



MAGNUM Original Sauna Stove
6.6 kW – 9.0 kW – 10.5 kW

MAGNUM Cenik and Lite
Sauna Stove
6.6 kW – 9.0 kW – 10.5 kW

Magnum Ruutu L and C
6.6kW - 9.0kW 10.5kW
Use and Installation

**With Finlandia and Magnum RC
Control Centers**

Table of contents:

<u>Safety instructions:</u>	3
1 Using the device - Finlandia Control Center	4
1.1 Control functions - Finlandia Control Center	4
1.2 Control functions - Magnum RC Control Center	5
1.3 Menu structure - Finlandia Control Center	6
1.4 Menu structure - Magnum RC Control Center	6
2 Using the sauna stove.....	7
2.1 Adjustable settings	7
2.2 Target temperature	7
2.3 Heating time	7
2.4 Timer	8
2.5 Turning the sauna on.....	8
2.6 Directions for using the sauna	9
3 Installation of the sauna stove	10
3.1 Installation:	11
3.2 Installing the thermostat sensor	13
3.3 Control panel installation.....	14
3.4 Installing the control centers in the sauna room.....	15
4 Installation images	16
4.1 Thermostat and Controller	16
4.2 Ventilation in the sauna room.....	17
4.3 Piling the stones in the sauna stove.....	18
4.4 Images showing the sauna stove	19
4.5 The sauna stove's wall conductor	20
5 Technical information and safety distances of the sauna stoves	21
5.1 Technical information	21
5.2 Safety distances	22
6 Warranty	23
7 Connection diagram	24
8 Problems / troubleshooting	25

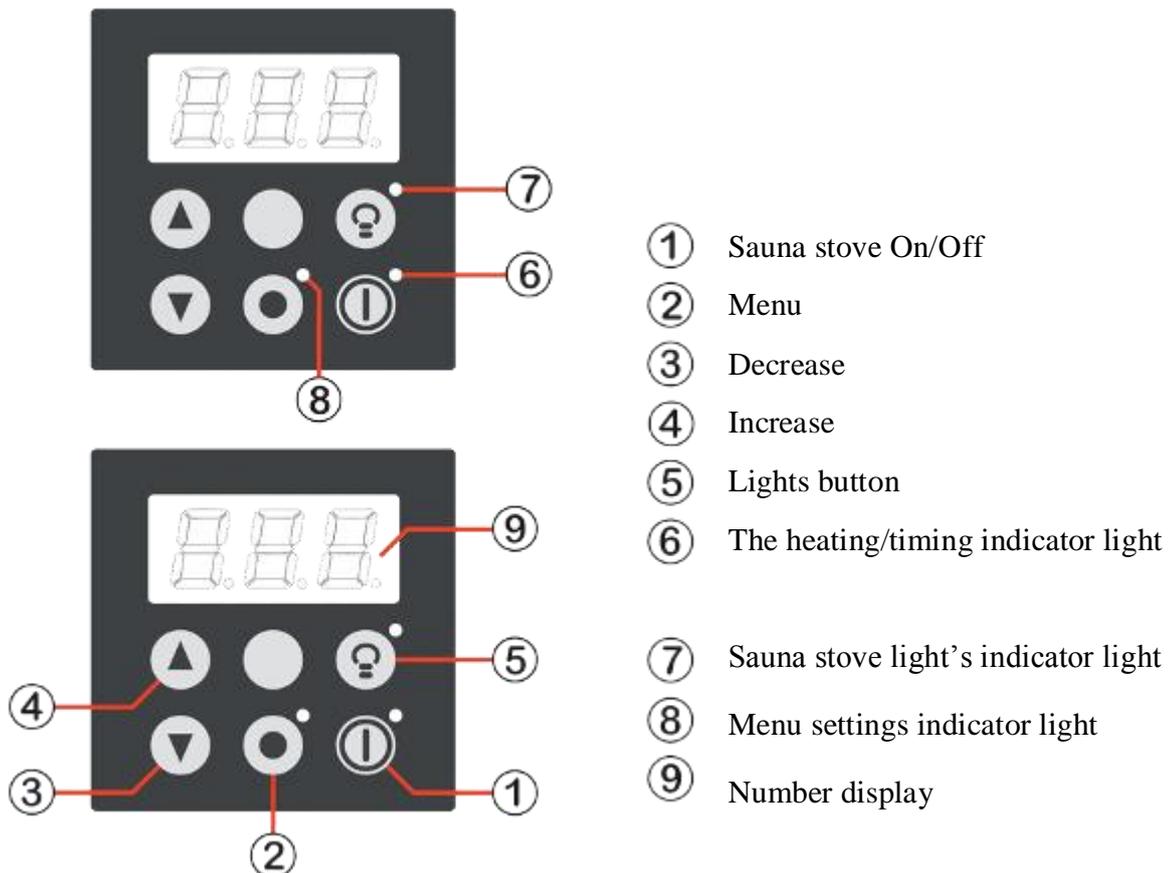
Safety instructions:

- **Read these instructions carefully before installing and using the sauna stove.**
- **These instructions are intended for the use of the owner of the sauna and the electrician who installs the sauna stove. The owner of the sauna receives the instructions for setting up and using the sauna stove after the stove has been installed.**
- **Malfunctions caused by errors in installation or use are not covered by the warranty. THIS INCLUDES ERRORS IN THE PILING OF ROCKS!**
- **Do not open the cover of the sauna stove's junction box while the stove is on.**
- **Before beginning the installation process, verify that the device is de-energized (has been disconnected from the power supply).**
- **Furthermore, ensure that the device has been grounded properly.**
- **Do not touch the components or microcircuits inside the device, as the electrostatic discharge could damage the device.**

I. Using the device - Finlandia Control Center

Section I.1 Control Center

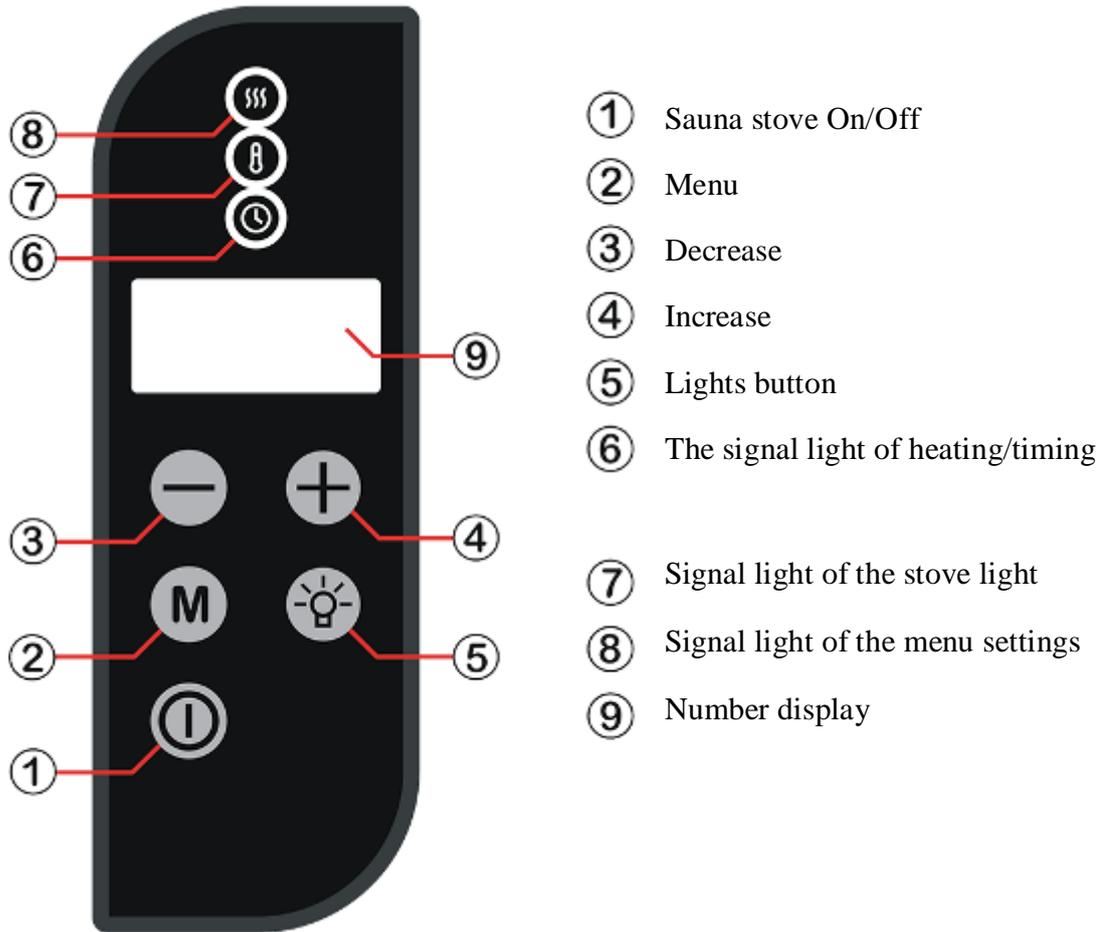
Control functions - Finlandia



Legend for the parts of the control panel:

1.	On/off button. Pressing this button turns the sauna stove on and off. If the timer has been set, pressing this button starts the timer for heating the sauna. Tip: Pressing this button for a longer duration overrides the timer and starts the heating of the sauna immediately.
2.	Menu button. By pressing this you can move through the menus of the device as follows: (Default mode → Target temperature → Heating time → Timer → Default mode)
3.	(∇) button. This button is used to decrease the default values.
4.	(∧) button. This button is used to increase the default values.
5.	Lights button. By pressing this, you can turn on the sauna stove's light. Pressing it again turns the light off. (Only used in models with lights or a separate fiber kit)
6.	"Device on" light. This light is constantly on while the sauna stove is on. The light "glows" when the timer is in use. The light is turned off when the sauna stove is not on.
7.	Sauna stove light's indicator light. This light is on as an indicator of the fiber light kit of the sauna stove / sauna being on.
8.	Menu settings indicator light. This light comes on when a menu setting is adjusted (timer, time the device is on, target temperature of the sauna stove)
9.	Three-digit display

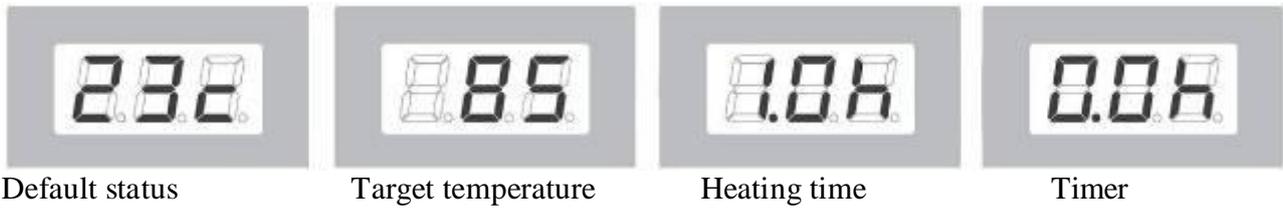
1.2 Control functions - Magnum RC Control Center



- ① Sauna stove On/Off
- ② Menu
- ③ Decrease
- ④ Increase
- ⑤ Lights button
- ⑥ The signal light of heating/timing
- ⑦ Signal light of the stove light
- ⑧ Signal light of the menu settings
- ⑨ Number display

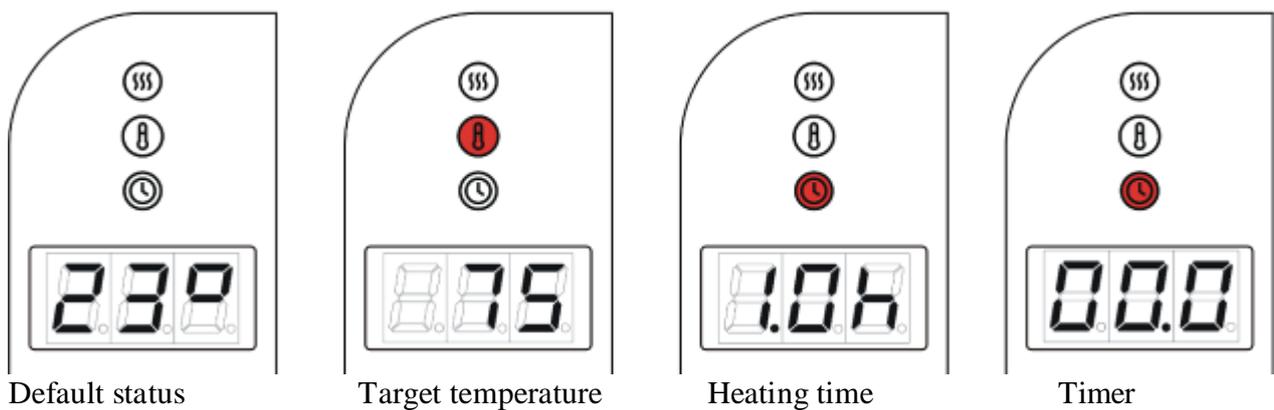
Legend for the parts of the control panel:	
1.	On/off button. Pressing this button turns the sauna stove on and off. If the timer has been set, pressing this button starts the timer for heating the sauna. Tip: Pressing this button for a longer duration overrides the timer and starts the heating of the sauna immediately.
2.	Menu button. By pressing this you can move through the menus of the device as follows: (Default mode -> Target temperature -> Heating time -> Timer -> Default mode)
3.	(-) button. This button is used to decrease the default values.
4.	(+) button. This button is used to increase the default values.
5.	Lights button. By pressing this, you can turn on the sauna stove's light. Pressing it again turns the light off. (Used only in models with lights)
6.	Timer light. Light is on: heating time setting / timer setting mode (or the default mode, if the display shows the remaining time).
7.	Target temperature setting indicator light. When this light is on, it is possible to change the target temperature.
8.	"Device on" light. This light is constantly on when the sauna stove is on. The light "glows" when the timer is in use. The light is turned off when the sauna stove is not on.
9.	Three-digit display

1.3 Menu structure - Finlandia Control Center



The adjustment menus of the device are shown in the image above. The user can move from one menu to another using the Menu button. When the sauna stove is on, the (^) and (v) buttons may be used to move to the mode where you can adjust the settings in the order shown in the image above.

1.4 Menu structure - Magnum RC Control Center



The adjustment menus of the device are shown in the above image. The user can move from one menu to another using the Menu button. When the sauna stove is on, the (+) and (-) buttons may be used to move to the mode where you can adjust the settings in the order shown in the image above.

II. Using the sauna stove

Section II.1 Adjustable settings

Parameter	Adjustment step	Adjustment step	Default value	Note!
Target temperature	40...110 °C	1 °C	60 °C	
Heating time	1 h...6 h	30 min	1 h	see section 2.3
Timer time	0.5 h...24 h	30 min	0 h (not in use)	

Section II.2 Target temperature

The sauna's target temperature may be adjusted in steps of one Celsius. The minimum temperature is 40 degrees and the maximum temperature is 110 degrees. This setting is saved.

The target temperature may be adjusted in two different ways.

1. The Menu button shows the target temperature on the screen. You may use the $+/\wedge$ and $-/\vee$ buttons to change the value. If you do not press any buttons, the controller will stop displaying the target temperature menu automatically in approximately 10 seconds. You may also leave the menu by pressing the Menu button repeatedly.
2. When the sauna temperature is on the display, pressing the $(+/\wedge)$ or $(-/\vee)$ button causes the controller to move directly to setting the target temperature. Leaving this menu is done as in section 1.

Section II.3 Heating time

You may set the sauna stove's heating time to be between 1 h and 6 h. The adjustment takes place in steps of 0.5 h.

This value needs to be set when the device is turned off.

You may move to this setting from the default mode by pressing the Menu button twice.

It is possible to reduce the time the stove is on when the sauna is heating.

You may increase or decrease the time of the sauna session by pressing the $(+/\wedge)$ or $(-/\vee)$ button when the remaining time is on the display. In this case, the adjustment step is 15 minutes. This setting is not saved to the memory. You can go back to the default mode by pressing the Menu button twice.

Section II.4 Timer

You can move from the default mode to the timer by pressing the Menu button three times in a row. The (+/∧) and (-/∨) buttons are used to change the timer's setting. The adjustment range is 0.5 h – 24 h and the adjustment step is 0.5 h. When this value is zero, the timer is not in use.

This setting may only be changed when the device is off.

Section II.5 Turning the sauna on

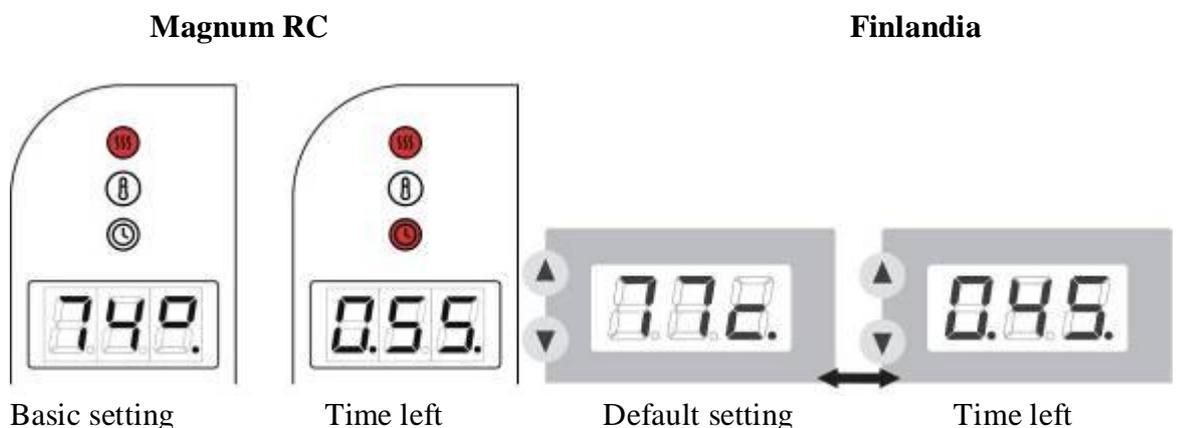
Turn the sauna stove's power on using the control switch at the lower part of the sauna stove. Pressing the controller's On/Off button makes the sauna stove start heating the sauna until the target temperature has been reached. The stove's indicator light in the controller will be turned on. The decimal mark lights up on the lower right side of the screen as a signal of the resistors being on.

(If the timer has been set, the On/Off button turns the timer on and the sauna stove begins heating only after the timer has run out). The On/Off button turns the sauna stove off.



Control switch

Tip: If the timer has been set but the sauna stove is not on, you may override the timer by pressing the On/Off button and keeping it pressed for a couple of seconds. This causes the stove to start heating the sauna immediately. The timer's setting remains in the memory.



When the machine is on, the default mode and the remaining time alternate on the screen with an interval of approximately 10 seconds.

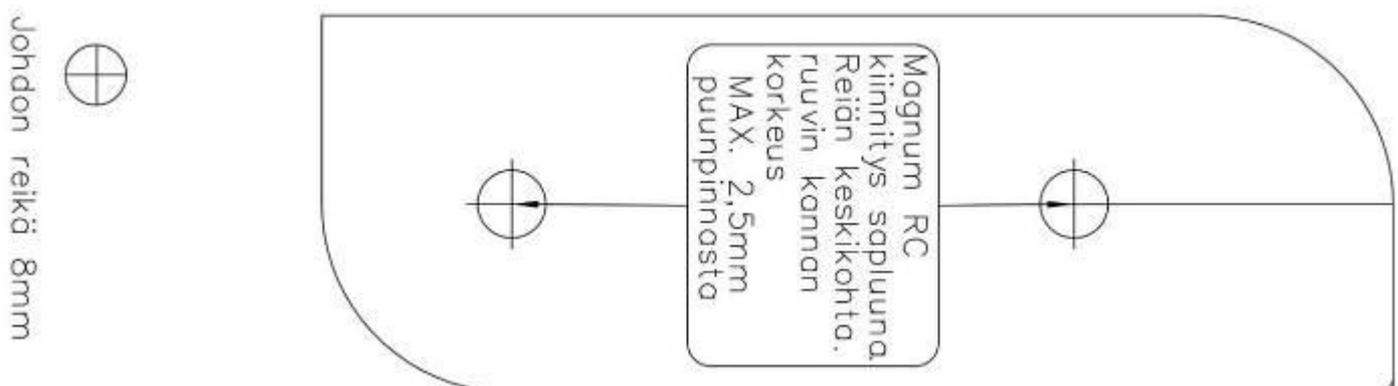
Section II.6 Directions for using the sauna

- Heat the sauna stove once before taking it into use, as the protective substances in the new stones may give off odors while the sauna stove is heating. Ensure sufficient ventilation.
- The recommended temperature is 55-70 degrees.
- The sauna stove heats to a proper sauna temperature in approximately 25 – 50 minutes, depending on the size of the sauna stove, the size of the sauna and the ventilation.
- Use water that is suitable for domestic use when throwing water on the stove for heating the sauna.
- Do not throw water on the stove if there are people next to it, as the water splashing from the sauna stove and the steam it creates are burning hot.
- Move carefully in the sauna, as the floors may be slippery.

Quality requirements for the heating water

Water condition:	Effect:	Recommendation:
Water containing humus	Color, taste, deposits	<12 mg/l
Water containing iron	Color, odor, taste, deposits	<0.2 mg/l
Hardness: the most important substances are manganese (Mn) and chalk or calcium (Ca)	Deposits	Mn: <0.05 mg/l Ca: <100 mg/l
Water containing chloride	Health risk	Use is banned
Seawater	Fast corrosion	Use is banned

RC Installation Template, cut out from here.



III. Installation of the sauna stove

- **The electrical installation may only be performed by a qualified electrician.**
- **Instructions for electrical installation are provided in the circuit diagram in these installation directions and on a sticker in the sauna stove.**
- **The electrical installation work may only be performed by an electrician qualified for the job in accordance with applicable regulations.**
- The sauna stove is connected to the power grid semi-permanently with H07RN-F or similar rubber cable.
- Check the required cable dimensions in the table below.
- **Note: the use of a PVC cable as a connection cable is not allowed.**
- **The power switch in the device is a so-called control switch and does not fully de-energize the sauna stove.**

Table

Sauna stove	POWER	FUSE	FEED CABLE	SIZE OF THE SAUNA
Magnum 6.6	6.6 KW	3x10 A	5x1.5 mm ²	5-9 m ³
Magnum 9	9 KW	3x16 A	5x2.5 mm ²	8-15 m ³
Magnum 10.5	10.5 KW	3x16 A	5x2.5 mm ²	10-20 m ³

Section III.1 Installation:

1. Remove the stainless steel frame from the upper part of the sauna stove.
2. Remove the protective plastics.
3. Set the sauna stove's lower part in the location you have chosen for the stove in a way that ensures that the maintenance/installation hatch at the foot of the sauna stove faces an open space. In the Lite / Cenik model, turn the sauna stove on its side, against a clean platform. Make sure the sauna stove is not scratched.
4. Open the hatch at the base of the sauna stove and connect the feeder line to the sections of the bayonet joint. L1, L2, L3, N, Ground (see image)



5. **Temperature reduction (Connector J5)** (If this feature is in use, it is possible to connect a relay or contactor coil to the output, which control the heating of the building) Detach the connector from the circuit card and screw the cables to the connector. Then, press the connector back onto the circuit card. The screws will point right when pressing the connector.



N - 230VAC OUT - Blue above

P - External - Brown below.

6. **Connect the thermostat sensor according to Section 3.2.**
7. **Connect the control panel according to Section 3.3.**
8. Close the hatch at the lower part of the sauna stove.
9. Connect the other end of the feed cable to the outlet. (Note: the upper edge of the outlet should be at most 400 cm from the floor)
10. Test the functioning of the resistors by turning the sauna stove on. If all the resistors do not heat or there is some other problem, contact the retailer or the manufacturer.
11. Install the lower part of the sauna stove vertically using the adjustment feet.
12. Pile the stones in the lower part of the sauna stove. (Leave 4-5 cm of free space for the upper edge in order to install the upper part of the sauna stove.) Do not wedge the resistors. Ensure that the resistors travel vertically where they have been attached to the bottom plate throughout the entire section where the stones have been installed.
13. Install the stainless steel frame of the upper part of the sauna stove. **Chapter 4.3, image 3**
14. Pile the stones in the upper part of the sauna stove in a way that ensures that no resistors are visible. Cover the resistors entirely with stones. Place stones that cannot fall to the benches or to the floor from between the vertical profiles in the outer edge. (NOTE: a freely glowing resistor may cause a combustion hazard even outside the protective distance.) **Chapter 4.3 Piling the stones on the sauna stove**
15. Use stones with a diameter of 5-10 cm, such as olivine diabase, olivine or peridotite, for the sauna stove.
16. The use of ceramic stones other than (KERKES) is forbidden. Other ceramic stones may cause the resistors to break down prematurely.
17. The stones of the sauna stove need to be installed again, the stone area of the sauna stove cleaned and the broken stones replaced with new ones once a year. We recommend that you change the stones every 2 years, depending on use.
18. The sauna stove's stones decrease in size due to the stainless steel frame's thermal expansion and the weathering of stones while in use, so ensure that no resistors become visible. Add stones when necessary.

Section III.2 Installing the thermostat sensor



Heat sensor



Connection of the LIYY wire

Connecting the sensor wire from the left LIYY CABLE (gray):

To connector	Brown	White	Green	Yellow
To circuit card	1	2	3	4

Connection of the sensor wire, from the left SILICONE CABLE (light brown, right on the picture):

To connector	Blue	White	Red	Yellow
To circuit card	1	2	3	4



All Magnum sauna stoves bought from 1 October 2015 onwards have been equipped with the new silicone cable.

Connect the connector to the circuit card's connector and press it carefully all the way down.

When installing the thermostat sensor on the wall, the distance from the roof to the upper edge of the sensor should be 100 mm. The sensor must be located 500-1000 mm from the upper edge of the sauna stove.

Furthermore, the sensor must be located at least 1000 mm from a non-directed incoming air valve or 500 mm from an incoming air valve which is located away from the device.

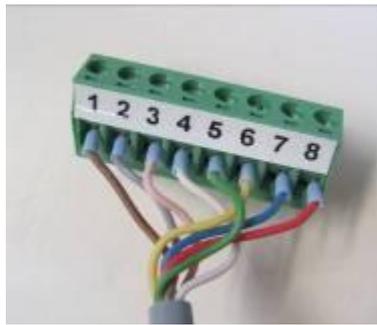
See the image at page 16.

Install the thermostat cable behind the panel in the air vent. If this is not possible, use an installation baseboard. Make sure that the incoming air does not disturb the heat sensor.

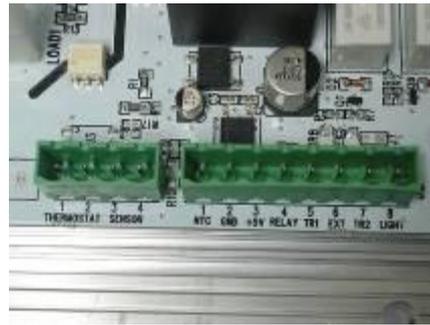
Do NOT cut the wire from the thermostat's side. The thermostat sensor does not function if the wires are continued/reconnected. If the wire needs to be shortened, shorten it from the connector's side. In other cases, contact the technical support.



Section III.3 Control panel installation



Controller's connector



Counterpart to the controller's connector on the circuit card on the right

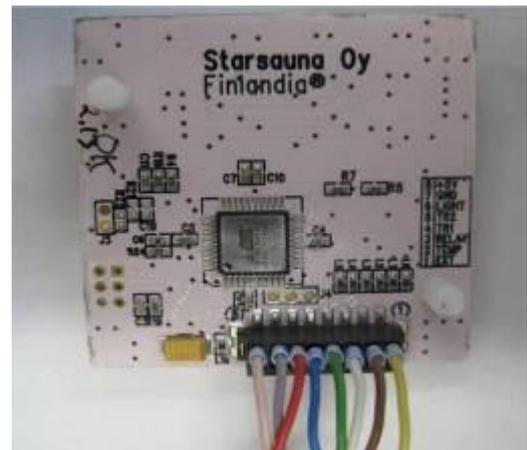
Connector number:	Color	On circuit card
1.	Brown	NTC
2.	Gray	GND
3.	Pink	+5V
4.	White	RELAY
5.	Green	TR1
6.	Yellow	EXT
7.	Blue	TR2
8.	Red	LIGHT

Connect the control panel's connector as shown in the attached diagram. Attach the connector in the wire to the circuit card and press it carefully all the way down. The process of connecting the connector card to the sauna stove is the same for the **Finlandia** and **Magnum RC** models.

Connecting the Finlandia controller card

Connecting from the left

approx.	Legend	Color
8	+5V	Pink
7	GND	Gray
6	LIGHT	Red
5	TR2	Blue
4	TR1	Green
3	RELAY	White
2	TEMP	Brown
1	EXT	Yellow



The **Control panel** can be installed inside the sauna. Inside the sauna, the control panel should be installed in a way that ensures that the distance from the sauna stove is at least 500 mm and the distance to the upper edge of the panel is at least 1000 mm. This is shown in the image on page 16.

3.4 Installing the control centers in the Sauna room

Finlandia



1. Check the central unit's height and distance in the installation manual. **Chapter 4.1**
2. Use a box drill to drill a 70 mm hole in the panel for the box. Be careful not to drill all the way to the insulation! If you penetrate the insulation plate/foil, repair it with aluminum tape.
3. Install the bottom of the box to the hole. Fasten it with fasteners that come with the bottom.
4. Draw the wires from the sauna stove to the hole along the lower edge of the panel, for example, and pull them out of the box.
5. Install the central unit's bracket in the box.
6. Connect the wires. **See Chapter 3.3**
7. Press the central unit into the bracket and attach it with two plastic tacks.
8. Install the controller to the sauna stove as set in **Chapter 3.3**.

NOTE! The electric grid connection process may only be performed by a licensed electrician.

- **The bottom of the box is not delivered with the sauna stove.** One suitable box is the ABB mounting box for board walls AUS-15.2p. These boxes are sold in all well-equipped hardware stores.

Magnum RC

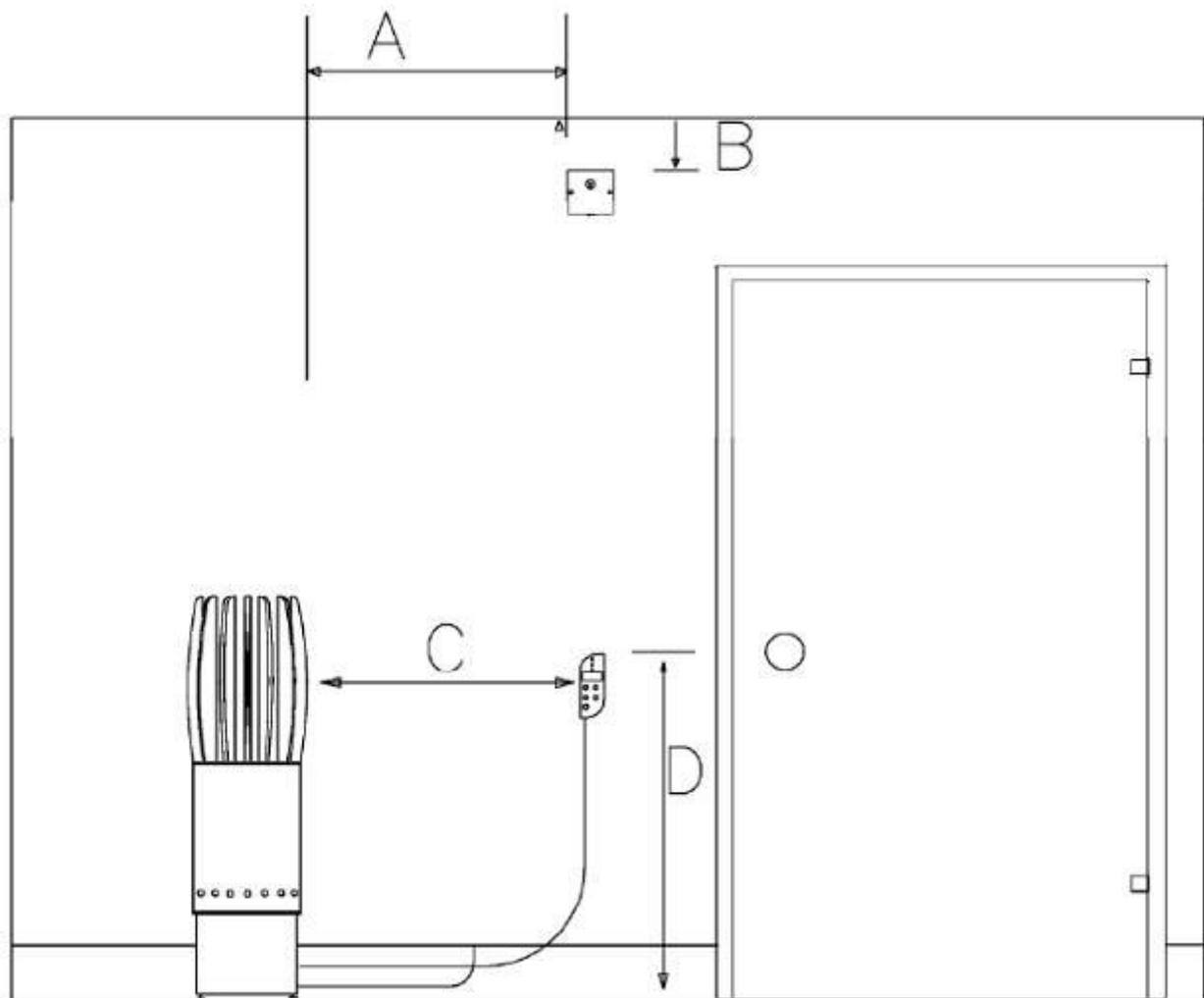
1. Install the screws in the panel using the template supplied with the panel. Leave the screws approximately 2 mm out of the wooden surface. Cut the template from the side 9.
2. If you want the wire to go through the panel, drill a hole in the template part. Diameter of the hole must be at least 8 mm.
3. After screwing in the screws and drilling the hole, take the wire of the controller through the hole and install the controller on the screws. Finally, remove the protective liner from the controller.
4. Connect the controller to the sauna stove as provided in **Chapter 3.3**.

Do NOT cut the wire from the side of the controller. The controller does not function if the wires are extended/reconnected. If the wire needs to be shortened, shorten it from the connector's side. In other cases, contact the technical support.



4 Installation images

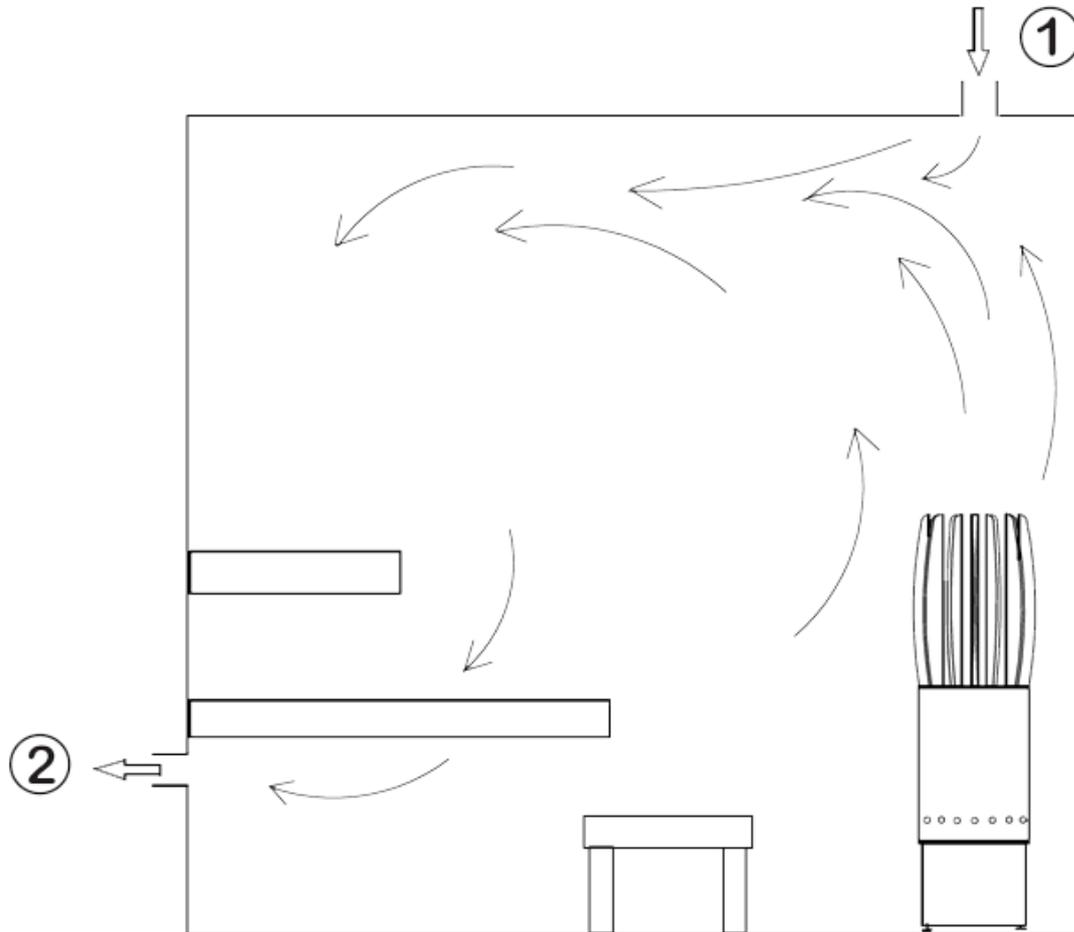
4.1 Thermostat and Controller



- A. The minimum distance of the thermostat from the upper edge of the sauna stove is 500-1000 mm. **PAY ATTENTION TO THE INCOMING AIR VALVE.** If incoming air cannot be directed away from the thermostat, the valve may not be installed **less than 1000 mm** from the incoming air valve. If it can, the installation distance may be between 500 mm - 1000 mm.
- B. The distance of the thermostat from the roof is 100 mm.
- C. The minimum distance of the control panel from the sauna stove is 500 mm.
- D. The maximum height of the control panel from the floor is 1000 mm.

4.2 Ventilation in the sauna room

Power ventilation for the sauna and the electric stove



1. Incoming air

2. Outgoing air

4.3 Piling stones in the sauna stove

Preparations

1. Ensure that the control panel, the temperature sensor, any floor heating reduction and the sauna stove have been correctly connected to the power supply by an electrician.

2. The benches should be installed before the stones are piled in the sauna stove, **IF** the sauna stove is integrated through the benches. It will be difficult to move the sauna stove after the stones have been piled it. Place the sauna stove in its intended location, considering the safety distances.

3. For piling stones in the sauna stove, you will need a spirit level, protective gloves, 80 – 110 kg of washed rocks with a diameter of 5 – 10 cm, depending on the sauna stove model (check the correct amount from the manual), and the resistors that were included in the sauna stove delivery.



Piling stones



1. Straighten the sauna stove with the help of a spirit level. The spirit level can be lowered between the resistors to the lower level of the sauna stove, where you can check the straightness. Check the straightness in both directions, adjust with the adjustment feet. If no stones have been piled into the sauna stove yet, the adjustment feet can be rotated by hand, but they can also be adjusted with a 17 mm ring spanner.



2. Pile the stones into the lower part of the sauna stoves. Do not wedge the resistors. Ensure that the resistors travel vertically where they have been attached to the bottom plate, throughout the entire section where the stones have been installed. Stop piling stones when you reach the end of the middle part of the resistor, and move to Section 3.

ENSURE throughout the entire stone piling process that there are stones between the resistors, and that the resistors cannot come in contact with each other! If the stones have been piled incorrectly, the resistors can melt into each other, which is not covered by the warranty!



3. Lower the resistor plate onto the stones as shown on the images, and continue piling the stones. It is very important to pile stones properly between the resistors, and for the resistors to be aligned straight. This ensures that the resistors cannot bend against each other, which might otherwise cause the resistors to break. However, do not put too many stones

between the resistors.



4. Stop piling the stones when you have reached a level of approx. 5 – 10 cm from the upper section of the lower part. The upper part is installed inside the lower section.

5. Lift the upper part in its place. Position the upper part so that the spaces between the profiles of the upper part would be aligned with the big holes in the lower part (the middle image). The other resistor plate can be used as a gauge throughout the entire piling process to ensure that the resistors are aligned straight. For the outer edge of the upper part, you must select stones that cannot fall through the vertical profiles. Choose smooth stones for this to ensure a visually pleasing outcome. Also pile stones between the resistors, so that the resistors cannot become in contact with each other.



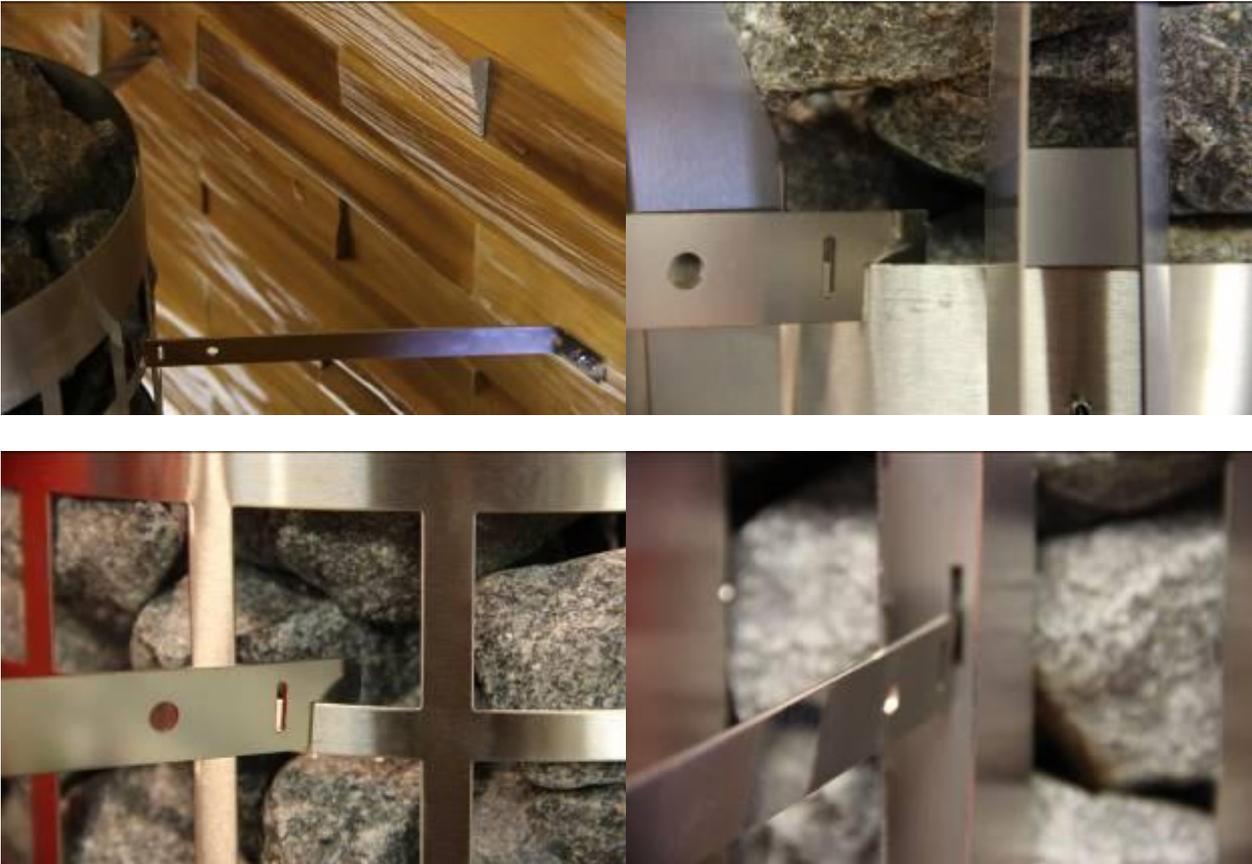
6. Pile the upper part with stones until you have reached approx. 5 – 10 cm from the top of the resistors. Lower the upper resistor plate in its place, and finish piling stones in the sauna stove. Ensure that there are enough stones on top. It is recommended to choose big stones for the top of the sauna stove, so that they cannot fall through the vertical profiles.

7. The sauna stove has now been piled with stones. The sauna stove must be heated once before people use it for the first time, and the sauna must be thoroughly ventilated. There may be impurities in the stones, and there may be some residue of storage/machining lubricants which will disappear during the first heating. When you are using the sauna, monitor the settling of the stones, and add more stones on top, if necessary.

Other remarks:

- If necessary, attach the sauna stove to walls using the mounting brackets included in the delivery.
- A sauna stove with too few stones is a fire hazard!
- Covering the sauna stove is a fire hazard!
- The uppermost layer of the stones must be as tight as possible, the resistors must not be visible.
- It is recommended that the sauna stove stones are piled again on a yearly basis! Always replace burned and cracked stones with new ones. If you use the sauna every day, it is recommended that the stones are piled again every 3 mths.
- The use of ceramic stones other than (KERKES) is forbidden. Other ceramic stones may cause the resistors to break down prematurely.

4.5 Sauna stove wall bracket



1. Fit the brackets to the sauna stove/wall before attaching to the wall. In Lite/Original/Cenik sauna stoves, the bracket can be installed to the outer edge or between the vertical profile; in Ruutu sauna stoves, anywhere between the squares.
2. Bend the brackets, if necessary. PLEASE NOTE: if you are bending the brackets by hand, use protective gloves.
3. When the bracket seems to be positioned well, mark the attachment points on the wall.
4. Drill a small starting hole at the mark, so that the panel would not crack during the screwing process.
5. Place the brackets to the hollows of the upper part of the sauna stove, according to the image, and screw the brackets to the wall.
6. Finish piling the sauna stove with stones. The brackets will be covered by the stones.

5. Technical information and safety distances of the sauna stoves

5.1 Technical information:

	Original 6.6	Original 9.0	Original 10.5
Power	6.6 KW	9 KW	10.5 KW
Diameter of the lower part	320 mm	320 mm	320 mm
Diameter of the upper part	320-360 mm	320-360 mm	320-370 mm
Height of the lower part	730 mm	730 mm	730 mm
Height	1270 mm	1270 mm	1440 mm
Dimensions of the sauna	5-9 m ³	8-15 m ³	10-20 m ³
Min. sauna height	2070 mm	2070 mm	2240 mm
Fuse	3x10 A	3x16 A	3x16 A
Connection cable	5x1.5 mm ²	5x2.5 mm ²	5x2.5 mm ²
Number of stones	approx. 80 kg	approx. 80 kg	approx. 100 kg

	Lite 6.6	Lite 9.0	Lite 10.5 kW
Power	6.6 KW	9 KW	10.5 KW
Diameter of the lower part	320 mm	320 mm	320 mm
Diameter of the upper part	320-360 mm	320-360 mm	320-370 mm
Height of the lower part	730 mm	730 mm	730 mm
Height	1270 mm	1270 mm	1440 mm
Dimensions of the sauna	5-9 m ³	8-15 m ³	10-20 m ³
Min. sauna height	2070 mm	2070 mm	2240 mm
Fuse	3x10 A	3x16 A	3x16 A
Connection cable	5x1.5 mm ²	5x2.5 mm ²	5x2.5 mm ²
Number of stones	n.90 kg	n.90 kg	n.110 kg

	Cenik 6.6	Cenik 9.0
Power	6.6 KW	9 KW
Diameter of the lower part	320 mm	320 mm
Diameter of the upper part	320-370 mm	320-370 mm
Height of the lower part	500 mm	500 mm
Height	1200 mm	1200 mm
Dimensions of the sauna	5-9 m ³	8-15 m ³
Min. sauna height	2000 mm	2000 mm
Fuse	3x10 A	3x16 A
Connection cable	5x1.5 mm ²	5x2.5 mm ²
Number of stones	n.90 kg	n.90 kg

	Ruutu L 6,6kW	Ruutu L 9kW	Ruutu L 10,5kW
Power	6,6 KW	9 KW	10,5 KW
Diameter	320 mm	320 mm	320 mm
Height	1200 mm	1200 mm	1400 mm
Sauna Room Size	5-9 m ³	8-15 m ³	10-20 m ³
Min. Sauna height	2000 mm	2000 mm	2200 mm
Fuse	3x10 A	3x16 A	3x16 A
Connection Cable	5x1,5 mm ²	5x2,5 mm ²	5x2,5 mm ²
Stone Amount	n.130kg	n.130kg	n.150kg

	Ruutu C 6,6kW	Ruutu C 9kW
Power	6,6 KW	9 KW
Diameter	320 mm	320 mm
Height	1160 mm	1160 mm
Sauna Room Size	5-9 m ³	8-15 m ³
Min. Sauna height	1960 mm	1960 mm
Fuse	3x10A	3x16A
Connection Cable	5x1,5 mm ²	5x2,5 mm ²
Stone Amount	n.120kg	n.120kg

5.2 Safety distances

Minimum safety distances MAGNUM ORIGINAL MODELS!				
Sauna stove	700 mm to the lower bench	Over 730 mm to the upper bench	To the sides from the top	Upwards to the roof
Original 6.6 kW	20 mm	70 mm	70 mm	800 mm
Original 9.0 kW	20 mm	70 mm	70 mm	800 mm
Original 10.5 kW	20 mm	70 mm	70 mm	800 mm

Minimum safety distances CENIK AND LITE MODELS!				
Sauna stove	700 mm to the lower bench	Over 730 mm to the upper bench	To the side from the top	Up to roof
Lite 6.6 kW	50 mm	100 mm	100 mm	800 mm
Lite 9.0 kW	50 mm	100 mm	100 mm	800 mm
Lite 10.5 kW	50 mm	100 mm	100 mm	800 mm
Kiuas:	Less than 500 mm	Over 500 mm	To the side from the top	Up to roof
Cenik 6.6 kW	50 mm	100 mm	100 mm	800 mm
Cenik 9.0 kW	50 mm	100 mm	100 mm	800 mm

Original model's dimensions and safety distances for the upper part:

Upper part:	Width:	Protective distance:
Vase 6.6 kW and 9 kW	360 mm	70 mm
Tulip 6.6 kW and 9 kW	360 mm	70 mm
Pillar 6.6 kW, 9 kW and 10.5 kW	320 mm	100 mm
Reed 10.5 kW	360 mm	70 mm
Vase 10.5 kW	370 mm	70 mm
Tulip 10.5 kW	370 mm	70 mm

Cenik and Lite model's measurements and safety distances for the upper part:

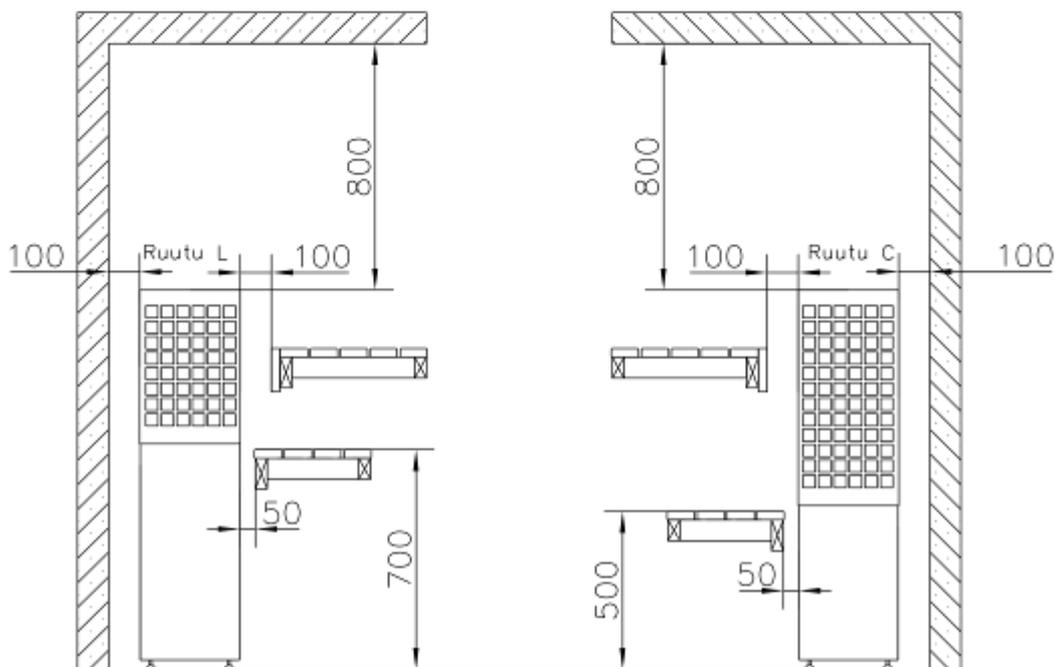
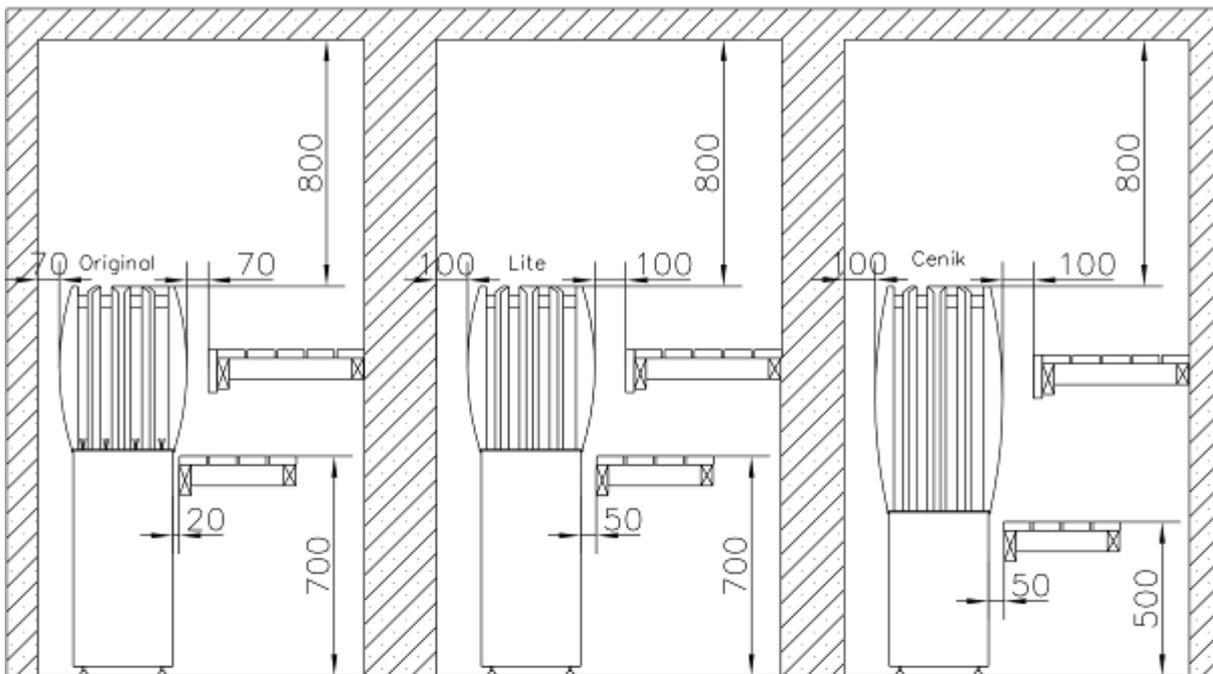
LITE Upper part:	Width:	Protective distance:
Vase 6.6 kW and 9 kW	360 mm	100 mm
Tulip 6.6 kW and 9 kW	360 mm	100 mm
Pillar 6.6 kW, 9 kW and 10.5 kW	320 mm	125 mm
Reed 10.5 kW	360 mm	100 mm
Vase 10.5 kW	370 mm	100 mm
Tulip 10.5 kW	370 mm	100 mm
CENIK upper part:		
Vase 6.6 kW and 9 kW	370 mm	100 mm
Tulip 6.6 kW and 9 kW	370 mm	100 mm
Reed 6.6 kW and 9 kW	360 mm	100 mm
Pillar 6.6 kW, 6.6 kW and 9 kW	320 mm	125 mm

Safety Distances Ruutu L ja C

Kiuas	700 mm to the lower bench	Over 700 mm to the upper bench	To the side from the top	Up to roof
Ruutu L 6,6kW	50mm	100mm	100mm	800 mm
Ruutu L 9kW	50mm	100mm	100mm	800 mm
Ruutu L 10,5kW	50mm	100mm	100mm	800 mm
Kiuas:	500mm to the lower bench	Over 500mm to the upper bench	To the Side from the top	Up to roof
Ruutu C 6,6kW	50mm	100mm	100mm	800 mm
Ruutu C 9kW	50mm	100mm	100mm	800 mm

5.3 Images showing the safety distances

The distances are always measured from the widest part!



6. Warranty

Starsauna Oy (the manufacturer) grants warranty for the products it manufactures according to these terms and conditions. For private/apartment use, the warranty period is **24 mths** from the delivery date. The receipt, the order confirmation about the purchase of the sauna stove, the receipt log of the construction site or other corresponding specification can all be used as the warranty certificate.

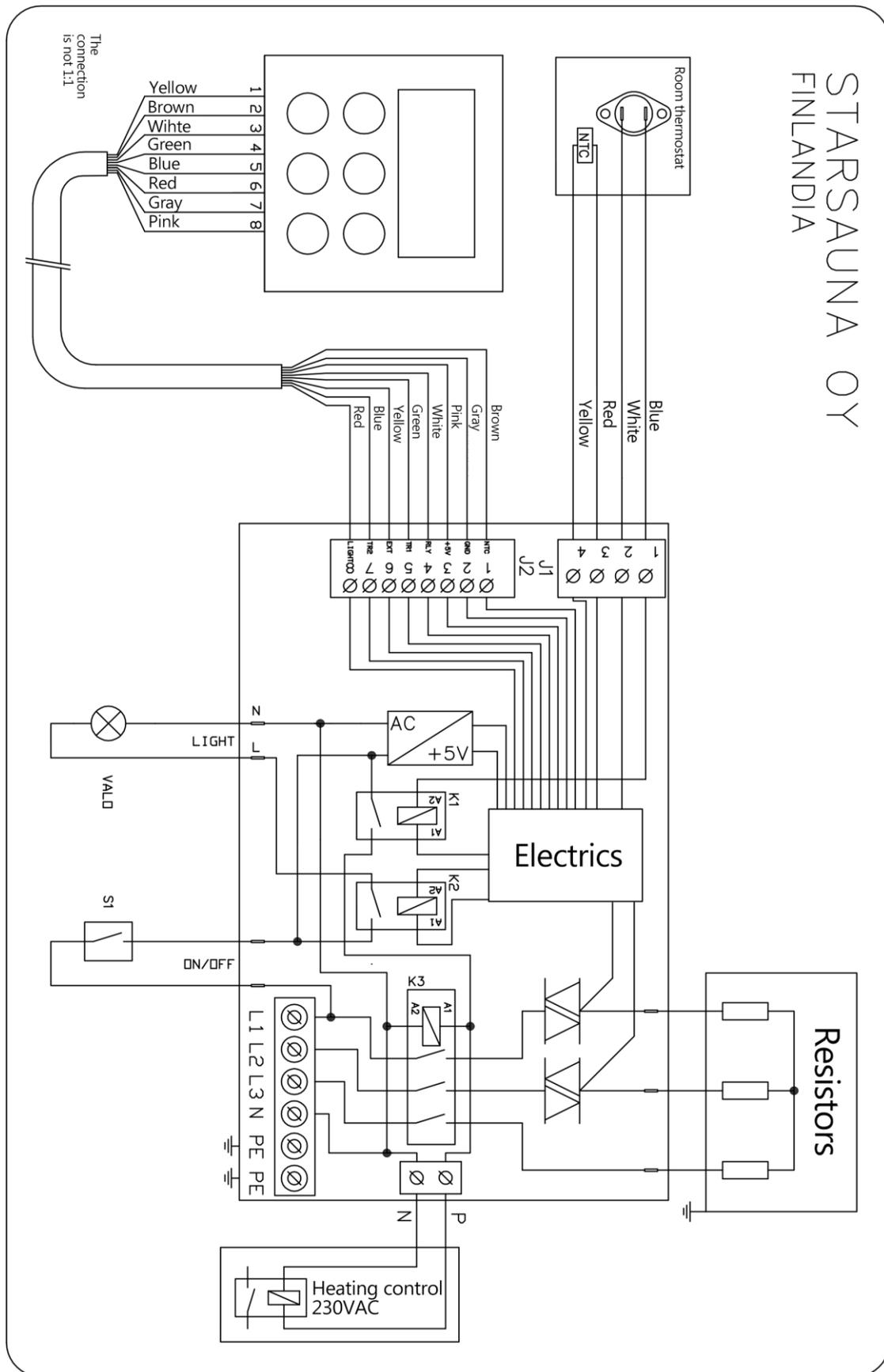
Starsauna Oy guarantees the quality and functionality of the sauna stoves during the warranty period. The warranty requires that the manufacturer's instructions are followed carefully. The warranty does not cover faults caused by incorrect installation and/or incorrect use. Warranty terms and conditions:

- For sauna stoves in apartment use, the sauna stove stones are piled/replaced at least once a year. Damaged stones must always be replaced when piling the stove with stones again, but we recommend replacing the stones every time.
- The manufacturer's instructions have been followed when piling stones in the sauna stove. **CHAPTER 4.3**
- The sauna stove's center has been installed and connected to the power supply by a licensed company/technician with a valid qualification regarding electrical installations. The installation must have been completed in accordance with the installation manual. No ceramic stones are used in the sauna stove. If ceramic stones have been used, the warranty is not binding for the manufacturer to compensate for any damage caused by ceramic stones.
- Under no circumstances is the manufacturer liable for direct or indirect damage such as loss of production, decrease in profit, loss of profit, loss of contracts or loss of benefit.
- The sauna stove is always controlled by its own control system.
- In case of a possible fault situation, the product must never be dismantled, or attempted to repair without the manufacturer's permission and/or instructions. If the center or another control device has been dismantled, the manufacturer reserves the right not to replace the product or the part of the product in question during the warranty period. The manufacturer may charge for possible spare parts, if a warranty term has been breached. When troubleshooting for issues outside the scope of the manual, the buyer should inquire the manufacturer about possible solutions to the problem before replacing all components.
- In troubleshooting situations, the manufacturer will not compensate for the dismantling of any sauna equipment during repair work done on the sauna stove. E.g. benches.
- In troubleshooting situations, the warranty does not cover the removing/re-positioning of the sauna stove stones.
- With regard to repair work covered by the warranty, Starsauna Oy will compensate any installation technician expenses up to the amount of one hundred (100€) Euros. This includes travel expenses and work on site. The compensation is paid when the defective product has been returned to the manufacturer, and deemed to be defective due to the manufacturer's fault. Compensation is not paid for those work hours used for troubleshooting before calling technical support. If the defective part is not returned, no compensation is paid. Neither is compensation paid if the damage has occurred due to misuse or incorrect connection. In these cases, the manufacturer can charge the full price from the buyer, according to the spare parts price list. The compensation claim must be submitted to the manufacturer in writing, and it must include the warranty certificate of the sold product, with the sales date specified on it. The receipt, the order confirmation about the purchase of the sauna stove, the receipt log of the construction site or other corresponding specification can all be used as the warranty certificate.
- Returning spare parts to the manufacturer is carried out at the buyer's expense. Starsauna will pay for the freight of the spare parts to be delivered to the buyer.
- The warranty period for replacement parts is 6 mths from the date of delivery.
- In cases of repair, the manufacturer's warranty is limited only to repairing or replacing the center, it does not extend to any other electrical systems in the building.

Institutional/Professional use

Starsauna Oy grants sauna stoves a 3-month warranty in institutional/professional use. Institutional use denotes premises which are kept hot constantly, e.g. swimming pools, gyms, etc. It is not recommended to keep the sauna stove turned on for more than six (6) hours at a time.

7. Connection diagram



8. Problems / troubleshooting:

Why is the sauna stove not heating the sauna?

Check the following:

1. Is the power on?
2. Is the adjusted temperature higher than the temperature of the sauna?
3. Has the temperature limiter gone off? (The cause must be determined before the next use)
4. Are the fuses intact?
5. Is there an error code in the control panel display? If the device malfunctions, the display will show an error code. You may attempt to solve the problem with the following error codes. If the problem is not solved with these instructions, contact the technical support or maintenance.

The error codes are removed from the display when the error has been solved, such as when the sensor's short circuit has been removed or an overheated device has cooled down sufficiently. After this, you may attempt to turn the device on again.

Error code / symptom:	Legend:
	ER1 = There is no heat sensor or the temperature is too low. Verify the heat sensor's cabling and installation.
	ER2 = Heat sensor has short-circuited or the temperature is too high. Check the heat sensor's cabling and ensure that the sensor is intact and that there are no short circuits.
	The temperature in the device's control electronics is too high. See the previous part.
No error codes on the screen, but the sauna is not heating up	Check the overheating protection and ensure that it has not gone off. The overheating protection may be turned off by carefully pressing the button in the heat sensor box.
The stove light does not work	First confirm that the sauna stove's model features the lights. If the light is not turned on, contact technical support.
The sauna stove does not heat properly	Contact technical support.