



Oceanic

Sauna & Steam

BEHIND BENCH HEATER

Assembly and operating manual
September 2018



Table of contents

1. **Introduction** 3

2. **Important Notes** 3

3. **Safety Precautions** 4

4. **Electrical connection** 4

5. **Basic Wiring Diagram** 5

6. **Specification** 6

6.1. Sauna Heater Unit Parameters 6

6.2. Table 2. Sauna Heater Controller Parameters 6

6.3. Temperature Sensor Parameters. 6

6.4. Sauna Heater Circuit Diagram 7

6.5. OC - SAII Sauna Controller Circuit Diagram 8

6.6. OCB - Sauna Heater Controller Circuit Diagram 9

7. **Installing Heater Unit** 10

7.1. Minimum Clearances 10

7.2. Water funnel 11

7.3. Safety Grate 12

8. **Sauna Stones** 12

9. **Installing Temperature Sensor** 13

10. **Installing Controller** 14

11. **Testing** 14

12. **Setting time and temperature** 15

13. **Troubleshooting** 16

14. **Notes for safe use** 17

14.1. Leakage current values 17

14.2. Earth Leakage Circuit Breaker 17

14.3. Moisture on the heater elements. 17

15. **Maintenance** 17

16. **Warrenty and After Sales** 18

1. Introduction

Thank you for choosing to buy our behind bench Oceanic Sauna heater; please take the time to read these instructions before you begin as they contain important information about the installation and maintenance requirements.

Oceanic sauna heaters are available in specifications from 3kw to 9kw and are equipped with our OC-SA digital controller. With this not only can you control the temperature and time duration of your sauna bath but also the light of the sauna room, alter the temperature display between Centigrade and Fahrenheit; as well as displaying the sauna heater's status.

For sauna heaters 9 Kw to 15Kw the OCSB controller is supplied.

All Oceanic sauna heaters are thoroughly tested before leaving the factory.

2. Important Notes

Incorrect assembly of the sauna heater presents a fire hazard, please read the installation manual carefully paying close attention to the electrical connections, dimensional information and the following instructions:

- The heater is intended for indoor use only and not outdoor or marine use
- This equipment must be installed by competent person, all electrical connections should be made by a qualified electrician.
- This equipment must be connected to an all pole isolator of the correct rating.
- Disconnect the power supply before exposing electrical connections
- All heaters can be connected single phase(230v) or triple phase(400v), this can be easily changed by adding bridge connectors across the connections L1, L2 and L3.
- 5 core silicon bound heat proof cable must be used to wire from the control to the heater. (For 230v and 400v) Wire the letters with the corresponding letters on the heater. For example: U V W on the control go to U V W on the heater, the three lives for the elements, the reason for having three is because each element is controlled individually. When the heater reaches the desired temp it cuts out two elements.
- The sauna heater should not be used for any other purpose.
- Do not cover the heater or allow contact with flammable materials such as towelling – Risk of fire.
- Do not operate sauna heater without sauna stone
- Ensure that both vertical and horizontal clearances between the heater unit and ceiling/floor and walls . This information is provided in the diagram on page ##
- If the unit is placed on the floor it is important that the floor is not made of a flammable material.
- Do not touch the heater when operational as it is very hot
- Sauna heater must have right earth connection, the earth wire should be larger diameter than the power supply wire to sauna heater
- The sauna controller should be installed on a dry wall outside the sauna cabin
- Any connecting cables on the inside of the cabin must be made of silicone and able to withstand 170°C . If single wire cables are used as connecting lines they must be protected by flexible metal tubing. Please see table # for the minimum diameter of the connecting cable.

Behind Bench Heater Manual

- A sauna heater of the correct capacity must be installed within the sauna cabin, please refer to table ##
- The sauna heater must only be installed along with the control unit as supplied. This control unit must be mounted outside the cabin with the associated sensors installed on the interior as detailed within the installation manual.
- Air intake and exhaust vents must be provided in every sauna cabin. They must always be aligned behind the heater between 5 and 10cm above the floor. The dimensions for the vents are listed in table #
- Extract vents must be positioned at low level on the rear wall in accordance with the instructions from the sauna cabin manufacturer.
- Covering and improperly filling the stone tray can create a fire hazard.
- Ensure air intakes are open before starting up.
- Ensure all packaging any protective films are removed before starting up.
- The sauna heater unit is not to be installed under a bench or under a sloped roof.

3. Safety Precautions

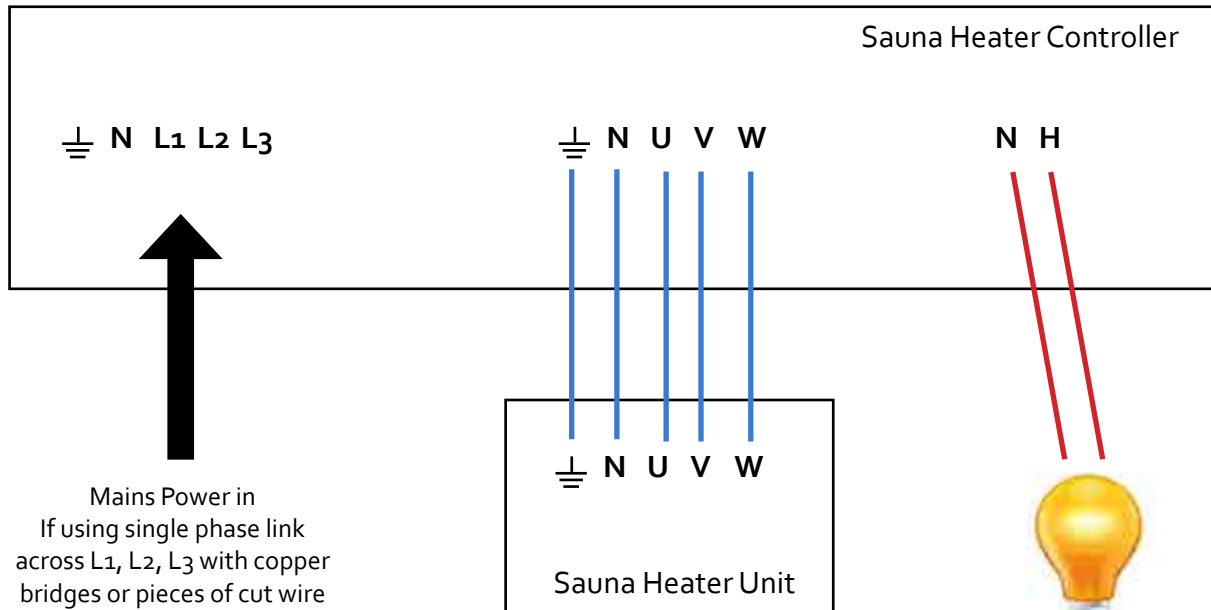
- Elderly persons, pregnant women, or those suffering heart disease, high blood pressure, diabetes or not in good health are advised to seek medical opinion before using a sauna room;
- Do not smoke in the sauna room;
- Avoid using the sauna room immediately after strenuous exercise;
- Do not use the sauna room when under the influence of alcohol;
- Leave the sauna room at once if you feel sleepy, sick or uncomfortable;
- Ensure there is good ventilation for the sauna room
- We do not recommend this product is used by children under 16 years old;
- Commercial operators should post a notice of these precautions in a prominent position
- The sauna controller should be installed on a dry wall outside the sauna cabin.

4. Electrical connection

A qualified electrician will have no problem installing this system with the provided wiring schematic and with the help of the circuit diagram mounted inside the respective control unit. Be sure to note, however, as a safety consideration there should be no visible live wires laid onto the interior of the cabin. For this reason, the wall element with the air intake vent is already equipped with cable conduits in most sauna cabins. Should there be no cable conduits in your cabin, drill an hole in the cabin wall immediately adjacent to the sauna heating unit where the cable projects from the sauna heating unit and pull the cable through this hole towards the exterior and then to the control unit. The cable as well as all other connecting lines (supply wire to the power source and to the cabin lighting) on the outside wall of the cabin should also be protected from damage. For instance by installation in cable conduits or by covering with wooden skirting strips.

According to the valid regulations, the electrical connection of the sauna heater and the control box has to be carried out by an authorised electrician. In case of a warranty claim, you are kindly requested to present a copy of the invoice from the electrician.

5. Basic Wiring Diagram



Mains Power in
If using single phase link
across L1, L2, L3 with copper
bridges or pieces of cut wire

5 core heat proof silicon cable
must be used between the
controller and heater unit. This
is because the controller heats
three elements individually when
the temperature in the room is
reached two will turn off.
DO NOT bridge across U,V or W!

240 V AC mains power
supply for the lights

6. Specification

6.1. Sauna Heater Unit Parameters

MODEL	POWER	INPUT		SIZE (mm)			N° HEAT ELEMENTS	STONE WEIGHT	CABIN SIZE	AIR VENT SIZES
	Kw	1N~	3N~	L	W	H		Kg	m ³	cm
OCU60	6	230V	400V	1300	225	850	6	15KG	6-8 m ³	35 x 3 cm
OCU75	7.5	230V	400V	1300	225	850	6	15KG	7-12 m ³	35x4 cm
OCU90	9	230V	400V	1300	225	850	6	15KG	9-14 m ³	35 x 5cm
OCU105	10.5		400V	1300	225	850	9	15KG	12-16 m ³	35 x 6cm
OCU120	12		400V	1300	225	850	9	15KG	14-18 m ³	35 x 7cm
OCU135	13.5		400V	1300	225	850	9	15KG	16-20 m ³	35x 8cm

6.2. Table 2. Sauna Heater Controller Parameters

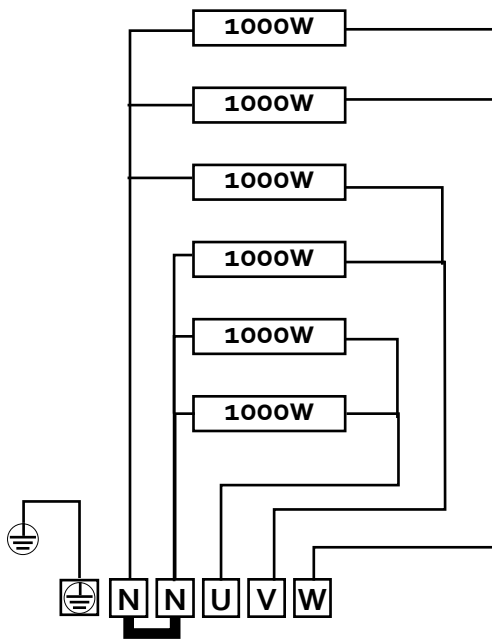
MODEL	POWER LOAD	INPUT		OUTPUT		SIZE (mm)			CONNECTING CABLE MAIN - CONTROLLER mm ²		CURRENT (A)		FUSE (A)	
	(Kw)	1N~	3N~	1N~	3N~	L	W	H	1N~	3N~	1N~	3N~	1N~	3N~
OC-SAIL	6	230V	400V	230V	400V	280	217	78	3X4mm ²	5X1.5	27	9	40	3X16
OC-SAIL	7.5	230V	400V	230V	400V	280	217	78	3X4mm ²	5X1.5	33	19		3X16
OCSB	9	230V	400V	230V	400V	310	260	65	3X4mm ²	5X2.5	39	22.5		3X16
OCSB	10.5	-	400V	-	400V	310	260	65	-	5X2.5	-	27	-	3X16
OCSB	12	-	400V	-	400V	310	260	65	-	5X2.5	-	30	-	3X16
OCSB	13.5	-	400V	-	400V	310	260	65	-	5X2.5	-	34	-	3X16

6.3. Temperature Sensor Parameters

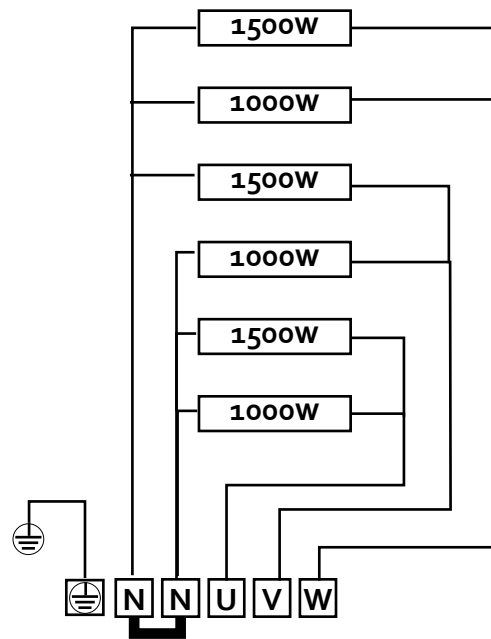
MODEL	DETECTED SCOPE		MAX CUT OUT TEMPERATURE		SIZE (mm)		
	°C	°F	°C	°F	L	W	H
OC-S	0-110	32-230	120	248	76	42	27

Behind Bench Heater Manual

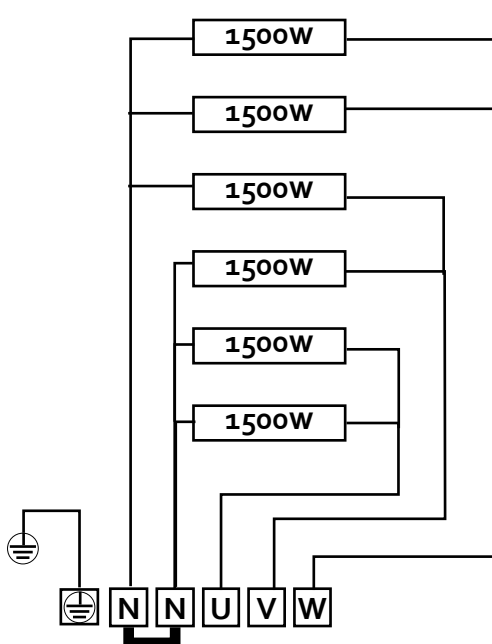
6.4. Sauna Heater Circuit Diagram



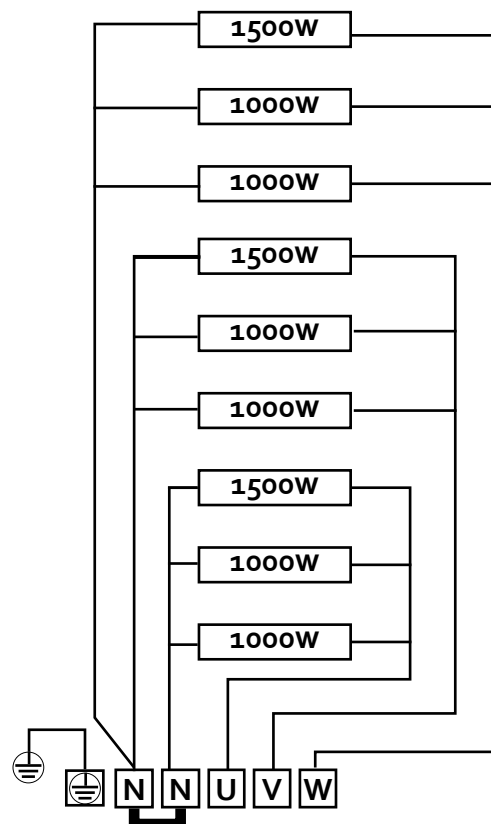
OCU60 - 6kW heater



OCU75 - 7.5kW heater

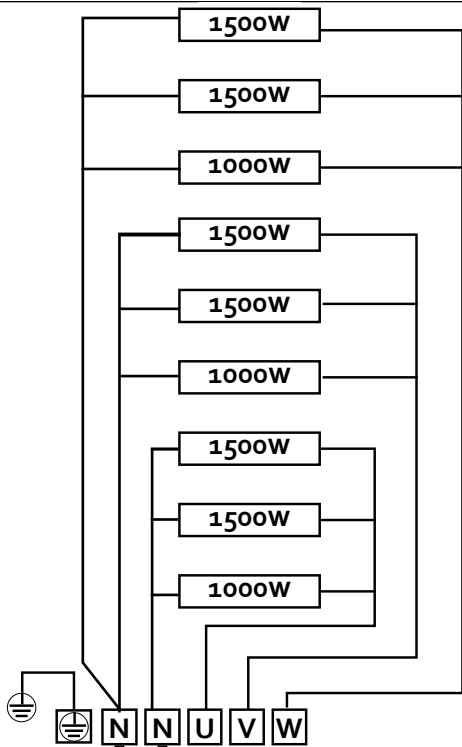


OCU90 - 9kW heater

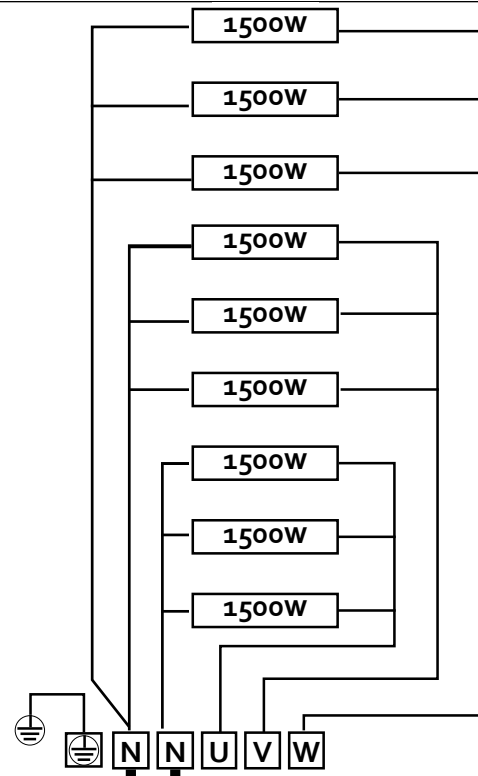


OCU105 - 10.5kW heater

Behind Bench Heater Manual

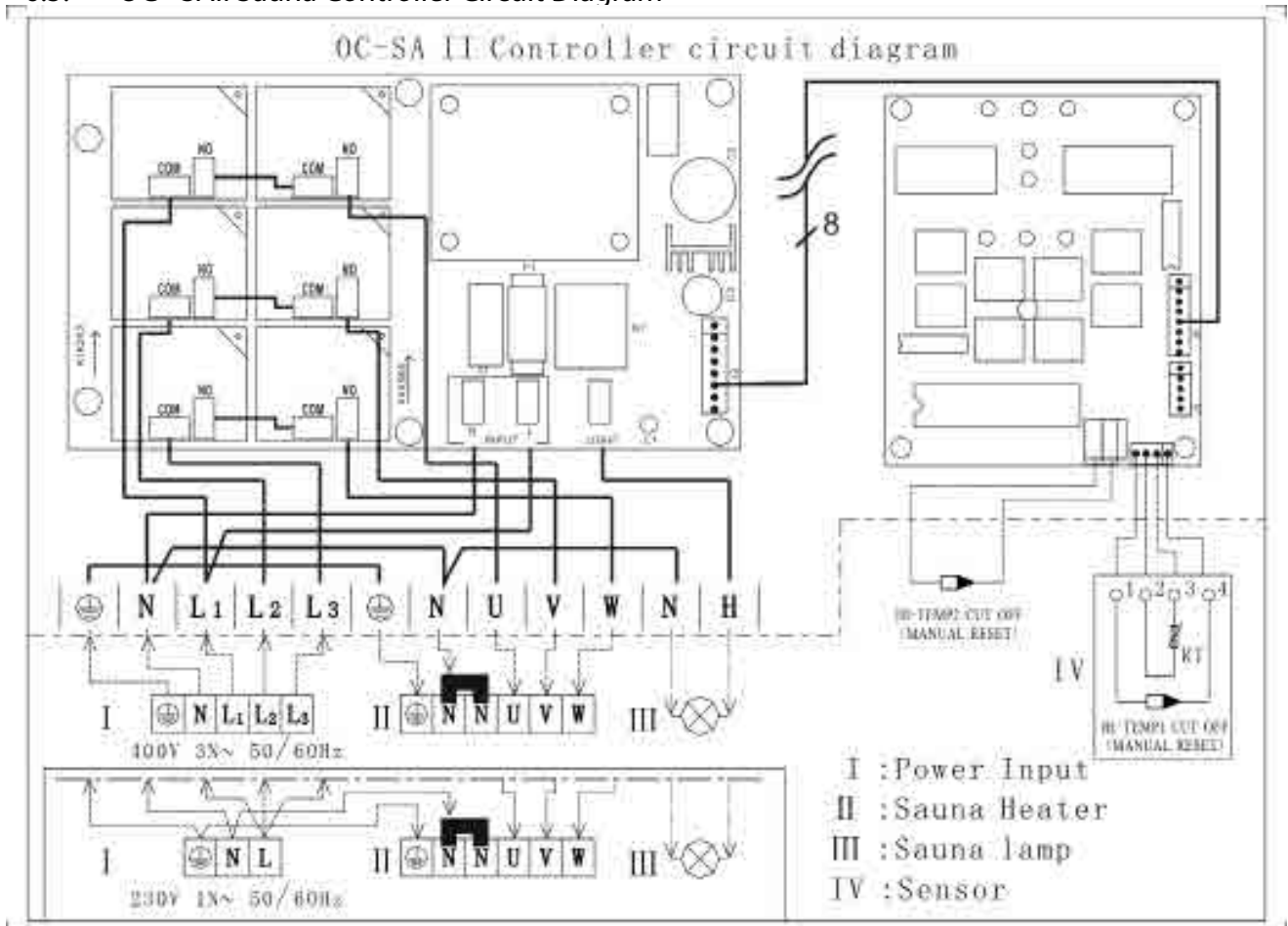


OCU12 - 12kW heater



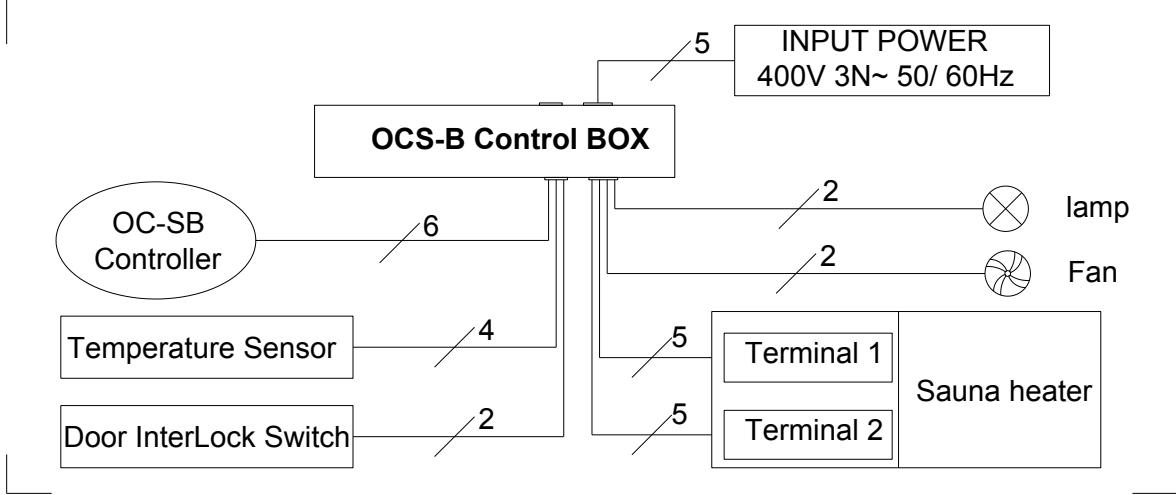
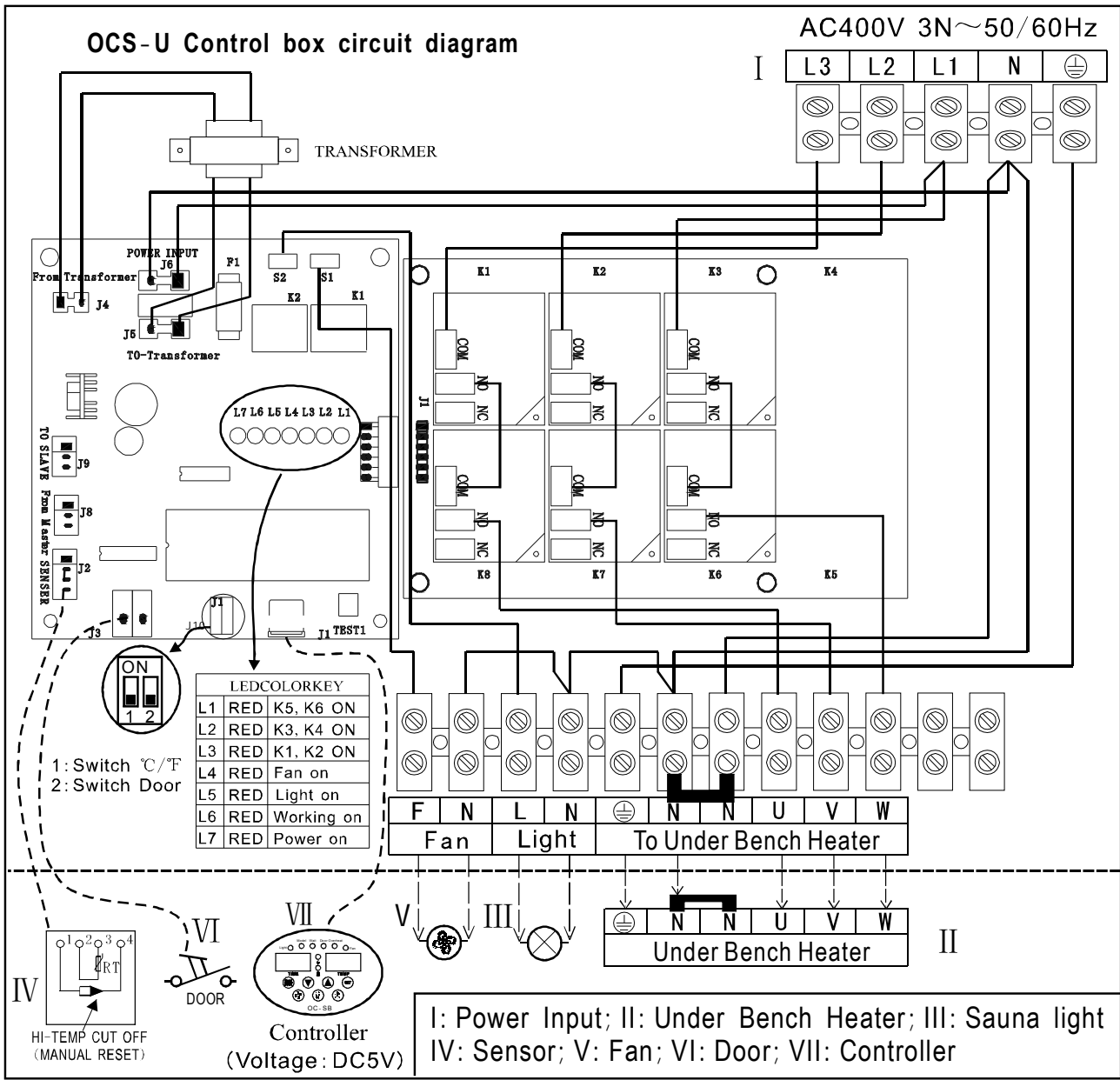
OCU13.5 - 13.5kW heater

6.5. OC - SAII Sauna Controller Circuit Diagram



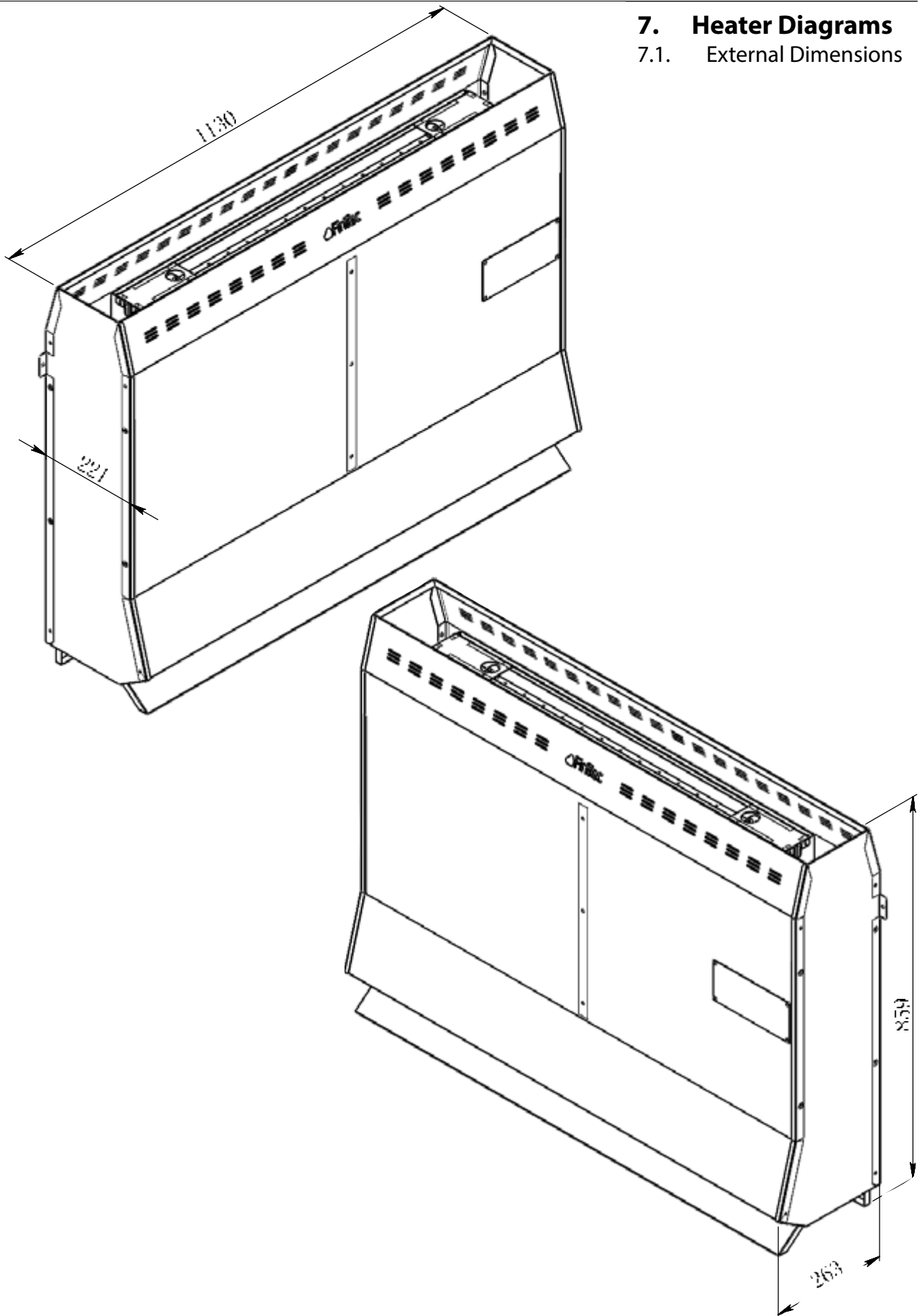
Behind Bench Heater Manual

6.6. OCB - U Sauna Heater Controller Circuit Diagram

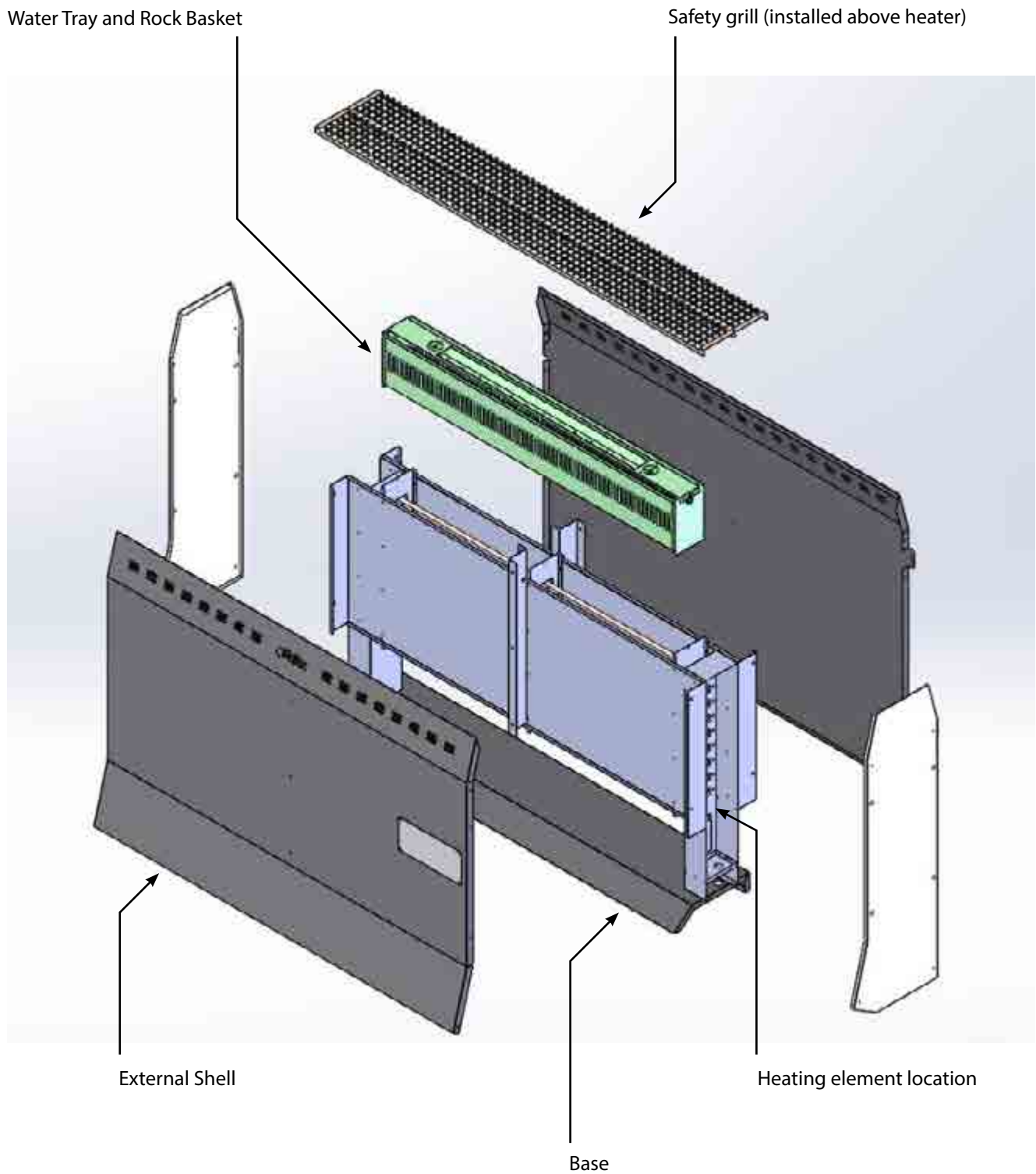


7. Heater Diagrams

7.1. External Dimensions



7.2. Internal Components



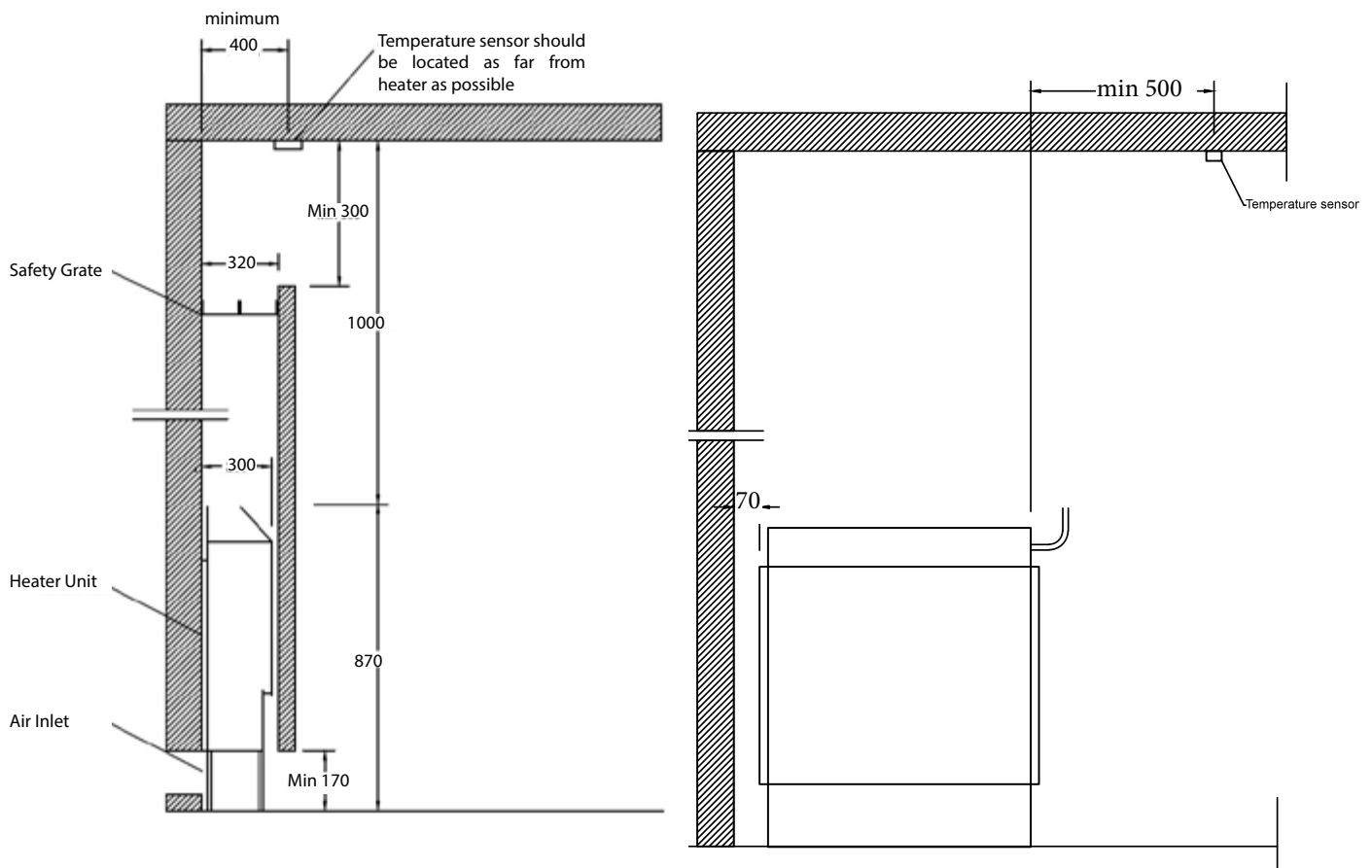
8. Installing Heater Unit

8.1. Minimum Clearances

- Internal sauna height: 1900mm min
- Vertical distance between top of heater and sauna ceiling: 900mm min
- Horizontal distance between heater and wall: 70mm min
- Distance between heater and false wall: 20mm

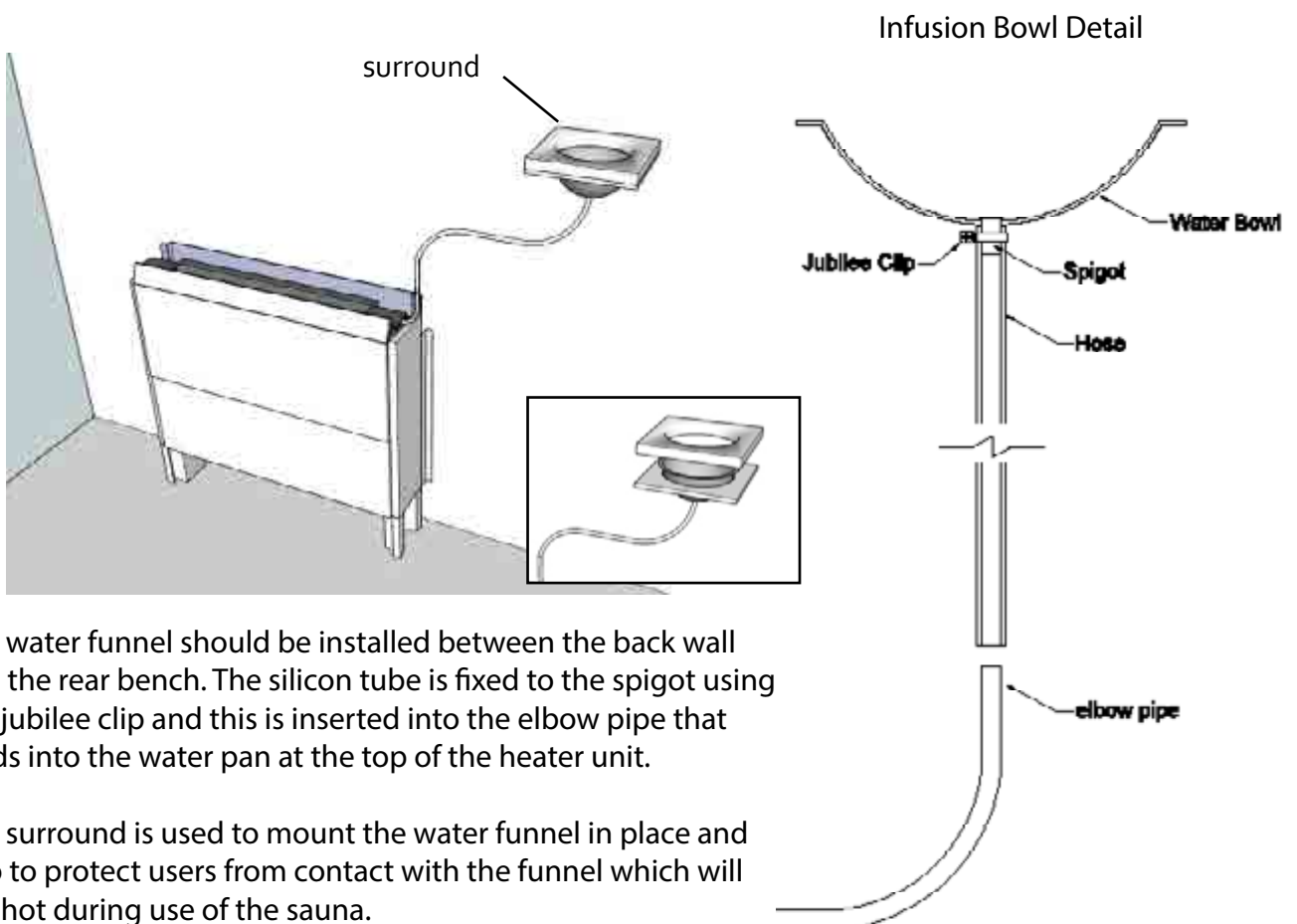
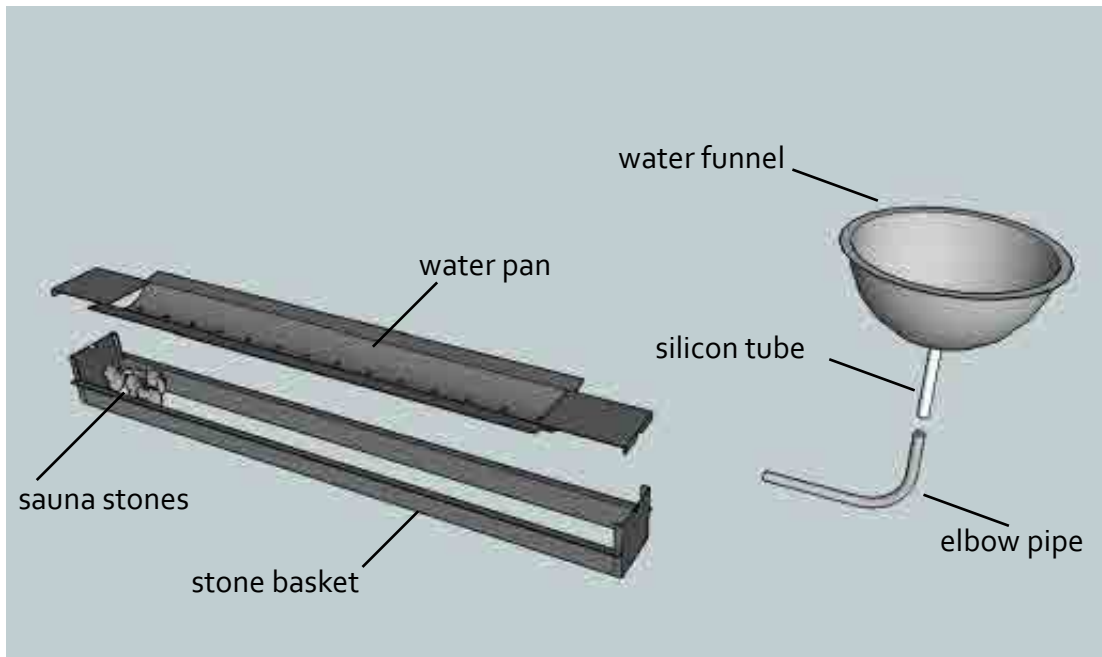
The safety grate must be installed as high above the heater, between the rear wall and the partition wall but should not be flush with the top where users will be able to touch it during use. The safety grate will get hot!

The heater sensor for the control unit must not be mounted centrally above the heater unit, please refer to diagram for appropriate location



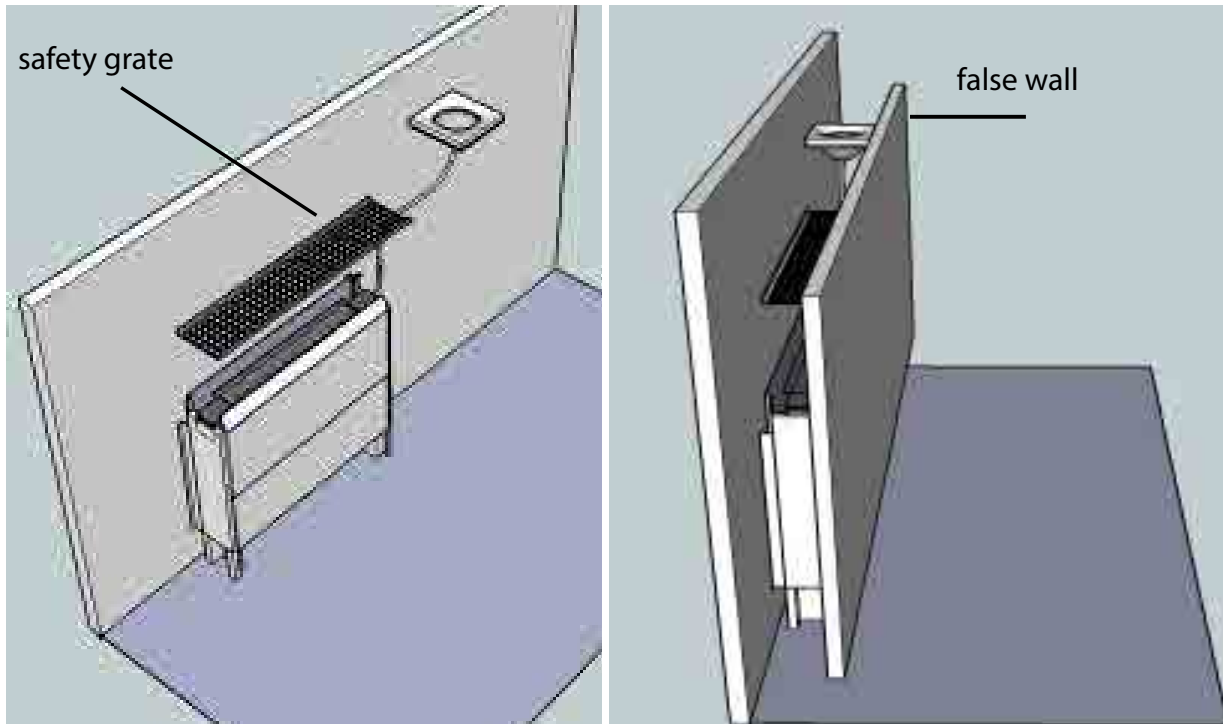
Behind Bench Heater Manual

8.2. Water funnel



The water funnel should be installed between the back wall and the rear bench. The silicon tube is fixed to the spigot using the jubilee clip and this is inserted into the elbow pipe that feeds into the water pan at the top of the heater unit.

The surround is used to mount the water funnel in place and also to protect users from contact with the funnel which will get hot during use of the sauna.



8.3. Safety Grate

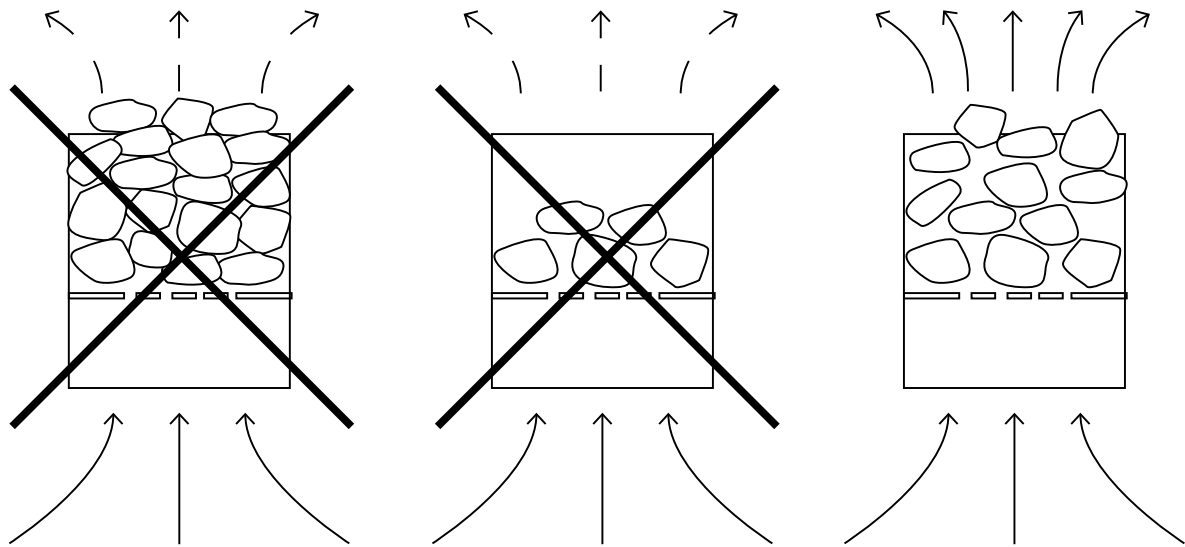
The safety grate is installed above the heater to prevent items being dropped on top of it during use. This should be mounted to the rear wall towards the top of the false wall to protect the heater from any items such as towels that could accidentally drop behind the bench. The grate should not be flush with the top of the bench as it will get hot during use and is not to be touched.

To begin infusion pour a ladle of water into the infusion bowl in the cabin. The water will be evenly distributed across the rocks via the connecting hose. The water is vaporised into the air infusing the cabin. To produce the intense steam it is important to ensure the rocks have been allowed to heat back up to optimum temperature. Always wait approximately 10 minutes between infusions.

9. Sauna Stones

After checking that the sauna heater installation is correct, put the sauna stone in place (note we recommend washing the stones thoroughly in water to remove any dust before the first use). Put the larger stones at the bottom and smaller stones on top. Take care not to pack the stones too tightly otherwise the air will not be able to circulate around the elements which can cause premature failure, but do make sure to cover the elements completely. Note that it will be necessary to change the stones from time to time as they will gradually crumble with use. For commercial users this is probably every year, for domestic users once every several years, depending upon use.

If using infusion agents please ensure the correct concentrates are used as they can degrade the stones. Wait 10 minutes between infusions. Never use alcohol or undiluted concentrates as this can cause a fire hazard!

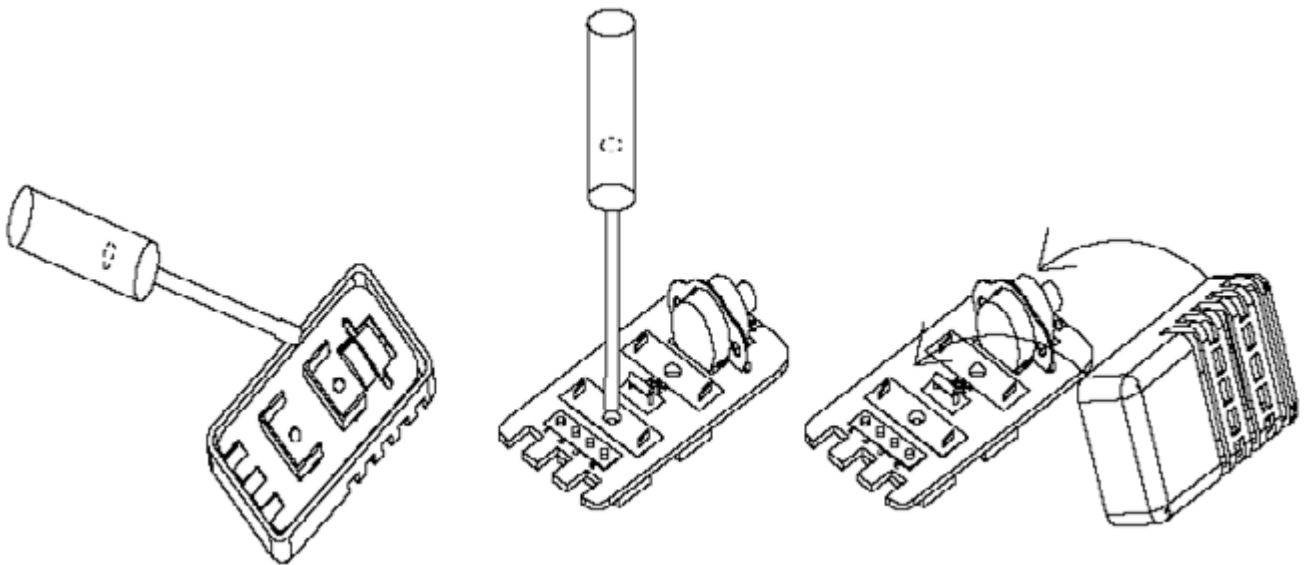


NOTE:

Ensure stones are stacked loosely with space between to allow rising air to circulate. Do not stack in layers. This will prevent correct air circulation through the stones

10. Installing Temperature Sensor

- Install the temperature sensor on the ceiling taking note of the minimum clearances on page 10
- Open the cover with a screwdriver
- Fix the bottom of the temperature sensor on to wall with screw
- Replace the cover.

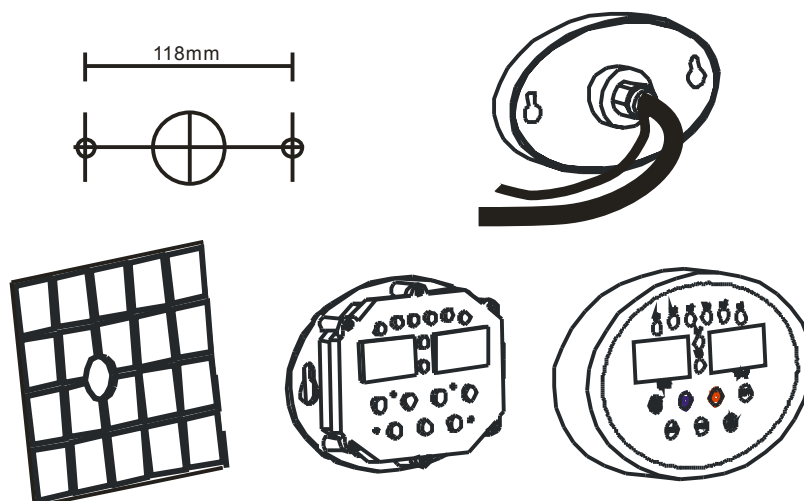
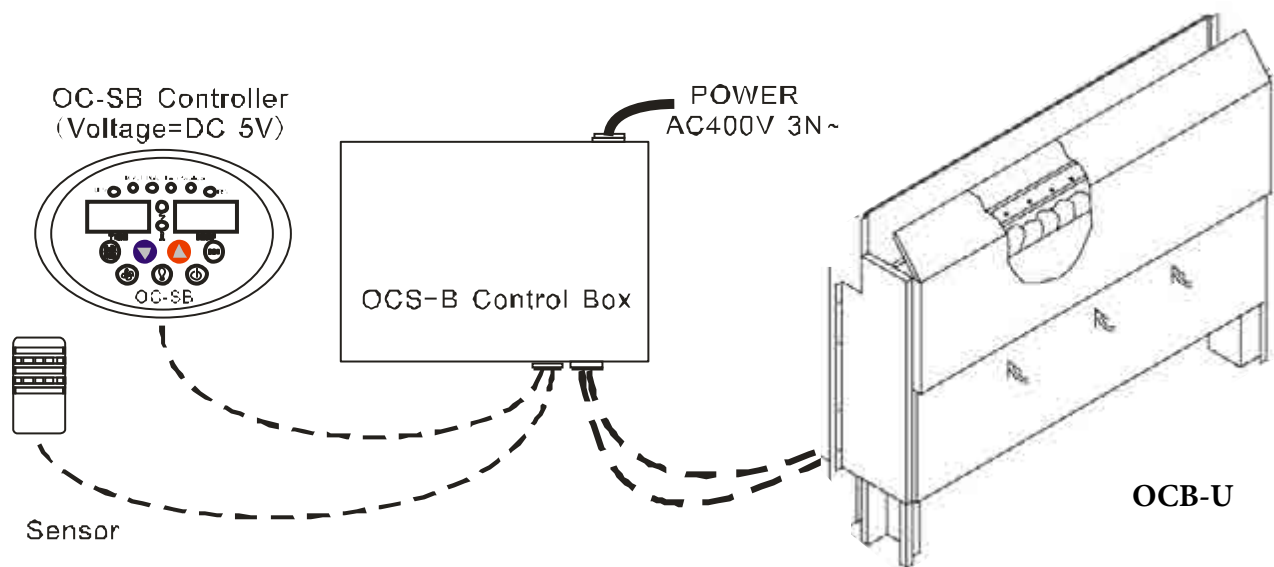


11. Installing Controller

The controller must be installed on an outside wall, not inside the sauna cabin. Ideally the control box should be installed at a height of approximately 1200mm for ease of use.

Installation method:

- Drill a 40mm diameter hole through the wall.
- Pull the front off the keypad, you may find it easier with a small flat electrical screw driver.
- Pin the control cable (6 cores) to the relevant ports.
- Install the control so it sits flat on the wall. Fix using the screw holes 118mm apart.
- Put the keypad cover back on, check the cover is completely on so that all the buttons click when pushed.



Behind Bench Heater Manual

Model	Default Mode	Default Temp °C/°F		Temperature adjust scope °C	
OC-SB	A	75 °C	187 °F	50-110 °C	122-230 °F
	Default Time			Time adjust scope	
	Working time	Waiting		Work time	Wait time
	2hrs	4hrs		10mins - 8hrs	0-12 hrs
	Time adjustment per button press			Temperature adjustment per button press	
	10 mins			1°C /2 °F	

12. Testing and Operation

12.1. Testing

Before connecting to the power supply check the sauna heater and make sure there are no flammable items on or around the heater, please note that on the first use the elements and stones may smoke slightly and give off a smell – please ensure the sauna cabin is well ventilated.

- Connect to power supply, press " "key, temp and time windows will display data, LED shows the sauna's heating status when the light is on, the temperature of sauna room will rise and will achieve the preset temperature (the default settings are 70 °C /158 °F, work time is 2 hours) chart 9

12.2. Setting time and temperature:

- The default settings for temperature are: 75°C/167°F. For preset operation time: 2 hours. These can be adjusted easily, if the electricity supply is lost the controller will return to default settings.
- When the sauna is turned on the time settings will work under A model (A model LED is on), the time window will display the last time that was set. Press "SET" key the time display window will flash. press "▲" or "▼" to adjust the time, every press the time will increase or reduce 10 minutes. once the desired setting is reached press "MENU/ENTER" the window will stop flashing. You can adjust from the time from 10 minutes to 8 hours. Note the controller has a memory function, if the power supply is not cut off the next time you turn on sauna the time you selected will be the default time.
- To set your heater to come on at a certain time (for example: if you plan to watch a film and want the sauna to start heating up half way through so its ready at the end of the film) you can use the B model setting which can be set if you press the "MENU/ENTER" and the time window will display 4:00, now Press "SET" key the time display window will flash. press "▲" or "▼" to adjust the time, every press the time will increase or reduce 10 minutes. once the desired setting is reached press "MENU/ENTER" the window will stop flashing., when it reaches "0" it will switch over to A Model and the heater will turn on. (Remember to set the time you want the heater on for on A Model before setting B Model)
- For quick time adjustment: hold the "▲" or "▼" and it will count continuously up or down, when it reaches the time you want release and it will stop.
- Temperature: switch button you can switch between centigrade and Fahrenheit.
- To adjust temperature: Press "SET" once after you finish setting the time or otherwise twice the temperature window will flash, enter the required temperature by pressing "▲" or "▼" to adjust - every press will increase or reduce 1°C or 2°F. you can adjust from 50°C-110°C 122°F-230°F once the required temperature has been set press "MENU/ENTER" key the window will stop flashing.

12.3. Door Interlock

When used in commercial situations such as public buildings where the countdown timer is set to come on in advance the door interlock switch must be connected as described in Fig 2 – before the timer is set to come on in advance the sauna room must be checked by the responsible person to ensure there is no hazard such as combustible material left over the sauna stove etc – then the sauna cabin door must be closed before the setting can be made – once the advance timer begins the countdown sequence if the door is opened the timing will stop and will not restart again until it is reset.

13. Troubleshooting

Please Note that we recommend a suitably qualified person carries out all repairs.

14. Trouble shooting Guide

Please Note that we recommend a suitably qualified person carries out all repairs.

Trouble description	Cause	Solutions
There is no display on the control panel when the on/off switch is pressed	There is a problem with; 1.Power supply or 2. Circuit board transformer or 3. Fuse	1. Chck the power supply. If the power supply indicator LED L1 (red) is on check the wire. 2. Change the controller
The controller is on but the sauna heater doesn't work	1 .The sauna heater hasn't been connected 2. There is a problem with the controller	1. Check the connection, refer to page 6 and 12. 2. Change the controller
OverHeat LED is on	1. The temperature sensor hasn't been connected correctly 2. The high teperature cut off switch is turned off	1. Check the connection to the temperature sensor. 2. Check if the high temperature cut off switch is turned off, i yes, reset by hand
Door LED is on	During the advance timer countdown sequence ,the sauna room door has been opened , the timing stoped and will not restart again until it is reset.	Reset counter down timer
Wait LED is on red	Sauna heater is under B mode	Press the Mode button to change to A mode (heating Mode)

<p>Temperature windows display -- L° or --H°</p>	<p>1. Thermometer isn't connected or cable is broken 2. The temperature is lower than 0°C . 3. The temperature is higher than 115°C</p>	<p>1. -- L°C means temperature sensor hasn't connected or the temperature is lower than 0°C check the connection, cable or change sensor 2. --H°C means there is a short circuit in the temperature sensor or the temperature is higher than 115°C check the connection,cable or change sensor. 3.Change controller.</p>
--	---	--

15. Notes for safe use

15.1. Leakage current values

For the installation of sauna heaters, please pay attention to the The EN 60335-1 DIN VDE 0700 part 1 of January 2001 states the following in paragraph 13;

quote: *The leakage current may not exceed the following values during operation:- for stationary heaters of protection class I 0,75 mA; or 0,75 mA each kW input of the appliance, depending on the higher value, at a maximum value of 5 mA.*

15.2. Earth Leakage Circuit Breaker

If the appliance is equipped with a protective device for leakage current (ELCB), please pay attention to the fact that no other electrical units will be protected by this ELCB.

15.3. Moisture on the heater elements

The heating elements will attract moisture from surrounding air and this can concentrate in the magnesium oxide filling during transportation and storage causing the ELCB to trip. If this is the case the unit must be heated up must be supervised by an expert with the protective earth (PE) conductor disconnected. Once the moisture has evaporated from the elements (around 10minutes from start up) the PE conductor must be reconnected.

It is recommended that the unit is run every 6 weeks to avoid moisture build up in the heating elements. Under these circumstances if the ELCB is triggered during start-up the electrical installation must be checked. Installation of the sauna heater and control unit may be undertaken only by a qualified electrician. Without documentation of such installation, a warranty is fundamentally invalid.

16. Maintenance

We recommend that you inspect the sauna heater on a regular basis for any signs of deterioration of the condition, pay particular attention to both the fastenings, the condition of the wiring and the electrical elements.

Note if the rocks have started to crumble this can cause the elements to overheat and they should be changed for new rocks. We recommend commercial operators to change the rocks at least once every 12 months.

16.1. Sauna Heaters & Sauna Cabins Maintenance

All Sauna products supplied by Direct Saunas Limited and Oceanic Saunas are for use in an indoor environment such as a domestic house or a club building and should not be used in any other circumstances.

16.2. Sauna Maintenance

Dependant upon how regularly the sauna cabin is being used a series of maintenance checks should be performed on the sauna cabin and sauna heater to ensure that they are kept in a good state of repair.

For commercial users we recommend these inspections be conducted on a monthly basis by a member of the maintenance staff and detailed records kept.

For domestic use these checks should be carried out every 6 months.

Any obvious deterioration should be noted immediately if noticed in between maintenance checks and should be resolved before continuing use of the products.

Under no circumstances do we recommend operating the sauna cabin if any electrical wiring is considered to be hazardous, please contact your electrician or our technical department for assistance.

16.3. Maintenance Checks

Please note all maintenance checks should be performed whilst the sauna cabin and sauna heater are cold.

16.4. Sauna Heater:

Ensure the heater has been correctly disconnected from the mains electricity before these checks are conducted

1) Check sauna elements for signs of deterioration. Report any signs of deterioration to the supplier

2) Make sure all rocks are placed correctly onto the heater elements to ensure an adequate airflow around the elements. Note that the rocks will gradually crumble and settle around the elements which can then cause overheating, this may lead to early failure or even melting of the elements.

17. Warranty and After Sales

All Oceanic Sauna Heaters are guaranteed for 12 months from the date of purchase against faulty materials or workmanship. The guarantee excludes consumable items such as the electrical elements and faults arising from misuse or abuse of the appliance. Elements last for 2500 hours, after this time has passed you should be expecting to buy new ones, premature failure can be caused by:

- A half filled rock basket.
- Rocks forced against elements from bad filling
- Customers throwing large amounts of water over the rocks, for heavy duty places we recommend
- screwing the bucket to the bench this prevents this from happening.
- Incorrectly wired heater.

For warranty claims and after sales service outside of the guarantee please contact your local Oceanic dealer.

If you encounter any difficulty with this assembly procedure or think we could have explained anything

more clearly we would welcome your comments, please call 01902 655425 technical help line.