



saunum

Saunum Luxury Experience

heater with a sauna room indoor climate device



THE BEST SAUNA EXPERIENCE TO HAVE!

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 analysed 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 other 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 balls 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



Saunum Saunas OÜ
congratulates you
 on choosing a heater with
 an innovative sauna room
 indoor climate device!



CONTENTS

| | |
|---------------------------------------|----|
| Safety information _____ | 6 |
| INSTRUCTIONS FOR USE | |
| Heating the sauna room _____ | 8 |
| Using the sauna climate device _____ | 8 |
| Adjusting the temperature _____ | 9 |
| Regulation of the sauna climate _____ | 9 |
| Use of Himalayan salt balls _____ | 10 |
| Throwing water on the heater _____ | 11 |
| Loading the stones _____ | 11 |
| Warnings _____ | 12 |
| Solving problems _____ | 13 |
| Maintenance _____ | 15 |
| Sauna room _____ | 16 |
| Sauna room ventilation _____ | 16 |
| Power of the heater _____ | 17 |
| INSTALLING | |
| Safety distances _____ | 18 |
| Before the installation _____ | 19 |
| Dimensions _____ | 20 |
| Product completeness _____ | 21 |
| Installation instructions _____ | 22 |
| Electrical connections _____ | 26 |
| Power output configurations _____ | 29 |
| Insulation resistance _____ | 29 |
| Failure of a heating element _____ | 37 |
| Warranty _____ | 39 |
| Installation Report _____ | 41 |



SAFETY
INFORMATION

These instructions for installation and use are intended for the sauna owner or maintenance provider, as well as the electrician responsible for installing the heater with a sauna room indoor climate device. After installing the heater with an indoor climate device, the instructions must be handed over to the owner or maintenance provider. Before using the **Saunum Luxury Experience** heater with an indoor climate device (hereinafter 'sauna climate device'), read the installation and safety instructions. The sauna climate device is intended for heating the sauna room at 60–100 °C and for regulating the sauna room climate during steaming.

NB! The climate control unit and the heater of the sauna must not be operated in temperatures exceeding 100 °C!

NB! Do not use the sauna climate device for any other purposes!

NB! To connect the sauna climate device to the power network, a control device for the control of electric heaters is required. The control device must correspond to the power of the heater used according to Table 1.

The control device must have the ability to control the fan of the sauna climate device, and the function of simultaneously switching off the heater and the fan of the sauna climate device is recommended.

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.

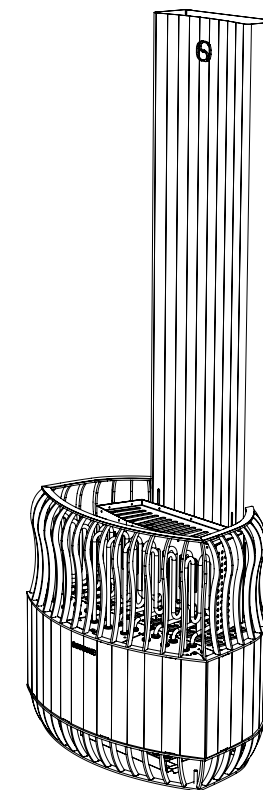


Table 1

| Device | Configuration | Power requirement | Power cable Main Braker to Control device | Power cable Control device to Heater | The minimum height of the ceiling | Cubic size of the sauna room m ³ |
|--------------------------|---------------|-------------------|---|--|-----------------------------------|---|
| Saunum Luxury Experience | 13.2 kW | 3 x 400 V 20 A | 5 x 4 mm ² | 5 x 4 mm ² SIHF | 215 cm | 14–18 m ³ |
| Saunum Luxury Experience | 16.6 kW | 3 x 400 V 25 A | 5 x 6 mm ² | Two cables, 5 x 4 mm ² SIHF | 215 cm | 18–22 m ³ |
| Saunum Luxury Experience | 19.8 kW | 3 x 400 V 30 A | 5 x 6 mm ² | Two cables, 5 x 4 mm ² SIHF | 215 cm | 22–28 m ³ |



HEATING THE SAUNA ROOM

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

- the electrical connections meet the requirements;
- the supply voltage corresponds to the nominal ratings allowed for the sauna climate device;
- the protective earth (PE) is in working order;
- the attachments of the sauna climate device housing are in order;
- the sauna climate device 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 climate device 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 climate device 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 to 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 experience is 65 ° to 80 °C.

USING THE SAUNA CLIMATE DEVICE

NB! Before switching the sauna climate device on, always make sure that nothing is above or near it.

The operating time of the sauna climate device model Saunum Luxury Experience may be adjusted by a separate control device.

- Do not connect the device directly to the mains!



REGULATION OF THE SAUNA CLIMATE

The amount of air circulation generated by the device is regulated by the same control unit that is used for heating control.

The airflow speed increases by adjusting it on the control unit you may choose between three different speeds..

- The sauna climate device 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 sauna climate device.
- When switching the sauna climate device on and off, refer to the instructions for the use of the control device you are using.

NB! After using the sauna, make sure that all parts of the sauna climate device are switched off (the heating and the fan have stopped).

ADJUSTING THE TEMPERATURE

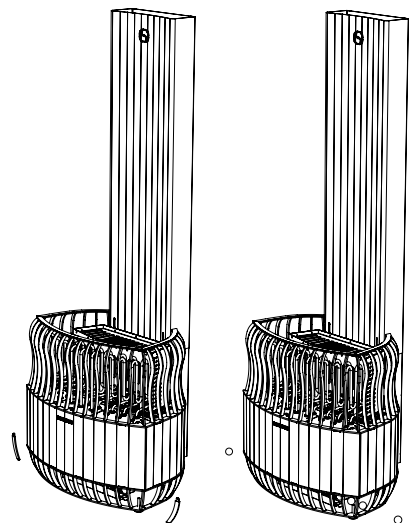
NB! It is recommended to keep the air circulation fan of the sauna climate device switched off during the heating of the sauna room! In this case, the sauna room heats up faster and the sauna bench does not get too hot during the heating. To find the right setting, start testing at the lowest temperature and lowest airflow rate. If the temperature becomes too high while in the sauna room, reduce the maximum temperature in the sauna room or the fan speed of the sauna climate device.



USE OF HIMALAYAN SALT BALLS

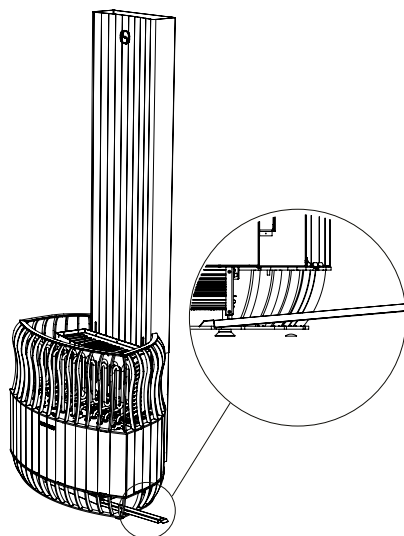
The sauna climate device comes with Himalayan salt balls. The use of salt balls in the device is optional and does not affect the main function of the device.

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



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

A detachable gutter which captures the dissolved particles of the salt balls is located underneath the salt ball sockets. When replacing old salt balls, 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 balls get into the fan housing!

NB! The use of third-party salt balls is not covered by the device warranty.



THROWING 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 sauna climate device, you will find the most suitable combination of temperature and humidity. The effects of heat and steam on people are different. When testing the different settings of the SAUNUM climate device, 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 thrown onto the heater must meet the requirements for clean domestic water. Only fragrances specially designed for a sauna may be used in the water. Saunum recommends Saunum sauna oil kit, which composes of a small bowl with oil that is placed in the same socket as the salt balls. This way the fragrances are not

burnt on the heated rocks, but instead are dispersed in the room by means of Saunum fan spreading the fragrance evenly in the sauna.

Follow the instructions on the package.

NB! Do not pour water into the ventilation openings of the sauna climate device!!

LOADING THE STONES

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 & 10–15 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 Luxury Experience, we recommend using high-quality crushed sauna stones.



When loading the stones, note:

- Use different size of stones to tightly pack the stones on the outer layer of the heater. Heating elements should not be openly visible.

NB! Direct radiating heat from the elements may be cause a fire hazard.

- Stones between the elements should be placed loosely, that achieves better airflow and cooling of the heating elements.
- Do not allow the stones to fall into the heater.
- Do not force the stones between the heating elements.
- Do not stack the stones on the heater.
- Do not place objects in the vicinity of the stone area or the fan of the sauna climate device that may change the amount or direction of the air flowing through the sauna climate device.

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!
- Do not allow children, disabled or sick people into the sauna room without supervision!
- Consult a doctor about medical contraindications to steam!
- Consult a doctor about medical contraindications to salt treatment!
- Make sure you are not allergic to salt treatment. Saunum is not responsible for the side effects of salt treatment!
- Consult a pediatrician or family doctor about the presence of children in the sauna room!
- Be careful when moving in the sauna and sauna room, as the bench and the floor may be slippery!
- Do not go to the sauna under the influence of alcohol, drugs, or narcotics!
- Do not sleep in the hot sauna room!
- Sea air and humid climates may cause an oxide layer (rust) on the metal surfaces of the heater!



SOLVING PROBLEMS

NB! Contact a qualified service specialist to perform maintenance. In the case of any disturbances in the operation of the sauna climate device, the use of the device must be stopped immediately, and the device must be inspected by a person authorised by Saunum.

THE SAUNA CLIMATE DEVICE DOES NOT HEAT OR BLOW AIR.

- Make sure that the heater fuses are in working order.
- Make sure the connection cable is connected.
- Make sure that the sauna climate device is switched on.
- Increase the maximum temperature in the sauna room.

THE SAUNA ROOM HEATS UP SLOWLY. THE WATER THROWN ON THE STONES COOLS THEM DOWN QUICKLY.

- Make sure that the air circulation fan of the sauna climate device is switched off during the heating.
- Make sure that the fuses of the sauna climate device are in working order.
- Make sure that all heating elements are hot (smouldering) when the sauna climate device is operating.

- Make sure you have proper ventilation in the sauna room. Saunum is not responsible for possible salt corrosion of equipment and machinery. If necessary, consult a specialist!
- Do not hang towels and clothes to dry in the sauna room – this may cause a fire hazard!
- Excessive moisture may damage the electrical equipment!
- There must be no obstructions closer than 50 cm in front of the fan opening!
- Sauna users must not keep their feet or other body parts closer than 50 cm in front of the fan!
- Do not cover. Symbol and text sign to prevent accidents resulting in injuries or damage from covering equipment which could lead to fire.

Please note. The electric heater requires a control unit and stones.

NB! 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!



- Increase the selected temperature on the control device.
- Make sure that the power 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 of the heater is not too high. If the power of the heater is suitable for the sauna room, it takes 45 to 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 sauna climate device fan.

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

- Observe the safety distance requirements.

- Check the stones. Stones that are placed too tightly, stones falling down/sinking closer over time, or the wrong type of stone may interfere with the air flow through the heater and cause the surrounding materials to overheat.
- Make sure that no heating elements are visible between the stones. If the heating elements are visible, lift the cooled stones so that the heating elements are completely covered.

NB! Too sparsely placed stones allow the heating elements to overheat and worsen the indoor climate of the sauna room. It may cause a fire hazard!

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

This process may be accelerated by:

- sunlight;
- heat from 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 8.
- A hot heater may amplify odours mixed with air, but this, however, is not caused by the sauna nor the heater. Causes include paint, glue, oil, spices, etc.



THE SAUNA CLIMATE DEVICE 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.

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 balls with the sauna climate device, it is recommended to inspect the salt balls once a year and, if

necessary, replace worn and broken balls with new ones. Make sure that there are no foreign objects in the fan air vents of the sauna climate device.

CAUTION! Before maintaining and cleaning the sauna climate device, the device power supply must be disconnected from the mains, and the moving parts of the unit must completely stop.

Before servicing and cleaning the sauna climate device, make sure that:

- the sauna climate device is disconnected from the mains by disconnecting the main switch of the controller unit;
- 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 rotor from operating correctly, causing an increase in noise when operating the sauna climate device. Noise may also increase due to damage/bending of the fan blades. Make sure that there are no foreign objects or salt balls in the working area of the fan rotor.

Generally, the fan does not need to be cleaned more than once a year. **The fan may only be cleaned by a person authorised by Saunum.**

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 sauna climate device at least once a year. This can be done by a suitably qualified person.

SAUNA ROOM

A prerequisite for the installation of the sauna climate device is a properly prepared sauna room. The thermal insulation of walls and ceilings must be appropriate, otherwise it will take too much time and energy to heat the room. The power supply cables

for the heater and the fan must be indicated on the electrical connection board in accordance with Table 1 (see pages 6–7).

SAUNA ROOM VENTILATION

Saunum climate device does not replace proper ventilation and fresh air in the room is still needed. The air in the sauna room should be exchanged 3–6 times an hour.

When using mechanical air extraction, place the air supply above the sauna climate device. When using natural air extraction, place the air supply under or next to the sauna climate device. The air supply pipe must have a diameter of 80 to 100 mm.

Install the air outlet near the floor, as far as possible from the sauna climate device. The diameter of the air extraction pipe must be twice the diameter of the air supply pipe. If the air outlet is in the washroom, there must be a gap of at least 100 mm under the sauna room door.

Exhaust ventilation in the sauna room is mandatory.

The venting hole for drying (optional) must be installed in the ceiling near the wall opposite to the sauna climate device (closed during heating and sauna). The



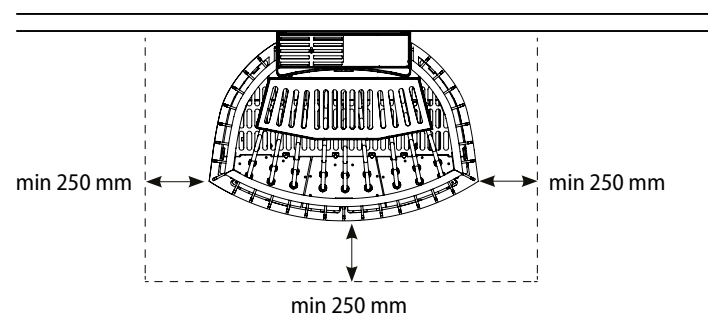
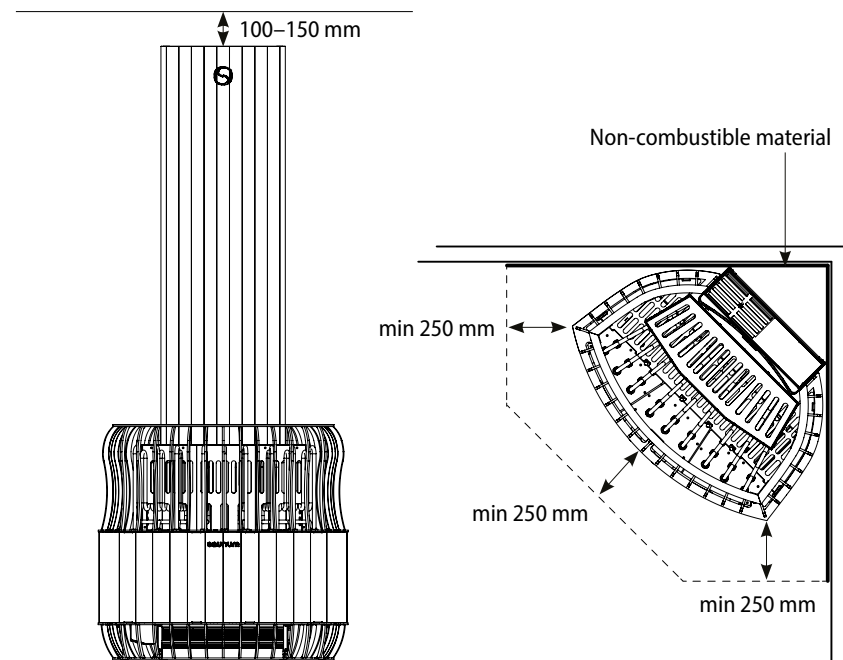
sauna can also be dried by leaving the door open after using the sauna. The sauna ventilation system should preferably prevent the sauna exhaust air from entering other rooms, especially when using the sauna climate device with salt balls.

POWER OF THE HEATER

If there is sufficient insulation behind the wall and ceiling covering, the power of the heater is determined by the volume of the sauna room. Non-insulated walls (brick, glass block, glass, concrete, floor tiles, etc.) need a more powerful heater. Add 1.2 m³ to the volume of the sauna room for each square metre of uninsulated wall.

For example, a 10 m³ sauna room with a glass door corresponds to the capacity requirement of a 12 m³ sauna room. If the sauna room has log walls, multiply the volume by 1.5. The optimal sauna room sizes for the sauna climate device Saunum Luxury Experience are given in **Table 1** (see pages 6–7).

The height of the sauna room is usually 215 to 230 cm.



BEFORE THE INSTALLATION

The installation of the sauna climate device must be performed by a qualified electrician. The connection of the device must be performed in a stable location with a cable that meets the temperature conditions. Protective earthing (PE) must be connected to the connection terminal of the device, with the cross-sectional area of the cable being at least 2.5 mm². The device must be powered from the control device's supply circuit, which is protected by over-current fuses. The required over-current fuses sizes and the connection cables dimensions are given in Table 1 (see pages 6–7).

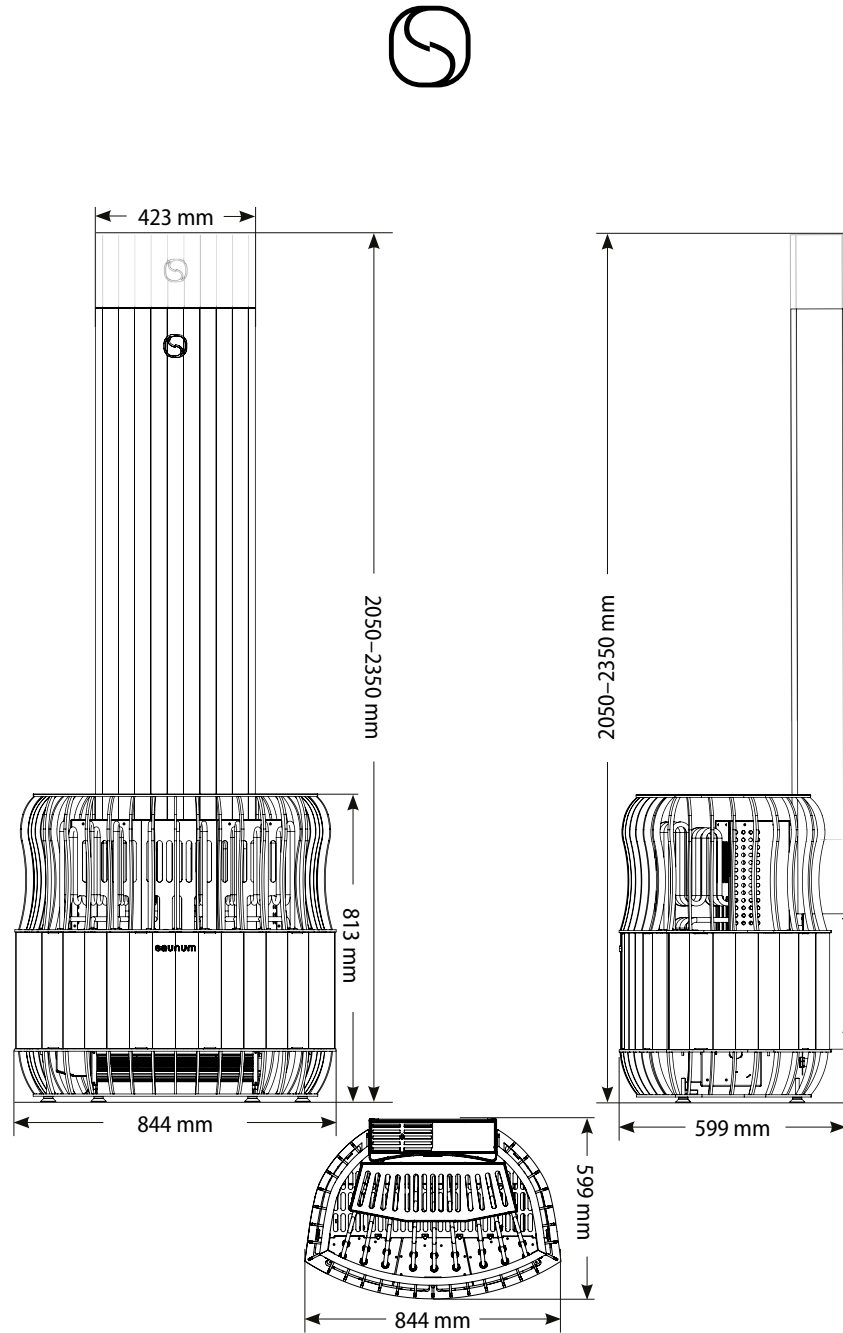
All the certified sauna control devices with the operating capacity corresponding to the capacity of the Saunum Luxury Experience model used in accordance with Table 1 (see pages 6–7) may be used to control the sauna climate control device.

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

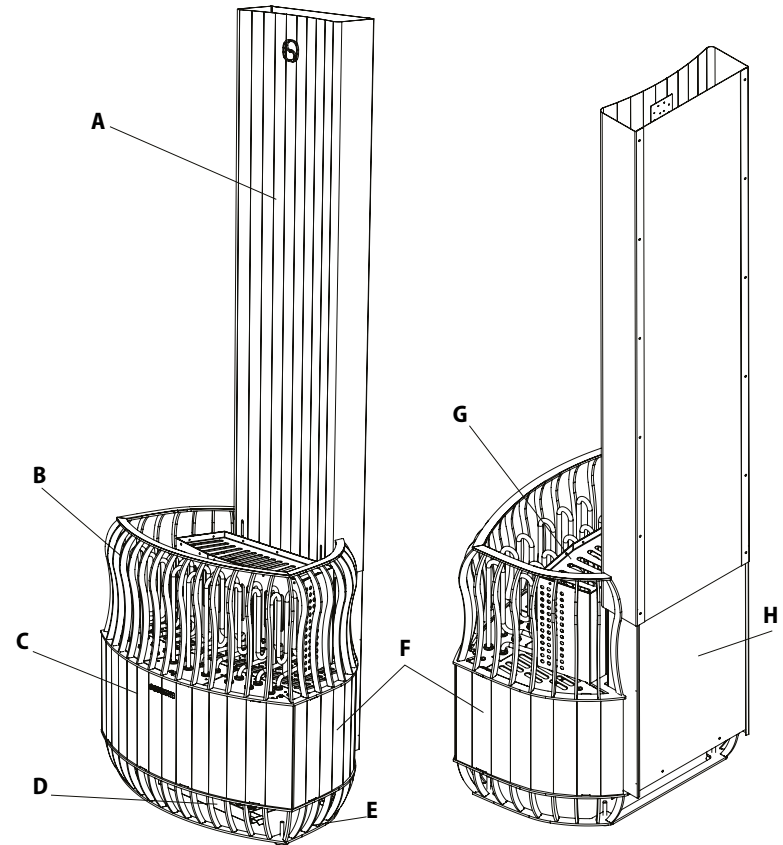
- The power and type of the heater are suitable for the given sauna room. The recommended sauna room volume is given in Table 1 (see pages 6–7).
- The supply voltage is suitable for the sauna climate device.

- At the installation site of the sauna climate device, the minimum safety distances given in Table 1 (see pages 6–7), measured from the heater housing, are guaranteed.
- The dimensions of the device are shown on page 20.
- 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 is a gap between the flue top and the ceiling (see figure 2) 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. Only one sauna climate device may be installed in the sauna room.





PRODUCT COMPLETENESS

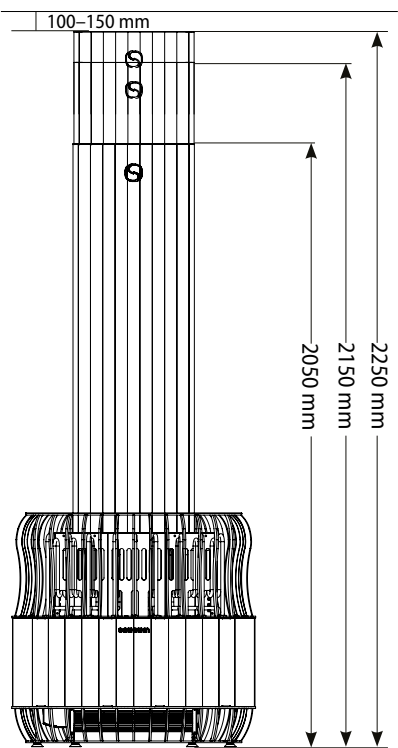


- A - Flue
- B - Stone basket
- C - Front panel covering the electronics
- D - Salt ball tray
- E - Bottom grille
- F - Side panels
- G - Heating element tunnel
- H - Flue bottom mount

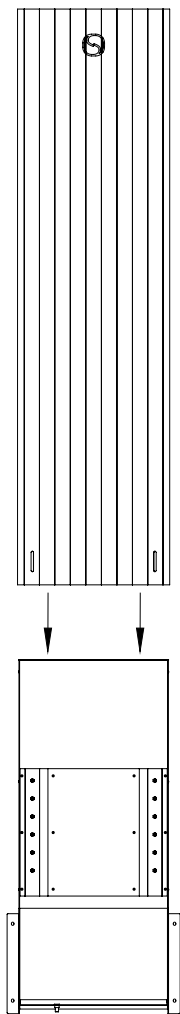


INSTALLATION

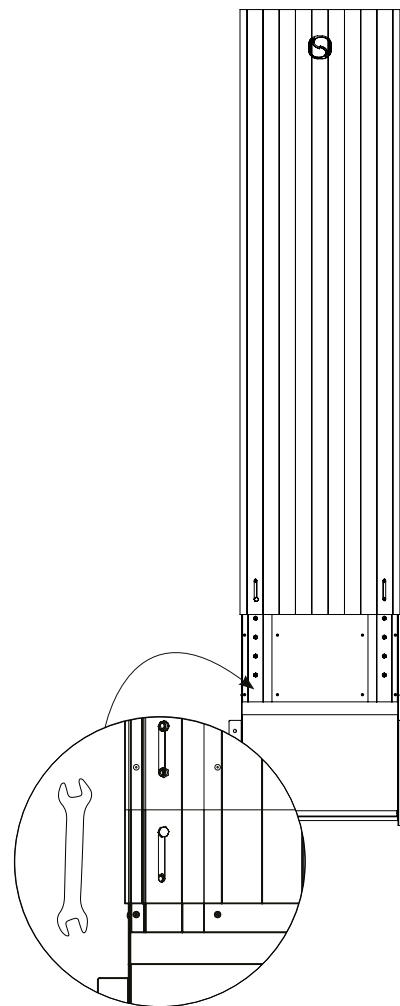
1. There are six positions (50 mm step) to install the flue. The top of the flue must be 100 to 150 mm from the ceiling. In order to determine correct position, measure the height of the ceiling and use follow the drawing to determine the correct position. For example, the top of the flue is 2050 mm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



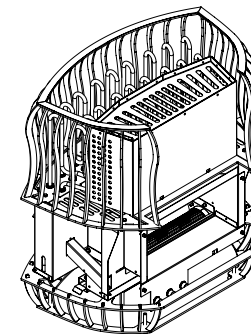
2. Slide the flue on to the flue mount.



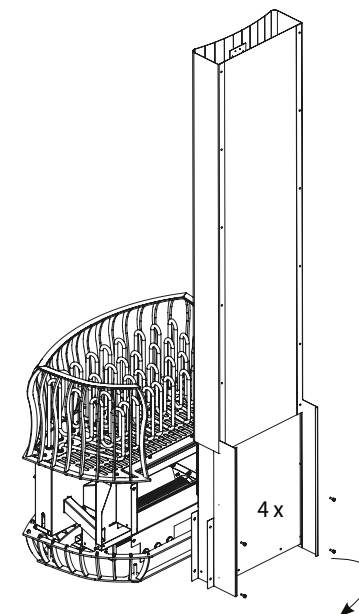
3. Fix the flue to previously determined position using two bolts and the slots in the bottom mount.



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

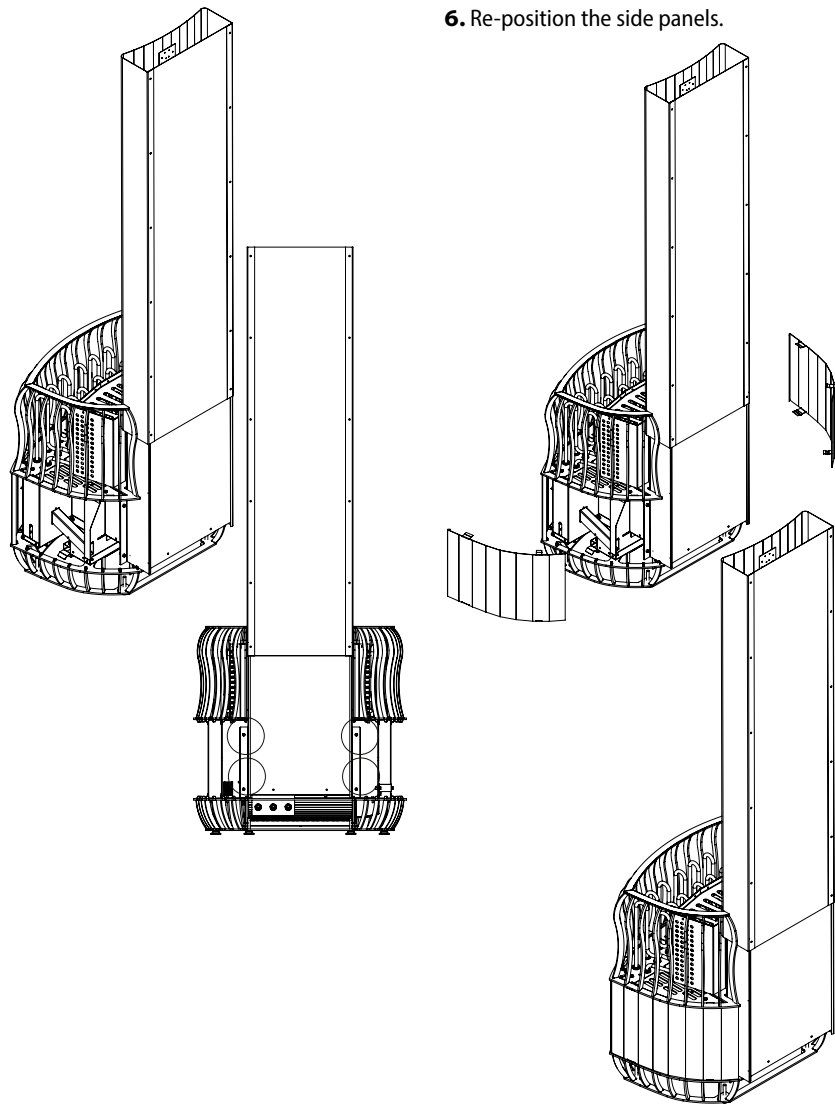


5. Fix the flue assembly to the main frame using 4 bolts included in the set.



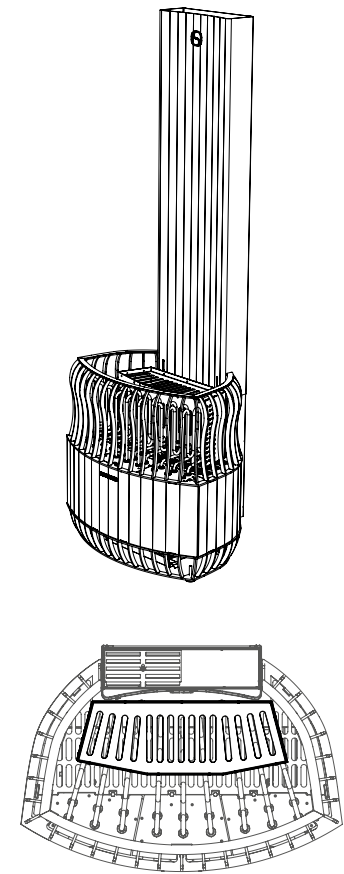
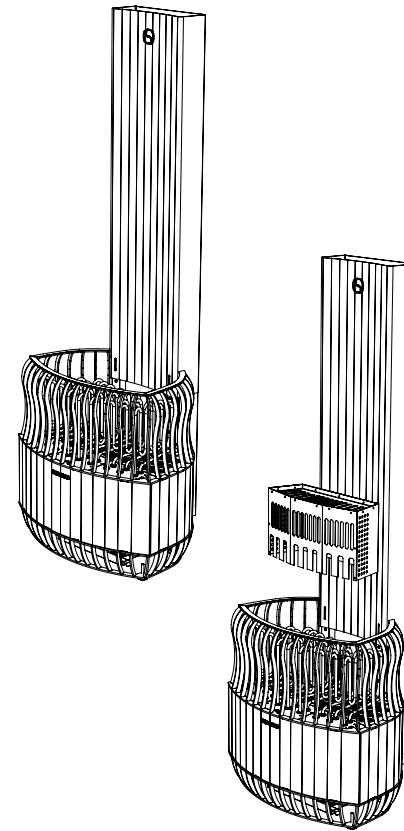


6. Re-position the side panels.



7. Install the salt balls (see USE OF HIMALAYAN SALT BALLS).

8. 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.



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



ELECTRICAL CONNECTIONS

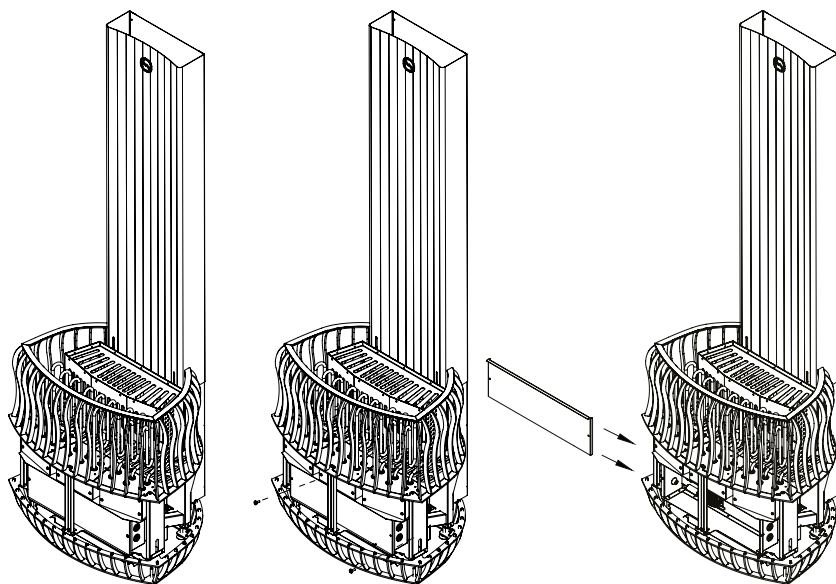
Connect the sauna climate device to the control device. Power of the heater is configurable on site according to the sauna

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

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

To access the electrical connections you need to first remove the front panel by pulling it toward yourself.

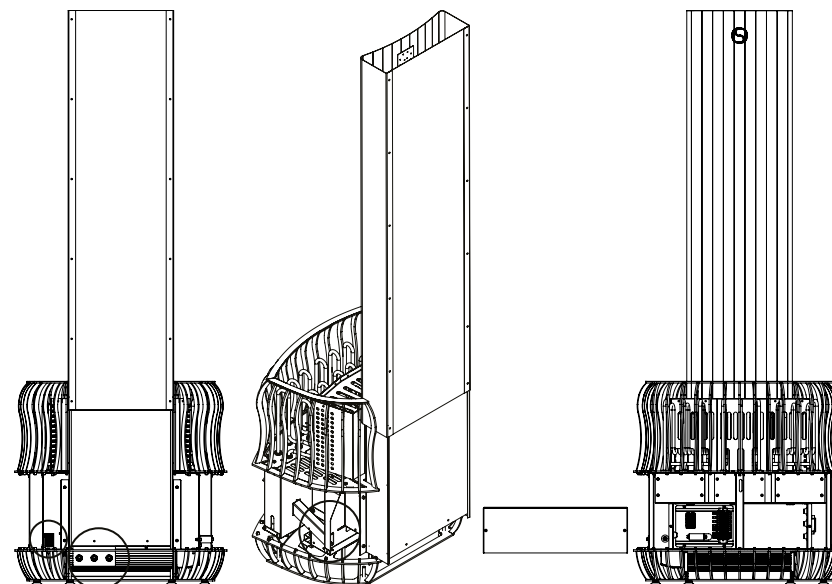
Then remove the panel that covers the electrical connections. It is fixed to the heater with two bolts. Undo the bolts, pull the panel slightly towards yourself and slide it out. See the illustrations for more info.



Now bring the power cable to the connectors. First, insert the cables through the cable glands which are located in the rear bottom part of the heater (see illustrations below).

Then pull the cables through the diagonal chute.

Once the cables are pulled through the chute, you can connect them to the connectors according to the schematics on pages 30–36.





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

- The internal connections of the device are made by means of screw terminals according to electrical schematic (see pages 30–36) and Table 1 (see pages 6–7) in this manual.
- Protective earthing (PE) must be connected to the connection terminal of the device.
- The heater must be powered from the 380 VAC (3-phase) 50/60 Hz supply circuit through a control device.
- The power cable must enter the housing of the sauna climate device so that the water does not flow along the cable into the electrical connection box of the housing of the sauna climate device. 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 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 6–7).

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



POWER OUTPUT CONFIGURATIONS

The heater can be configured in three distinct ways, enabling output power options of 13.2 kW, 16.6 kW or 19.8 kW. The configurations can be changed by means of changing jumper pin positions (provided in Luxury Experience kit) and power cables.

- 13.2 kW heater is supplied with a single 5 x 4 mm² power cable and requires that two additional jumper pins are connected to the connector.
- 6.6 kW heater is supplied with two 5 x 4mm² power cables. The jumper pins come preconfigured from the factory to deliver an output power of 16.6 kW.
- 19.8 kW heater is supplied with a two 5 x 4 mm² power cables and requires that two additional jumper pins are connected to the connector.

By default the heater jumper pins are configured to 16.6 kW.

INSULATION RESISTANCE

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

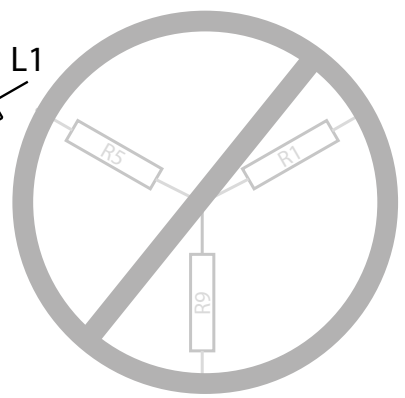
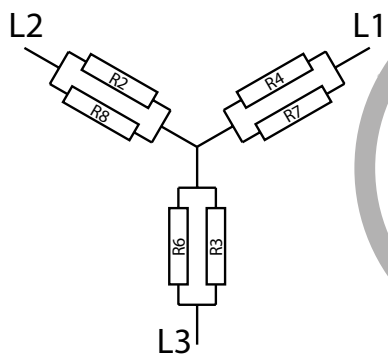
NB! Do not connect the control device to the mains via a residual-current device!



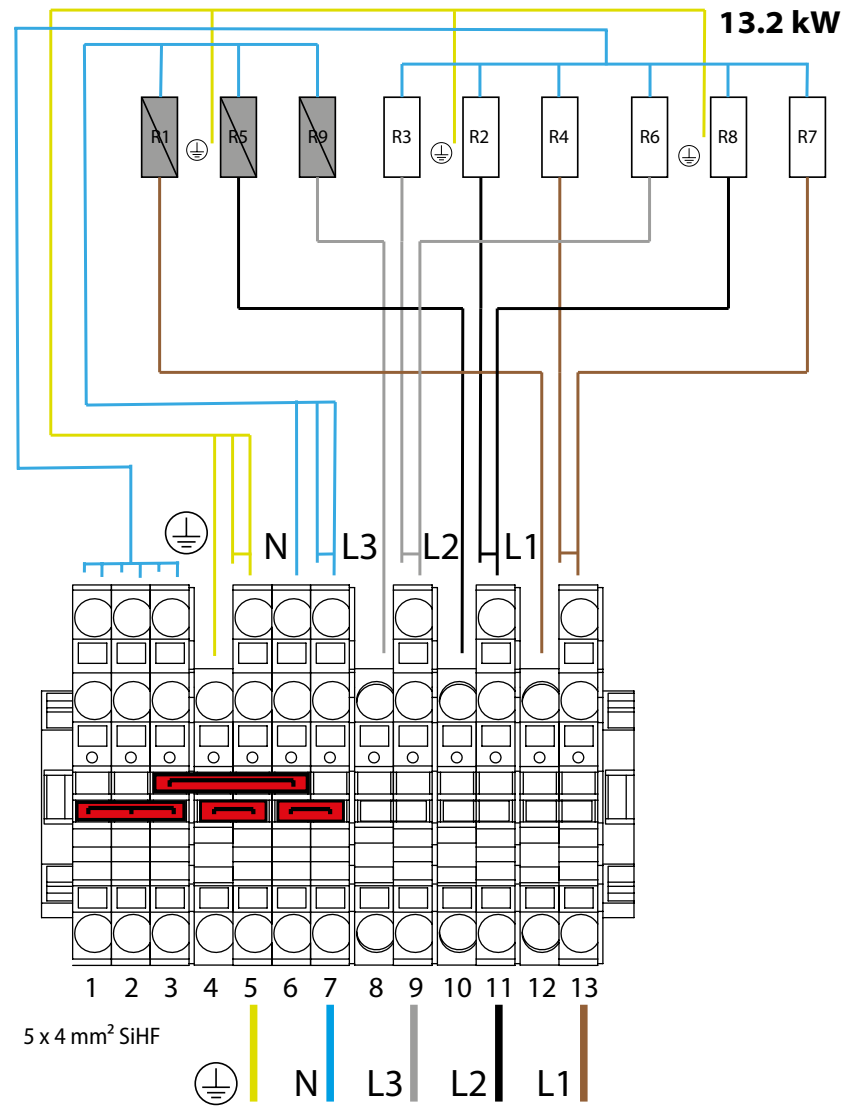
13.2kW

Group 1: 6 x 2200 W

Group 2: Disabled



* For the 12 kW configuration Group 2 (elements 1, 5 and 9) is disabled. It is possible to use them to substitute when Group 1 element has failed. Detailed instructions can be found in the maintenance part of the manual.



13.2 kW

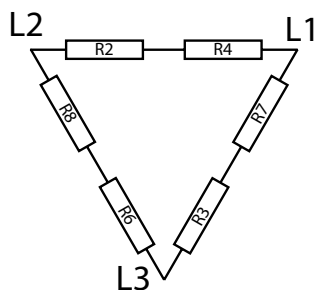
5 x 4 mm² SiHF



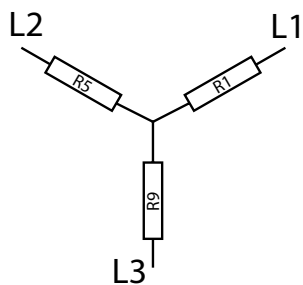


16.6 kW

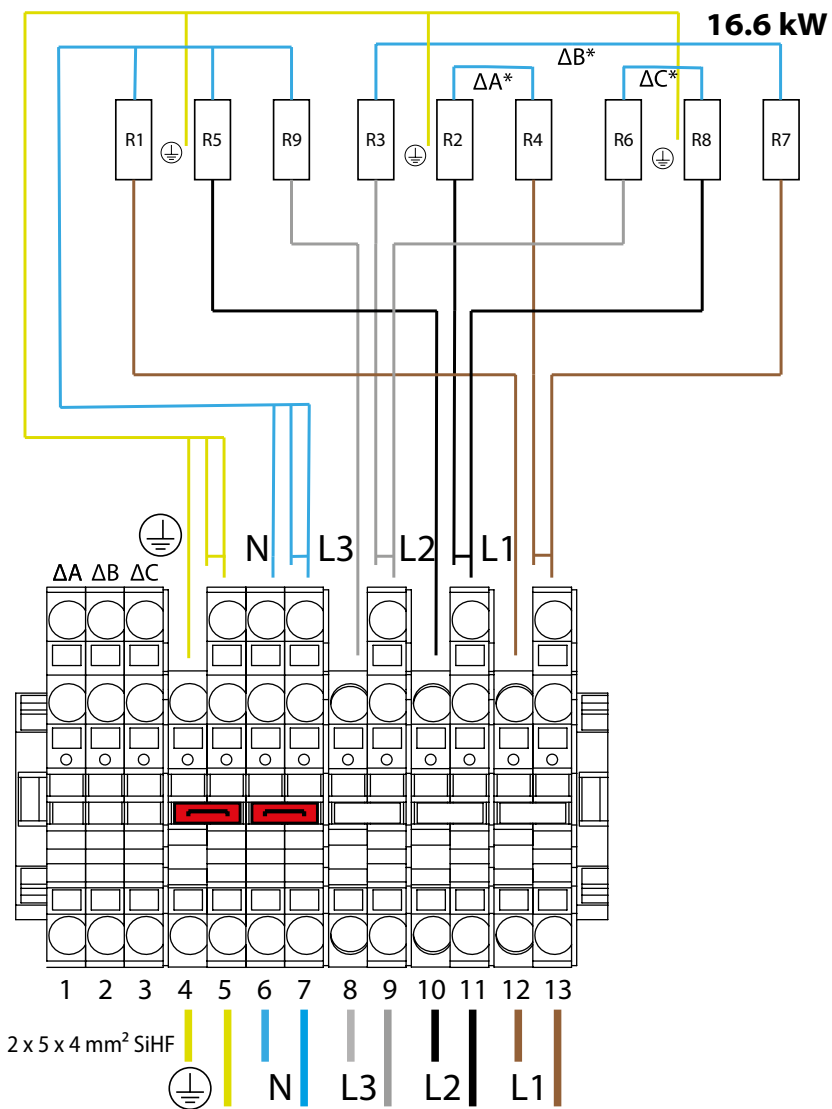
Group 1: 6 x 1660 W



Group 2: 3 x 2200 W



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.

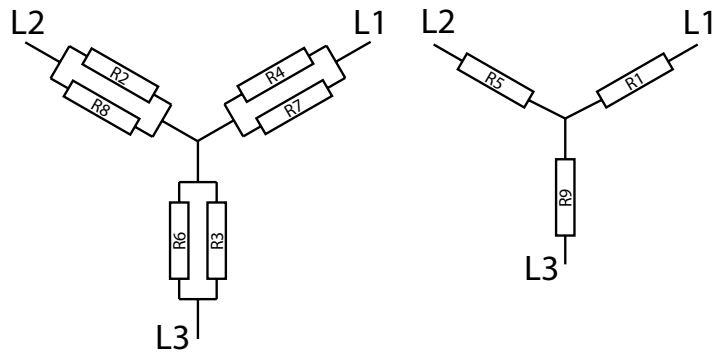




19.8 kW

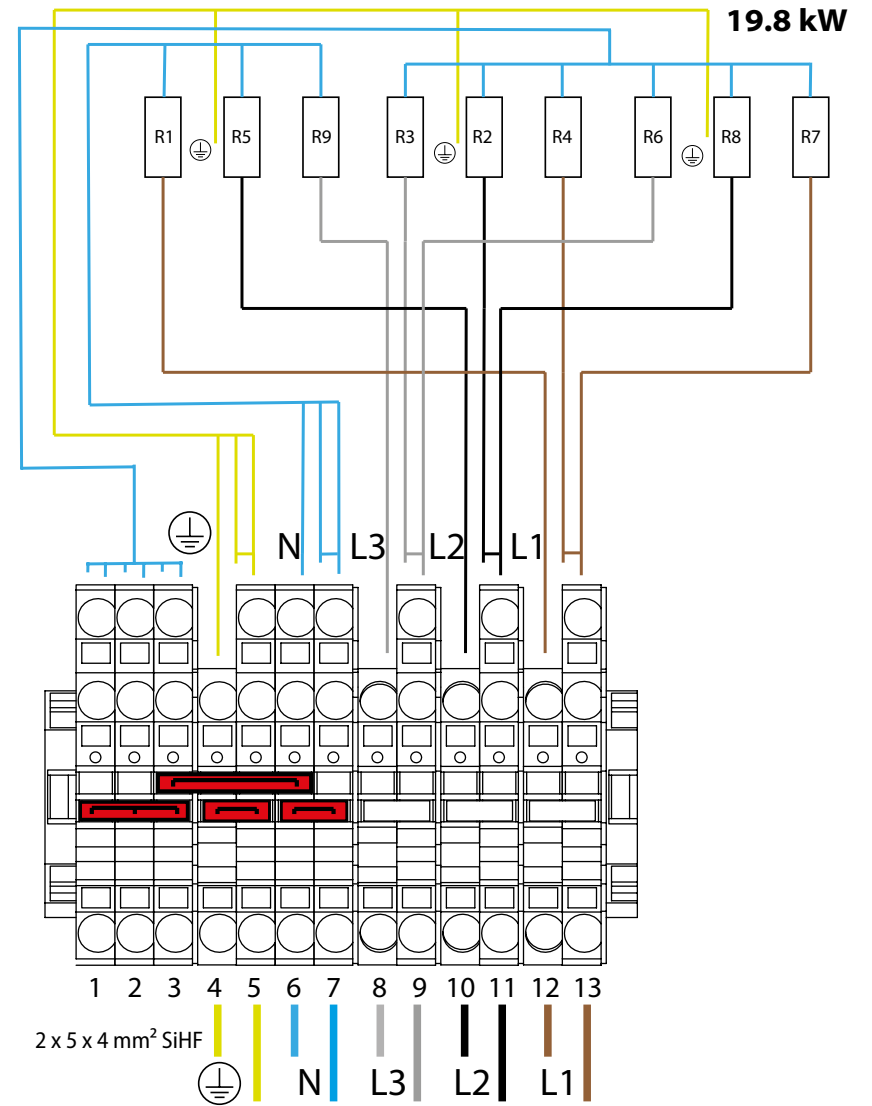
Group 1: 6 x 2200 W

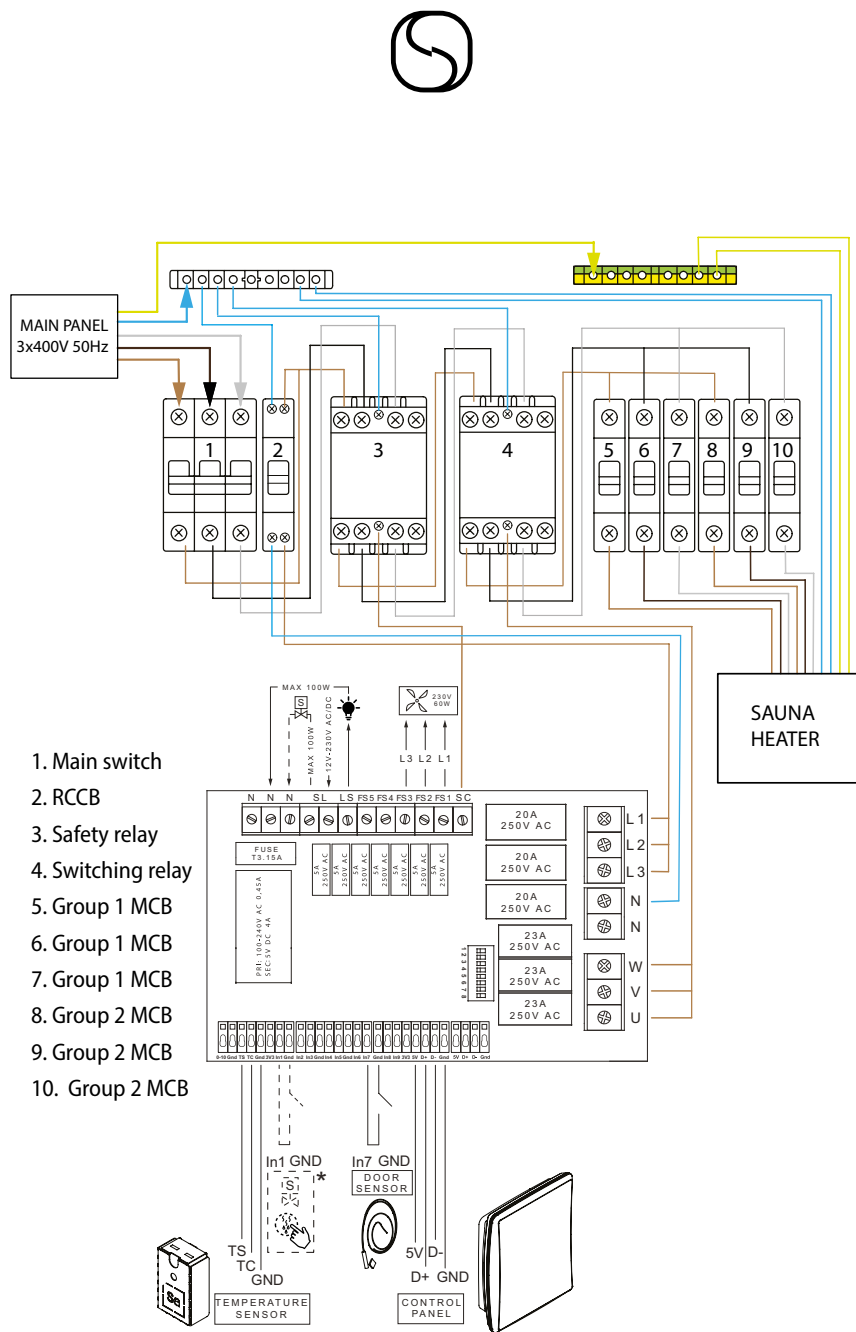
Group 2: 3 x 2200 W



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.





FAILURE OF A HEATING ELEMENT

The heater is designed to have a long and low maintenance life. But even then at some point in the heaters life especially in professional use the heating elements can fail. The health of the heating elements should be routinely checked.

It is possible to check for broken elements by:

- Checking if any of the brakers have tripped
- DO all of the elements turn red(only 6 in case of 13.2 kw model)
- Visual check when replacing the stones.

In case of a heating element failure, it is possible to reconfigure the heater and still use it by disabling some of the heating elements. Underpowered heater is not a suitable solution for long term but these solutions enable the use of sauna while waiting for replacement pars or planning for the repair.

13.2 kW version:

It is possible to rewire the heater to use one of the elements from Group 2 as replacement.

To do that:

Pick most suitable replacement element.

Ideally next to the failed element, elements that can be used are 1, 5 and 9. Replace the line wire of the failed element with the new chosen one. Heater will now work with full power and replacing the element is not needed.

16.6 kw version:

Element failure in Group 1

Switch the failed element with a one from Group 2 and leave the according braker (now in group 2) on the control panel off. The heater will be underpowered to 14.4 kW.

Element failure in Group 2

Turn off the according braker on the control panel.

19.8 kW version:

Element failure in Group 1

Turn off the according braker on the control panel. The heater will be underpowered to 15.4 kW.

Element failure in Group 2

Turn off the according braker on the control panel. The heater will be underpowered to 17.6 kW.

Any rewiring must be properly documented and reversed to original when heating element is replaced with a new one.



Replacing the heating elements

Steps for replacing the heating elements.

Tools needed:

- Screwdriver PH2
- 21 mm deep socket wrench
- 7 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.



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 without charge for labour and parts 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. Routine maintenance and cleaning of the device and replacement of the components due to normal wear and tear.
2. Adaptation or modification of the device for any purpose other than that indicated in the instructions for use.
3. Risks arising from transport.
4. Damage resulting from the misuse of the device.
5. Damage resulting from the improper installation of the device;
6. Repairs to the device not carried out by Saunum's recommended repair partner (maintenance partner).
7. Accidents, lightning, water, fire, improper ventilation, or any other factor beyond the control of Saunum.
8. Breakages caused by the use of stones and salt balls not recommended by Saunum.
9. The heating elements and the salt balls.



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

Saunum's device maintenance instructions can be found in the instructions for use.

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

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.



INSTALLATION REPORT

Date of purchase: _____

Heater type: _____

Sticker/serial number: Date of installation: _____

Place of installation: _____

Installed by: _____

Checked by: _____

Date, signature: _____

Description of the work done: _____

All the details are available for the installation _____

There are no colour defects or dents _____

Installed on the wall or on the floor according to the instructions _____

The electrical connections are made according to the installation instructions _____

All the heating elements heat up _____

The three fan speeds are working / in the correct order _____

Notes: _____

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

Received work: _____

Warranty start date: _____

ENG

INSTRUCTIONS FOR USE AND INSTALLATION