



INSTALLATION AND OPERATING INSTRUCTIONS

Ahti and Ukko heaters

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1. General safety information



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

Electrical connections may only be carried out by an electrician with valid installation authorization according to the current regulations.

The Mondex 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.

Always check the adequacy of the fire protection distances!

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

Always check the sauna room before switching the heater on!

Always check that the controller has switched the heater off after the set time period!

Due to the 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.

Steam from the heater is burning hot and may cause severe 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.).

A stone compartment without stones or filled improperly will present a risk of fire!

Covering the heater will present a risk of fire.

Extended periods in a hot sauna will raise the temperature of the body, which may be dangerous.

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This device is not intended for use by children or persons whose physical, sensory or mental abilities or lack of experience and knowledge prevent them from using the device safely, without the supervision of a person responsible for their safety or before they have been instructed on how to use the device.

Children should be supervised to ensure that they do not play with the device.

This device complies with the requirements of:



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. Ahti and Ukko heaters



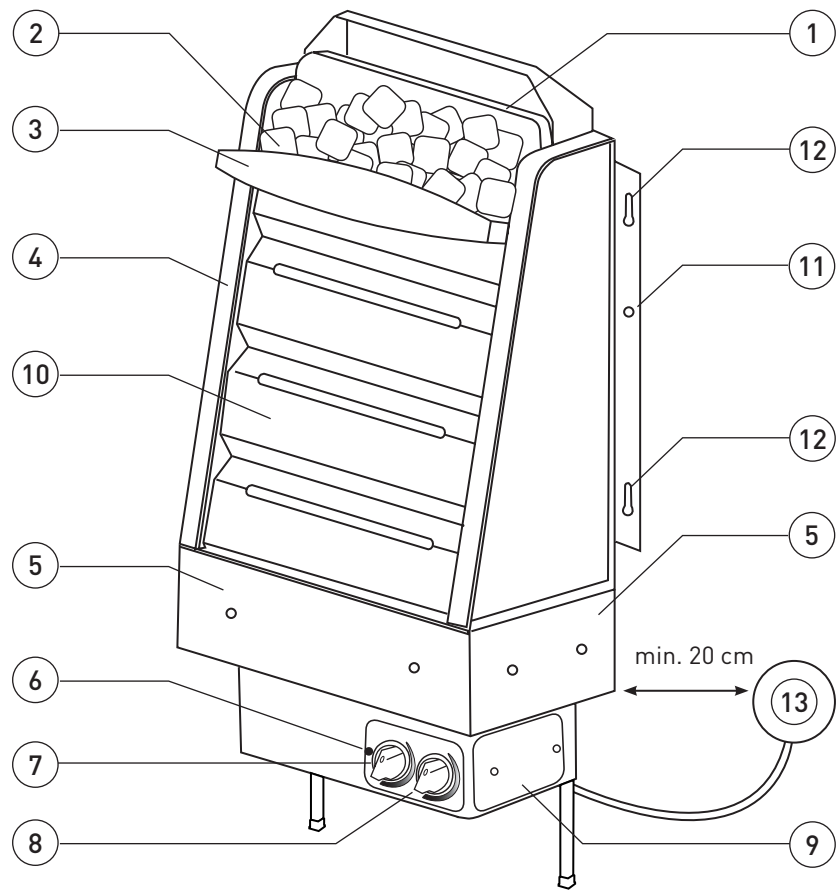
Ahti heater.
6.0 kW and 8.0 kW.



Ukko heater.
6.0 kW, 8.0 kW and 10.5 kW.

Ahti and Ukko heater components

- 1) Background stone
- 2) Small heater stones
- 3) Steel shelf
- 4) Side stone / stainless steel
- 5) Front and side bottom stones / stainless steel
- 6) Overheating protector reset switch
- 7) Thermostat
- 8) Time switch
- 9) Connection box
- 10) Heater blocks
- 11) Locking screws
- 12) Fastening screws
- 13) Junction box (min. of 20 cm from the heater)



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3. Heater assembly and installation

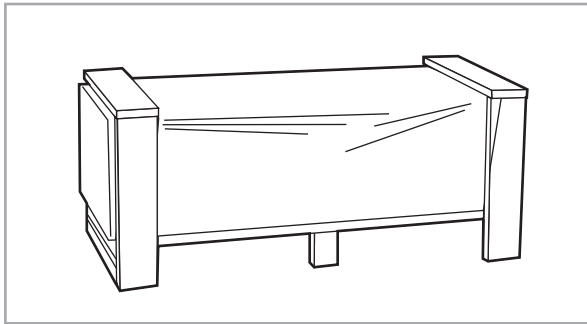


Figure 3.1

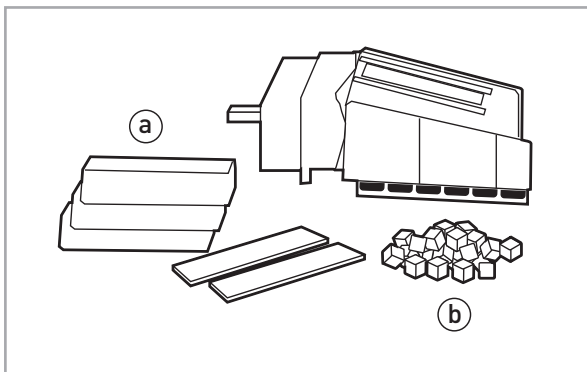


Figure 3.2

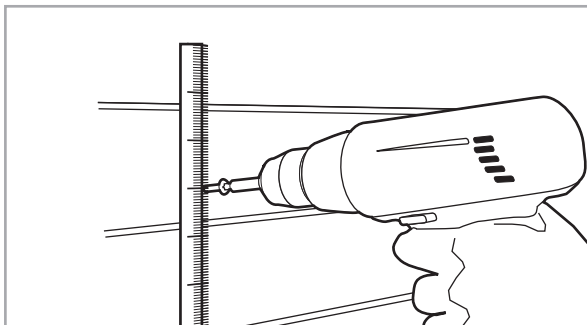


Figure 3.3

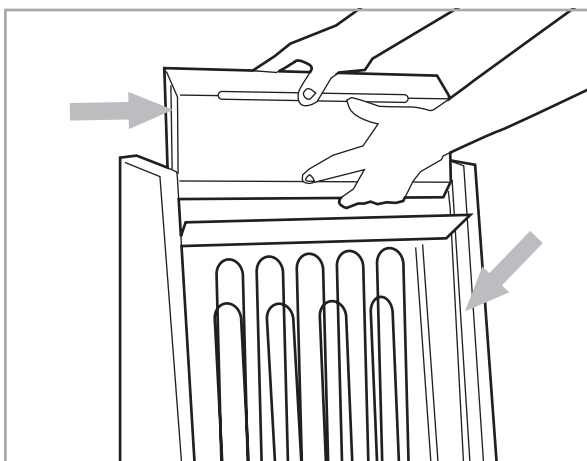


Figure 3.4

Heater assembly

- 1) The package includes the heater, heater blocks (a) and small heater stones (b). Unpack the components with the box placed horizontally (see Figures 3.1 and 3.2).

Inspect the heater components visually. If you notice any discrepancies or deficiencies, please contact the store where you purchased the heater. Do not expose soapstone parts to blows and denting when taking them out of the package. The sauna's floor surface should also be properly protected before you begin the installation.

- 2) Attach the heater to the wall with screws. Observe the safety distances between the heater and any inflammable material in accordance with Table 4.4 (see Figure 3.3) when installing the heater.

- 3) Install the heater blocks by aligning the grooves on their sides with the rails on the inside of the heater sides and lowering the blocks carefully into place (see Figure 3.4).

The bevelled block should be placed topmost, with the bevel facing up. **Ensure that there is a gap between the resistors and the heater blocks** (see Figure 3.5). If the bottom end of any of the blocks is straight, place this block at the bottom.

NOTE! Remove all plastic film before using the heater!



Figure 3.5

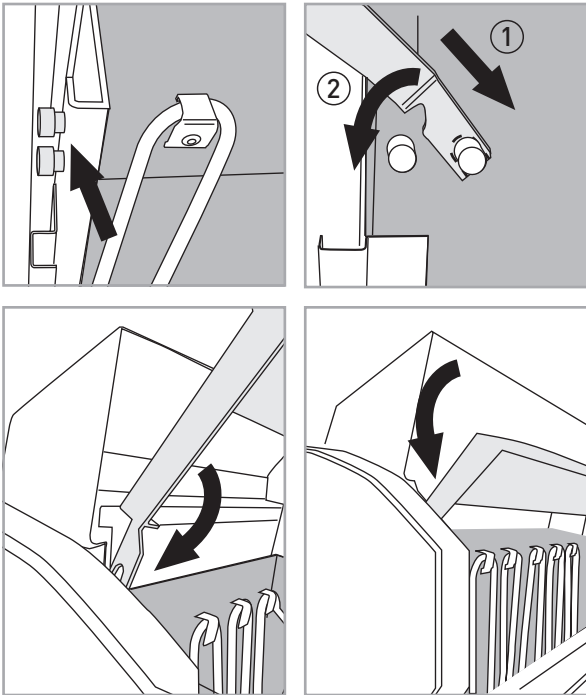


Figure 3.6

- 4) Install the heater stone shelf: there are metal fastening pins for the shelf, located on the inside of the heater, approximately 9 cm downward from the upper end of the air deflector. Insert the support arms of the heater stone shelf in the rearmost pins diagonally from the top (1) and turn the shelf by the arms so that it rests on the front fastening pins (2). After that, the heater stones can be stacked on the shelf (see Figure 3.6).
- 5) Attach the background stone (see Figure 3.7).
- 6) When stacking the stones, ensure that you do not place **small heater stones among the resistors or on top of the ventilation grill located at the top edge of the heater** (see Figure 3.8).

After the assembly, remove all plastic films, including those from behind the deflector.

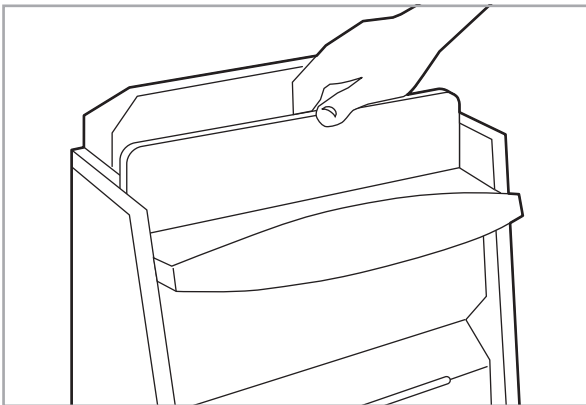


Figure 3.7

Dents caused by the user or others are not covered by Mondex's warranty or other product liability. When stacking the stones, be careful not to dent the heater's metal or painted surfaces to avoid damaging them. For more information on the warranty and replacing stones, see page 12.

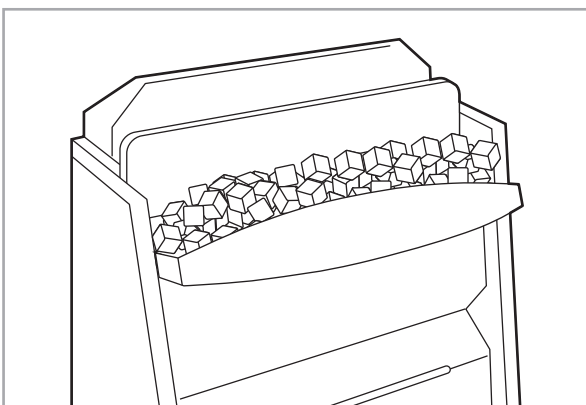


Figure 3.8

4. Technical specifications

Type	Power (kW)	Voltage	Connecting cable	Fuse
Ahti, Ukko 6.0	6.0	400 V 3N	5 x 1.5 mm ²	3 x 10 A
Ahti, Ukko 8.0	8.0	400 V 3N	5 x 2.5 mm ²	3 x 16 A
Ukko 10.5	10.5	400 V 3N	5 x 2,5 mm ²	3 x 16 A

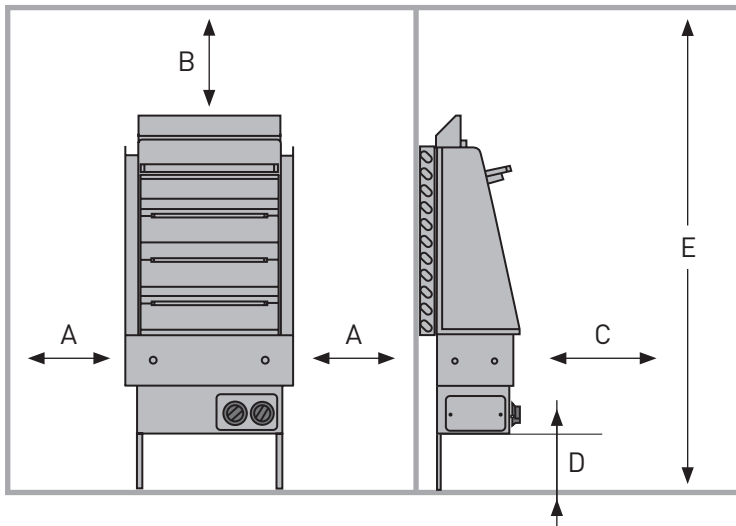
Table 4.1

Heater dimensions and required quantity of stones

Type	Width (mm)	Depth (mm)	Height (mm)	Stone amount (kg)
Ahti, Ukko 6.0	420	250	750	41
Ahti, Ukko 8.0	420	300	850	55
Ukko 10.5	500	350	970	70

Table 4.2

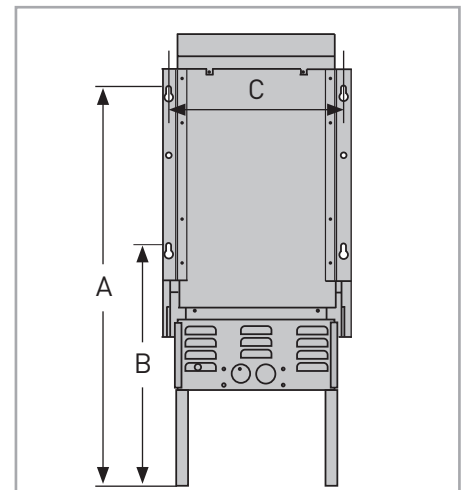
Minimum distances to inflammable material



Type	A	B	C	D	E	Volume
Ahti, Ukko 6.0	70	900	300	150	1900	5–8 m ³
Ahti, Ukko 8.0	100	950	300	150	2100	7–10 m ³
Ukko 10.5	70	990	200	150	2100	9–15 m ³

Table 4.3 Minimum distances to inflammable material (mm)

Attachment points



Type	A	B	C
Ahti, Ukko 6.0	792	612	400
Ahti, Ukko 8.0	854	604	400
Ukko 10.5	976	776	470

Table 4.4 Attachment points (mm)

Attachment points in corner installations

	6.0 kW	8.0 kW	10.5 kW
A	220	220	365
B	310	310	435
C	275	275	310
D	140	206	260
E	615	615	780
F		103	130

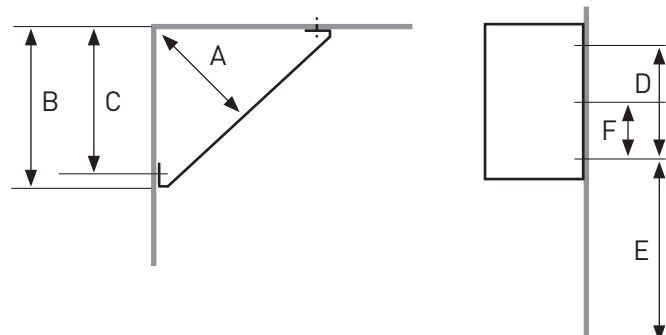


Table 4.5 Attachment points in corner installations (mm)

5. General instructions for users of Ahti and Ukko heaters

Note

Electrical connections may only be carried out by an electrician with valid installation authorization according to the current regulations. The Ahti and Ukko electric heaters are 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

Preheating

Stack the heater stones according to the instructions. **Before you start using the heater, you need to preheat the heater two consecutive times** (follow the same procedure also when the heater blocks are replaced). In the first preheating, the heater will be heated for twenty minutes with the temperature control set to the middle position. **Let the heater cool down completely before the second, 40-minute preheating session**, in which the temperature control is set to the $\frac{3}{4}$ position. During preheating, the resistors may emit fumes, so please ensure that the room is properly ventilated. **Do not throw water on the heater during preheating.** Always monitor the preheating runs! If preheating is not carried out in accordance with the instructions, the soapstone warranty will become void.

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 a mechanical thermostat (see page 11). 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 4, item 6).



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.

Sauna room structure

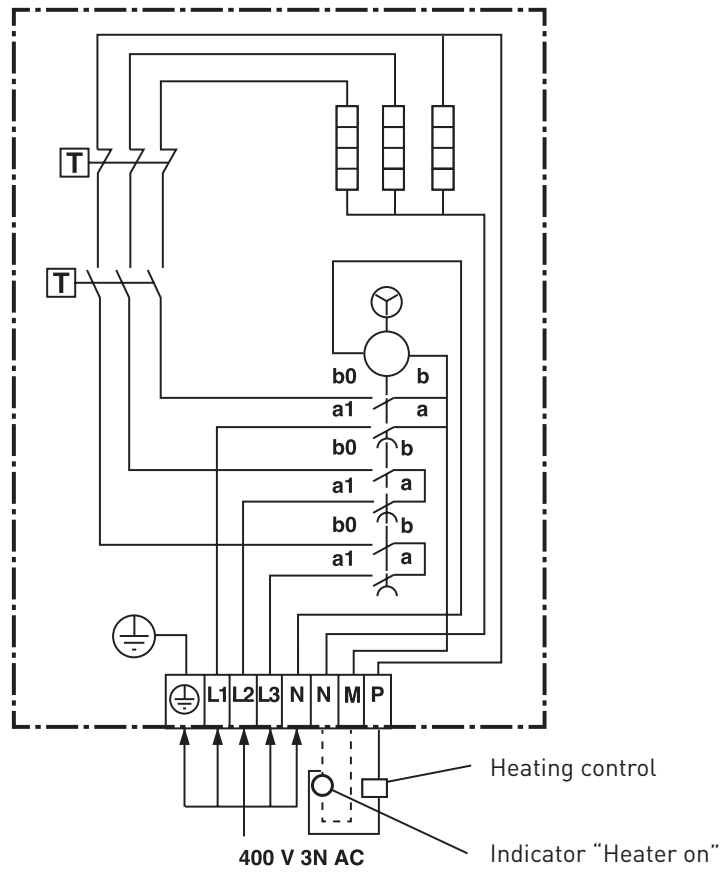
The sauna and its ceiling, in particular, should have good thermal insulation, as heat tends to escape through the ceiling. Due to the moisture, we recommend that you use aluminium paper. The size of the heater should be selected according to the size of the sauna (in cubic metres). In addition to calculating 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.

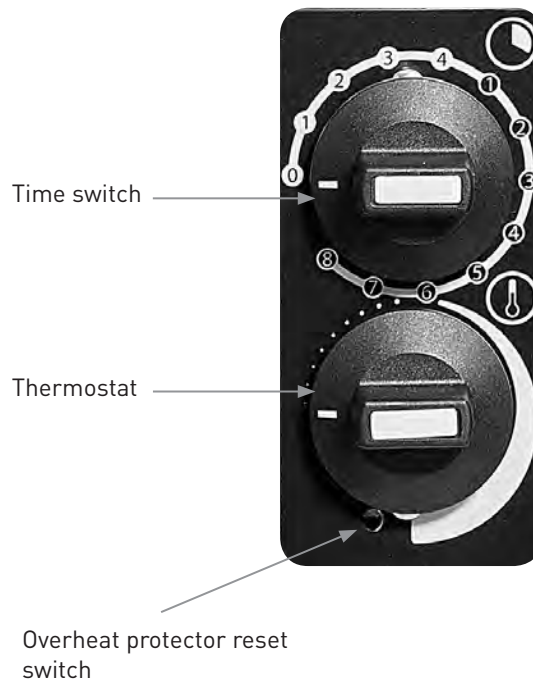
The air in the sauna needs to change at least 6 times per hour. For a sauna with an electric heater, mechanical ventilation is the most convenient ventilation method. The supply air should be provided through an inlet located 500 mm, at a minimum, above the heater, either on the wall or in the ceiling. 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 an easier removal of moisture after sauna sessions.

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

7. Wiring diagram



8. Time switch and thermostat operation



The time switch (4+8 h) is also the heater's main switch. After a set time, the time switch automatically switches the heater off. With the timer function, the heater can be set to switch on in 1–8 hours. The maximum warm-up time is 4 hours.

For example:

If you want the sauna to be ready as soon as possible, set the time switch between 1 and 4. The heater switches on immediately and begins to warm up. Set the desired temperature by turning the thermostat.

If you want the sauna to be ready in three hours, turn the timer to 2 on the time switch scale of 1–8. The timer starts and the power will be switched on and the heater will start warming up after two hours. When the power has been switched on, the heater will remain on for a maximum of 4 hours. After that, the power will be switched off automatically. You can switch the power off sooner by turning the time switch to zero (0).

Always make sure that the time switch has switched the power off after the set time period!

Additional connection options

Connecting a signal light outside the sauna room

The connection cable used should be, for example, the H07RN-F cable with a cross-sectional area the same as that of the connection cable.

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.

9. Troubleshooting

Heater does not warm up

Is the power on?

Has the overheating protector tripped?

→ This is reset by pressing the overheating protector reset switch powerfully with a sharp object until a click is heard.

The cause of overheating must always be determined before the heater is switched on again! If necessary, contact the dealer or manufacturer.

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.)

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.

Maintenance, 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.

Soapstone as material

Small pebbles or pieces may come off the soapstones 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. The heater blocks will become brittle, change colour and may blister over the years, which indicates that they need to be changed. Any spots of rust are due to the ferric oxide contained in soapstone. You may try to clean the stone surface with a brass brush or a wet sanding paper.

Changing the soapstone blocks

Stack the heater stone according to the instructions. **Before you start using the heater, you need to preheat the heater two consecutive times** (also when the heater blocks are replaced). In the first preheating, the heater will be heated for twenty minutes with the temperature control set to the middle position. **Let the heater cool down completely before the second, 40-minute preheating session**, in which the temperature control is set to the $\frac{3}{4}$ position. During preheating, the resistors may emit fumes. Therefore, ensure that the room is properly ventilated. **Do not throw water on the heater during preheating.** Always monitor the preheating runs! If the preheating is not carried out in accordance with the instructions, the soapstone warranty will become void.

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