

NARVI

Narvi NC



ASENNUS- JA KÄYTTÖOHJE	FI
INSTALLATIONS- OCH BRUKSANVISNING	SE
INSTALLATION AND INSTRUCTION MANUAL	EN
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EN INSTALLATION AND INSTRUCTION MANUAL

NARVI NC ELECTRIC	4,5 kW
NARVI NC ELECTRIC	6,0 kW
NARVI NC ELECTRIC	9,0 kW

1. INTRODUCTION

Thank you for choosing the Narvi NC Electric sauna heater. This manual contains installation and operating instructions for sauna heater models equipped with the Narvi Flow controller.

2. WARNINGS AND NOTES

- Please read these instructions carefully before installing and using the sauna heater, and keep the manual for future reference.
- The sauna heater is only to be used for heating the sauna.
- The controller must be installed in a room from which the heater can be visually monitored to ensure safe start-up. If the controller is installed in a room without a direct line of sight to the heater, the heater must comply with the fire safety test requirements specified in clauses 19.101 and 19.102 of standard EN 60335-2-53. Otherwise, installing the controller in a room without visual contact with the heater is prohibited.
- When using the remote-controlled Narvi NC Electric Wi-Fi sauna heater, ensure safe operation by installing a door switch or other approved safety device.
- Children under 8 years old must not use the device, and children under 14 years old may use it only under adult supervision.
- This device is not intended for use by persons with physical, sensory, mental disabilities, or lack of experience or knowledge that prevents them from using the device safely, unless they are supervised or have been instructed on how to use the device by a person responsible for their safety.
- Children should always be supervised to ensure they do not play with the sauna heater or its controls.
- A hot sauna heater may cause burns – the metal parts and stones of the heater become extremely hot during operation.
- Do not touch the sauna heater when it is hot.
- Only a small amount of water (1-2 dl) should be thrown onto the heater stones at a time, as the steaming water is scalding hot.
- Do not throw water onto the heater stones when you or someone else is next to the sauna heater – hot steam can cause burns.
- The heater stones must be placed according to the instructions – improper placement poses a fire hazard.
- The sauna heater must not be used without stones.
- An insufficient amount of stones poses a fire hazard.
- Covering the sauna heater poses a fire hazard.
- Drying clothes or other textiles on or near the sauna heater is prohibited.
- No objects should be placed on top of the sauna heater.
- Before operation, make sure that there are no objects or textiles on or near the sauna heater.
- Doors and windows should be kept closed when using the sauna heater.
- When using remote control, always check the steam room and the area around the sauna heater before activating standby mode.
- The recommended temperature for the steam room is 60-80°C.
- Prolonged stay in a hot sauna raises body temperature, which can be dangerous.
- Sleeping in the sauna is prohibited.
- If you have any health conditions that may affect your ability to use the sauna, consult your doctor. Do not use the sauna if you are ill or intoxicated.
- Do not use the sauna while under the influence of intoxicating substances or if you are ill.
- Only clean drinking water should be used in

the sauna; seawater, salty water, or chlorinated water is not suitable and may damage the sauna heater.

- If the sauna heater has a stainless steel outer casing, its colour change during use is normal and not covered by the warranty.
- Marine and humid climates accelerate corrosion in the sauna heater.

3. FOR THE USER

3.1 USING THE SAUNA HEATER

During the first use, the sauna heater and stones may produce an odour that dissipates with ventilation. When the sauna heater is properly sized for the steam room, a well-insulated sauna will reach operating temperature in about an hour, and the stones will heat up in the same time. The recommended sauna temperature is 60-80°C. To increase steam, throw about 0.2 litres of water onto the heater stones at a time. The softness of the steam can be adjusted by throwing water either on top of or to the side of the sauna heater. Do not throw water onto the heater stones when you or someone else is next to the sauna heater – hot steam can cause burns. Steam and temperature preferences vary by individual. The ideal duration for a sauna session is whatever feels comfortable for the user. For optimal longevity, switch off the heater only upon leaving the sauna, allowing the sauna and stones to dry properly.

3.2 POURING WATER ON THE STONES

Only clean drinking water should be used for the sauna heater.

Quality requirements for drinking water:

- Humus content < 12 mg/l
- Iron content < 0.2 mg/l
- Calcium content < 100 mg/l
- Manganese content < 0.05 mg/l
- Seawater or other salty water must not be used.
- Chlorinated water must not be used.

The warranty does not cover any damage caused by using improper water in the sauna heater.

4. SAUNA STRUCTURE

The steam room must be well insulated, especially the ceiling, as most of the heat escapes upwards. For insulated structures, it is recommended to use a vapor barrier, such as aluminium foil. The interior surfaces of the sauna should be made of wood or non-combustible material. A dark-coloured floor is recommended, as the stones and steam water may cause discoloration.

4.1. HEATER GUARD

A heater guard can be built around the sauna heater if necessary, and its design must always comply with the minimum safety distances from combustible materials as specified in the instructions (figure 6.1-1, table 6.1-1). Incorrect installation constitutes a fire hazard.

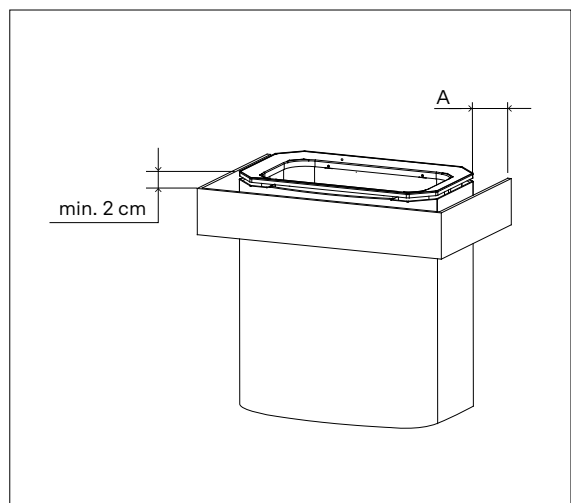


Figure 4.1-1. Heater guard

4.2. VENTILATION

The steam room must have adequate ventilation to ensure proper oxygen levels and the availability of fresh air. The air in the sauna should be exchanged 3-6 times per hour. Ventilation should be installed according to the HVAC engineer's specifications.

5. SAUNA HEATER SYSTEM

5.1 PARTS OF THE HEATER SYSTEM:

The sauna heater system consists of the following parts:

1. Sauna heater

2. Wall mounting plates + mounting screws

3. Installation and operating instructions for the sauna heater

4. Control unit (local model or remote-controlled model)

5. 6-meter control unit cable

6. Temperature sensor with overheat protector and 6-meter cable.
7. Humidity sensor and 6-meter cable. (Optional)

8. Door switch (sensor, magnet, brackets x 2) and 5-meter cable (remote-controlled model)

9. Accessory bag (screws, plugs, tapes x 4)

10. Router (remote access) (not included in delivery)

11. Mobile device (not included in delivery) + Narvi application (remote access)

12. Power supply cable (not included in delivery)

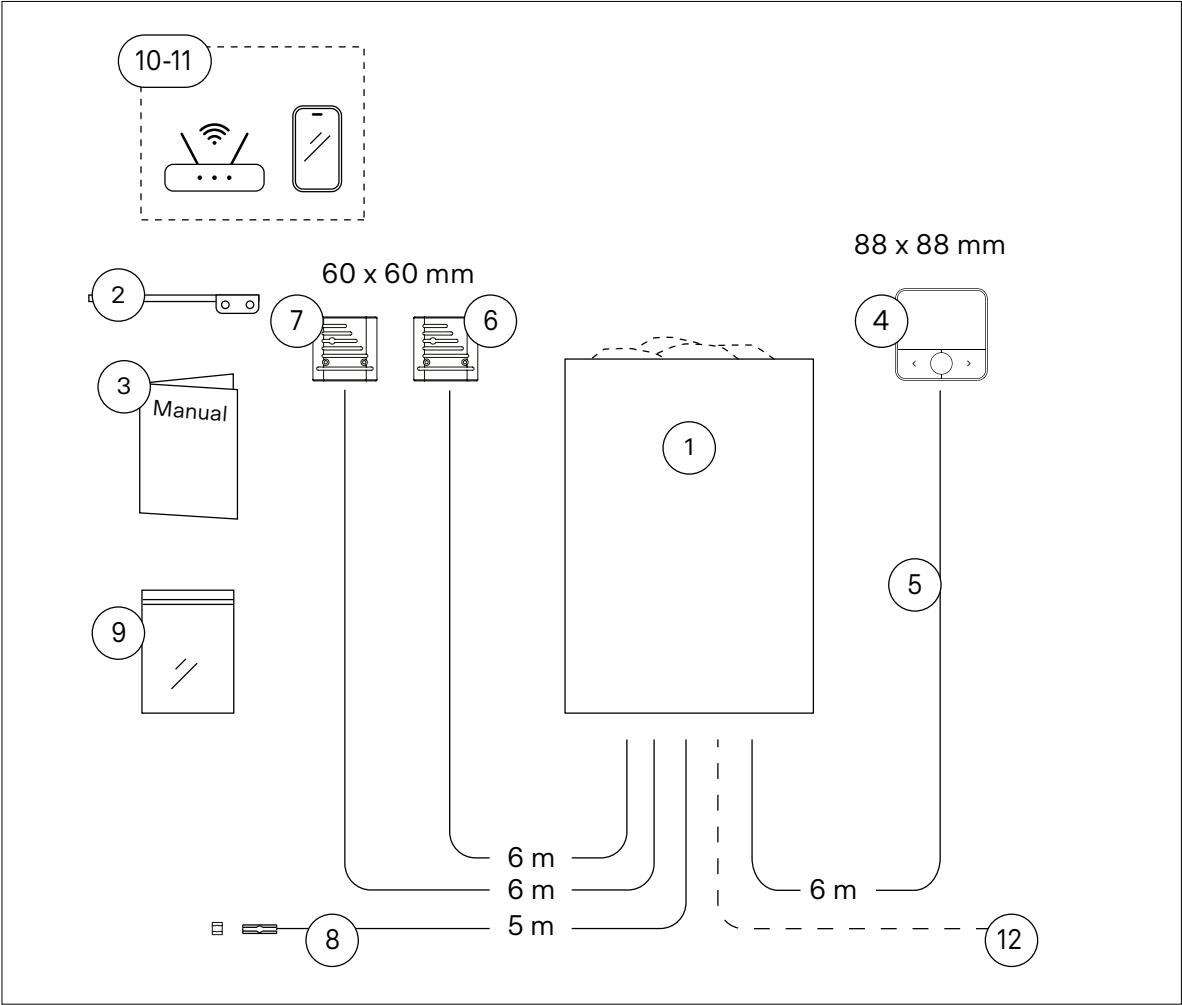


Figure 4.1-1 Bastusystemets delar

5.2 TECHNICAL DATA:

Sauna heater	Width [mm]	435
	Depth [mm]	315
	Height [mm]	520
	Weight [kg] (without stones)	15
	Installation	On the wall
	Maximum current [A]	16
	IP class	IPX4
Control unit	IP class	IPX5
	Storage temperature [°C]	0–50
	Ambient temperature [°C]	-10–80
	Dimensions WxHxD [mm]	88 x 88 x 23
	Installation	On the wall
	Installation in the sauna	Yes
	Maximum surface temperature exposure [°C]	max. 80
	Maximum installation height in the sauna [cm]	100
	Minimum distance to the sauna heater in the sauna [cm]	70
	Temperature range [°C]:	40-115
Control unit (remote-controlled model)	WiFi network	2,4 GHz
Control unit cable (SIHF-O 4x0.25)	Cable length: [m]	6
Temperature sensor	Overheat protector [°C]:	144
Humidity sensor	(optional)	Narvi
Temperature and humidity sensor	Dimensions WxHxD [mm]	63 x 60 x 22
Sensor cable (SIHF-O 4x0.25)	Length of sensor cable [m]	6
Light	(230V AC 1N) [W]	max.100

Table 5.1-1. Technical data

5.3 WIRING DIAGRAM

All electrical installations must be carried out only by a qualified electrician, according to the applicable installation standards.

During insulation resistance testing, leakage may occur due to moisture absorbed by the heating element insulation during storage or transport. This moisture will dissipate after a few heating cycles.

Other electrical devices than sauna heater must be connected through a Residual Current Device.

The connector locations in the wiring diagram are for reference only. Always check the final markings on the power unit's power card

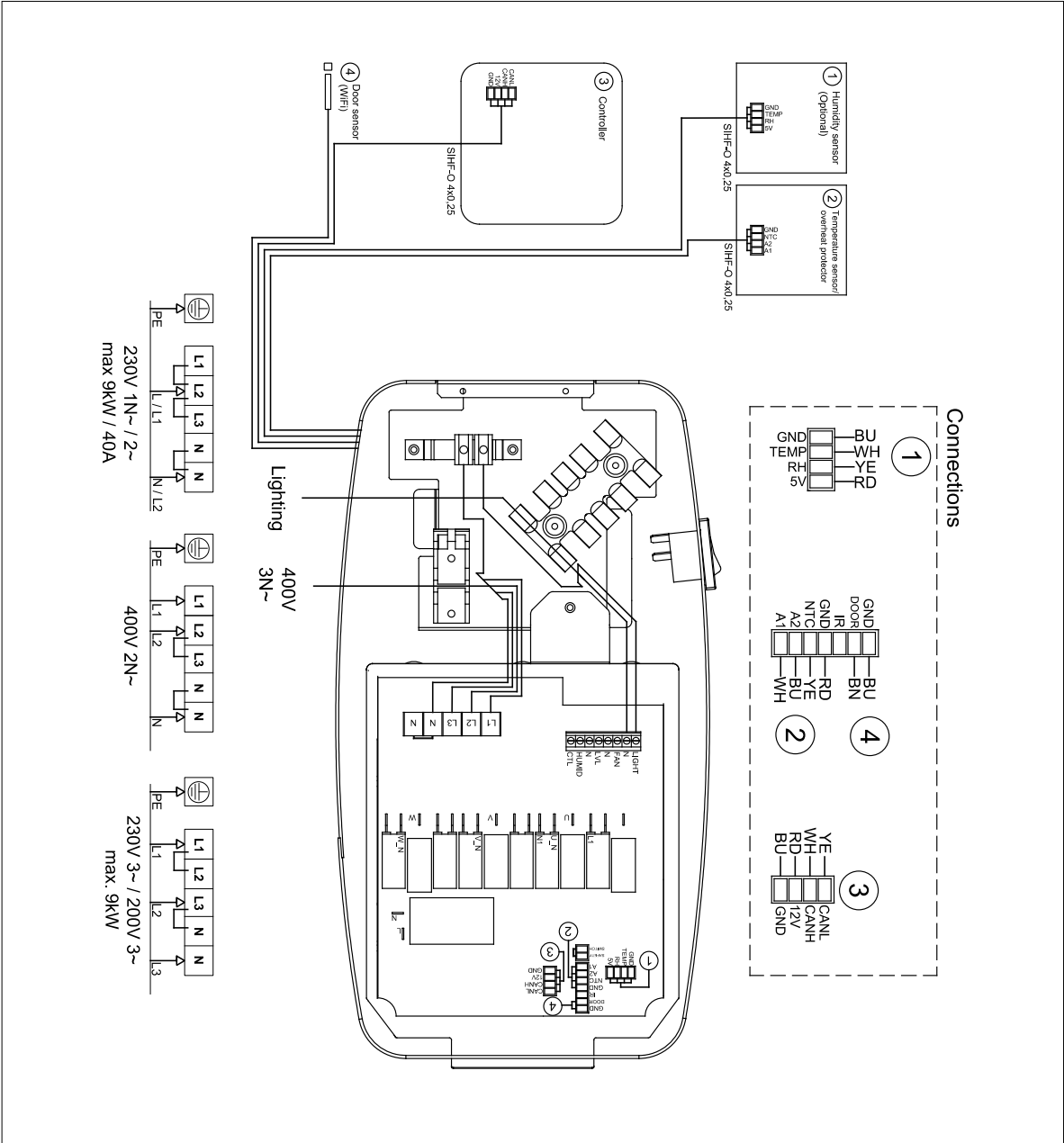


Figure 5.3-2. Wiring diagram

The sauna heater's power card contains two glass tube fuses:

- 1) 1A for lighting
- 2) 1A CTL

Fuses must always be replaced with fuses of the same rating, and the cause of the failure must be determined before installing a new fuse. When replacing a fuse, the power must always be disconnected from the heater at the building's electrical panel.

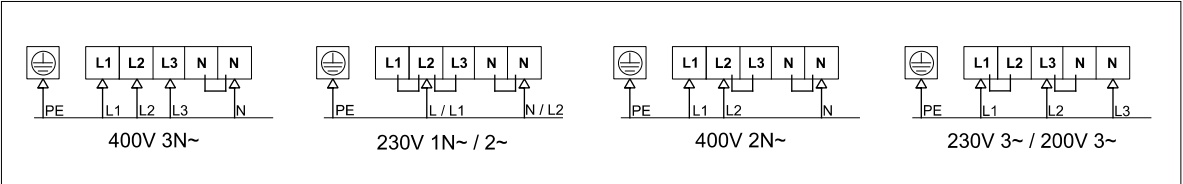


Figure 5.3-2. Wiring Diagram for the E Model / with Flow Power Extension Unit

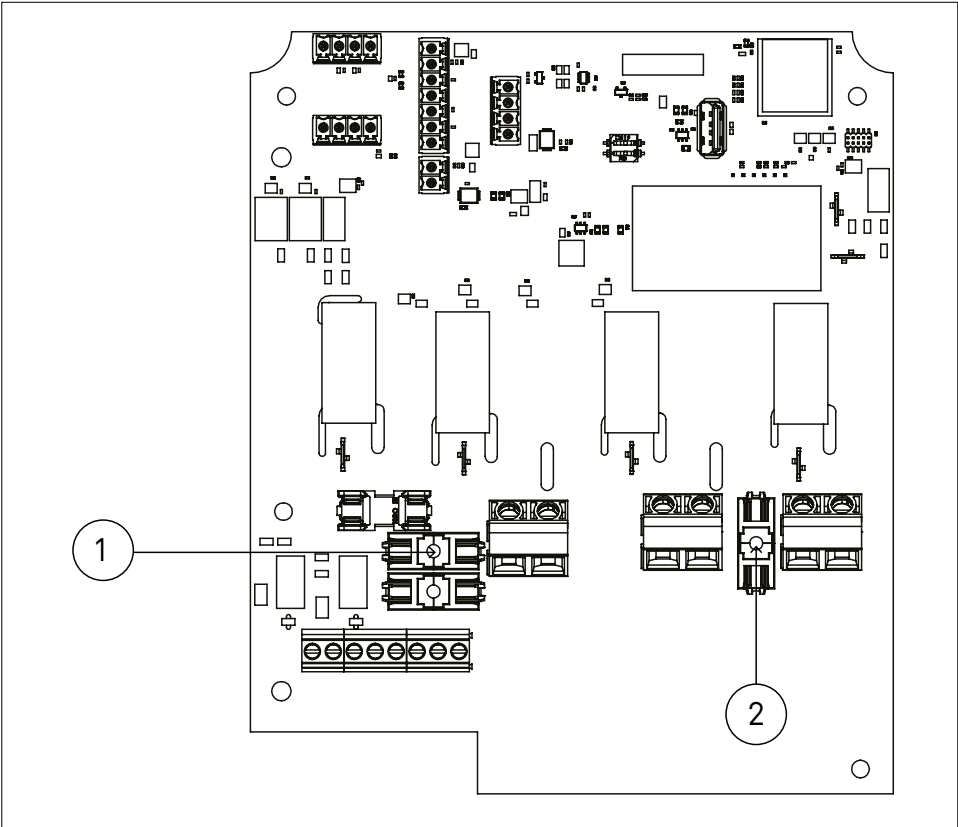


Figure 5.3-3. Power card fuses

6. INSTALLATION

6.1. BEFORE INSTALLATION

- Read the operating and installation instructions carefully before starting work.
- All electrical installations must be carried out only by a qualified electrician, according to the applicable installation standards.
- Ensure that the cables from the building's electrical panel to the heater have sufficient cross-section and comply with the electrical plan.
- Also check that the safety distances at the installation site meet the requirements specified in the instructions.
- The sauna's minimum height and minimum safety distances are specified in Table 6.1-1.

- Before starting installation, make sure that the heater is disconnected from the electrical network.
- Never install a damaged unit.
- If any instructions are unclear, confirm the correct procedure with Narvi's technical support.
- The heater must be connected to the electrical network without a residual current device (RCD).
- Other devices installed in the sauna, such as lighting and fans, must be connected to a RCD-protected supply.
- The control unit has an IP rating of X5, meaning it is protected against water jets.
- Ensure that the cables are of sufficient length before installation.
- Cabling can be either surface-mounted or flush-mounted, in accordance with applicable installation standards.
- The operation of the remotely controlled heater requires a reliable WiFi connection.
- Ensure that the mounting plate screws have a sufficiently strong base; a thin panel alone is not sufficient. Support can be provided by additional structural studding behind the panel or reinforcement boards on top of the panel that are secured to the wall studs.
- The floor beneath the sauna heater must have a heat-resistant covering. Hot pieces of stone falling from the heater may damage the floor

covering and pose a fire hazard.

- The NARVI NC sauna heaters of 4,5-6,0 kW can also be installed in a wall recess, provided that the safe distances given by Figure 6.1-1 are observed.
- The NARVI NC heater of 9,0 kW must not be installed in a wall recess.
- **Only one electric heater may be installed in the sauna.**

Ensure the correct sizing of the sauna heater:

- The heater's power (kW) must match the sauna volume (m³).
- Table 6.1-1 presents the sauna volumes corresponding to each heater type.
- If the sauna has uninsulated surfaces, such as brick, tile, or glass, add 1.5 m³ to the sauna volume for each square meter of such surface. The resulting adjusted volume is then used to determine the required heater power from Table 6.1-1.

Sauna volume must remain within the range specified in Table 6.1-1.

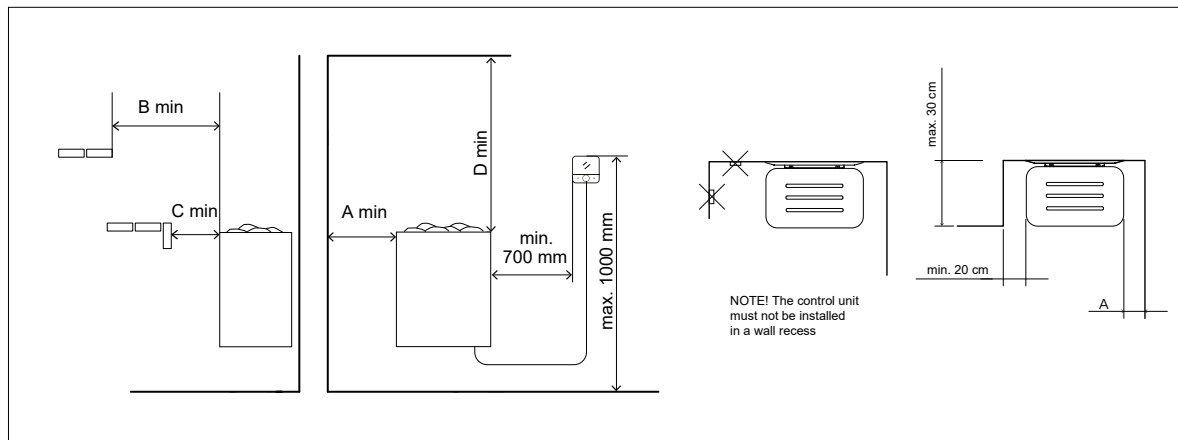


Figure 6.1-1. Minimum safety distances

Heater model	Power kW	Sauna room			Minimum safety distances					Stone capacity 5-10 cm kg
		Volume (m³)		Height min. (cm)	Sides A **) cm	In front B **) cm	In front C **) cm	To the ceiling D **) cm	To the floor D **) cm	
		min m³	max m³							
NARVI NC	4,5	4	6	190	5	8	2	115	12	25
NARVI NC	6	6	9	190	5	8	2	115	12	25
NARVI NC	9	9	15	190	7	10	2	115	12	25

Table 6.1-1. Installation information for the sauna heater

**) See figure 1 *) Power supply cable: rubber cable of type H07RN-F or equivalent

Effect the sauna heater kW	400V 3N~ mm²	Fuses A	230V 3N~ mm²	Fuses A	200V 3N~ mm²	Fuses A	230V 1N~ mm²	Fuses A	400V 2N~ mm²	Fuses A
4,5	5x1,5	3x10	4x2,5	3x16	4x2,5	3x16	3x6	1x20	4x2,5	2x16
6	5x1,5	3x10	4x2,5	3x16	4x6	3x20	3x6	1x32	4x6	2x20
9	5x2,5	3x16	4x6	3x25	4x6	3x32	3x10	1x40	4x6	2x32

Table 3. Connection of the sauna heater (minimum requirement by the manufacturer)

6.2 INSTALLATION SEQUENCE

1. Ensure a safe working environment
2. Make the electrical connections
3. Test the operation of the sauna heater
4. Install the sauna heater
5. Place the sauna stones

The cables are routed into the heater's connection box as follows:

Cable gland 1) Power supply cable to the sauna heater
 Cable gland 2) Lighting Cable gland 3) Controller cable
 Cable gland 4) Temperature sensor cable
 Cable gland 5) Door sensor (WiFi) / humidity sensor (accessory) cable

The strain relief for cables 2–5 is made by securing the cables to the strain relief comb using the supplied cable ties.

6.3 ELECTRICAL CONNECTIONS

Before performing electrical connections, ensure that the power supply from the building's electrical panel is switched off and that there is no voltage in the supply cables at the start of electrical work.

Cables must be sized to the correct length and must not be coiled inside the connection box of the heater.

- Turn the heater upside down.
- Open the bottom of the electrical enclosure.

The power supply must not be connected to the sauna heater before the sensor and control unit are installed.

Electrical connections are made in the following order:

1. The cable between the controller and the heater.
2. Cable between the temperature sensor and the sauna heater.
3. Cable between the humidity sensor and the sauna heater. (optional)
4. Cable between the door switch and the sauna heater. (remote-controlled models)
5. Cable between the lighting and the sauna heater.

6. Once the components of the controller have been installed and connected, the power supply cable can be connected to the sauna heater according to the wiring diagram (figure 5.3-1). The power supply cable must be a rubber cable of type H07RN-F or equivalent. The cable cross-section and fuse rating are shown in Table 6.1-2.

The CTL connector on the power card can be used to control the building's electric heating. When the sauna heater is turned on from the control unit, a voltage of 230V is supplied to the CTL connector. This connector provides the control voltage for the contactors of the building's electrical panel. The control voltage can be used to turn off the electric heating during sauna use. If the building's electric heating control (CTL) is used, a 7-core rubber cable of type H07RN-F or equivalent must be used as the heater supply cable.

7. Once the power supply cable is connected, plug any unused cable glands using the supplied plugs and secure the cable glands.
8. Check the connections.
9. Close the cover of the connection box and tighten the cover screws.
10. Ensure that the main switch (I/O) of the heater is in the O position (See Figure 6.3-2).
11. Connect the power from the building's electrical panel to the heater.
12. Set the main switch (I/O) to the I position.

The control unit should now have power, and it will prompt you to select the operating language and temperature scale.

6.4. INSTALLATION OF THE CONTROL PANEL

Note before installation:

- The control unit can be installed either inside the sauna room or in another indoor area. The control unit has an IP rating of X5, meaning it is protected against water jets. The control unit is not intended to be installed outdoors without protection.
- The control unit should be protected from

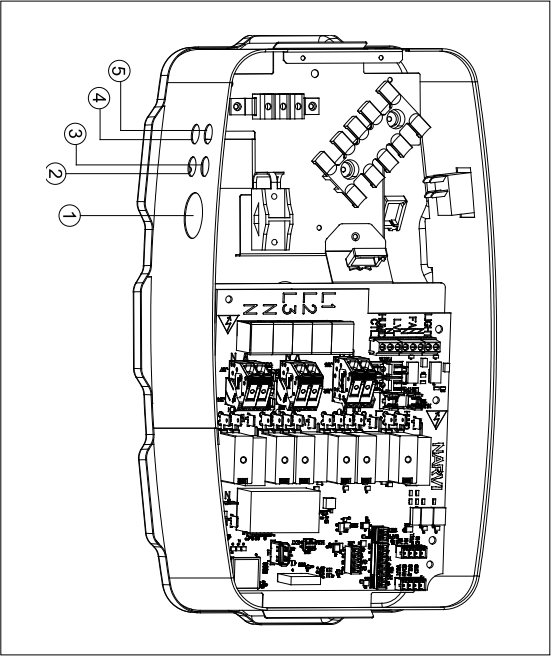


Figure 6.3-1. Att öppna kopplingsboxen

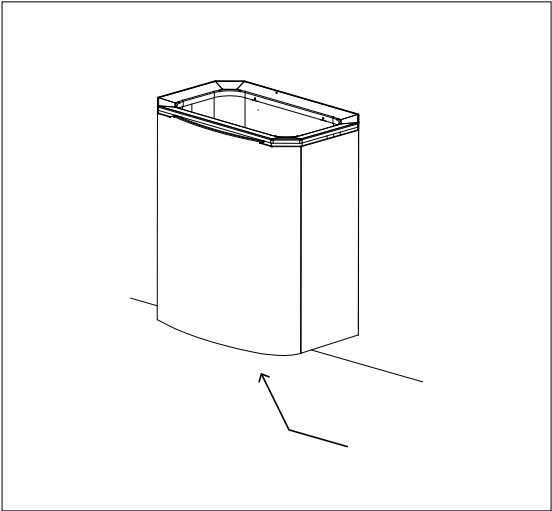


Figure 6.3-2. Location of the main switch

- freezing and direct sunlight and should be safeguarded against mechanical damage.
- The control unit is low voltage.
 - The control unit can be mounted directly to the wall surface or into a junction box.
 - The controller must be installed in a room from which the heater can be visually monitored to ensure safe start-up. If the controller is installed in a room without a direct line of sight to the heater, the heater must comply with the fire safety test requirements specified in clauses 19.101 and 19.102 of standard EN 60335-2-53. Otherwise, installing the controller in a room without visual contact with the heater is prohibited.
 - The control unit must not be installed in a location where the temperature exceeds 80°C maximum temperature. If the control unit is installed in the steam room, the installation location must be at least the minimum protection distance (0.7 m) from the heater and at most one meter (1 m) above the floor (see Figure 6.1-1). Power supply cables and the control unit's cable should not be installed next to each other to avoid interference.
 - A 6-meter control unit cable (SIHF-O 4x0.25) is supplied with the control unit. This cable must not be extended.
 - If the control unit is installed more than 6 meters away from the sauna heater, a longer, continuous cable (max. 25 m) must be obtained.
 - The reliability of the remotely controlled heater requires that the WiFi signal is strong enough at the planned installation location of the control unit.
 - The quality of the network connection should be checked at the planned location of the control unit before making the final placement decision.
 - You can perform the assessment using a mobile device:
 - The mobile device should be set to use only the WiFi connection (mobile data turned off).
 - The signal strength is monitored from the device's display. The number of WiFi bars indicates signal strength (full or nearly full bars indicate good reception).
 - The network connection is tested by opening web services or applications and checking if they load without delay.
 - If the connection works smoothly, the WiFi signal at that location is strong enough for the device to operate.
 - If the signal is weak:
 - The signal strength should be tested in another possible location for the control unit by repeating the test.
 - If possible, the router or wireless access point should be moved closer to the device to improve reception.
 - The building structures between the control unit and the router or access point weaken the quality of the network connection. In particular, concrete walls, intermediate floors, and metal surfaces can significantly affect signal strength.
 - If a sufficiently strong signal is not available at the desired location, a WiFi repeater, mesh network system, or other signal amplifier can be installed to extend coverage and improve reception in hard-to-reach areas.

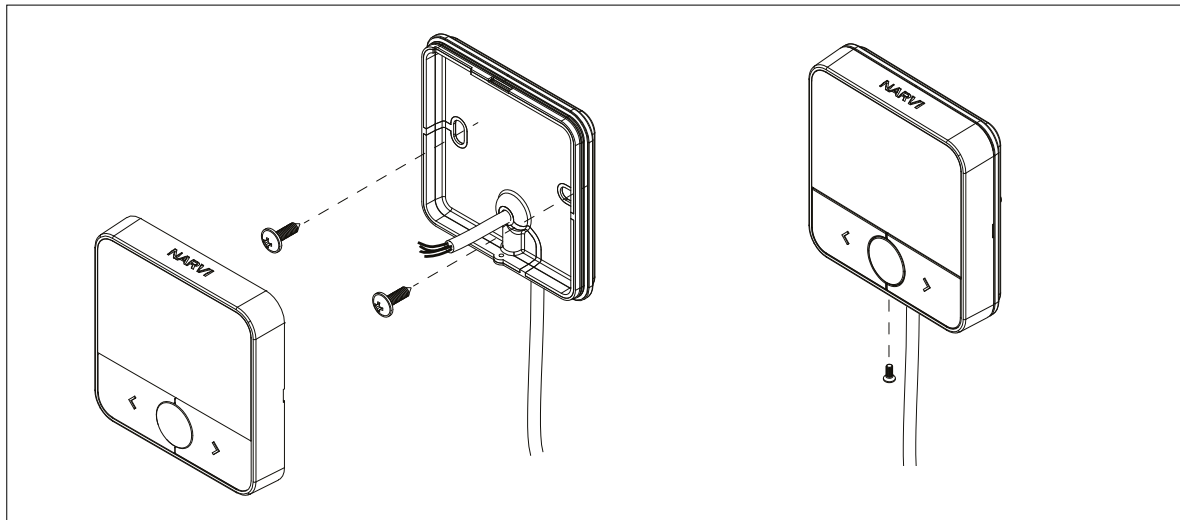


Figure 6.4-1. Installation of the control unit casing

Once the location of the control unit is determined, the control unit cable is routed from the control unit to the heater.

The control unit cable is pulled 5-8 cm through the hole in the back plate of the control unit to facilitate connecting the wires to the terminal block on the power card. The correct connection is checked from the wiring diagram (Figure 5.3-1), ensuring that the order of the wires is the same in the power unit and the control unit.

Screws are tightened by hand, and an electric screwdriver or power tools should not be used.

Before attaching the back panel to the wall, make sure that the front panel of the control unit is positioned correctly. The length of the wire remaining inside the casing is adjusted so that the cable does not push the front of the casing out of position.

The back panel of the control unit is attached to the wooden surface of the wall with screws provided with the control unit (2 pcs Ø 4,2 x 13). The screw is threaded through the oval-shaped soft part (Figure 6.4-1). Screws should not be over-tightened to avoid damaging the plastic of the control unit. For other surface materials or when attaching to a box, the fastening materials

are selected according to the surface material and the method of attachment.

The front panel of the control unit is placed in position and locked at the bottom with a screw.

The control unit cable is routed into the connection box of the heater through the designated conduit 1 (Figure 6.3-1). The cable is connected to the connector according to the wiring diagram (Figure 5.3-1).

6.5. TEMPERATURE SENSOR / OVERHEAT PROTECTOR INSTALLATION

Note before installation:

The temperature sensor with in-built overheat protector is a low-voltage component that is installed on the sauna wall above the sauna heater (see Figure 6.5-1).

When placing the sensor, the distance of the supply air vent must be considered: the vent must not be located closer than 50 cm from the sensor. If the vent is located 50-100 cm away, a directional vent must be used to prevent cold air flow from reaching the sensor, which could cause inaccurate temperature readings and lead to the sauna heater overheating.

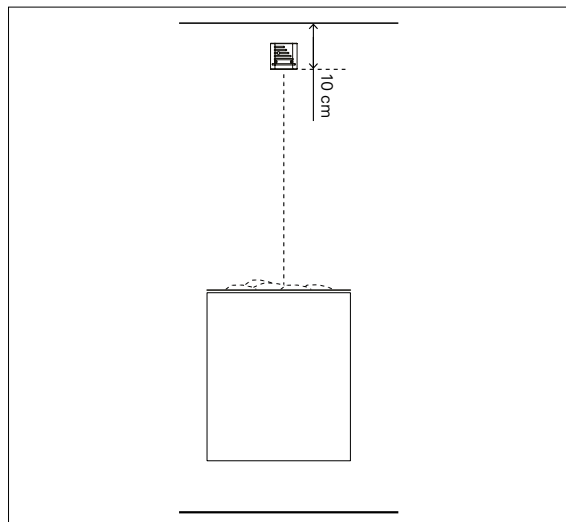


Figure 6.5-1. Installation of the temperature sensor

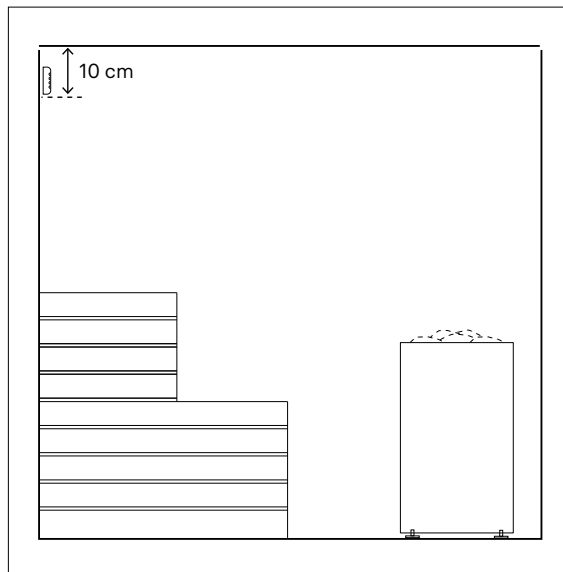


Figure 6.6-1. Installation of the humidity sensor

The temperature sensor is supplied with a 6-meter cable (SIHF-O 4x0.25), which must not be extended. If a longer distance is required, an approved, continuous cable of the necessary length must be obtained. The sensor's cable should be routed into the heater's connection box through the designated conduit (Figure 6.3-1) and connected to the connector according to the wiring diagram (Figure 5.3-1). The sensor is attached to the wooden surface using the supplied screws (2 pcs Ø 2.9x16), and for other surface materials, the mounting accessories are selected according to the surface material and mounting method.

6.6. INSTALLATION OF THE HUMIDITY SENSOR (OPTIONAL ACCESSORY)

NOTE! The humidity sensor must be connected carefully. Incorrect connections may damage the sensor and the power unit.

The humidity sensor is a low-voltage component that is installed on the wall behind the sauna benches so that it is not directly exposed to steam or heat rising from the heater (Figure 6.6-1). The humidity sensor is supplied with a 6-meter cable (SIHF-O 4x0.25), which must not be extended. If a longer distance is

required, a single continuous cable approved by the manufacturer must be used. The sensor cable should be routed into the heater's connection box through the designated conduit (Figure 6.3-1) and connected to the connector according to the wiring diagram (Figure 5.3-1). The humidity sensor should be attached to the wooden surface using the supplied screws (2 pcs Ø 2.9x16), and for other surface materials, the mounting accessories are selected according to the surface material and mounting method.

6.7. INSTALLATION OF THE DOOR SWITCH (NARVI REMOTE-CONTROLLED MODELS)

The door switch is a low-voltage safety device supplied with remote-controlled heater models. The door switch is installed at the bottom of the door frame, on the handle side, and the magnet is attached to the door leaf so that the distance between the door switch and the magnet is a maximum of 15 mm when the door is closed (Figure 6.7-2). A gap that is too large prevents the switch from functioning and hinders remote operation of the heater. The door switch should not be installed at the top of the door, as high temperatures weaken the strength of the magnet.

The switch and magnet holders can be attached either with the supplied screws (pcs Ø 2.9x16) or with double-sided tape. The switch and magnet can also be embedded in the wooden door and frame according to the schematic diagram (Figure 6.7-3). The door switch cable (5 m) should be routed into the heater's connection box through the designated conduit (Figure 6.3-1) and connected to the connector according to the wiring diagram (Figure 5.3-1). If necessary, the cable can be extended by making a joint according to installation standards.

6.8 LIGHTING

The lighting may only be connected by a qualified electrician, according to current installation standards.

A lighting with a maximum power of 100 W can be connected to the sauna heater (230 V AC 1N). The lighting connected to the sauna heater can be controlled from the heater's control unit.

The voltage of the lighting is 230V. The lighting supply must be protected by a residual current device (RCD).

The residual current device is not included in the delivery.

The lighting cable must be selected according to the electrical plan for the building.

The lighting cable should be routed into the heater's connection box through the designated cable gland (Figure 6.3-1) and connected according to the wiring diagram (Figure 5.3-1).

For proper control, it is important to ensure that the used lighting is compatible with TRIAC dimming.

6.9. SAUNA HEATER INSTALLATION AND PLACING STONES

- In the installation of the sauna heater, the specified safety distances must be taken into account (Figure 6.1-1 and Table 6.1-1).
- Fasten the attachment plate to the wall using the screws included in the delivery in accordance with Figure 6.9-1.

- The protective plastic of the outer casing and the support board of the heating elements are removed before the product is put into operation, if they are in place.
- Thread the carrying handles at the rear of the heater into the slots in the wall mounting plate (Figure 6.9-2).
- Secure the attachment of the top end of the heater using 2 pcs. of locking screws (Figure 6.9-2).
- The stone space will be locked to the jacket and the mounting plate of the sauna heater.
- The operation of the heater is ensured before placing the stones.
- Only block-shaped stones specifically intended for sauna heaters may be used in the heater.
- Use block-shaped olivine diabase stones with a diameter of 5-10 cm in the sauna heater.
- Pile the stones onto the stone compartment support plate, between the heating elements so that the stones support one another. The weight of the stones must not be supported by the heating elements.
- The stones must be placed carefully to avoid damaging the surface coating of the heater's outer casing. Protective gloves must be worn when placing the stones.
- When placing the stones, ensure that the heating elements do not bend and that sufficient air circulation is not obstructed.
- Flat stones should be placed between the heating elements.
- Pile the stones loosely. Placing the stones too tightly causes overheating of the heating elements, which shortens their lifespan and slows down the heating of the sauna.
- The stones must cover the heating elements completely
- Do not heap the stones on top of the heater (see Figure 6.9-3).
- The inspection and re-arrangement of sauna stones should be done every six months, and the stones should be replaced every 2-3 years.
- Using light (porous) ceramic stones, that are of exactly the same shape and size is

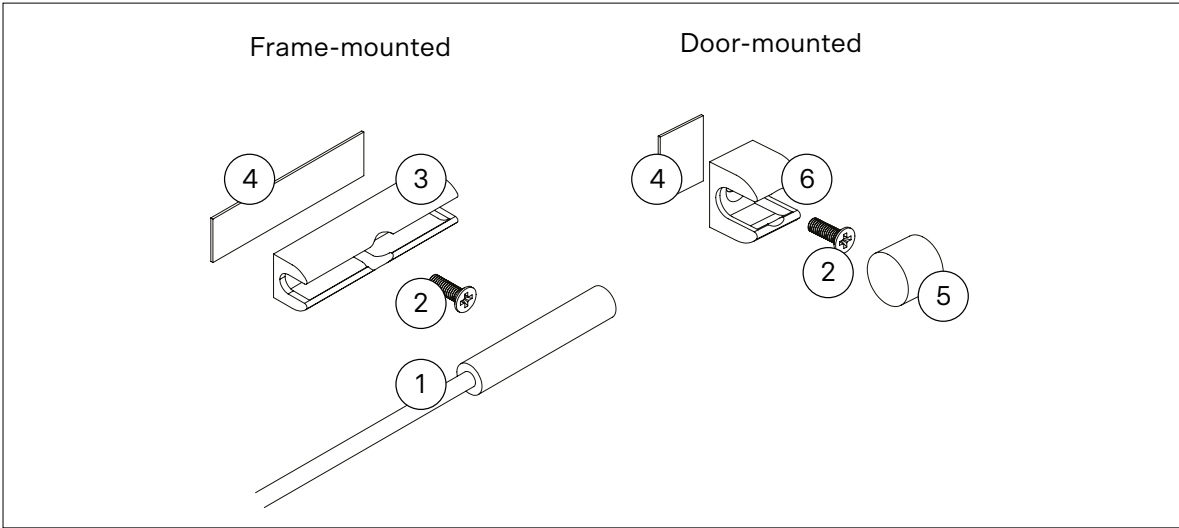


Figure 6.7-1. Door switch set: 1) Door switch with connection cable, 2) Screw 3) Frame switch holder 4) Sticker 5) Magnet 6) Door magnet holder

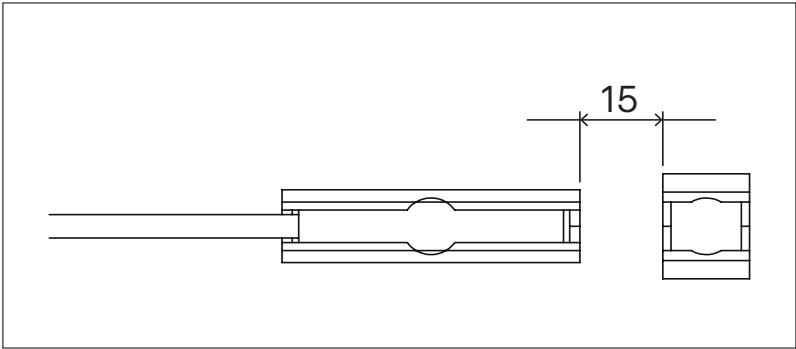


Figure 6.7-2. The distance between the door switch and the magnet holders max. 15 mm

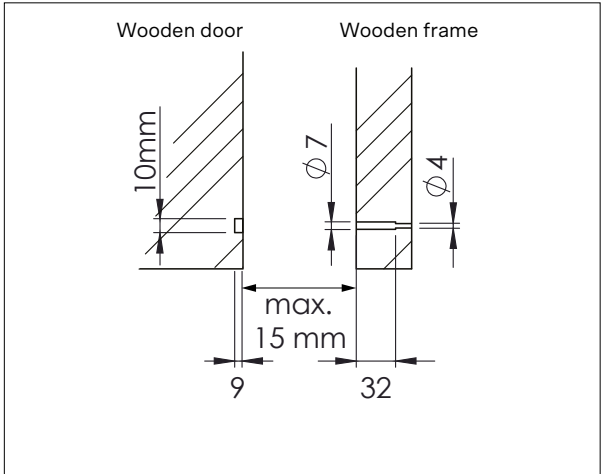


Figure 6.7-3. The embedding of the door switch and the magnet

prohibited, as they can cause excessive heating and break the resistors.. Likewise, soft soap-stones shall not be used in this sauna heater either.

THE SAUNA HEATER MUST NOT BE USED WITHOUT STONES. AN INSUFFICIENT AMOUNT OF STONES POSES A FIRE HAZARD!

7. USING THE CONTROL UNIT

The Narvi Flow control unit's interface can be used to start the heater, set the steam room temperature and operating time, schedule heating, control lighting, and define default settings. The control unit displays the ongoing operation and the temperature of the steam room, as well as the humidity percentage of the steam room, if the humidity sensor is connected to the heater. In the remote-controlled model, you can schedule the heater to start, adjust the temperature of the steam room, and set the heater's operating time using a mobile app. The app will send you notifications, for example, when the sauna is ready for use.

The system has a power outage memory of about three minutes. The system continues to operate normally after a power outage. After a longer power outage, the system shuts down and does not resume operation until the function is reactivated after the power is restored.

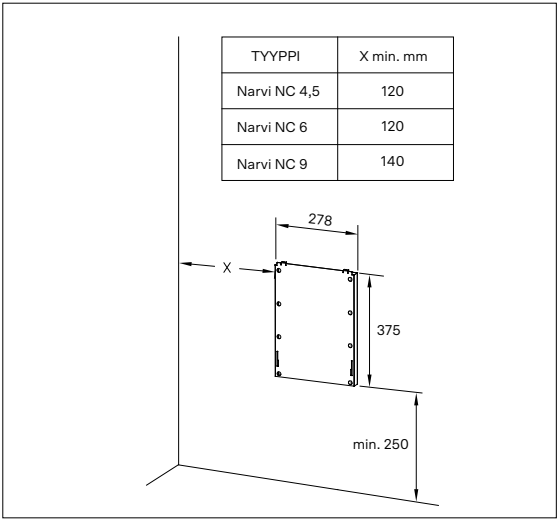


Figure 6.9-1. Installation of the Wall Mounting Plate

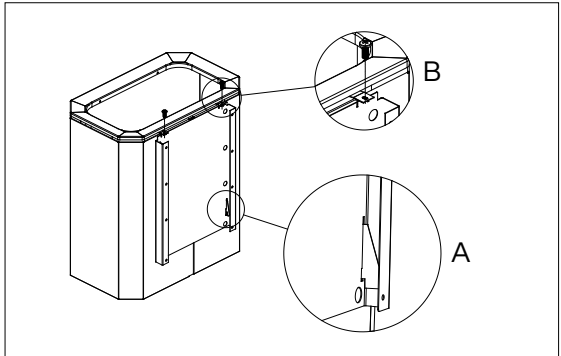


Figure 6.9-2 Heater onto the wall mounting plate

7.1 NAVIGATION IN MENUS

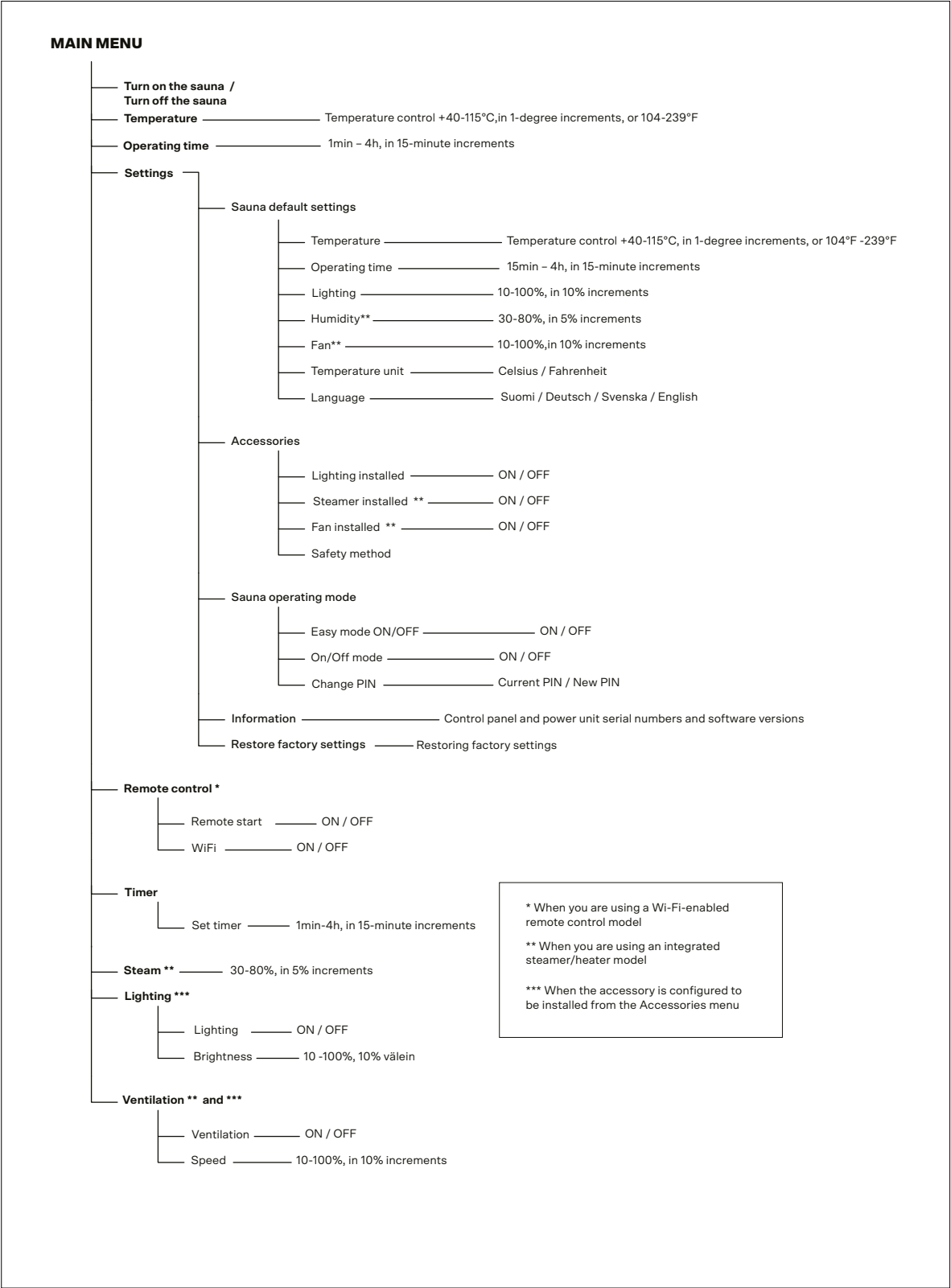


Table 7.1-1. Interface diagram

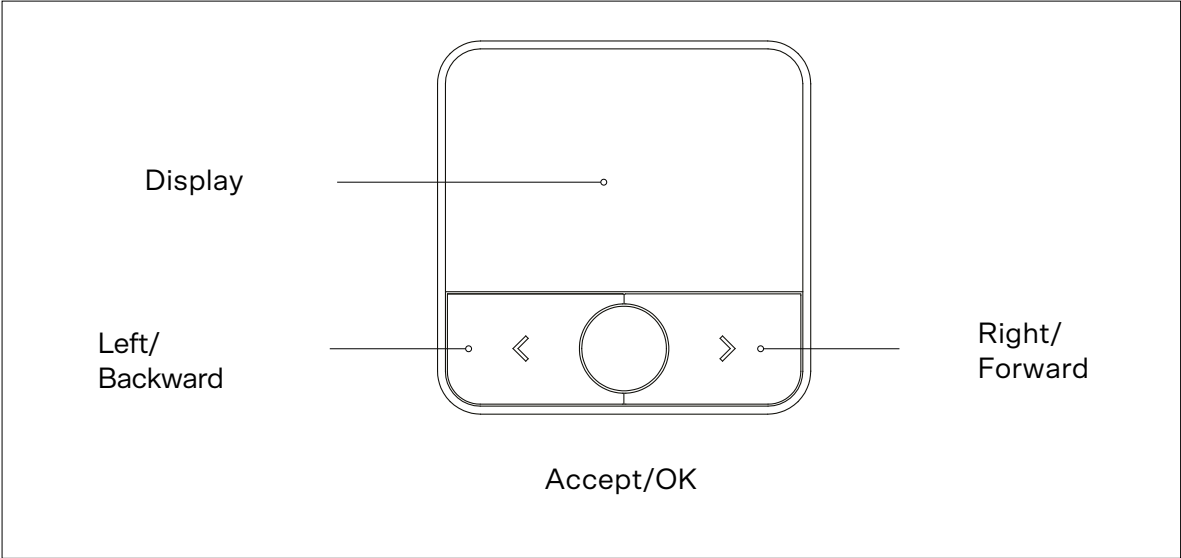
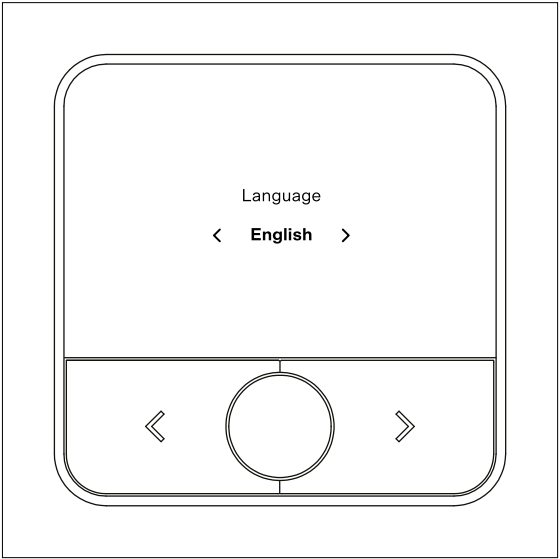


Figure 7.1-1. Use of the control unit

In the Narvi Flow control unit, you can navigate the menus using three buttons: left (◀), right (▶), and the centre button (OK). To move to the desired menu item, press the left or right button. The selected menu is opened or the action is confirmed by pressing OK. A stronger border or highlight indicates which menu item is currently selected. The interface diagram shows all the menus of the control unit (Table 7.1-1). The visible menus and the scope of functions may vary depending on the control unit version (Flow / Flow Wi-Fi) and the accessories in use.

7.2. SETTING THE LANGUAGE AND TEMPERATURE SCALE

When the control unit is powered on for the first time or factory settings are restored, the control unit prompts to select the operating language and temperature scale. The desired language (Finnish, Swedish, English, or German) is selected by pressing the left or right button and confirming the selection by pressing OK. Then, the temperature scale is selected: Celsius (°C) or Fahrenheit (°F). This selection is also confirmed with the OK button. The control unit will then start with the selected settings in the main menu. Settings can be changed later through the Settings menu.



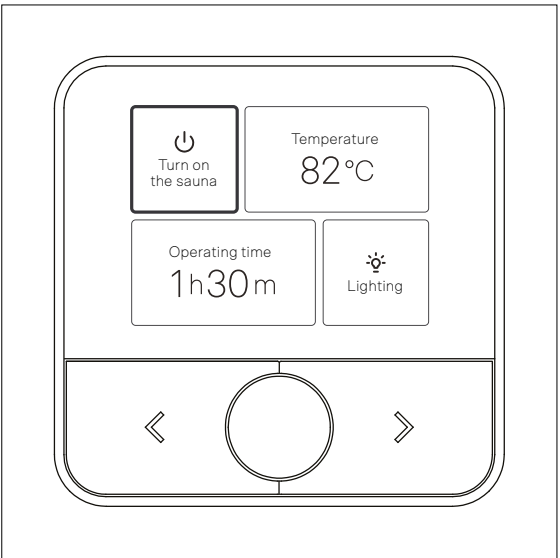
7.3. MAIN MENU

Once the control unit is started and the initial settings (language and temperature scale) are configured, the control unit will move to the main menu. The main menu displays the status of the heater, the current temperature of the steam room, and the available main functions. The main menu remains active for 15 seconds, after which the control unit will enter standby mode and only show the temperature. After 30 minutes, the figures on the display will turn off, and only the indicator light of the centre button will remain on. You can return to the main menu by pressing any button.

7.4. TURN ON / TURN OFF THE HEATER

In the main menu, you can turn on the heater by selecting “Turn on heater” and pressing the OK button. When the heater is started, the control unit shows the temperature rise and the duration the heater has been on. The control unit notifies the user when the target temperature of the steam room is reached. During heating, the user can navigate through the menus and adjust, for example, the temperature or operating time.

You can turn off the heater by returning to the main menu, selecting “Turn off heater” and pressing the OK button. This will turn off the heating elements and the heater will shut down.



7.5. TEMPERATURE

The target temperature of the sauna can be adjusted in the menu between 40-115 °C (104-239°F), with an accuracy of one (1) degree.

The temperature can be adjusted before turning on the heater or while the heater is in operation. When the heater is turned off, the settings will revert to their default values.

7.6. OPERATING TIME

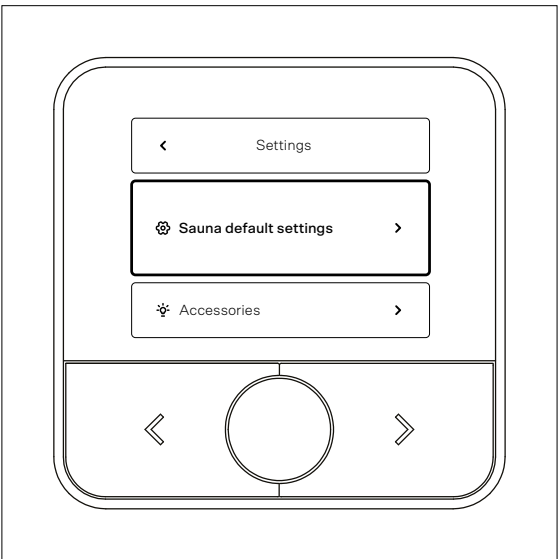
The operating time of the heater can be adjusted in the menu between 15 minutes – 4 hours, in 15-minute increments.

The operating time can be adjusted before the heater is turned on or while the heater is in operation.

When the heater is turned off, the settings will revert to their default values. Note: the continuous operating time of the heater cannot exceed four hours.

7.7. SETTINGS

Under the Settings menu, you will find the following submenus: Sauna Default Settings, Accessories, Operating Modes, Information, and Restore Factory Settings. More detailed descriptions of the aforementioned menus can be found in the respective section and user interface diagram (Table 7.1-1).



7.7.1. SAUNA DEFAULT SETTINGS

In the default settings menu, you can set the control unit’s default values, which are used every time the heater is turned on:

Temperature: 40-115°C, with an accuracy of 1 degree, (104°F-239°F) Operating time: 15min – 4h, every 15 minutes.

Lighting: You can set the default brightness of the lighting to 10-100%, in increments of 10%

Temperature unit: You can choose either Celsius or Fahrenheit as the default temperature unit

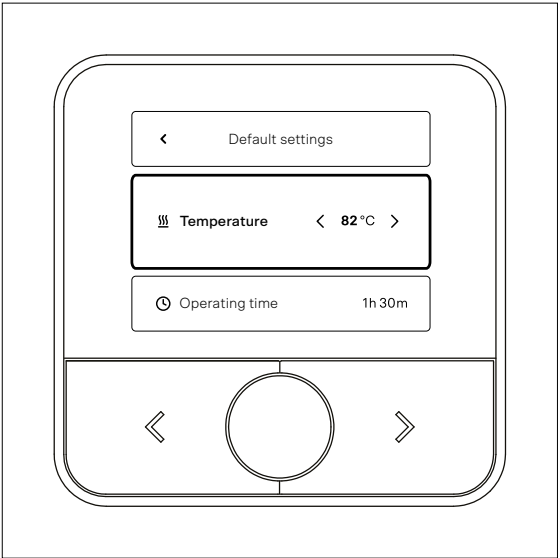
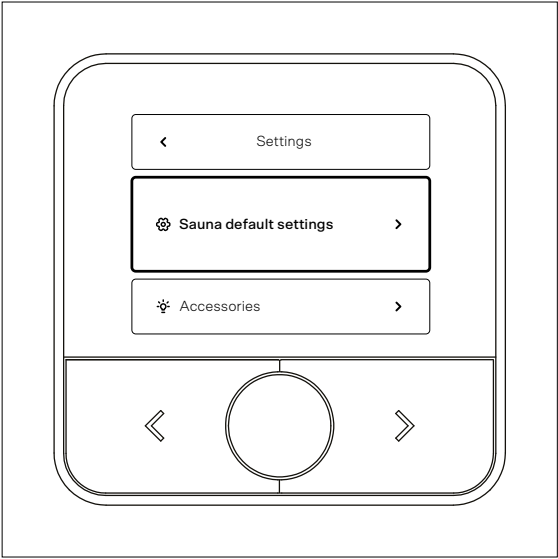
Language: The operating language of the control unit can be selected as Finnish, English, Swedish,

or German.

The desired language is selected using the transfer keys, and the language is activated with the control unit’s central key.

A message will appear on the control unit’s display saying “You are selecting a language. The device will restart and return to the main menu”.

Language selection can be confirmed by pressing OK with the control unit’s middle button or cancelled by pressing the left button on the control unit. After pressing the OK button, the device restarts in the selected language and returns to the control unit’s main menu.



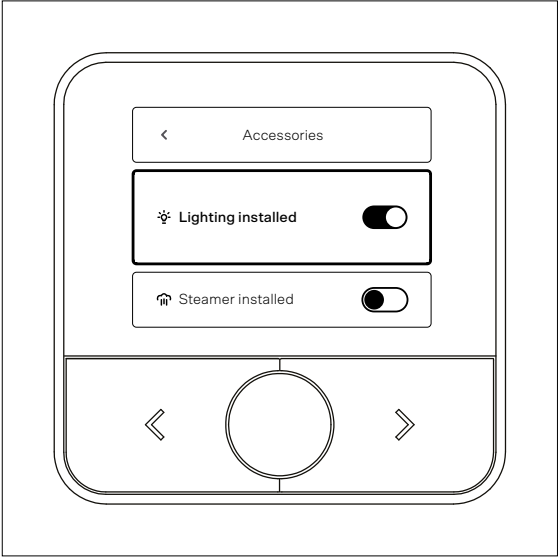
7.7.2. ACCESSORIES

Sauna accessories are configured in the Settings view under Accessories.

The Accessories menu is used to configure all accessories connected to the system. When an accessory is activated in the menu, its control functions become visible in the main menu.

Available accessories:

- Lighting: allows control and dimming of the sauna lighting.
- Safety method: shows the safety device in use, which is mandatory for remote operation.



7.7.3. CONTROL UNIT OPERATING MODES

The flow control unit has two operating modes that restrict the adjustment of settings: Easy mode and On/Off mode.

Easy mode

- Easy mode prevents the user from changing the control unit's default settings.
- Easy mode is activated from the toggle switch.
- After activation, the control unit requests a PIN code.
- The mode comes into effect after entering the PIN code.

On/Off mode

- In On/Off mode, the user can only turn the heater on or off.
- The mode is activated from the toggle switch.
- After activation, the control unit requests a PIN code.
- The mode comes into effect after entering the PIN code.

Return to unrestricted operating mode

- To exit Easy and On/Off modes, re-enter the PIN code.
- In Easy mode, entering the PIN code is done by selecting the Operating Mode menu from the main menu.
- In On/Off mode, entering the PIN code is done by pressing the left button on the control unit for 5 seconds.

Changing the PIN code

- Factory setting: 000.
- The change is made by selecting the numbers with the arrow keys and confirming with the OK button.
- If the PIN code is forgotten, the control unit must be reset to factory settings. To reset the unit, contact Narvi's technical support.

7.7.4. INFORMATION

The Information menu displays the serial number and the software versions in use (control unit and power unit).

7.7.5. RESTORE FACTORY SETTINGS

In the Restore Factory Settings menu, the control unit can be restored to its original factory settings. This function is needed in situations such as:

The Wi-Fi network password has changed.

A new user account or different application credentials are connected to the control unit.

Before restoring, the control unit confirms the action with the following message: "Are you sure you want to restore the factory settings?"

Options:

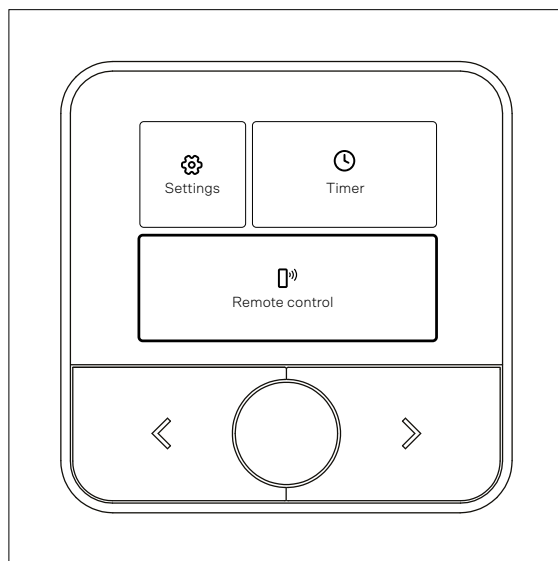
OK: confirms the reset and the control unit will restart with factory settings.

Cancel: returns to the menu without changes.

Note:

Restoring factory settings will clear user-specific settings.

7.8. REMOTE CONTROL



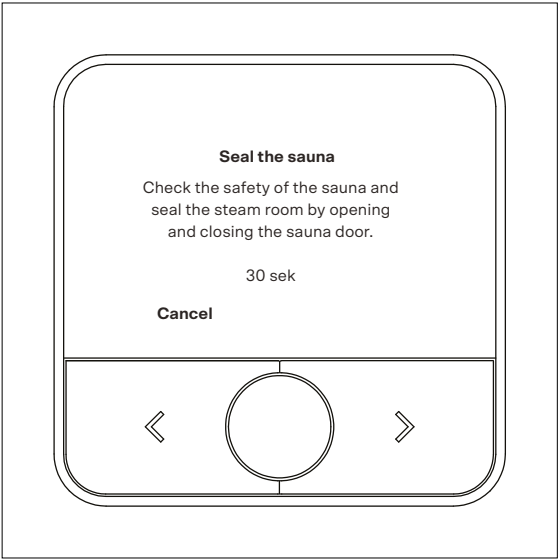
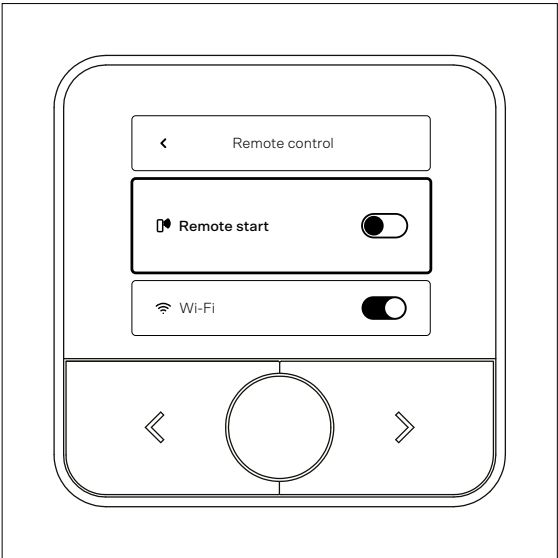
If using the Narvi Flow Wi-Fi control unit, remote control of the heater can be activated from the Remote Control menu. Remote control allows the heater to be controlled via a mobile app.

Before activating remote control, you must:

- Install the Narvi Flow app and create a user account
- Connect the control unit to the building's Wi-Fi network
- Define the safety method to be used (door switch or other approved safety device)

When the conditions are met, remote control readiness is enabled by activating the Remote Control toggle switch.

The sauna heater can be turned off remotely at any time, provided the heater is connected to the mobile app.



Activating remote control readiness

- Remote start can only be performed if the safety method is activated.
- Narvi's remote-controlled heater operates remotely only if a door switch or approved safety switch is installed.
- The heater can also be controlled remotely when it is scheduled or turned on from the control unit.

Safety device

The safety device installed on the sauna heater or sauna door must meet the requirements of the product standard IEC/EN 60335-2-53 for electric heated stoves.

In addition to the safety device, the product standard requires the user to consider potential hazards related to remote control.

Door switch

- The user must ensure that the steam room is safe before activating remote operation.
- After activating remote control from the control unit, the sauna door will close within 30 seconds, sealing the sauna area.
- If the door is opened before the steam room temperature reaches +40 °C, remote control readiness is deactivated and must be re-enabled.
- When the temperature is above +40 °C, opening the door does not interrupt the operation of the heater.
- If the door is not opened at all, remote control readiness remains active.

Safety switch

A safety device based on Narvi's safety switch is not currently available.

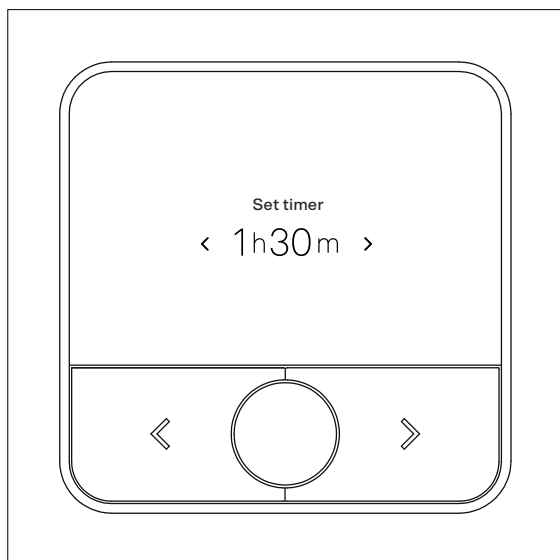
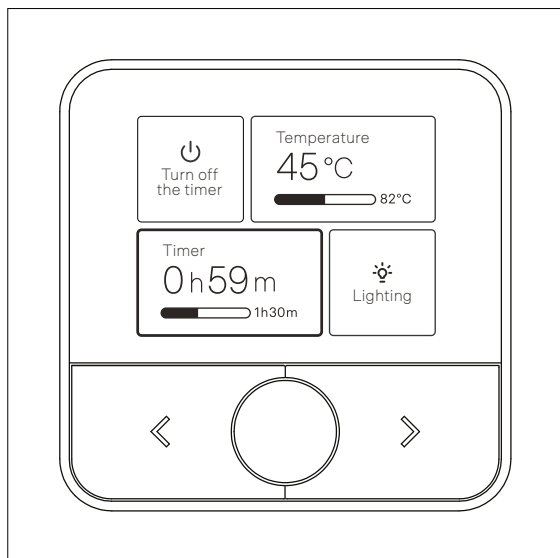
7.9. TIMER

From the timer menu, the sauna can be scheduled to turn on with a delay of 15 minutes to 4 hours, in 15-minute intervals.

The timer can be changed from the menu while the timer is still running.

The factory default setting for the timer is 1 hour, which can be increased or decreased as needed. When the scheduled time ends, the

heater turns on and the control unit displays the heating status.



7.10 LIGHTING

The Lighting menu is available when the lighting function has been activated from the Accessories menu.

In the menu, you can:

- Turn the sauna lighting on or off
- Adjust the brightness of the lighting between 10-100%, in 10% increments.

The dimming of the lighting only works with fixtures that are compatible with TRIAC dimming.

7.11 CHILD LOCK

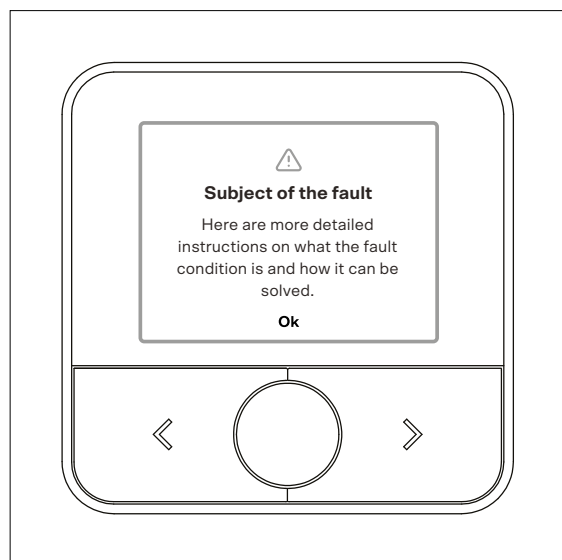
The child lock prevents the unintentional use of the control unit. The child lock is activated and deactivated with the same function.

Using the child lock:

- Activation: press and hold the right and left buttons at the bottom for three (3) seconds.
- Deactivation: repeat the same function (left + right button for 3 seconds).

When the child lock is active, the settings of the control unit cannot be changed.

7.12 CONTROL UNIT FAULT NOTIFICATIONS



The control unit displays clear notifications in fault situations that help the user identify and resolve the problem.

Fault conditions and their meanings:

The sauna heater may not be used until corrective actions have been taken.

Fault conditions that prevent the use of the heater

- No connection to the power unit: the control unit cannot connect to the heater's power unit, and the heater cannot be used.
- The heater's temperature sensor is disconnected: the heater's temperature sensor is not

functioning, and the heater cannot be used.

- The heater's temperature sensor is short-circuited: the heater's temperature sensor is not functioning, and the heater cannot be used.
- The safety switch of the heater has tripped: check the condition of the heater and ensure that there is nothing on the heater that poses a fire risk.
- The overheat protector of the heater has tripped: **the cause of the overheat protection tripping must be determined!** The overheat protector can be reactivated by pressing the temperature sensor (Figure 7.12-1).

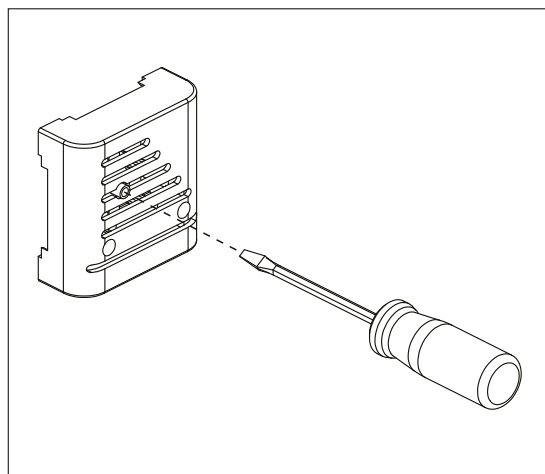


Figure 7.12-1. reactivation of the overheat protector

Technical faults that restrict the use of the heater

- Component fault lighting: lighting can be controlled if the lighting is functioning.
- Heater identification data cannot be read: remote control is disabled (only for remote-controlled models).

Other problems

- Remote start not activated: safety method not defined. Install the safety method from the mobile application.
- The heater has been turned off: the sauna door was opened after the remote control was activated. When continuing to use remote control, remote control must be reactivated.

8. MOBILE APPLICATION

The Narvi Flow application is installed on the mobile device. It can be downloaded from the Google Play Store or App Store. The application works on Android 6.0 / iOS 13.0 and newer system versions.

8.1. ACTIVATION OF THE MOBILE APPLICATION

1. Open the application.
2. Create a user account by providing an email address and name.
3. Create a password (at least 12 characters, including one uppercase letter and one number).
4. Confirm the user account via the confirmation link sent to your email. The link is valid for 15 minutes.
5. Log in to the application.

Adding the heater:

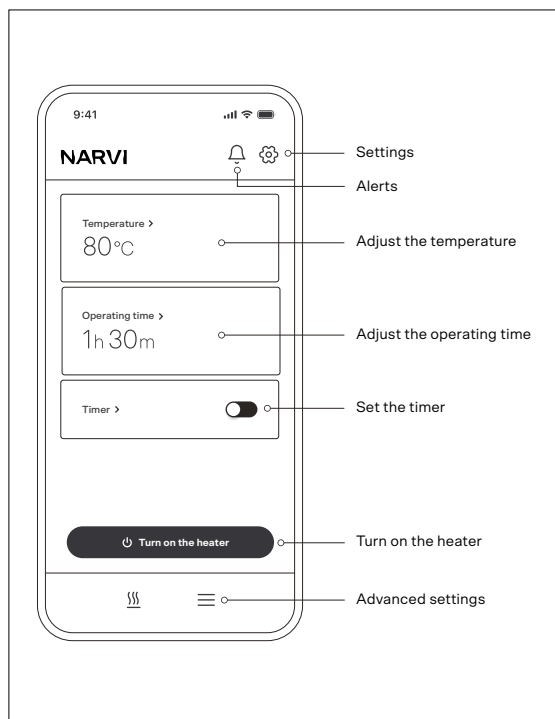
1. Make sure that the mobile device is connected to a functioning internet and Wi-Fi network.
2. Activate the heater's internet connection.
3. Connect the heater to the network; once the heater's internet connection is turned on from the control unit, go to the phone settings and find the heater on the list. The heater's name can be found on the list in the format Narvixxxxxx.
4. Confirm the connection to the heater; confirm the connection between the heater and the application by entering the six-digit PIN code displayed on the control unit.
5. Connect the heater to your home network by following the instructions in the app. Connecting may take several tens of seconds. If the connection fails, the application will provide instructions to fix the error.
6. Once the heater has been successfully added, the application will ask for permission to send notifications.
7. Fill in the details of your heater; enter the rated power of the heater and name your heater for easier identification.

Setting up the security system

1. Select the security method in use from the application.
2. The application will ask to activate it for identification.

Using the mobile application

- Remote control must be activated from the control unit before use.
- The following functions can be controlled from the application:
 - Startup and shutdown
 - Setting the target temperature
 - Setting the operating time
 - Controlling the timer function
- The application shows notifications, such as when the sauna is ready for use.
- The heater can always be turned off from the application once it has been added to the app.



9. FAULT SITUATIONS

General:

In case of faults, the heater is turned off. The cause of the fault must always be determined before restarting the heater.

All electrical work related to the hardware must be performed by a qualified electrician.

Before maintenance work, the power supply to the heater must be disconnected from the fuse box.

The heater does not turn on or operation is abnormal

- Check the fuses from the electrical panel and the heater's power card.
- Ensure that the main switch (I/O) of the heater is in position I. Make sure the switch works by pressing it back and forth a few times. The location of the switch is shown in Figure 6.3-2. The switch (I/O) is located at the bottom of the heater.
- The display of the heater control unit is not working. Check the connections of the control unit and the temperature sensor.
- The lighting is not working: check the fuse on the heater's power card (Figure 5.3-2).
- No voltage is coming to the CTL connector: check the fuse on the heater's power card (Figure 5.3-2).
- The warranty does not cover fuse failure caused by external disturbances.
- The control unit's casing is warped: check the mounting.

The heater heats up poorly

- Check the fuses from the building's electrical panel.
- Check if the heater's temperature is set to low.
- The sauna ventilation is too high or the location of the exhaust duct is incorrect.
- Check the placement of stones, rearrange them to ensure proper air circulation.
- Check that all heating elements are heating up. The heating elements should glow red after some time of turning on the heating. Do not touch the heating elements. If necessary, a

few stones can be removed from the heater's surface to better see the heating elements.

- Check if the temperature sensor is faulty (~10kΩ / 25°C)

A fuse has blown in the electrical panel

- Ensure that the heater's power supply cable and fuse match the heater's power (see Table 6.1-2).
- Check that the building's electric heating control (CTL) is not incorrectly connected.
- There is a short circuit in the heater, e.g., a heating element is broken.

The sauna's surface cladding near the heater is darkening

- Check the safety distances
- Check the placement of stones
- Check the location of the temperature sensor

10. MAINTENANCE

The Narvi NC sauna heater is designed to be as maintenance-free as possible. The instructions below concern the safe maintenance of the heater and its control unit.

General maintenance tasks

- Before any maintenance work, ensure that the power supply to the heater is disconnected from the building's fuse box.
- All electrical work related to the equipment should be performed by a qualified electrician
- In control unit versions with remote access, software updates will be installed automatically when the control unit is connected to the internet.

Cleaning of exterior surfaces

- You can clean the exterior surfaces of the heater and control unit with a lightly damp cloth.
- If necessary, use a mild, neutral detergent.
- Do not use abrasive materials or solvents that may damage the surfaces.

Inspection and maintenance of stones

- The placement of stones should be checked at least every six months.
- The stones should be replaced every 2-3 years or more often if they crumble.
- Place the stones according to the instructions (Figure 6.9)

11. DISPOSAL OF EQUIPMENT

The Narvi NC heater and its controller must be disposed of in accordance with environmental regulations.

- Packaging and packaging materials must be delivered for recycling according to local guidelines.
- Equipment must not be disposed of with mixed waste.
- Deliver the heater and electrical devices to a collection point for electrical and electronic waste (WEEE).
- Follow local waste management requirements and recycling instructions.

Proper recycling of equipment reduces environmental impact and enables the reuse of materials.

12. SPARE PARTS

- Spare parts for the heater and its equipment can be obtained through Narvi's websites or retailers.
- Only use original Narvi spare parts to ensure safe and reliable operation of the product.
- If you are unsure about the correct spare part, contact Narvi Oy's technical support.

13. WARRANTY TERMS

The latest warranty terms for the Narvi NC heater can be found on Narvi's website at: <https://narvi.fi/en/warranty/>

Key principles of the warranty:

- The warranty covers manufacturing and material defects according to the warranty terms.
- The warranty does not cover installation errors, misuse, or actions contrary to instructions.
- The warranty does not cover defects caused by improper use or failure to follow the instructions.
- The warranty does not cover indirect damages.

The validity of the warranty requires:

- Correct installation in accordance with current regulations and instructions.
- Proper use of the sauna stones and regular maintenance.
- Use of the device as described in the instruction manual.

Current and complete warranty terms should be checked on Narvi's website.