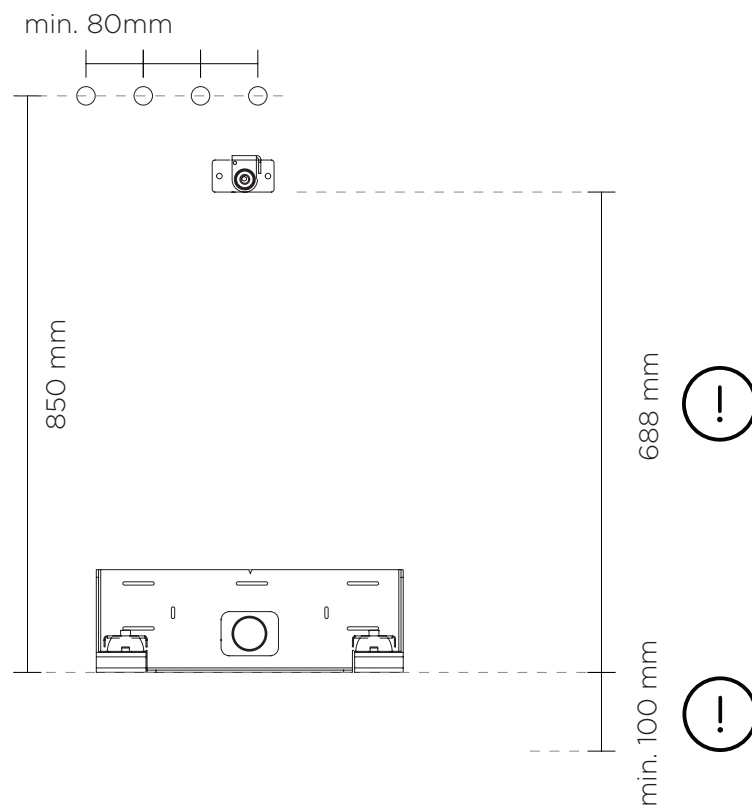
Kit Measurements



Recommended Kit Measurements



X Finished floor height where it is level.



IMPORTANT

Incoming tap water can only be drawn in from the back or top.



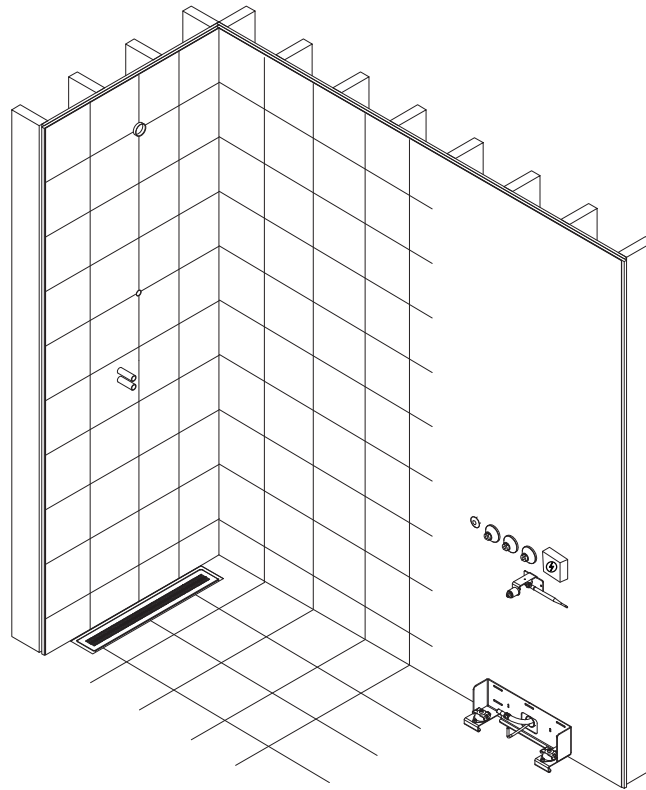
IMPORTANT

Leakage indicators must be mounted at least 60 mm from the floor or wall.

Installation Scenario Displayed in Manual

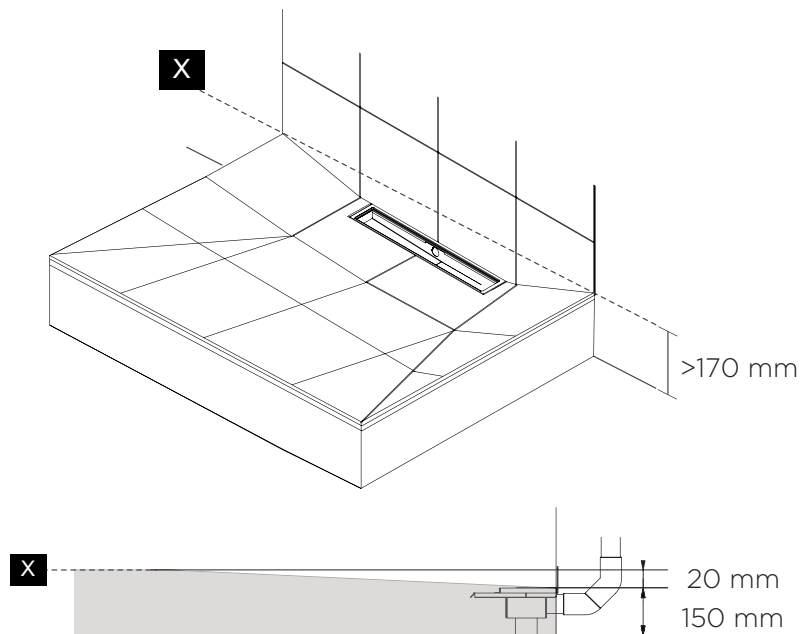
Adjust lengths and bends on hoses and cables depending on installation scenario.

See section [Orbital Shower Installation Requirements \[11\]](#) in Chapter [Installation Overview \[9\]](#) for requirements on maximum lengths and maximum number of conduit bends.

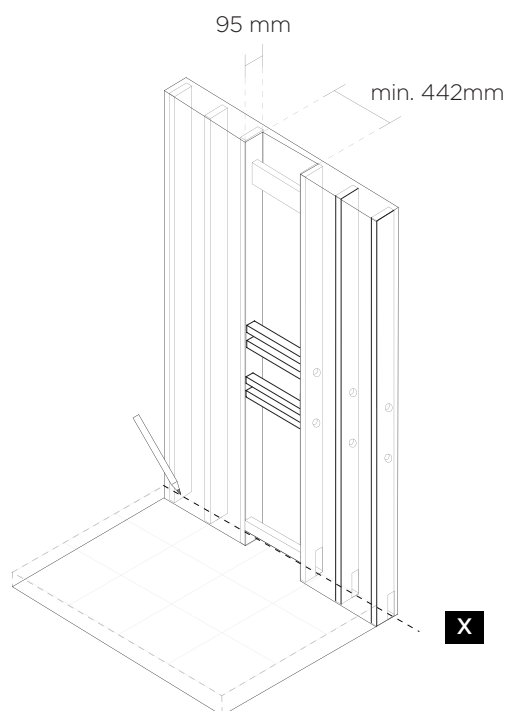


Prepare Shower Area


1. Mark the finished floor height where it is level (>170 mm). This mark will be used as measurement "X" in the installation process to ensure that there is enough space for the Drain Unit.



- 2.

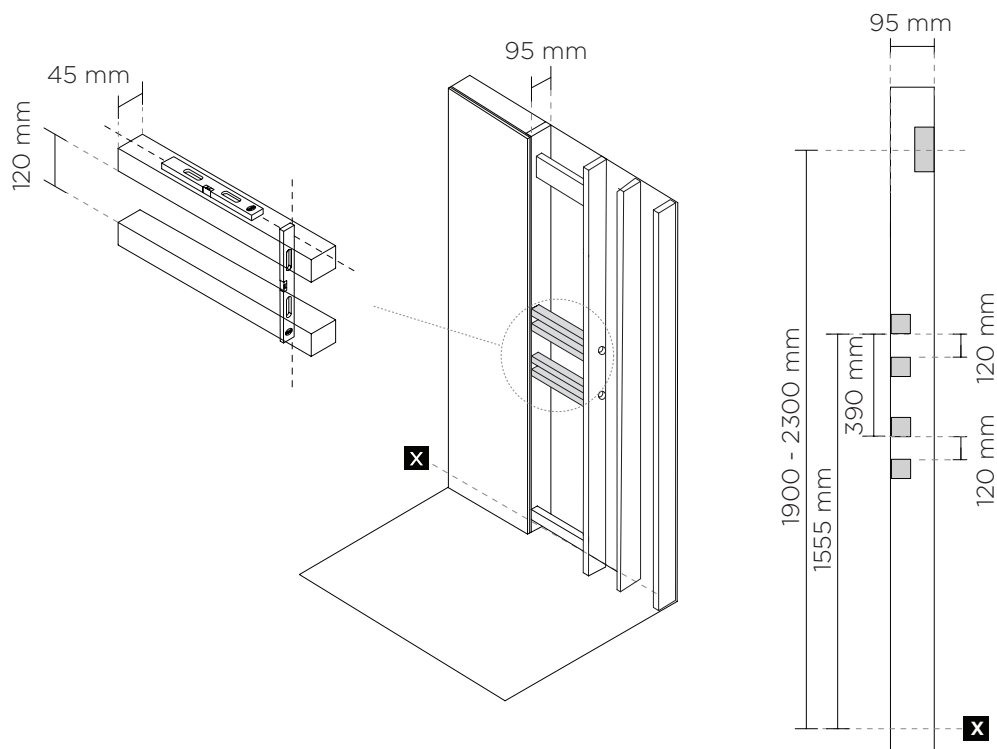


X Finished floor height where it is level.

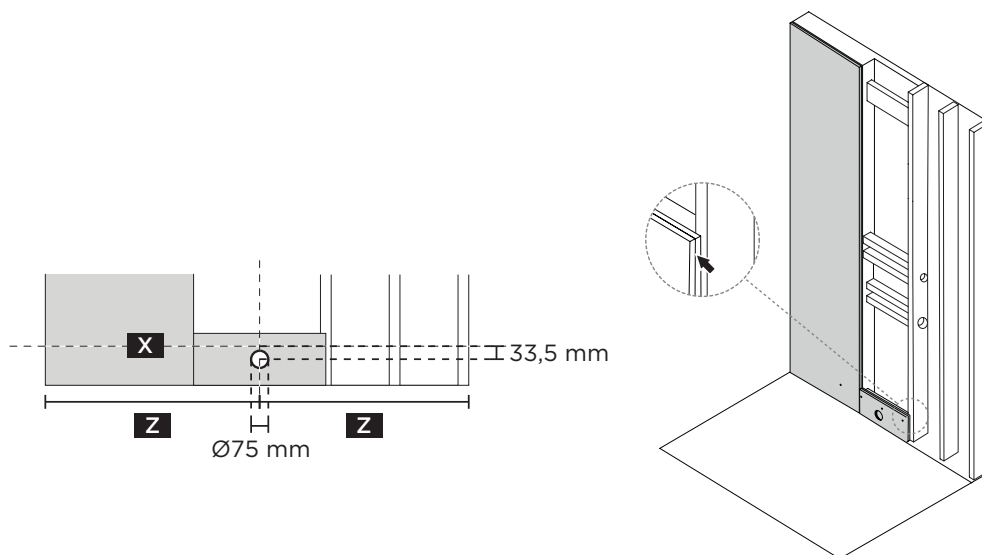
3. 

CAUTION

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




4. Apply wall covering according to industry rules.



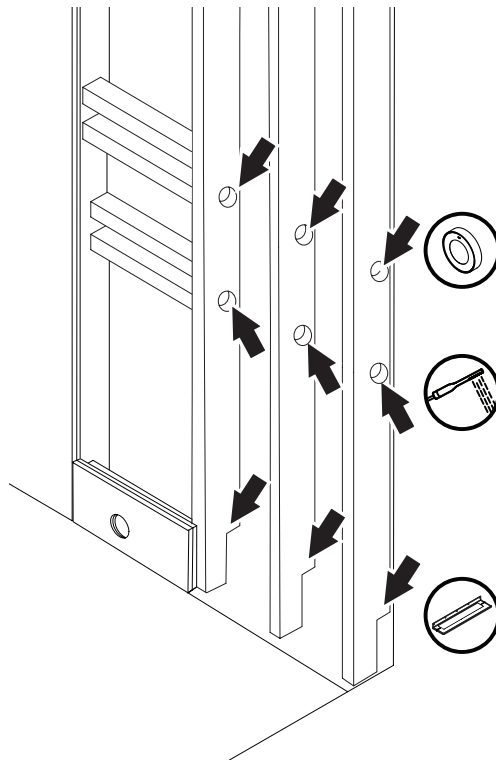
X Finished floor height where it is level.

Z The hole is centered in the shower area.

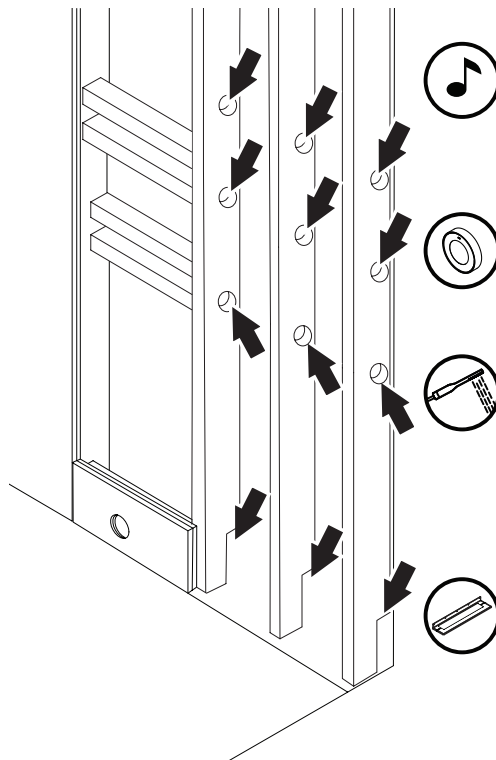
5. 

NOTICE

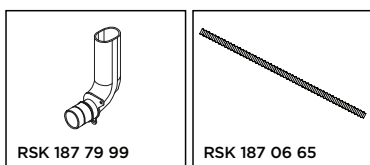
Adjust slot in studs and wall covering depending on Hand Shower and Control Dial placement. Make sure to place the slots to the back, to avoid the wall covering screws damaging the pipes and hoses.



Only valid for Orbital Audio installation



6.



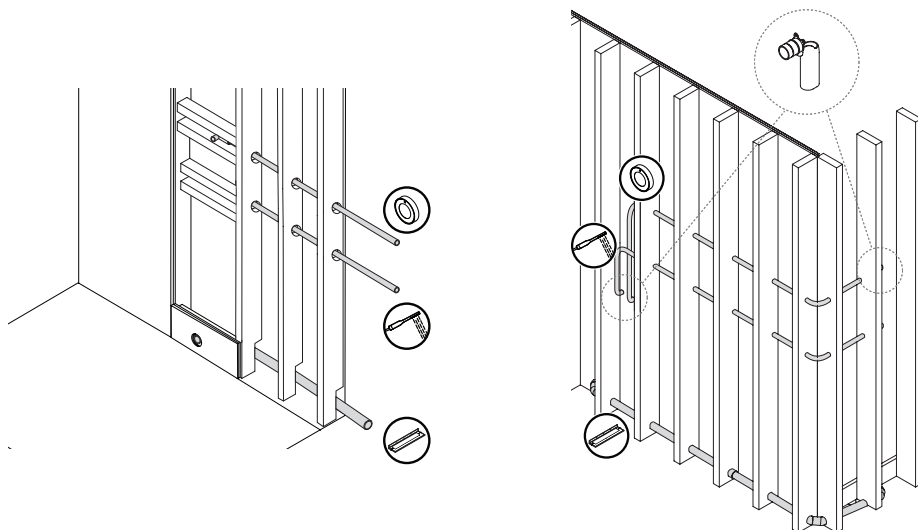
Draw Pipes, Pex Hoses with Conduits and Drain Conduits for Control Dial, Diverter and Drain Unit to the Orbital Shower Core mounting area. Use Conduit Elbows in kit to achieve the bends.

See section [Orbital Shower Installation Requirements \[11\]](#) in Chapter [Installation Overview \[9\]](#) for requirements on maximum lengths and maximum number of conduit bends.

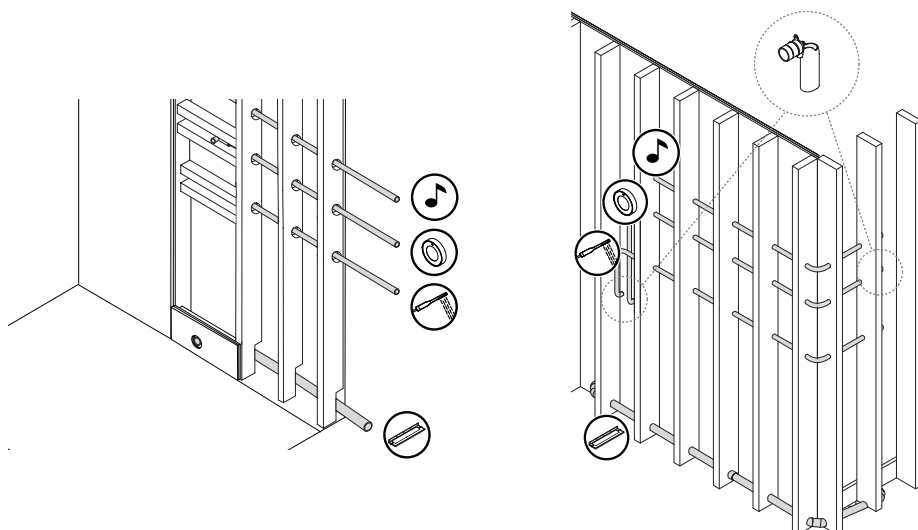


NOTICE

Pictures are for illustration purposes only, adjust conduit routing and bends to local requirements.

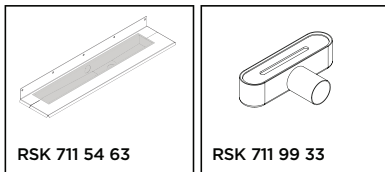




Only valid for Orbital Audio installation

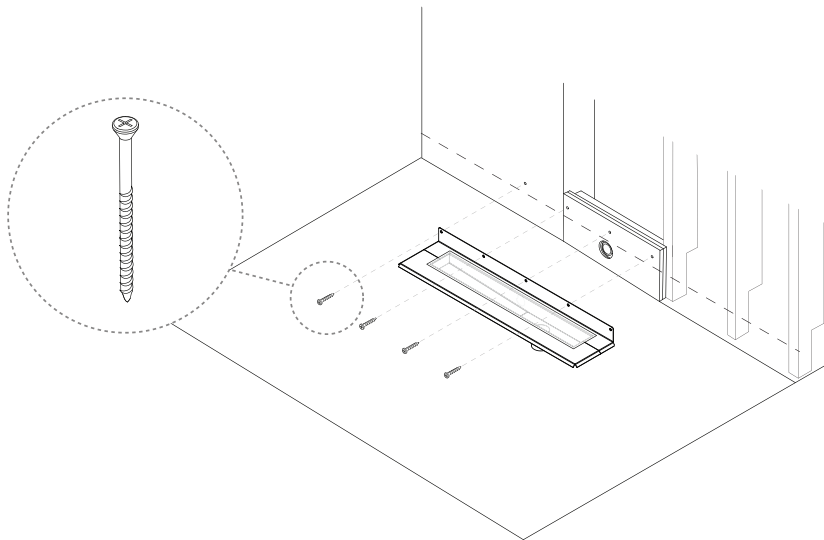


Install Drain

Drain unit and Outlet unit



1.  **CAUTION**
Plumbing and electrical installation should be performed according to industry rules.
-  **CAUTION**
Do not remove the Protective Cover until the Frame is being installed in a later step.

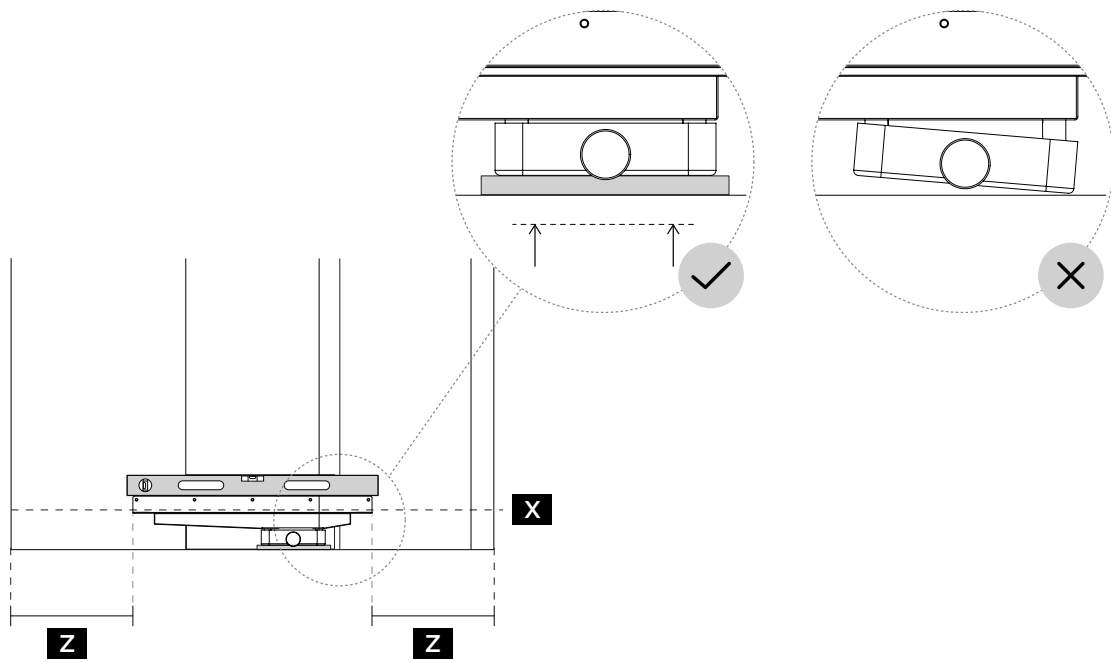


x7

Countersunk stainless steel screw

All supplied screws (x7) must be inserted.

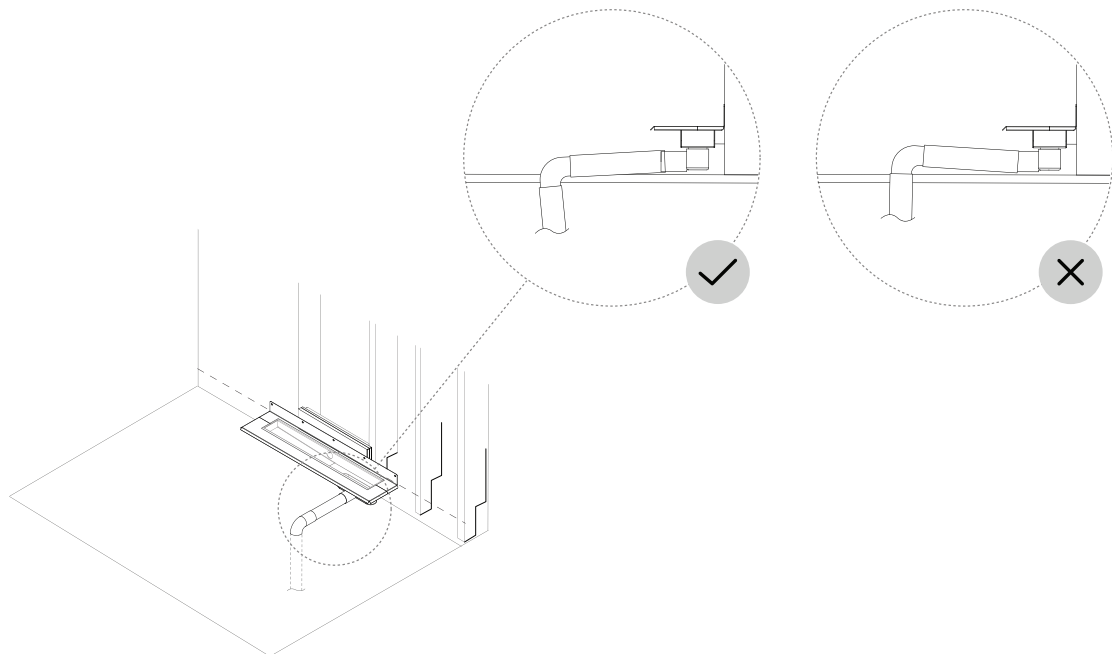
2.



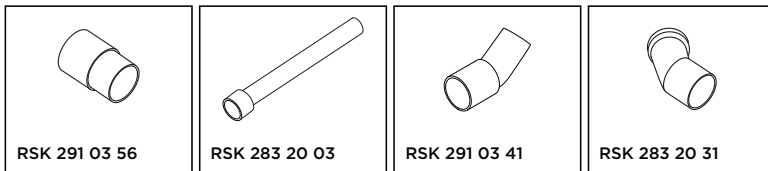
X Finished floor height where it is level.

Z Drain Unit is centered in the shower area.

3. Connect Drain Unit to the sewerage system as defined by industry rules.



Drain piping



CAUTION

Perform the installation in accordance with current Industry Rules Safe Water Installation:

- 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.

1.



NOTE

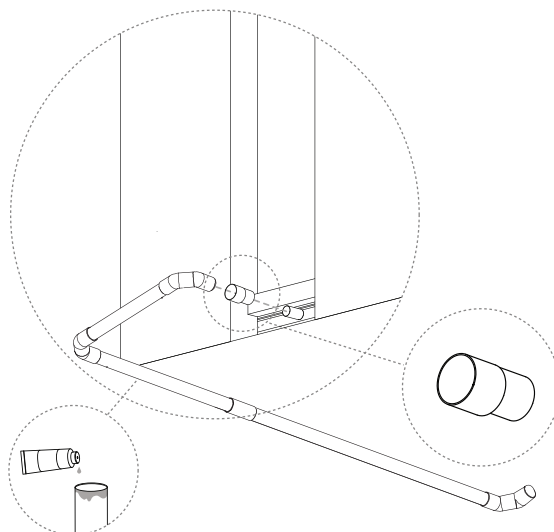
Apply Glidex lubricant when assembling.



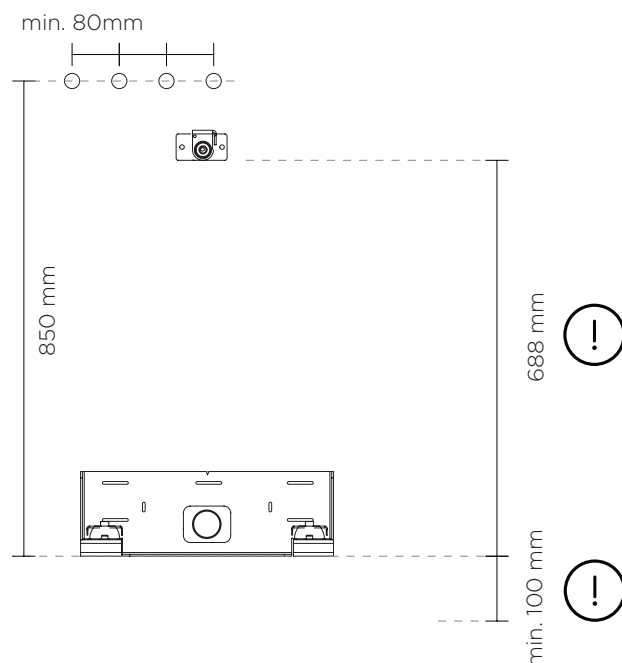
CAUTION

Check water tightness to eliminate leakage.

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.



2.



3. Anchor the Pipes and Fittings according to industry rules. For installation in Sweden according to Safe Water § 4.4.1, 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.

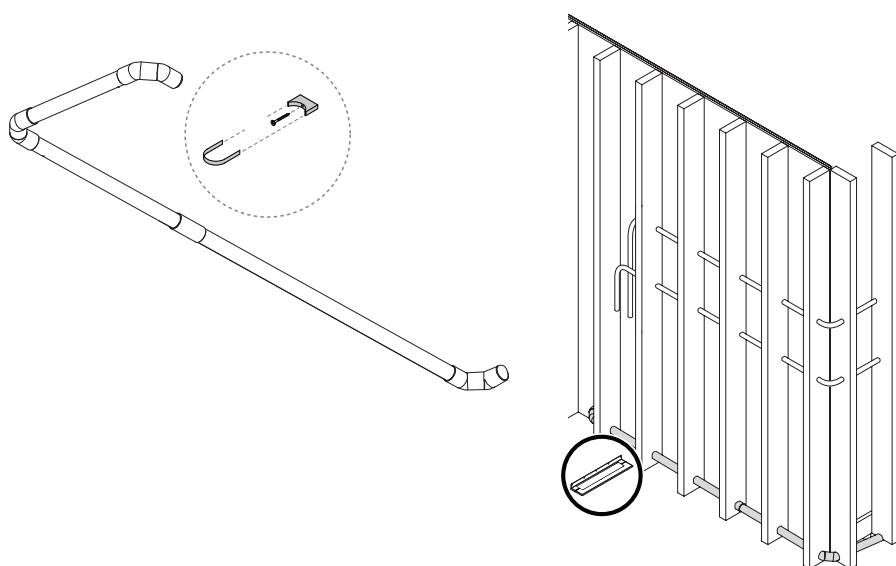
Provided by Customer:


- Anchors



CAUTION

Make sure to fasten and anchor the Pipes and Fittings so they cannot move or be separated.

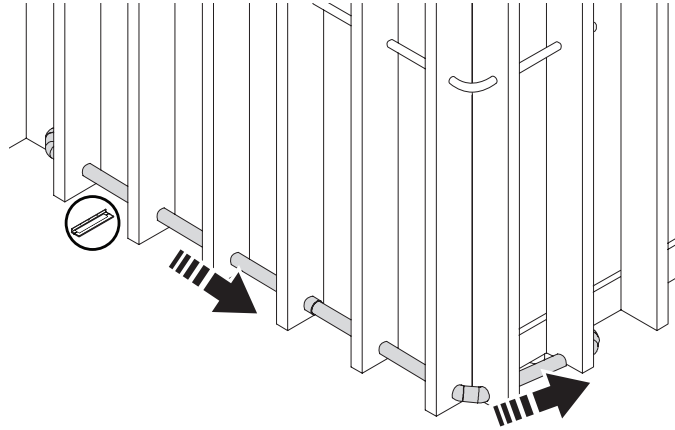


4. 

CAUTION

Check water tightness to eliminate leakage.

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.

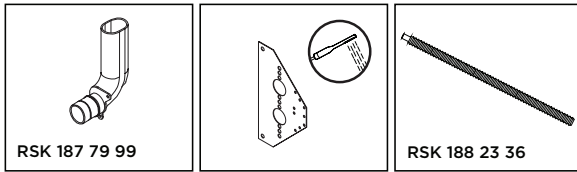


Install Wall Brackets

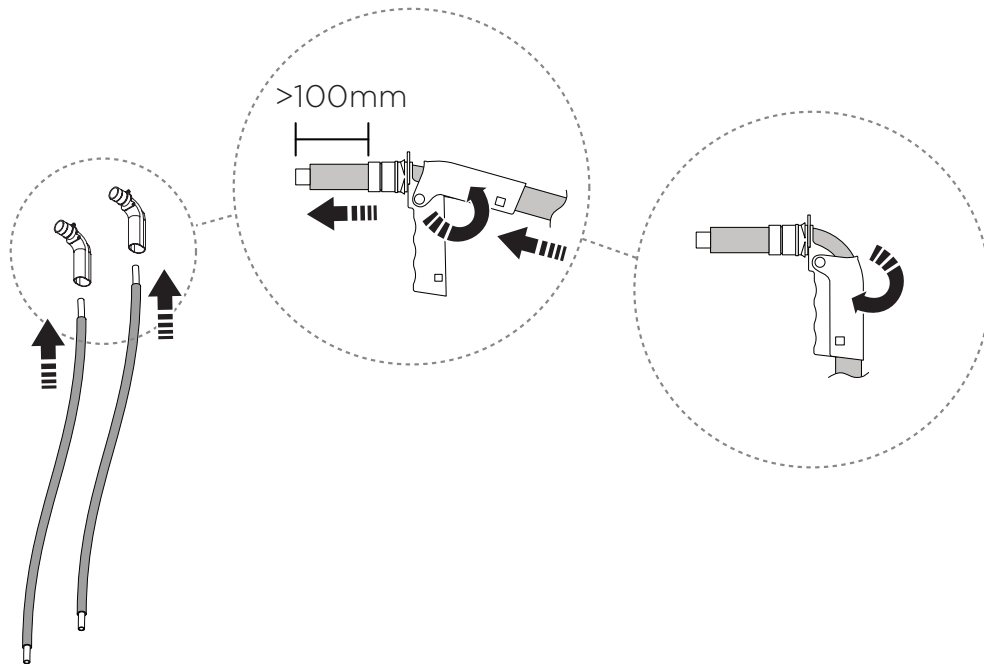


NOTICE

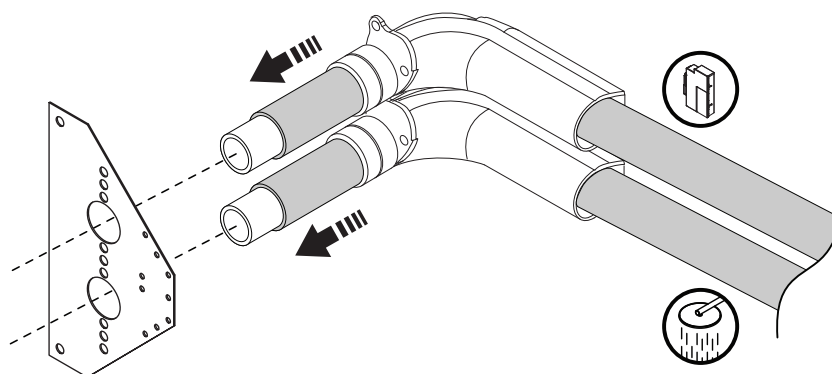
Following steps only valid for Orbital Systems Shower Head and Hand Shower.



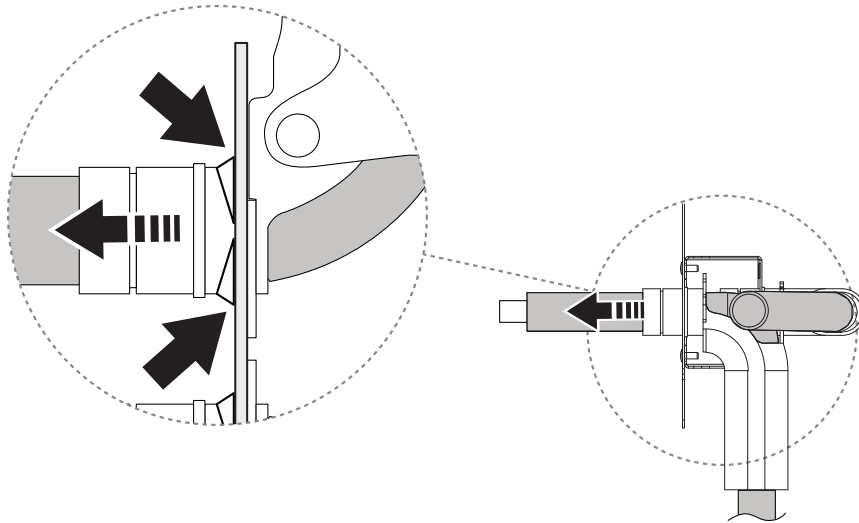
1.



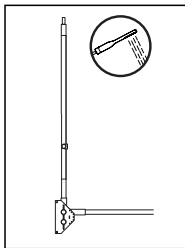
2.



3.



4.

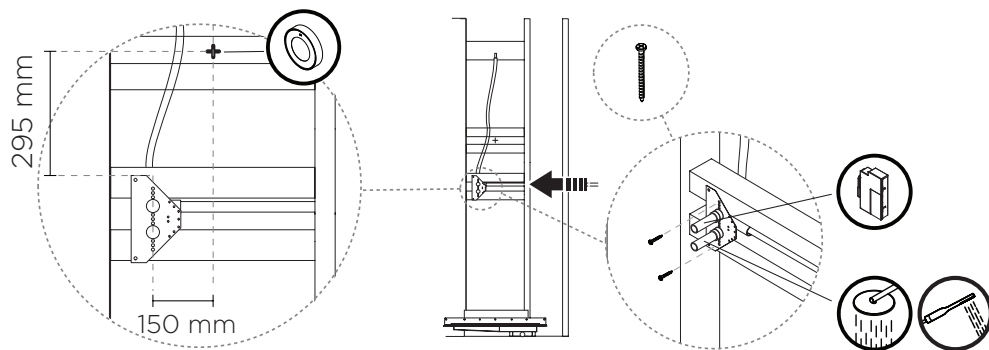


Make sure the Shower Head and the Control Dial are centered vertically.



CAUTION

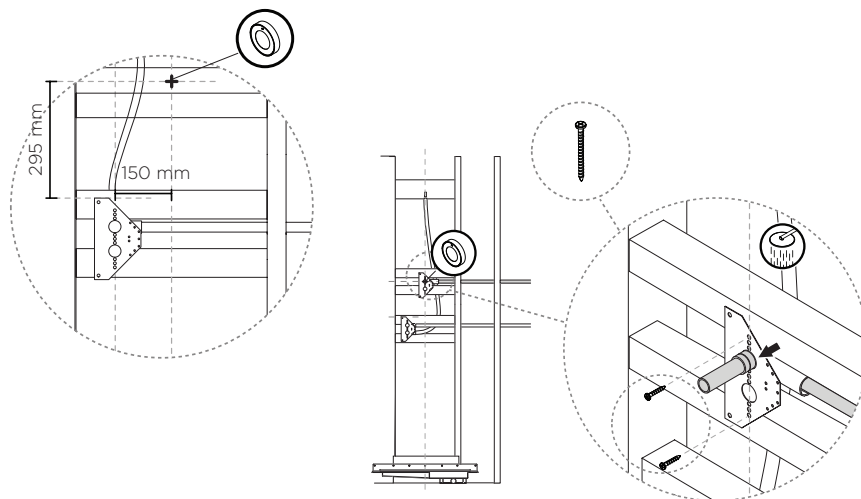
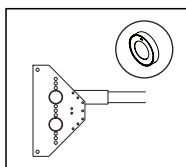
- The Orbital Shower Core shall be connected to the top inlet.
- The Shower Head shall be connected to the bottom inlet.



x2

Countersunk stainless steel screw

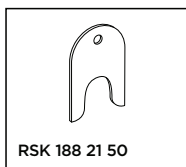
5.



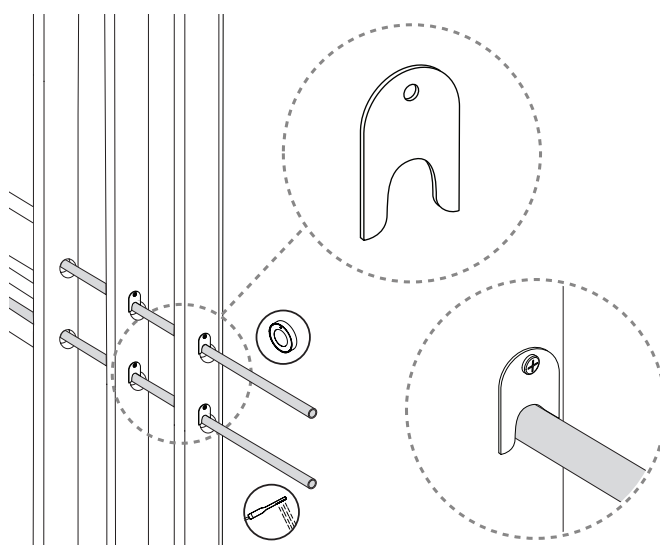
x2

Countersunk stainless steel screw

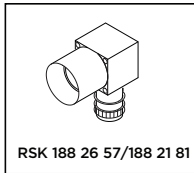
6.



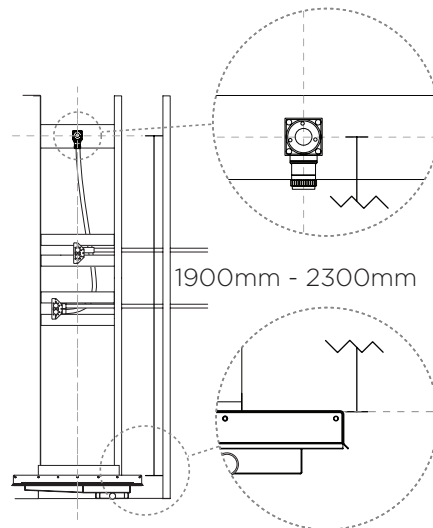
Anchor the Control Dial and Diverter Piping according to industry rules.



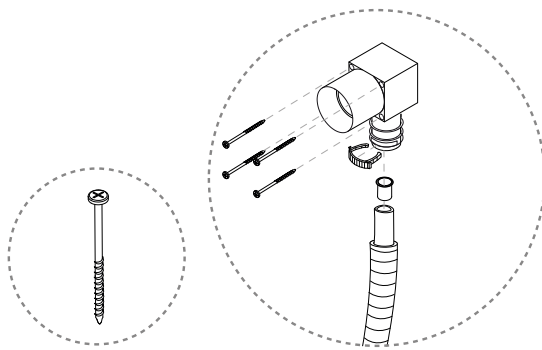
Prepare Orbital Systems Shower Head



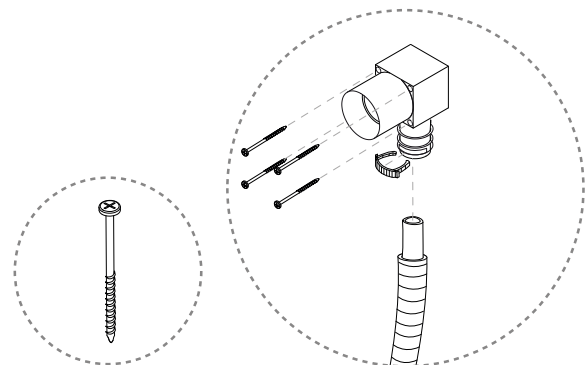
1. Measure and mark placement of Wallbox UNI Push.



2. Follow instructions provided for the Wallbox UNI Push. Mount the Wallbox with four screws from the front. Installation should be performed according to industry rules. 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

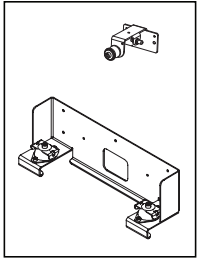


Wallbox UNI Push with integrated support sleeve

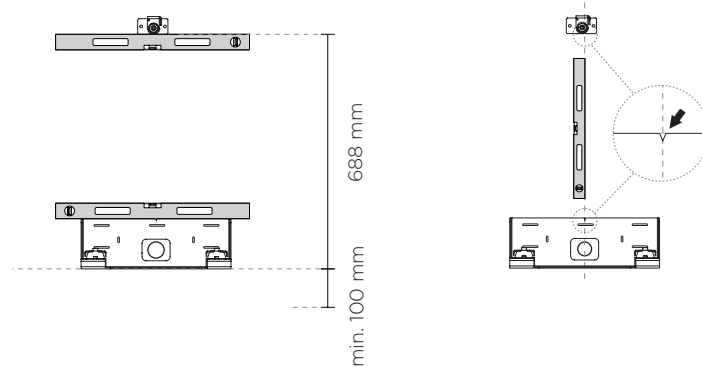
x4

Pan head stainless steel screw

Install Core Wall Mounting



1. Measure and align the placement of the Core Wall Mounting.

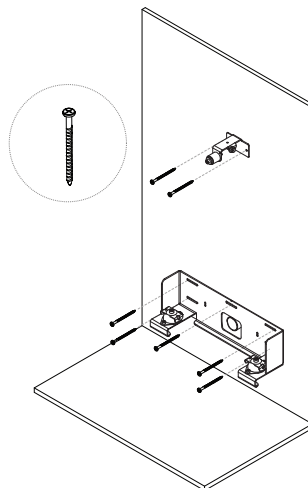


2. The weight of the Orbital Shower Core is approx. 25 kg. The wall construction must be able to support this load.



CAUTION

Seal drill holes according to industry rules. See section [Seal mountings in wet zone \[13\]](#) for instruction.

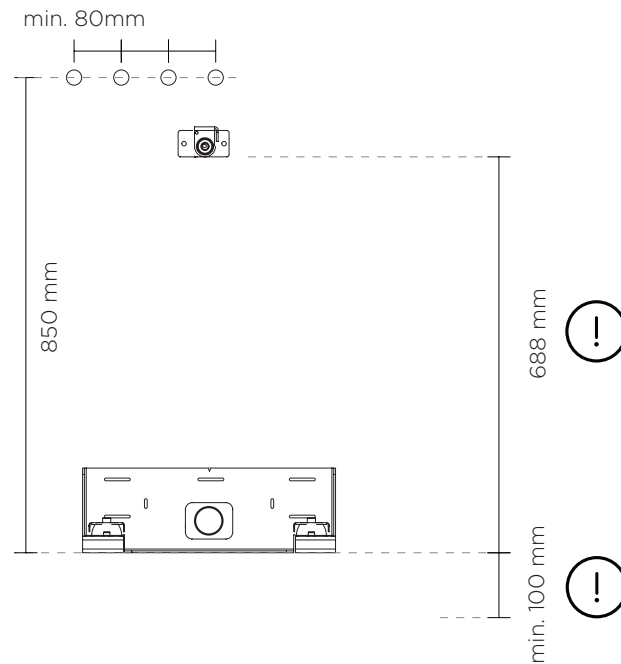


x7

Pan head stainless steel screw

Pipes & Connections

1.



2. Prepare incoming water and electricity. Draw Cables and Conduits and use Wall Conduits for anchoring. Use Retainer Conduits in kit to anchor Conduits for Shower Head/Hand Shower.



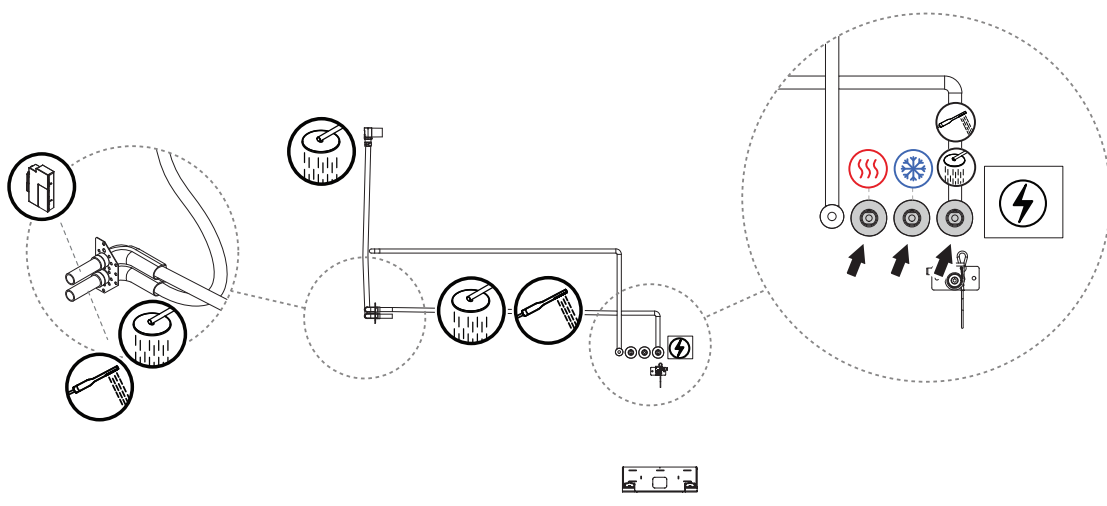
CAUTION

- The Orbital Shower Core shall be connected to the top inlet.
- The Shower Head shall be connected to the bottom inlet.

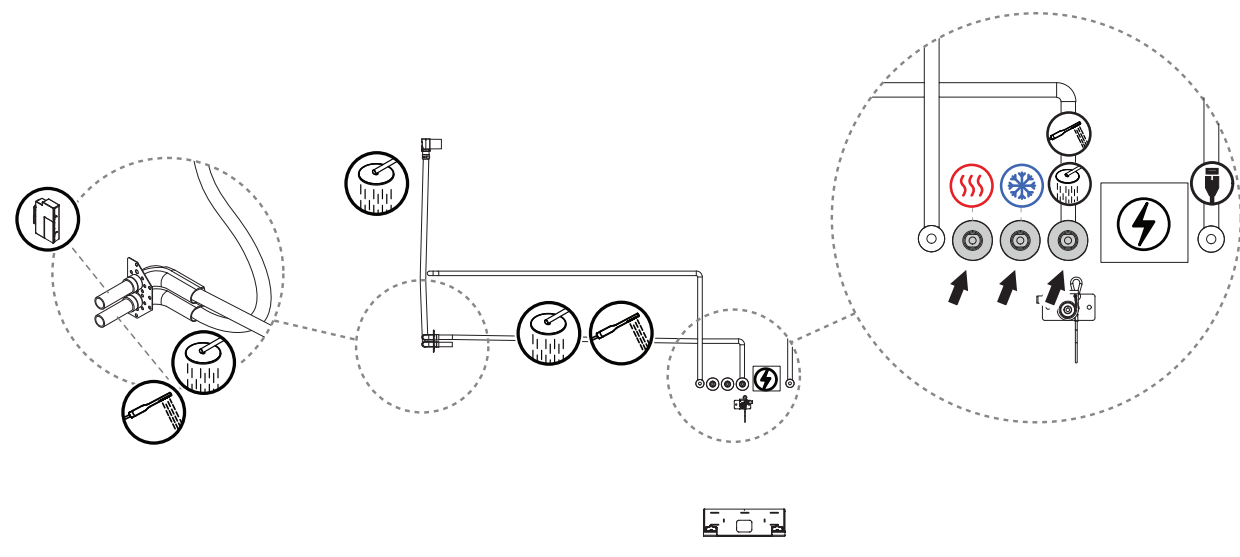


NOTICE

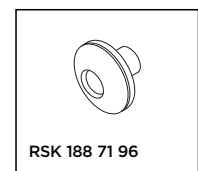
Wall Conduits for incoming water and electricity is supplied by customer.



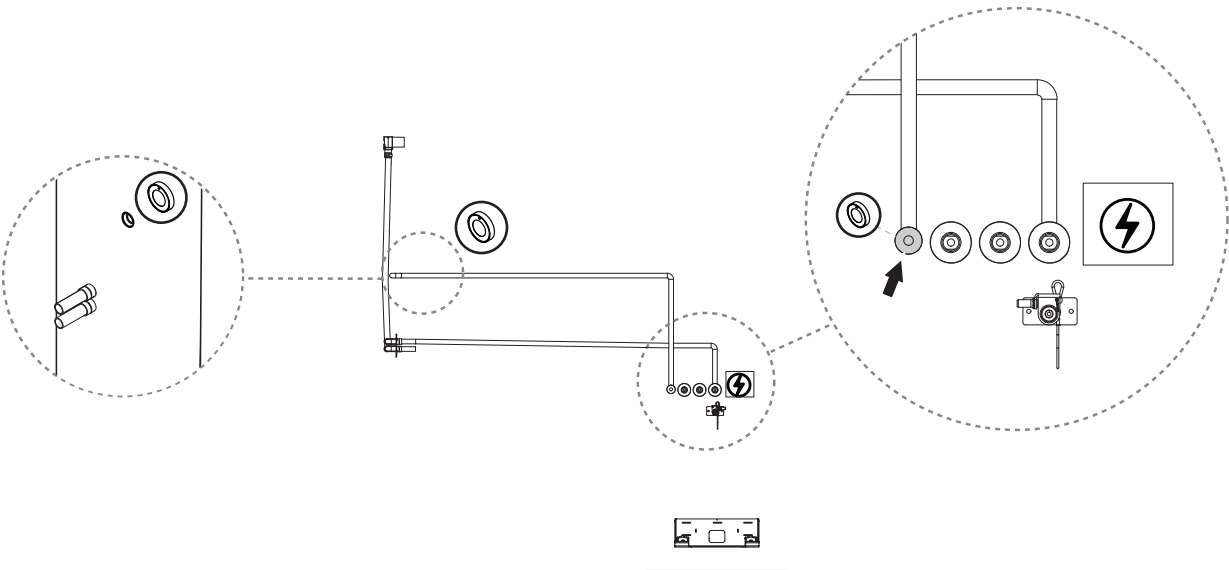
Only valid for Orbital Ethernet installation



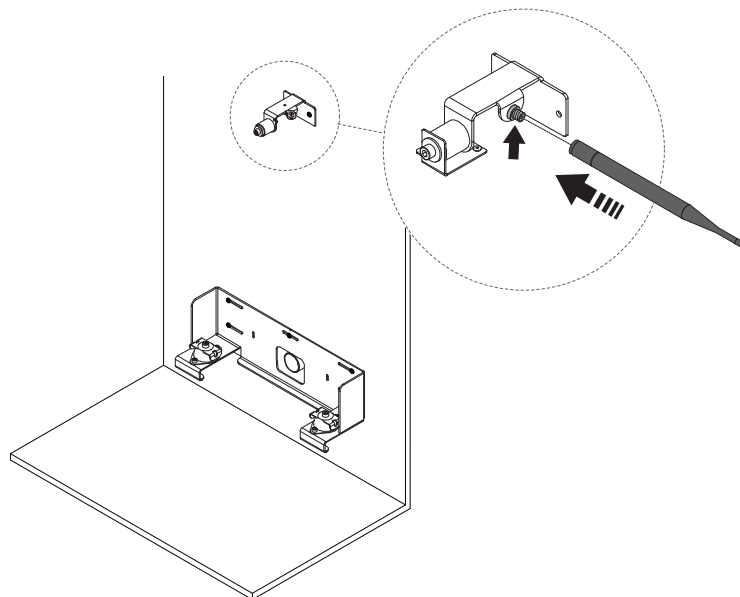
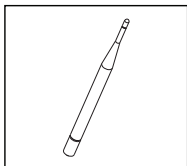
3.



Anchor piping for Control Dial with Conduit End Cap.

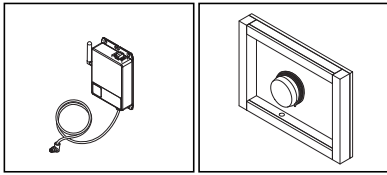


4.



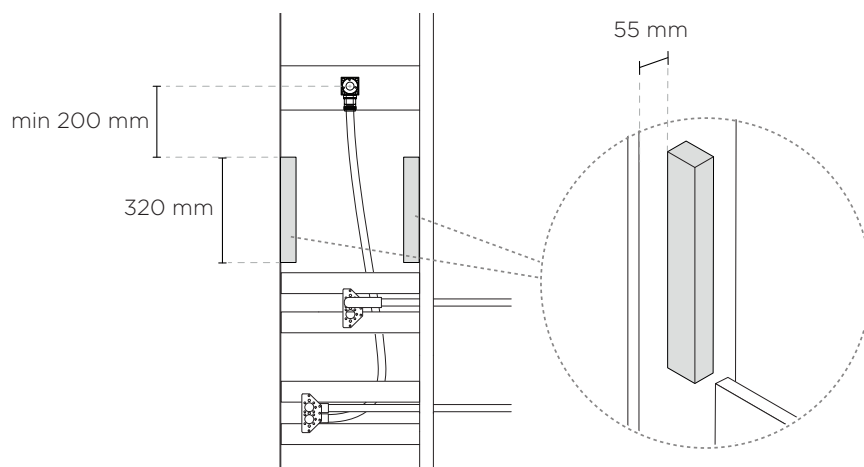
Install Audio

Following steps are only valid for Orbital Audio

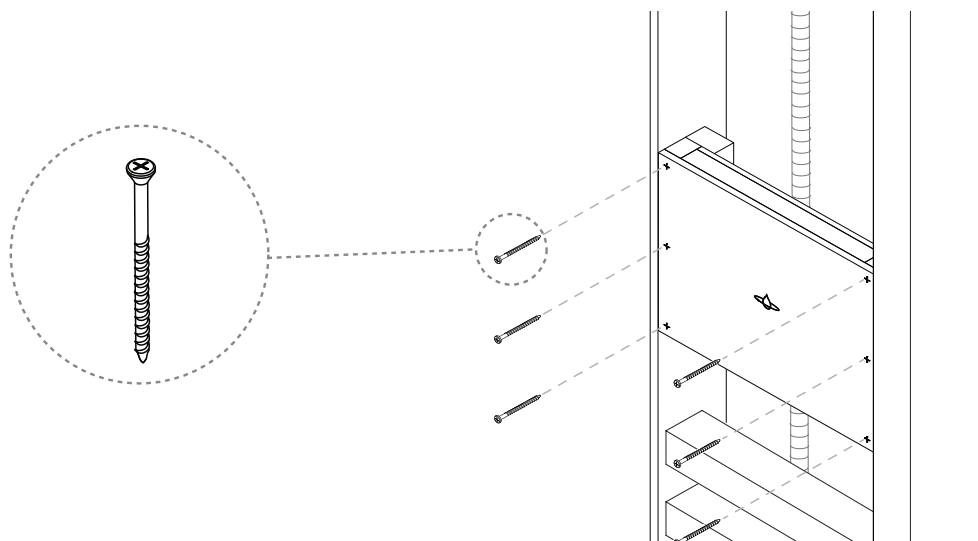


Check that the exciter is intact and attached to the back of Audio fixture before starting the installation.

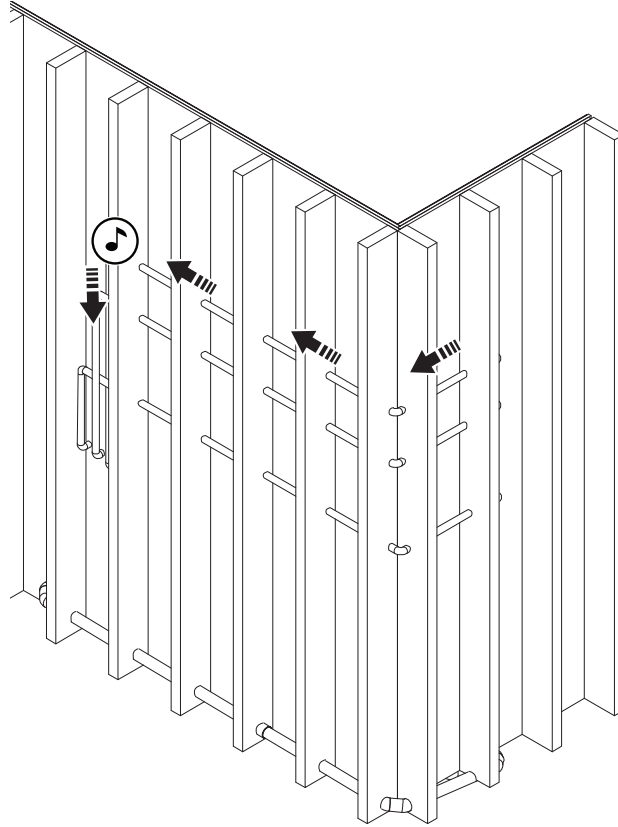
1. Install two studs in between the head shower and the control display, where Audio fixture will be placed.



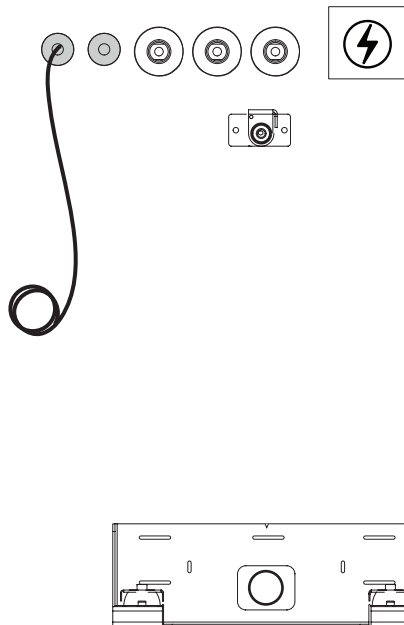
2. Place Audio Fixture in level with the front edge of the vertical studs. Pre-drill and attach with six stainless steel countersunk screws.



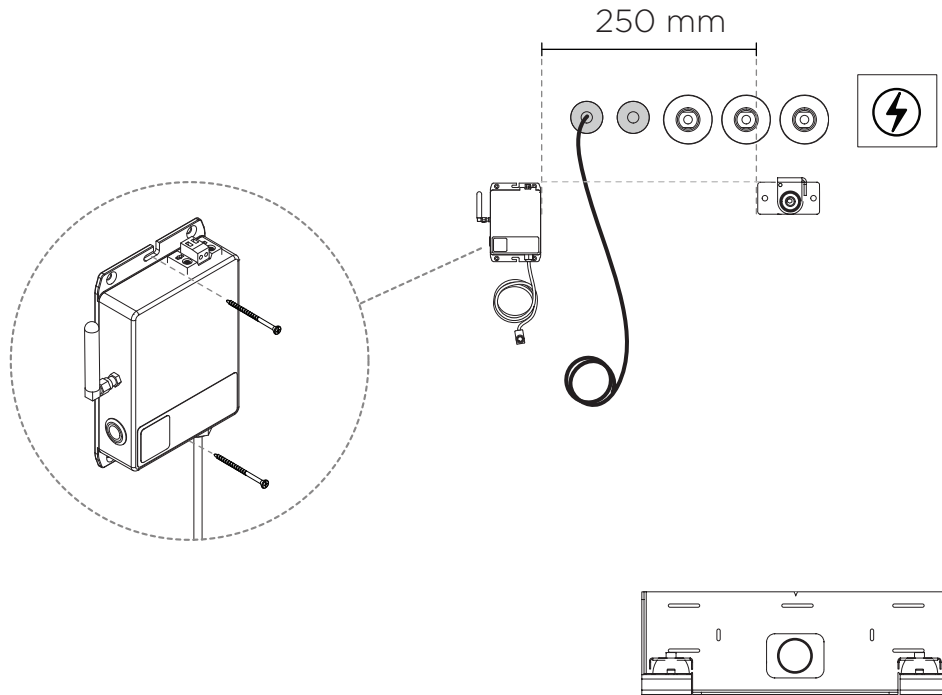
-
3. Draw the speaker cable from the back of Audio fixture to the wallbox.



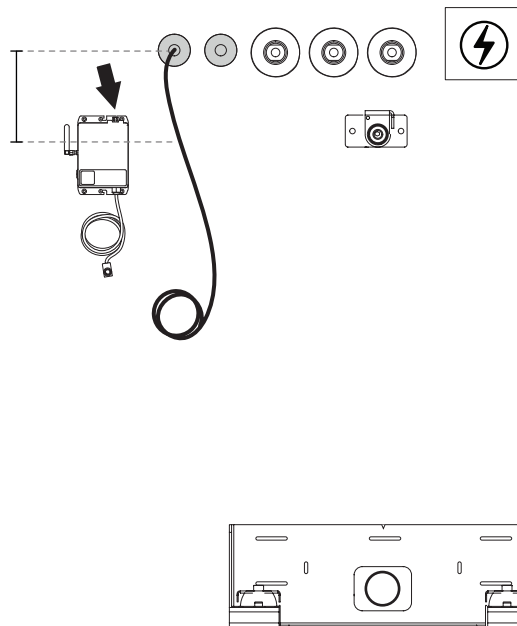
-
- 4.



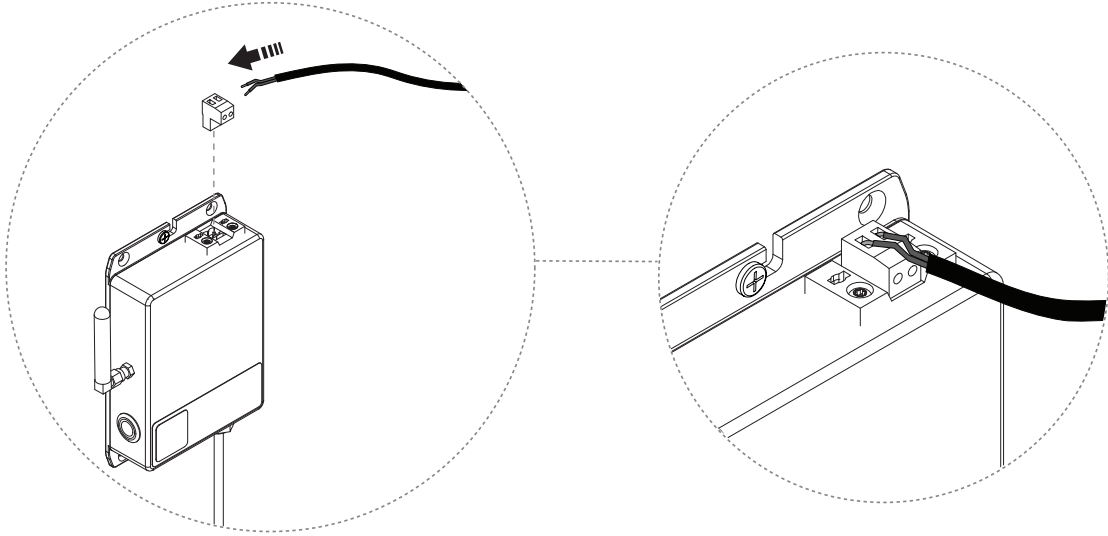
-
5. Mount the exciter with two screws next to the shower core wall brackets.



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

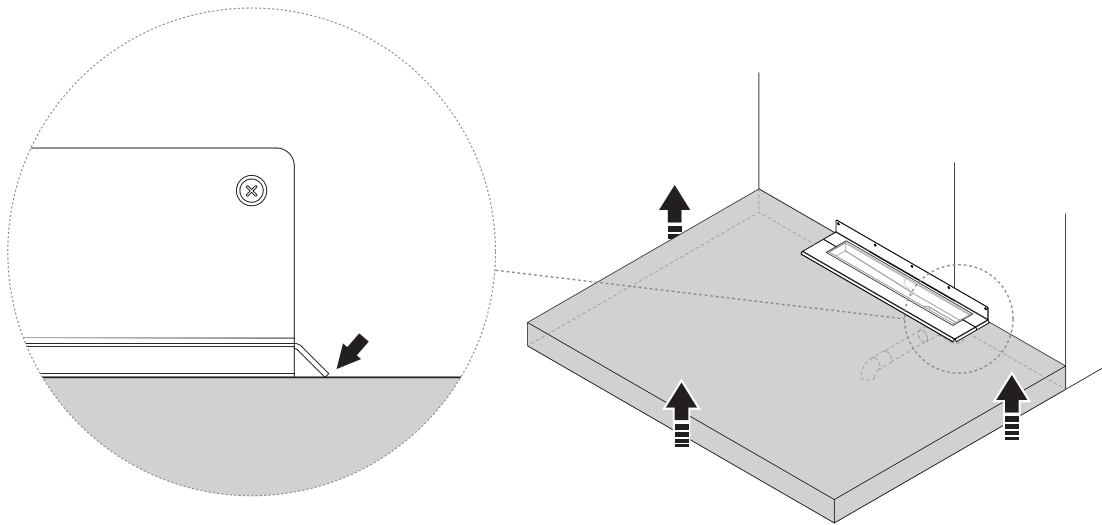


-
7. Strip and attach the cable to the amplifier.

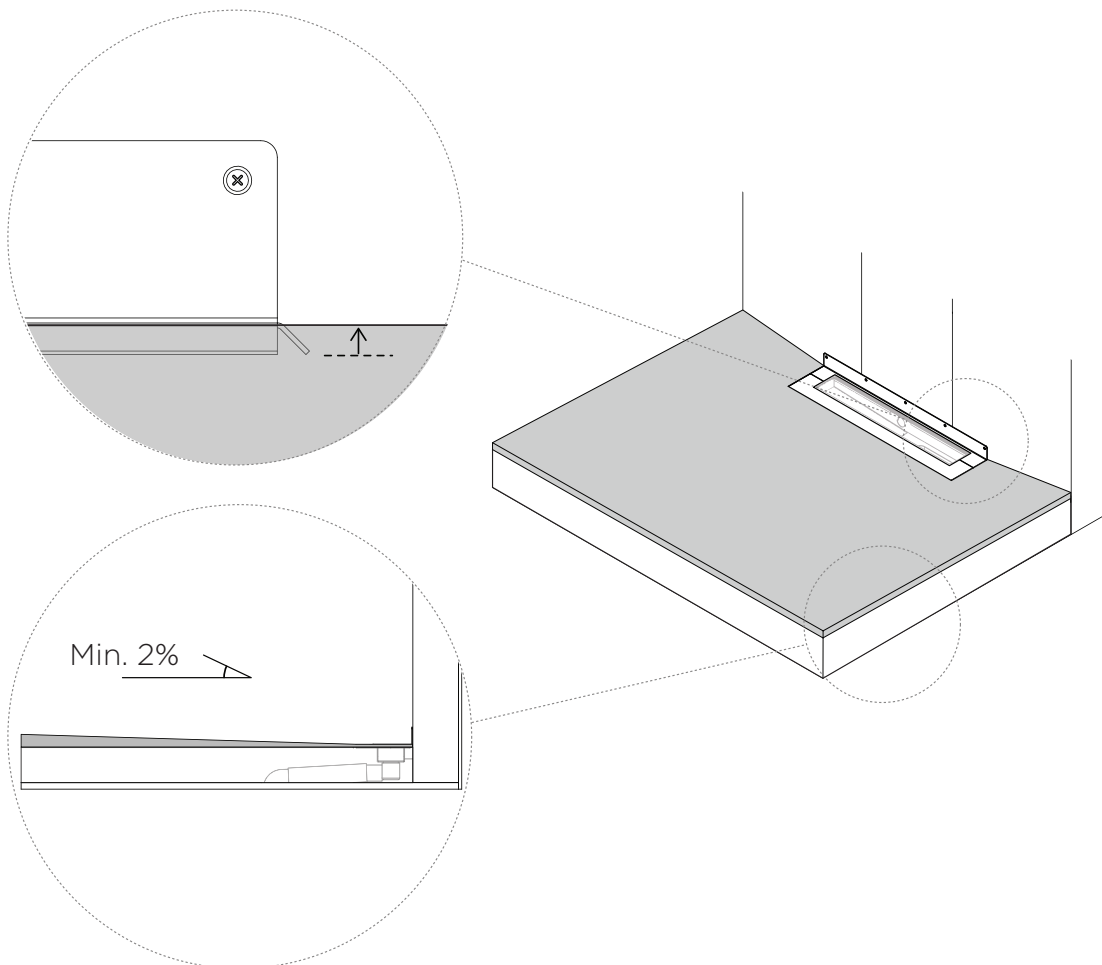


Prepare for Tiling

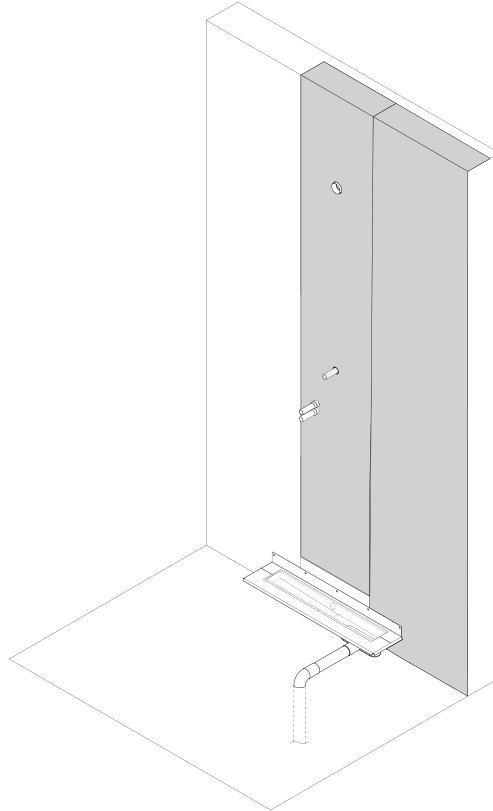
1. Raise the floor until it is level with the flange on the drain unit.



2. Form a steep inclination according to industry rules (min. 2% inclination) towards the Drain Unit. Make sure that the lowest part of the inclination is in level towards the Drain unit surface.



-
3. Apply wall covering according to industry rules.

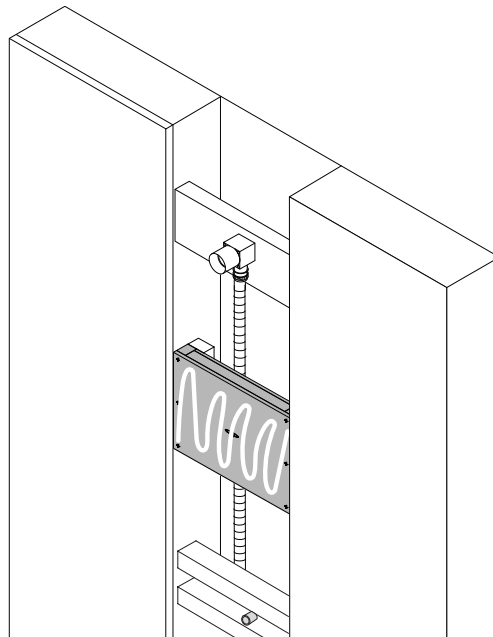


Only valid for Orbital Audio installation



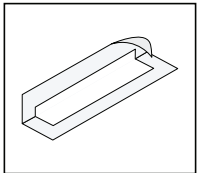
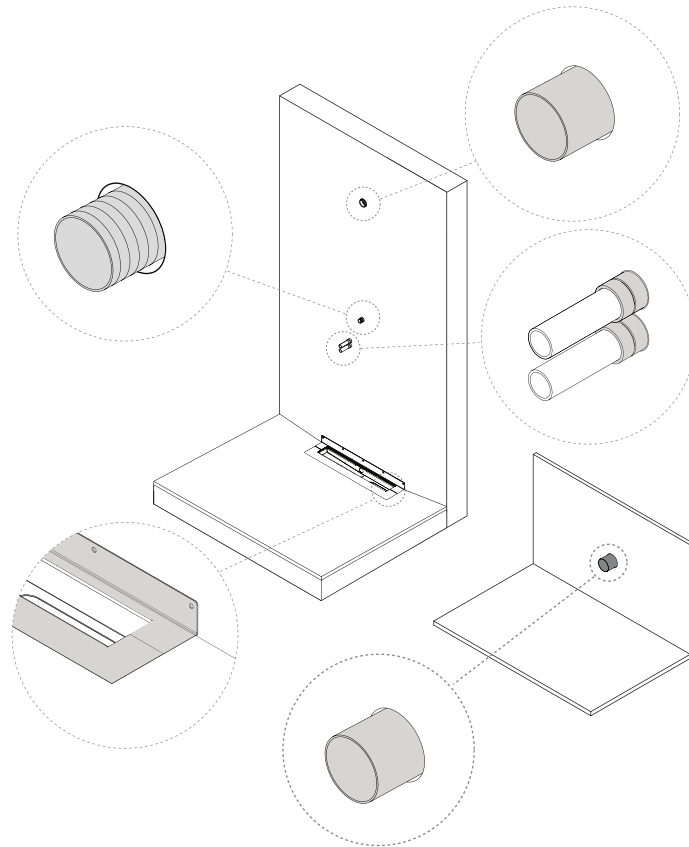
CAUTION

Make sure to apply construction glue to all wallboard layers.



Apply Waterproofing Membrane

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



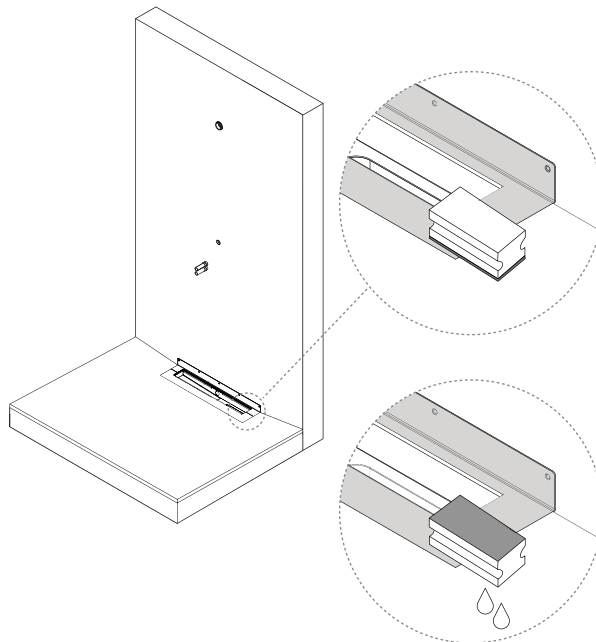
Provided by Customer:

1. Waterproofing Conduit Membrane for Diverter
2. Waterproofing Conduit Membrane for Shower Head
3. Waterproofing Conduit Membrane for Control Dial

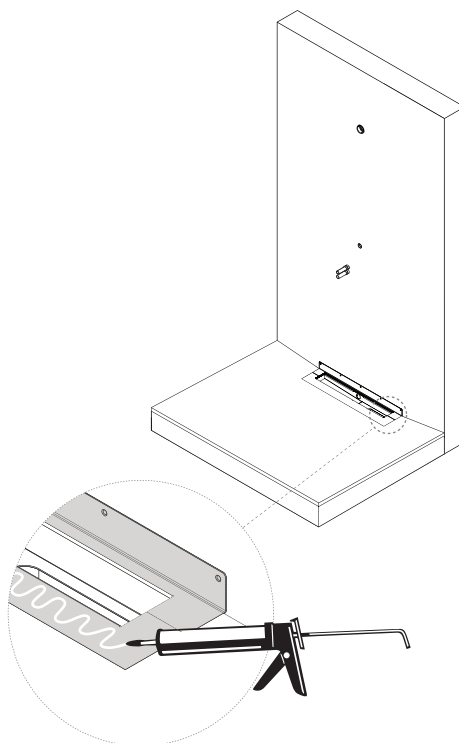
-
1. Roughen the metal surface of the Drain Unit and clean it with rubbing alcohol or similar.

**NOTICE**

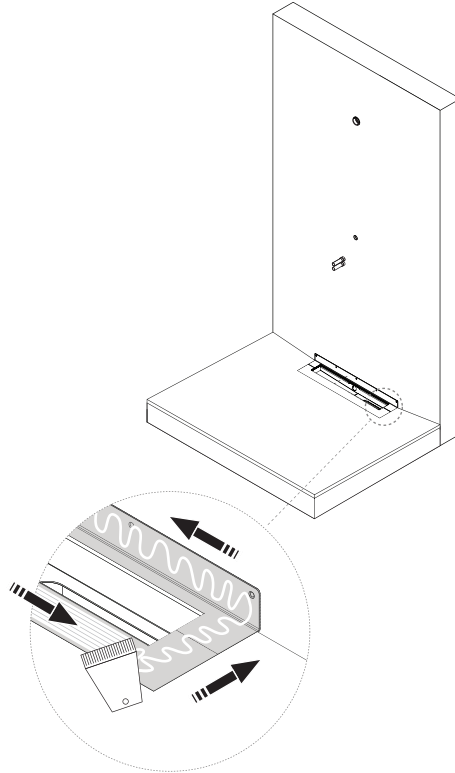
To achieve optimal bonding, all surfaces should be clean and free of adhesion reducing substances (e.g. dust, acid, grease).



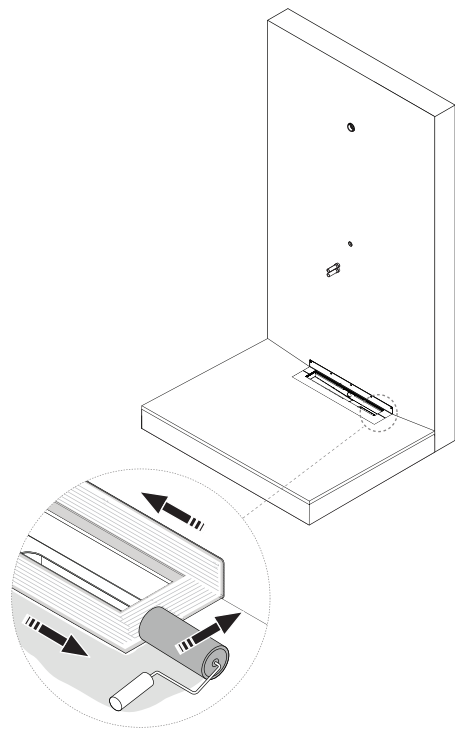
-
2. Apply waterproofing glue to the Drain Unit's metal flange.



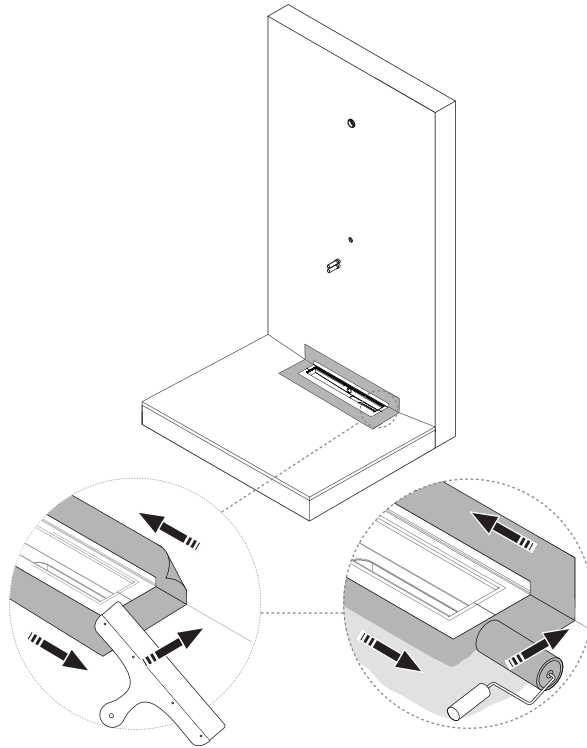
-
3. Spread the waterproofing glue with a fine-toothed glue spreader or brush.



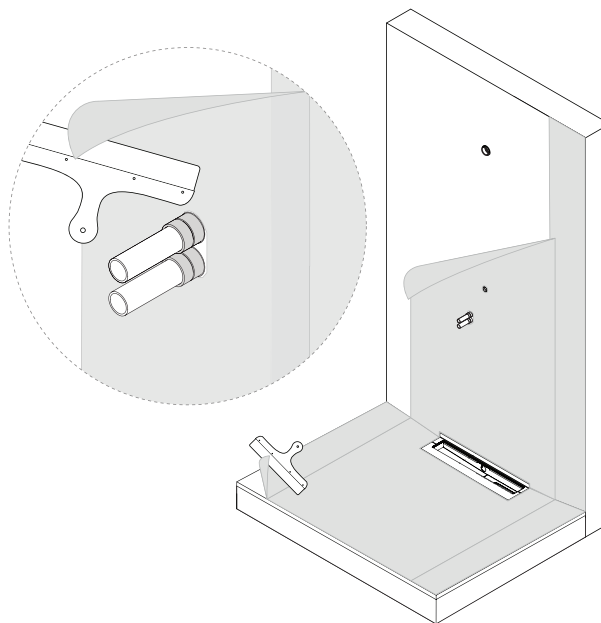
-
4. Apply liquid membrane to the floor- and wall surface which the Drain Waterproofing Membrane is going to cover.



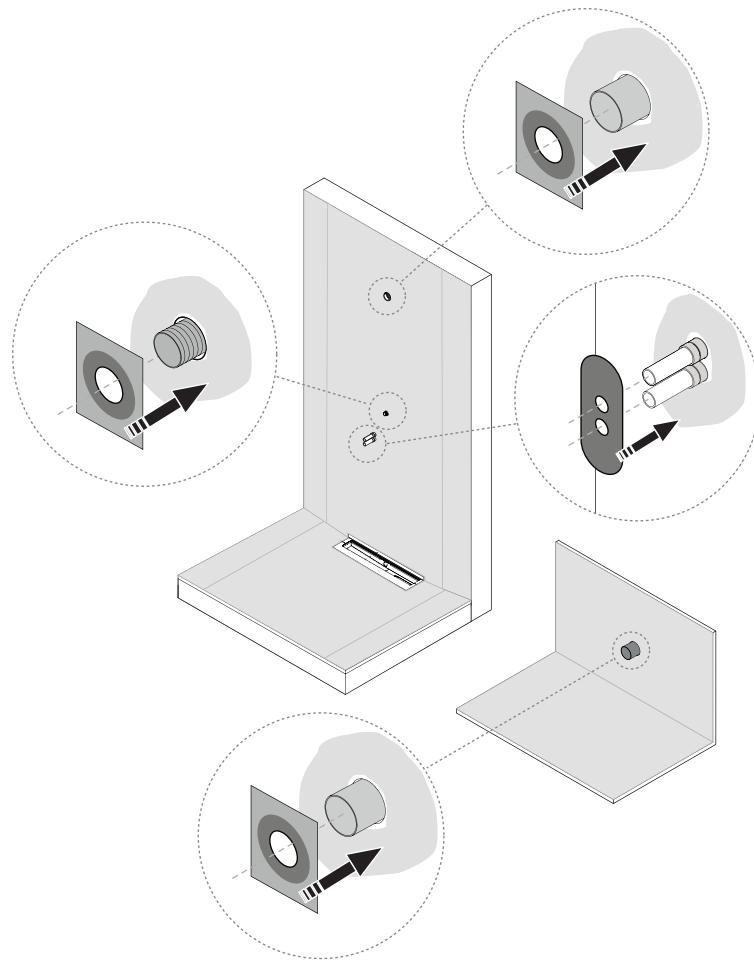
-
5. Apply the Drain Waterproofing Membrane around the Drain Unit. When mounting the Drain Waterproofing Membrane, make sure to cover both the floor and the wall. Firmly apply pressure and remove air pockets using a smoothing tool. Make sure no blisters or creases occur.



-
6. Carefully mount Waterproofing Membrane and overlap by at least 50 mm. Close the joints with liquid membrane.

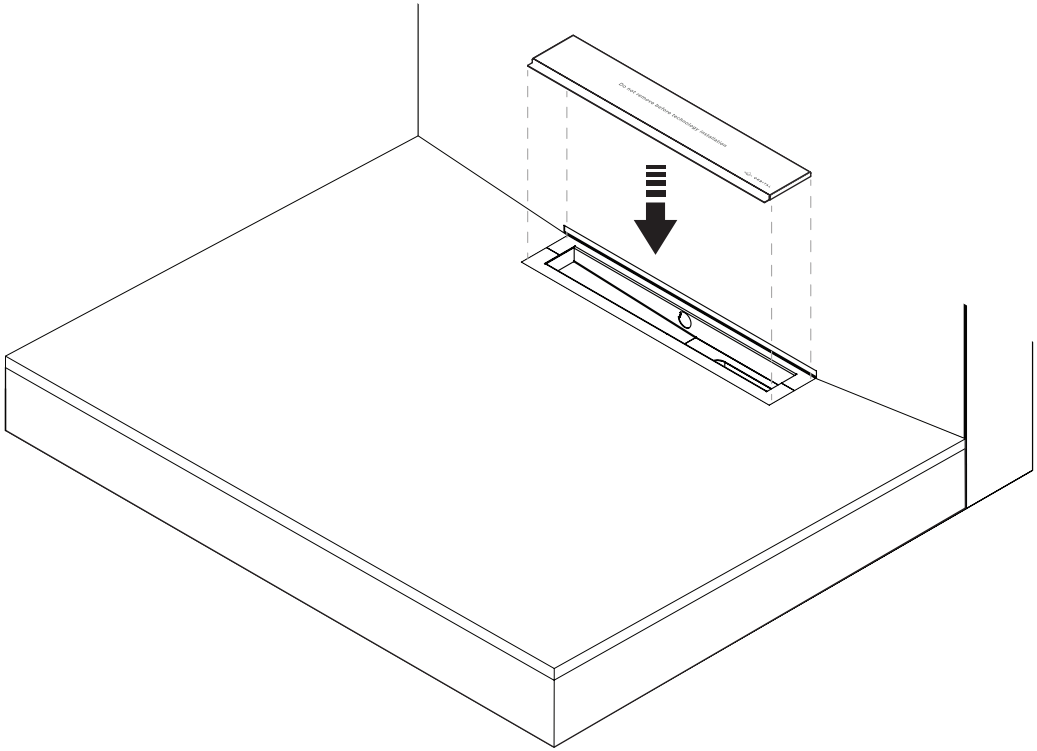
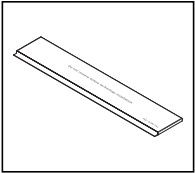


-
7. Apply Waterproofing Conduit Membrane according to chosen manufacturer to seal the conduits coming out of the wall.



-
8. Make sure remaining surfaces are being waterproofed according to chosen waterproofing membrane manufacturer and industry rules.

Install Tiling Frame Set



Tiling



NOTE

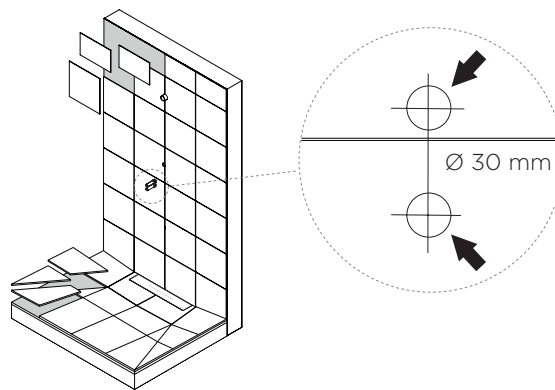
It is important to keep exactly 90 degree angles and set everything vertically / horizontally. It is also important that you do not smear fix over onto the black lacquered area on the Cabinet. Finally, it is recommended to place a thin sili-cone joint in the meeting with the tile strip and the Cabinet, mainly along the bottom side of the Cabinet hole, avoiding water flowing on to the fix.

1. Cut holes in tiles for water connections.



CAUTION

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

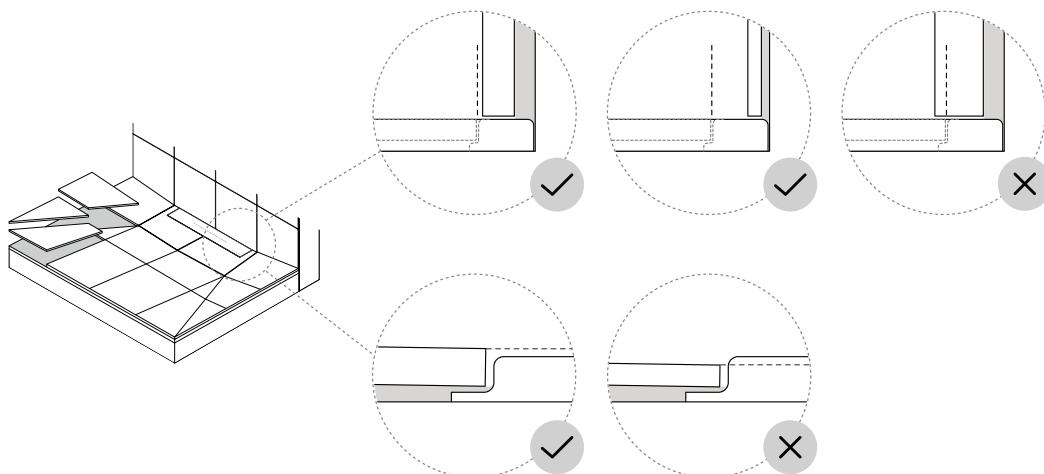


2. Make sure the tiles do not overlap the Grating, allowing it to be removed.

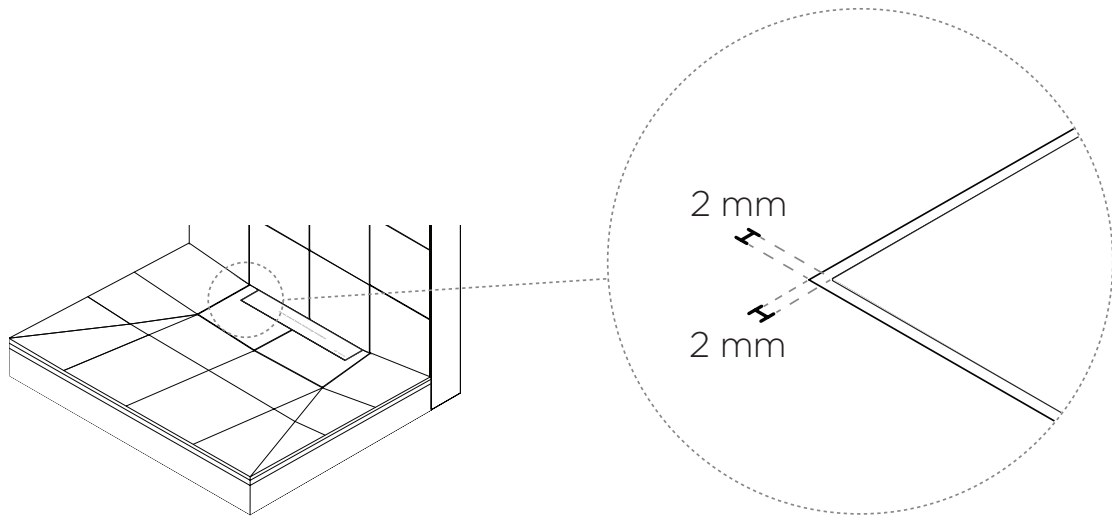


NOTICE

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



3.



Final Preparations

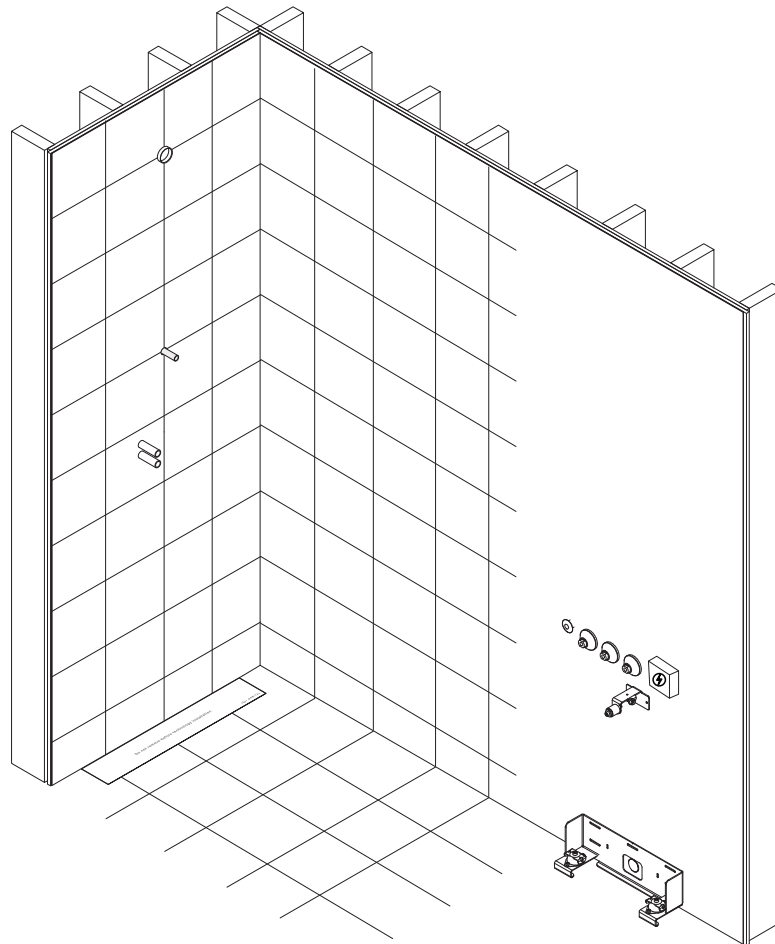


CAUTION

The Orbital Shower will not function without executing above mentioned steps.

Fixture Installation completed.

Next step is to install the Orbital Shower Core, Control Dial, Shower Head and Hand Shower (including Diverter and Hand Shower Holder). See Technology Installation Manual for details.



ORBITAL



CERTIFIED SPACE TECHNOLOGY