

Oceanic

Sauna & Steam

SAUNARIUM CONTROLLER

Assembly and operating manual

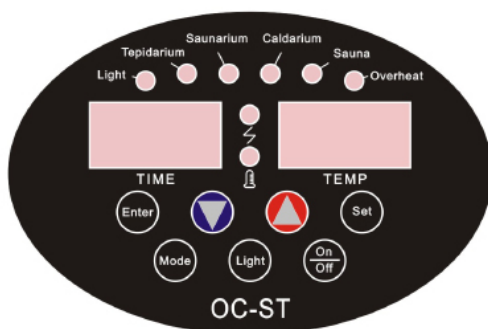


Table of contents

1. Introduction 3

2. Important Notes 3

3. Safety Precautions 3

4. General Setup Overview 6

5. Installing the Sauna Heater 7

5.1. Sauna Heater Unit Parameters 7

5.2. Sauna Heater Parts Description. 8

5.3. Sauna Heater Circuit Diagram. 8

5.4. Sauna Heater Installation 8

5.5. Minimum Clearances 9

6. Temperature Sensor 9

7. Sauna Stones 10

8. Mini Steam Generator 11

8.1. Safety Precautions 11

8.2. Parameters. 11

8.3. Mini Steam Generator Circuit Diagram 11

8.4. Parts Description. 12

8.5. Installation. 12

8.6. Minimum clearance diagram 13

8.7. Mini Steam Generator Water Filling Details 13

9. Saunarium Control Box 14

9.1. Saunarium Control Box Parts Description 14

9.2. Saunarium Control Parameters 14

9.3. Saunarium Control Box Circuit Diagram 15

9.4. Saunarium control pad parts description 16

10. Maintenance 17

10.1. Sauna Heaters & Sauna Cabins Maintenance 17

10.2. Sauna Maintenance 17

10.3. Maintenance Checks 18

10.4. Sauna Heater: 18

10.5. Mini Steam Generator: 18

11. Guarantee 19

1. Introduction

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

2. Important Notes

- Read the manual before installation and operation.
- This Equipment must be installed by competent person.
- This equipment must be connected to an all pole isolator
- Disconnect the power supply before exposing electrical connections.
- This equipment is suitable for indoor use only
- Not suitable for marine use

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 steam room.
- Do not smoke in the steam room.
- Avoid using the steam room immediately after strenuous exercise.
- Do not use the steam room when under the influence of alcohol.
- Leave the steam room at once if you feel sleepy, sick or uncomfortable.
- Ensure there is good ventilation for the steam room.
- We do not recommend that children under 16 use this product.
- Commercial operators should post a notice of these precautions in a prominent position.

Steam emitted from the steam generator will be scalding hot; ensure the generator is located in the correct position away from where users will sit and/or provide adequate guarding, post a notice to caution users.

The Oceanic Saunarium Controller is designed to combine the use of the Oceanic wall mounted Sauna Heater and Mini Steam Generator to create a variety of humidity/temperature environments, these environments can be seen described on the next page in the chart and illustration.

The controller achieves these different humidity/temperature environments by changing the amount of power supplied to the Sauna Heater or Steam Generator.

Each switches between the amount of:

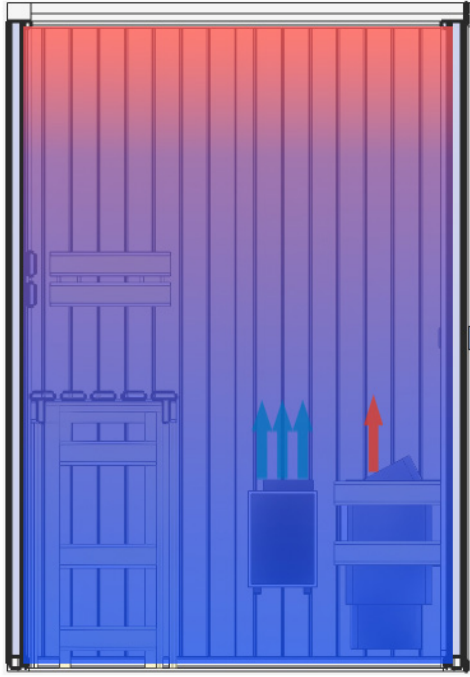
Temperature (minimum to maximum) and,

Humidity (Percentage of time the steam generator is working)

You will notice how the more the steam generator is operating the lower the maximum temperature you will be able to set. The reason for this being that the more water-moisture-humidity in the air, the more contact the heat has to your skin. For example a Sauna can be used at 100°C as the humidity is only approximately 5%, in a Steam room where you have 100% humidity it is uncomfortable to increase the temperature past 45°C. Our illustration on the next

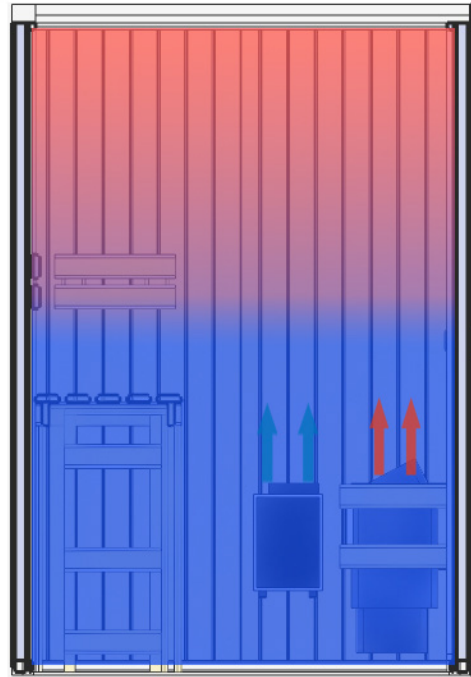
Tepidarium

Low Heat - High Steam
Max Temp 48°C - 50-60% humidity



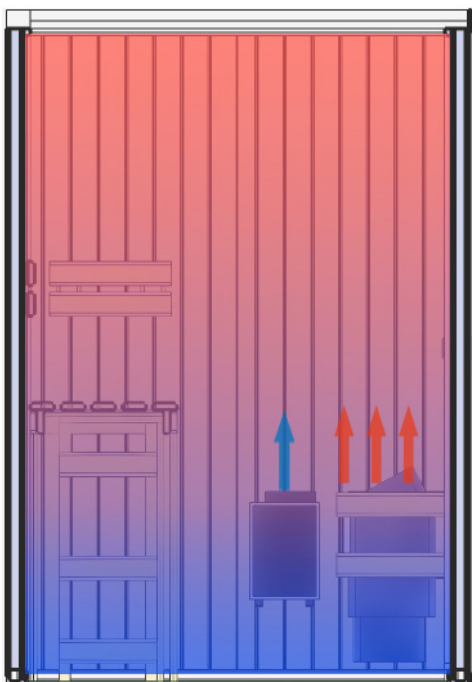
Saunarium

Medium Heat - Medium Steam
Max Temp 56°C - 40-50% humidity



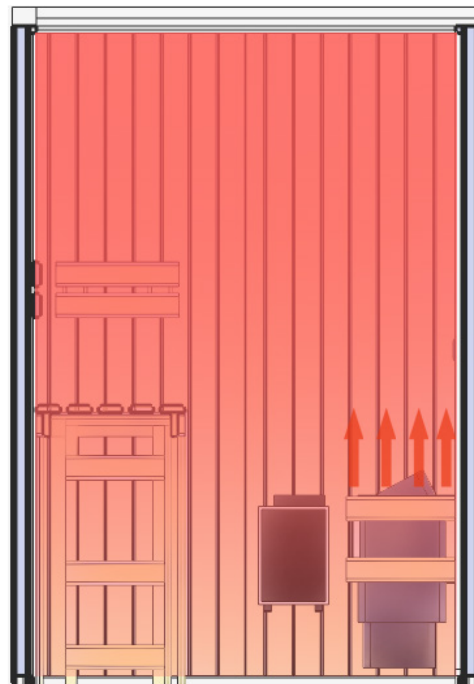
Caldarium

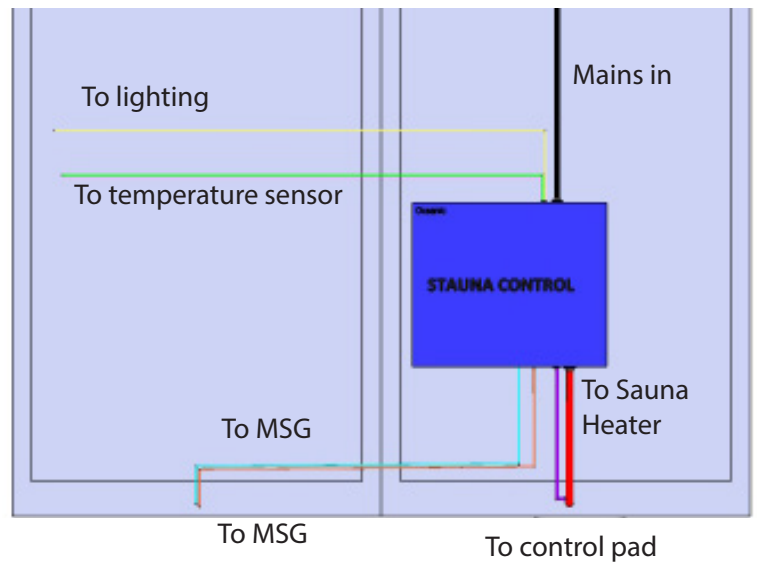
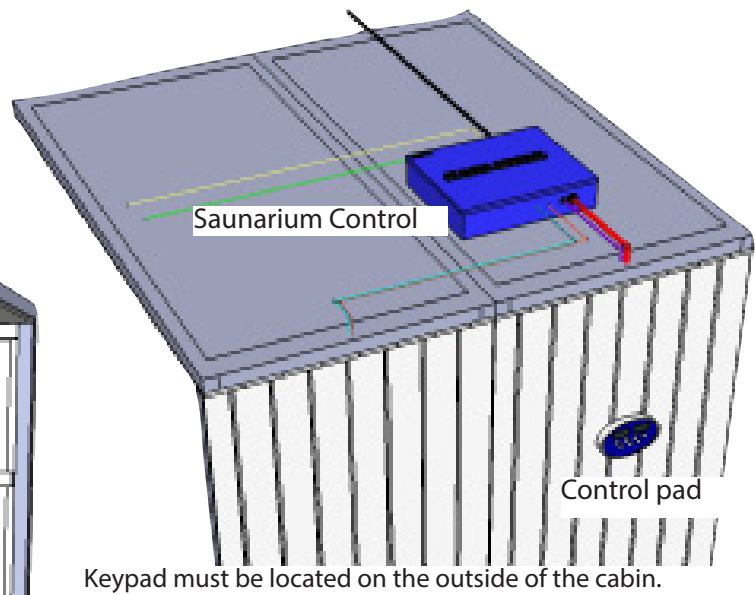
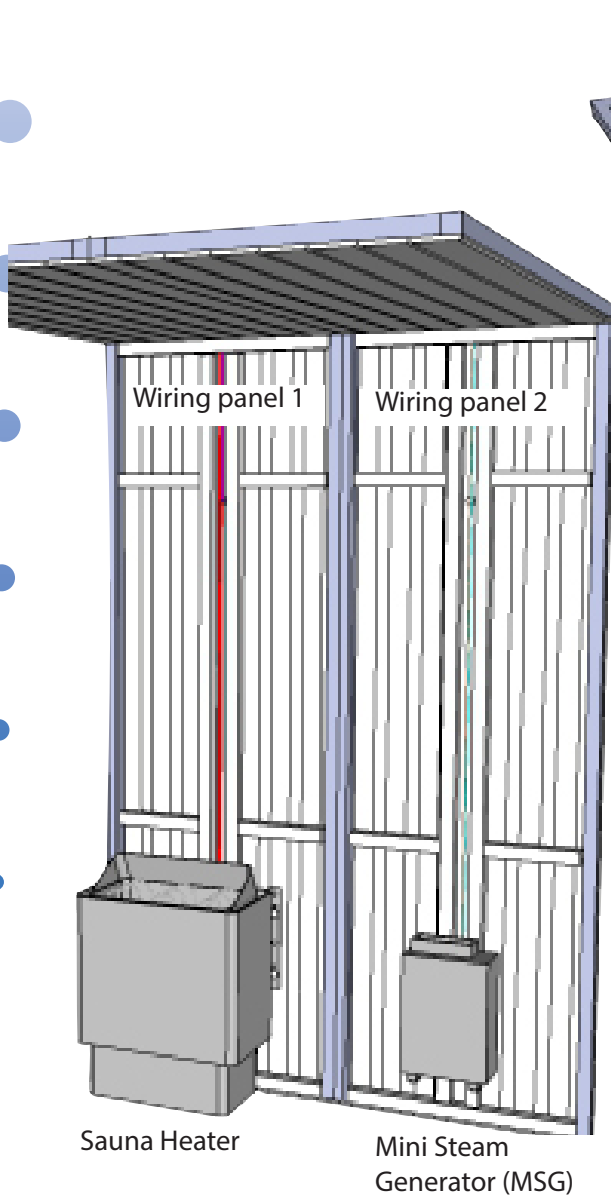
High Heat - Low Steam
Max Temp 65°C - 30-40% humidity



Sauna








Very High Heat - No Steam
Max Temp 100°C





All cables inside panel must be heat proof to 150°C

Cable Key

	3 or 5 Core silicon cable from mains supply to control box. 3 core 240V 1N / 5 core 400V 3N. Not Provided
	2 Core cable out from controller to lighting. Not Provided
	4 core wire to temperature sensor. 4m Provided
	5 core heat proof cable to sauna heater. Not Provided
	6 core 12V cable to Control Pad. 4m Provided
	4core signal cable to MSG. 2m Provided
	3 core 1mm silicon cable to MSG. Not provided

Stauna Manual

page should help you to understand the modes.

4.5kW Saunarium

Mode	Heater Power (kW)	Mini Steam Power (kW)	Max Temp (oC)	Total Power (kW)	Steamer Operation (%)
Sauna	4.5	0	100		0
Caldarium	3	1	65	4.0	80
Sanarium	3	1	56	4.0	90
Tepidarium	3	1	48	4.0	100

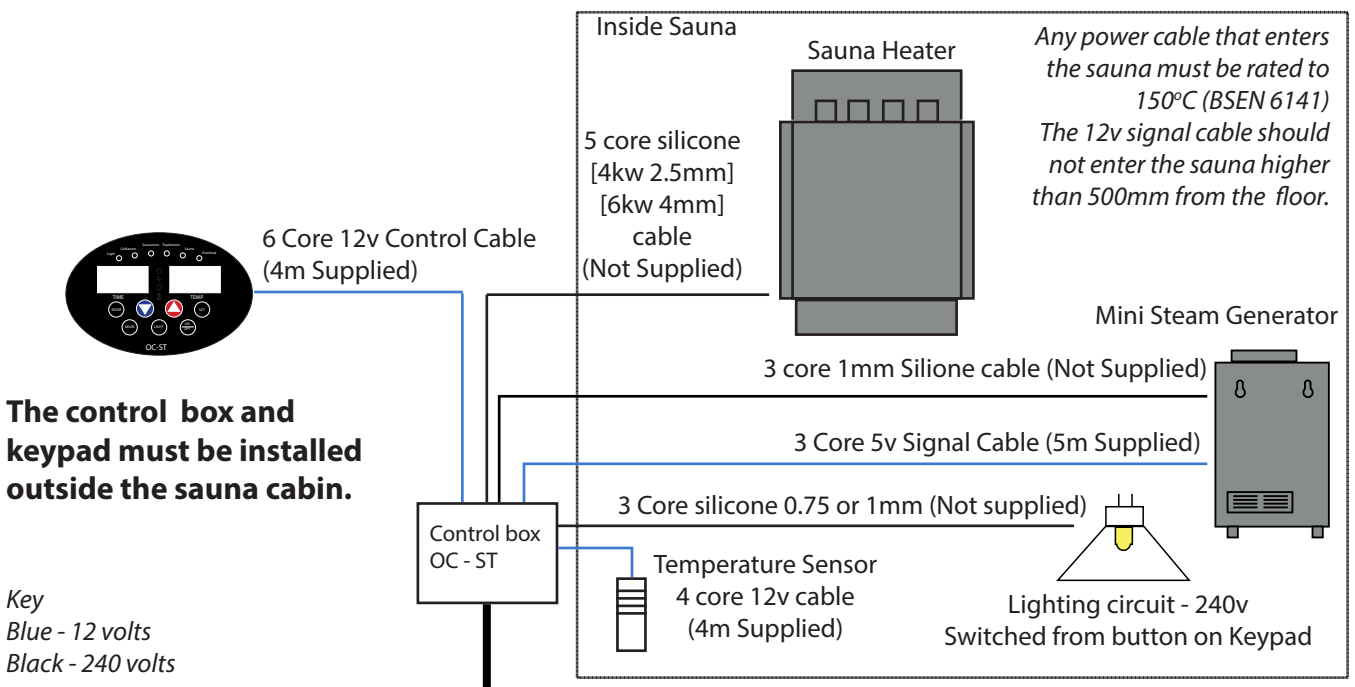
6kW Saunarium

Mode	Heater Power (kW)	Mini Steam Power (kW)	Max Temp (oC)	Total Power (kW)	Steamer Operation (%)
Sauna	6	0	100	6	0
Caldarium	4	1	65	5	80
Sanarium	4	1	56	5	90
Tepidarium	4	1	48	5	100

4. General Setup Overview

According to the valid regulations, the electrical connection of the steam generator 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.

Important Notice: Please pay close attention to the drawing below. The mains power is solely supplied to the OC-ST control and is diverted from here to the heater and steam generator. You must not wire directly from the mains to either the sauna heater or mini steam



Mains in 230v 1N or 400v 3N

generator.

5. Installing the Sauna Heater

- i. Confirm the model you have selected is suitable for your sauna room, please refer to the table below.
- ii. Ensure the power supply is suitable for the sauna heater, refer to the table below.
- iii. The installation position must comply with the minimum distance in the table below and in the diagrams on the following pages.
- iv. The minimum height of your sauna room must be 1900mm, please refer fig 5.4c
- v. Do not install the sauna heater on the floor or in a cabinet
- vi. Do not cover the sauna heater back with asbestos cement or similar material
- vii. The wires which enter the sauna room must be rated to 150°C- type 60245 IEC 66 HO7RN-F (BSEN 6141) please refer to table below. (The signal cable between control box and mini steam generator does not need to be changed to the silicone cable as long as it does not enter the cabin higher than 500mm from the floor.)
- viii. Do not install two or more sauna heaters in one sauna room.
- ix. The sauna heater becomes very hot when operating and must be guarded to protect in case of accidental contact, please see the sizes in fig 5.4d and also refer to charts below.
- x. The upper supporting screws must be fixed tightly, there is a 3mm gap between the screw head and wall (refer fig 5.4a, fig 5.4b), additional retaining screws should be inserted into the round holes to prevent the heater being lifted.
- xi. Temperature sensors should be installed in sauna room but not directly above sauna heater, the height should be a minimum of 1800mm from floor. The horizontal distance to sauna heater should exceed 500mm.
- xii. Wash the rocks thoroughly before filling the basket. Discard any with veins running through or any rocks smaller than 50x50mm.
- xiii. Fill the rocks loosely around the elements, try to use the larger rocks between the elements and use the smaller ones for the top.
- xiv. To prolong the life of your sauna you can use a heatproof board behind and above the heater to prevent charring, for commercial cases this should be more seriously considered.

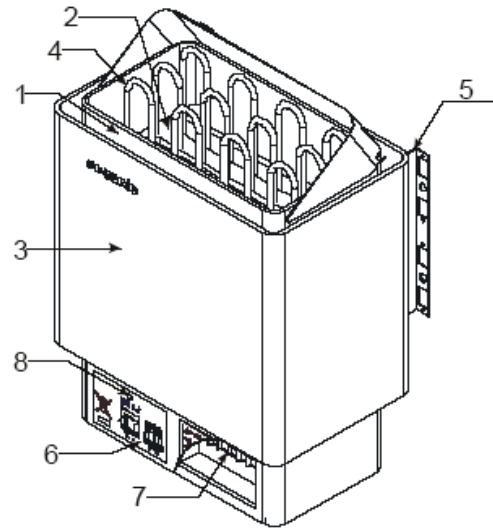
Model	Sauna Room		Min Distance from Sauna (mm)			Current (A)		Fuse (A)		
	Volume (m ³)		Min height	Distance to shelf over 500mm above the floor	Ceiling	Floor	230V 1N~	400V 3N~	230v 1N~	400V 3N~
	Min	Max								
OCS45	4	6	1900	80	1100	180	19.5	6.5	25	10
OCS60	5	8	1900	150	1100	180	27	9	40	16

5.1. Sauna Heater Unit Parameters

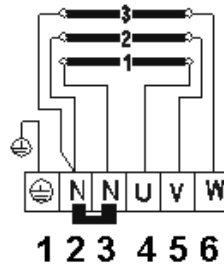
Sauna Heater Dimensions 410 x 280 x H570mm

5.2. Sauna Heater Parts Description

No.	Parts
1	Inner shell
2	Stone bracket
3	Shell
4	Heat element
5	Fix bracket
6	Cover Panel
7	Terminal
8	Wiring Diagram



OC45~OC60 Circuit diagram



5.3. Sauna Heater Circuit Diagram

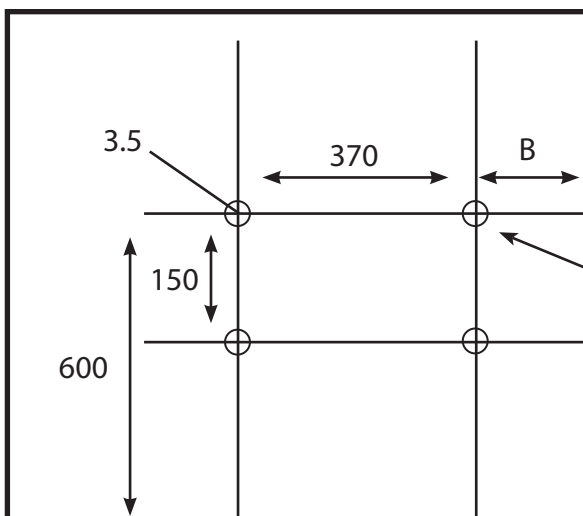


Fig. 5.4a

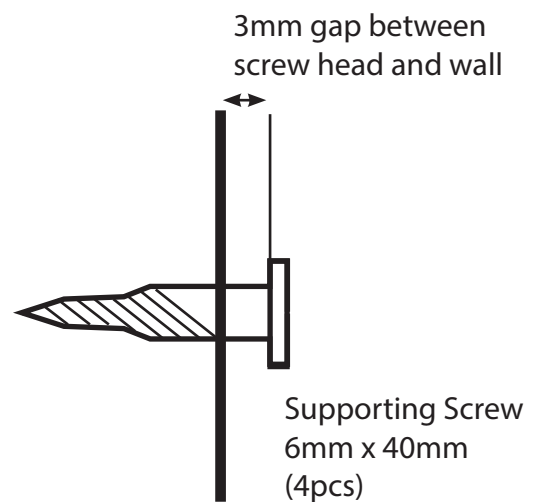


Fig. 5.4b

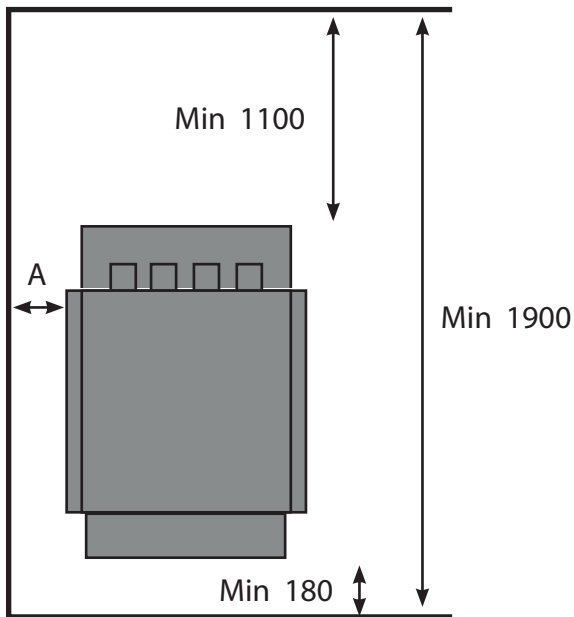


Fig. 5.4c

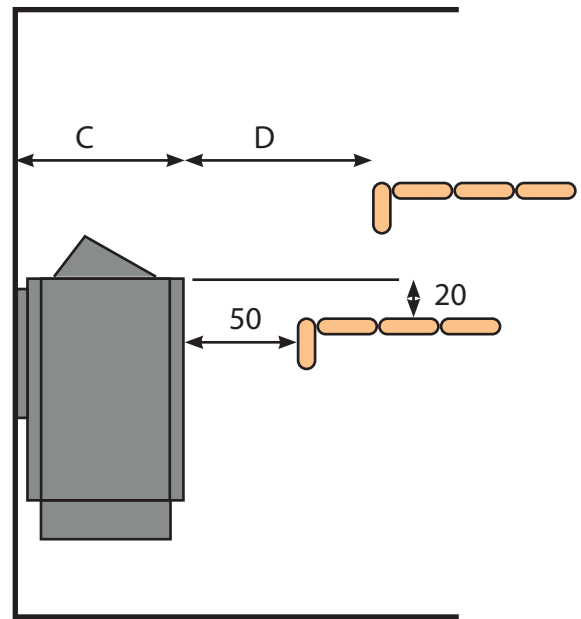


Fig. 5.4d

All sizes in mm

5.4. Sauna Heater Installation

Model	Minimum Distance (mm)			
	A	B	C	D
OCS45	80	100	280	100
OCS60	100	120	280	150

5.5. Minimum Clearances

6. Temperature Sensor

- Install the temperature sensor as in the Fig. 4
- Open the cover with a screwdriver as in Fig. 5
- Fix the bottom of the temperature sensor on to wall with screw

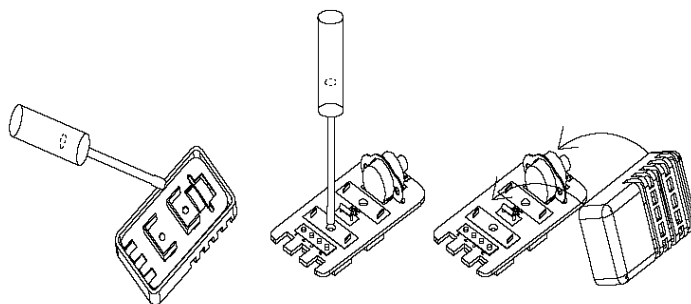


Fig. 6a

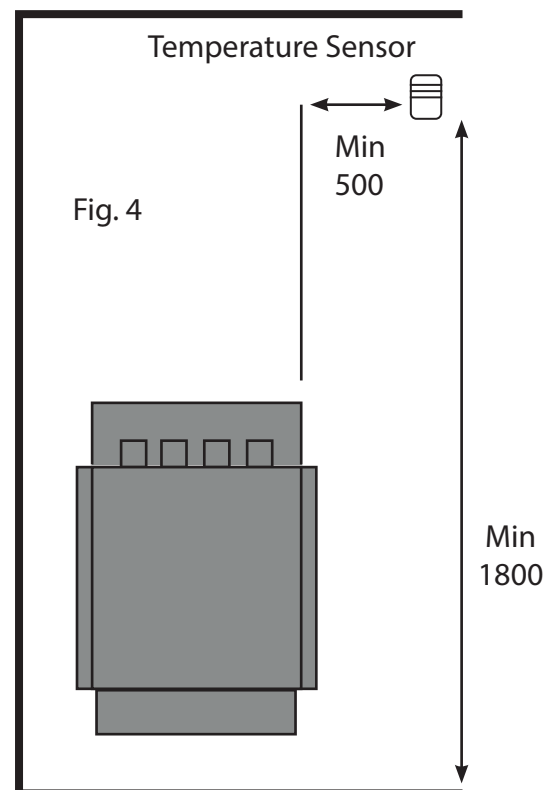
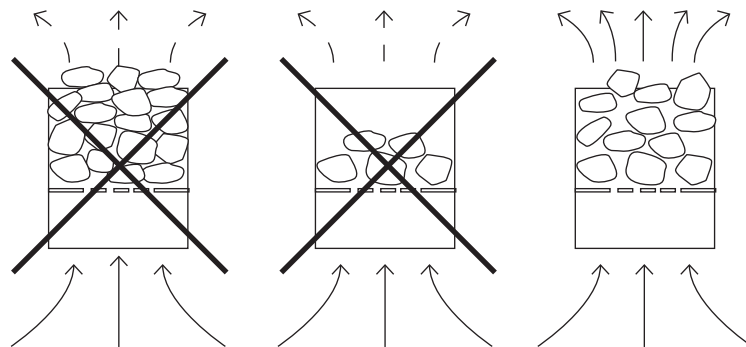


Fig. 6b

iv. Replace the cover.

7. Sauna Stones

- i. Carefully check that none of the stones have white lines running through them, these are susceptible to exploding when hot so do not place these in the rock basket.
- ii. Note we recommend washing the stones thoroughly in water to remove any dust before the first use.
- iii. Put the larger stones at the bottom and smaller stones on top.
- iv. Take care not to pack the stones too tightly other wise 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.
- v. 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.
- vi. 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.

8. Mini Steam Generator

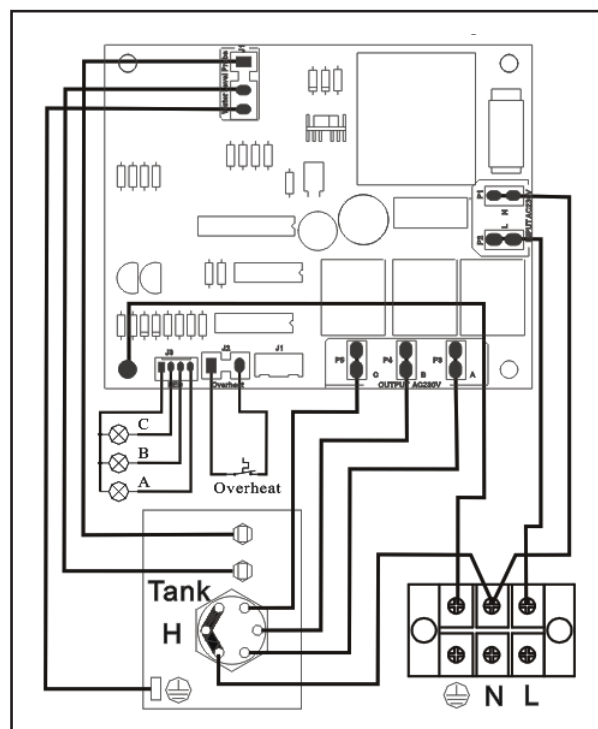
8.1. Safety Precautions

- i. The equipment must be installed vertically
- ii. Stop pouring water into the boiler when the high level LED light (A) turns on. Don't let the water reach the holes in the top cover. You can release water using the valve at the bottom.
- iii. If overheat indicator LED light turns on, cut off the power supply and do not do not turn

back on until the problem has been resolved. If in doubt please contact our technical

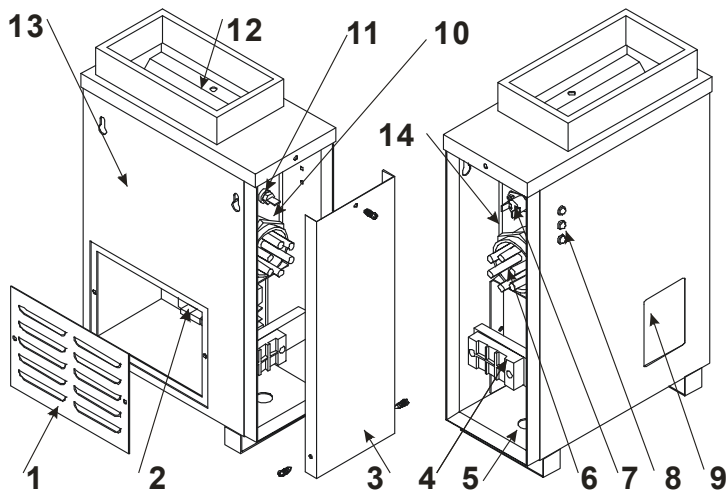
Model	Power (W)			Voltage (V)	Current (A)			Dimensinos LxWxH (mm)
	Class 1	Class 2	Class 3		Class 1	Class 2	Class 3	
OC-Mini-1	500	750	1000	210-240	2.1-2.3	3.2-3.6	4.2-4.8	220 x 100 x 340
OC-Mini-2	1000	1500	2000	210-240	4.2-4.6	6.4-7.2	8.4-9.6	220 x 100 x 340

team.



8.2. Parameters

8.3. Mini Steam Generator Circuit Diagram

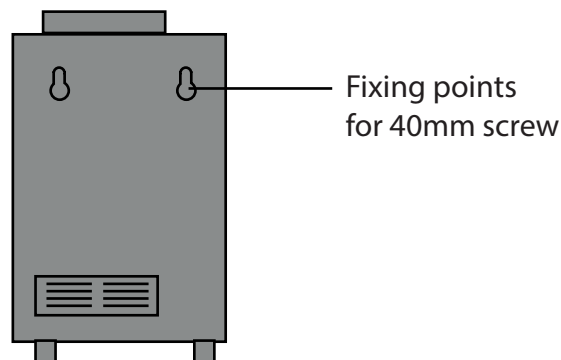


No	Description
1	Back cover
2	circuit board
3	Side cover
4	Terminal
5	Power entry
6	Heat element
7	Overheat switch
8	Water level indicator LED
9	Control panel
10	SUS tank
11	Water level probe
12	Steam outlet and water inlet
13	Shell
14	Heat preservation cotton

8.4. Parts Description

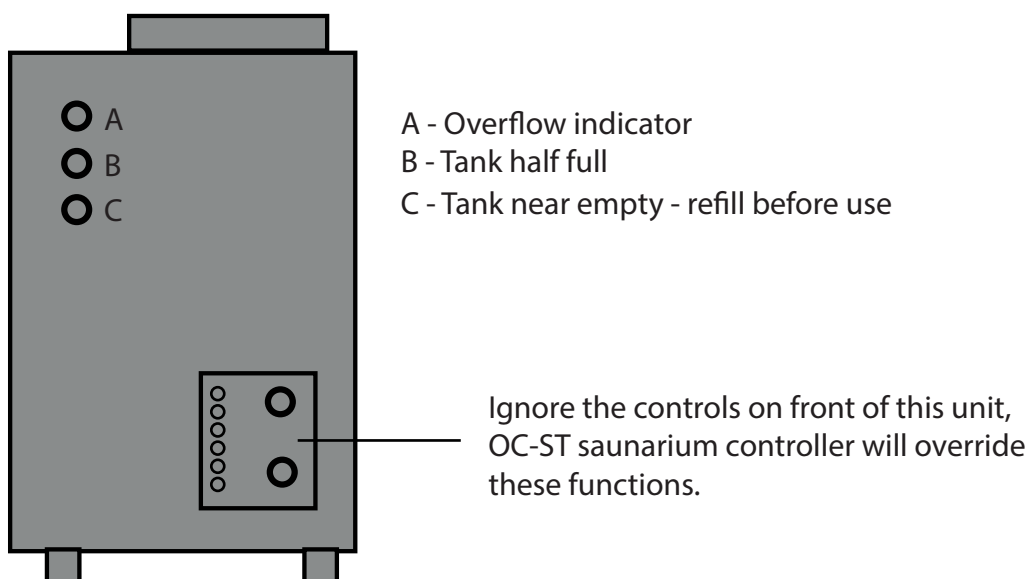
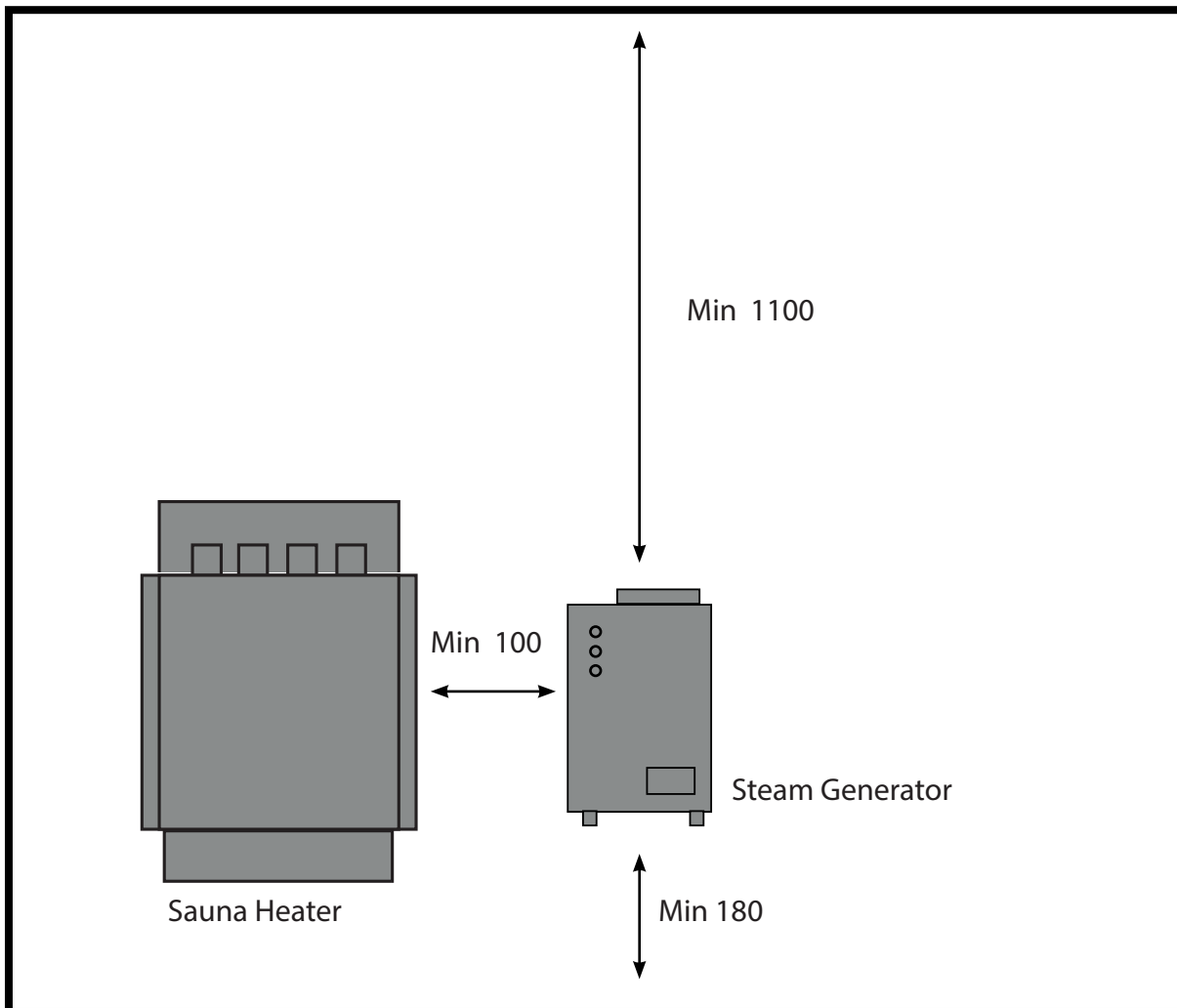
8.5. Installation

- i. Position the steam generator adjacent to the sauna heater on the wall of the cabin as shown in the diagram on the next page.



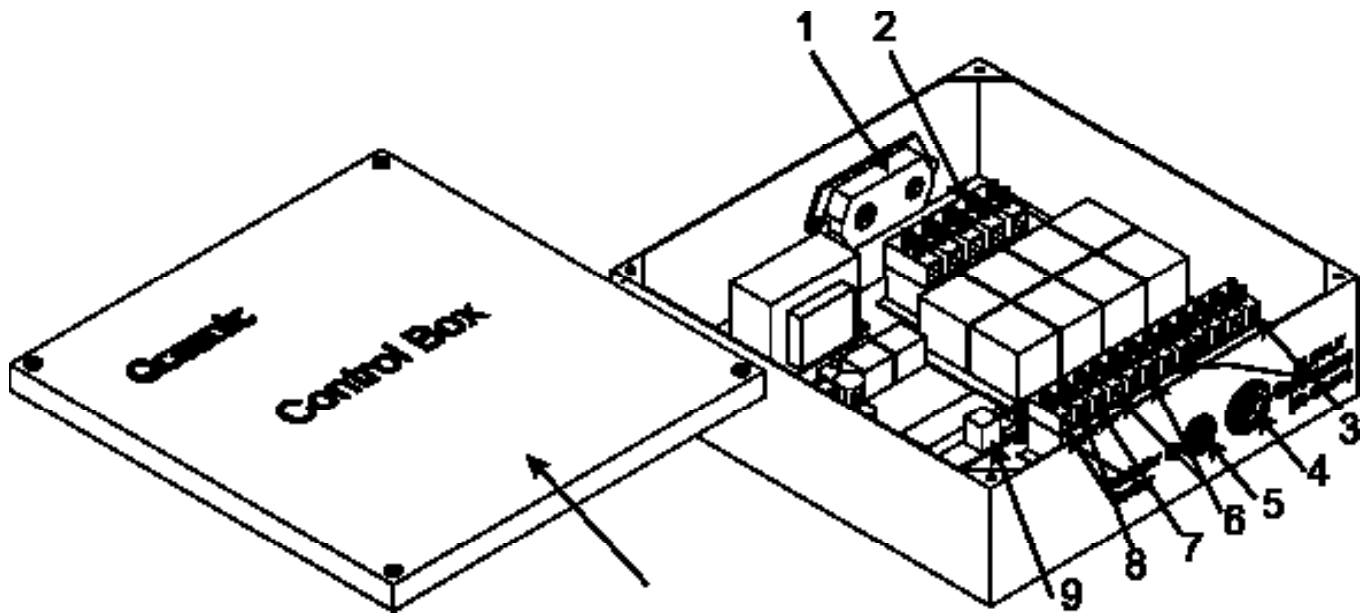
Stauna Manual

- ii. Fix to cabin wall using 40mm Screws and the locating fixing points on the back of the heater
- iii. Connect the steam generator to the saunarium control box (see pages 4, 9, 13)



8.6. Minimum clearance diagram

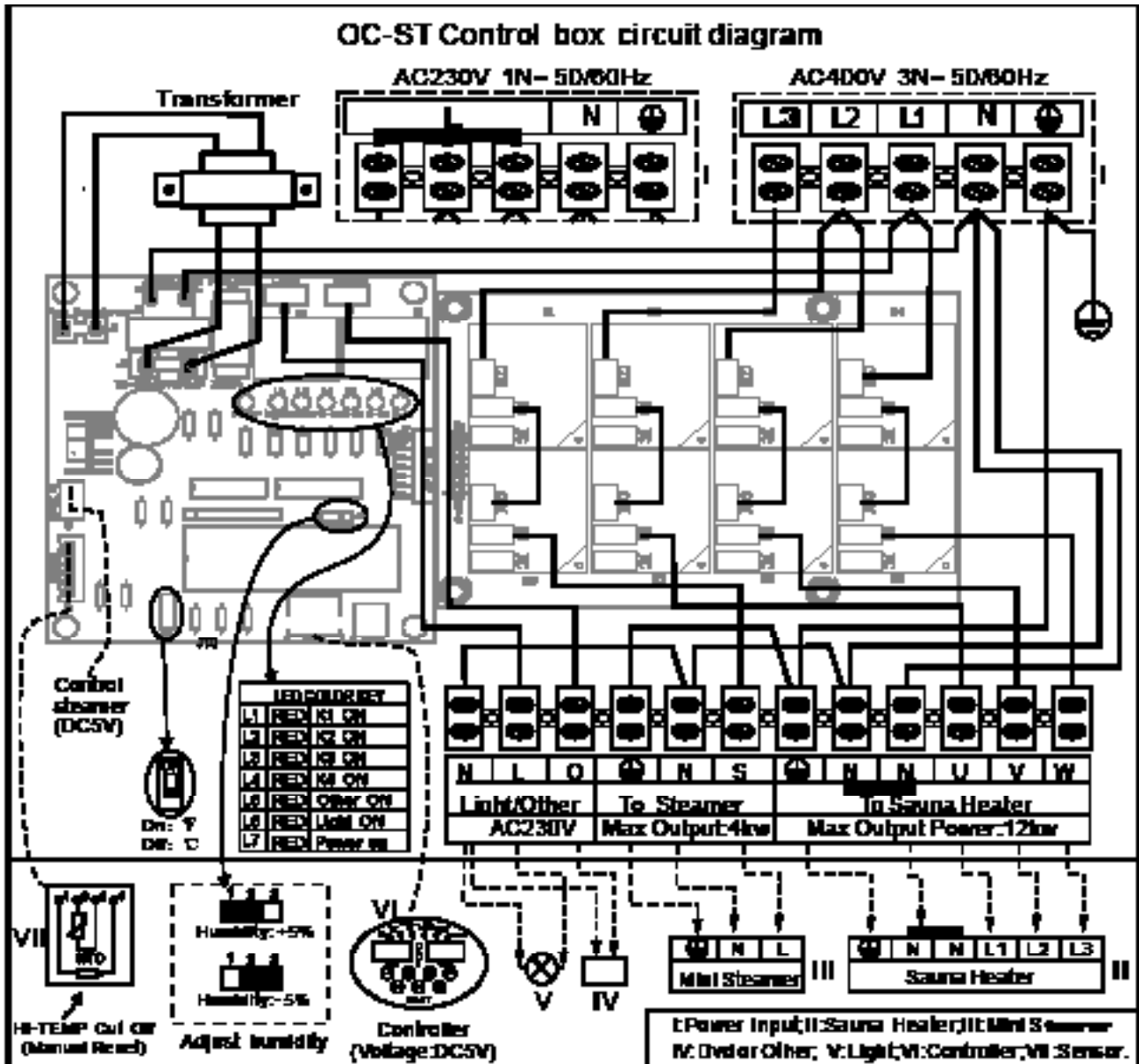
8.7. Mini Steam Generator Water Filling Details

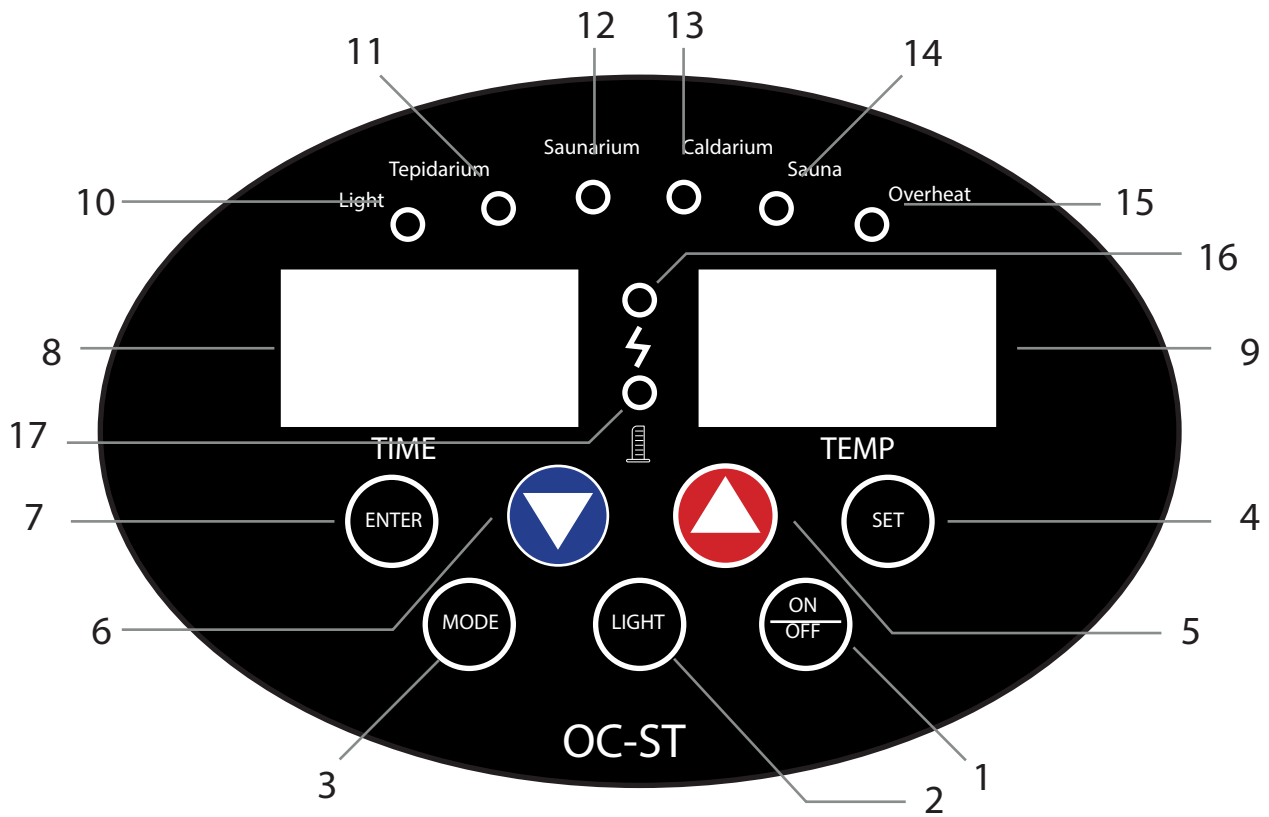


Model	Working Time (m)	Temperature (°C)	Dimension L x W x H (mm)
OC-ST	15-240	30 - 100 °C	150 x 92 x 22

9. Saunarium Control Box

9.1. Saunarium Control Box Parts Description





No	Part	Description
1	On/off	Push to turn the equipment on or off
2	Light	Push to turn on the light in the room.
3	MODE	Push to change mode
4	Set	Preset time and temperature - (you must press enter to save settings)
5	∧	Increase button
6	∨	Decrease button
7	/ °C/F / ENTER	Change from centigrade to Fahrenheit / Enter to save settings
8	Time display window	Display the work time of the steam generator
9	Temp display window	Display the detected temperature of steam room
10	Light	Indicator LED for the light in steam room
11	Tepidarium	Indicated the Tepidarium setting has been selected
12	Saunarium	Indicated the Saunarium setting has been selected
13	Caldarium	Indicated the Caldarium setting has been selected
14	Sauna	Indicated the Sauna setting has been selected
15	Overheat	Indicator LED for overheat - turn machine off and wait for 1 hour before switching back on, if problem persists contact the seller.
16	L7	Indicates the detected temperature is lower than the preset temperature and sauna heater is heating.
17	L8	Indicates the detected temperature is higher than the preset temperature and the sauna heater is idling.

Stauna Manual

1	Wire anchorage
2	Terminal block
3	To Sauna Heater
4	To sauna heater wire anchorage
5	Control cable anchorage
6	To mini steam generator
7	for spare usage
8	lamp
9	To temperature sensor

Stauna Manual

9.2. Saunarium Control Parameters

9.3. Saunarium Control Box Circuit Diagram

This diagram can be found on the back of the control panel's cover.

9.4. Saunarium control pad parts description

Testing and Operation

- i. Both the Keypad and the Control box must not be installed inside the sauna. The control box can be located on top of the sauna and the keypad should be located on the front of the sauna normally on the front of a wiring panel.
- ii. The buttons on the front of the mini steam generator should be ignored as the saunarium control will power the generator when it is necessary.
- iii. Push On/Off to switch on the system.
- iv. The Saunarium Controller has 4 different heat settings which can be selected by pushing the 'MODE' button, an LED will indicate which mode ("atmosphere") you have chosen. Each press moves the LED one position from left to right. These "atmospheres" are explained on pages 4 and 5)
- v. Within each Atmosphere you are able to set temperature within the specified range. Once in the correct Mode Push 'SET' until the numbers in the temperature window are flashing. Use the the Up and Down arrow buttons to select the required temperature. Once correct press Enter to confirm the temperature.
- vi. The length of time for which the session will last can be set by pushing the Set button until the numbers in the time window are flashing. Change the value with the Up and Down buttons. Push Enter to confirm selection.
- vii. Before using the room fill the mini steam generator until the A light illuminates and then stop. If you overfill, drain away some of the water before operating the controller as water will boil and spit out of the top which can be dangerous. There is a valve at the bottom of the unit which can be opened to drain the unit. Place a container beneath the valve before opening. The C light indicates the water is too low and should be refilled.
- viii. If you intend to use Aromas only use Oceanic Steam Aroma – any other aromas could invalidate your warranty. Ensure the Aroma is diluted correctly and then add to the steam generator as above. Never use the aroma without diluting.
- ix. Make sure to drain down the mini steam generator at the end of your bathing session.

10. 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.

10.1. 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.

10.2. 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.

10.3. Maintenance Checks

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

10.4. 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.

For commercial operators an electrician must periodically inspect and ensure all the wiring is in a good condition and all connections are good and tight – a good idea would be to have this carried out annually as for PAT testing.

10.5. Mini Steam Generator:

The single biggest problem with steam generation is the build up of scale resulting from dissolved

solids within the water. Scaling can cause the elements to fail, the water level sensors not to function, premature failure of the O-rings resulting in leaks from around the elements. The extent

of the problem will vary according to the degree of hardness in the local water supply.

For all commercial operators we recommend the use of a water softener.

Expect 2500 hours element life, this can be seriously depleted by poor maintenance.

All users must ensure a regular maintenance routine to descale the generator – the frequency of this will vary according to the degree of hardness in the local water supply and the amount of time the generator is used for. Check the water for hardness and arrange the descaling routine accordingly: -

High levels of hardness descale once every 50 to 100 hours of operation.