

# IKI

KIUKAISTA KIUKAIN

## Instructions for installation and use



### **Monolith electric heaters with a separate control unit**

Monolith 6,9 kW  
Monolith 9 kW  
Monolith 13,8 kW  
Monolith 15,9 kW  
Monolith 18 kW



This instruction manual is intended for the sauna owner or the person in charge of caring for the operation of the sauna, as well as for the electrician who installs the heater. When the installation is complete these instructions must be given to the owner or the person caring for the sauna. The sauna heater is intended for the sole purpose of heating the sauna room to a temperature appropriate for bathing. Its use for any other purpose is prohibited.

## **Before you begin installing the heater, pay attention to the following points:**

- Use a long-sleeved shirt and protective gloves during the installation.
- Read through this installation manual before you begin the installation of the heater.
- The warranty does not cover defects caused by faulty installation or misuse of the heater.
- Separate instructions for electrical connections come with the control unit and/or the circuit diagrams of these instructions.

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## Installation of the heater

1. Remove the plastic wrapping from around the heater.
2. Choose the place for the heater according to the required safety distances (page 6).
3. Consider the location of the air vent, thermostat and control unit (see instructions for the control unit.)
4. Lift the steel frame from the resistor casing/stand.
5. Open the element box located at the underneath the heater and connect the five-pole electric cable through the socket seal to the terminal block inside the box.
6. Attach the other end of the cable to the control unit and connect it according to the specified instructions inside the control unit (controller).
7. Test that all the heating elements function properly. If all the resistors heat up, close the element box panel. If problems occur, contact the manufacturer's technical support.
8. Place the heater in its place. Check the safety distances to flammable materials before piling on the stones.
9. Lift the steel frame on top of the resistor casing / stand and straighten the heater by adjusting the adjustable legs.
10. **PILING OF THE STONES:** Read separate instructions (page 10). In communally or publicly used saunas we recommend the use of ceramic Kerkes stones around the heating elements ([www.kerkes.fi](http://www.kerkes.fi)). Kerkes stones support and help preserve the heating elements and they do not disintegrate prematurely due to high temperature changes. Note that the use of soapstone and natural stones is allowed only on the outer edges and on the top of the heater.
11. We recommend the use of safety railings around the heater. However, the stainless steel mesh frame does not over-heat the way ordinary steel-cased heaters do.
12. The surface of the stones sinks in a little after the heater is in use. Frequently check that the heating elements do not become exposed. If this should happen, pile in more stones. The disintegration of the stones depends on the type of stones and the frequency of use. The condition of the stones should be checked yearly and broken stones must be replaced with new ones.

## Connecting the heater to the electrical network

The heater is connected to the electrical network semi-stationarily with an H07RN-F rubber cable or an equivalent. The use of PVC-insulated cable as a connecting cable is prohibited due to thermal embrittlement. **The electric installation may only be administered by a qualified electrician adhering to current regulations.** The maximum distance of the junction box from the floor is 400 mm, measured from the upper corner of the box. Make sure that the connecting cable will not be exposed to thermal radiation or mechanical strain. If the rubber cable running inside the wall of the sauna is above 1000 mm from the floor, it needs to endure temperatures up to 170 degrees Celsius (for example SSJ).

## Control unit

Refer to the separate instructions for installation provided by the manufacturer of the control unit.

## Sauna-room temperature sensor and over-heat prevention fuse

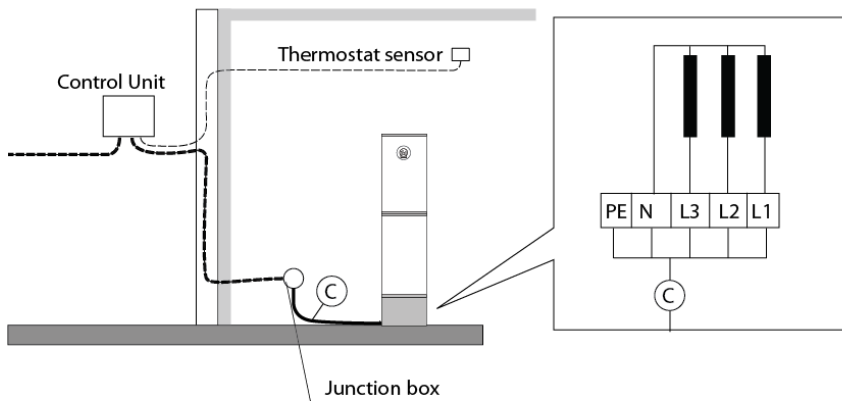
The sensor should be located

- **to a wall:**
  - 10 cm down from ceiling
  - 10-30 cm from outer edge of heater
  
- **to the ceiling:**
  - 10-30 cm from outer edge of heater
  
- minimum of 1000 mm distance from undirected vent for replacement air or minimum of 500 mm distance from the air vent directed away from the sensor.

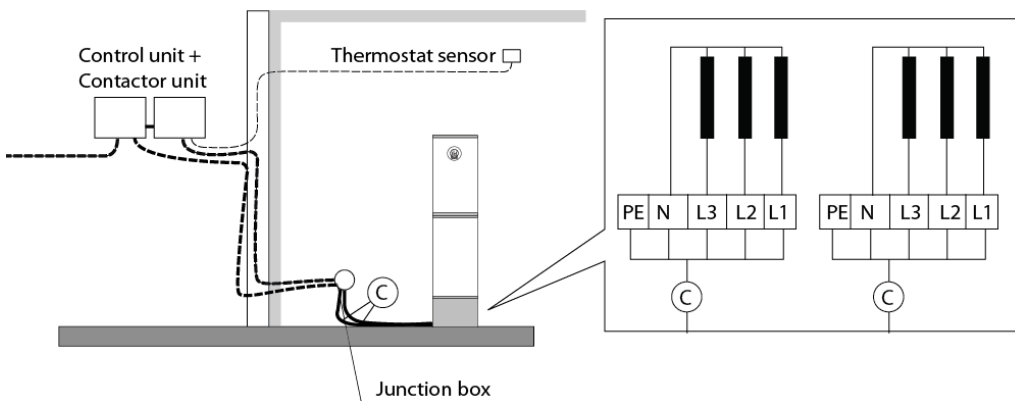
The temperature restrictor switches off the power if the temperature in the sauna climbs dangerously high (139 degrees Celsius) due to a malfunction.

Model	version			input(s)	fuse	cable	
	power	power	power				
	kW	kW	+ kW				
Monolith	6,9				3	3x10A	5x2,5S (tai 5x1,5S)
Monolith	9				3	3x16A	5x2,5S
Monolith	13,8				3	3x20A	5x6S
	6,9	6,9		double	6	6x10A	2x 5x2,5S (or 2x 5x1,5S)
Monolith	15,9				3	3x25A	5x6S
	6,9	9		double	6	3x10A ja 3x16A	2x 5x2,5S (or 5x1,5S ja 5x2,5S)
Monolith	18				3	3x32A	5x10S (or 5x6S)
	9	9		double	6	3x16A ja 3x16A	2x 5x2,5S

Heater's electrical connection, 1 input



Heater's electrical connection, double input



## Table of heater models

Heater	Room size	Heater height	Diameter	Stone capacity	Wattage
Monolith 6,9 kW	7-12 m <sup>3</sup>	132 cm	30 cm	120 kg	6,9 kW
Monolith 9 kW	9-16 m <sup>3</sup>	132 cm	30 cm	120 kg	9 kW
Monolith 13,8 kW	15-25 m <sup>3</sup>	132 cm	42 cm	220 kg	13,8 kW
Monolith 15,9 kW	16-26 m <sup>3</sup>	132 cm	42 cm	220 kg	15,9 kW
Monolith 18 kW	18-28 m <sup>3</sup>	132 cm	42 cm	220 kg	18 kW

## Safety distances

to inflammable materias (such as wall-panneling and benches)

Heater	Front	Sides	Back	Up
Monolith 6,9 kW	10 cm	10 cm	10 cm	80 cm
Monolith 9 kW	10 cm	10 cm	10 cm	80 cm
Monolith 13,8 kW	20 cm	20 cm	20 cm	80 cm
Monolith 15,9 kW	20 cm	20 cm	20 cm	100 cm
Monolith 18 kW	20 cm	20 cm	20 cm	100 cm

## Requirements for water quality

Water type	Effect	Recommendation
Humus concentration	Color, taste, precipitates	<12 mg/l
Iron concentration	Color, smell, taste, precipitates	<0,2 mg/l
Hardness: most important substances are manganese (Mn) and lime, i.e. calsium (Ca)	Precipitates	Mn: <0,05 mg/l Ca: <100 mg/l
Chlorinated water	Risk to health	Forbidden
Seawater	Fast corrosion	Forbidden

## Instructions for use

- Before bathing for the first time, heat up the heater once to burn off the protective oil solvents. Be careful to 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 temperature for IKI stone pillars is 50–70 degrees. Pouring water on the heater increases temperature and humidity. You can control the heat and humidity by pouring the water to different parts of the heater.
- The temperature should be set to the desired range from the temperature knob in 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 to the heater when there are people nearby: the steam coming off the heater is burning hot. Do not throw too much water on to the heater. Maximum amount is half a litre at a time.

## Trouble-shooting

If the heater or sauna room does not heat up, check that:

- The power is on.
- The timer is set to the operating range.
- The temperature knob is set to a higher temperature than the temperature in the sauna room.
- The fuses are intact.
- The temperature restrictor (overheat protector) has not gone off. If temperature restrictor has gone off, the reason for this must be solved before using heater again.
- The stones are piled correctly

If the wooden walls / parts take on a darker shade, check safety distances and piling of the stones does not leave resistor exposed or touching one another. If the resistors are visible they emit excessive heat.



## 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 month from the day of purchase or 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.

### The warranty for electric heaters requires that:

- 1 In case of 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 out and 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 cost free. The installation of the replacement part must be carried out by a mechanic that has been 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 contact 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.
- 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 in the installations instructions.

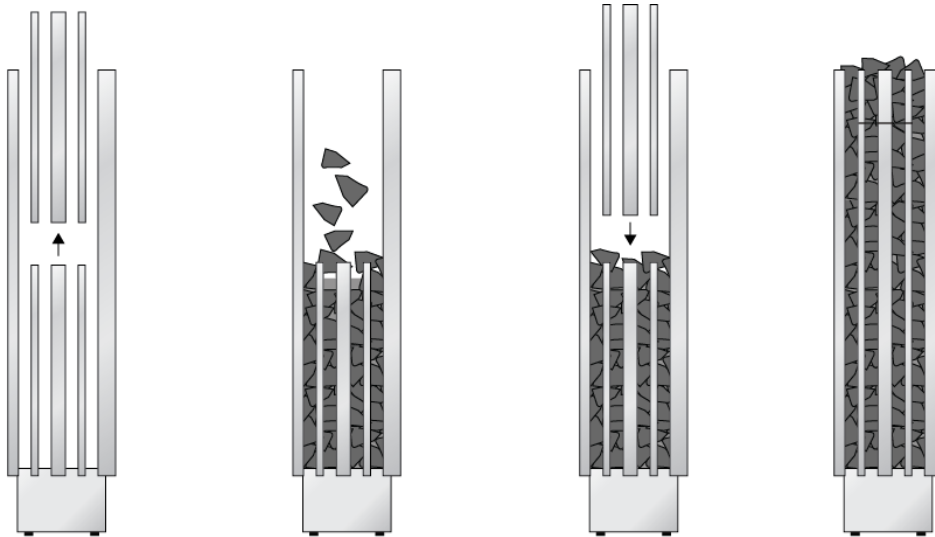
The warranty does not cover colour changes, slipping or hair-line fractures, characteristic to natural stones, which do not affect the use or the safety of the heater.

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.

## Piling the stones

Use protective gloves when piling the stones to the heater because there may be sharp edges in the heater. If needed wash the stones before you pile them. You can fit about 120 kg of stones to the heater. Piling the stones should be done with care. The stones should be placed so that the gap between the heating elements and the frame of the heater is completely filled with stones for the whole height of the heater. The stones should not be placed too tightly together; instead there should be enough space between the stones to allow air to flow freely. Check that the guide for the resistors is in place at the top of the heater and keeps them upright. The resistor guide can be left in place after stoning (10 cm below the top of resistors).

In private use, we recommend olivine, olivine-dolerite and peridotite stones. The stones should be smaller than 10 cm in diameter, so that they are easy to pile in between the heating elements and the mesh frame. In ordinary use the stones should be changed every 2 to 5 years, depending on how frequently the sauna is used.

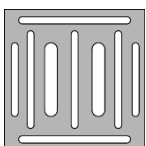


One of the sides of the heater opens up. Lift the side away.

Pile the stones halfway up.

Lift the piece back.

Pile rest of the stones.

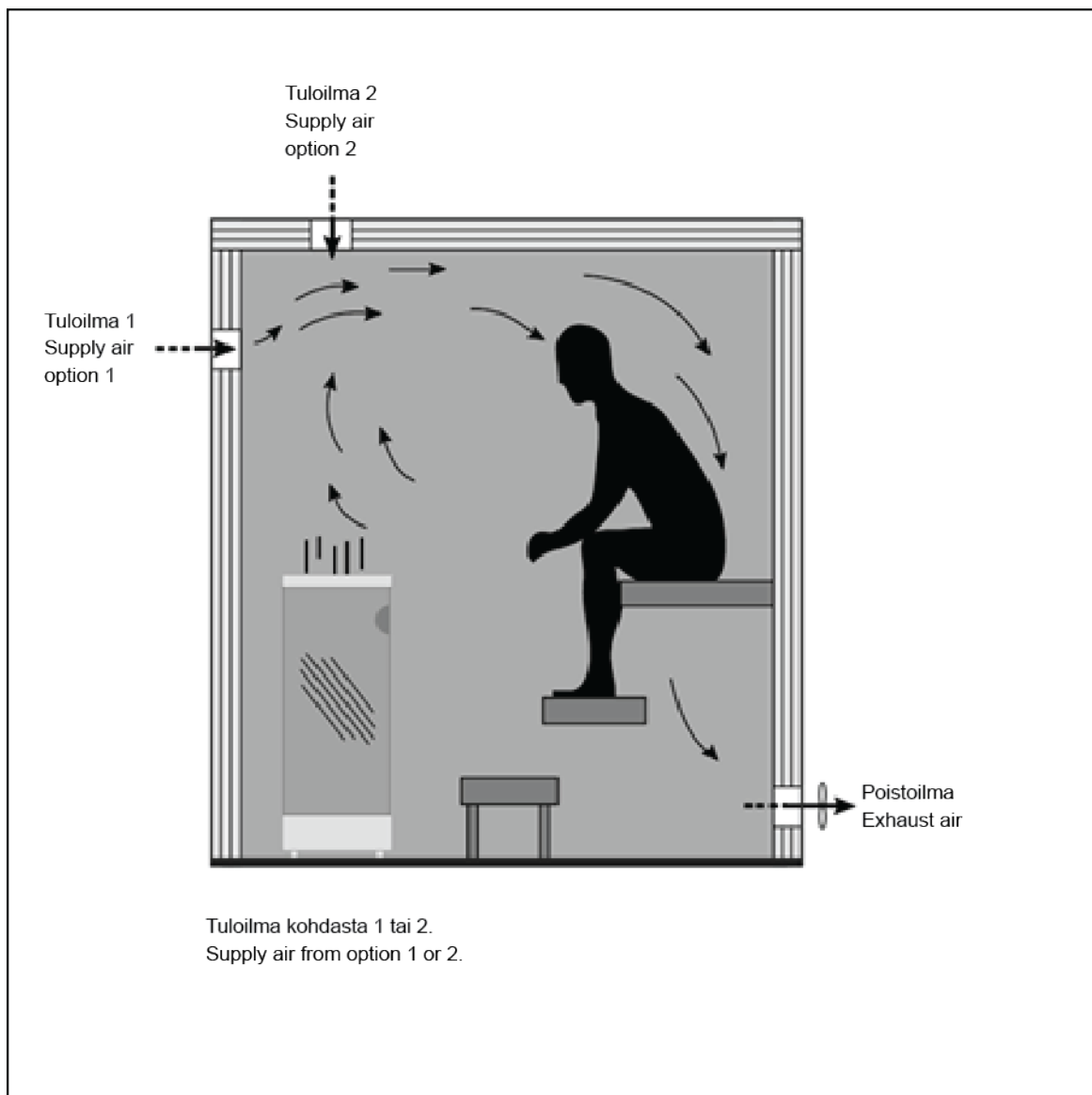


Resistor guide

## Mechanical ventilation

The ventilation in the sauna room needs to be considered. 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 sensor for the thermostat should be located at a minimum of 1000 mm distance from undirected vent for replacement air or minimum of 500 mm distance from the air vent directed away from the sensor.



## Warnings

1. Staying in the hot sauna for long periods 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 burn.
3. Prevent children from getting close to the heater.
4. Do not leave children, handicapped or ill people to use the sauna without supervision.
5. Consult your doctor about any health concerns regarding sauna-bathing.
6. Consult child welfare clinic about taking little 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.





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