

AURA

Installation and Operating Instructions



MONDEX

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1 GENERAL SAFETY INSTRUCTIONS

To ensure safe use of the sauna, please read these safety instructions first!

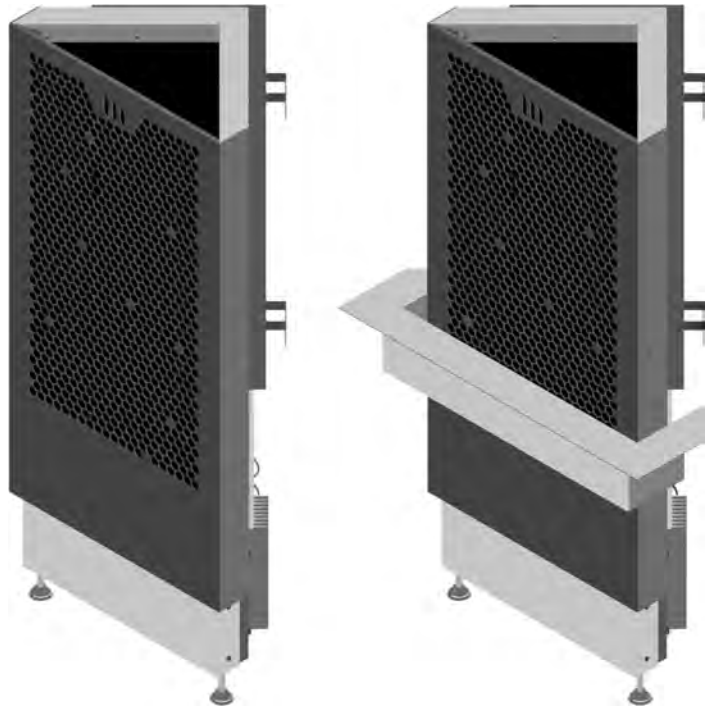


- 1 Electrical connections may only be made by an electrician with valid installation authorization according to the current regulations.
- 2 The Mondex electric heater is suitable for use in a family sauna, one (1) heater per sauna room.
- 3 Retain the installation and operating instructions for further reference.
- 4 Always check the adequacy of the fire protection distances!
- 5 Failure to observe the connection instructions may result in a risk of fire!
- 6 Always check the sauna room before switching the heater on!
- 7 Always check that the controller has switched the heater off after the set time period!
- 8 Due to the risk of fire, do not use the sauna to dry clothes or laundry.
- 9 Exercise caution with a hot heater, since the heater stones and metal parts become very hot and can cause burns.
- 10 The water steam rising from the heater is hot and can cause burns.
- 11 Children, disabled and ill persons who are using the sauna should be supervised.
- 12 Benches and floors may be slippery, therefore move in the sauna with caution.
- 13 Do not go to a hot sauna under the influence of narcotic substances (alcohol, drugs, narcotics, etc.).
- 14 A stone compartment without stones or filled improperly will present a risk of fire!
- 15 Covering the heater will present a risk of fire.

This device is not intended for use by persons whose physical, sensory or mental abilities or lack of experience and knowledge prevent them from using the device safely, without supervision or before they have been instructed on safe use of the device and they understand the hazards associated with using the device. Children may not play with the device. Children may not clean the device or perform maintenance on the device unsupervised.

Mondex pursues an active policy of product development and continuous improvement. For this reason, Mondex reserves the right to make changes relating to the design and technical specifications of their products without prior notice.

2 AURA HEATER



3 HEATER ASSEMBLY AND INSTALLATION

1. Store the heater in its original package in an upright position and in a warm and dry location until it is installed.

2. Inspect the heater visually. If you notice any discrepancies or deficiencies, please contact the store where you purchased the heater or e-mail info@mondex.fi

3. The heater is installed so that it leans against a wall using the bracket provided (see the dimensions on page 10).

4. To facilitate installation, adjust the heater's feet so that they extend out 8–9 cm.

NOTE! Leave a gap of 5 cm between the floor and the heater!



Stacking the stones

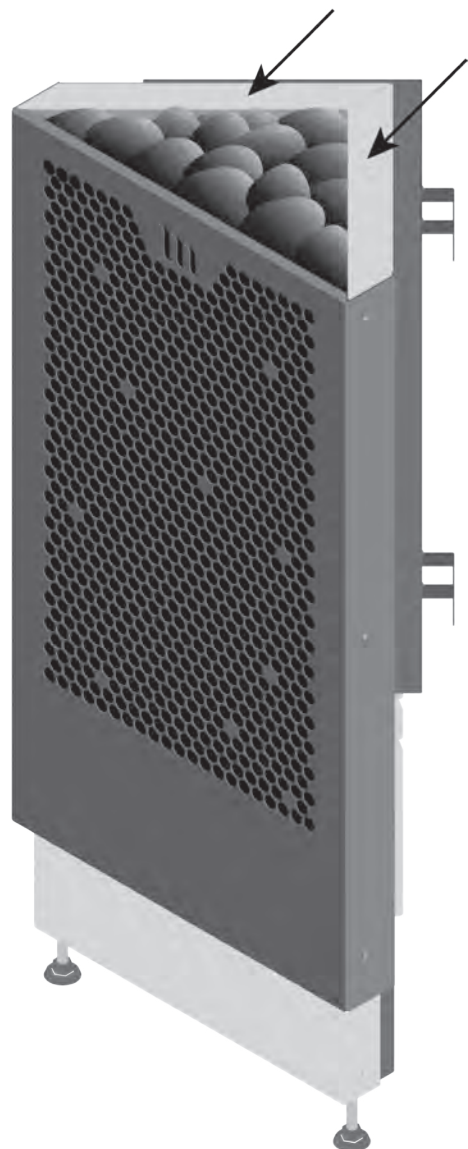
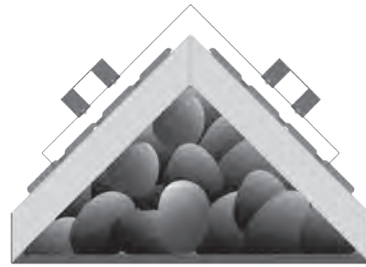
Note! Use regular olivine diabase granite heater stones with diameter of less than 10 cm in the Aura heater. Do not place ceramic heater stones in the heater. Wear protective gloves when stacking the stones. Stack the heater stones so that the resistors do not make contact with each other. Do not bend the resistors so that they are in contact with the metal structures of the heater.

NOTE! Do not remove the bands around the resistors. If there are two bands, one of them is located at approximately 20 cm from the bottom and another approximately 10–15 cm from the top. They keep the resistors apart from each other and prevent premature deterioration.

Stack the stones in layers starting from the bottom. **Stack stones loosely to the centre of the heater and fit them more tightly against the outer metal netting.** Continue stacking the stones in this way until all of them have been placed.

NOTE! Ensure that the resistors do not touch the heater's netting structure anywhere. There must always be a stone between a resistor and the netting. Exposed resistors may be a fire hazard, so the stones should be stacked as tightly as possible.

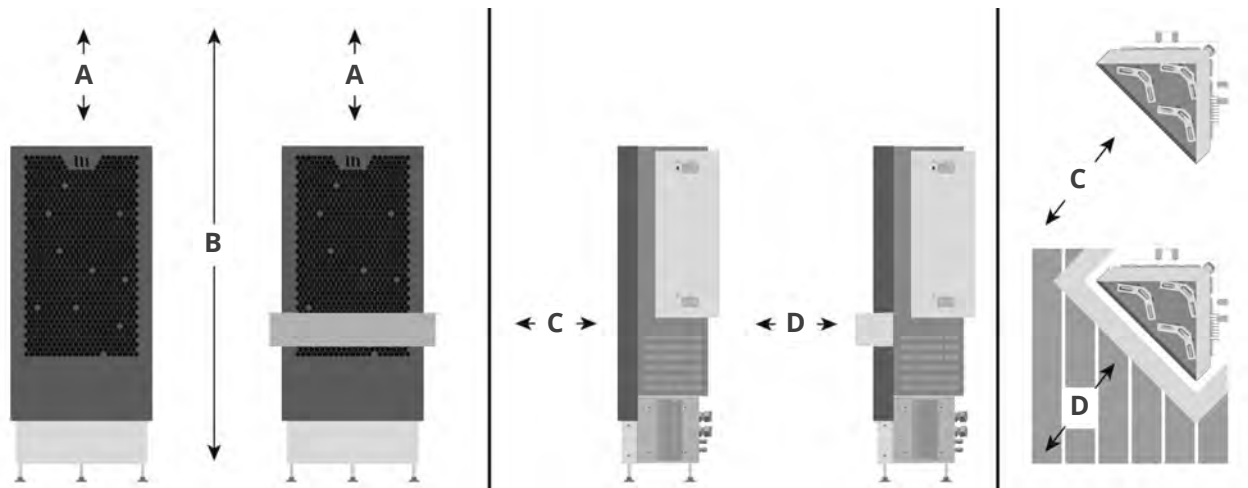
Dents caused by the user are not covered by Mondex's warranty or other product liability. When stacking the stones, be careful not to dent the heater's metal surfaces to avoid damaging them.



4 TECHNICAL SPECIFICATIONS

HEATER	AURA 6.6	AURA 9.0
Power	6.6 kW	9.0 kW
Voltage	400 V 3N~	400 V 3N~
Connecting cable	5 x 1.5 mm ²	5 x 2.5 mm ²
Fuse	3 x 10 A	3 x 16 A
Height (mm)	1010	1010
Width (mm)	405	405
Depth (mm)	310	310
Sauna size	5-9 m ³	8-15 m ³
Amount of stones	70 kg	70 kg

MINIMUM DISTANCES TO INFLAMMABLE MATERIAL



MODEL	A	B	C	D
AURA 6.6	900	2,000	100	75
AURA 9.0	900	2,000	120	75

NOTE! Ensure that when installing the safety collar, dimension **D** is measured from the front surface of the heater to the bench structures!

5 GENERAL INSTRUCTIONS FOR USERS OF AURA HEATERS

Note

Electrical connections may only be made by an electrician with valid installation authorization according to the current regulations. The Aura electric heater is suitable for use in a family sauna, one (1) heater per sauna room. Retain the installation and operating instructions for further reference.

Installation cable

Use rubber cable H07RN-F as a connection cable.

Additional connection options

Control of electric heating with the heater: The electric heating control cable is brought directly to the heater's junction box and further to the heater's terminal block with a rubber cable that is dimensionally identical to the incoming cable.

NOTE! Failure to observe the connection instructions may result in a risk of fire!

NOTE! Remove all plastic film before using the heater!

6 THINGS TO KEEP IN MIND WHEN USING THE HEATER

First heating

During the first heating, the resistors may emit fumes. Therefore, ensure that the room is properly ventilated. **NOTE! Please also read the user instructions for the controller!**

Sauna room

Always check the sauna room before switching the heater on! Always make sure that the timer has switched the power off after the set time period!

Temperature control

The temperature is adjusted by means of the controller (see page 15). The actual heating time depends on the dimensions, structure and thermal insulation of the sauna. The temperature in the sauna room can be maintained at the desired level with the thermostat. If the temperature of the sauna room becomes dangerously high for any reason, the overheating protector will switch the heater's power off. The cause of overheating must always be investigated. The power can be switched on again by pressing the overheating protector reset button (see page 17).

Heating time

An excessive heating time consumes energy and does not improve the steaming properties. The best steam is achieved by keeping the sauna's heating time relatively short, at about 30–60 min., according to the size of the sauna and the heater's power. The size of the sauna, the glass door, windows, or materials used may require a longer heating time.

Water thrown onto the heater

We recommend using hand warm water. The water should be fresh household water. Throwing the water onto the heater sides / lower stones generates softer steam. If you want steam that feels hotter and more intense, pour plenty of warm water on top of the heater all at once.

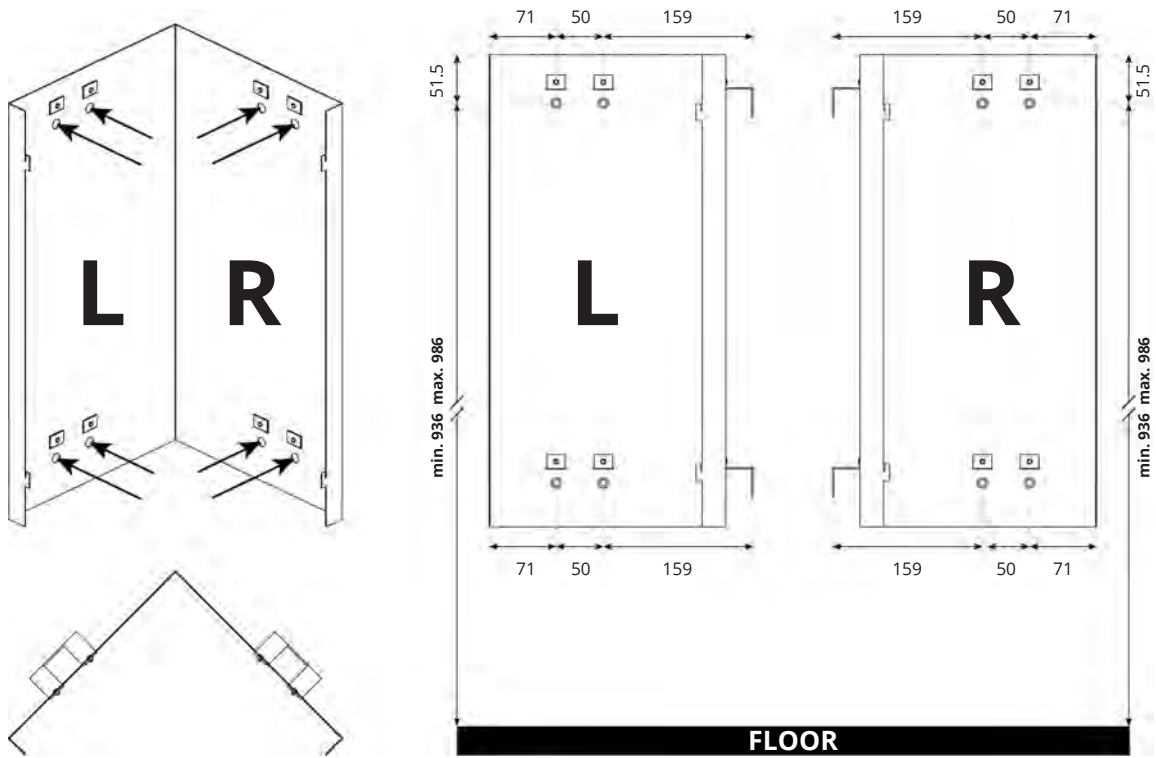
Sauna room structure

The sauna and its ceiling, in particular, should have good thermal insulation, as heat tends to escape through the ceiling. Due to the moisture, we recommend that you use aluminium paper. The size of the heater should be selected according to the size of the sauna (in cubic metres). In addition to calculating the power need for the regular sauna structure (glass wool–foil–wood), the following should be taken into consideration. If the sauna has any uninsulated wood, tile or concrete surfaces or the walls are made of logs, the heater power needs to be increased. For every uninsulated square metre, the heater power need increases by the same amount as if increasing the space volume by 1.2 m³ and on timber surfaces by 1.5 m³. The factor for glass surfaces (glass walls, doors and uninsulated stone surfaces) is also 1.2 m³ per square metre. In borderline cases, you should choose a heater with higher power.

The sauna needs efficient ventilation for a good oxygen level and a sufficient amount of fresh air. The air in the sauna needs to change at least 6 times per hour. For a sauna with an electric heater, mechanical ventilation is the most convenient ventilation method. The supply air should be provided through an inlet located 500 mm, at a minimum, above the heater, either on the wall or in the ceiling. The exhaust valve should be placed on the opposite wall, as far away from the heater and as close to the floor level as possible. It is highly recommendable to install an exhaust air valve in the ceiling as well for easier removal of moisture after sauna sessions.

For more information, refer to the construction instructions and building regulations.

7 WALL MOUNT INSTALLATION



See page 7 for the heater's minimum distances to inflammable materials.

NOTE! Keep in mind that the adjustable feet add to the total height of the heater.

8 INSTALLATION INSTRUCTIONS

Heater installation

Electrical installation work may only be carried out by an authorized electrician according to the current regulations. The instructions for electrical installation are provided in the wiring diagram on page 13 of this installation manual. The heater is connected to the mains by means of a H07RN-F or equivalent rubber cable. The connection is semi-fixed.

Installation of the thermostat's thermal sensor

Connect the thermal sensor wire to the circuit board. The sensor wires, starting from the left, are: blue, white, red, and yellow. You can also refer to the wiring diagram on page 13 for the order of the wires. Carefully connect the connector to the circuit board by pushing it all the way.

Installing the thermostat sensor to the wall: The distance from the ceiling to the top of the sensor is 100 mm. The distance from the outer surface of the heater is over 500 mm.

Installing the thermostat sensor to the ceiling: The distance from the outer surface of the heater is over 100–400 mm.

In addition, the minimum distance between the sensor and a non-directional inlet air valve is 1000 mm, or 500 mm if the inlet air valve is directed away from the sensor. See the instructions on page 12. Install the thermostat wire in the air gap behind the wall panel. If this is not possible, use a power skirting. Ensure that the inlet air does not interfere with the functioning of the thermal sensor.

NOTE! DO NOT cut the wire at the thermostat end. The thermostat sensor will not work if the wire is extended or reconnected. If you need to shorten the wire, do so at the connector end. Otherwise, please contact technical support.

CONTROLLER INSTALLATION

1. See the installation instructions on page 12 to determine the installation height and distance.
2. Drill a hole of an appropriate size in the panel for the wire, or if you use a connection box, for the box. Do not puncture the insulation. If you puncture the insulation board / foil, you must patch the hole with aluminium foil tape.
3. Route the wires from the heater along the bottom edge of the panel to the hole and thread the wires out of the hole/box.
4. Connect the wires to the switchboard (see page 13). Attach the switchboard to the wall/box. The front plate of the switchboard attaches to the switchboard by means of two plastic tacks. The colour options underneath the transparent plastic may vary.
5. Install the controller to the heater as instructed on page 13.

NOTE! Electrical connections may only be carried out by an electrician with valid installation authorization.

CONTROLLER CARD CONNECTIONS

No.	KEY	COLOUR
8	+5V	Pink
7	GND	Grey
6	LIGHT	Red
5	TR2	Blue
4	TR1	Green
3	RELAY	White
2	TEMP	Brown
1	EXT	Yellow

INSTALLATION DIMENSIONS OF THE THERMOSTAT AND CONTROLLER

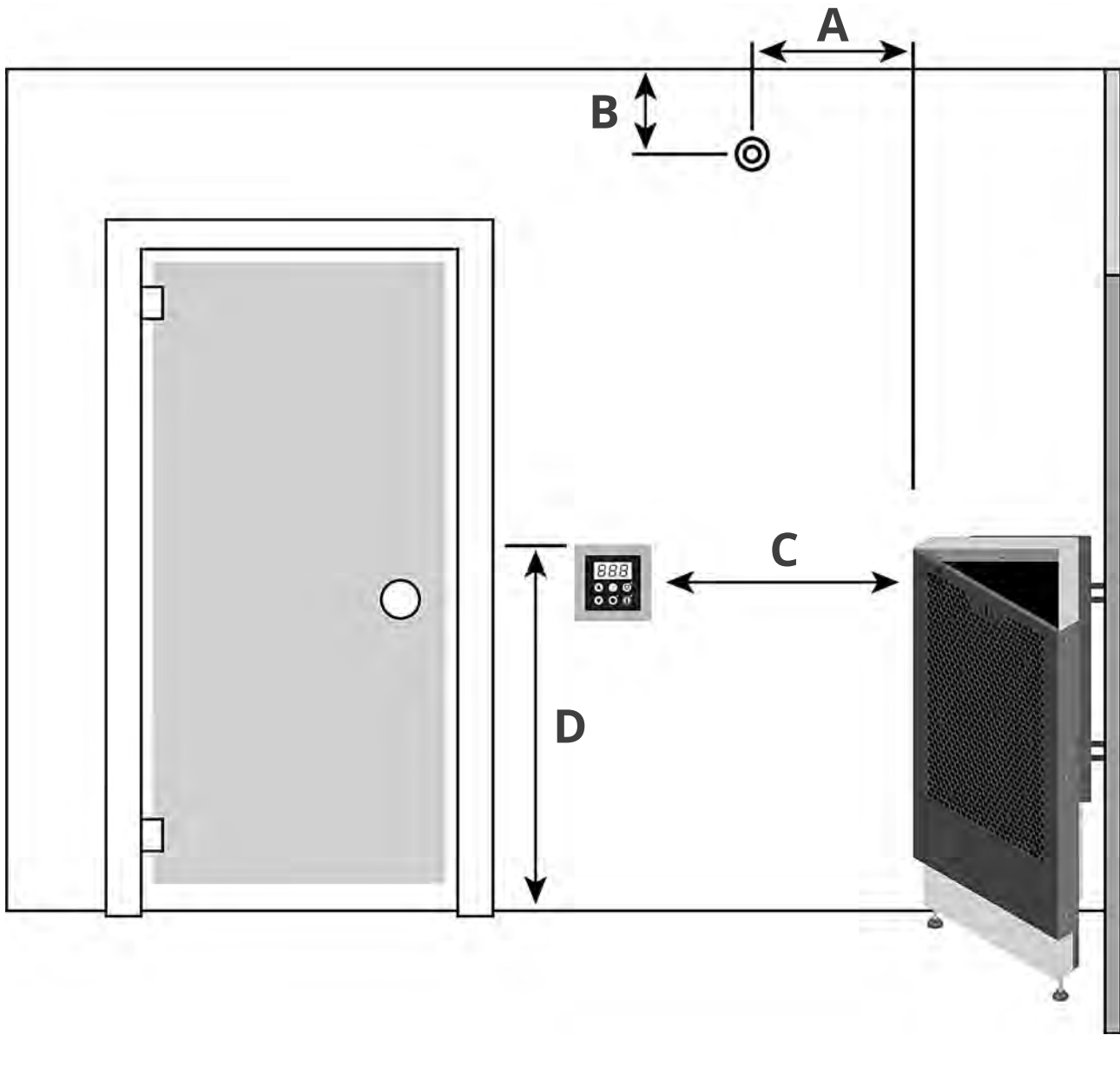
A) The minimum distance between the thermostat and the outer edge of the heater is 500–1000 mm. **Note the inlet air valve!** The minimum distance between the thermostat sensor and the inlet air valve is **1000 mm**, unless the inlet air can be directed away from the thermostat. If the inlet air can be directed away from the thermostat, the distance can be 500–1000 mm.

B) The distance between the thermostat sensor and the ceiling is 100 mm

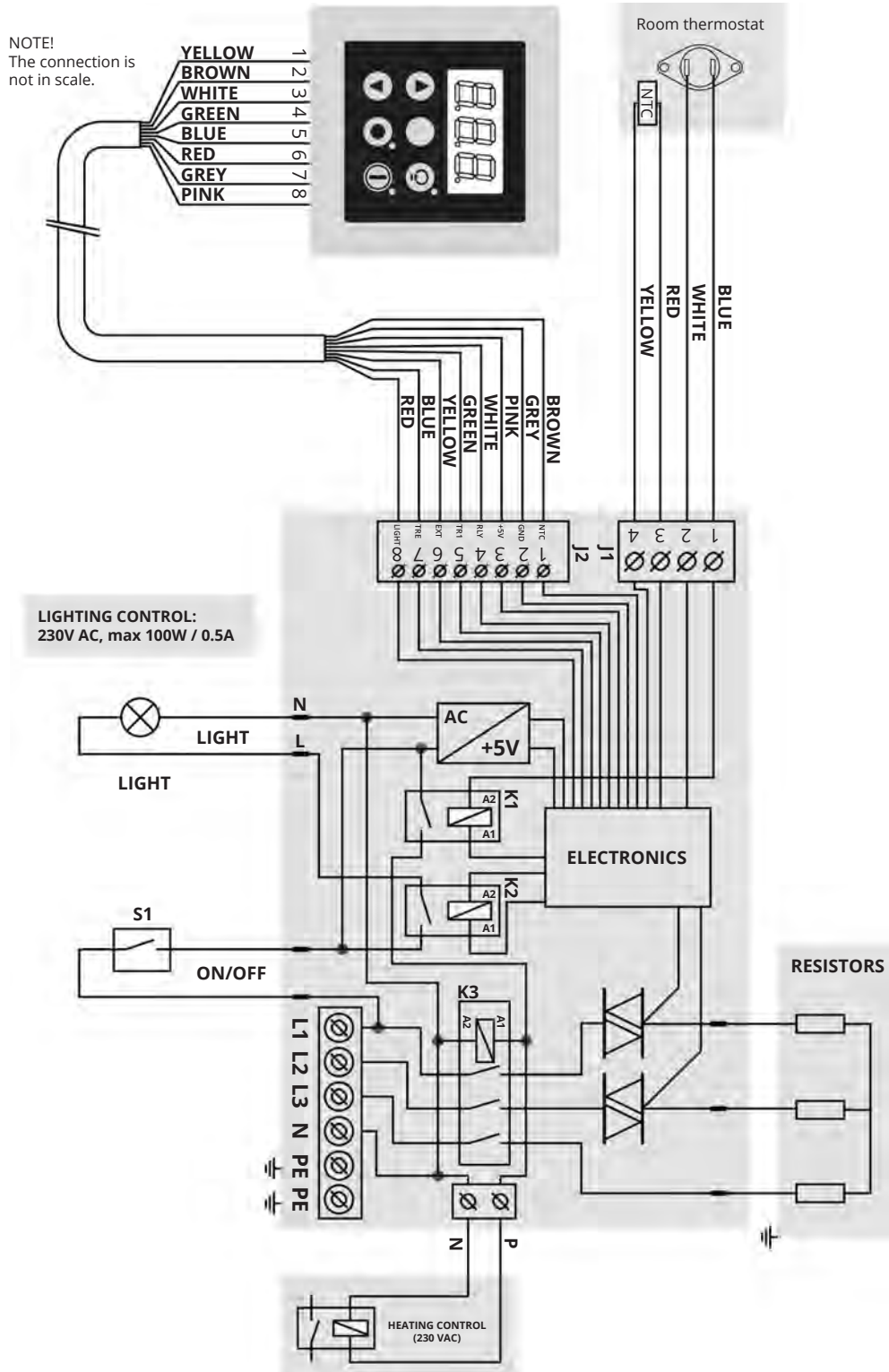
C) The minimum distance between the controller and the heater is 500 mm

D) The maximum installation height from the floor is 1000 mm

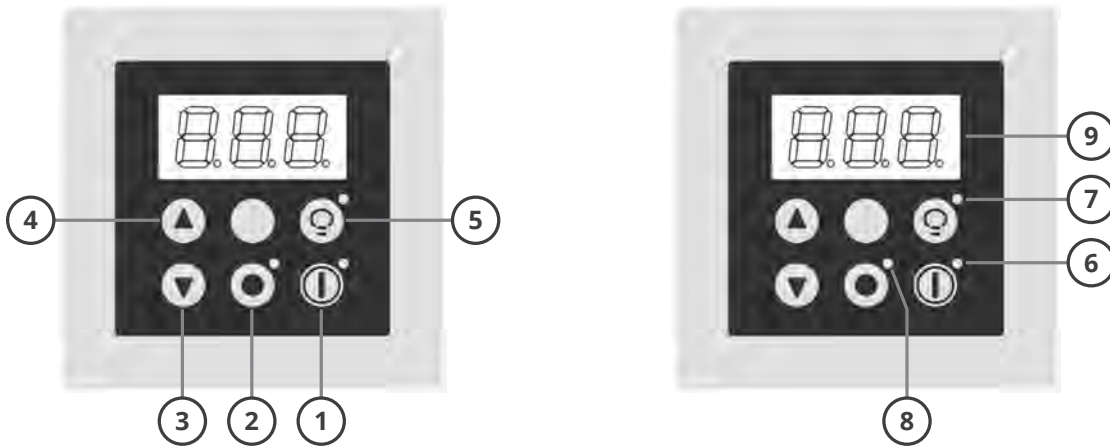
NOTE! The length of the thermostat cable is 5 m and the length of the controller cable is 10 m. Do not extend the cables!



9 WIRING DIAGRAM



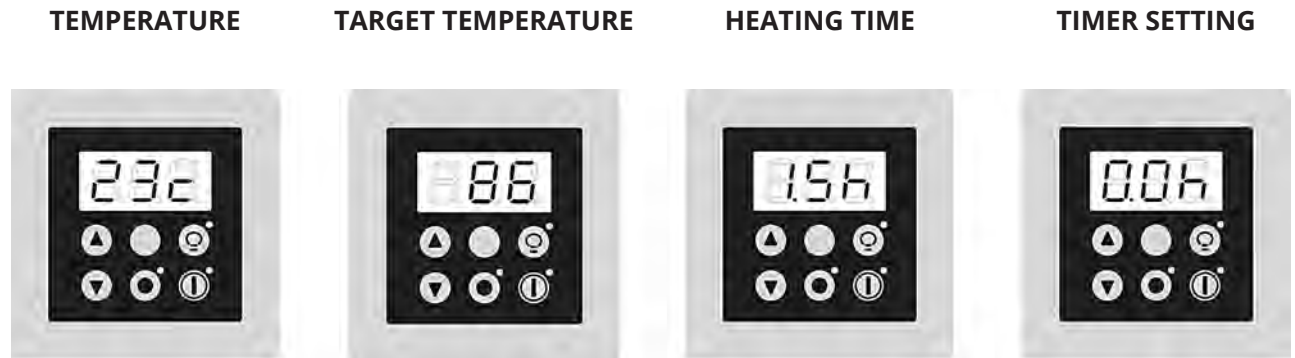
10 HEATER CONTROL AND OPERATION



- 1 Heater on/off**
Press this button to switch the heater on and off. If the timer function is set, pressing this button activates the timer, which then controls the heater operation. Tip: Keeping the button depressed longer will override the timer function and the heater switches on immediately.
- 2 Menu**
This button cycles you through the heater menu options as follows: (Basic status -> Target temperature -> Heating time -> Timer setting -> Basic status)
- 3 Decrease**
This button decreases the value being set.
- 4 Increase**
This button increases the value being set.
- 5 Lights**
If the heater is equipped with lights, they are switched on using this button. Pressing the button again switches off the lights.
- 6 Heating/timer indicator**
This indicator is on constantly when the heater is on. The indicator “glows” if the timer function is active. The indicator is off when the heater is off.
- 7 Heater light indicator**
When this indicator is on, changing the target temperature is possible.
- 8 Menu settings indicator**
This indicator is on when a menu setting is being adjusted (timer, heating time, heater target temperature).
- 9 Numerical display**
A screen displaying three digits

MENU STRUCTURE OF THE CONTROLLER

The image below describes the heater's control menus. Navigate between menus using the **MENU** button.



Parameter	Target temperature	Heating time	Timer setting
Adjustment range	40 – 110 °C	1.0 – 4.0 h	0.0 h – 24.0 h
Accuracy	1 °C	0.5 h (30 min)	0.5 h (30 min)
Default value	60 °C	1 h	0 h (not in use)

Target temperature

The target temperature of the sauna can be adjusted at an accuracy of one degree Celsius. The minimum temperature is +40 degrees and the maximum is +110 degrees Celsius. The setting is saved in the memory.

There are two different methods to adjust the target temperature:

1. Press the **Menu** button to display the target temperature. Press the **Increase / +** and **Decrease / -** buttons to change the value. The controller exits the target temperature setup menu automatically in approximately 10 seconds if no button is pressed. You can also exit the menu by pressing the **Menu** button repeatedly.
2. Pressing the **Increase / +** or **Decrease / -** button when the sauna temperature is displayed on the screen gives direct access to the target temperature setup. To exit, follow the instructions in item 1 above.

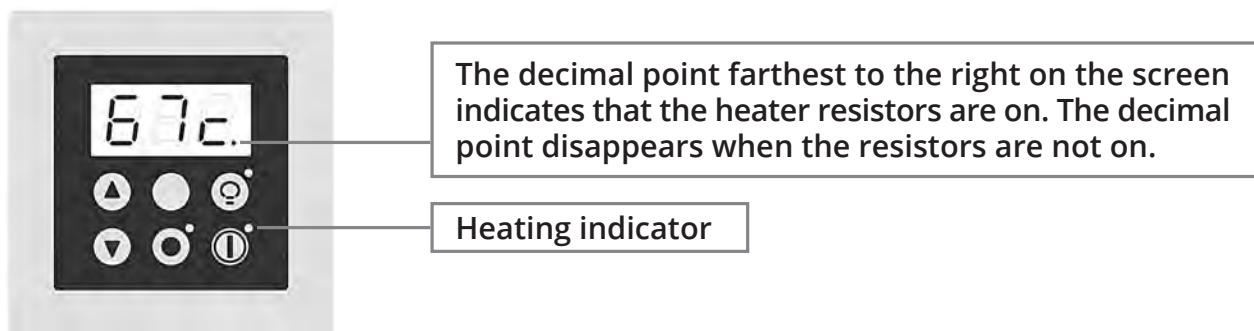
Timer setting

The timer setting can be adjusted from the basic status by pressing the **Menu** button three times. To change the setting, press the **(Increase / +)** and **(Decrease / -)** buttons. The adjustment range is 0.5 h – 24 h, with an adjustment interval of 0.5 h. When the setting value is 0, the timer is not active. This setting can only be changed when the heater is switched off.

Switching on the heater

To switch the heater on, press the main switch located in the bottom part of the heater. Press the **On/Off** button of the controller. The heater's resistors start heating to the set target temperature. The heating indicator lights up on the controller. A decimal point is displayed at the lower right-hand corner of the screen to indicate that the resistors are on. (If the timer has been set, the **On/Off** button switches on the timer function. The heater will start heating after the time set with the timer has elapsed.

The heater is switched off by pressing the **On/Off** button.



Tip: If the timer has been set but the heater is not on, the timer setting can be overridden by keeping the **On/Off** button depressed for a couple of seconds. This switches the heater on immediately. The timer setting will still be retained in the memory.

Controller error codes

If the heater malfunctions, an error code is displayed on the screen. Once the malfunction has been addressed, the error code disappears. Otherwise, contact maintenance.



ER1

ER1 = The thermal sensor is missing or the temperature is too low. Check the wiring and installation of the thermal sensor.



ER2

ER2 = The thermal sensor has short-circuited or the temperature is too high. Ensure that the wiring of the thermal sensor is intact and that the sensor has not short-circuited. Also check the controller wiring in the wiring diagram on page 13.



PCB

PCB = The temperature of the heater's control electronics is too high. Check the controller wiring in the wiring diagram on page 13.

**NO ERROR CODES
DISPLAYED BUT THE
SAUNA FAILS TO HEAT**

Check if the overheating protector has been activated. Acknowledge the overheating protector by carefully pressing the button located on the thermal sensor casing.

**LIGHTING DOES NOT
WORK**

Ensure the connections are made correctly and that the heater and light contacts are appropriate.

**HEATER FAILS TO WARM
UP PROPERLY**

Contact technical support.

11 TROUBLESHOOTING

HEATER DOES NOT WARM UP

Is the power on?

Is the set temperature higher than the sauna's temperature?

Has the overheating protector been activated?

Do the fuses work?

Does the controller display an error code?

If the heater malfunctions, an error code is displayed on the controller screen. The error code definitions are provided on page 17. If the problem cannot be resolved with the instructions provided, contact technical support or maintenance. Once the malfunction has been addressed, the error codes disappear. Such situations include a cleared short-circuit in the sensor or the heater cooling off sufficiently after overheating. After that, you may try to switch the heater on again.

WARNINGS

- Due to a risk of fire, do not use the sauna to dry clothes or laundry.
- Exercise caution with a hot heater, since the heater stones and metal parts become very hot and can cause burns.
- The water steam rising from the heater is hot and can cause burns.
- Children, disabled and ill persons who are using the sauna should be supervised.
- Benches and floors may be slippery, therefore move in the sauna with caution.
- Do not go to a hot sauna under the influence of narcotic substances (alcohol, drugs, narcotics, etc.)

12 WARRANTY AND MAINTENANCE

WARRANTY

For heaters and control units in private use, the warranty is two (2) years. In commercial/professional use, the warranty is three (3) months. Commercial use refers to facilities in which the heater is in use on a continuous basis, such as fitness centres, swimming pools, housing companies etc. It is not recommended that the heater is on for longer than six (6) hours at a time. Retain the sales receipt or warranty card. The warranty does not cover external or internal mechanical damage caused by, for example, the impacts of stones or the heater falling over. The warranty also does not cover defects caused by acts of nature, such as lightning, or damage caused by overvoltage. Please also see chapter "Changing the heater stones". **Removing or re-stacking of heater stones are not covered by the warranty in a potential warranty maintenance.**

MAINTENANCE AND SPARE PARTS

In case of a fault that cannot be solved, please contact the store where you purchased the heater or email info@mondex.fi. Spare parts can be purchased from Mondex distributors and the manufacturer. When purchasing spare parts, please refer to the name, power, serial number and manufacturing date of the heater to ensure you receive the correct parts.

NATURAL STONE AS MATERIAL

Small pebbles or pieces may come off the natural stone used in the heater. As this is not a failure of the organic material but a natural feature that cannot be predicted at the time of manufacturing the product, the manufacturer is not responsible for any damage.

CHANGING THE HEATER STONES

Re-stack the heater stones and replace any eroded stones annually (every three months in commercial/professional use). The good condition and proper, spacious stacking of the stones around the resistors inside the heater ensure a sufficient air flow between the resistors. If this is not carried out annually, a proper air flow may be obstructed and the resistors may break prematurely, which is not covered by the warranty.

HEATER MAINTENANCE HISTORY

We recommend changing the heater stones at one-year intervals.

DATE	MEASURE



Premec Oy
Kettukallionkatu 4
84100 Ylivieska
Finland

info@mondex.fi
www.mondex.fi

