ENG

Patented Technology
MADE IN ESTONIA

saunum

Saunum Air Perfect

Sauna heater with climate device

INSTRUCTION FOR USE AND INSTALLATION

V_26_10.3

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 stratifi cation 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

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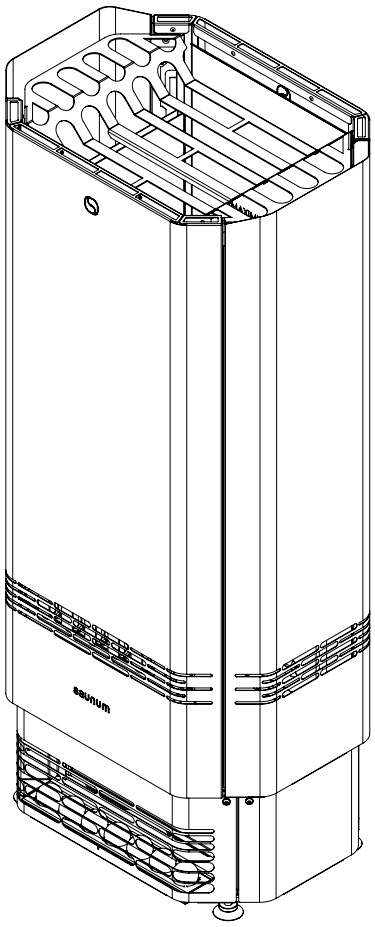
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Read all of the instructions for use carefully and thoroughly **before using the device** and keep them in a safe and easily accessible place for future reference.



Saunum **congratulates you** on choosing a heater with an innovative saunaroom indoor Heat Equalizer!

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 pages 43–44). 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 pages 44–45). 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 climate device, 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.

By using the Saunum AirIQ control panel, you can always pre-set or manually change temperature, humidity (by throwing water on hot stones) and Saunum climate device fan speed to find the settings you enjoy most.

These installation and operating instructions are intended for the sauna owner, maintenance personnel, and the electrician responsible for installing the **Saunum Air Perfect** heater with a built-in climate device (hereinafter **"heater", "device"**).

Package Contents:

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

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

AirIQ control unit (sold separately) includes:

- Power board,
- Control panel,
- Air Button,
- Door sensor with cable,
- Temperature sensor,
- Temperature sensor, Air Button and control panel connection cables.

Additional accessories available:

- AutoLeil (includes 1 button),
- AutoLeil Button (for installations requiring more than one button),
- Protective air deflector
- Safety rail

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

All connection options are shown in the wiring diagram on **pages 22–30**.

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 Air Perfect is intended for heating the sauna room at 60–90 °C and for leveling the sauna room climate during steaming.

Please note! The heater with the climate device must not be operated in temperatures exceeding 90 °C!

Do not use the Saunum Air Perfect 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.

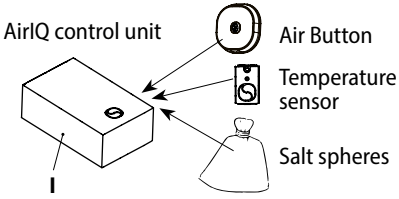
The manufacturer is not responsible for any malfunction caused by an overrun of the authorized operating temperature.

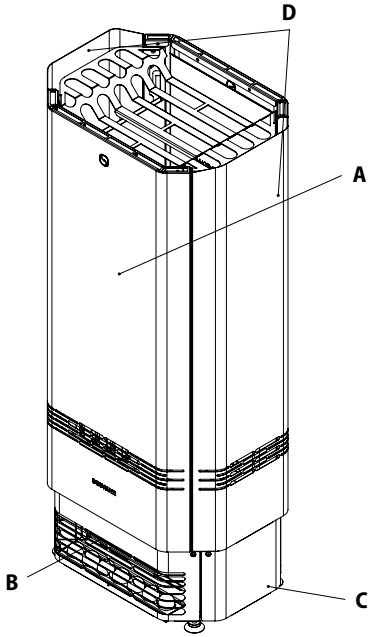
Saunum Air Perfect is designed to operate exclusively with the Saunum AirIQ control unit.

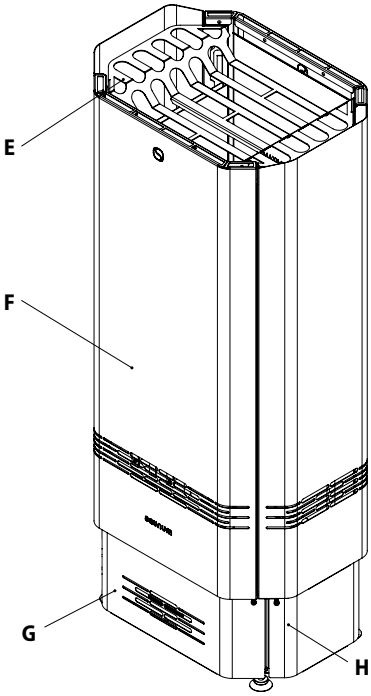
PRODUCT **COMPLETENESS**

The Saunum Air Perfect package includes the heater and Himalayan salt spheres. The AirIQ control unit package is sold separately.

AirIQ control unit includes the power board, control panel, Air Button, door sensor, temperature sensor, and connection cables

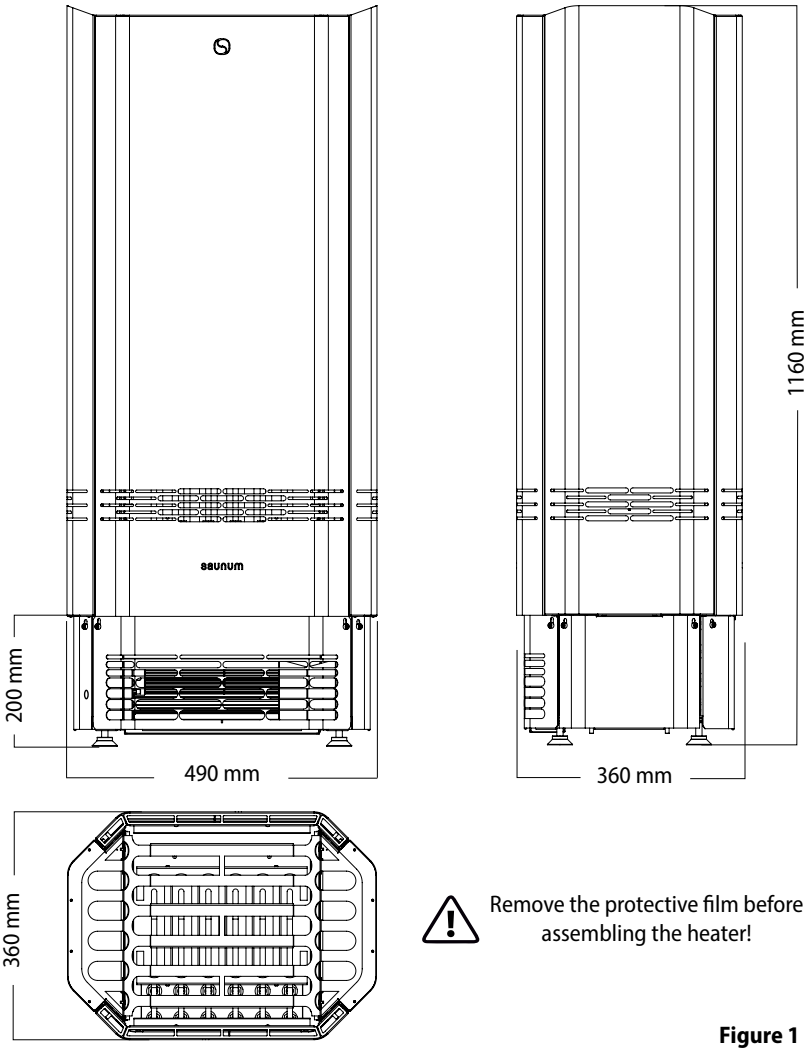






A - Front panel
B - Bottom front panel (air outlet grille)
C - Panel covering the electrical connection
D - Side flues
E - Stone basket top grille
F - Rear panel
G - Panel covering the power board
H - Panel covering the electrical motor
I - AirIQ control unit

Elements that are not part of the climate device package: safety barrier, bottom air deflector, power supply cables and stones.

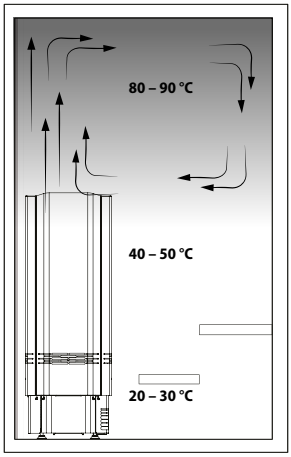


Remove the protective film before assembling the heater!

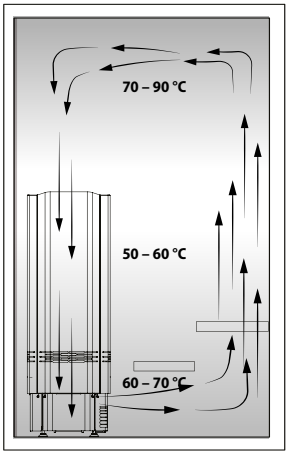
Figure 1

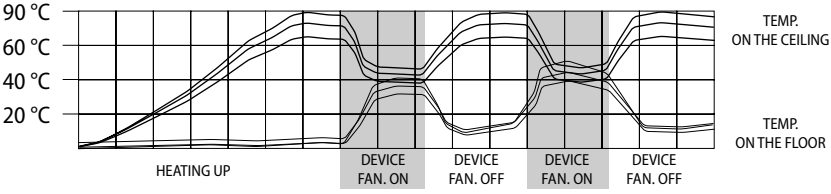
WORKING PRINCIPLE

The image below shows the operation of the Saunum heater during heating, with the target temperature range of 80–90 °C and the fan 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 fan 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 heater 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 2.5 mm^2.

The device must be powered through the Saunum AirIQ control unit, which must be protected by overcurrent fuses. Use of any other control unit is not permitted.

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 Air Perfect. At the installation site of the sauna climate device, 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 **Figure 1 (see page 9)**.
- It must also be ensured that the upper edge of the fan outlet of the sauna climate device 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 there are no obstructions **above the device** 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 heater, 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 Air Perfect 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) × X (width) × Z (height) in meters.
The result is the base volume in cubic meters (m^3).

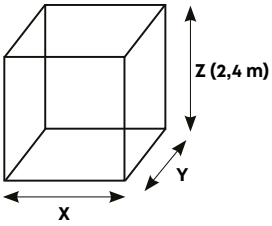


Figure 2

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
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.

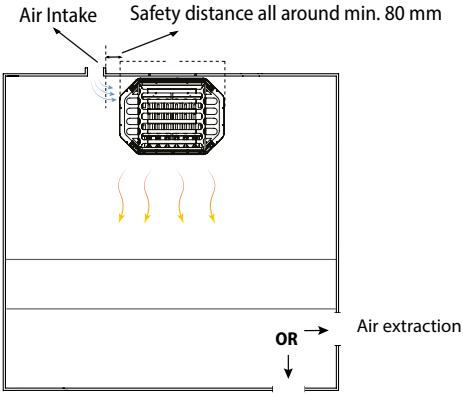


Figure 3

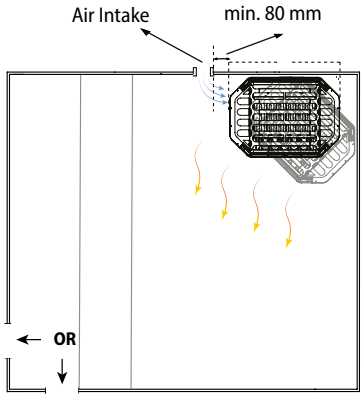


Figure 4

Recommended for improved fresh-air distribution in the sauna room.

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

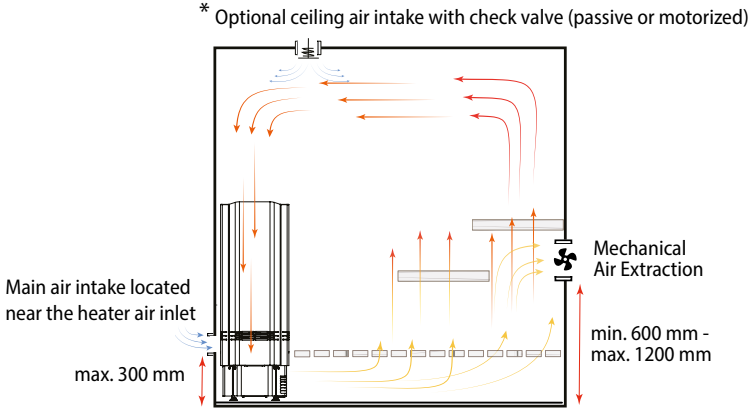


Figure 5

* The ceiling air intake may function passively or include a fan in mechanical ventilation setups. A fan is not required.

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

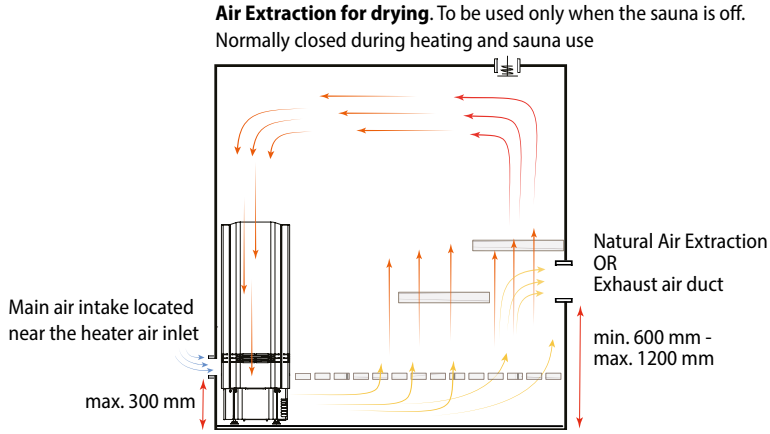


Figure 6

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

This requires approximately X m^3/h of airflow, depending on the size of the sauna room.

Air intake ventilation in a sauna room is mandatory.

Install the **main 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 Air Perfect 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!

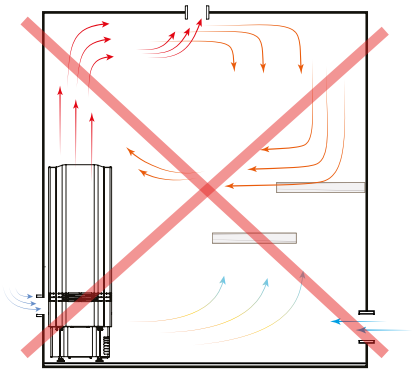




Table 1

DEVICE (230V 3N~ 50/60Hz)	WATTAGE	PROTECTION
Air Perfect 6	6 000W	C10
Air Perfect 9	9 000W	C16
DEVICE (230V 1N~ 50/60Hz)		
Air Perfect 6	6 000 W	C25
Air Perfect 9	9 000 W	C40



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

DEVICE	ROOM SIZE	MIN. CEILING HEIGHT
Air Perfect 6	6-10 m^3	1960 mm
Air Perfect 9	9-16 m^3	1960 mm

POWER CABLE mm²	POWER CABLE mm² from control unit to fan internal installation	POWER CABLE mm² from control unit to fan external installation
5 x 2.5	5 x 1.5	3 x 1.5
5 x 2.5	5 x 1.5	3 x 1.5
3 x 6	5 x 1.5	3 x 1.5
3 x 10	5 x 1.5	3 x 1.5

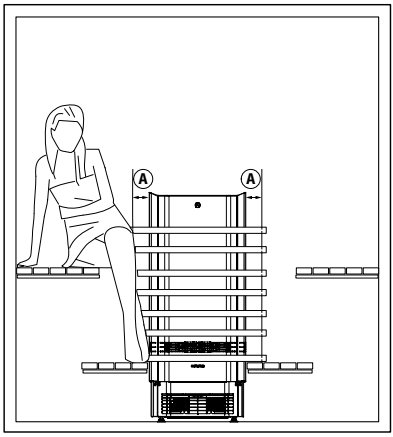
Min 125 ºC copper wiring

MIN. SAFE DISTANCE FROM THE TOP OF THE STONES TO CEILING	MINIMUM SAFE DISTANCE FROM THE HEATER	MIN. SAFE DISTANCE FROM FAN OUTPUT
800 mm	80 mm all around (A, B)	500 mm
800 mm	80 mm all around (A, B)	500 mm

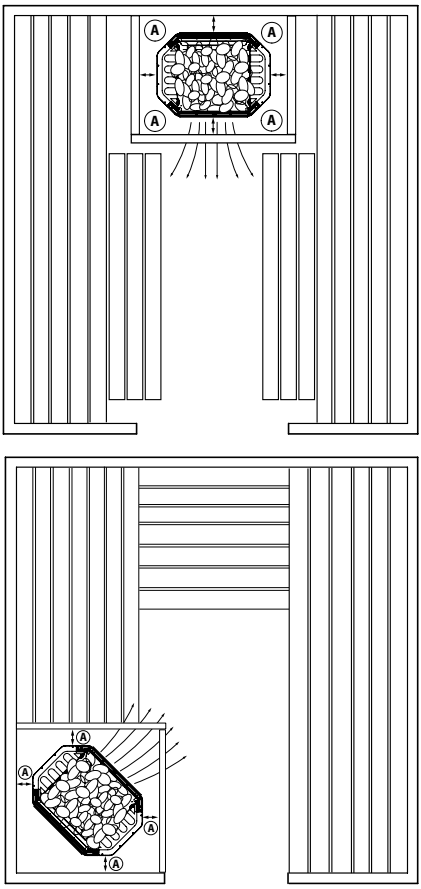
SAFETY DISTANCES

The recommended installation location of the Saunum Air Perfect within the sauna room must comply with the specified minimum safety distances to ensure safe and efficient operation.

Minimum Safety Distances
Safety distance all around the device:
80 mm



(A) safety distance all around min. 80 mm



NOTE!
Is indicative and only illustrates the possible situation in the steam room of the sauna, how there should be no obstacles in front of the climate device air outlet.

If the heater is installed into the floor, make sure that the floor surface does not block the air outlet and allows free airflow throughout the sauna room.

Installation Height

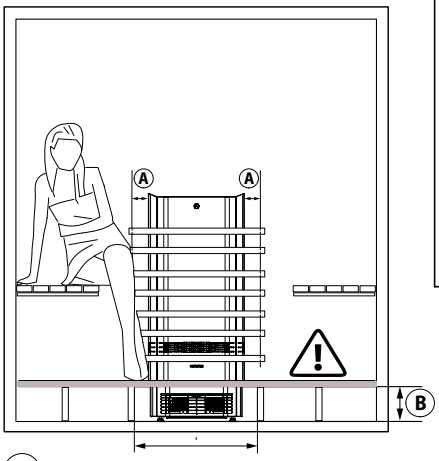
The device can be partially recessed into the floor or a bench.

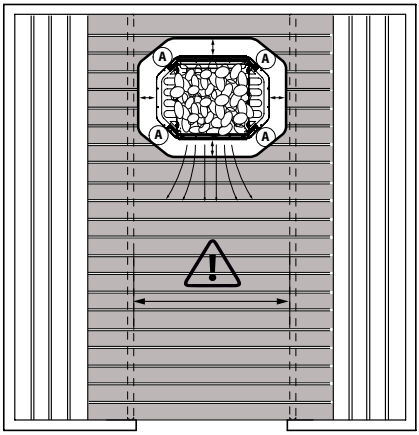
The installation height must be **180–800 mm** measured from the device bottom to the floor or bench surface.

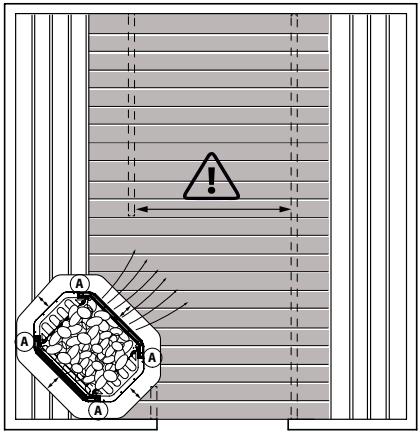
The surrounding structure may cover the lower part of the unit within this range, provided the air outlet remains unobstructed.

If installed in a wooden floor, leave ventilation gaps between planks for proper airflow.

The minimum gap between the floor planks must be 6 mm.







NOTE!
Is indicative and only illustrates the possible situation in the steam room of the sauna, how there should be no obstacles in front of the climate device air outlet.

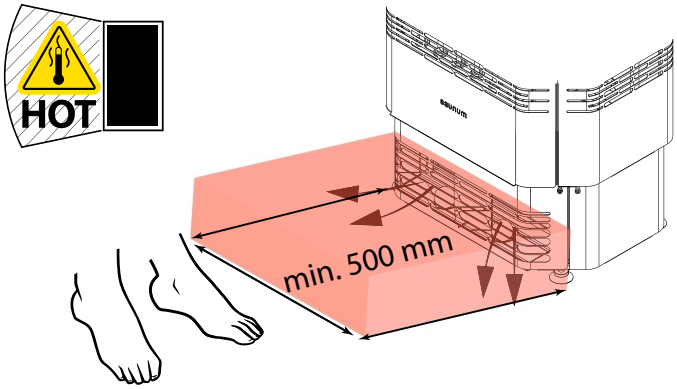
A safety distance all around min. 80 mm

B min. 180 mm - max. 800 mm

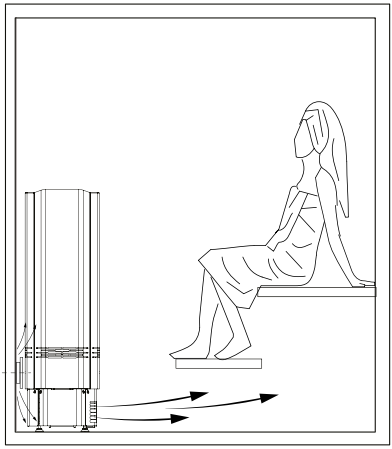
Do not place your feet or any other body part within 500 mm in front of the air outlet while the fan is operating

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!

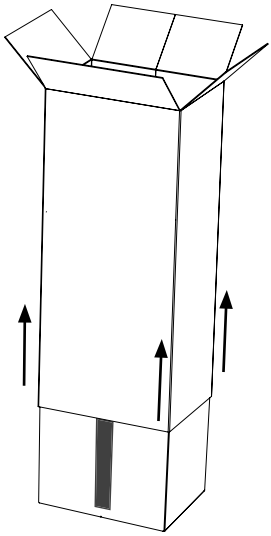




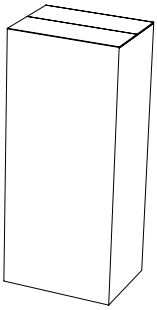


NOTE! The total package weight of the device is 54 kg. Two people are required to handle and transport the package safely

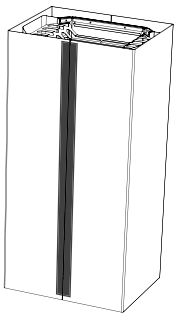




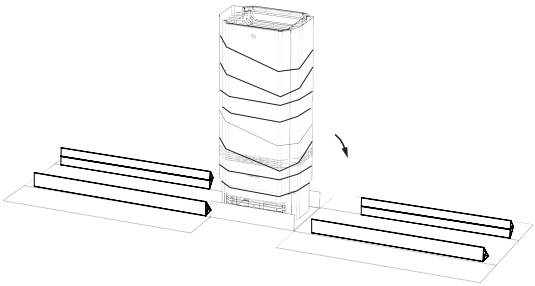




1. Remove the top cover of the package by pulling it upwards

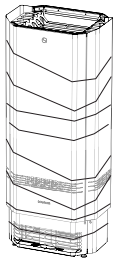


2. Remove the mounting tape.
DO NOT USE BLADES TO SCRATCH!



3. Place the device on the preparation area





4. Remove the protective film.
DO NOT USE BLADES!

INSTALLATION

Saunum Air Perfect has been designed for easy installation — everything is pre-assembled. The main installation steps are making the **electrical connections** (see pages 25-30) and **loading the stones** (see page 38-40).

ELECTRICAL CONNECTIONS

The heater is equipped with an integrated terminal block for connection to the control unit.

The terminal block is integrated within the heater and is located behind the bottom right side panel. The control unit can be installed either **inside** or **outside** the heater; the terminal block remains inside the heater in both configurations.

The control unit enclosure does not need to be opened to make the installation connections. Make these connections at the cable terminals behind the bottom right side panel of the heater.

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

To access the electrical connectors, you need to remove the bottom right side panel. Undo the two bolts fixing the panel and remove the panel.

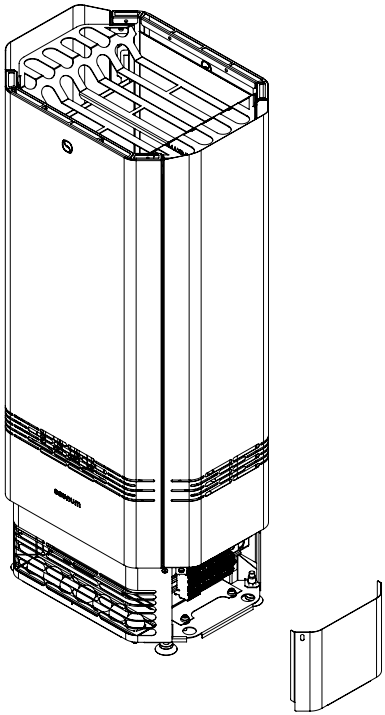
Make the electrical connections according to the applicable diagrams:

pages 25–27 for the control unit installed **inside** the heater;

pages 29–30 for the control unit installed **outside** the heater.

Feed the cable through the openings in the bottom of the heater near the cable terminals.

The connection cable must be a rubber-insulated type H07RN-F cable or equivalent. When done with the connections, re-position the side panel and fix with bolts.



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

- The internal connections of the heater are made by means of terminals according to the applicable wiring diagrams on **pages 25–30** and **Table 1** (see pages 16–17) in this manual.
- **Protective earthing** (PE) must be connected to the device's connection terminal using a conductor with a cross-sectional area of **at least 2.5 mm²**.
- The heater must be connected to a 230 VAC (3-phase), 50/60 Hz supply circuit through a control unit protected by an overcurrent fuse with the rating specified in **Table 1** (see pages 16–17).

  NOTE: Single-phase (230 VAC, 1-phase) connection may be available upon pre-order. Heater **neutral** must match the control unit's incoming neutral in cross-section.
- The **fan power** supply cables must include a protective earth conductor and have a conductor cross-sectional area of at least **1.5 mm²**.
- The power cable must enter the heater housing in a way that prevents water from running along the cable into the terminal block. The outer insulation of the cable can only be peeled off only from the part that is in 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 at least 125 °C (e.g., SSJ).
- Electrical equipment installed in the steam room below 1000 mm must withstand a temperature of at least 90 °C (e.g., T125).
- The recommended cross-section of the connection cable grooves is given in **Table 1** (see pages 16–17).

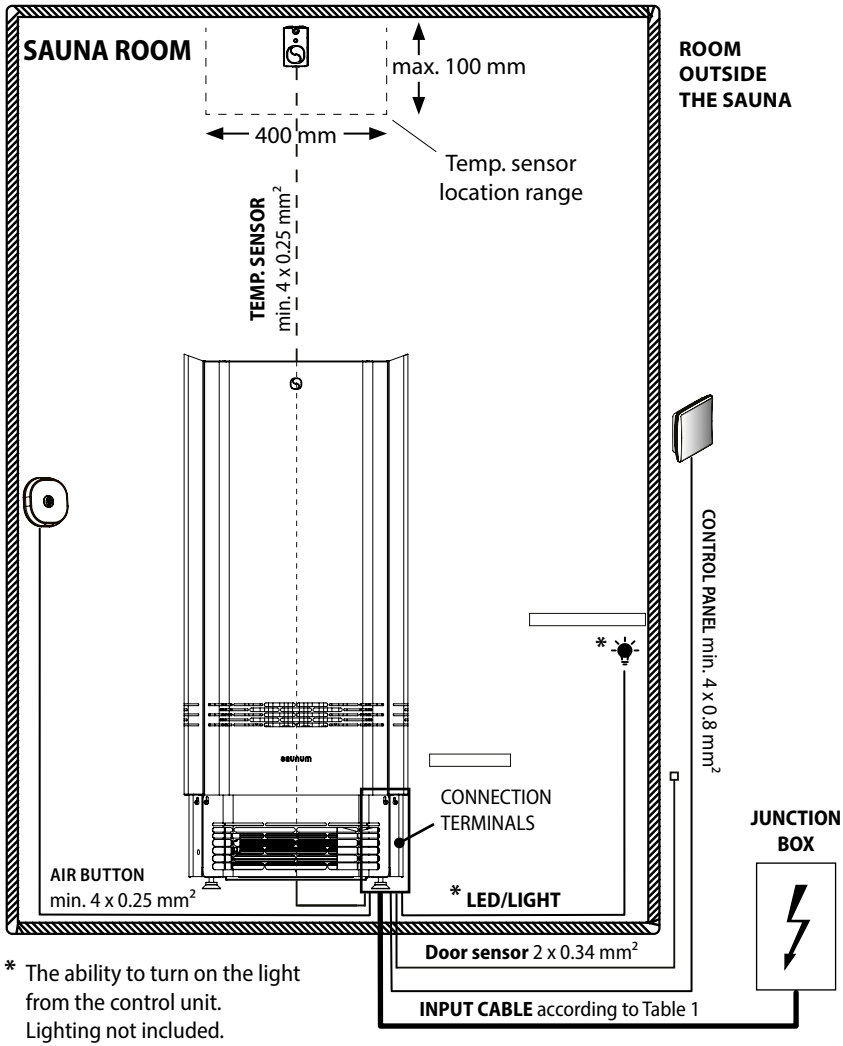
NB! The heater may only be connected by a professional electrician in accordance with the applicable regulations!

ELECTRIC HEATER
INSULATION RESISTANCE

During the final inspection of the electrical installation, a leakage may be detected when measuring the insulation resistance of the heater, 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 device, this moisture will disappear.

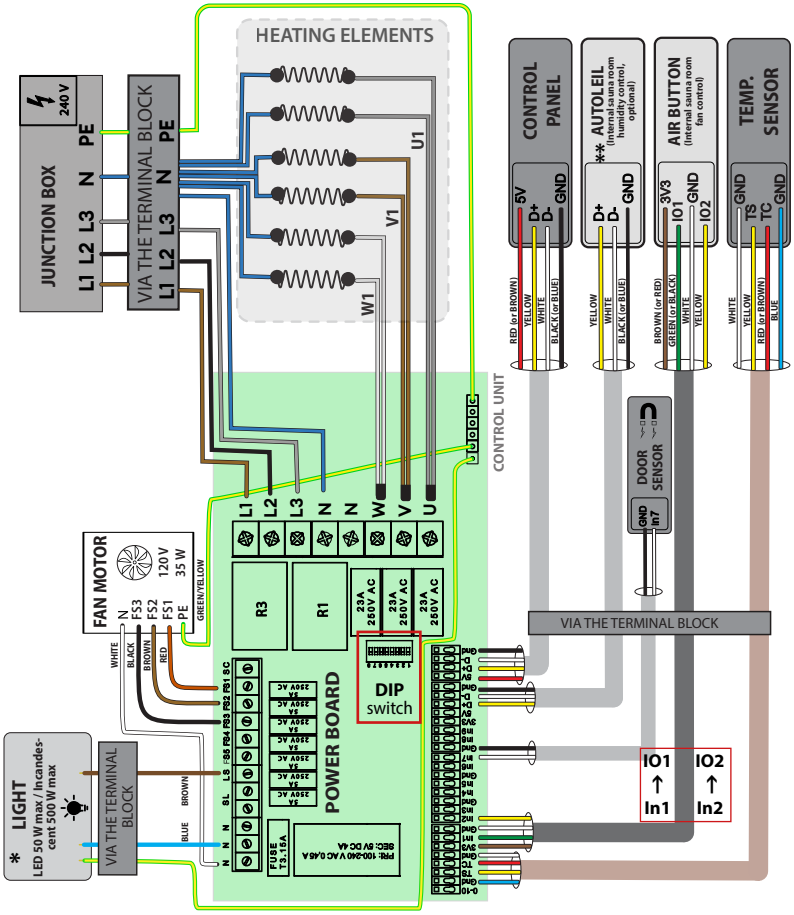
Do not connect the heater through a GFCI (Ground Fault Circuit Interrupter) breaker, as it may cause unwanted tripping during normal heater operation.

CONTROL UNIT INSTALLED INSIDE THE HEATER



* The ability to turn on the light from the control unit. Lighting not included.

Connecting to the control unit.



*** LED light power supply (max 50 W) must be equipped with an inrush current limiter.**
For incandescent light bulbs, the maximum permitted power is 500 W.
For loads exceeding 50 W, the circuit must be used for switching purposes only.

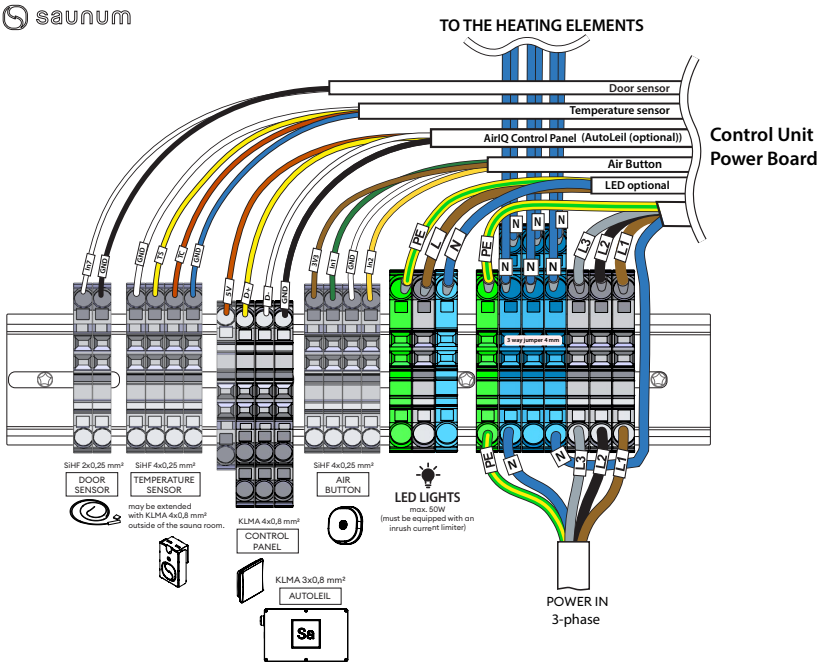
** AutoLeil are sold separately

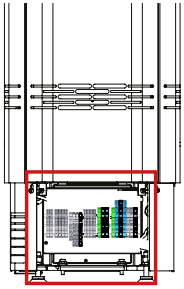
NB! Do not change the DIP switch factory settings unless permitted by Saunum's instructions.

NB! Heater neutral must match the control unit's incoming neutral in cross-section.

TERMINAL BLOCK

3-phase conections





TERMINAL BLOCK

1-phase conections

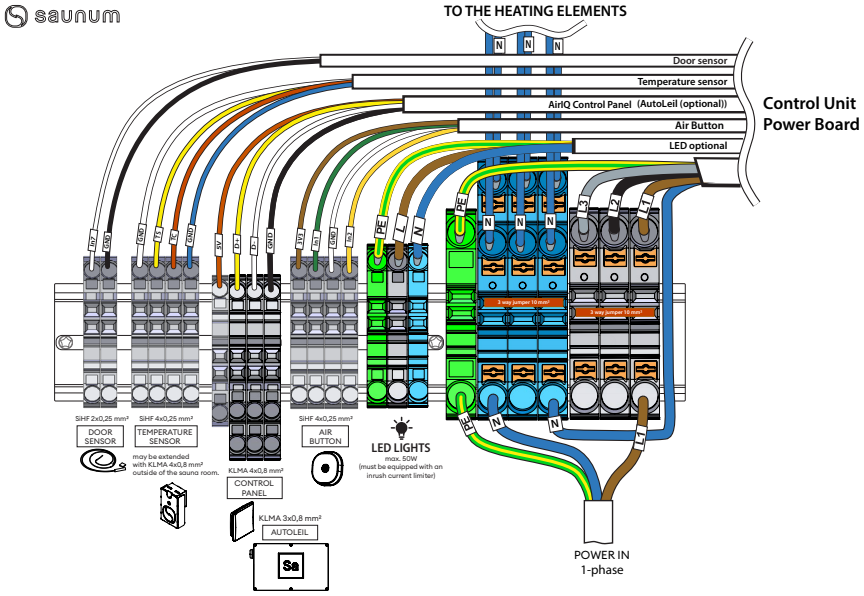
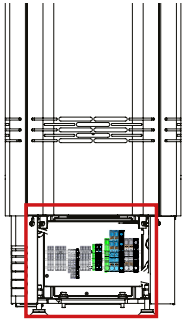
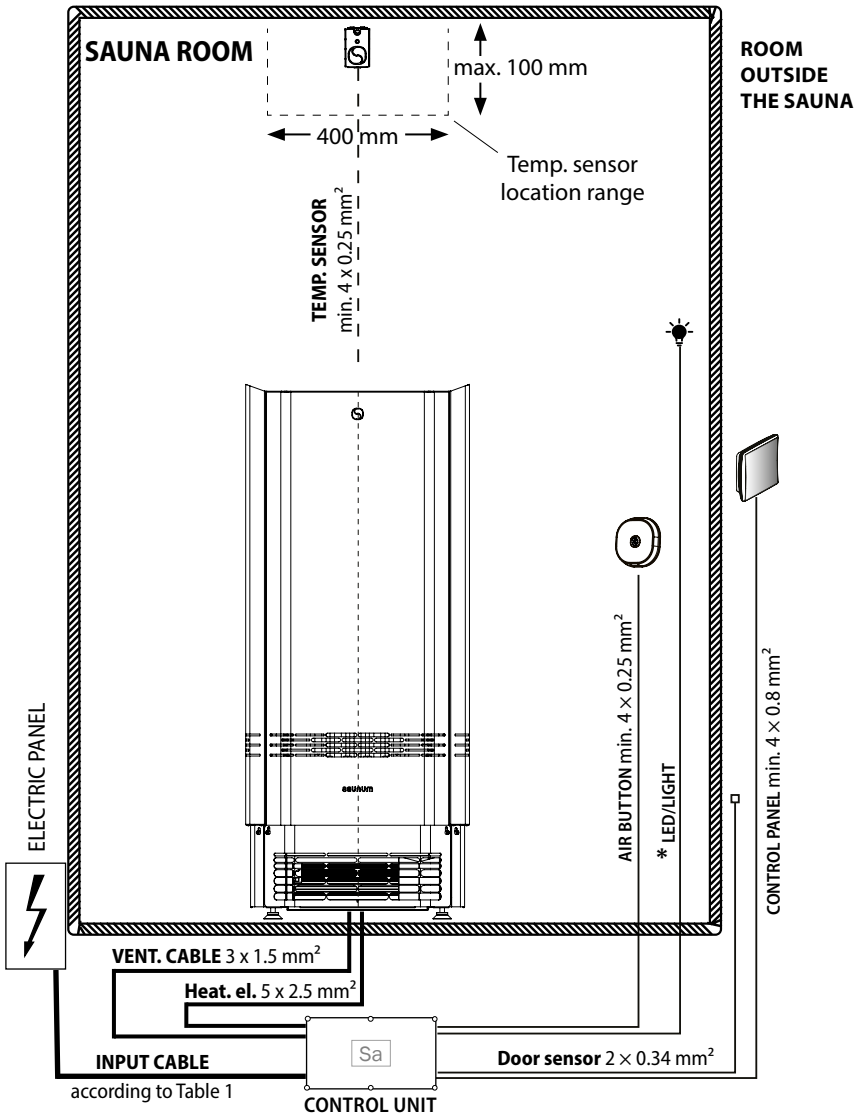


Figure 7



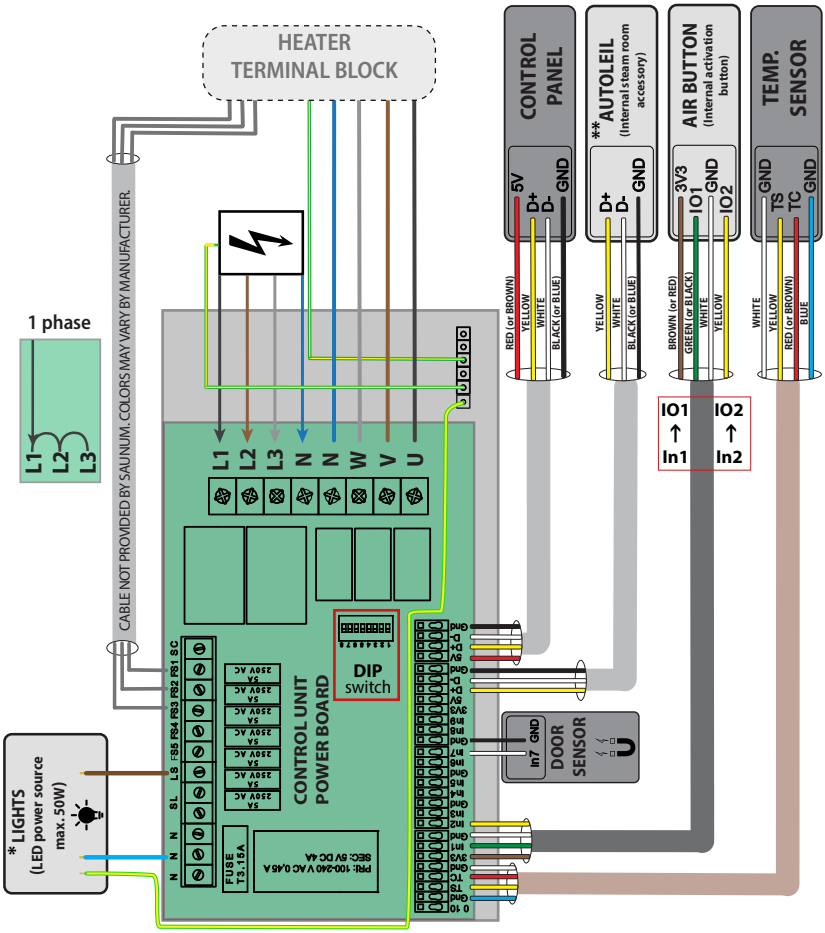
ELECTRICAL CONNECTION

CONTROL UNIT INSTALLED OUTSIDE THE HEATER



(DRY ROOM – VESTIBULE / CEILING / ELECTRICAL PANEL AREA)

CONNECTING TO THE CONTROL UNIT



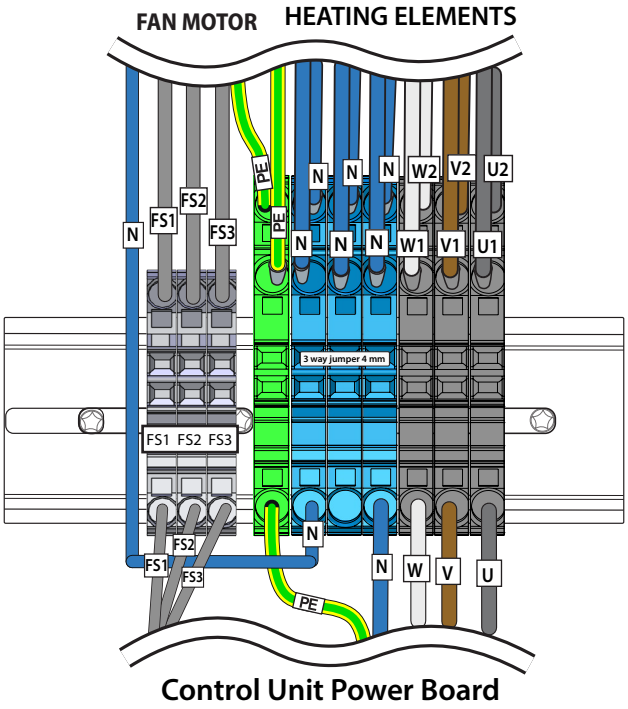
*** LED light power supply (max 50 W) must be equipped with an inrush current limiter. For incandescent light bulbs, the maximum permitted power is 500 W. For loads exceeding 50 W, the circuit must be used for switching purposes only.**

** AutoLeil are sold separately

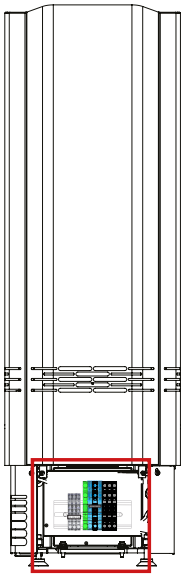
NB! Do not change the DIP switch factory settings unless permitted by Saunum's instructions.

NB! Heater neutral must match the control unit's incoming neutral in cross-section.

TERMINAL BLOCK



Neutral terminal: max. conductor cross-section 10 mm².

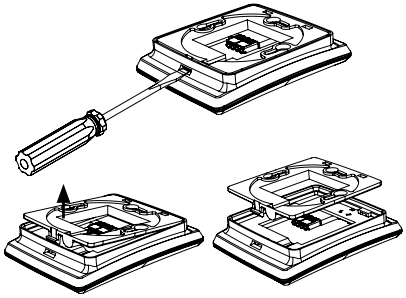


INSTALLING
THE CONTROL PANEL

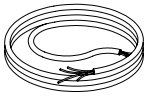
For concealed installation, the control panel can be mounted into a standard flush-mounted installation box (Ø 68 mm). If concealed installation is not possible, the control panel must be installed on the wall surface.

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

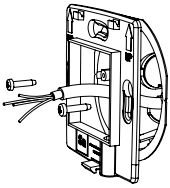
1. **Remove the wall mount from the control panel.**

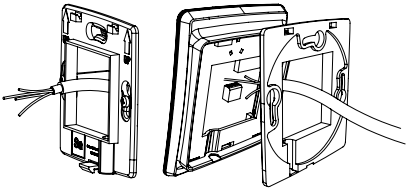


2. **Thread the data cable through the hole in the wall mount and fasten the wall mount to the wall with screws.**

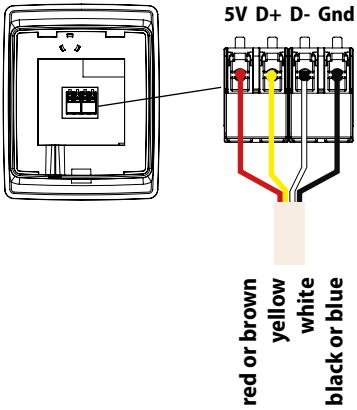


min 4 x 0,8 mm²

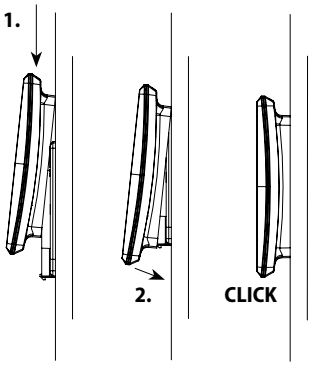




3. **Connect the data cable to the control panel connector.**



4. **Press the control panel into the wall mount.**



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.

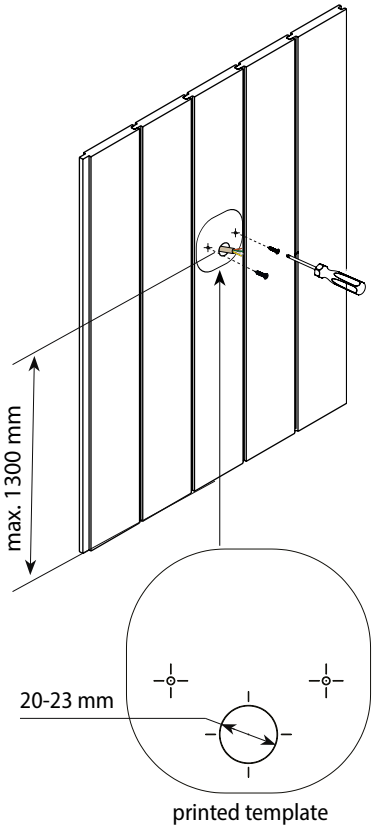
If the connection and installation cables are located higher than 1,000 mm from the sauna room floor or routed inside the walls, they must be rated to withstand temperatures of at least 125 °C (e.g. SSJ-type cables).

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.

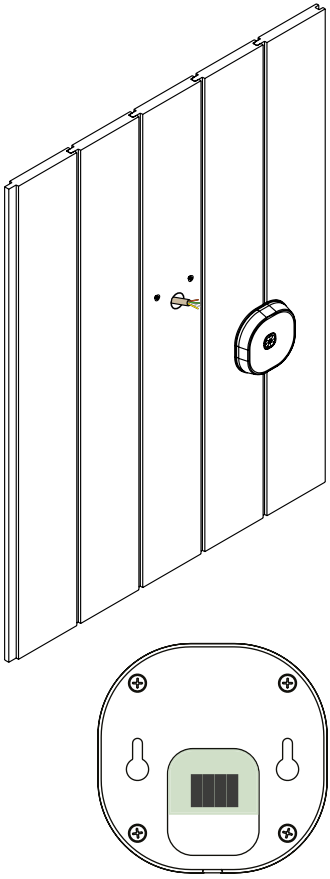
The Air Button is IPX2 rated and must be installed on a wall area protected from water splashes.

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.

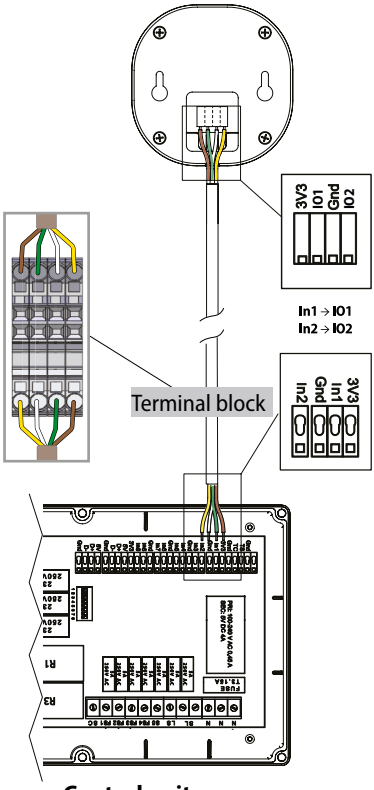


2. Install the screws, leaving the heads protruding 3–4 mm from the wall. Drill the cable opening through the wall and route the cable to the opening. Pull enough cable through to connect it to the button terminals.



3. Connect the wires to the button connector. Connect the wires to the control unit via the terminal block. 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.



Control unit

INSTALLING THE **DOOR SENSOR**

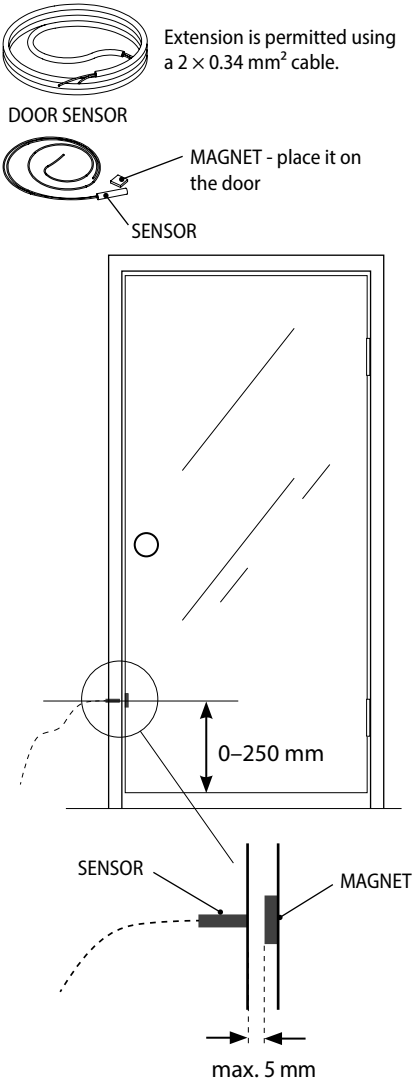
The door sensor is a magnetic switch that is attached to the door frame of the sauna room.

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 (extension cable (not provided)) 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



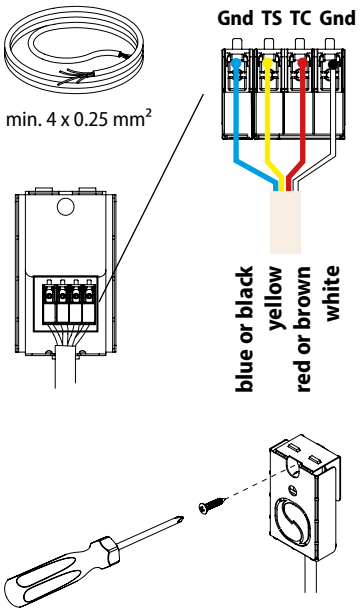
INSTALLING THE
TEMPERATURE SENSOR

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

- Connect the cable to the temperature sensor's plugs.
- Install the temperature sensor directly above the heater, as shown in the figure on pages 24 and 28.
- Position the sensor 50–100 mm below the ceiling.
- 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.
- **The sensor must remain unobstructed on all sides except the back.**

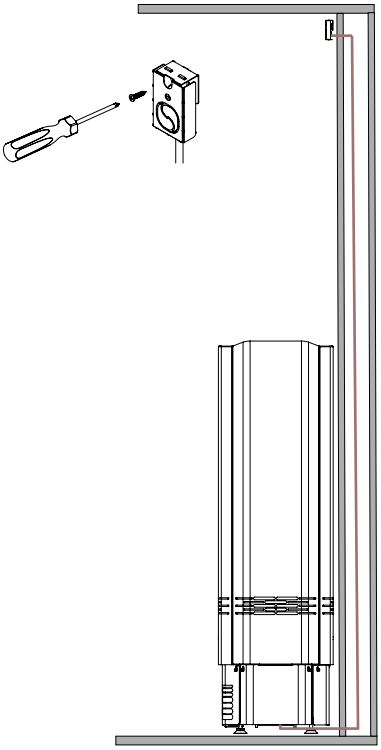
The airflow near an air vent cools down the sensor, giving the control unit inaccurate temperature readings.

As a result, the heater might overheat.



INSTALLING TEMPERATURE SENSOR:

1. For a more aesthetic finish, the cable can be routed inside the wall.
2. Unroll the temperature sensor cable and secure temperature sensor casing with a screw as shown in the figure below.

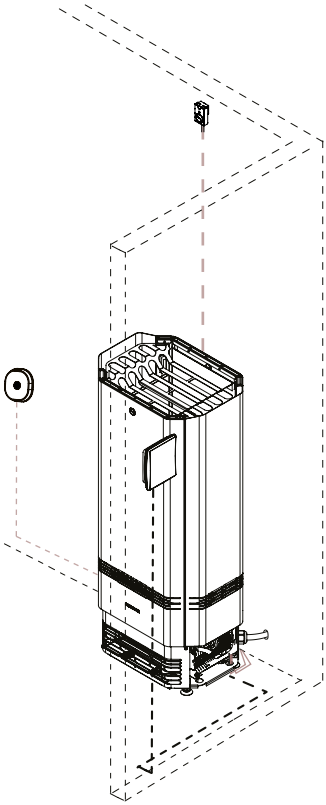


INSTALLING CONTROL PANEL:

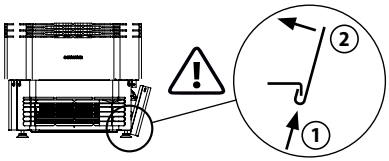
The control panel must be installed on the wall **outside of Sauna Room** (see p 31).

INSTALLING THE AIR BUTTON:

Install the Air Button inside the sauna room. (see p 32-33).

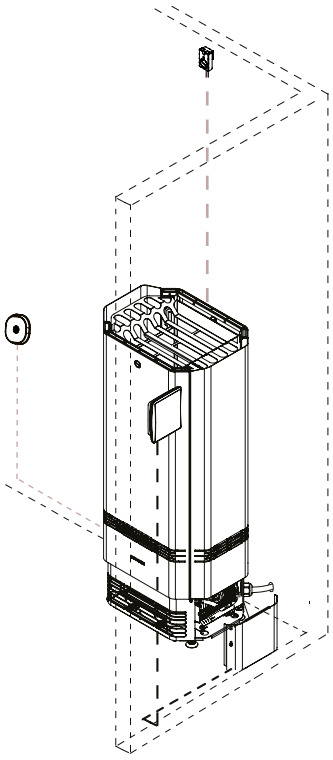


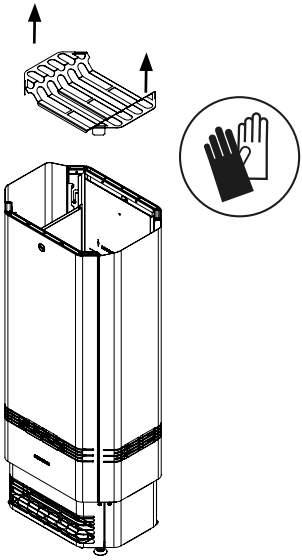
Place back the panel covering the electrical connection.



Fill the stone basket with stones like shown on **pages 38-40.**

BEFORE LOADING THE STONES REMOVE THE HEATING ELEMENTS PROTECTION PADDING FROM THE STONE BASKET AND MAKE SURE THAT THERE ARE NO EXTRANEOUS OBJECTS LEFT IN THE STONE BASKET!





LOADING
THE STONES

The amount of stones for the Saunum Air Perfect is approximately 60 kg.

Before loading, open the stone box and sort the stones by size.

Start stacking from the bottom section of the basket, using larger stones first. This helps to create air channels that improve hot air circulation around the heating elements.

Stacking stones has a great effect on the operation of the heater.

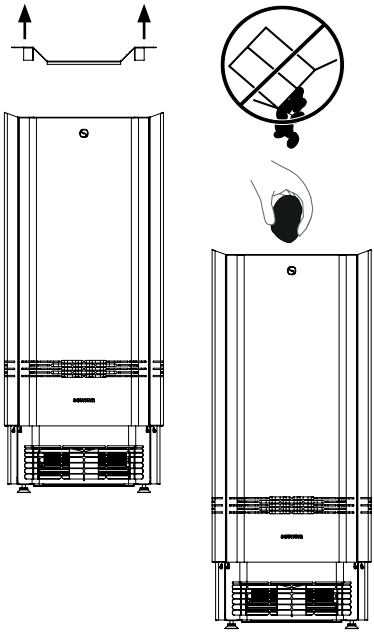
Important to know:

- The diameter of the stones must be 5–10 cm.
- Only stones sold for saunas are intended for use in the heaters.
- Do not use light, porous ceramic "stones", or soft tiles in the heater. They do not store enough heat when heated and can result in damage to the heating elements.
- Wash any dust off the stones before placing them in the heater.

NB! When using Saunum equipment, we always recommend doing so with high-quality polished sauna stones!

1. Install the heater in the sauna room, ensuring that all safety distances are met (**Table 1**, pp. 16–17, and Figures on pp. 18–20).
2. Remove the stone basket top grille by pulling it upward. Remove the protective padding from the heating elements.

Do not pour heater stones into a stone basket!

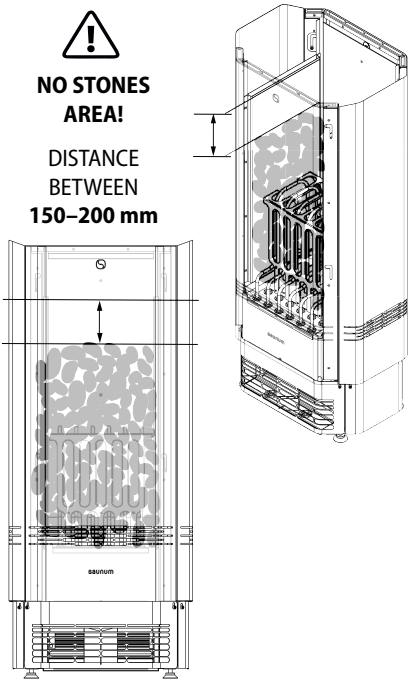


3. Fill the stone basket by hand with heater stones, leaving a clearance of approximately **150–200 mm** below the openings of the air ducts, as shown in the figure below.

Do not force the heater stones. Stack the heater stones so that air passes between them. Start by stacking larger stones.

NO STONES AREA!

DISTANCE BETWEEN **150–200 mm**



Do not drop any stone inside of the both side flue (Figure 8)!!!

If this happened the stones fall into the fan chamber and damage the fan!!!

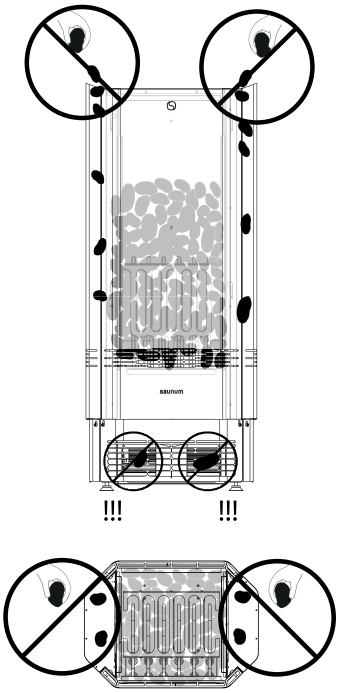


Figure 8

If heater stones have got into the fan, it is FORBIDDEN to start the fan of the device before the stones have been removed!!!

LOADING THE STONES

4. Place back the stone basket top grille and add 1-2 layers of stones so that air can pass through the top grille and stones freely (**Figure 9)**.

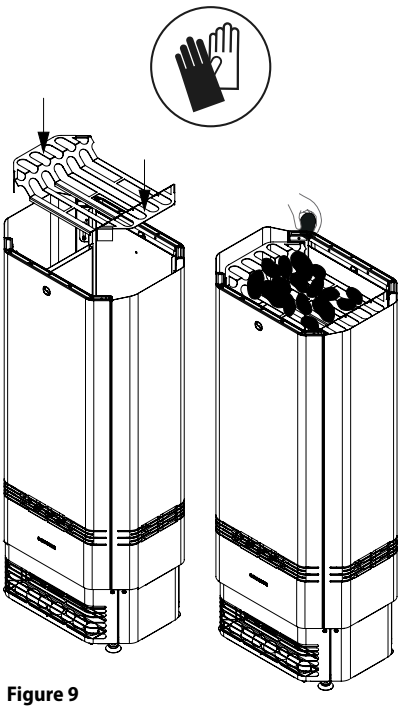
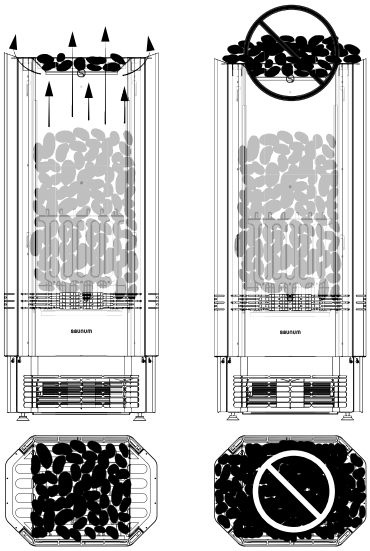
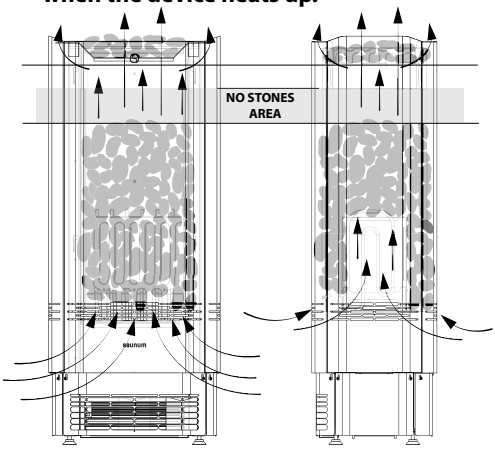


Figure 9



Working principle and explanation when the device heats up.



Front view Side view

USE OF
HIMALAYAN SALT

The sauna climate device 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 between the air outlet grille and the fan. Make sure that the salt spheres are correctly placed in their individual slots and do not obstruct the fan rotation.

To install or remove the salt spheres, unbolt the bottom front panel and place the salt spheres in their sockets.

When replacing old salt spheres, it is recommended to rinse the salt spheres tray.

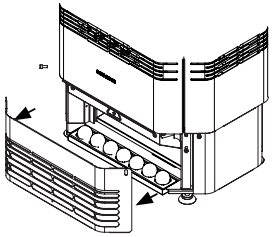
After installing or removing the salt spheres, reinstall the bottom front panel.

The sauna climate device may only be used with the front panel in place!

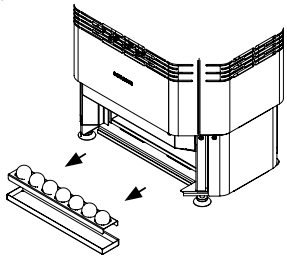
Do not use/start the device if the salt spheres get into the fan housing!

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

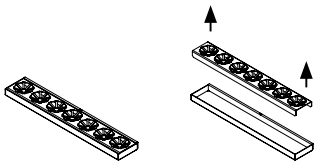
1.



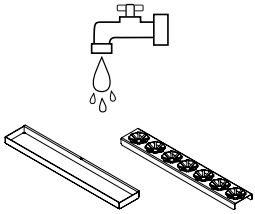
2.



3.



4.



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!
- Do not cover the device. A warning label shows this to prevent fire or injury.



- 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 device for the first time, make sure that:

- the AirIQ control unit and control panel are installed and the heater is properly loaded with stones;
- the electrical connections meet the requirements
- the supply voltage corresponds to the nominal ratings allowed for the device
- the protective earth (PE) is in working order;
- the over-current fuses are in working order
- the fan rotor rotates smoothly
- no tools or materials are left inside the housing after mounting the device.

When switching the heater on, check:

- airflow direction – air must be drawn in through the upper opening and discharged through the lower opening
- that there is no vibration or excessive noise when the fan is running.

When the device is switched on for the **first time**, the heating elements and the stones will emit an odor. The sauna room must be properly ventilated to remove the anticipated initial smell.

Presuming proper insulation of the room and that the power of the heater is suitable for the sauna size, it takes 45–90 minutes to reach the desired temperature.

The stones are usually heated to proper temperature for water usage 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 60–90°C.

USING THE SAUNA
CLIMATE DEVICE

The operating time of the climate device can be adjusted using the AirIQ control panel.

- Do not connect the device directly to mains power. Connection must be made through the control unit according to the wiring diagram.
- The heater 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 device.
- When switching the heater on or off, refer to the AirIQ user manual.

After using the sauna, make sure that the device is switched off.

Do not leave the fan of the sauna climate device running when you are not in the sauna room – this will cause an excessive energy consumption, and the sauna bench will become too hot!

ADJUSTING **THE TEMPERATURE**

During initial heat-up, the air-circulation fan must remain switched off.

This will allow the sauna room to heat up faster and the bench will not get too hot during the warming process. To find the right setting, start testing at the lowest temperature and lowest airflow rate. If the temperature becomes too high while in the sauna room, reduce the target temperature in the sauna room.

REGULATION OF THE **SAUNA CLIMATE**

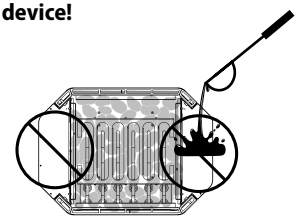
The airflow generated by the device is controlled via the touch control panel, where the desired fan speed can be selected (three speed levels available). The fan speed can be preset or adjusted once the target temperature has been reached.

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

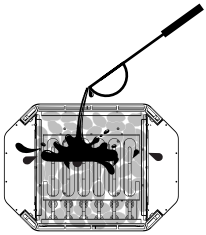
LADLING WATER **ON THE HEATER**

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 device, you will find the most suitable combination of temperature and humidity.

Do not pour water into the air flue or ventilation openings of the sauna climate device!



A small amount of water drops in the flue is normal and does not affect the operation of the device.



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.

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 applicable drinking 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 µS/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.

THE SAUNUM HEATER 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 device 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 climate device is switched off during sauna room heating.
- Make sure that the breakers and fuses of the heater are in working order.
- Increase the selected temperature on the control 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 fan speed of the climate device.

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.

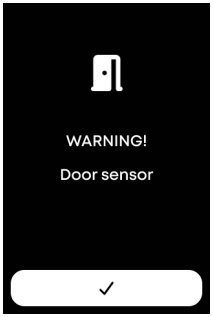
THE HEATER SMELLS.

- See section HEATING THE SAUNA ROOM (**page 43)**.
- 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 HEATER 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"



If the sauna door remains open for more than 20 seconds, the heater will stop heating. Once the door is closed, the heater will resume normal operation.

CONTROL PANEL MESSAGE "THERMAL CUTOFF"

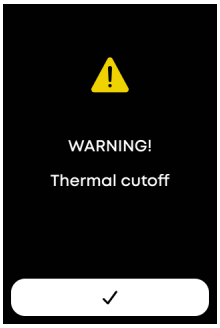


The sauna room or heater is critically overheated.

Let the room cool down about 10 minutes and push the reset button.

See how to do it on **page 48**.

CONTROL PANEL MESSAGE **"THERMAL CUTOFF"**

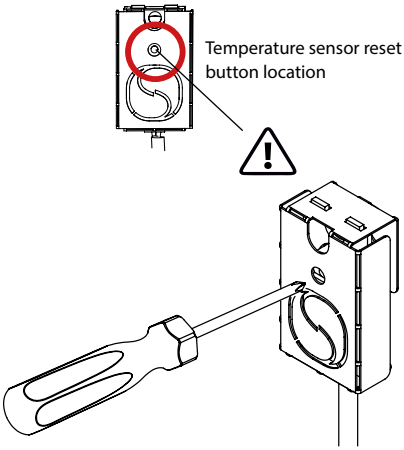


During a sauna session, the sauna room or the heater may overheat, activating the **thermal cutoff** for safety. In this case, heating stops automatically.

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 resume operation within **2 to 3 minutes**.

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

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

MAINTENANCE

Due to large temperature fluctuations, sauna stones gradually break down. They must be restacked at least once a year, and more frequently if the sauna is used often. When restacking the stones, remove stone fragments from the bottom of the heater and replace broken stones with new ones. Regular monitoring helps maintain optimal heating performance and reduces the risk of overheating.

If Himalayan salt spheres are used, inspect them at least once a year and replace any worn or damaged pieces as needed. Ensure that no salt fragments or foreign objects are present in the housing air vents or in the working area of the fan rotor.

CAUTION! Before maintenance or cleaning, the device must be completely disconnected from the mains supply, and all moving parts must have come to a full stop.

Before starting any service or cleaning work, make sure that:

- the device is fully disconnected from the mains (both via the power switch and over-current breaker or fuse);
- the fan has completely stopped;
- appropriate occupational safety and personal protective equipment is used;
- all connection cables are undamaged. If cables are damaged, they must be replaced by a qualified electrician in accordance with applicable standards before any further work is carried out.

The device housing may be cleaned with a cloth slightly dampened with water.

Do not use pressure washers, running water, chemical cleaners, or solvents.

To remove limescale, use a 10% citric acid solution, then rinse thoroughly with water.

Excessive dirt may impair fan performance and increase noise levels. Noise may also occur due to bent or damaged fan blades. Always ensure that no foreign objects or salt fragments are present in the fan rotor area.

Normally, the fan **does not** require cleaning more than once a year. The fan may only be cleaned by a person authorized by Saunum.

Do not use compressed air to clean the fan, as this can permanently damage the rotor. The fan bearings are maintenance-free and must be replaced if problems occur.

It is recommended to have all electrical connections of the device checked at least once a year by a suitably qualified professional.

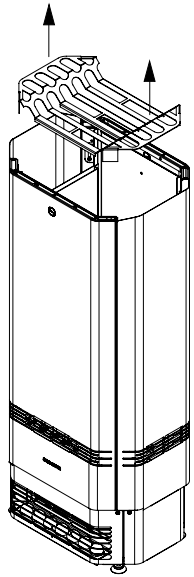
Contact a qualified sauna service specialist to perform maintenance. In the case of any disturbances in the operation of the Saunum Air Perfect, stop use of the device immediately and have the device inspected by a person authorized by Saunum.

INSTALLING AND REPLACING
THE HEATING ELEMENTS

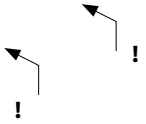
Before proceeding to replace the heating elements, make sure that the device is disconnected from the mains!

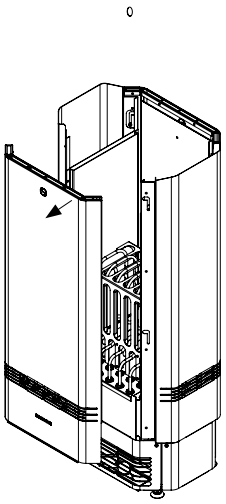
1. Remove the stones from the top grille, then remove the grille itself. After that, remove the stones from inside the heater.



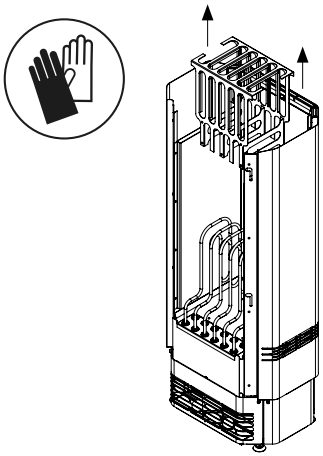


2. Remove the front panel by releasing (**DO NOT REMOVE**) the front panel bolts and pulling the front panel upwards.

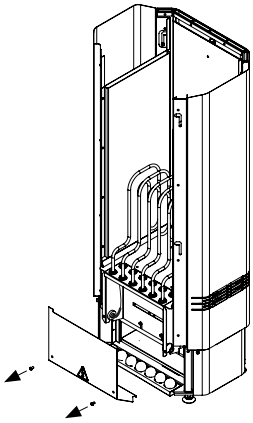




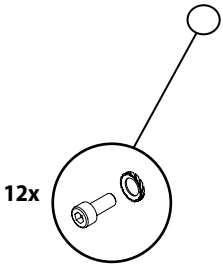
3. Remove the heating element air tunnel by pulling it upwards.



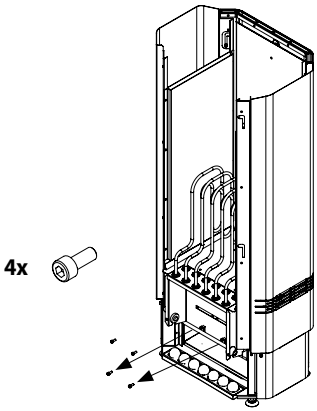
4. Undo the two bolts holding the bottom front panel and two bolts holding the panel covering access to the heating elements.



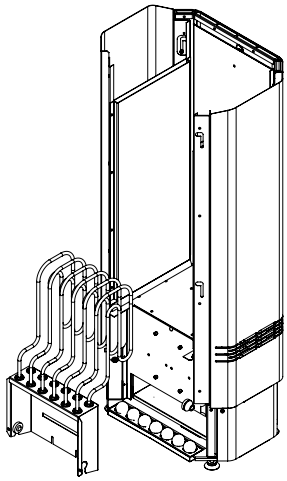
5. Release all the heating element cables (use M4 hexagon key)



6. Undo the bolts holding the heating element module in place.



7. Remove the heating element module.

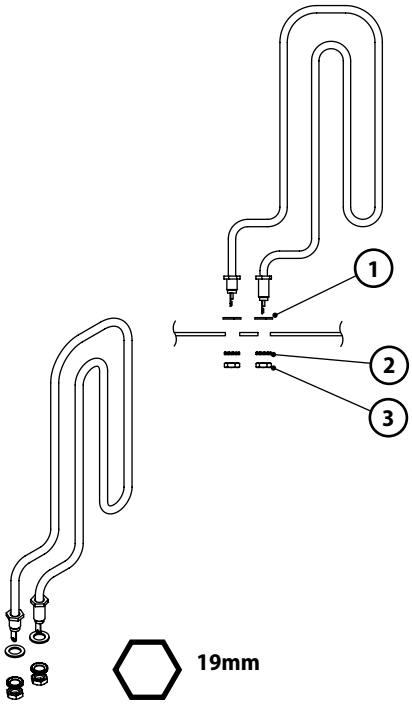


Each heating element is fixed with special gaskets ①, star-washers ② and nuts ③.
Use a 19 mm socket wrench to remove the nut.

8. Replace the heating element module and re-position all components in reverse order. Apply high-temperature thread grease (e.g. copper grease) to the bolts.

Note! If a single heating element is being replaced, ensure that the seal and the lock washer are also replaced together with the heating element.

Apply high-temperature thread grease (e.g. copper grease) to the heating element thread.



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 climate device when used in a private sauna is two (2) years.
4. The warranty period of the sauna climate device 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**

Date of purchase: _____ Date of installation: _____

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 available _____

There are no color defects or dents _____

Installed according to the instructions and required safety distances _____

The electrical connections are made according to the installation instructions _____

All the heating elements heat up _____

All three fan speeds operate in the correct order _____

Notes: _____

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

Work accepted: _____

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 device may only be connected to the power supply by a qualified electrician in accordance with the applicable regulations.

NOTES

PATENT REGISTRY

PCT/EP2023/070940
EP3167864
EP23749032.1
EP3167865
US12491131
US19505046
CA3222450
CA3299327
AU2023455694

CE

EC declaration of conformity

Manufacturer: Saunum Saunas OÜ
Address: Suur-Paala 19, 11415 Tallinn, Estonia

certifies that the product:

Sauna heater with climate device
Saunum Air Perfect

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 60 204-1 "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.