

MONDEX[®]

User manual and
installation instructions of
Total Rock sauna
heaters



INTRODUCTION

Dear owner of Mondex sauna heater manufactured in Finland! Thank you for choosing Mondex sauna heater and we wish you lots of fun and pleasant visits to sauna.

The aim of this user manual is to help you use your sauna heater in the right and safe way. The user manual contains detailed information about the sauna heater and the accessories belonging or mounted to it as well as information about the usage and maintenance of the sauna heater.

We recommend you to carefully read the user manual and familiarize yourself with the sauna heater before starting to use it. If this is your first Mondex sauna heater or if you have acquired a new type of Mondex sauna heater with which you are not familiar yet, make sure that the instructions of the user manual are followed in order to have a comfortable and safe sauna experience.

Sellers of the sauna heater are glad to provide additional information and to answer your questions both at local points of sale and in the customer service of Mondex Oy.

We wish you pleasant sauna experience,

A handwritten signature in cursive script, reading "Jarmo Niikhanen".

Managing Director
Mondex Oy



In order to have a safe sauna experience, you should first of all carefully read the following warnings!

Sauna heater can be connected with the electric circuit by an electrician who has the installation right in compliance with the valid regulations.

Mondex electrical sauna heater is suitable for using in a family sauna, one (1) heater per sauna room. Keep the user manual and installation instructions for later use, if needed.

Always check that the distance needed for fire safety is sufficient!

If connection instructions are not followed, there may be a problem with fire hazard!

In order to avoid blocking ventilation of the heater, do not fill the inside of the sauna heater elements with stones!

Always check the sauna room before switching the heater on!

Always make sure that the control unit has been switched off after the specified time of power supply has passed!

Do not use sauna for drying clothes or laundry due to fire hazard.

You have to be careful near hot sauna heater as the stones and metal parts of the heater heat to the temperature, which may cause skin burns.

Water vapour from the heater is hot and may cause scalds.

Children, people with mobility impairment and sick people must be watched in sauna.

Sauna platform and floor can be slippery. Therefore, you have to move very carefully in sauna.

Do not go to hot sauna under the influence of psychotropic substances (alcohol, medicines, drugs, etc.)

Insufficiently filled stone place causes fire hazard.

Covering the sauna heater causes fire hazard.

The device is not intended to be used by children or any other persons whose physical, sensory or mental ability or lack of experience and knowledge prevent safe usage of the device, except in cases a person responsible for the safety of such persons is watching them or has trained them to use the device.

Make sure that the children do not play with the device.

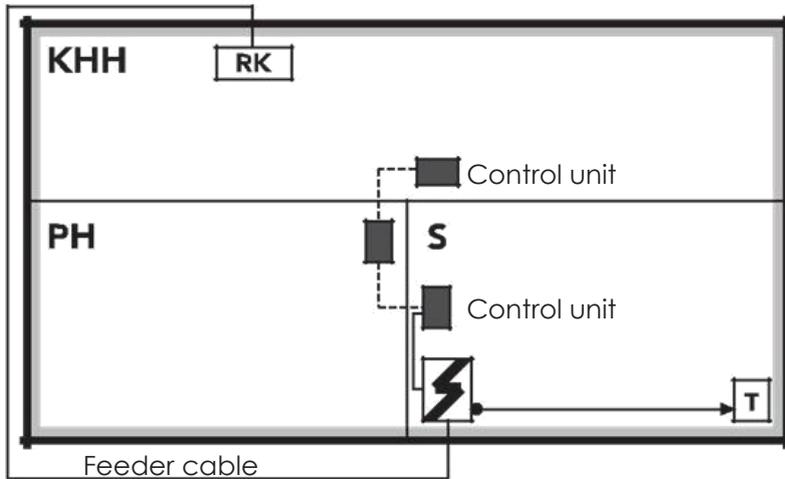
The device is in conformity with:



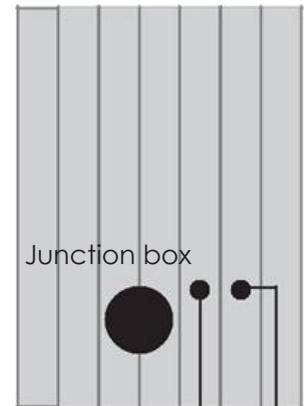
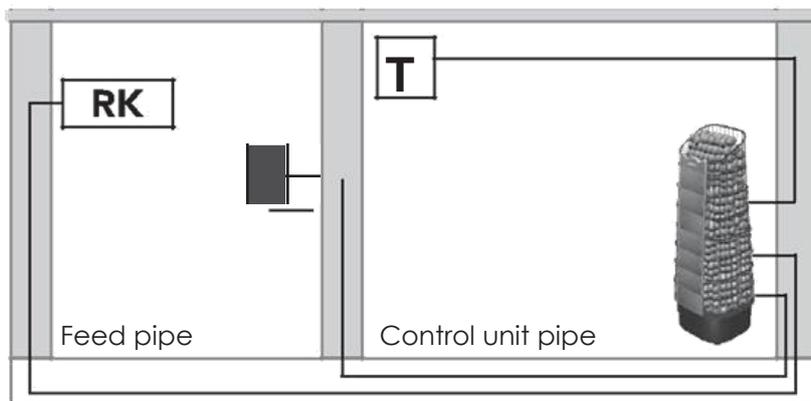
For continuous product development purposes, Mondex reserves the right to change the appearance and technical qualities of its products without any previous notice.

Installation of the sauna heaters:

Control unit SenseMate Total:



Make sure that all connections between sauna and the heater are made without breaking the constructions!

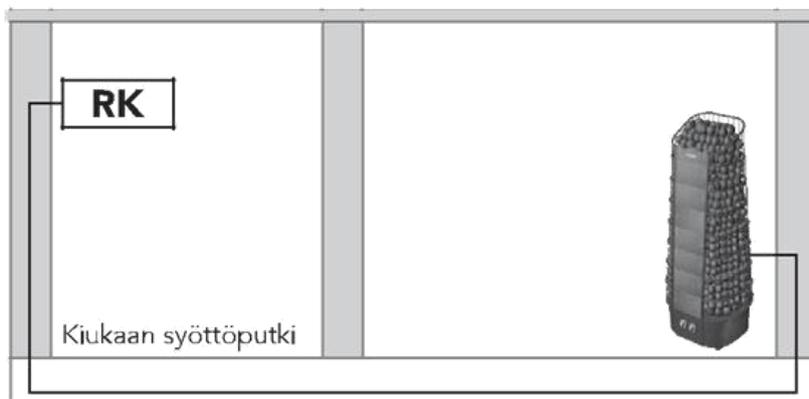


A pipe to control unit

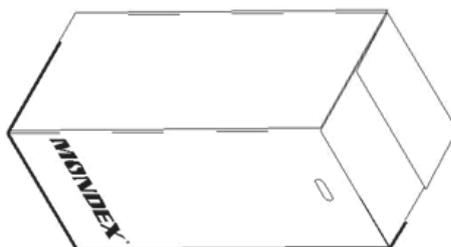
A pipe until the thermostat

(It is not obligatory - the wire can be taken under the panel.)

Mechanical control unit:



Installation of the sauna heater: assembly



Sauna heater box

The sauna heater has to be stored in packaging, in a dry and warm room until installation.

The packaging contains sauna heater and necessary hole rocks. **Rocks for the sauna heater < 10 cm which are placed inside hole rocks between the elements) are not included in the set. Buy 2 boxes of these.** Check the condition of the parts by viewing them. If you discover any deficiencies, contact the seller. While taking the sauna heater out of the packaging make sure that it is not hit or shaken. It is recommended to cover the sauna floor before the installation.

An electrician needs to connect the wires before the installation of the sauna heater. If needed, the position of the heater can be adjusted by means of the adjustable stands. During the installation of the sauna heater, pay attention to the distance from a burning material, referred to on page 6 in Table 2.1.

The sauna heater is mounted on the floor and the stands are adjusted so that the heater is straight.



Threaded rods are screwed in ready-made thread openings in the lower part of the sauna heater. Screw the threaded rods to the depth of 50-70 mm into the bottom plate.

Attention! Remove all films before the usage of the sauna heater!

Laying the rocks:

Rocks of Mondex sauna heater Total Rock are laid so that the elements remain straight. The elements cannot be twisted so that they are stuck at the metal construction of the heater.

Filling the sauna heater with the rocks

Lay hole rocks layer by layer on threaded rods. In order to have the best result, try fitting different hole rocks not to have unnecessary gaps.

It is reasonable to put small heater rocks with the size under 10 cm (these are not part of the set) inside the elements and between the elements and hole rocks.

Recommendation: first of all, lay 2-3 layers of hole rocks and then the internal rocks. Keep on laying like this until the end.

When you have laid about 30 cm of hole rocks, place the first layer of support rings (see the picture next to the text)

After placing the support rings carry on laying both hole rocks and internal rocks.

The next layer of support rings is placed about 60-70 cm from the bottom plate of the sauna heater.

When all the hole rocks and internal rocks are in their places, you can put heater rocks on top of the sauna heater in order to hide the elements.

Dents made by the user are not subject to the warranty or any other product liability provided by Mondex. While laying rocks on the sauna heater, make sure that you avoid contact between the rocks and the painted surface of the sauna heater in order to prevent damages

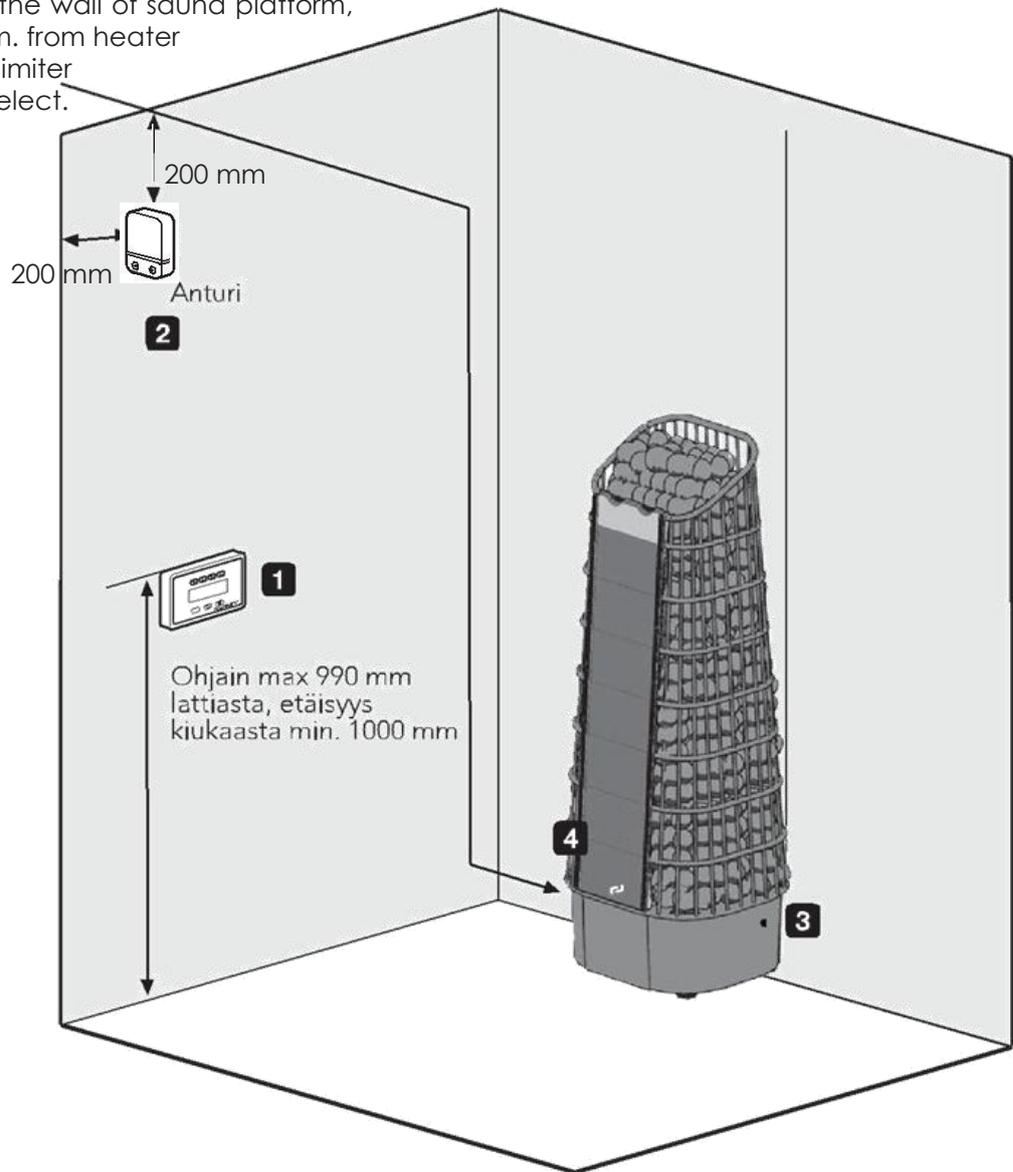


Figure 1.0 Whole

Mondex Total Rock 6,6/9,0 kW

Models with SenseMate control unit:

1. Control unit
2. Sensor, placed on the wall of sauna platform, if possible. At least 1 m. from heater
3. Resetting button of limiter
4. Main switch of the elect.



Models with mechanical control unit:

Models with mechanical control unit are different from the above-described version in the following:

1. Turn-switch for heating and timer (no external sensor)
2. Resetting button of the temperature limiter is on the front panel of the sauna heater

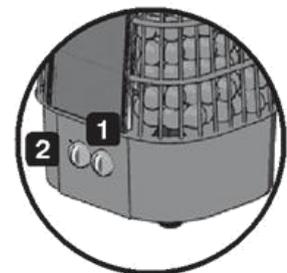


Table 1.1 Technical data

Model	Capacity (kW)	Supply voltage	Connection cable	Fuse
Total Rock 6.6	6,6	400 V 3N	5 x 1,5mm ²	3 x 10A
Total Rock 9.0	9.0	400 V 3N	5 x 2,5mm ²	3 x 16A

2.1 Minimum distance from the burning material

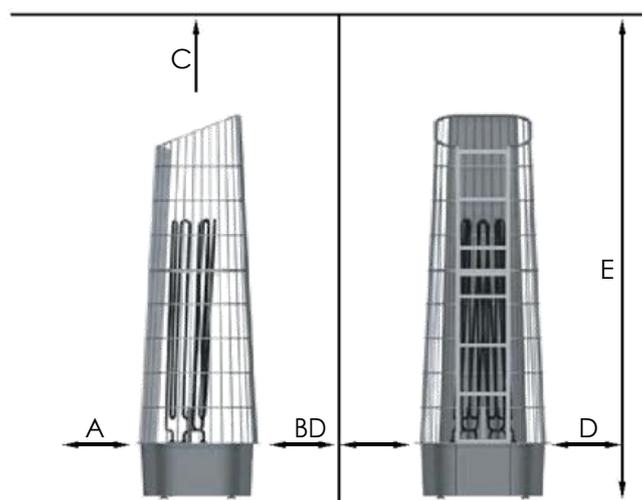


Table 2.1 Minimum distance from the burning material (mm)

Model	A	B	C	D	E	Volume
Total Rock 6.6	100	100	770	100	1900	7 - 10m ³
Total Rock 9.0	120	120	770	120	1900	9 - 15m ³

Table 2.2 Dimensions of the sauna (mm)

Model	Width (mm)	Depth (mm)	Height (mm)
Total Rock 6,6	400	400	1100
Total Rock 9.0	400	400	1100

General instructions for the user of Mondex sauna heater Total Rock

Reminders

Sauna heater can be connected with the electric circuit by an electrician who has the installation right in compliance with the valid regulations. Mondex electrical sauna heater is suitable for using in a family sauna, one (1) heater per sauna room. Keep the user manual and installation instructions for later use, if needed.

Installation

It would be easier for an electrician to make the connections of the sauna heater before the final installation of the heater. Rubber cable H07RN-F is used as the connection cable.

Fire safety distances

Fire safety distance is measured from the burning material. Check the minimum distance of Mondex sauna heater Total Rock from the burning material from the table on page 6. Safe distance from the burning material is half of the value shown in the table. If needed, ask about the fire safety of the wall covering material from the seller or manufacturer of it.

Possibilities for additional connections

Adjusting electric heating with the sauna heater: the control cable of the electric heating is taken directly into the junction box of the sauna heater, from where it is taken by means of a connection cable, with the same strength rubber cable, to the terminal block.

ATTENTION! If the connection instructions are not followed, fire hazard may be caused!

ATTENTION! Remove all films before the usage of the sauna heater!

Preheating

Rocks for the sauna heater are laid according to the instructions on page 4. It is recommended to have some preheating before the usage of the sauna heater. Allow the heater to heat up for 30 minutes. In case of a mechanically adjustable model, the temperature is adjusted by thermostat so that the temperature in sauna is 40 °C, in SenseMate control unit the temperature is set to 50 °C. The elements may discharge smell of burning during preheating, therefore you need to ensure good ventilation. Do not use steam water during preheating. Do not leave the sauna heater without supervision during preheating!

Application

Always check the sauna room before switching on the sauna heater! Always make sure that the control unit has been switched off after the specified time of power supply has passed!

Adjusting the temperature

Depending on the model of the sauna heater, the desired temperature is set either by means of SenseMate Total control unit or mechanical thermostat (see p. 14–18). The actual heating time of the sauna is affected by the size, construction and thermal insulation of the sauna. With the help of the thermostat it is possible to keep the desired temperature in sauna. If the temperature of the sauna room rises for some reason dangerously high, the temperature limiter switches the sauna heater off. You always have to find out the reason for overheating. In order to switch the sauna heater on again, you need to push the resetting button of the temperature limiter (see Figure p. 17).

The right heating time

Heating sauna too long wastes energy and it does not improve the qualities of sauna steam. In order to have the best sauna steam, keep the heating time relatively short, i.e. depending on the size of the sauna and capacity of the heater 45-60 min. Size of the sauna, glass door, window or the materials used in sauna may indicate a longer heating time.

Sauna steam water

We recommend you to use water at room temperature. Household water is used as sauna steam water. You have to use large quantities of sauna steam water, ½-1 litre at a time. You get a milder steam if you throw water on lower rocks. For stronger and more intensive steam pour ca 1 litre of warm water at a time on the sauna heater.

Sauna room

Saunas need to have good thermal insulation, especially the ceiling as the steam tries to escape through this. It is advisable to use aluminium foil due to humidity. If sauna has uninsulated stone, tiled and concrete surfaces or log walls, the power of the sauna heater needs to be increased. In case sauna has a regular wall construction (wool insulation-aluminium foil-wood), sauna heater power of ca 1 kW is estimated per 1 m³ of sauna. Power consumption increases per each uninsulated area square meter (incl. glass walls and doors and uninsulated stone surfaces) as much as volume by 1.5 m³. Additionally, 1.3 m³ / square meter has to be calculated for glass windows. In borderline cases, choose the sauna heater with bigger capacity.

Sauna ventilation needs to be efficient in order to have fresh air with large oxygen content. Sauna room air needs to change 6 times per hour. It is recommended to place a fresh air pipe with a valve above the sauna heater. Exhaust valve is placed as far from the sauna heater as possible and near the floor surface.

Exhaust air can be directed into the washing room also under the door. In this case the opening under the sauna room door needs to be at least 50 mm and the exhaust valve needs to be in the washing room. Further information is provided in construction instructions and regulations.

If sauna heater does not heat up

Is power supply switched on?

Has a higher value than sauna temperature been set for the control unit?

Has temperature limiter been applied?

-> For resetting push a button through the opening next to the thermostat switch with an item with a thin handle until you hear a click. You always have to find out the reason for overheating before switching the sauna heater on again!

If needed, contact either the seller or the manufacturer of the device

Warnings

- Do not use sauna for drying clothes or laundry due to fire hazard.
- You have to be careful near hot sauna heater as the stones and metal parts of the heater heat to the temperature, which may cause skin burns.
- Water vapour from the heater is hot and may cause scalds.
- Children, people with mobility impairment and sick people must be watched in sauna.
- Sauna platform and floor can be slippery. Therefore, you have to move very carefully in sauna.
- Do not go to hot sauna under the influence of psychotropic substances (alcohol, medicines, drugs, etc)

Warranty

Mondex Oy provides a two-year (2-year) warranty for Mondex sauna heaters as from the purchase date. The warranty applies only to sauna heaters in private use. Keep the purchase receipt or guarantee certificate. The warranty does not cover external or internal mechanical damages caused, for example, by a stone that hit the sauna heater or falling of the sauna heater.

Maintenance, spare parts

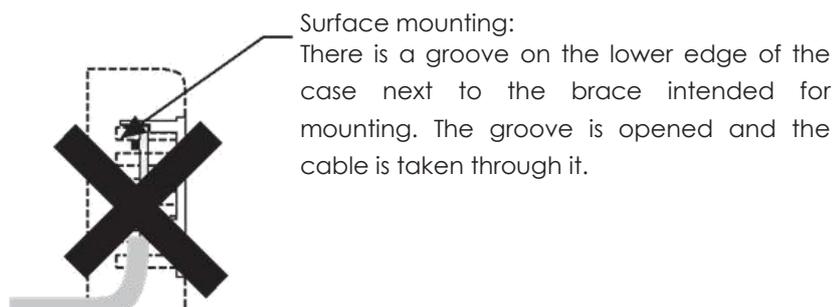
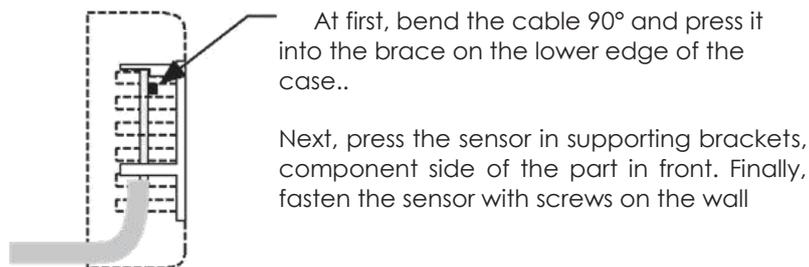
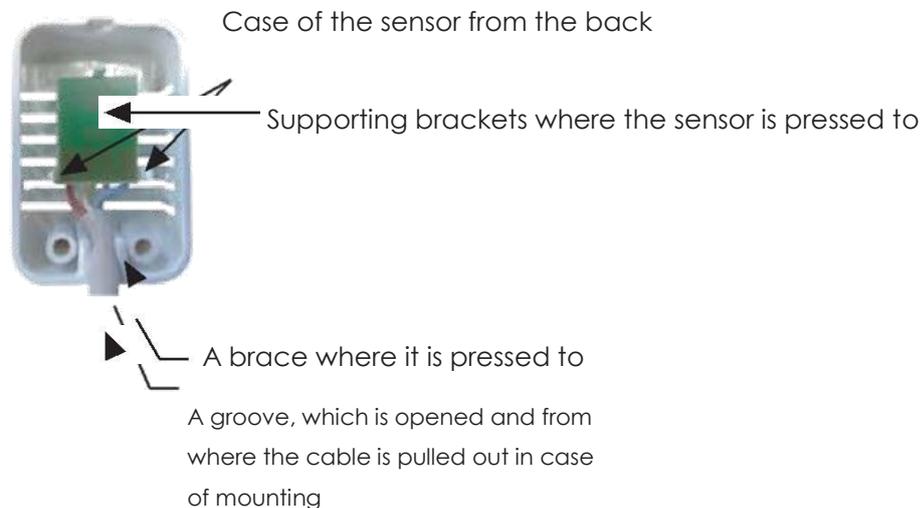
If the sauna heater has an indescribable fault, contact the manufacturer's maintenance counselling telephone at (+358) 0500 889 559. Spare parts can easily be obtained from the seller of Mondex products and from the manufacturer himself. Before ordering the spare parts, write down the name and capacity of the sauna heater so that the right parts would be sent to you.

Natural stone as a material

The natural stone used in the sauna heater may emit a substance and pieces may come off. As it is not a defect but the quality of a natural material, which cannot be foreseen at the moment of producing the product, the manufacturer shall not take any liability for the potential damages caused by this.

Mounting of the wall sensor and control unit (model with SenseMate Total control unit)

Length of the sensor cable is 14 m. The control unit cable is switched off from the same cable. The sensor has been already attached to the cable. Preparations: there has to be a pipe in sauna wall or a hole in the panel wall for the cable, which would reach the sauna heater. The other end of the cable is connected with the heater.



Mounting the wall sensor control unit (SenseMate Total control unit model)

During mounting of the control unit and wall sensor, the sauna heater has to be free of supply voltage. Turn the circuit breakers of sauna heater's cable into position OFF in the fuse box or screw the fuses loose.

Attention! There may be external sources of power supply in the sauna heater (e.g. heat leading). Always check before the mounting whether the sauna heater has power supply in it or not!

Control unit, terminal block in the left-hand upper corner.

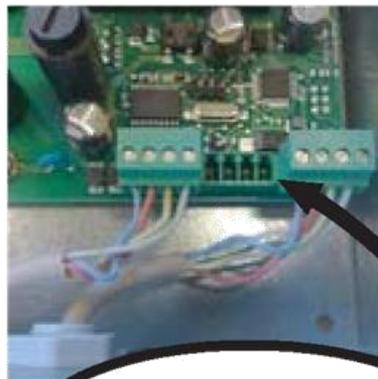


The control unit is connected with the sauna heater by means of a 4-pin silicone cable. The wall sensor is connected with the same type of cables. Both cables are delivered in one piece, so that the sensor has already been mounted to one end. The cable has to be cut through in the suitable place, so that it would be of suitable length. The total length of the cable in the set is 14 m.

It is recommended to mount the sensor on the wall of sauna platform but at least 1 m from the sauna heater and 20 cm from the ceiling and wall.

The control unit may be mounted in the dressing or washing room or in other living-rooms or in sauna. In sauna, the control unit can be mounted at the height of max. 0.99 m (Figure 1.0). If the control unit is mounted so far that the length of the cable in the set is not enough, it can be lengthened, for example, with MHS telephone cable or any other threaded cable within the range outside sauna. The accompanying silicon cable has to be always used in the sauna room. When continuing the cable, you must pay attention that the blue and brown cables are connected with each other into one twisted pair and yellow and white cable into the other twisted pair. Additionally, you also have to pay attention that the right order of the buttons is kept at the end facing the control unit.

Connection in the sauna heater



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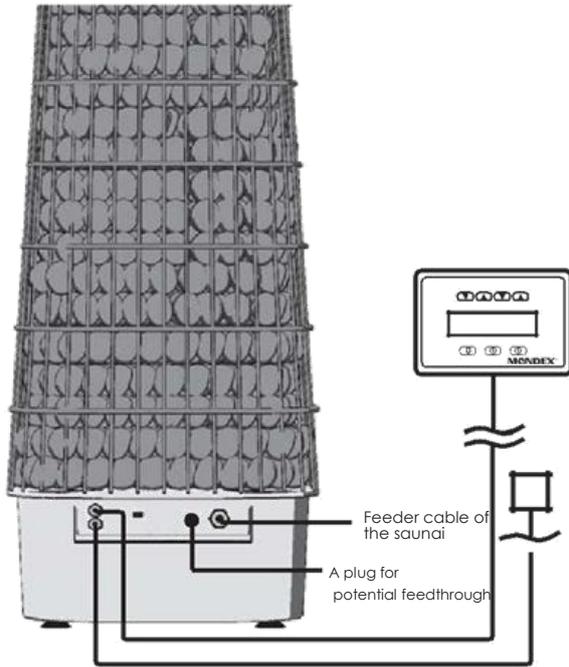


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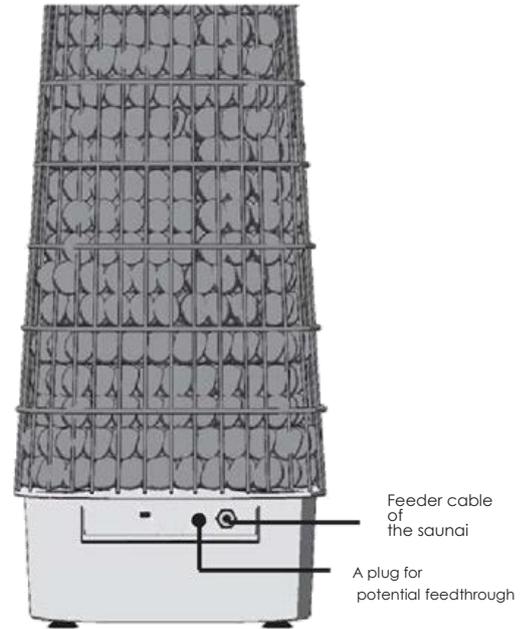
In order to facilitate the mounting, the connectors can be removed from the printing plate.

Connections

SenseMate model equipped with the control unit

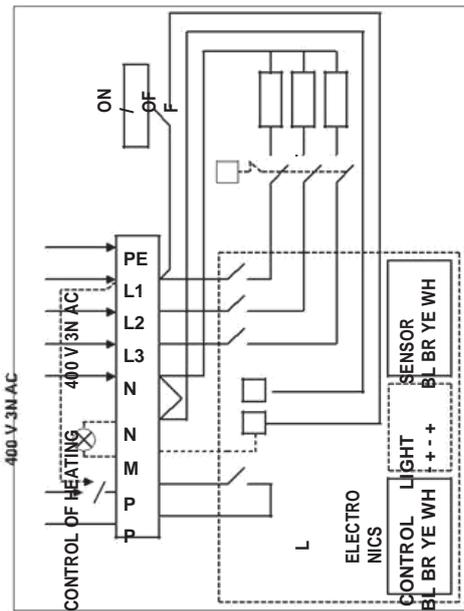


Model with mechanical control unit

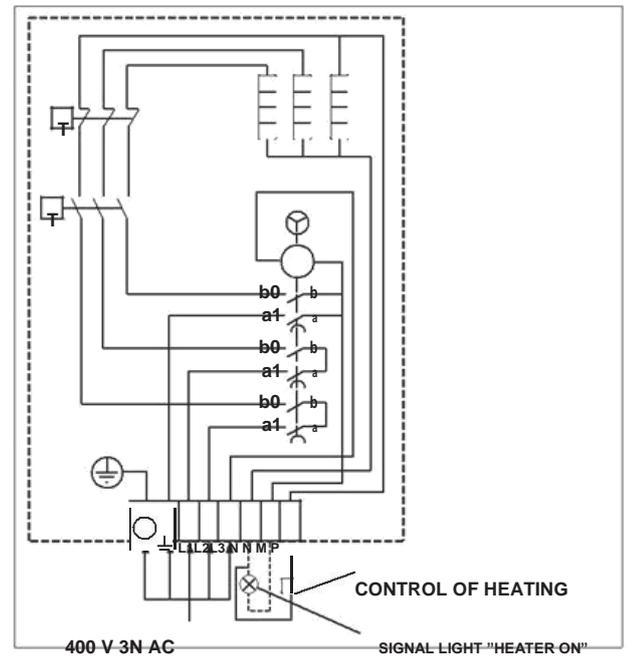


Connection diagrams

SenseMate model with the control unit



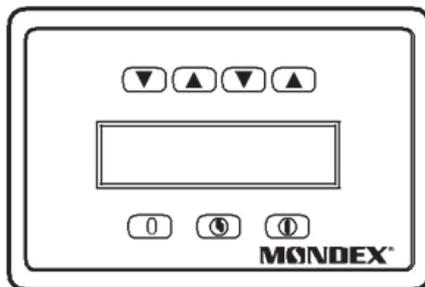
Model with mechanical control unit



Operation principle of the control unit

Buttons

Main functions of the sauna heater (OFF, timer, ON) are controlled with the lower row of the buttons    on the control unit. The buttons have symbols corresponding to the functions. By means of the upper row arrow buttons   of the control unit such adjustment activities are controlled like timer and operating time, temperature and setting menus. It is possible to switch directly from the timer function to operating time function or the other way round, but timer or operating time cannot be switched on without switching the sauna heater first off from the button OFF .



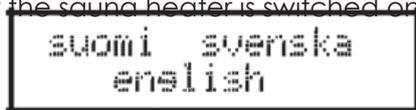
-  Reduces the displayed amount
-  Increases the displayed amount
-  Off
-  Timer
-  On

Switching on

When the sauna heater is switched on, for a moment a text "MONDEX SenseMate Total" is displayed



If the sauna heater is switched on for the first time, the control unit will ask the desired menu language.



In order to choose the language, push the buttons as follows:

- Finnish: either of the left-hand buttons   in the upper row, e.g. arrow down
- Swedish: either of the right-hand buttons   in the upper row, e.g. arrow down
- English: the middle button  in the bottom row (timer)

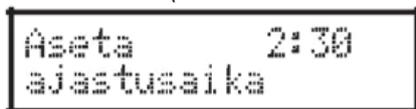
Switched off mode OFF

In mode OFF, the sauna heater is switched off and temperature and OFF are displayed..



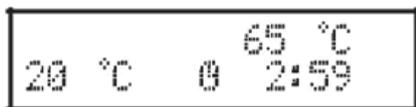
Timer

When pressing the button , the display asks whether you wish to set time for the timer. The valid default value is the last saved or used timer time. Timer can be set with the right-hand arrow buttons   with 30-minute steps. Maximum value of the timer depends on the usage purpose of the sauna heater (used at home/ for business).



In few seconds, regular timer reading is displayed and at the same time the chosen time for the timer is saved. The upper row of the display has a temperature line, the vertical line of which shows the desired temperature value and the filled part of the line displays the current sauna temperature. The desired temperature can be adjusted with the right-hand arrow buttons    .

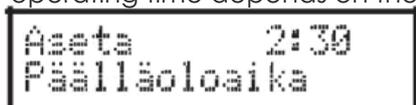
The clock symbol of the timer and the remaining time, after which the sauna heater will be switched on, are displayed on the bottom line.



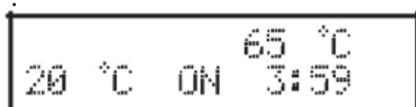
If the chosen time ends, the sauna heater will be switched to the mode ON and the operating time will be 4 hours, irrespective of the adjusted operating time.

ON

By pressing the button ON , the sauna heater will start to heat up and the display asks if you wish to set the operating time. The valid default value is the last saved or used operating time. Operating time can be set with the right-hand arrow buttons    with 30-minute steps. The value of the operating time depends on the usage purpose of the sauna heater (used at home/ for business)



In seconds, the time is displayed and at the same time, the chosen operating time and desired sauna temperature are being saved. Temperature is displayed in the left lower corner of the display and the desired sauna temperature is displayed in the right upper corner, just as in case of the timer mode. The desired temperature can be adjusted with the upper arrow buttons   



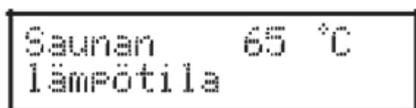
If the chosen operating time is completely over, the sauna heater will be switched off (OFF).

Adjustment menu

The control unit has a menu, which contains operations that are used seldom. The menu can be browsed with the arrow buttons   . Once the menu has been browsed, main indicators are displayed again. If buttons OFF, ON or the timer button    , are pressed while browsing the menu, the corresponding data are displayed.

Sauna temperature

The desired sauna temperature. Pay attention that the temperature can be adjusted also in timer or ON mode directly on the main display. The minimum and maximum temperatures depend on the usage purpose of the sauna heater (used at home/ for business)



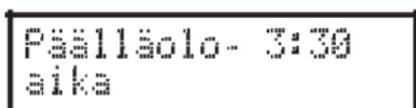
Timer

Pay attention that time for the timer is asked every time timer is switched on. Time can be chosen with 30-minute steps. The maximum time for the timer depends on the usage purpose of the sauna heater (used at home/ for business)



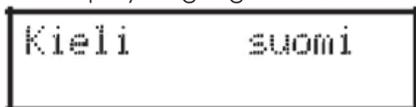
Operating time

Pay attention that operating time is also asked every time the sauna heater is switched on. The operating time can be adjusted with the arrow buttons    with 30-minute steps. The maximum operating time depends on the usage purpose of the sauna heater (used at home/ for business).



Language

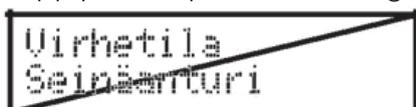
The display language can be Finnish, Swedish or English.



Failures

If a failure occurs, the display shows a corresponding error message. At the same time, the sauna heater will be switched off and it cannot be switched on before the power supply has been switched off and on again. Switch on the sauna heater again only after you have found the.

If there is a failure in the control unit, switch off the power supply of the electronics from the main switch (see p. 4 "The main switch of the electronics") and wait for 2 minutes. Switch on the power supply. A sample error message!



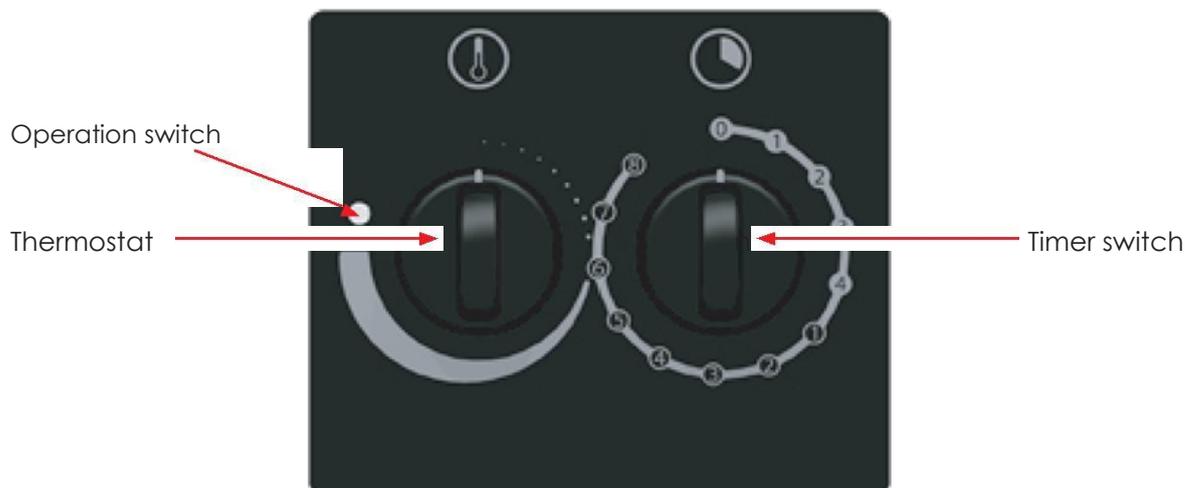
Error messages

Error message	Action
Wall sensor	Check the wiring condition of the wall sensor.

Attention! The manufacturer may have adjusted different limit values for the following functions, if so asked by the client:

- Time for the timer
- Operating time
- Min/max temperature values

**Operation of the timer switch and thermostat
(models with mechanical contron unit)**



Timer switch (4 + 8 h) functions as the main switch of the sauna heater. When the desired time passes, the timer switch automatically interrupts the power supply to the sauna heater. If you wish to heat the sauna heater after a certain time period has passed, you can set the timer to start the heating process in 1-8 hours. The maximum heating time is 4 hours.

For example:

If you wish to have sauna as quickly as possible, turn the timer switch between 1-4. The sauna heater switches on immediately and starts to heat up. Turn the thermostat to have the desired temperature.

If you wish to go to sauna, for example, in three hours, turn the timer switch to position 2 on the timer scale 1-8. The timer starts and in two hours the power supply will switch on and the sauna heater starts to heat up. The sauna heater remains switched on for 4 hours. After that the power supply will be switched off automatically. If you wish, you can switch off the power supply earlier as well by turning the timer switch into position 0 (zero).

Always make sure that the timer switch has been switched off after the specified time of power supply has passed!!

If the sauna heater does not heat up

Is power supple switched on?

Has the timer switch been turned into the position where should heat up?

Has the thermostat been set at higher value than sauna temperature?

Has the timer switch stopped or got stuck (e.g. pressed to the front panel? Suitable distance is 1–2 mm

Has the temperature limiter been applied?

-> For resetting push a button through the opening next to the thermostat switch with an item with a thin handle until you hear a click. You always have to find out the reason for overheating before switching the sauna heater on again!

If needed, contact either the seller or the manufacturer of the device!

Possibilities for additional connection

Connecting the signal light outside the sauna room

For example, cable H07RN-F is used as a connection cable, the cross-section of which has to match that of the connection cable.

Adjusting electric heating with the sauna heater

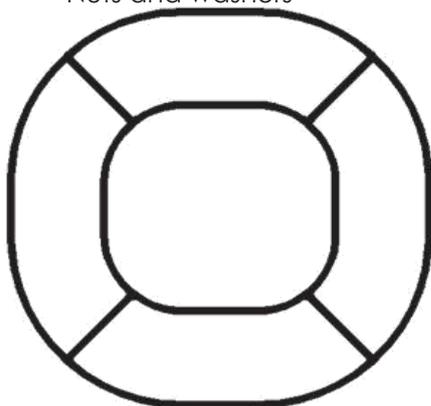
The control cable of the electric heating is taken directly into the junction box of the sauna heater, from where it is taken by means of a connection cable, with the same strength rubber cable, to the terminal block of the heater.

Mounting sets for Mondex sauna heaters Total Rock



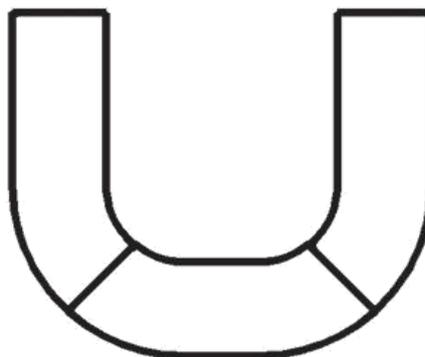
Sauna heater mounted in the middle:

- Front stone
- 2 side stones
- Back stone
- Mounting frame with accs.
- Nuts and washers



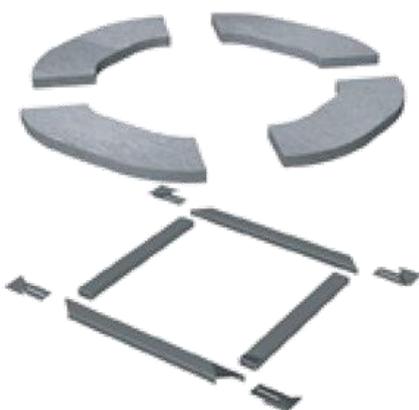
Sauna heater mounted at the wall:

- Front stone
- 2 side stones
- Mounting frame with accs.
- Nuts and washer



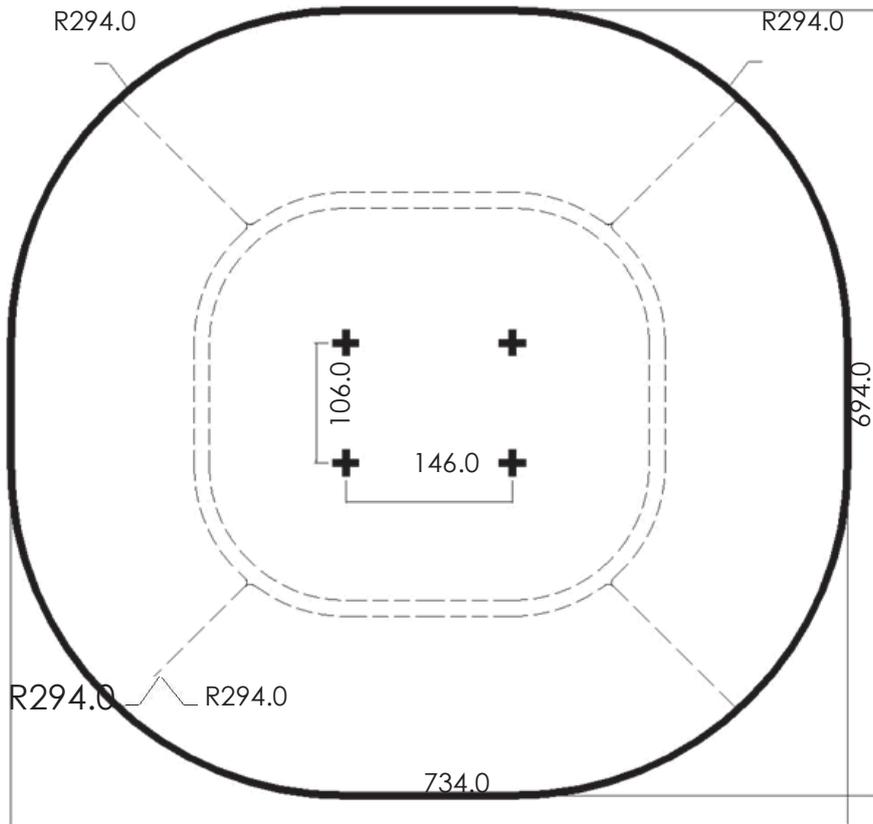
Mounting

In order to join the mounting frames and soapstone units, apply an even layer of heat resistant silicone on the upper surface of the mounting frame.



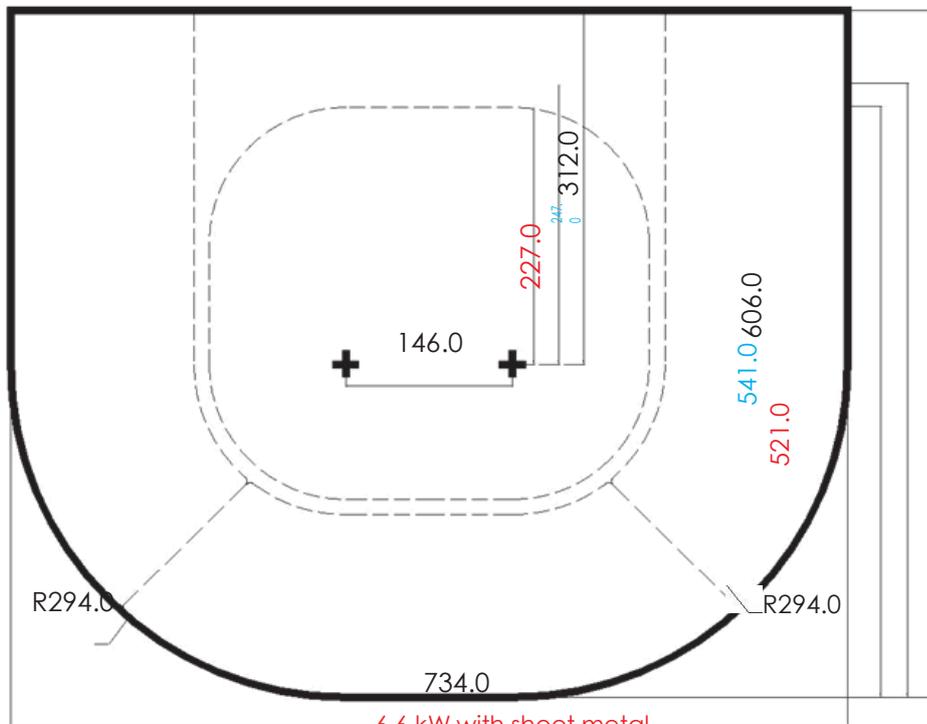
Cut model:

Mondex 6.6 kW and 9 kW sauna heaters Total Rock



Cut model:

Mondex 6.6 kW and 9 kW sauna heaters Total Rock



6.6 kW with sheet metal

9.0 kW with sheet metal

6.6 kW and 9.0 kW without sheet metal

Cut model:
Mondex 6.6 kW and 9 kW sauna heaters Total Rock to be mounted in the
corner of the sauna.

