



Patented Technology
MADE IN ESTONIA

saunum

Saunum Luxury

Sauna heater with climate device



THE BEST SAUNA EXPERIENCE



I am very glad that you have invested in the Saunum device, and I believe that our innovative technology will offer you a wonderful and extraordinary sauna experience.

I have a degree in thermal engineering and come from the Southern Estonia, where my love for saunas began. The special feature of local historic smoke saunas is the lower temperature and higher humidity level than, for example, a classic Finnish sauna. In ordinary saunas, the stone volume of the sauna heater is generally small. Such an arrangement can cause a sudden, burning hot steam and an extremely uneven temperature, where your head and shoulder level is really hot, but your feet are left cold. Such an experience can be quite unpleasant and may cause headaches and lead to body stress. However, in ancient smoke saunas and Native American saunas, the stones were first heated during the day. Then the heat stored in the stones was used to cleanse the body and create a truly enjoyable sauna experience.

Inspired by the experience of a smoke sauna, I wanted to create an innovative solution that combines the best features of an authentic sauna with modern technology; enabling a pleasantly mild and relaxing sauna experience without painfully scorching steam. For that, however, I had to solve the problem of how to achieve an even temperature, at both the head and foot levels. My development work was supported by research done alongside Tallinn University of Technology in



which we analyzed the thermal stratification and air movement in the sauna room. Saunum was born in cooperation between scientific thinking and technological innovation.

Saunum's unique patented mixing system of air layers captures the hot steam that rises under the ceiling of the sauna room, mixes it with the cooler air from the surface of the floor, and directs the milder steam back evenly. This makes for an enjoyable, unaggressive heat. You can sit in the sauna for a longer time, and enjoy a sweat and a deep cleanse without feeling tired. The stone volume of our heaters is significantly larger than most widely used sauna heaters, which is the reason for the especially pleasant indoor climate with long and soft steam.

A moist steamy sauna, a therapeutic salt sauna, or a healthy aroma sauna – all of these functions are available on Saunum's devices to create a truly relaxing sauna experience. When using Himalayan salt spheres in our device, salt ions that are beneficial to skin and respiratory tract evaporate and the steam circulates these into the air. Adding a sauna aroma system that blends steam and healthy aroma oil creates an even more enjoyable sauna environment.

Saunum's sauna devices are suitable for both adults and children.

Have a pleasant sauna!

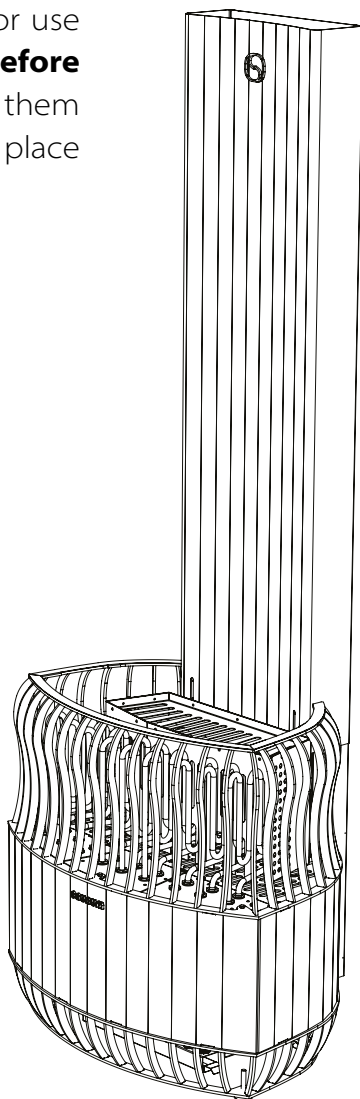
Andrus Vare
The creator of Saunum



Product completeness _____	8
Dimensions _____	9
Working principle _____	10
BEFORE THE INSTALLATION	
Sauna sizing and heater selection _____	12
Sauna room ventilation _____	13 - 15
INSTALLATION	
Safety information _____	16 - 17
Safety distances _____	18 - 19
Electrical connections _____	20 - 29
Installation instructions _____	30 - 33
Control panel _____	34
Door sensor _____	35
Air Button _____	36 - 37
Temperature sensor _____	38 - 39
Loading stones _____	40
DIRECTION FOR USE	
Warnings _____	41
Heating the sauna room _____	42
Using the sauna heater _____	43
Adjusting the temperature _____	43
Sauna climate control _____	43
Use of Himalayan salt spheres _____	44
Ladling water on the heater _____	44 - 45
Maintenance _____	46 - 47
Solving problems _____	48 - 49
Thermal cutoff _____	50
Heating element failure and replacement _____	51 - 53
Warranty _____	54
Installation report _____	55



Read all of the instructions for use carefully and thoroughly **before using the device** and keep them in a safe and easily accessible place for future reference.





Saunum **congratulates you** on choosing a heater with an innovative sauna room indoor heater!

HOW TO USE SAUNA

Enjoying sauna has a relaxing effect. It should never be a source of stress. The best sauna experience is individual. While using the sauna, it is recommended to wear as little clothing as you feel comfortable with.

Enter the sauna room when it has reached your target temperature (see page 43). When the sauna has reached the target temperature, use a dedicated sauna ladle with hot water – around 150–200 ml at once – by pouring it on the hot stones (see page 44). Always use hot water – cold water will fragment the stones more quickly.

You can also install an automatic water spraying system, such as the Saunum AutoLeil. This will raise the humidity in the sauna room and create stronger sensations of heat.

When using the Saunum heater, use the ventilation mode to distribute steam evenly between the upper and lower layers of the room. Proper ventilation is an essential part of a comfortable sauna experience: fresh air improves breathing comfort and prevents the sauna from becoming stuffy. Make sure that the intake and exhaust openings are not blocked.

Using the Saunum control panel, you can preset or manually adjust the temperature and fan speed to find the settings that suit you best.



These installation and operating instructions are intended for the sauna owner, maintenance personnel, and the electrician responsible for installing the Saunum Luxury heater with built-in climate device.

Package Contents:

The standard Saunum Luxury package includes the heater with heating elements and Himalayan salt spheres.

All components required for operation and control must be purchased separately.

Control Unit (sold separately) includes:

- Control unit power board,
- Control panel and connection cable
- Air Button and connection cable,
- Door sensor with connection cable,
- Temperature sensor and connection cable,

Additional accessories available:

- AutoLeil (includes 1 button),
- AutoLeil Button (for installations requiring more than one button),

Lighting is not included in the package and is not supplied by Saunum.

All connection options are shown in the wiring diagram on **page 23**.

After installation, the instructions must be handed over to the owner or maintenance provider.

Before using the heater, carefully read the installation and safety instructions.

The Saunum Luxury is intended for heating the sauna room at 60–100 °C and for leveling the sauna room climate during steaming.

Please note! The heater with the heater must not be operated in temperatures exceeding 100 °C!



Do not use the Saunum Luxury for any other purposes!



The installer is responsible for verifying compliance with local building codes and structural requirements.

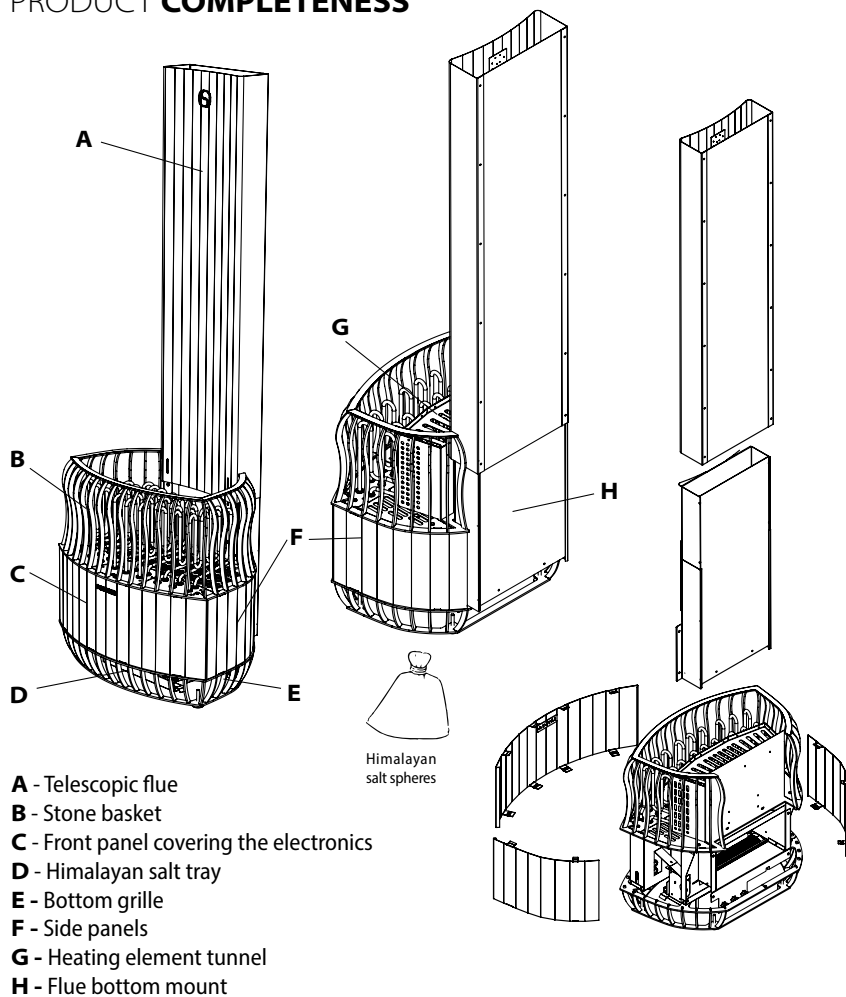
NOTE: To ensure the longevity of the device, make sure that the temperature of the sauna room at the height of the lower part of the device does not exceed 80 °C. If it is exceeded, the thermal protection will be applied and the fan will stop; the fan will start running again if the temperature drops below the fuse limit of application.

The manufacturer is not responsible for any malfunction caused by an overrun of the authorized operating temperature.

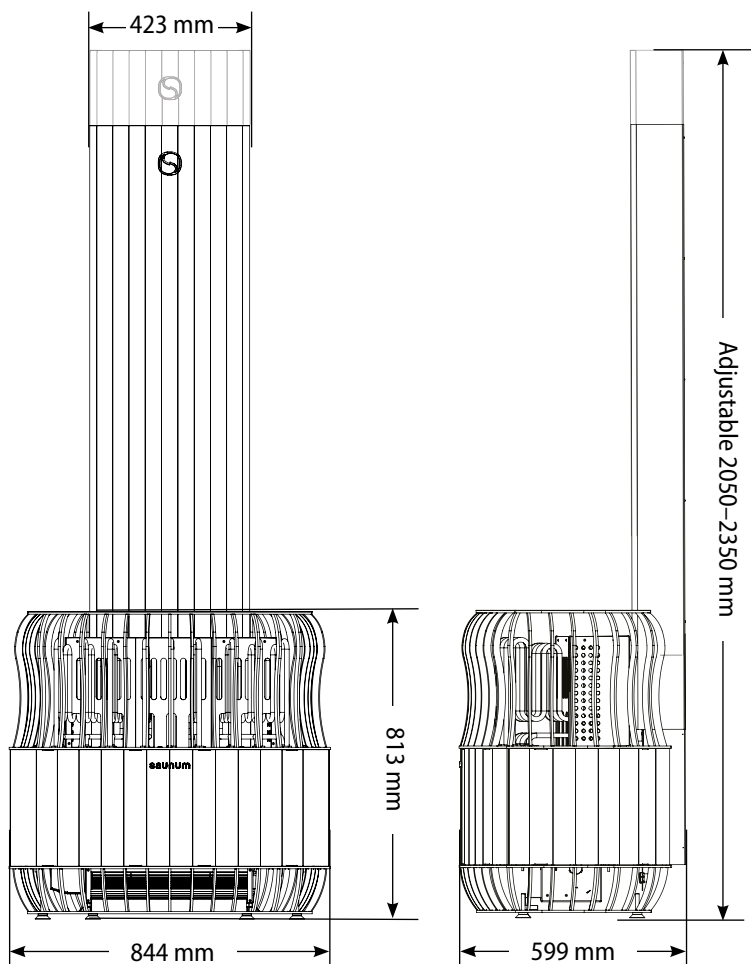
Saunum Luxury is designed to operate exclusively with the Saunum AirIQ Control Unit.



PRODUCT COMPLETENESS



The following components are required for operation, but are not included in the scope of delivery: contactor box, control unit, power cables, and stones.



Figures 1

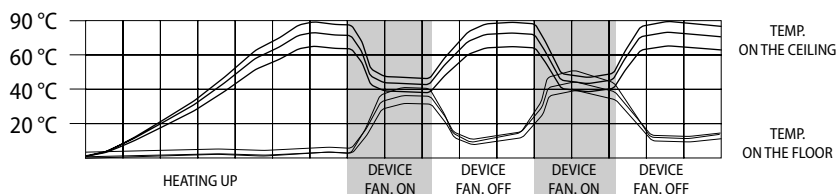
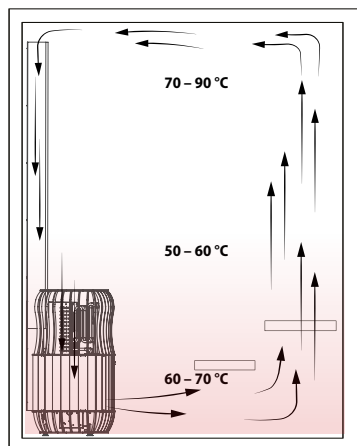
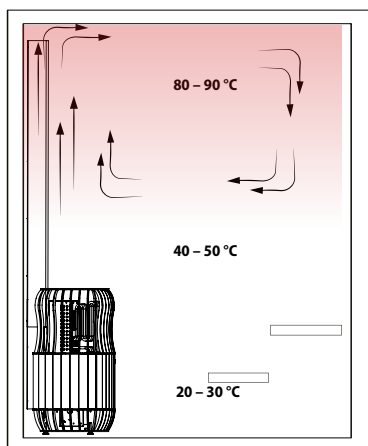


Remove the protective film before assembling the heater!



The image below shows the operation of the Saunum heater during heating, with the target temperature range of 80–90 °C and the ventilator turned off. When water is poured onto the hot stones in a traditional sauna, the resulting steam rises to the upper layers of the sauna room, creating a harsh heat layer under the ceiling

The image below shows the operation of the Saunum heater with the ventilator running. The device is designed so that when water is poured onto the stones, the fan distributes the resulting steam evenly throughout the sauna room, ensuring a balanced and enjoyable sauna experience.





BEFORE THE INSTALLATION

The installation of the Saunum Luxury must be performed by a qualified electrician in accordance with local electrical and building regulations.

The connection of the device must be carried out in a stable location using a cable suitable for the ambient temperature conditions.

Protective earthing (PE) must be connected to the earthing terminal of the device, and the cross-sectional area of the cable must be at least 4 mm².

The device must be powered from the control device's supply circuit, which is protected by over-current fuses.

The required fuse ratings and connection cable dimensions are given in **Table 1** (see pages 16–17).

Use of any other control device is not permitted.

Before starting the installation work, read the installation instructions and observe the following:

- The power and type of the heater are suitable for the given sauna room. The recommended sauna room volume is given in **Table 1** (see pages 16–17).
- The supply voltage is suitable for the Saunum Luxury.
- At the installation site of the sauna heater, the minimum safety distances given in **Table 1** (see pages 16–17), measured from the heater housing, are guaranteed.
- The dimensions of the device are shown in **Figures 1** (see pages 8–9).
- It must also be ensured that the upper edge of the fan outlet of the sauna heater is lower than the lower edge of the bench.
- There must be no obstructions in front of the air outlet from the device, the exhaust air flow must be able to flow freely across the sauna room.
- The device works most efficiently when its flue cap is installed against the ceiling of the sauna room and the exhaust air is blown under the bench.
- Safety distances must be complied with unconditionally, as failure to do so may result in a fire hazard.



SAUNA SIZING AND HEATER SELECTION

Proper heater performance depends not only on the sauna room's volume, but also on how the room is constructed and insulated. This section explains how to prepare the sauna space and how to calculate the correct heater size for optimal operation and comfort.

Preparing the Sauna Room

Before installing the Saunum Luxury, the sauna must be properly insulated and prepared.

Poorly insulated walls and ceilings can result in long heating times and energy inefficiency.

Note: The minimum room height required for the Saunum Luxury unit is listed in Table 1 (pages 16–17).

Follow the steps below to determine the correct heater power for your sauna room:

1. Measure the Room Volume

Calculate the basic sauna volume:

Y (length) $\times$ X (width) $\times$ Z (height) (in meters)

Result is the base volume in cubic meters (m^3)

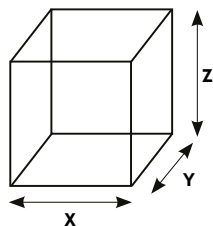


Figure 2

2. Adjust for Non-Insulated Wood Construction

If the sauna is constructed from logs, planks, or staves (without internal insulation),

Multiply the base volume by **1.5**

This accounts for additional heat loss through uninsulated wood surfaces.

3. Adjust for Cold Surfaces

For any cold surface materials such as glass, tile, brick, concrete, or stone add **1.2 m^3** to the total volume per **1 m^2** of such material.

Example:

A glass door of **1.5 m^2**

$$1.5 \times 1.2 = 1.8 m^3$$

Add this to the sauna volume.

4. Determine Total Sauna Volume

Add all adjustments to your base volume.

This is the final volume to be used for heater selection.

5. Choose the Heater Size

Use the final sauna volume to select the correct heater model.

If your volume falls between two heater sizes, choose the larger one for better heat-up time, efficiency, and temperature stability.

Example Calculation:

A sauna room has dimensions:

Length = 2 m, Width = 2 m, Height = 2.4 m

$$2 \times 2 \times 2.4 = 9.6 m^3$$

There is a glass door of **1.5 m^2**

$$1.5 \times 1.2 = 1.8 m^3$$

$$\text{Total volume} = 9.6 + 1.8 = 11.4 m^3$$

Choose a heater rated for at least **11.4 m^3**



SAUNA ROOM VENTILATION

This ventilation setup allows Saunum technology to operate at its full potential.

When installing the heater, make sure the **Air Intake** is positioned close to the heater's air inlet.

Natural or with **mechanical** extraction:

The **intake opening** should be located **no higher than 300 mm from the floor**.

The **air intake pipe** should have a diameter of approximately **100 mm**, providing an approximate cross-sectional area of **78.5 cm²**.

The **air extraction pipe** should have a diameter of approximately **150–200 mm**, providing a cross-sectional area of approximately **180–320 cm²**.

Extraction vents should be installed as far as possible from the heater, at a height of no less than 600 mm and no more than 1200 mm from the floor.

For **mechanical** ventilation:

As an option, a **ceiling-mounted auxiliary air intake** may be installed. This intake does not replace the main air intake located near the heater. The ceiling-mounted intake must be equipped with a check valve to prevent backflow. A fan may be used to supply fresh air through this intake if required.

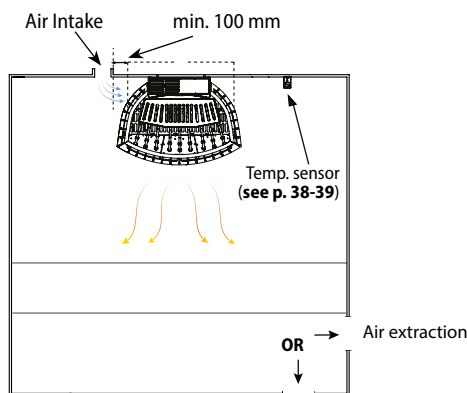


Figure 3

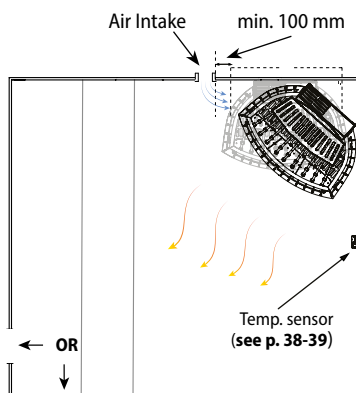


Figure 4



Recommended for better fresh air mixing in Saunum heater.

Optimal placement of ventilation openings for **mechanical ventilation**:

* Optional ceiling air intake with check valve (passive or motorized)

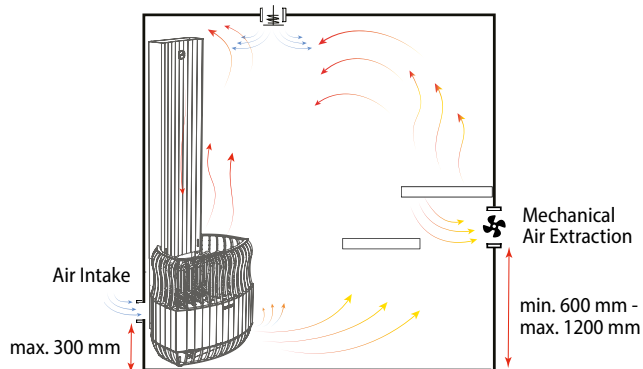


Figure 5

Optimal placement of ventilation openings for **natural ventilation**:

Air Extraction for drying. To be used only when the sauna is off.
Normally closed

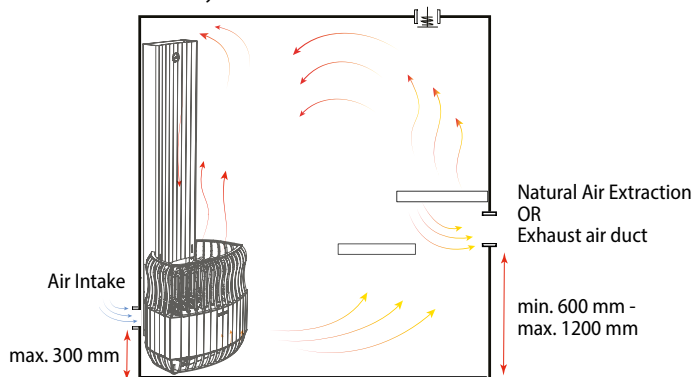


Figure 6



The air in the sauna room must be changed at least six times an hour.



Air intake ventilation in a sauna room is mandatory.

Install the air intake vent under or next to the heat equalizing module. The **air intake pipe** must have a diameter about **100 mm**.



Air output ventilation in the sauna room is mandatory.

Install the air extraction higher than intake and as far as possible from the Saunum Luxury unit.

The **air output pipe** must be twice the diameter of the air intake pipe (approximately **150–200 mm**).



Incorrect ventilation layout.

In this setup, the exhaust openings are positioned lower than the intake, and the ceiling vent remains open without a check valve.

This configuration disrupts proper warm air circulation and causes excessive heat loss, reducing the sauna's efficiency.



Do not install ventilation this way — it is ineffective and should be avoided!

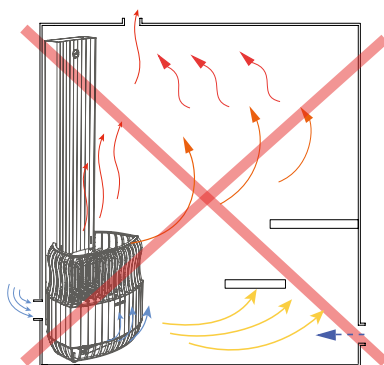




Table 1

DEVICE (230V 3N~ 50/60Hz)	CONFIGURATION	Power requirement
Saunum Luxury	13.2 kW	3 × 230 V 20 A
Saunum Luxury	16.6 kW	3 × 230 V 25 A
Saunum Luxury	19.8 kW	3 × 230 V 30 A



Do not connect the heater to the power and/or utilities via a GFCI breaker!

DEVICE	ROOM SIZE	MIN. CEILING HEIGHT
Saunum Luxury – 13.2 kW	14–18 m ³	2150 mm
Saunum Luxury – 16.6 kW	18–22 m ³	2150 mm
Saunum Luxury – 19.8 kW	22–28 m ³	2150 mm



3 phase PROTECTION	Power cable Main Breaker to Device Control device	Power cable Control device to Heater
C20	5 × 4 mm ²	5 × 4 mm ² SIHF
C25	5 × 6 mm ²	Two cables, 5 × 4 mm ² SIHF
C30	5 × 6 mm ²	Two cables, 5 × 4 mm ² SIHF



Min 125 °C copper wiring

MINIMUM SAFE DISTANCE FROM THE HEATER TO CEILING	MIN. SAFE DISTANCE FROM THE HEATER
1335 mm	A: 250 mm from sides & B: 250 mm from the front side
1335 mm	A: 250 mm from sides & B: 250 mm from the front side
1335 mm	A: 250 mm from sides & B: 250 mm from the front side



SAFETY DISTANCES

Minimum safety distances must always be maintained to ensure safe and efficient operation of the device.

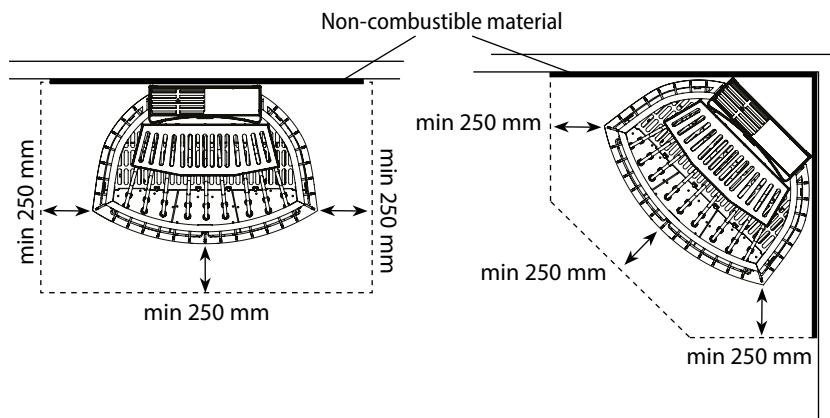
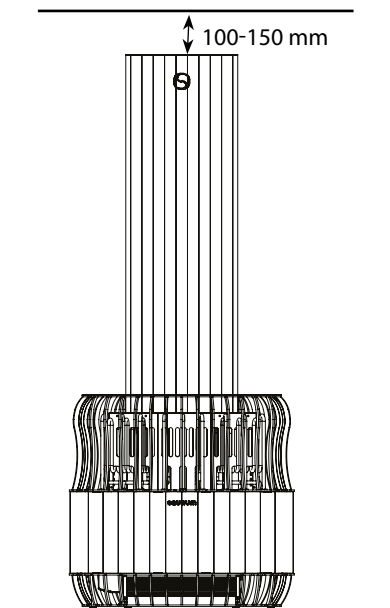
The minimum safety distance from the device must be **250 mm from the front and sides**. The device may be installed in a corner or along a wall, provided that all required safety distances are maintained.

A gap of 100–150 mm must be maintained between the ceiling and the air intake opening of the flue.

It must also be ensured that the lower air outlet is positioned below the level of the sauna bench so that the airflow is directed under the bench.

There must be no obstructions in front of the air outlet. The exhaust airflow must be able to flow freely across the sauna room.

Failure to comply with the required safety distances may result in a fire hazard.





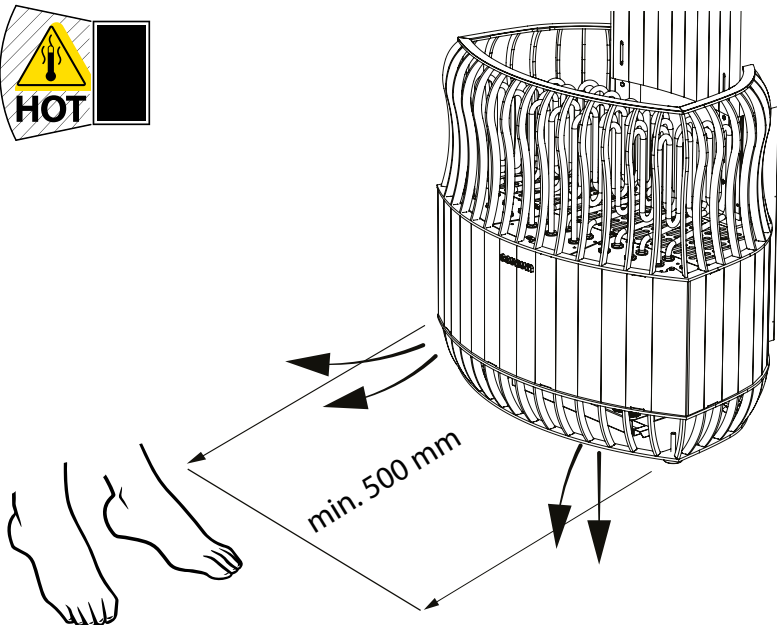
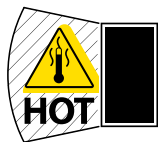
Do not keep your feet or any body part closer than 500 mm in front of the air outlet while the fan is operating!



Please keep children at least 1000 mm away if the fan is operating — sauna steam may cause skin burns!



Do not allow pets in the sauna room while the device is operating!





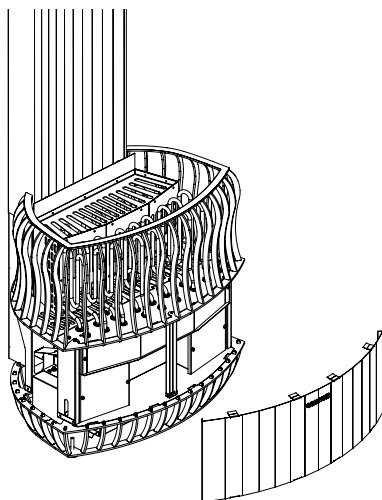
ELECTRICAL CONNECTIONS

Connect the Saunum Luxury to the dedicated Luxury contactor box as shown in the wiring diagram on page 23. The heater output can be configured on site to suit the sauna.

The electrical connection of the device must be performed by a qualified person in accordance with the applicable standards and requirements.

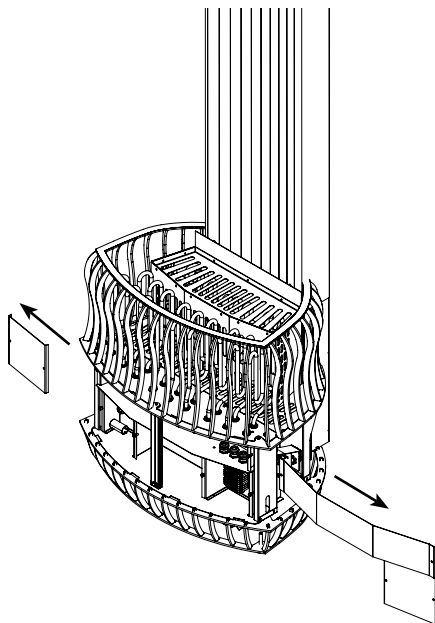
Before making any electrical connections, make sure that the device is disconnected from the mains!

1. To access the electrical connections, first remove the front panel by pulling it towards yourself.



2. Then remove the two panels covering the electrical connections.

- The smaller panel covers access to the motor terminals. It is fixed with two bolts. Undo the bolts and slide the panel to the left.
- The longer panel covers access to the heating elements terminals. It is fixed with four bolts. Undo the bolts and slide the panel to the right. See the illustrations for more information.

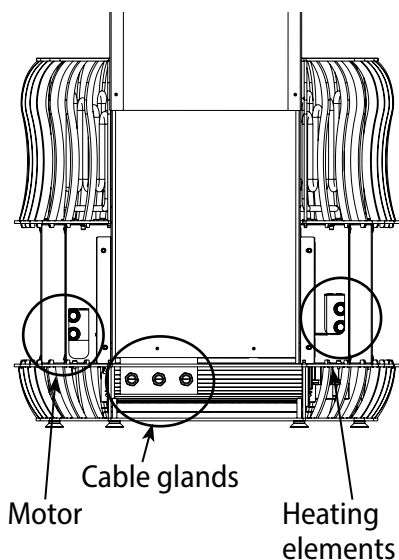




3. Now route the power cables to the connectors.

- First, insert the cables through the cable glands located in the lower rear part of the heater (see illustrations below).
- Then pull the cables through the diagonal chute.

Once the cables are routed through the chute, connect them to the terminals according to the electrical schematics on pages 24–29.



NB! Due to the potential danger of thermal embrittlement, it is forbidden to use PVC-insulated cable as the connection cable for the sauna heater.

The internal connections of the device are made by means of push-in or screw terminals according to the electrical schematics (see pages 24–29) and Table 1 (see pages 16–17) in this manual.

Protective earthing (PE) must be connected to the connection terminal of the device.

The heater must be powered from the 230 V (3-phase) 50/60 Hz supply circuit through a control device.

The power cable must enter the housing of the sauna heater in such a way that water cannot run along the cable into the electrical connection box of the device. The outer insulation of the cable may only be stripped inside the device housing.

If the connecting and installation cables are located higher than 1000 mm from the floor of the sauna room or inside the walls of the sauna room, they must be able to withstand a temperature of at least 170 °C (e.g., SSJ). Electrical equipment installed in the steam room below 1000 mm must withstand a temperature of at least 90 °C.

The recommended cross-section of the connection cable grooves is given in Table 1 (see pages 16–17).

NB! The sauna heater may only be connected by a professional electrician in accordance with the applicable regulations!



POWER OUTPUT CONFIGURATIONS

The heater supports three output configurations: 13.2 kW, 16.6 kW, and 19.8 kW. It is factory-configured for 16.6 kW operation. The output can be reconfigured on site by changing the jumper pin positions and power cable connections. All jumper pins required for these configurations are included in the Luxury kit.

- **13.2 kW configuration:** Connect the heater using one $5 \times 4 \text{ mm}^2$ power cable and install two additional jumper pins on the terminal block.
- **16.6 kW configuration (factory default):** Connect the heater using two $5 \times 4 \text{ mm}^2$ power cables. The jumper pins are installed in the required positions at the factory.
- **19.8 kW configuration:** Connect the heater using two $5 \times 4 \text{ mm}^2$ power cables and install two additional jumper pins on the terminal block.

ELECTRIC HEATER INSULATION RESISTANCE

During the final inspection of the electrical installation, a leakage may be detected when measuring the insulation resistance of the Saunum Luxury, and which has occurred due to the insulation material of the heating elements absorbing moisture from the air (storage, transport). After a few uses of the Saunum Luxury, this moisture will disappear.



Do not connect the heater through a GFCI (Ground Fault Circuit Interrupter) breaker, as it may cause unwanted tripping during normal heater operation.

[illegible]

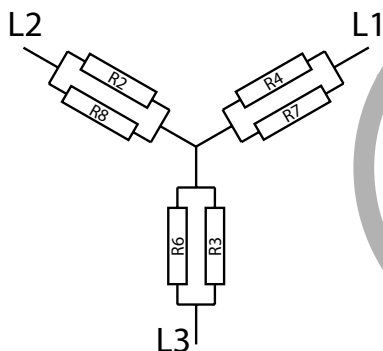
1. Main switch
2. RCCB
3. Safety relay
4. Switching relay
5. Group 1 L1
6. Group 1 L2
7. Group 1 L3
8. Group 2 L1
9. Group 2 L2
10. Group 2 L3



ELECTRICAL CONNECTION OF THE 13.2 kW HEATER

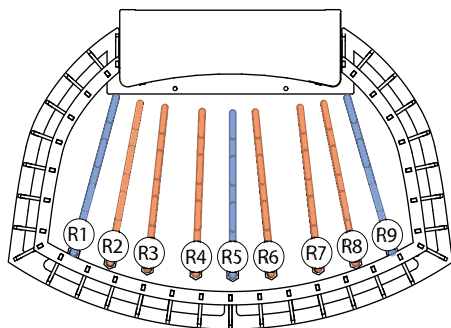
Group 1: $6 \times 2200 \text{ W}$

Group 2: Disabled



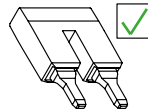
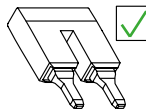
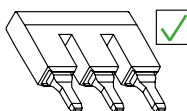
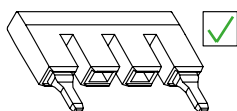
GROUP 1
R2 R3 R4 R6 R7 R8

GROUP 2
R1 R5 R9



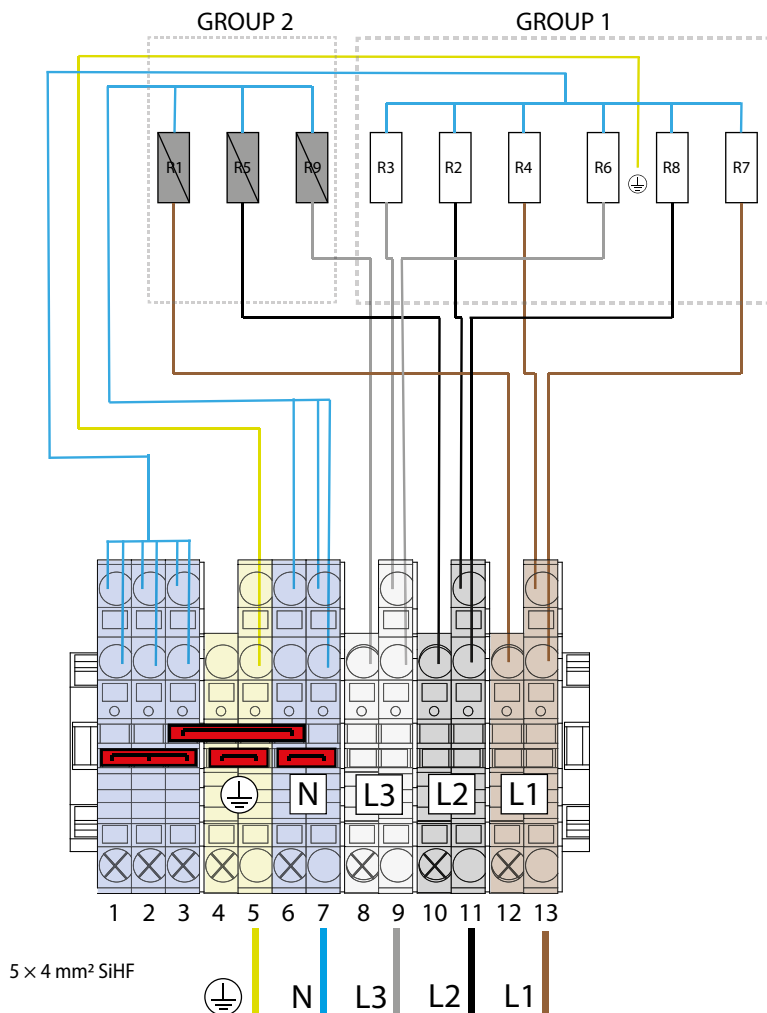
For the 13.2 kW configuration Group 2 (elements 1, 5 and 9) is disabled.

It is possible to use them as substitutes when a Group 1 element has failed.





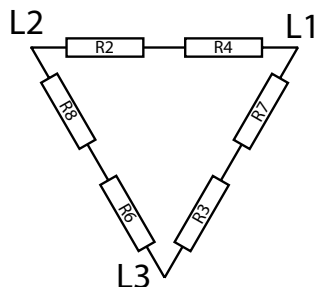
ELECTRICAL CONNECTION OF THE 13.2 kW HEATER



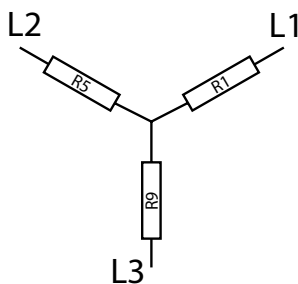


ELECTRICAL CONNECTION OF THE 16.6 kW HEATER

Group 1: $6 \times 2200 \text{ W}$



Group 2: $3 \times 2200 \text{ W}$

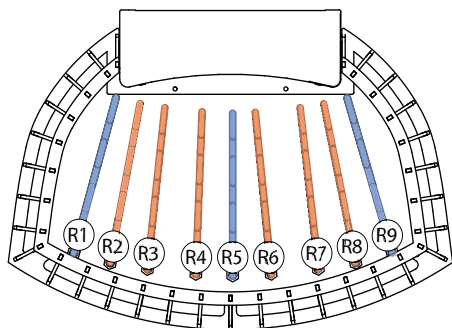


GROUP 1

R2 R3 R4 R6 R7 R8

GROUP 2

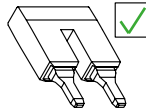
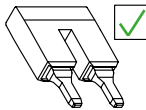
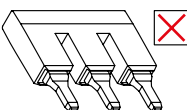
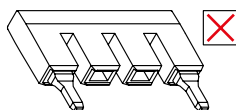
R1 R5 R9



In 16.6 kW configuration Group 1 uses a delta configuration. Each line of the triangle has 2 elements in series.

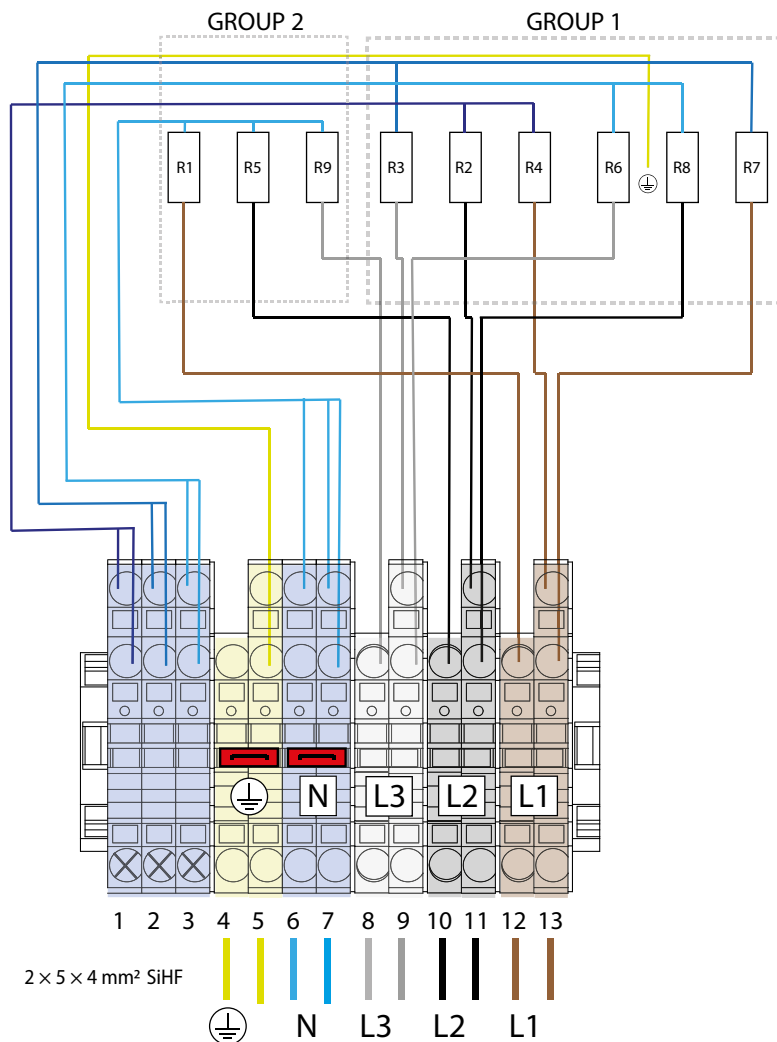
No jumper on terminals 1–3.

Group 2 is connected in a star configuration. 2 slot jumpers have to be installed on terminals 4–5 and 6–7.



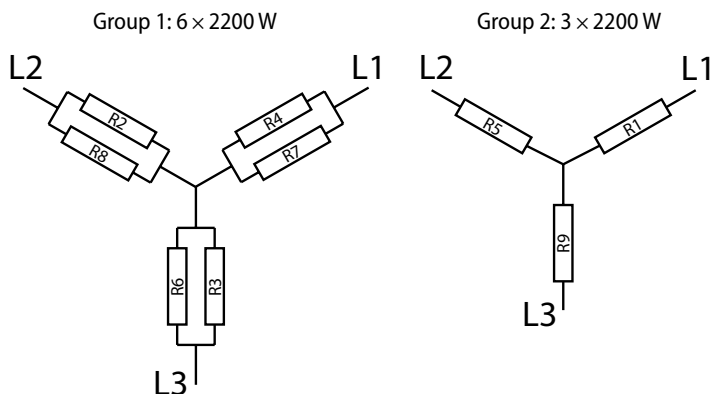


ELECTRICAL CONNECTION OF THE 16.6 kW HEATER



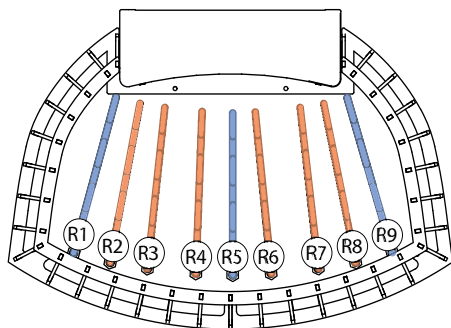


ELECTRICAL CONNECTION OF THE 19.8 kW HEATER



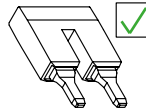
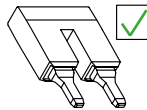
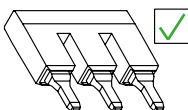
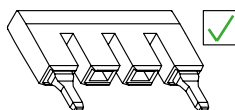
GROUP 1
R2 R3 R4 R6 R7 R8

GROUP 2
R1 R5 R9



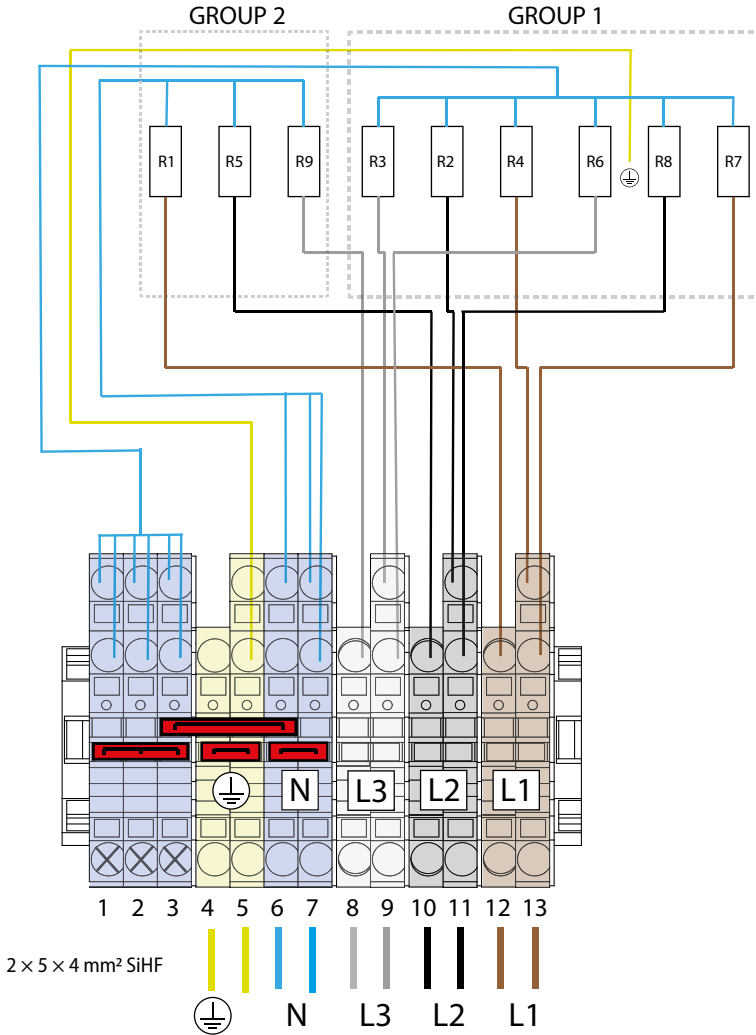
In 19.8 kW configuration both Groups use a star connection. All 4 of the included jumpers must be installed according to the drawing:

3 slot on terminals 1–3, 2 slot connecting terminals 3 and 6, 2 slot on 4–5 and 6–7.





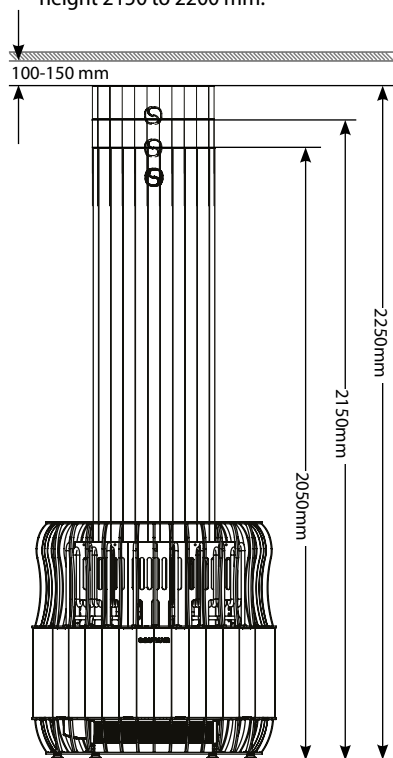
ELECTRICAL CONNECTION OF THE 19.8 kW HEATER



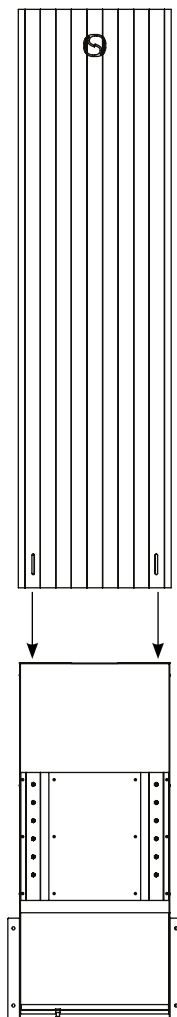


INSTALLATION

1. There are six positions (50 mm step) to install the flue. The top of the flue must be 100 to 150 mm from the ceiling. In order to determine correct position, measure the height of the ceiling and use the drawing to determine the correct position. For example, the top of the flue is 2050 mm from the floor in the lowest position, therefore suitable for ceiling height 2150 to 2200 mm.

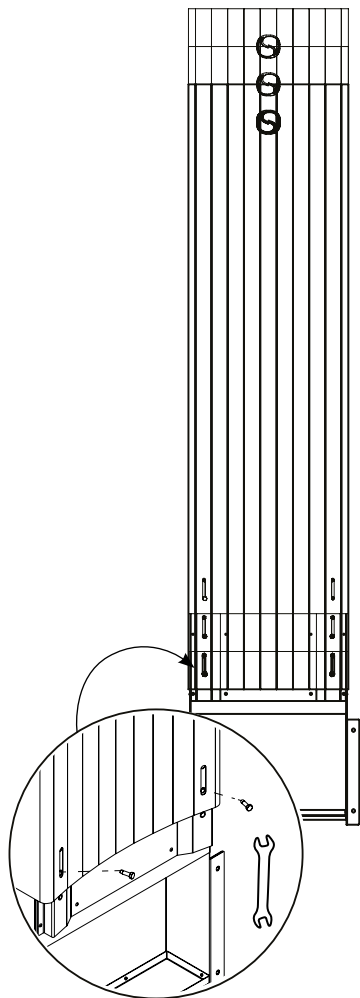


2. Slide the flue onto the flue mount.

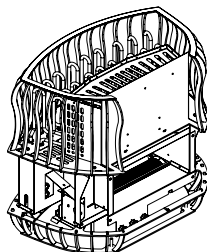




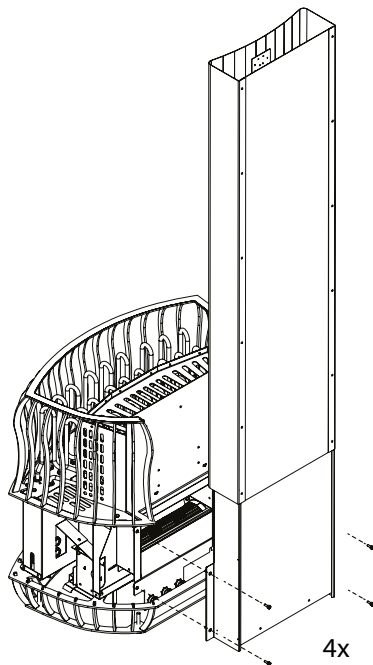
3. Fix the flue to previously determined position using two bolts and the slots in the bottom mount.



4. Remove the side panels from the heater main frame by pulling them towards yourself.

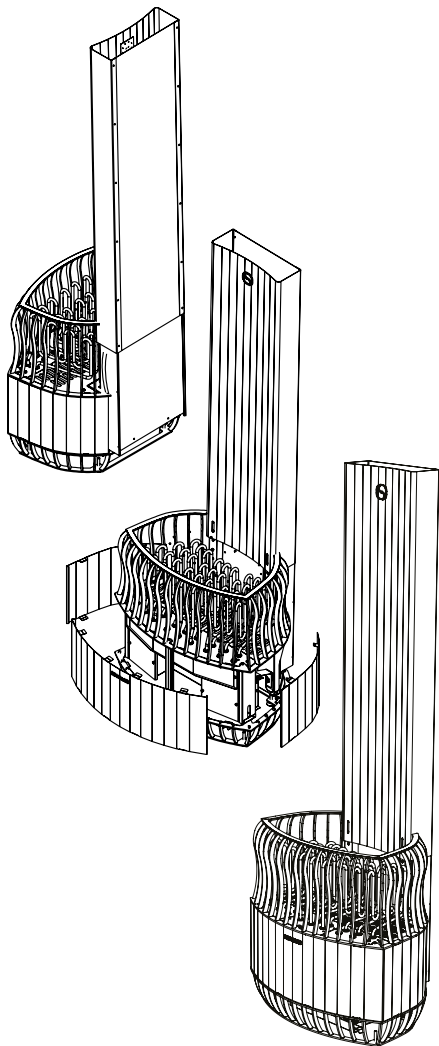


5. Fix the flue assembly to the main frame using 4 bolts included in the set.

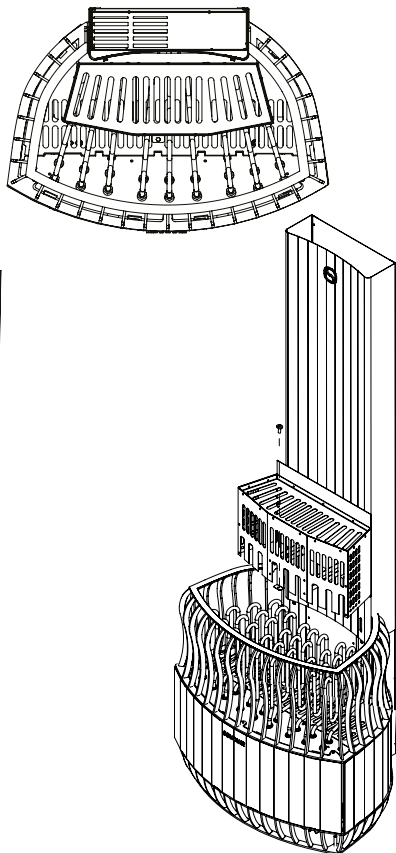




6. Re-position the side panels.



7. Install the heating element tunnel by positioning it in the stone basket partially covering the heating elements. When positioning, notice that there is a slot in the tunnel for each heating element and use the top view for reference. Secure the tunnel with the bolt as shown in the figure.

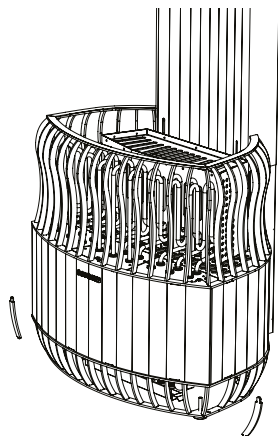




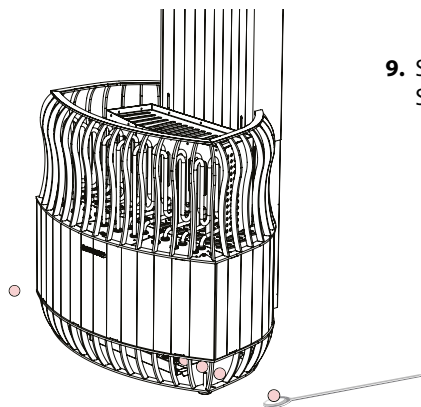
8. Install the salt spheres (see USE OF HIMALAYAN SALT SPHERES p. 44).

8.3 Regularly remove the salt collection tray and clean it thoroughly.

8.1 Remove the bottom side rib.



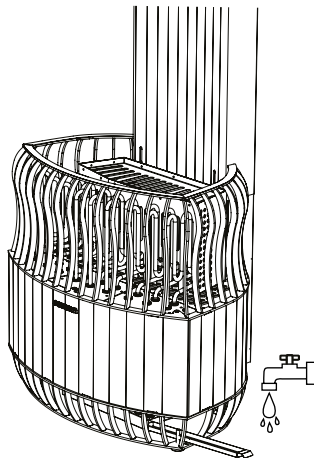
8.2 Place the salt spheres in their sockets using a long spoon. Ensure that the salt spheres are seated correctly.



8.4 Reinstall the bottom side rib.

Do not operate the sauna heater without the side ribs installed!

9. Stack the rocks, see LOADING THE STONES for guidelines p. 40.



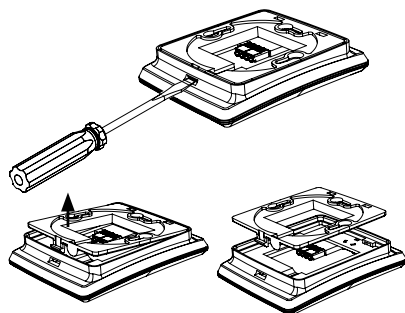


INSTALLING THE CONTROL PANEL

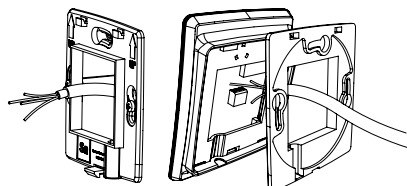
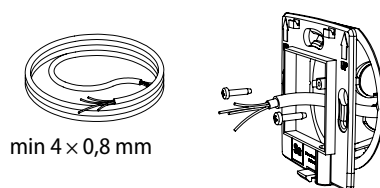
For concealed installation, the control panel can be mounted into a standard flush-mounted installation box (Ø 68 mm). If concealed installation is not possible, the control panel must be installed on the wall surface.

The control panel must be installed on the wall **outside of Sauna Room**, in a place protected from water splashes. Must be installed inside a protective enclosure when used outdoors.

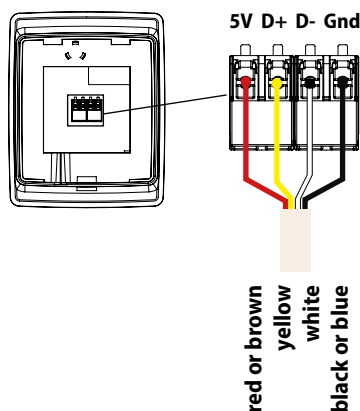
1. Remove the wall mount from the device.



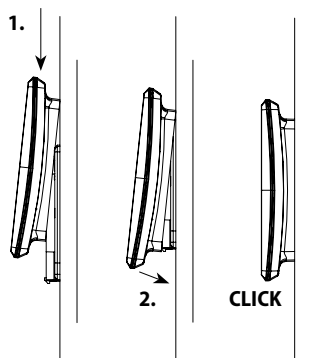
2. Thread the data cable through the hole in the wall mount and fasten the wall mount to the wall with screws.



3. Connect the data cable to the panel connector.



4. Press the control panel into the wall mount.





INSTALLING THE DOOR SENSOR

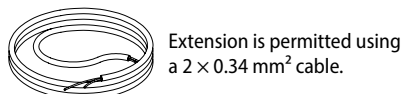
The door sensor is a magnetic switch that is attached to the door frame of the sauna room.

When the door is closed, the circuit of the door sensor closes, allowing the sauna control unit to operate.

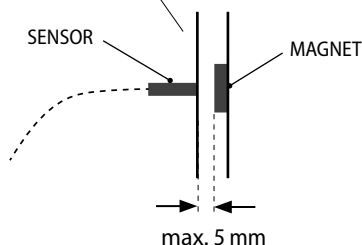
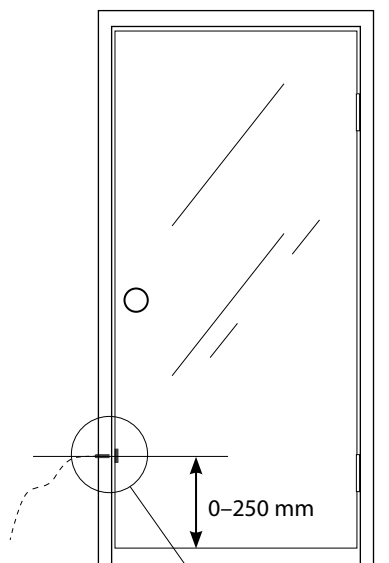
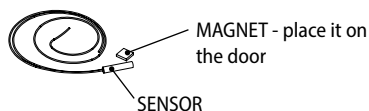
The door sensor prevents the risk of overheating caused by a door that has been left open.

The door sensor consists of two components: a sensor and a permanent magnet.

- Connect the cable to the sensor wires.
- Attach the magnet to the door using double-sided tape. It must allow the door to close and be positioned close to the door frame.
- Attach the sensor to the door frame, aligning the sensor and the magnet when the door is in the closed position.
- The maximum gap between the sensor and the magnet when the door is closed must not exceed 5 mm



DOOR SENSOR





INSTALLING THE AIR BUTTON

Install the Air Button inside the sauna room. The button may be installed on the sauna wall or on the bench.

Install the button at a practical and easily accessible height for the user.

The button must be installed:

- no higher than 1300 mm above the floor;
- at least 500 mm from the heater.

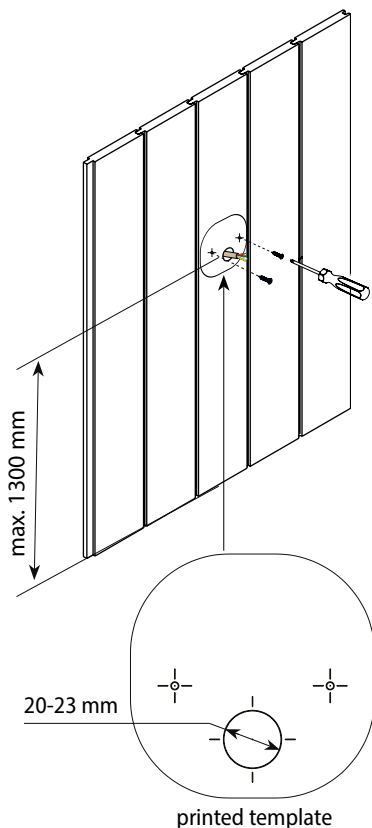
If the connection and installation cables are located higher than 1,000 mm from the sauna room floor or routed inside the walls, they must be rated to withstand temperatures of at least 125 °C (e.g. SSJ-type cables).

For concealed installation, the data cable may be installed inside a protective tube within the wall. If this is not possible, the cable must be installed on the wall surface.

The Air Button is IPX2 rated and must be installed on a wall area protected from water splashes.

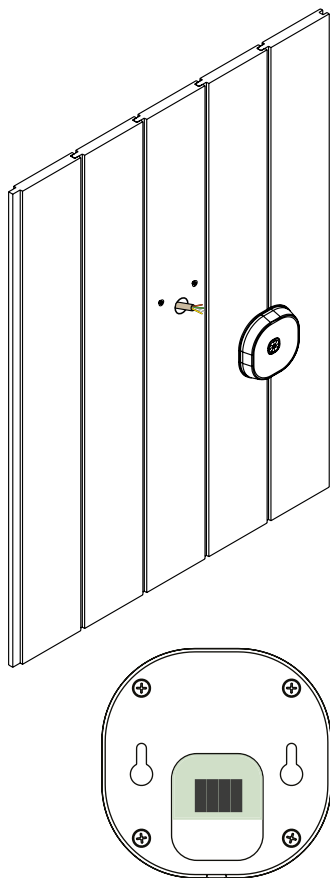
Installation steps:

1. Use the printed template to mark the locations for the screw holes and the cable opening (Ø 20–23 mm). If the cable is not concealed inside the wall, the opening may be only 5 mm deep or formed as a groove using a sharp blade.

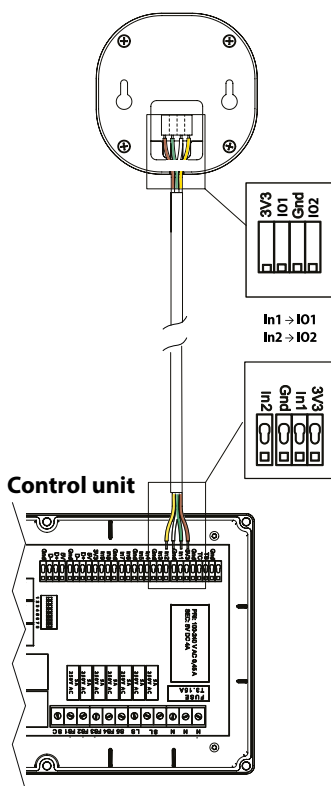




2. Install the screws, leaving the heads protruding 3–4 mm from the wall. Drill the cable opening through the wall and route the cable to the opening. Pull enough cable through to connect it to the button terminals.



3. Connect the wires to the button connector. Make sure the wires are connected to the control unit using the same colour code order (see the illustration below).
4. Attach the button to the wall by aligning the screw heads with the keyholes on the back of the button.



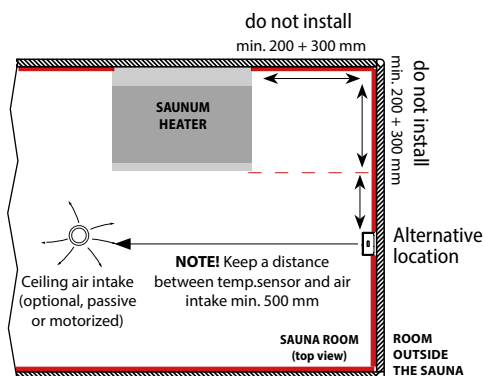
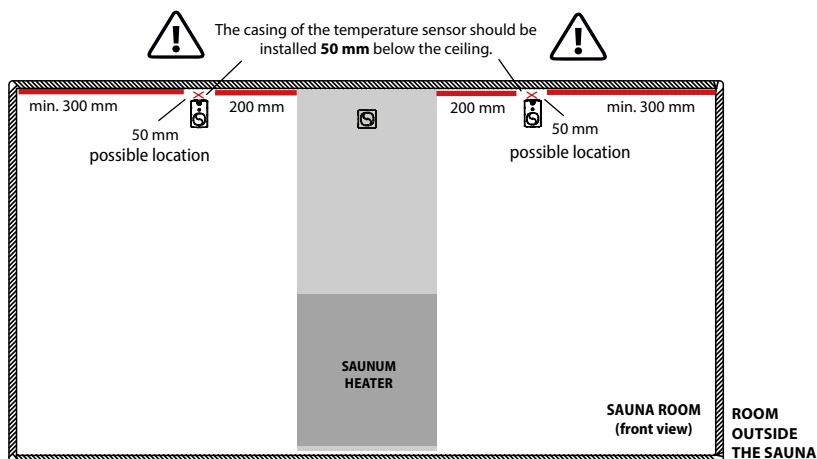


TEMPERATURE SENSOR

Prepare the installation location for the temperature sensor as shown in the diagram below, according to the layout of your sauna.

The temperature sensor may only be installed within the area marked as a "possible location" or "alternative location" in the diagram.

Airflow near a ventilation opening may cool the sensor, causing the control unit to receive incorrect temperature readings. This may lead to the heater overheating.



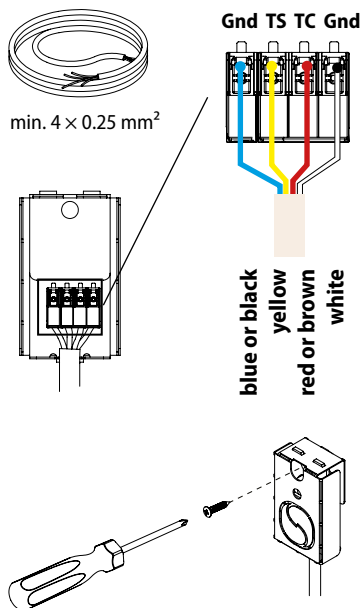


To install the temperature sensor/overheating protection, proceed as follows.

- Connect the cable to the temperature sensor's plugs.
- Screw the temperature sensor onto the wall (see figure).
- The temperature sensor cannot be placed above the heater.
- The temperature sensor must not be installed near any air openings (such as ventilation openings, doors, or windows) and must be located at least **500 mm** away from the air intake.
- **Sensor should not be blocked from any side except back side**

The airflow near an air vent cools down the sensor, giving the control unit inaccurate temperature readings.

As a result, the heater might overheat.





LOADING THE STONES

**Stone quantity: approx. 120 kg
(13.2 kW / 16.6 kW / 19.8 kW)**

The way the stones are stacked has a significant effect on the operation of the heater.

Important to know:

- The stones must be 5–10 cm in diameter.
- Use only stones intended for sauna heaters.
- Do not use lightweight, porous ceramic “stones” or soft tiles in the heater. They do not store enough heat and may damage the heating elements.
- Wash any dust off the stones before placing them in the heater.

NB! For the Saunum Luxury heater, we recommend using high-quality crushed sauna stones.

When loading the stones, note:

- Use stones of different sizes to pack the outer layer tightly. The heating elements should not remain visible.

NB! Direct radiant heat from the heating elements may create a fire hazard.

- Place the stones loosely between the heating elements to ensure better airflow and cooling.
- Do not pour the stones into the heater. Place them by hand.

- Do not force the stones between the heating elements.
- Do not overfill the heater. Do not form a pile of stones above the stone basket.
- Do not place any objects near the stone basket or the fan that could alter the volume or direction of airflow through the sauna heater.



WARNINGS

Staying in the sauna room for a long time raises your body temperature, which may be dangerous to your health!

- Do not touch the hot heater – the stones and the outside of the heater may burn you!
- Saunum strongly recommends using the **Saunum Safety Rail** around the heater to reduce the risk of accidental contact and potential burns.
- Be careful when moving in the sauna room, as the bench and the floor may be slippery!
- Do not hang towels and clothes to dry in the sauna room – this may cause a fire hazard!
- Make sure you have proper ventilation in the sauna room. Saunum is not responsible for possible salt corrosion of equipment and machinery.
- Excessive humidity may cause malfunction or failure of electrical components.
- Sea air and humid climates may cause an iron oxide layer (rust) on the metal surfaces of the heater!
- Clear obstructions closer than 500 mm in front of the fan opening!
- Sauna users must not keep their feet or other body parts closer than 500 mm in front of the working fan!
- Do not allow children, disabled or sick people into the sauna room without supervision!
- Consult a doctor about medical concerns related to steam, heat, and/or salt treatment!
- Make sure you are not allergic to salt treatment. Saunum is not responsible for potential side effects of salt treatment in the sauna room!
- Do not go to the sauna under the influence of alcohol, drugs, or narcotics!
- Do not sleep in the hot sauna room!

Hyperthermia

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 37 °C. The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting.

The effects of hyperthermia include:

- Failure to perceive heat;
- Failure to recognize the need to exit the room;
- Unawareness of impending hazard;
- Fetal damage in pregnant women;
- Physical inability to exit the room; and,
- Unconsciousness.



WARNING – The use of alcohol, drugs, or medication is capable of greatly increasing the risk of fatal hyperthermia.



HEATING

THE SAUNA ROOM

Before using the sauna heater for the first time, make sure that:

- the electric heater is equipped with a control panel and heater stones;
- the electrical connections meet the requirements;
- the supply voltage corresponds to the nominal ratings allowed for the sauna heater;
- the protective earth (PE) is in working order;
- the attachments of the sauna heater housing are in order;
- the sauna heater is properly attached to the wall;
- the over-current fuses are in working order;
- the fan rotor rotates smoothly;
- there are no tools or materials left after mounting the device in the housing.

When switching the sauna heater on, check:

- the direction of the air flow – the air intake from the upper and the output from the lower opening;
- that there is no vibration or excessive noise when the fan is running.

When the sauna heater is switched on for the first time, the heaters and the stones will emit an odour. The sauna room must be properly ventilated to remove the odour.

If the power of the heater is suitable for the sauna room, it takes 45-90 minutes to reach the desired temperature in a properly insulated sauna room. The stones are usually heated to the steam temperature at the same time as the sauna room.

Only switch the device fan on just before entering the sauna room – this will help to prevent the sauna bench from overheating and an excessive energy consumption.

Saunum's recommended temperature for sauna operation is 65 °C to 80 °C.



USING THE SAUNA

HEATER



Before switching the Saunum Luxury on, always make sure that nothing is above or near it.

The operating time of the Saunum Luxury heater can be adjusted using the control panel or, if available, through a connected smart control system.

- Do not connect the device directly to the utilities and/or power!
- The Saunum Luxury must not be used if the components of its housing have been removed and/or the wiring diagram has been changed.
- Children should not be allowed to access or play with the Saunum Luxury.
- When switching the Saunum Luxury on and off, refer to the instructions for use of the control device you are using.



After using the sauna, make sure that all parts of the Saunum Luxury are switched off (the heating and the fan have stopped).

ADJUSTING

THE TEMPERATURE



During the heating of the sauna room, the air circulation fan of the Saunum Luxury must be switched off.

This ensures faster heating of the sauna room and prevents the bench from becoming excessively hot during the heating phase.

To determine the appropriate operating settings, start with a lower target temperature and the lowest airflow speed.

If the sauna room feels too hot, reduce the target temperature or decrease the Saunum Luxury fan speed.

SAUNA CLIMATE CONTROL

The airflow generated by the device is controlled via the touch control panel, where the desired fan speed can be selected (three speed levels available). The fan speed can be preset or adjusted once the target temperature has been reached.

The Air Button installed inside the sauna room allows the user to change the fan speed during the sauna session without leaving the sauna.



USE OF HIMALAYAN SALT SPHERES

The sauna heater comes with Himalayan salt spheres. The use of salt spheres in the device is optional and does not affect the main function of the device.

To use the salt spheres, they must be installed in the sockets behind the air outlet grille and the fan. Make sure that the salt spheres are installed correctly and do not impede the fan rotation. To install or remove the salt spheres, remove the bottom side rib from either side of the heater and place the salt spheres in their sockets.

We recommend using a long spoon to maneuver the salt spheres through the bottom grille and then gently drop the salt spheres in the sockets. After installing or removing the salt spheres, reposition the bottom side ribs. **The sauna heater may only be used with the side ribs in place!**

A detachable gutter which captures the dissolved particles of the salt spheres is located underneath the salt sphere sockets. When replacing old salt spheres, it is recommended to slide it out of its socket and give it a good wash.

Do not use/start the device if the salt spheres become dislodged near the fan housing!



The use of third-party salt spheres is not covered by the device warranty.

LADLING WATER ON THE HEATER

The air in the sauna becomes dry as it heats up. Therefore, it is necessary to create steam to achieve a suitable level of humidity. The effects of heat and steam on people are different. When testing the different settings of the Saunum Luxury, you will find the most suitable combination of temperature and humidity.

The volume of the sauna ladle should not exceed 0.2 litres. When throwing water, the amount of water should not exceed 0.2 litres, because by pouring too much water on the stones at once, some of it may be sprayed outwards in splashes of boiling water.

Make sure that people are at a safe distance from the heater when creating steam!

Hot steam and water splashes cause skin burns.

The water to be ladled or tossed lightly onto the heater must meet the requirements for clean domestic water. Only fragrances specially designed for sauna may be used in the water. Follow the instructions on the package.



WATER QUALITY REQUIREMENTS

The water used for ladling onto the heater must comply with domestic water quality standards.

To prevent corrosion, scaling, and damage to the heater components, ensure that the water does not exceed the maximum concentration of impurities listed below.

Water properties	Effect	Maximum impurity level
Organic impurities	Colour, taste, precipitates	12 mg/l
Iron concentration	Colour, odour, taste, precipitates	0.2 mg/l
Manganese (Mn) concentration	Colour, odour, taste, precipitates	0.10 mg/l
Hardness (main substances: magnesium (Mg) and calcium (Ca))	Precipitates	Mg: 100 mg/l, Ca: 100 mg/l
Chloride-containing water	Corrosion	Cl: 100 mg/l
Water electrical conductivity	Corrosion, faster electrochemical reactions	3000 $\mu\text{S}/\text{cm}$



Do not use chlorinated water, seawater, water containing arsenic or radon. Such water poses a health risk and causes rapid corrosion of metal components.



MAINTENANCE

Due to large temperature fluctuations, stones tend to break down. Stones must be restacked at least once a year and even more frequently when using the sauna often. When restacking the stones, remove stone fragments from the bottom of the heater and replace the broken stones with new ones. By monitoring this, the heating capacity of the heater remains optimal and the risk of overheating is avoided.

If you use Himalayan salt with the Saunum Luxury, it is recommended to inspect the salt once a year and, if necessary, replace worn and broken salt with new ones. Make sure that there are no foreign objects in the fan air vents of the heat equalizing module.



Do not leave the fan of the heat equalizing module running when the sauna is not in use – this will cause unnecessary energy consumption and may overheat the sauna bench.



CAUTION! Before maintaining and cleaning the Saunum Luxury, the device power supply must be disconnected from the power and/or utilities, and the moving parts of the unit must completely stop.

Before servicing and cleaning the Saunum Luxury, make sure that:

- the Saunum Luxury is disconnected from the power and/or utilities (in addition to the device's power switch, also by means of over-current breaker or fuse);
- the device fan has stopped completely; the prescribed occupational safety and personal protective equipment is used when performing the work;
- the connection cables are undamaged. In the event of damage to the connection cables, have the cables replaced by a qualified electrician in accordance with the applicable standards and requirements before continuing maintenance and cleaning work.

The device housing can be cleaned with a cloth dampened with water. Do not use pressure washers, running water, chemical cleaners, or solvents to clean the housing!

Use a 10% citric acid solution to remove scale and rinse with water.

Excessive dirt can prevent the fan from operating correctly, causing an increase in noise when operating. Noise may also increase due to damage/bending of the fan blades. Make sure that there are no foreign objects or salt in the working area of the fan rotor.



The fan will naturally stay free of debris with regular use. If cleaning is needed, we recommend contacting a sauna airflow specialist.



CAUTION! Using compressed air to clean the fan can permanently damage the fan rotor! The fan bearings are maintenance-free and must be replaced if problems occur.

It is recommended to check all electrical connections of the Saunum Luxury at least once a year. This can be done by a certified electrician.



Contact a qualified sauna service specialist to perform maintenance. In the case of any disturbances in the operation of the Saunum Luxury, stop use of the device immediately and have the device inspected by a person authorized by Saunum.



THE SAUNUM LUXURY IS NOT HEATING OR BLOWING AIR. ENSURE THE FOLLOWING:

- That the heater breakers and fuses are in working order.
- That all wiring is properly connected.
- That the Saunum heater is switched on.
- Make sure that the selected target temperature is set high enough for normal operation.
- Make sure that the sauna door is closed.

THE SAUNA ROOM HEATS UP TOO SLOWLY. THE WATER LADLED OVER THE STONES COOLS THEM DOWN QUICKLY.

- Make sure that the air circulation fan of the heat equalizing module is switched off during sauna room heating.
- Make sure that the breakers and fuses of the Saunum Luxury are in working order.
- Increase the selected temperature on the display panel.
- Make sure that the power output (kW) of the heater is sufficient.
- Check the stones. Stones that are placed too tightly, falling down/sinking closer over time, or the wrong type of stone may interfere with the air flow through the heater and therefore reduce the heating speed.
- Make sure that the ventilation of the sauna room is correct.

THE SAUNA ROOM HEATS UP QUICKLY, BUT THE TEMPERATURE OF THE STONES IS INSUFFICIENT. THE WATER THROWN ON THE STONES FLOWS DOWN.

- Make sure that the power output (KW) of the heater is not too high. If the power of the heater is suitable for the sauna room, it takes 45–90 minutes to reach the desired temperature in a properly insulated sauna room.
- Make sure that the ventilation of the sauna room is correct.
- Reduce the speed of the heat equalizing module.

THE WALL COVERING OR OTHER MATERIAL NEAR THE HEATER BECOMES DIRTY QUICKLY.

- Observe the safety distance requirements.
- Make sure that no heating elements are visible between the stones. If the heating elements are visible, turn off the device, let the stones cool, and lift them so that the heating elements are completely covered.



Stones placed too sparsely may cause the heating elements to overheat and make the indoor climate of the sauna room uncomfortable and may cause a fire hazard!



THE WOODEN SURFACES OF THE SAUNA ROOM BECOME DIRTY OVER TIME.

This process may be accelerated by:

- direct or indirect sunlight
- warmth produced by the heater
- wall protectors (protection equipment has poor heat resistance)
- fine particles from the stones.

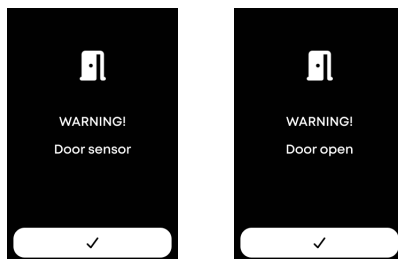
THE HEATER SMELLS.

- See section HEATING THE SAUNA ROOM (page 42).
- A hot heater may amplify odors mixed with air, but this, however, is not caused by the sauna nor the heater. Causes include paint, glue, oil, spices, etc.

THE SAUNUM LUXURY IS MAKING NOISE.

- There is always a certain noise when the fan is running. If it is not uniform and/or accompanied by a metallic sound, the fan is likely to need maintenance or repair. Check that there are no foreign objects in the fan air vents.
- Try switching the fan to a lower speed.
- Loud sounds are likely to be caused by stones cracking due to heat.
- Thermal expansion of the heater parts may cause noise when the heater warms up.

CONTROL PANEL MESSAGE "DOOR SENSOR"/"DOOR OPEN"



MESSAGE "DOOR SENSOR"

Heating stops if the physical door sensor detects the door open for over 20 seconds and resumes when it is closed.

MESSAGE "DOOR OPEN"

If the temperature does not rise within 30 minutes, heating stops. Make sure the sauna door and any windows are closed, then restart the sauna from the control panel.

CONTROL PANEL MESSAGE "THERMAL CUTOFF"



The sauna room or heater is critically overheated (see page 50).



CONTROL PANEL MESSAGE "THERMAL CUTOFF"

During a sauna session, the sauna room or the heater may overheat, activating the **thermal cutoff** for safety. In this case, heating stops automatically.

ACTIONS

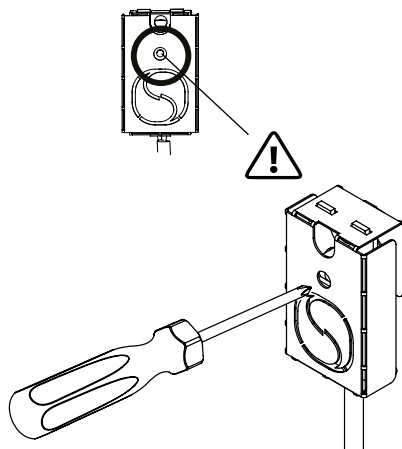
Although all sauna functions are disabled when the thermal cutoff is activated, the sauna screen remains active so that the user can view the current sauna status, the set target temperature, and other relevant information.

1. Stop the sauna session by pressing **STOP** on the control panel.
2. Allow the sauna room to cool down for approximately **10 minutes** or until the temperature reaches about **60–65 °C**.
3. **After that**, reset the **temperature sensor** by pressing the reset button located in the temperature sensor housing on the wall.

After resetting the sensor, the **control unit** should automatically restart within approximately **2–3 minutes**.

If the automatic restart **does not occur**, make sure the sensor reset has been performed **correctly**, and restart the control unit by switching off the **main circuit breaker**, wait **10 seconds**, and then switch it back on.

If the error still persists after restarting the system, contact an authorized service center.





FAILURE OF A HEATING ELEMENT

The heater is designed for a long service life. However, over time, especially in commercial or intensive-use environments, heating elements may fail.

The condition of the heating elements should therefore be checked regularly.

Possible signs of a failed heating element include:

- A tripped circuit breaker.
- One or more heating elements not glowing red during operation (in the 13.2 kW configuration, six heating elements should glow red during normal operation).
- Visible damage detected during stone replacement or routine inspection.

If a heating element fails, the heater can be reconfigured to allow continued operation. Depending on the selected power configuration and the location of the failed element, the heater may continue operating at full power or at reduced power until repairs are carried out.

Operating the heater at reduced power in the 16.6 kW and 19.8 kW configurations is intended as a temporary solution. It allows continued use of the sauna while waiting for replacement parts or scheduling repairs.

13.2 kW configuration

If a heating element in Group 1 fails, one of the unused elements in Group 2 can be used as a replacement.

Select R1, R5, or R9, preferably the element closest to the failed element. Move the line wire from the failed element to the selected replacement element (see pages 24–25).

The heater will then operate at its full output of **13.2 kW**, and the failed element does not need to be replaced.

16.6 kW configuration

Failure of a heating element in Group 1

Rewire the heater so that a working element from Group 2 replaces the failed Group 1 element. Leave the corresponding breaker in Group 2 switched off (see pages 26–27).

The heater can then operate at a reduced output of approximately **14.4 kW**.

Failure of an element in Group 2

Switch off the corresponding breaker in Group 2.

19.8 kW configuration

Failure of an element in Group 1

Switch off the corresponding breaker in Group 1 (see pages 28–29).

The heater will then operate at a reduced output of **15.4 kW**.

Failure of an element in Group 2

Switch off the corresponding breaker in Group 2.

The heater will then operate at a reduced output of **17.6 kW**.



Disconnected element wires must be insulated, fixed with a cable tie and marked as "BROKEN" inside the electrical compartment.

The wiring must be returned to its original state when an element gets replaced. Both actions must be recorded in the maintenance log (see page 53) in this manual!

REPLACING THE HEATING ELEMENTS

Steps for replacing the heating elements.

Tools needed:

- Screwdriver PH2
- 24 mm deep socket wrench
- 8 mm wrench (preferably deep socket)

1. Disconnect from power.
2. Remove the stones.
3. Remove front panel.
4. Remove cover from the failed element section and electrical compartment.
5. Check if the heater has been temporarily rewired (R1-R9 on wires correspond to markings on the terminals).
6. Replace the heating element (it should always come with a new gasket).
7. Reposition all components in reverse order.
8. Turn on the heater for 3–5 seconds and check if all the elements are heating up.
9. Restack the stones.



MAINTENANCE LOG

Date	Action Taken/Comments	Work performed by

EXAMPLE

dd:mm:yyyy dd:mm:yyyy	Failure of R7, R7 substituted with R5 Replacement of R7, R5 wires returned to correct position	
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WARRANTY

With the Saunum device warranty, Saunum guarantees that the product will be free from defects in the materials and the assembly for a specified period after the date of purchase. If, during the warranty period, the device is found to be defective due to the use of substandard materials or the quality of the assembly, Saunum's recommended repair partners will repair or replace the device or its defective part under the conditions set out below. Saunum reserves the right to decide whether to replace the defective product component or to replace the device with a new one. The replaced defective product components remain the property of Saunum.

Warranty conditions:

1. The warranty is only valid if a completed installation report is submitted with the claim.
2. The device has been connected to the power network by a qualified electrician in accordance with the regulations in force.
3. The warranty period of the sauna heater when used in a private sauna is two (2) years.
4. The warranty period of the sauna heater when used in a public sauna is one (1) year.

Not covered by the warranty:

1. Saunum will not cover labor cost.
2. Routine maintenance and cleaning of the device and replacement of the components due to normal wear and tear.
3. Adaptation or modification of the device for any purpose other than that indicated in the instructions for use.
4. Risks arising from transport.
5. Damage resulting from the misuse of the device.
6. Damage resulting from the improper installation of the device;
7. Repairs to the device not carried out by Saunum's recommended repair partner (maintenance partner).
8. Accidents, lightning, water, fire, improper ventilation, or any other factor beyond the control of Saunum.
9. Breakages caused by the use of stones and salt spheres not recommended by Saunum.
10. The heating elements and the salt spheres.

Read all of the instructions for use carefully and thoroughly before using the device and keep them in a safe and easily accessible place.



INSTALLATION REPORT

Purchase date: _____ Installation date: _____

Heater type: _____

Sticker/serial number: _____



Place of installation: _____

Installed by: _____

Checked by: _____

Date, signature: _____

Description of the work done: _____

All components required for installation are present _____

The device has no visible finish defects or dents _____

The device is installed on the wall or floor in accordance with the instructions _____

Electrical connections comply with the instructions _____

All heating elements heat up during operation _____

All three fan speeds operate in the correct order _____

Notes: _____

Customer's contact (name, email address): _____

Received work: _____

Warranty start date: _____

You can find the list of Saunum Saunas OÜ's recommended installation and maintenance professionals on the Saunum Saunas OÜ website **www.saunum.com** or by contacting us at **info@saunum.com**

Please note! The sauna heater may only be connected to the power network by a qualified electrician in accordance with the regulations in force.

PATENT REGISTRY

PCT/EP2023/070940

EP3167864

EP23749032.1

EP3167865

US12491131

US19505046

CA3222450

CA3299327

AU2023455694



EC declaration of conformity

Manufacturer: Saunum Saunas OÜ

Address: Suur-Paala 19, 11415 Tallinn, Estonia

certifies that the product:

Saunum Luxury

complies with the requirements of the following directives of the Council of Europe, provided that the installation has been performed in accordance with the installation instructions issued by the device manufacturer and the instructions EN 60204-1 "Safety of the machinery. Electrical equipment for the machinery –

Part 1: General requirements":

Machinery Directive 2006/42/EC

Low Voltage Directive 2014/35/EU

Electromagnetic Compatibility Directive 2014/30/EU.