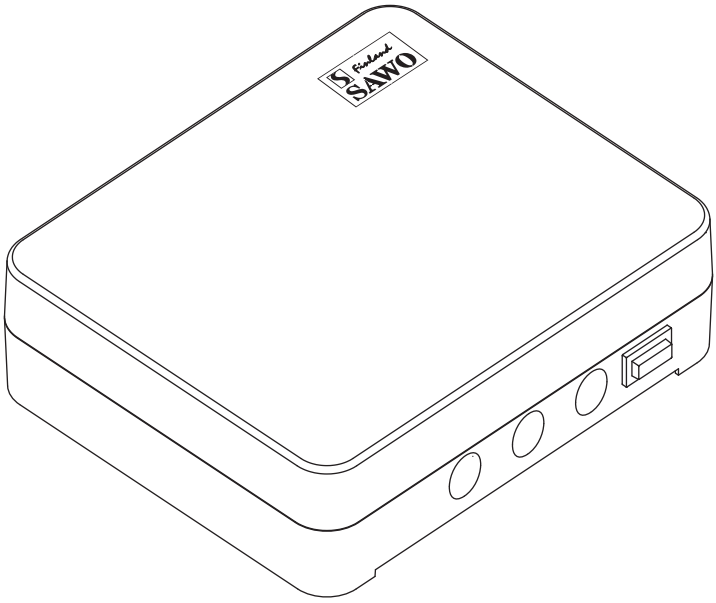
Finland SAWO

MANUAL

INNOVA POWER CONTROLLER 2.0

(INP-C)



Not for use in the USA, Canada and Mexico.

ENGLISH

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INTRODUCTION OF THE INNOVA CONTROL

Congratulations on your purchase of Innova Control Unit!

Innova Control Unit is developed to enhance your sauna bathing with a variety of different features. It can adjust temperature, humidity, ventilation and light option in your sauna. The Innova Control Units are available on a separate or built-in mounting on the Power Controller.

The following information provides you with instructions on adjusting the settings of the control unit. Please, read this instruction manual carefully before using it. Familiarization of key functions will give you a more enjoyable sauna experience.

Precautions

1. Only a qualified electrician is allowed to make electrical connections and repairs on the unit. Use original parts only.
2. Disconnect the Power Controller and the Contactor Unit from the electrical circuit before installation, opening the lid of the power controller or contactor unit and repair.
3. Check power supply rating before installation.
4. Check the correct location of the sensor in the installation section of the manual. It is very important to place the temperature sensor correctly as it closeness to the air ventilation cools down the sensor and may lead to overheating.
5. The power controller can be operated in a room temperature 0-40°C. Do not install it inside the sauna room!
6. Do not pour water in the control unit or clean it wet cloth. For cleaning purposes, use a cleaning cloth that has been only slightly moistened with a mild soapy solvent (dish detergent).

Power Controller

The Power controller or the separate control panel must not be located inside the sauna room or in places where temperature can exceed 40°C. It is protected against water splashes, however it should not get in contact with water. Mount the Power Controller in a dry location, outside the sauna room.

Install the Power Controller on the wall in vertical direction only,and at least 30cm from the ceiling (refer to Fig.2).

The heater is connected to the electrical network semi-stationarily with a H07RN-F rubber cable or its equivalent. The use of PVC-insulated cable as a connecting cable is prohibited due to thermal embrittlement. The maximum distance of the junction box from the floor is 500 mm, measured from the upper corner of the box.

Fig. 1

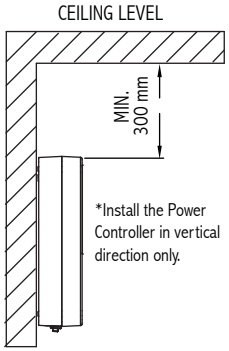
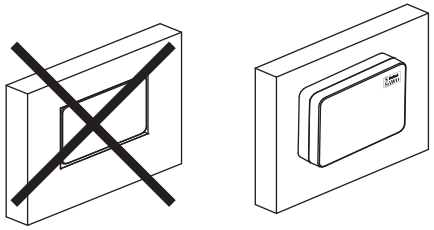


Fig. 2

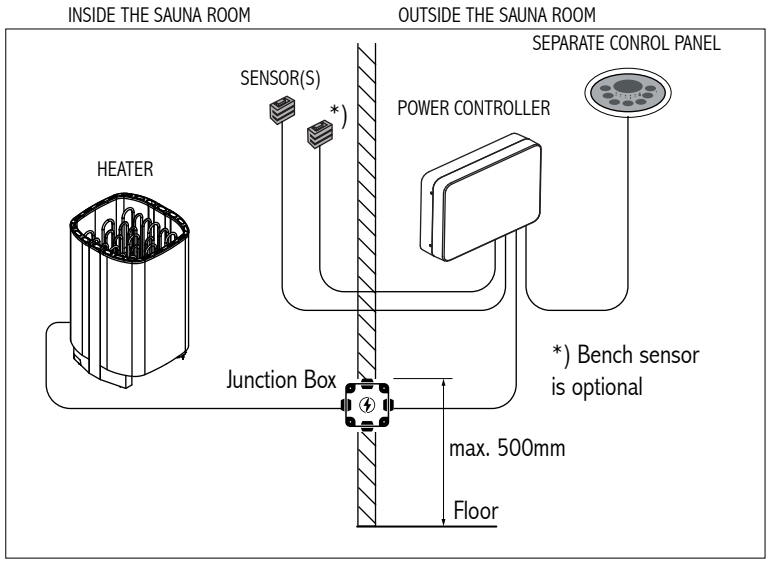


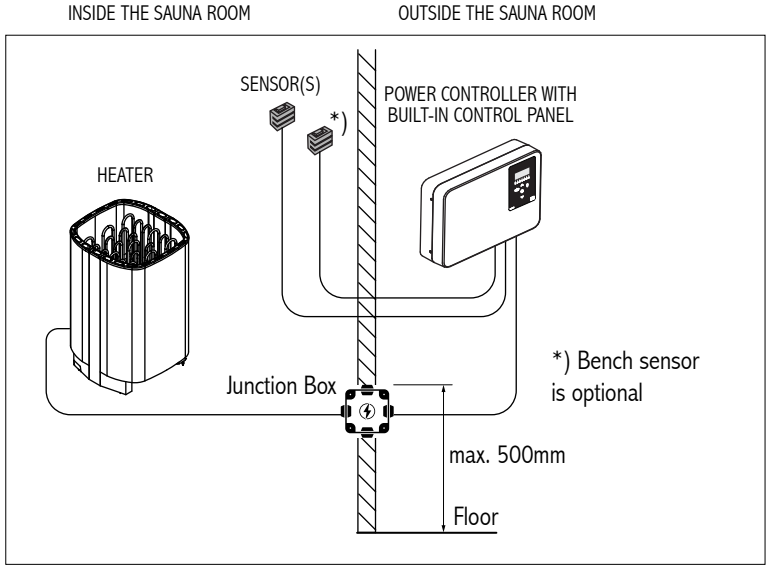
WARNING

Do not embed the control unit into the wall, because it may lead to overheating of the unit and cause damage!

Control Unit to Heater Connection Diagram

Fig. 3





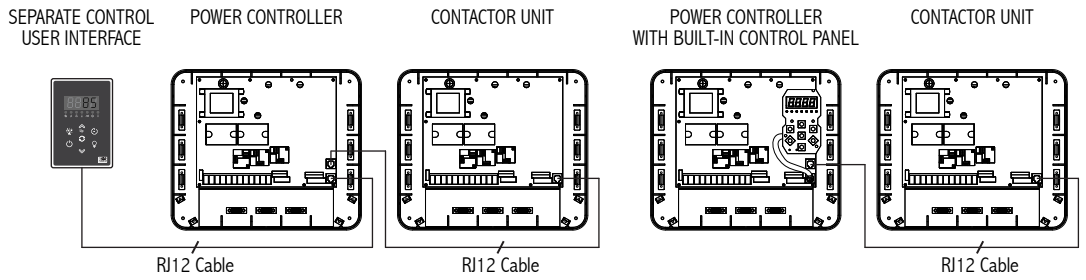
Contactor Unit

If the heater used is more than 15 kW, an additional contactor is needed. The contactor unit is linked to the main Power Controller with a RJ12 cable (Fig.4).

Follow the instructions that are supplied together with the contactor unit.

Fig. 4 **Installation of separate control panel with power controller and contactor unit**

Installation of power controller with built-in control panel with contactor unit



Sensors

One or two sensors can be connected to the Power Controller. The first sensor measures the temperature, it is the sensor with temperature fuse and thermistor.

The second sensor, the optional bench sensor, is a temperature sensor or combined temperature humidity sensor. The combined sensor is capable of measuring the humidity as well as the temperature.

With two sensors it is possible to receive more accurate measurements from the sauna room.

If the heater is mounted on the wall or floor standing less than 200mm from the wall, the first temperature sensor needs to be mounted on the wall above the heater. Place the sensor 150mm from the ceiling (Fig. 5 & 6).

However, if the heater is more than 200mm from the wall, place the sensor to the ceiling, over the heater, as shown in the figure 7 & 8.

The optional second sensor should be mounted on the wall, opposite to the heater, minimum 30cm from the ceiling and minimum 130cm from the floor (fig. 5 & 7). It is designed to measure the bench temperature, so ideally place it close to the shoulder height of the sauna goers.

Do not place the sensors near the air ventilation. The closeness of the air vent cools down the sensor. Thus, an incorrect temperature is displayed and the heater may overheat (Fig.8).

Sensor location with heaters mounted on the wall

Fig. 5

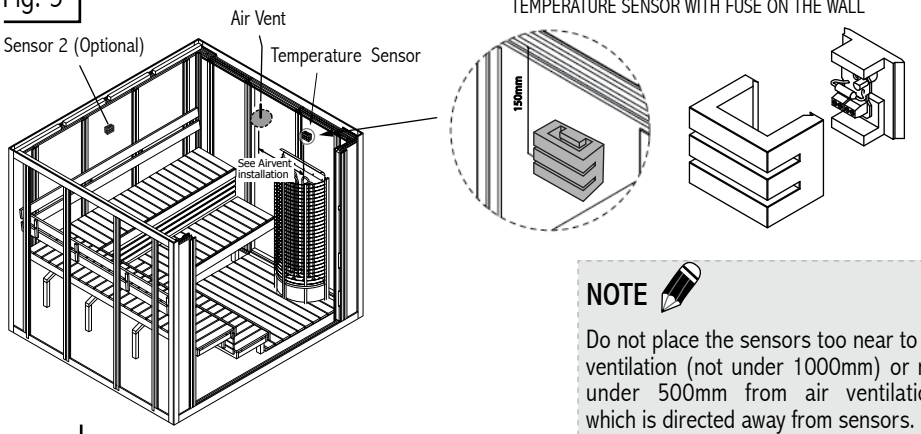
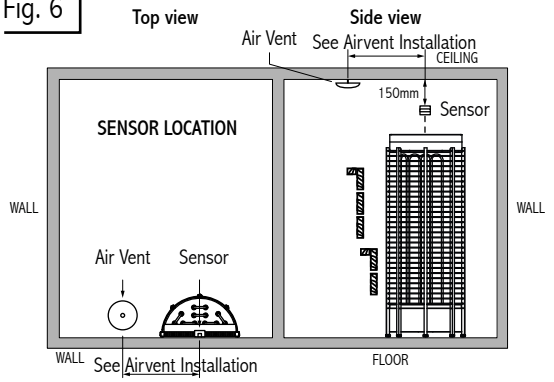
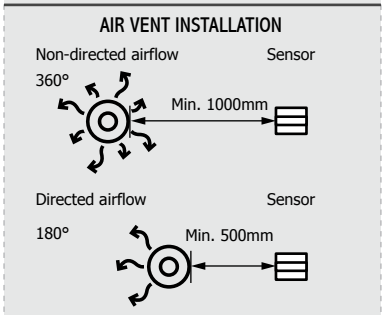


Fig. 6



NOTE

Do not place the sensors too near to air ventilation (not under 1000mm) or not under 500mm from air ventilation, which is directed away from sensors.



Sensor location with heaters mounted on the floor more than 200mm from the wall

Fig. 7

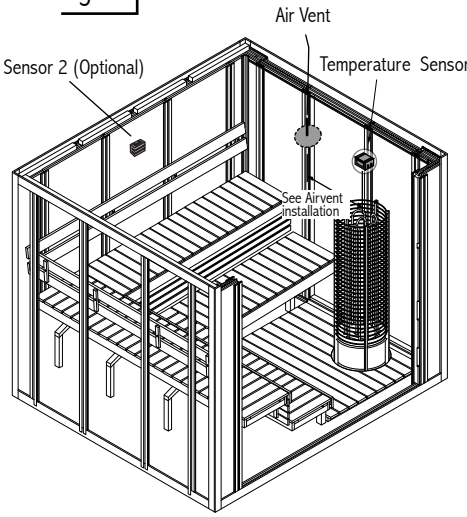
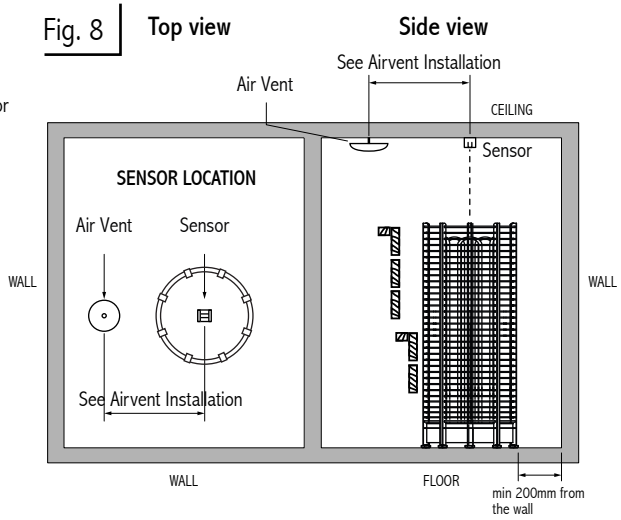
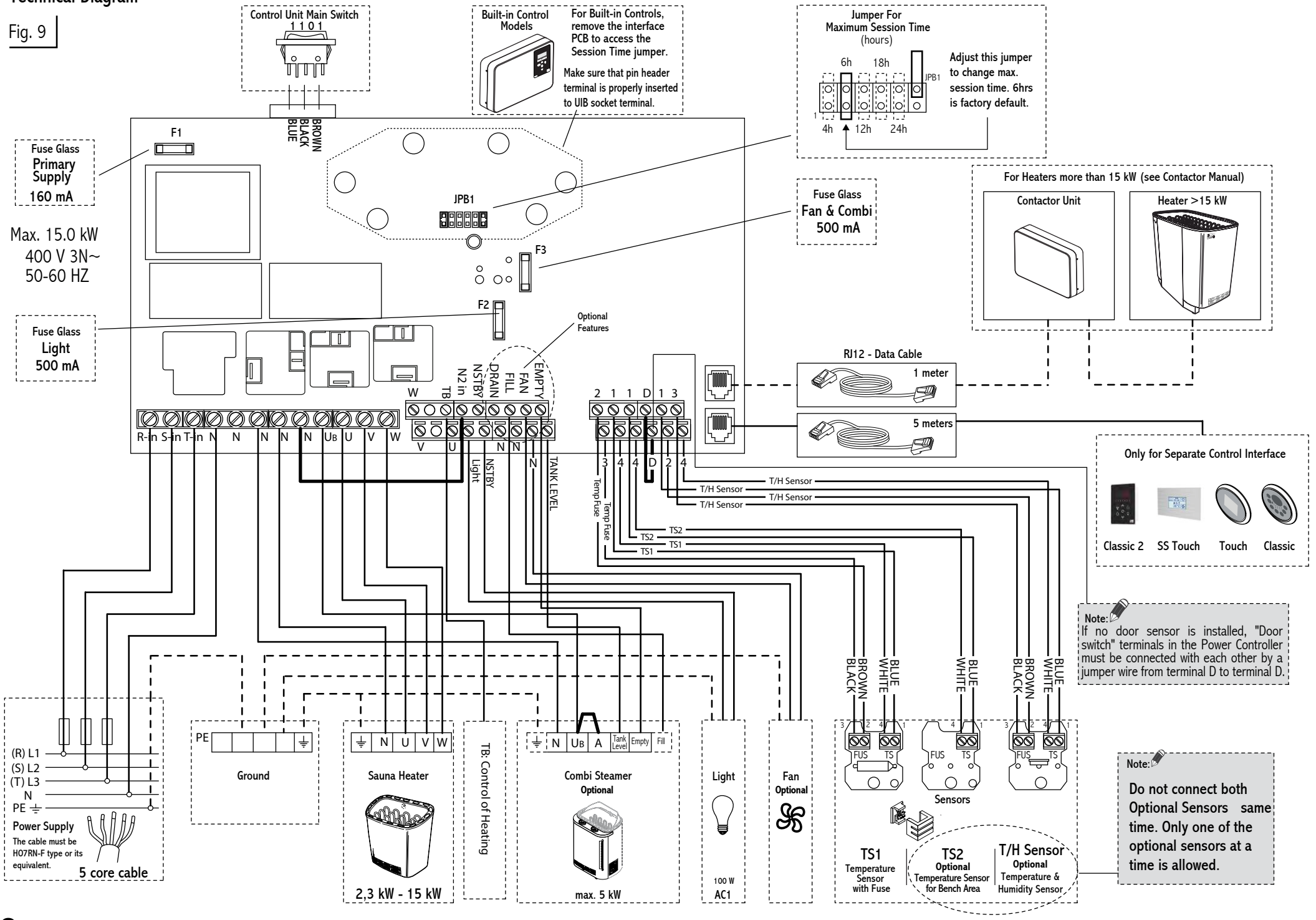


Fig. 8



Technical Diagram

Fig. 9



Maximum Session Time

The maximum sauna session time depends on the purpose of the sauna. For domestic use, the total on-time of the sauna is limited to 6 hours. *)It includes pre-run time and the session time. The factory setting for the control unit is 6 hours.

For condominiums, hotels and similar locations, the operating period of the sauna heater is limited to 12 hours, including the pre-run time and the session time.

For public sauna, the operating period of the sauna heater can be either 18 or 24 hours. Please note, if the jumper is set to 24 hours, and it will be on constantly. It needs to be continuously monitored.

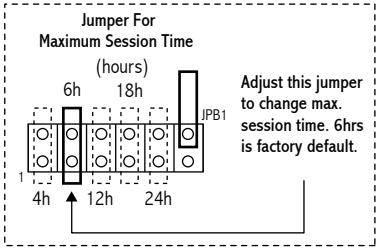
*) IEC 60335-2-53

Fig. 10

Sauna Type	Domestic sauna		Hotels, Condominiums	Public sauna	
Jumper	1	2	3	4	5
Max. time	4h	6h	12h	18h	24h
Max. pre-run time	2h - steam 3h - steam	4h - steam 5h - steam	99h		

The maximum heater on-time is set by the jumpers on SCB1 in the power controller, Figure 11. Jumpers 3, 4 and 5 are meant only for public sauna rooms. Only a qualified electrician can change the settings. The standards and regulations of the country where the control unit is installed must be followed when setting the jumpers. When no jumpers are placed, the default time is 6 hours. See the Figure 10.

Fig. 11



Door Sensor

In other than household use, it is recommended to install door sensor. The door sensor disables all pre-run operations if the door is opened while the pre-run countdown is active.

The door sensor also ensures that the door is not open for long periods of time when the heater is on. If the heater is on and the door is open for more than 15minutes, an alarm and "DOOR" will be displayed to warn the user. The heater will be switched off automatically.

NOTE

If no door sensor is installed, "Door switch" terminals in the Power Controller must be connected with each other by a jumper wire from terminal D to terminal D. (Figure 4)

Fan

The fan function can only be activated if the fan feature is present on the control unit. Ensure that the fan motor to be controlled is either shaded pole or permanent split capacitor motor. The maximum power is

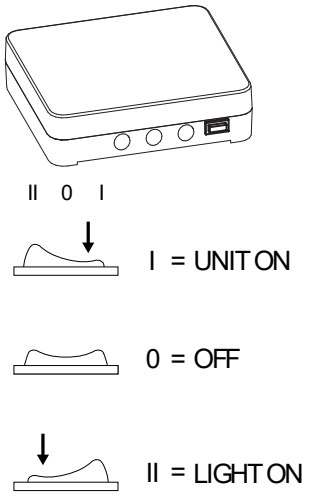
100 W with 230 VAC.

Dimmer

It is possible to use any suitable lamp of your choice in the sauna room. However, if the dimmer feature is present on the control unit and wished to be used, only incandescent lamp is suitable.

The Control Unit Main Switch

The control unit switch can be found on the top end of the unit. Using this switch, you can isolate the electronics from the mains power supply.



Description	Power Rating	Remarks
Control		
Rated Power 3 Phases	15kW AC1 (3 x 5kW)	
Rated Voltage 3 Phases	400V 3N~	
Rated Power Single Phase	9kW AC1	
Rated Voltage Single Phase	230V 1N~	
Frequency	50/60Hz	
Switching capacity per phase	21A	
Sauna temperature range	10-110°C	
Maximum session time (preset)	4, 6, 12, 18, 24h	Restrictions apply according to IEC/EN 60335-2-53
Dimensions INNOVA S types		
User Interface	(W) 180 x (H) 105 x (D) 31	
Power Controller	(W) 270 x (H) 320 x (D) 90	
Dimensions INNOVA B types	(W) 270x (H) 320 x (D) 90	
Weight INNOVA S types		
User Interface	120g	
Power Controller	2500g	
Weight INNOVA B types	2700g	

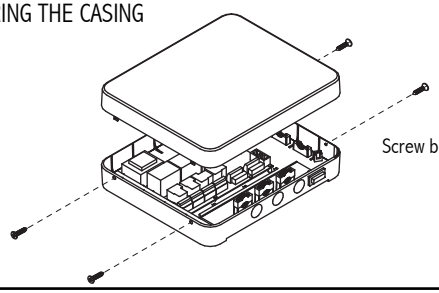
Description	Power Rating	Remarks
Steamer		
Rated Power 3 Phases	5kW AC1	
Rated Power Single Phase	3kW AC1	
Rated Voltage	230V 1N~	
Switching capacity	21A (3 Phases), 13A (1 Phase)	
Maximum sauna temperature for steamer operation	80°C or *55°C * Depending on the type of Sensor 2.	
Automatic water filling		Optional
Automatic drain valve		Optional
Cabin Light		Min 20W, max 100W. Only resistive load or dimmable (phase control compatible) light bulb
Rating	230V 1N~, 100W AC1	
		Dimmer optional
Fan		Fan without starting capacitor. Optional (with speed control)
Rating	230V 1N~, 0.5A	

Fuse	
Fuse F1	(160mA) is fuse for electronics
Fuse F2	(1A slow) is fuse for cabin light
Fuse F3	(500mA slow) is fuse for fan and automatic refilling combi .

Description	Remarks
Sensor	
Temperature Sensor with fuse	
Bench Sensors	
Bench Temperature Sensor	Optional
Bench Combined Temperature - Humidity Sensor	Optional

Description	Power Rating	Remarks
Power Extension Unit		
Rated Power 3 Phases	15kW AC1 (3 x 5kW)	Additional Power expansion to maximum of 30kW
Rated Voltage 3 Phases	400V 3N~	
Frequency	50/60Hz	
Switching capacity per phase	21A	

COVERING THE CASING



IPX4 T40

Subject to change without notice.

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