

IKI

KIUKAISTA KIUKAIN

Instruction manual



Float electric heater 13.8 kW

4/2020

This instruction manual is intended for the owner or the person responsible for the upkeep of the sauna as well as for the electrician in charge of installation. Once installation is completed, the instruction manual must be handed over to the owner or manager. The purpose of the heater is to heat a sauna room to a temperature appropriate for sauna-bathing; any other use is prohibited.

Please note the following before beginning installation:

- Beware of sharp edges in the heater frame. Wear a long-sleeved shirt and protective gloves during installation and laying of the stones.
- Before installation read through the instructions for installation and use.
- The warranty does not cover malfunctions caused by faulty installation or use.

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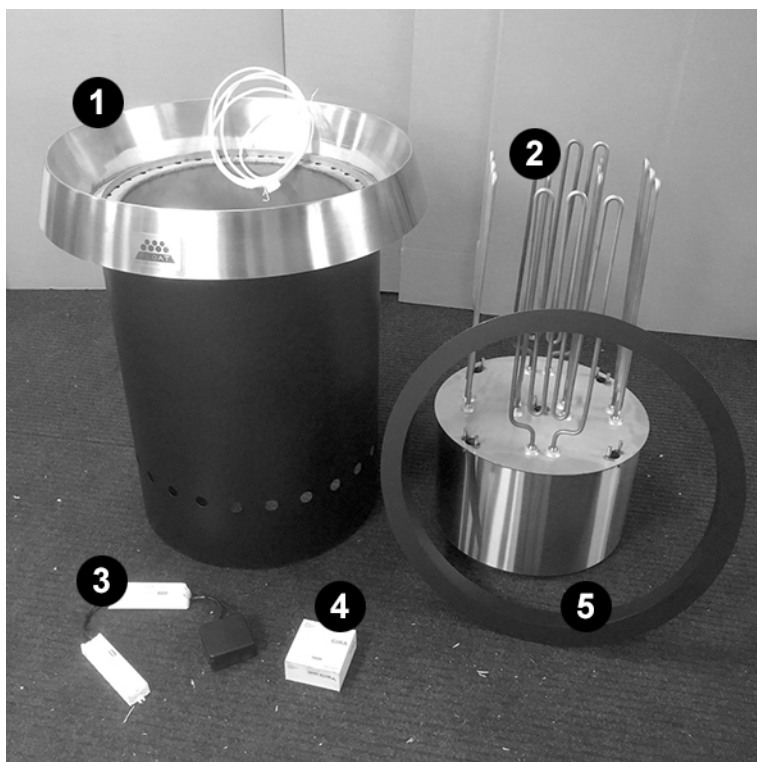
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Contents of delivery:

1. Outer casing of the heater, heater light and electric cord.
2. The heater base and heating elements.
3. The light's adaptor, dimmer unit and connection box.
4. Wireless dimmer switch.
5. Embedding flange for lower bench embedding.

Installation of the heater

1. Check that all the required items are included in the delivery. **(See page 2: Content of delivery)**
2. Select the location for the heater to be installed in, following the proper safety distances **(Page 7)**.
3. Take into consideration the location of air vents, thermostat **(page 5)** and control unit (Ref. the separate installation instructions for the control unit).
4. Lift off the outer casing to reveal the base unit and the heating elements **(installation image 1)**.
5. Open the bottom plate of the base unit under the heater **(installation image 2)**.
6. Make the electrical connections according to the circuit diagram on **page 6**. **Note!** Leave the powercables (2 pcs. 5x2,5mm) leading off the box long enough to allow for the installation to be performed above the lower bench.
7. Connect the heater to control unit according to the separate instructions in the control unit box.
8. After alle the connections are made, test that all heating elements are functioning properly by switching the power on. If all the elements are working, close the base plate. if one or more of the heating elements fail to heat up, or there is another problem, such as a fuse blowing, contact the manufacturer.
9. Install the heater base in the hole made in the flooring **(installation image 3)**.
10. Place the integration collar around the hole on the lower bench **(installation image 4)**.
11. Install the heater's outer casing on top of the base making sure the grooves in the casing and the electric cords fit together **(installation image 5 and 6)**. Level the heater securely before laying in the stones.
12. LAYING THE STONES: We recommend using KERKES ceramic interspace sauna stones around the heating elements. The specially designed Kerkes stones support and protect the heating elements, and they do not disintegrate prematurely. As surface stones, we recommend rough cut olivine, olivine diabase or peridotite (e.g. Parhaat Lölylt) stones the size of 5 to 10 cm in diameter. Lay the stones carefully, making sure there is room for air to flow freely around the stones. Make sure to lay the stones so that the heating elements **DO NOT** touch one another, or the outer casing. **NOTE!** Soapstone, rounded stones or natural stones may only be used at the surface level.
13. IKI-Kiuas recommends, for safety reasons, to build a safety railing around the heater if the heater is in public or semipublic use.
14. As the stones settle down, when used, the surface will drop down a little. Add more stones, if needed. The frequency with which the stones should be replaced depends on stone quality and frequency of sauna use. Check the condition of the stones yearly, remove any broken ones and replace them with new ones. Normally it is recommended to replace all the stones at once.

Installation of lighting:

1. Take the heater light's white cable and connect the **positive (+) brown** wire and **negative (-) yellow** wire and attach them to the corresponding terminal in the dimmer unit LL1-CV-SC **(installation images 7 and 8)**.
2. Connect the 230V supply voltage to the black connection box's Wago connectors, L = 230V and N= neutral 0 wire **(installation image 9)**.
3. Install the Gira dimmer switch onto a wall according to the instruction on **page 8**. The dimmer switch has been pre-paired with the receiver. When you touch the switch briefly, the lights go on and off. Pressing the switch longer will dim and brighten the lights. Indoors, the operating range of the dimmer switch is 30 metres. If installed inside the sauna room, the dimmer switch should be no closer than 1000 mm to the heater and below the height of 1000 mm.
4. The dimmer unit, light's adaptor and connection box should all be installed in a dry space.

Installation images

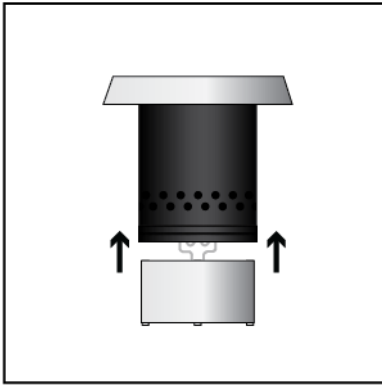


Image 1

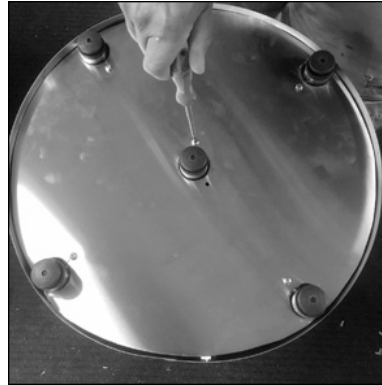


Image 2

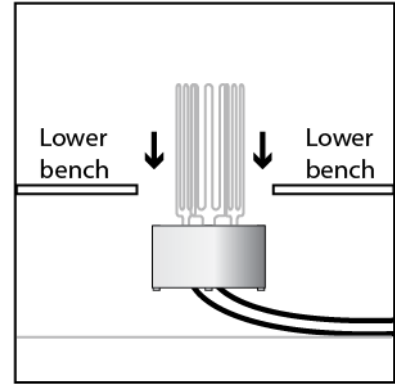


Image 3

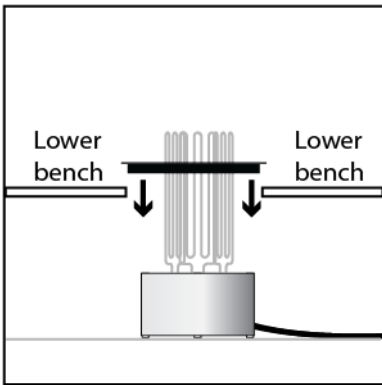


Image 4

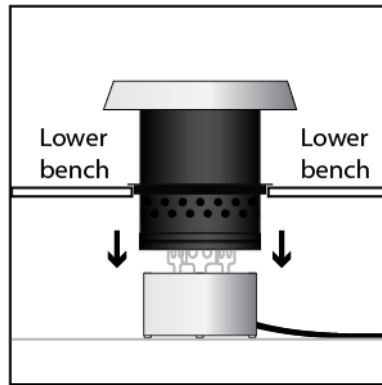


Image 5



Image 6



Image 7

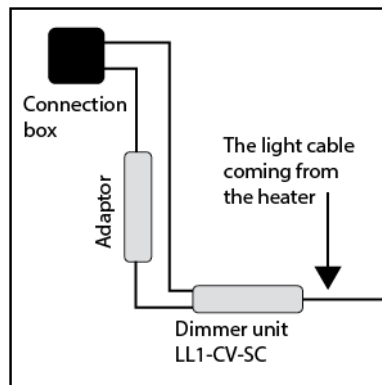


Image 8



Image 9

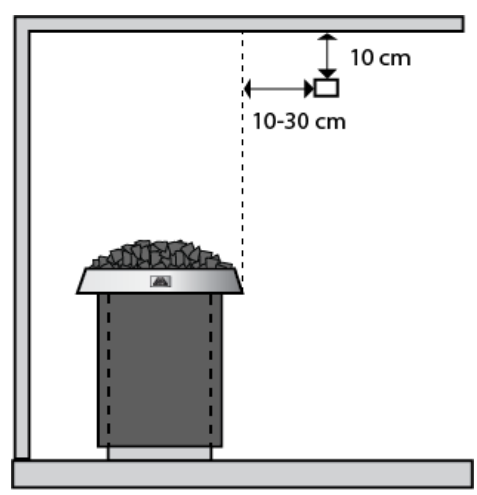
Connecting the heater to electricity

The heater is connected to the electric supply with a H07RN-F, or similar, rubber cable. The use of PVC-insulated cables is forbidden due to poor heat resistance. **The electrical installation must be performed by a licenced electrician and must adhere to current legislation.** The cable must be installed safely away from mechanical strain and heat radiation. If the rubber cable runs inside the wall panelling 1000 mm above the floor rom it will need to be heat resistant up to 170 degrees Celsius (e.g. SSJ).

Control unit

For installation, refer to the separate installation instructions specific to the control unit.

Sauna's temperature sensor and overheating fuse

<p>Sensor location:</p> <p>INSTALLATION TO THE CEILING: - 10-30 cm from the outer casing of the heater.</p> <p>INSTALLATION TO THE WALL: - 10 cm from the ceiling - 10-30 cm from the outer casing of the heater.</p>	 <p>The diagram illustrates the correct placement of a temperature sensor and an overheating fuse in a sauna. A heater is shown on the floor. A sensor is mounted on the ceiling, positioned 10 cm from the heater's top and 10-30 cm from its outer casing. A fuse is mounted on the wall, positioned 10 cm from the ceiling and 10-30 cm from the heater's side.</p>
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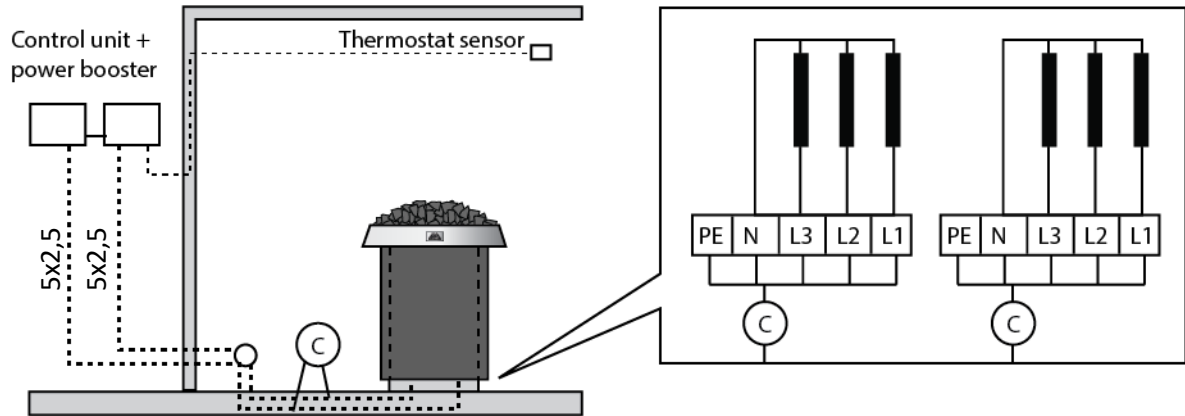
Note!

Make sure the temperature sensor is not located less than 1000 mm distance from an undirected air inlet vent, or less than 500 mm from a vent that is directing air away from the sensor.

Temperature limiter will switch off the power from the heater if the temperature in the sauna raises dangerously high (139) due to a malfunction.

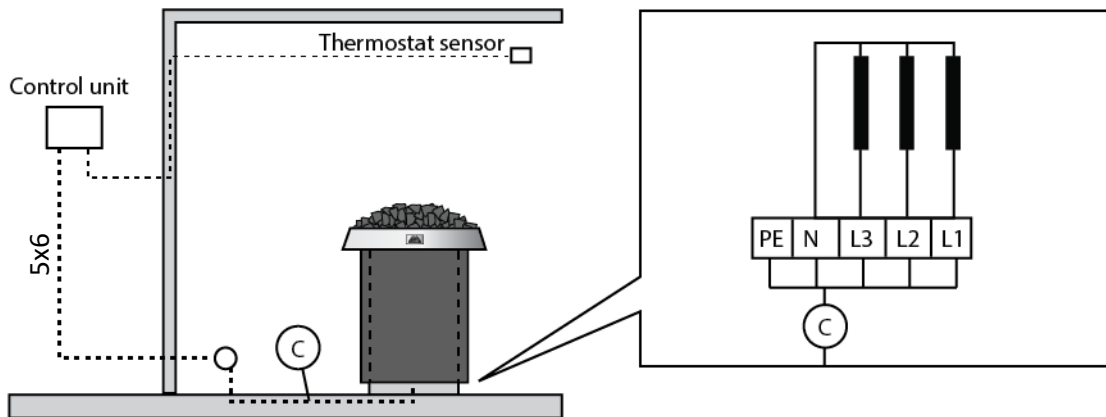
Circuit diagram

Electrical two-way switch connection:

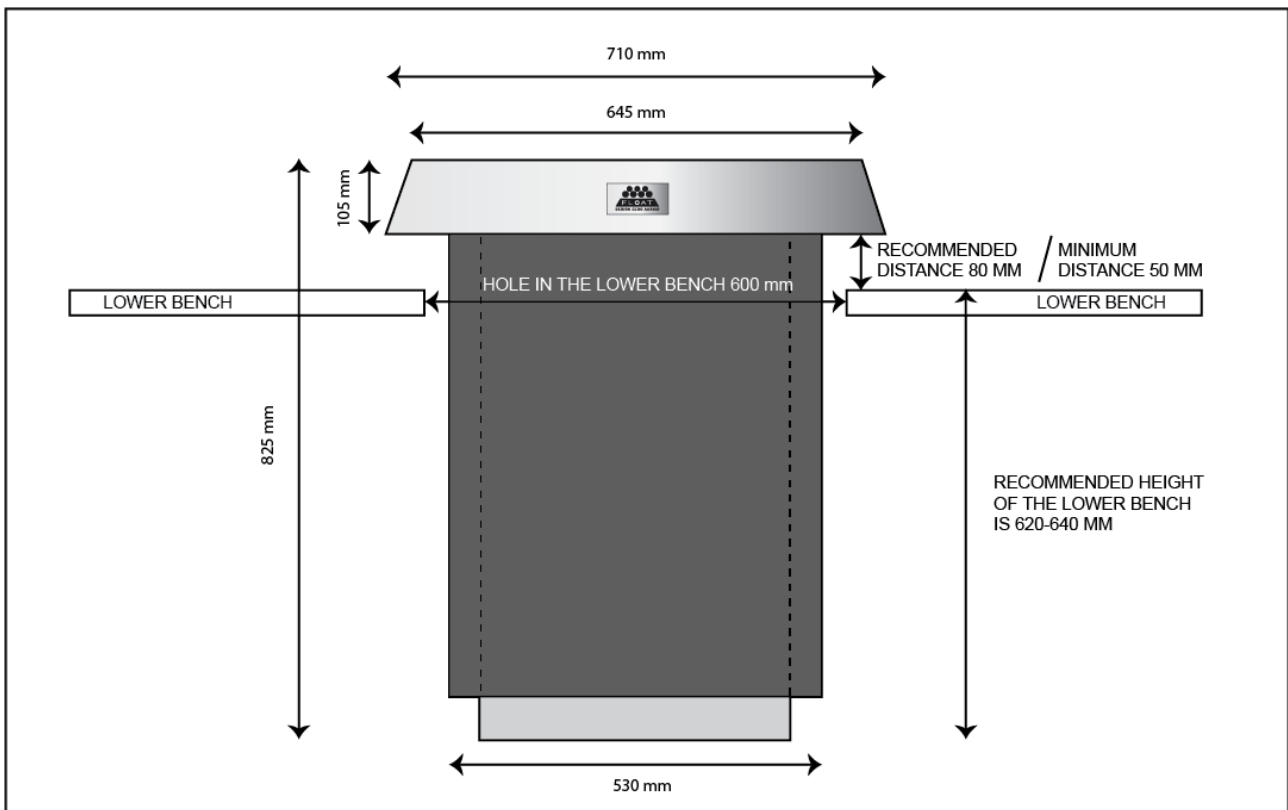


If the control unit requires an additional contactor, we recommend a two-way switch connection to distribute the power evenly to the control unit and the additional contactor.

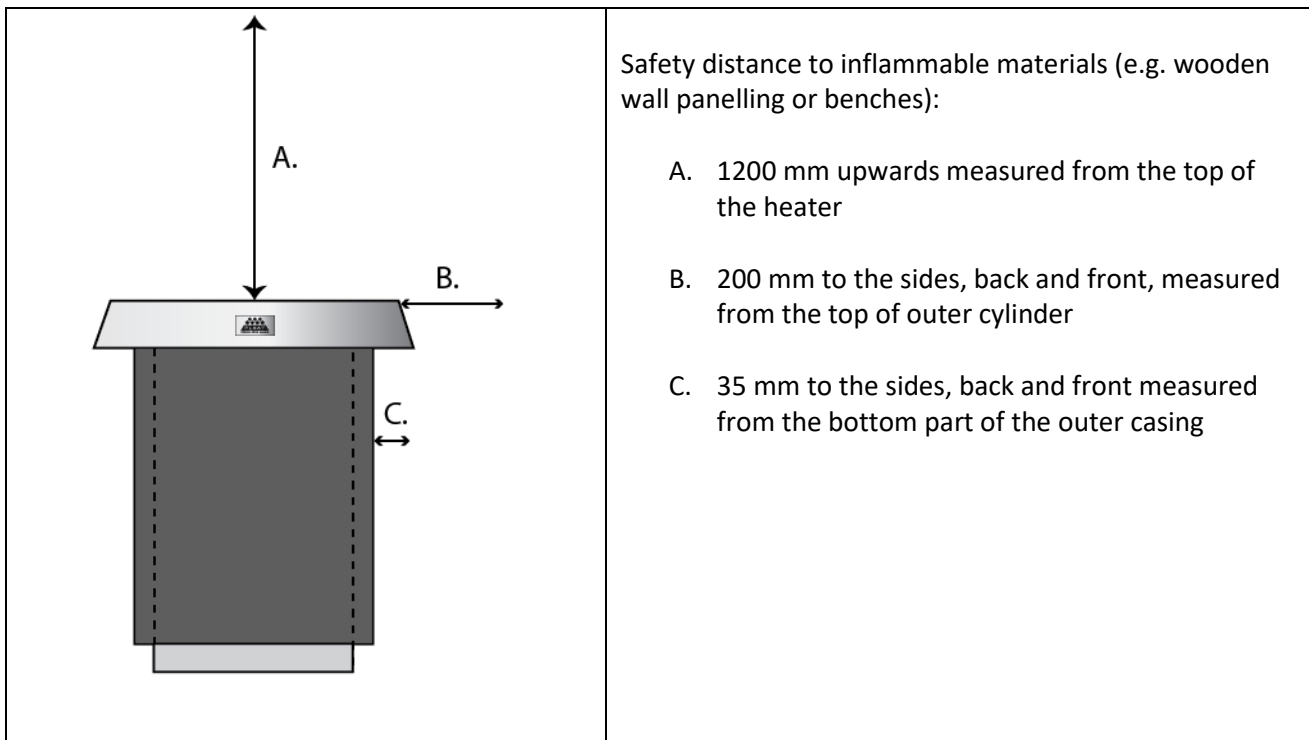
Electrical one-way switch connection:



Heater measurements



Heater safety distances



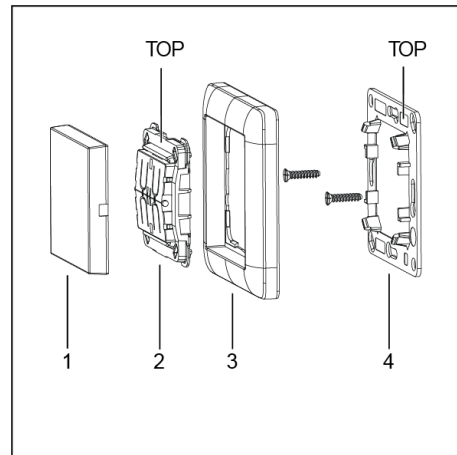
Installation of Gira dimmer switch

The electrical installation must be performed by a licenced electrician. The product adheres to the R&TTE Directive, 1999/5/EC. It is certified for EU and EFTA. The product does not include a battery or an external power source.

The dimmer switch must be installed on a level wall surface, attached by screws or adhesive film.

Screws:

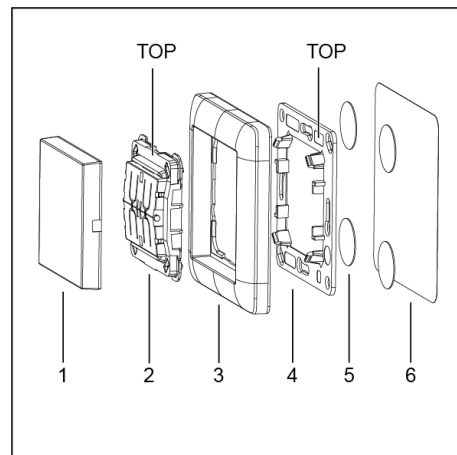
1. Affix the base (4) to the wall by screws.
2. Attach the frame (3) to the base.
3. Attach the radio signal module (2) to the frame.
4. Attach the controller (1) on top.



Adhesive film:

Make sure the surface is even, clean and grease-free.

1. Attach the adhesive film (6) to a clean wall.
2. Attach the round stickers (5) to the adhesive film.
3. Affix the base (4) by pressing it down firmly.
4. Attach the frame (3) to the base.
5. Attach the radio signal module (2) to the frame.
6. Attach the controller (1) on top.



Technical data:

NOTE! The radio signal penetration loss caused by different materials when performing the installation:

- Wood, plasterboard, appx. 90%
- Brick, hardboard, appx. 70%
- Concrete appx. 30%
- Metal, metal sheet appx. 10%
- Rain, snow, appx. 1% - 40%

868.3 MHz (ASK)

The signal range outside is 300 m and inside a building appx. 30 m.

Ambient temperature: min. -25, max. +65 °C

Humidity 0 - 95%

Quality requirements for water

Water properties	Effects	Recommendations
Humus concentration	Colour, taste, precipitates	<12 mg/l
Iron concentration	Colour, odour, taste, precipitates	<0,2 mg/l
Hardness: most important substances are manganese (Mn) and lime, i.e. calcium (Ca)	Precipitates	Mn: <0,05 mg/l Ca: <100 mg/l
Chlorinated water	Health risk	Forbidden
Sea water	Accelerated corrosion	Forbidden

Instructions for use

- Before bathing for the first time, heat up the heater once to burn off protective oil solvents. Air out the sauna room efficiently afterwards.
- The heating time is about 45–75 minutes depending on the size of the room and its ventilation. Recommended bathing temperature with IKI heaters is 50–70 degrees. Pouring water on the stones increases the temperature and humidity.
- Set the desired temperature from the control unit.
- Check that the heating elements do not become exposed as the stones shift about due to heat expansion.
- Check the condition of the stones once a year, and clean and replace as necessary.
- Do not throw water onto the heater when there are people close-by: the steam is burning hot. Do not throw too much water on to the heater. Maximum amount is half a litre at a time.

Troubleshooting

If the heater fails to heat up, check that

- Electricity has been wired properly
- Fuses are intact
- Timer switch is set to i.e 1-4 h, for heating
- The thermostat is set to a higher temperature than current room temperature
- The overheating fuse has not gone off. If it has, the reason must be resolved before attempting to re-heat the heater.
- The stones are laid correctly.

If you find discoloration in the wooden structures near the heater, check that the safety distances are followed correctly, that the stones have been laid correctly and the heating elements are not exposed or touching one another. The heat radiation from exposed resistors is extreme.

Warranty

IKI Kiuas Ltd (the manufacturer) assures a warranty to its products as stipulated here, guaranteeing the quality and functionality of the products during the warranty period. The warranty applies to heaters sold and used in Finland. The warranty requires that the buyer follow the instructions regarding the placement of the heater, its installation, use and maintenance as well as those regarding the qualities of the stones used in the heater. The length of the warranty period is 24 months from the day of purchase. The warranty period for spa saunas and other public-use saunas is 6 months or determined according to the frequency of use. Contact the manufacturer for more details.

1. In case of a defect or malfunction, the buyer must always contact the manufacturer or sales agent before searching for the cause or attempting to repair it. Any repairs must be agreed upon in writing with the manufacturer.
2. In private apartment use, the heater's stone space needs to be cleaned and stones re-piled at least once a year and weathered stones need to be replaced with new ones.
3. In institutional or professional use, the heater's stones must be re-piled at least three times a year during the warranty period. If this is not done, the warranty ceases to apply. In addition, the stones must be changed to new ones at least once a year. Proof, such as the product's purchase receipt, must be presented at request. The use of ceramic heater stones (other than those from Kerkes) is prohibited.
4. The warranty does not cover dismantlement or reinstallation on sauna benches, removal of sauna stones nor re-piling them. IKI Kiuas recommends using for the lower levels sauna benches that can be moved without using tools to dismantle structures.
5. The warranty for replacement parts is 12 months from the day of purchase. The replacement for the damaged part will be delivered to the sales agent free of cost. The installation of the replacement part must be carried out by a mechanic approved by the manufacturer. The manufacturer is not liable to reimburse any costs due to the removal of the faulty part or the installation of the replacement. The faulty part must be returned to the manufacturer at request and at their expense. The manufacturer will issue its freight contacts number for the delivery of the faulty part. Receipt from the reseller or certificate from a manufacturer's authorized mechanic will function as a warranty certificate.
6. **Warranty based on the conditions set by The Electrical Contractors' Association of Finland STUL.** STUL-warranty applies to electric heaters and control units if agreed upon in writing. In such cases, the conditions STUL has set are attached to these warranty conditions. When the use of STUL warranty has been agreed upon, they supersede these warranty regulations, if contradictory. For details, visit: <http://www.stul.fi/fi/in-english>
7. Limitations to warranty: The product owner must take good care of the product. On receiving the product, the owner is expected to check that it does not show signs of damage caused during shipping or storage. In case of such damage, they must contact the sales agent or transport company immediately. The manufacturer is not liable for any damages caused during shipping, or by inappropriate storage, installation or use against manufacturer's instructions, neglect of maintenance, or damage caused by placement of the heater in a place which does not meet the recommendations made by the manufacturer.
8. Damage notifications: The owner is responsible for notifying the manufacturer, the sales agent, or manufacturer's authorized mechanic of any damage or malfunction as soon as it appears and within 14 days. Any warranty related claims must be submitted within 14 days from the closing date of the product's warranty period.
9. Manufacturer's actions regarding warranty, continuation of warranty: In receipt of a substantiated warranty claim, the manufacturer will repair or change the product. This is done in the manufacturer's expense, and the manufacturer is free to select the most cost-effective alternative.

The warranty for replacement parts is outlined above. The replacement part is granted warranty according to specifications. The warranty for a repaired part continues as before.

The manufacturer is not liable for reimbursing any expenses, business loss or other direct or indirect harm occurred to the buyer from damages or malfunction.

Quality guarantee / Freight guarantee

Guarantee of materials. The manufacturer guarantees the durability of the stainless steel parts (resistor platform and frame) in private home use for 10 years. During the warranty period any defects that appear in the heater's raw materials or are production-based will be repaired free of charge. For example, the use of seawater on the heater is forbidden. Read through the requirements for water quality on page 9. The warranty does not cover colour changes, slipping or hair-line fractures, characteristic to natural stones, which do not affect the use or the safety of the heater.

Damages occurred while shipping must to be recorded in the waybill when the product is received or within 7 days of delivery. Shipping damage must also always be reported to the shipping company's last contact. The damaged part needs to be stored for inspection. Insurance compensates for the new part, which will be delivered by a public transporter. In all issues concerning warranty contact the store the product was bought from.

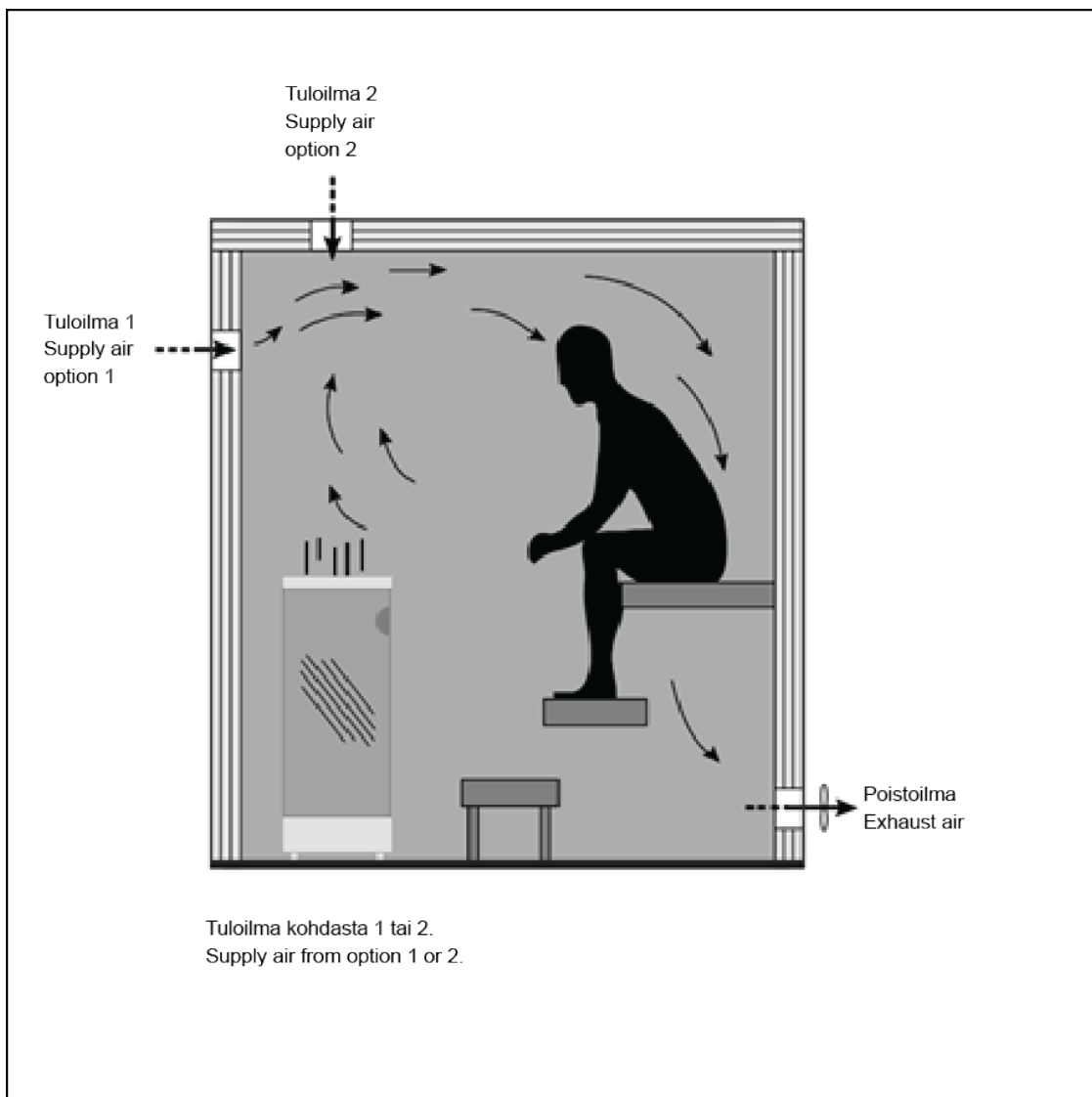
Ventilation

The ventilation in the sauna room needs to be considered carefully. Proper air-flow allows bathers to enjoy fresh, oxygen-rich air. The air should fully change 6 times an hour. The supply air inlet should be installed on the wall or the ceiling at about 500 mm above the heater. The supply air inlet vent should be 50-100 mm in diameter. The outlet vent should be located as far away from the heater as possible, close to the floor. The outlet vent should be twice the size of the inlet vent.

NOTE!

The thermostat sensor should be installed minimum of 1000 mm distance from an undirected supply air vent or at least 500 mm away from a vent directing air towards the sensor.

Illustration of ventilation



Warnings

1. Staying in the hot sauna for long periods of time increases body temperature, which may be dangerous.
2. Keep away from the heater when it's hot. The stones and outer surface of the heater may cause burns when in contact with skin.
3. Prevent children from getting close to the heater.
4. Do not leave children, handicapped or ill people in the sauna without supervision.
5. Consult your doctor about any health concerns regarding sauna-bathing.
6. Consult child welfare clinic about taking babies to the sauna.
7. Always move carefully in the sauna, as the benches and floors may be slippery.
8. Never go to a hot sauna under the influence of alcohol, medication or narcotics
9. Never sleep in a hot sauna.
10. Sea-air and a humid climate may corrode the metal surfaces of the heater.
11. Do not hang clothes to dry in the sauna, as this may cause a risk of fire. Excessive moisture content may also cause damage to the electrical equipment.

Notes

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