

Sauna heater

Home combi

HOME-C60 / 1-050-408: Home combi 6.0 kW

HOME-C90 / 1-050-411: Home combi 9.0 kW

INSTRUCTIONS FOR INSTALLATION AND USE

English

EN

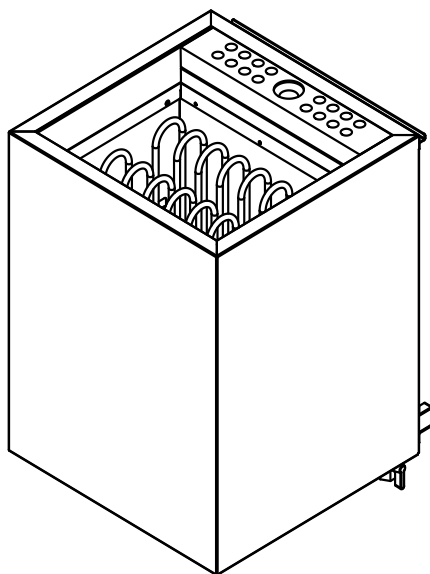


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1. About this instruction manual

Carefully read these instructions for installation and use, and keep them near the sauna. This ensures that you can refer to information on safety and operation at any time.



These installation and operating instructions can also be found in the downloads section of our website: www.sentiotec.com/downloads.

Symbols used for warning notices

In these instructions for installation and use, a warning notice located next to an activity indicates that this activity poses a risk. Always observe the warning notices. This prevents damage to property and injuries, which in the worst case may be fatal.

The warning notices contain keywords, which have the following meanings:



DANGER!

Serious or fatal injury will occur if this warning notice is not observed.



WARNING!

Serious or fatal injury can occur if this warning notice is not observed.



CAUTION!

Minor injuries can occur if this warning notice is not observed.

NOTE!

This keyword is a warning that damage to property can occur.

Other symbols



This symbol indicates tips and useful information.



Do not cover



Read the operating instructions

2. Important information for your safety

The Home combi sauna heater has been produced in accordance with the applicable safety rules and regulations. However, hazards may arise during use. Therefore adhere to the following safety information and the specific warning notices in the individual chapters.

2.1. Intended use

The Home combi is a sauna heater with integrated evaporator. The Home combi may only be used for heating sauna cabins and for increasing the humidity inside the sauna cabin. The Home combi may only be used in conjunction with a sauna control unit without a remote start function.

The Home combi sauna heater can also be used with a sauna control unit with a remote start function, but only in conjunction with the optional safety shutdown feature.

The Home combi sauna heater can also be used in public saunas, but only in conjunction with the optional safety shutdown feature.

Any use exceeding this scope is considered improper use. Improper use can result in damage to the product, severe injuries or death.

2.2. Safety information for the installer

- Installing and connecting the sauna heater may only be performed when the power supply is disconnected.
- Installation may only be performed by a qualified electrician or similarly qualified person.
- A fully disconnecting all-pole isolating device compliant with overvoltage category III must be fitted on site.
- Always use silicone cables that are heat-resistant up to 150 °C to connect the sauna heater.
- Only install one sauna heater in the cabin. The Home fin sauna heater must not be used together with other sauna heaters in a sauna cabin.
- The roof and walls of the sauna cabin must be manufactured from low-resin, untreated or thermally treated wood, e.g. Nordic spruce, hemlock, pine or fir, or from laminated wooden materials. If laminated wooden materials are used, make sure that the adhesive used in them does not give off formaldehyde. If other materials than wood are used in the sauna cabin, these materials must be heat-resistant and corrosion-resistant and must not cause any negative effects on the health of the sauna users.
- The height of the sauna cabin must be at least 1.9 m.
- Observe the specifications on volumes and on ventilation of the sauna cabin in chapter **10. Technical data** on page **25**.
- When positioning the sauna heater, observe the minimum safety distances (see chapter **4.2. Safety distances**).
- Also comply with the regulations applicable at the installation location.
- For your own safety, consult your supplier in the event of problems that are not explained in sufficient detail in the installation instructions.

2.3. Safety information for the user

- The device must not be used by children under 8 years of age.
- The device may only be used by children over 8 years of age, by persons with limited psychological, sensory or mental capabilities or by persons with lack of experience/knowledge under the following conditions:
 - They are supervised.
 - They have been shown how to use the device safely and are aware of the hazards that could occur.
- Children must not play with the device.
- Children under 14 years of age may only clean the device if they are supervised.
- For health reasons, do not use the sauna when under the influence of alcohol, medication or drugs.
- Never operate the sauna heater without sauna stones, as this can cause fires.
- Make sure that no flammable objects have been placed on the sauna heater before the sauna control unit is switched on.
- Heat up the sauna heater for half an hour BEFORE using the sauna for the first time. Do NOT remain in the sauna cabin during this period. Then ventilate the sauna cabin well (see **5.2. Heating for the first time** on page 17).
- Never touch the sauna heater while it is operating. The surfaces of the sauna heater and sauna stones become extremely hot.
- For your own safety, consult your supplier in the event of problems that are not described in sufficient detail in the user instructions.

3. Product description

3.1. Scope of delivery

- Sauna heater
- Instructions for installation and use

3.2. Accessories

<i>Accessories</i>	<i>Item number</i>
Cut-off rocker switch	SFE-350400 / 1-045-583

3.3. Product features

- **Finnish sauna mode:** usually 80 to 100 °C; approx. 10% rel. humidity
- **Combi mode** (only in combination with a combi control): approx. 40 to 65 °C, 35% to 70% humidity. The maximum permissible relative humidity decreases with increasing temperature.

4. Installation and connection

Take the following points into account when positioning and connecting the sauna heater:



WARNING!

Danger of electric shock

- The sauna heater may only be installed and connected when the power supply is disconnected.
- The electrical connection may only be performed by a qualified electrician or similarly qualified person.
- A fully disconnecting all-pole isolating device compliant with overvoltage category III must be fitted on site.
- The Home fin sauna heater is a wall-mounted heater. Before starting the heater, check that the heater has been firmly installed on the mounting rail.

4.1. Installation location and sensor position

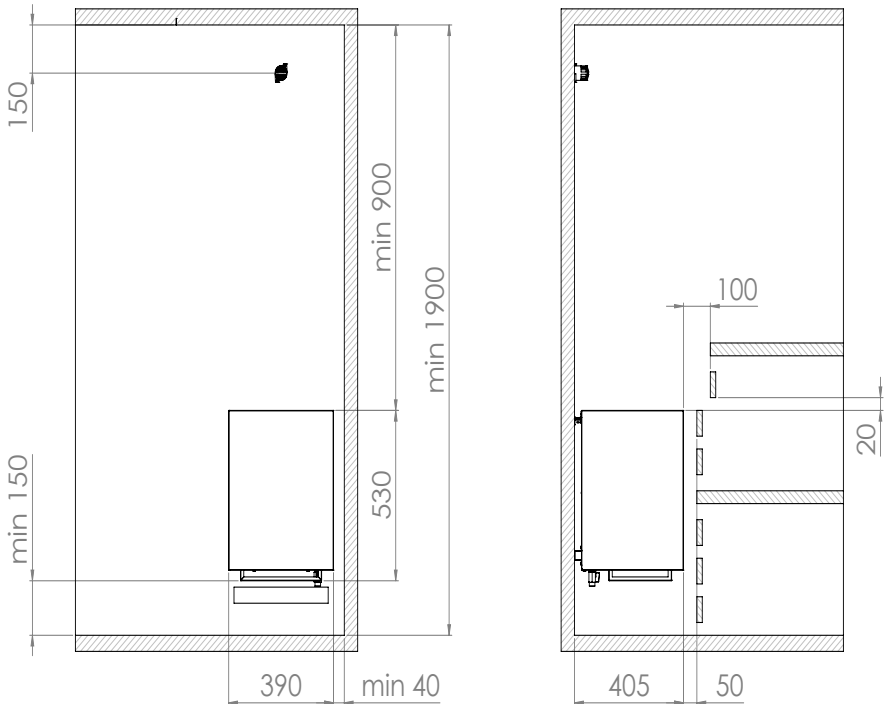
Position the heater centrally in front of the air intake opening on the cabin wall. Observe the safety distances to the cabin wall specified in **Fig. 1**.

Install the temperature sensor with excess temperature cut-out to the cabin wall above the centre of the sauna heater. Maintain a distance of 15 cm to the sauna cabin roof. Observe the assembly instructions for the sauna control unit.

4.2. Safety distances

Observe the minimum safety distances specified in **Fig. 1**.

Fig. 1 Safety distances
 Home combi 6.0 kW and 9.0 kW
 (HOME-C60 / HOME-C90)
 Dimensions in mm



4.3. Installation on the cabin wall

Observe **Fig. 1**, **Fig. 2**, **Fig. 3** and **Fig. 4** (page 9, 10, 11).

1. Attach the mounting rail **1** to the wall horizontally using the wood screws supplied **2**. Observe the minimum distances for the heater shown in Fig. 1.
2. Suspend the heater **3** from the mounting rail from above, moving it downwards. Make sure that the heater is flush with the wall.
3. Secure the heater **3** using the lock screws supplied **4** on the mounting rail **1**.



WARNING!

Risk of fire

- To fix the heater in place and secure it against slippage, use the supplied lock screw **4** for attachment.

Fig. 2 Mounting rail for Home combi
Dimensions in mm

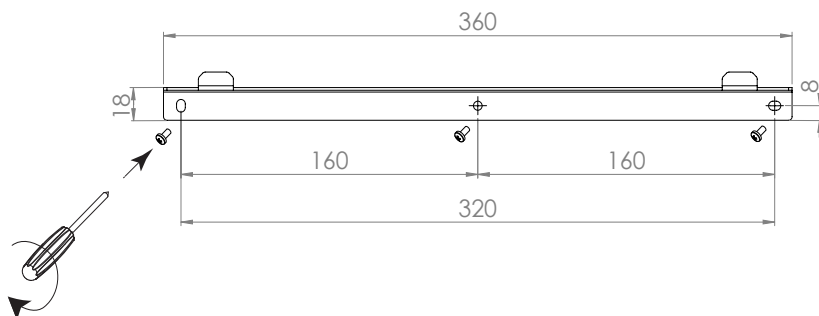


Fig. 3 Position of mounting rail for Home combi
Dimensions in mm

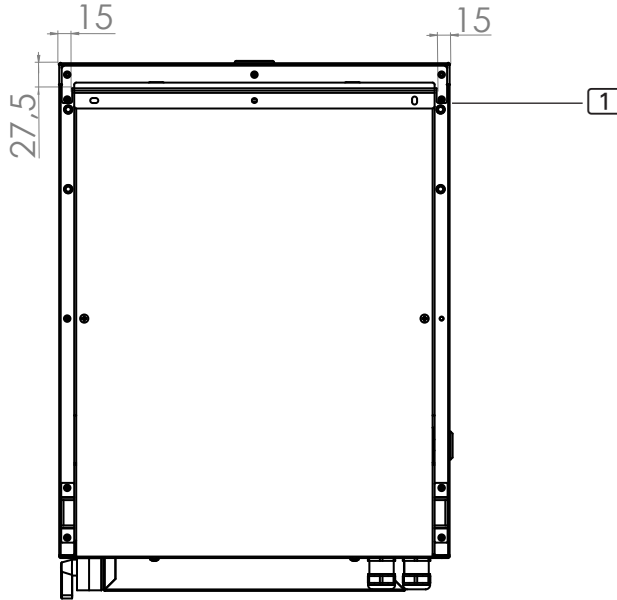
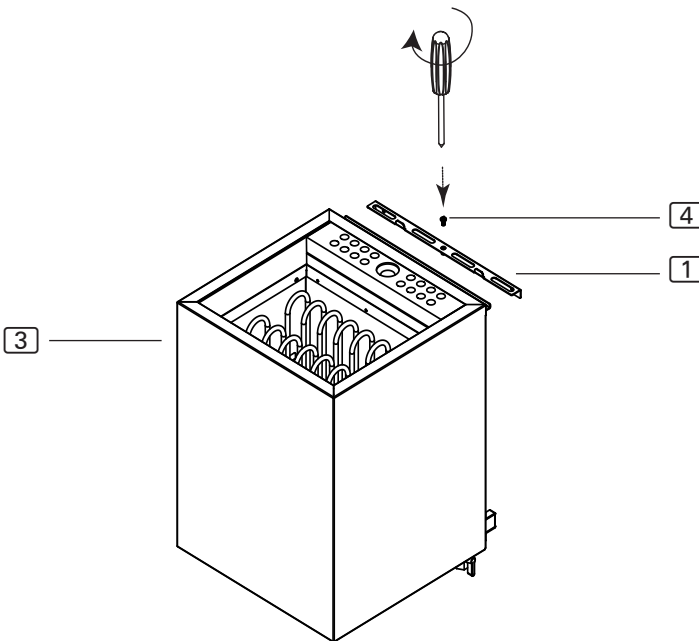
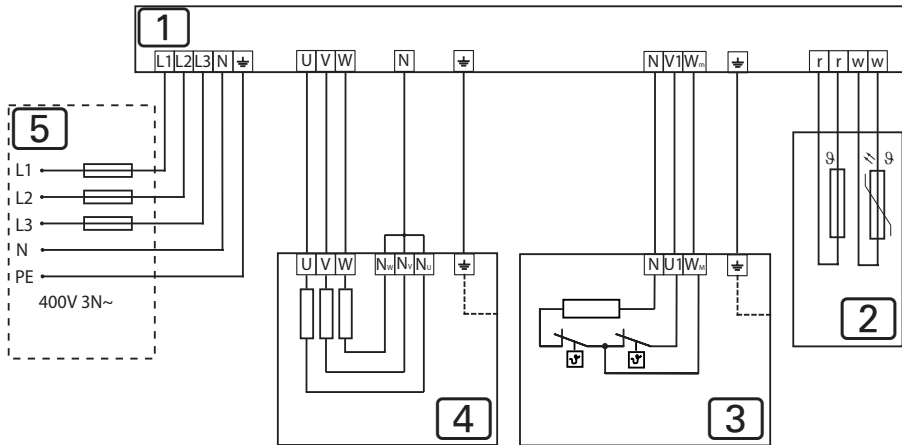


Fig. 4 Securing the Home combi (mounting rail)



4.4. Connection diagram for 400 V 3 N~

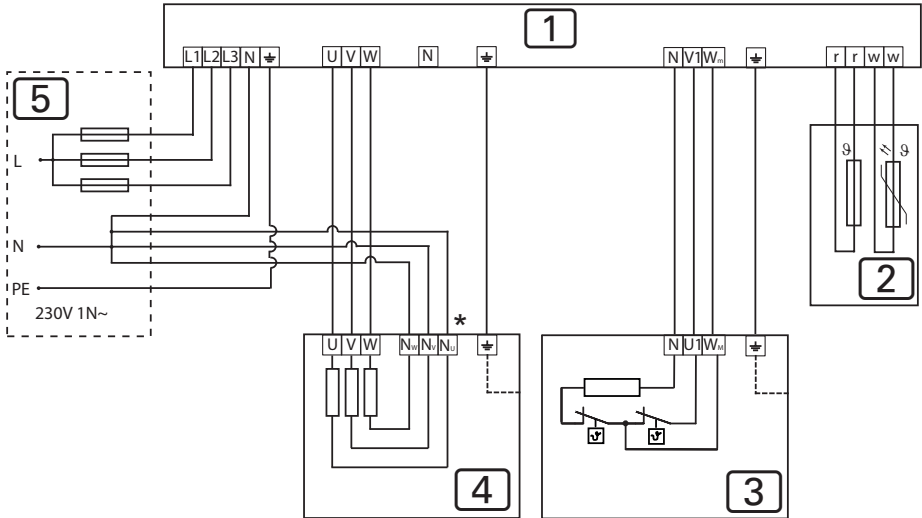
Fig. 5 Connection diagram for 400 V 3 N~
Home combi 6.0 kW and 9.0 kW
(HOME-C60 / HOME-C90)



- 1 Sauna control unit
- 2 Temperature sensor with excess temperature cut-out
- 3 Evaporator 2.0 kW
- 4 6.0 kW or 9.0 kW Heating system
- 5 Power supply

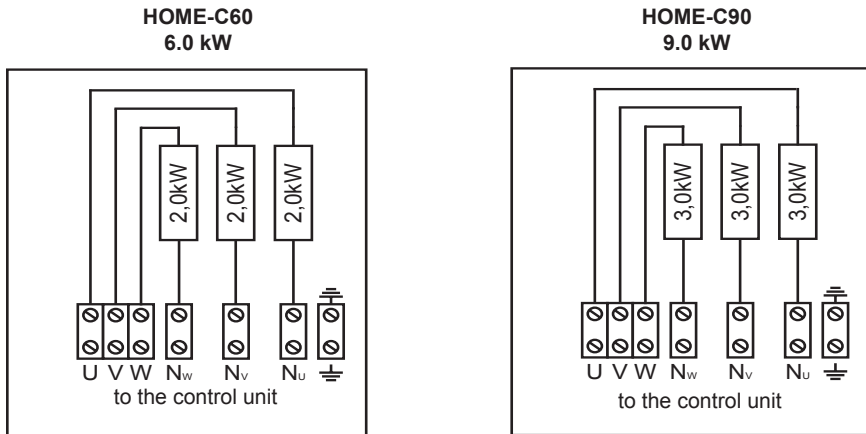
4.5. Connection diagram for 230 V 1 N~

Fig. 6 Connection diagram for 230 V 1 N~
Home combi 6.0 kW and 9.0 kW
(HOME-C60 / HOME-C90)



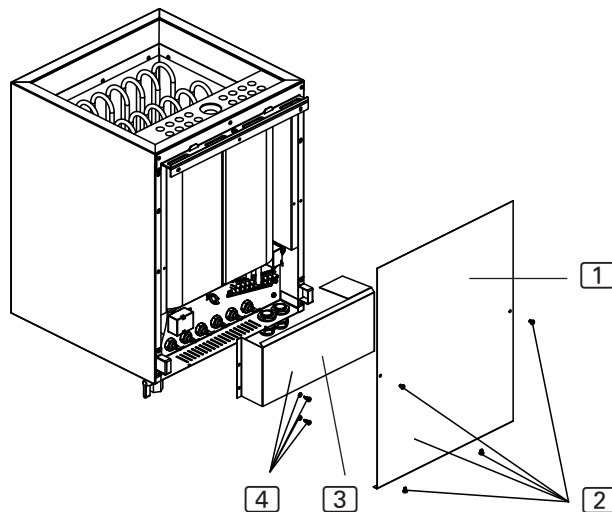
- 1 Sauna control unit
 - 2 Temperature sensor with excess temperature cut-out
 - 3 Evaporator 2.0 kW
 - 4 Heating system 6.0 kW or 9.0 kW
 - 5 Power supply
- * Remove the copper bridge

4.6. Wiring diagrams



4.7. Electrical connection

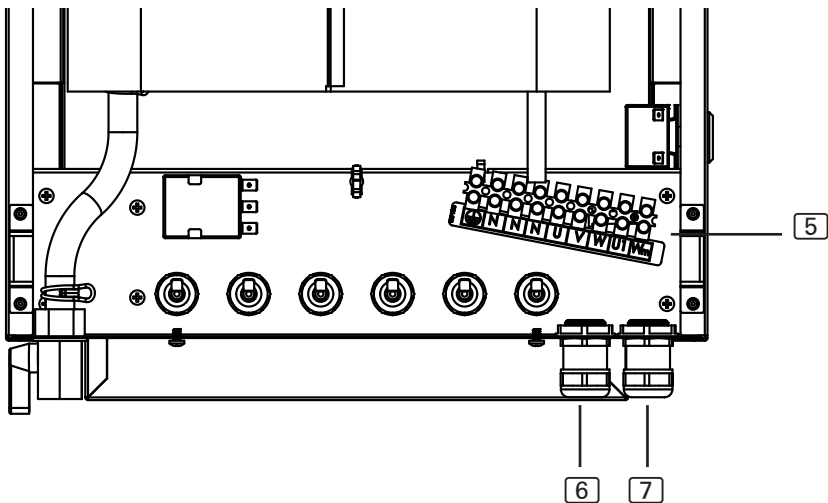
1. Unscrew the screws **2** with a screwdriver.
2. Remove the cover plate **1**.
3. Unscrew the screws **4** with a screwdriver.
4. Remove the cover plate **3**.



Connecting the Home combi 6.0 kW and 9.0 kW

(HOME-C60 / HOME-C90)

1. Guide the connection cable for the heating system through the feed-through **6**.
2. Connect the wires of the connection cable (depending on the type) to the matching terminals of the connector block **5** and to the appropriate sauna control unit terminals. Observe the installation instructions for the sauna control and the connection diagrams on page 12 and 13.
1. Guide the connection cable for the evaporator through the feed-through **7**.
2. Connect the connectors of the evaporator cable to the PE – N – U1 – Wm terminals on the connector block **5** and to the applicable sauna control unit terminals. Observe the installation instructions for the sauna control and the connection diagrams on page 12 and 13.
3. Fasten the cover plates **3** and **1** back on the sauna heater.



5 Connection block for the heating system and the evaporator

6 Feed-through for the connection cable of the heating system

7 Feed-through for the evaporator cable

5. Commissioning

5.1. Filling the stone container

**WARNING!*****Risk of fire due to overheating***

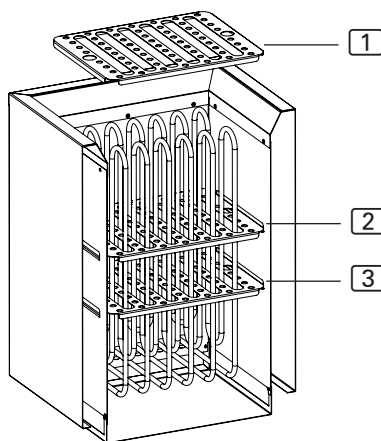
If the sauna heater is used without sauna stones, the cabin walls will become extremely hot. This could cause fires.

- NEVER operate the sauna heater without the sauna stones.

The stone basket **1** can be mounted at two different heights.

Position **2**: fewer stones, shorter heating time, energy saving

Position **3** (set at factory): more stones, larger amount of water for pouring possible, creating more steam, longer heating times



The amount of stones suited to your heater can be found in chapter **Technical data** (see page **25**).

1. Wash the stones thoroughly using water and a brush before use. Do not use any cleaning additives.
2. Before filling the heater with the sauna stones, check them for foreign objects and remove any remaining packaging.
3. Place the stones in the stone container and also between the heating rods. Stack the sauna stones loosely so that air can flow through the gaps.
4. **Do NOT allow the heating rods to make contact with one another.**
5. Make sure that the sauna stones do not protrude beyond the edge of the stone container.

5.2. Heating for the first time



CAUTION!

Formation of smoke and odours when heating up for the first time

Materials used during the manufacturing process will be present on the new heating elements. These evaporate when the sauna heater is heated up for the first time. This produces smoke and an unpleasant odour. Breathing in the fumes or smoke can be harmful to your health.

Perform the following steps when **operating the sauna heater for the first time** and if the **heating elements for the sauna heater have been replaced**. This prevents damage to health due to the fumes and smoke produced when heating for the first time.

1. Heating the heating rods for the first time
 - a. Select the highest possible temperature on the sauna control unit.
 - b. Heat up the sauna heater for half an hour.
Do NOT remain in the sauna cabin during this period.
2. Heating the evaporator for the first time
 - a. Select a low temperature and high humidity on the sauna control unit.
 - b. Heat up the evaporator with half the amount of water (see **Filling the evaporator** on page 20)
Do NOT remain in the sauna cabin during this period.
 - c. Switch off the sauna control unit after approx. 15 minutes.
 - d. Allow the evaporator to cool (for approx. half an hour).
 - e. Empty the water tank (see **Filling the evaporator** on page 20)
 - f. Repeat step 2.b.
 - g. Allow the sauna cabin to ventilate thoroughly after heating for the first time.
 - h. If no smoke or odours form the next time the sauna heater is heated, you can start to use the sauna.
If smoke or odours form again, leave the sauna cabin immediately, and repeat the initial heating process, followed by ventilation.

6. Operation

**WARNING!*****Risk of fire***

Combustible objects that are placed on the heater will ignite and cause fires.

- NEVER place combustible objects on the sauna heater.
 - Make sure that NO flammable objects have been placed on the heater before operating it.
-

6.1. Operating the sauna heater

A sauna control unit is used to operate the sauna heater. For information on how to operate the sauna control unit, read the operating instructions for the device used. Please note that only sauna control units without a remote start function are permitted for use with the Home combi sauna heater.

6.2. Finnish sauna mode

In Finnish sauna mode, only the heating system operates. Dry heat is produced. The temperature in the cabin is high (80 to 100 °C). The maximum humidity level of 10% is low. The temperature in the sauna cabin is regulated by your sauna control unit.

At the end of the sauna session, you can pour an infusion of water over the stones. Pour water over the stones using a sauna ladle. The water evaporates and the humidity in the sauna cabin increases.

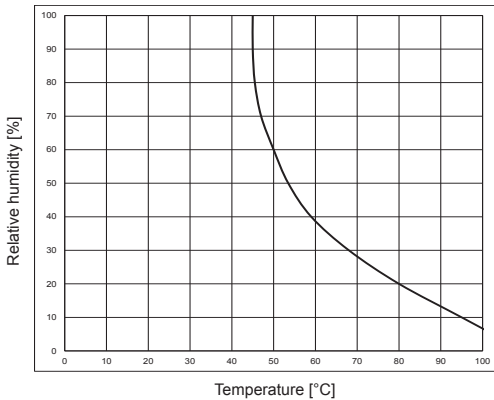
When pouring water over the stones, observe the following points:

- Only use tap water. Sea water, hard water and chlorinated water can damage the sauna heater.
- Only use fragrances and essential oils that are suitable for use in saunas. Follow the manufacturer's instructions on the packaging of the scented substance.
- Do not pour the water onto the stones too quickly. Only this way will all the water evaporate completely.

6.3. Combi mode

Both the heating system and evaporator operate in combi mode. The temperature in the sauna cabin is lower than in Finnish sauna mode (approx. 40 to 65 °C), with the relative humidity being considerably higher at 35% to approximately 70%. The maximum permissible relative humidity decreases with increasing temperature. The temperature and the humidity in the sauna cabin are controlled by your sauna control unit.

Fig. 7 Characteristic for temperature/relative humidity (compliant with EN 60335-2-53)



Only settings on the lower left side of the characteristic curve are possible; e.g.: at 60%, a temperature of 50 °C cannot be exceeded.

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The evaporator tank must be filled manually. If the water in the evaporator tank has been used up, an overheating protection function automatically turns off the heating of the evaporator. The lack of water is reported to the sauna control unit and displayed there, e.g. by an audible warning tone and the message "FILL".

ATTENTION!

Damage to the evaporator

Sea water, hard water, chlorinated water, herbs, essences or fragrances can damage the sauna heater.

- Only fill the evaporator tank with tap water.
- Do not put herbs, essences or fragrances directly into the evaporator tank, and only into the ceramic bowl over the evaporator.
- Descale the evaporator regularly (see **7.5 on page 23** on page).

Filling the evaporator



CAUTION!

Risk of scalding

If you pour water into the hot evaporator tank, hot steam is created.

- NEVER pour water into the hot evaporator tank.
 - Check and fill the evaporator tank each time before starting combi mode.
 - If the overheating protection has switched off evaporator heating, or if your sauna control unit reports a lack of water, allow the evaporator to cool down BEFORE you pour water into the evaporator tank.
-



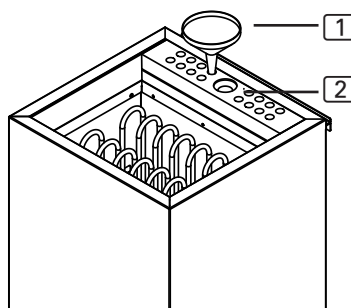
CAUTION!

Risk of scalding

If the evaporator tank is too full, boiling water will spray out of the evaporator tank.

- Fill the evaporator tank with 5 litres of water.
-

1. Use a funnel **1** or remove the soapstone **2**.
2. Only fill the evaporator tank with fresh tap water. You will need about 5 litres of water for this. This amount of water allows the evaporator to be operated for approximately 1 hour.
3. Remove the funnel **1** or put the soapstone back in.



Using fragrances

If you wish, you can put liquid fragrances or dried herbs on the soapstone. Observe the following points:

- Do not put fragrances directly into the evaporator tank.
- Carefully fill the trough in the soapstone, but only half full, so that the fragrances do not drip through the holes in the evaporator tank.
- Follow the manufacturer's instructions on the packaging of the herbs and fragrances.
- Regularly clean the soapstone under running water.

7. Maintenance

7.1. Extended periods of non-use

Moisture can accumulate in the heating rods in humid ambient conditions or during long periods of non-use. This is a physical process and not a manufacturing fault. Accumulation of moisture in the heating rods can lead to the FI circuit breaker being triggered. In this case, contact an electrician to have the fault corrected (see section **9. Problem-solving by the installer** on page 24).



Heat the sauna heater for approximately 15 minutes every 5 to 6 weeks. This prevents moisture from building up on the heating rods during extended periods of non-use.

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7.2. Cleaning the sauna heater

Make sure that the ventilation openings are free of lint and dust. This prevents the air circulation in the sauna heater from being restricted and prevents the device from overheating.

7.3. Changing the sauna stones

Sauna stones are subject to stress by the water poured on them, and by large fluctuations in temperature which occur during use. The sauna stones can become weak and brittle.

**WARNING!*****Risk of fire due to overheating***

If the sauna heater is used without sauna stones, the cabin walls will become extremely hot. This could cause fires.

- NEVER operate the sauna heater without the sauna stones.

Check the sauna stones at regular intervals and replace the stones at least once a year.

1. Remove the old sauna stones.
2. Clear the stone container of limescale deposits, dust and other contamination.
3. Wash the stones thoroughly using water and a brush before use. Do not use any cleaning additives.
4. Before filling the heater with the sauna stones, check them for foreign objects and remove any remaining packaging.
5. Place the stones in the stone container. Stack the sauna stones loosely so that air can flow through the gaps.
6. Make sure that the sauna stones do not protrude beyond the edge of the stone container.

7.4. Cleaning the evaporator tank

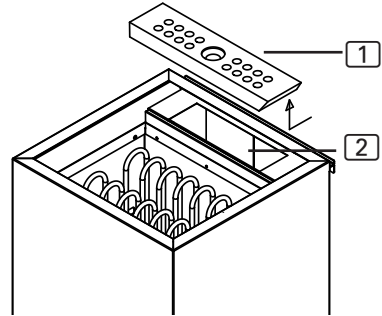
Drain and clean the evaporator tank after each use. Perform the following steps:

1. Wait until the water in the evaporator has cooled.
2. Place a receptacle (at least 5 litres) under the ball valve at the bottom of the evaporator.
3. Open the ball valve to the left until the remaining water flows out.
4. When the evaporator tank is empty, close the ball valve.
5. Remove the soapstone.
6. Clean the evaporator tank with a household brush with plastic bristles. Take care not to damage the tank sensor leads. Rinse with water.
7. Put the soapstone back in.

7.5. Descaling the evaporator tank

Descale the evaporator tank as required. To do this, use a descaling agent for household appliances. Observe the specifications and safety information provided by the manufacturer.

1. Remove the soapstone.
2. Empty the evaporator tank.
3. Prepare the descaling solution according to the manufacturer's instructions.
4. Fill the evaporator with the descaling solution up to the top of the limescale.
5. Let the descaling solution take effect according to the manufacturer's instructions.
6. Place a receptacle under the ball valve at the bottom of the evaporator and drain the evaporator tank.
7. Rinse the evaporator tank twice with cold tap water.



8. Disposal



- Please dispose of packaging materials in accordance with the applicable disposal regulations.
- Used units contain reusable materials as well as hazardous substances. Therefore, do not dispose of your used unit with household waste, but rather do so in accordance with the locally applicable regulations.

9. Problem-solving by the installer

Baking out of the heating rods

Moisture can accumulate in the heating rods in humid ambient conditions or during long periods of non-use. This is a physical process and not a manufacturing fault. Under certain circumstances, accumulation of moisture in the heating rods can lead to the FI circuit breaker being triggered.

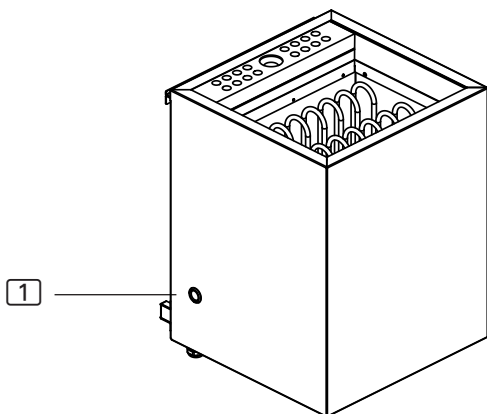
In this case, it is necessary to bake out the sauna heater under the supervision of an electrician. To do this, the protective function of the FI circuit breaker must be switched off. The baking out procedure takes approximately 10 minutes. The safety function of the FI circuit breaker must subsequently be reactivated.

If the problem persists, consult your supplier.

Resetting the overheat cut-out of the evaporator

A temperature switch is responsible detecting any lack of water. If a certain water level in the evaporator tank is not complied with (approx. 1 l), this temperature switch switches off the heating element. At the same time, the feedback to the WM control unit falls to 0 V – the control unit displays the message "LOW WATER".

In case the evaporator still overheats, there is a temperature cut-out as protection. This cut-out must be reset manually. To do this, press the contact in the left side wall **1**.

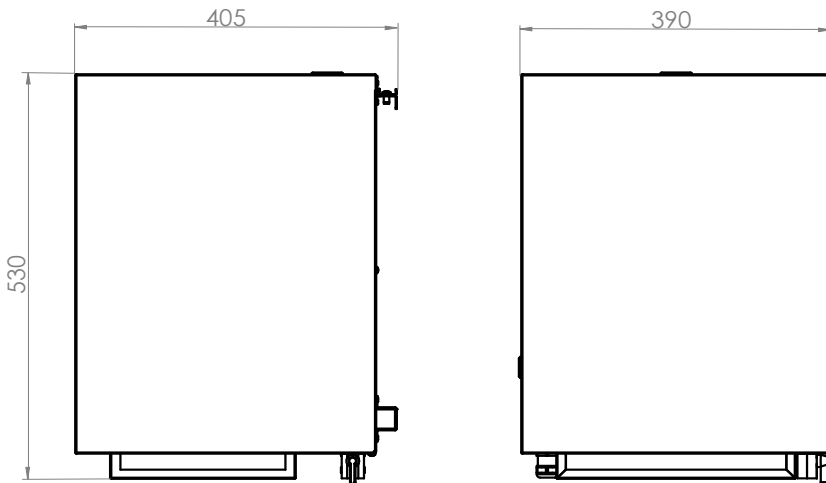


10. Technical data

<i>Item number</i>	<i>Power rating [kW]</i>	<i>Power rating of the evaporator [kW]</i>	<i>Cabin volume [m³]</i>	<i>Amount of stones [kg]</i>	<i>Weight without stones [kg]</i>
HOME-C60	6.0	2.0	5 - 9	approx. 20 / 30	17
HOME-C90	9.0	2.0	8 - 14	approx. 20 / 30	17

<i>Item number</i>	<i>Minimum size of ventilation opening [mm]</i>	<i>Fuse [A]</i>	<i>Supply voltage</i>
HOME-C60	350 x 35	3 x 10	400 V AC 3N~ 50/60 Hz 230 V AC 1N~ 50/60 Hz
HOME-C90	350 x 50	3 x 16	400 V AC 3N~ 50/60 Hz 230 V AC 1N~ 50/60 Hz

Fig. 8 Dimensions of Home combi 6.0 kW and 9.0 kW (HOME-C60 / HOME-C90)
Measurements in mm



11. Spare parts

No.	Name	Item numbers	Quantity
1	Heating elements 2000 W	HP-HOME-200 (1-043-618)	3
1	Heating elements 3000 W	HP-HOME-300 (1-043-620)	3
2	Heating element for evaporator 2000 W	VZH-104(1-047-023)	1
3	Complete evaporator unit	WX671 (1-051-000)	1
4	Temperature cut-out 140 °C	ZSK-764 (1-046-109)	1
5	Thermostat 110 °C	ZSN-250 (1-046-108)	1

