

EmoTouch 3

Control unit for sauna and steam room



EN

Installation and operation manual

Made in Germany

CE



English

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Scope of delivery

(changes are reserved)

1. Main electronic unit (with two-part front cover)
2. Control panel with touchscreen display
3. Housing base for flush-mounted installation of the control panel, with mounting brackets
4. De-installation tool (for control panel)
5. Temperature sensor: a) housing, b) sensor board, c) overheat protection fuse, d) 2 mounting screws 4 x 40 mm, e) connection cable 5 m with RJ10 plug, f) 2-core white cable for overheating protection fuse 5 m
6. Connection cable 5 m (main unit - touch screen display) with RJ14 / RJ10 plugs
a) ferrite ring (pre-mounted on the board)
7. Plastic bag with 3 mounting screws 4 x 25 mm (for main electronic unit)
8. 1 spare overheating protection fuse
9. 8 rubber cable glands
10. 1 installation & operation manual, 1 operation manual (for end users)



Accessories (optionally available):



2nd sensor.....item 94.572



Humidity sensor.....item 94.5726

Technische Daten

Voltage (power supply):	400 V 3 N AC 50 Hz
Switching capacity:	max. 9 kW resistive load, may be extended with a power extension unit (LSG)
Heating time limit:	6 h / 12 h / unlimited
Housing:	plastic, shatter-resistant
Display:	7" capacitive colour touch screen display, 16:9 aspect
Operation:	via touch screen display
Temperature control range:	30° - 115°C (dry sauna mode) 30° - 70°C (humid sauna mode)
Humidity control:	proportional to time or optionally as per rel. air humidity (%) with an optional humidity sensor.
Sensor system:	Digital sensor with overheating protection fuse (STB) 142°C
Control characteristic:	Digital two-point control
Connection for fan:	min. 5 W, max.150 W (only fans without starting capacitor) Please make sure to use only the fans suitable for phase lead edge control, otherwise either the fan or the control unit may be damaged!
Connection for light:	min. 5 W (20 mA), resistive loads - max. 150 W, dimable energy saving lamps - max. 35 W Lamps at conventional transformers - max. 60 VA. Attention: only dimmable lamps may be used!
	 Fan and light output share a common 5 A fuse.
Start time pre-selection:	up to 24 h in advance
Switching automation:	Week timer with 4 switching programs per day
Error display:	Clear text error indication on the display
Outputs:	3 x RJ10 jacks for sensor connections 2 x RJ14 jacks for control panel and extension modules 1 x potential free contact (2 terminals)
Output S1:	maximal load 50 W / 50 VA, no capacitive loads allowed.
Card reader:	SD card reader in control panel
Ambient temperatures:	-10°C to +35°C
Storage temperatures:	-20°C to +60°C
Sensors:	may not be installed in corrosive or highly salty environment.
Control unit:	may not be installed in corrosive environment or in an environment which may cause water condensation.



Sensors and control unit may not be installed in corrosive or highly salty environment.

Dimensions main block: H 270 x W 300 x D 100 mm

Dimensions control panel: H 142 x W 210 x D 42 mm

Dear customer

You have purchased a high-quality technical device with which you will have years of sauna fun. This sauna control unit was designed and inspected according to the current European safety standards and manufactured at the factory in accordance with the quality management standard DIN EN ISO 9001:2000.

This detailed installation and operation manual has been prepared for your information. Please observe in particular the **important notes** and the information on electrical connection.

We wish you exhilarating recreational experience and lots of fun with your sauna!

Intended use

This sauna control unit is exclusively intended for the control of the sauna heater in a sauna cabin.

Any other use over and above the intended purpose is not considered as appropriate use! Compliance of the standard operation, maintenance and repair conditions is also an element of appropriate use.

The manufacturer cannot be held liable for deviating, unauthorized alterations and any resulting damages: the initiator of these changes bears the full risk.

General information

Please check whether the unit has arrived in perfect condition. Any transport damages should be immediately reported to the freight forwarder delivering the goods or you should contact the company that shipped the goods.

Please note that you will only be able to achieve an optimum sauna climate if the cabin with its air intake and ventilation, the sauna heater and the control unit are aligned to each other.

Please observe the information and stipulations made by your sauna supplier.

Sauna heaters heat up your sauna cabin using heated convective air. Here, fresh air is drawn in from the air intake which, when heated, rises upwards (convection) and is then circulated within the cabin. Part of the used air is pushed out through the vent in the cabin. This creates a typical sauna climate which can achieve temperatures of approx. 110°C measured directly under the ceiling of your sauna, dropping in temperature to approx. 30-40°C towards the floor. It is therefore not unusual to measure temperatures of 110°C on the temperature sensor hanging over the heater, whilst the thermometer hanging on the sauna wall, approx. 20-25 cm under the cabin ceiling, only indicates 85°C. The bathing temperature generally lies between 80°C and 90°C in the area of the upper bench when the temperature is set to maximum.

Please note that the highest temperatures are always generated over the sauna heater and that the temperature sensor and the safety limiter must be mounted there in accordance with the control unit installation instructions.

When heating up for the first time, you may notice a slight smell caused by evaporating lubricants used in production processes. Please ventilate your cabin before beginning your sauna bath.

General safety precautions

- This device can be used by children aged 8 upwards and by persons with physical, sensory, or mental disabilities, or who have inadequate experience and knowledge if they are supervised or if they have received adequate instruction in how to use the device safely and understand the associated risks. Children may not play with this device. Children may not clean or carry out any user maintenance if unsupervised.
- Children are to be supervised in order to make sure that they do not play with this device.
-  **Attention:** It is forbidden to install the control box in a closed switch cabinet or behind a wooden panelling!
- The electrical installation may be done only by a qualified electrical technician.
- You must comply with the regulations of your power supply company and applicable VDE regulations (DIN VDE 0100).
-  **WARNING:** Never attempt repairs or installations yourself, as this could result in serious injury or death. Only a qualified technician may remove the housing cover.
- Please note the dimensions in the assembly instructions, especially when installing the temperature sensor. The temperature above the oven is critical for the temper-

ature setting. The temperature can be held within operating parameters and a minimal temperature gradient inside the bench area of the sauna cabin can be achieved only if unit is assembled correctly.

- The device may only be used as intended as a control unit for sauna ovens up to 9 kW (up to 36 kW when combined with a contactor box).
- Completely disconnect the control unit from the electrical circuit, i.e. flip all circuit breakers or the main circuit breaker during each installation or repair.
- Please note the safety and installation information from the sauna oven manufacturer.
- Always heed the specifications and instructions of the cabin manufacturer, too.

Attention!

If control units with remote control options* are used, protection against switching on if the heater is covered is required. (e.g. cover protection rail type 1-5).

**Remote control = setting up, controlling or adjusting a unit by a command that can be given out of view of the unit by means of transfer media such as telecommunication, audio technology or bus systems. (this also includes weekly timers)*

 When designing the sauna cabin ensure that the external exposed glass surfaces only reach a maximum temperature of 76°C. If necessary, protective features need to be fitted.

 **Attention!**

Dear customer,
according to the valid regulations, the electrical connection of the sauna heater and the control box has to be carried out through the specialist of an authorized electric shop

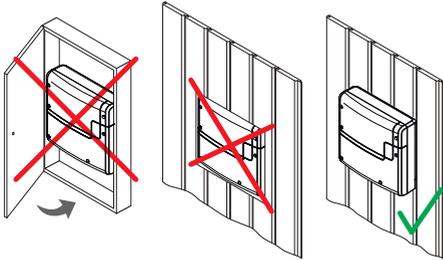
We would like to draw your attention that in case of a warranty claim, you are kindly requested to present a copy of the invoice of the executive electric shop.

 **Attention!**

Only the original spare parts may be used.
Any modification of the cables included in the delivery can lead to malfunctions and is not permitted.
Any unauthorized technical alteration makes the product warranty void.

Installation of the main electronic unit

The main electronic unit (relay box) may be installed only outside sauna cabin. The recommended places of installation are the outer sauna wall or a plant room (technical room). The installation on the sauna roof is also possible. If empty ducts for connection cable are already available, then they usually predetermine the installation position. The installation shall be carried out as follows:



⚠ Attention: The relay box may not be installed in a closed switch cabinet or behind a wooden panelling!
Risk of overheating! Fire hazard!

1. Take the lower part of the front cover off the relay box. For this undo 3 fixation screws, then pull the cover slightly downwards and take it off. See the fig. 1 for details.

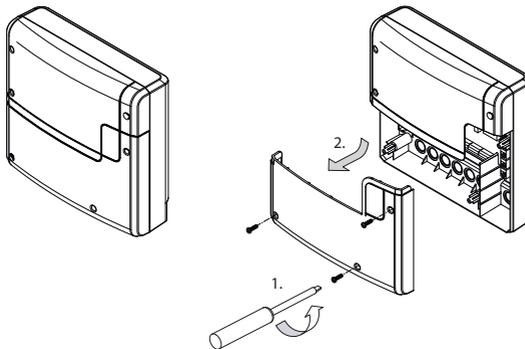


Fig. 1

2. The relay box has three mounting holes on the rear side. Refer to fig. 2 below for dimensions in order to mark the position on the wall (template). The central upper screw shall be used to hang the relay box onto it with the corresponding opening on its rear side. Two lower screws shall be used to secure the housing to the wall after it is hung on the upper screw.

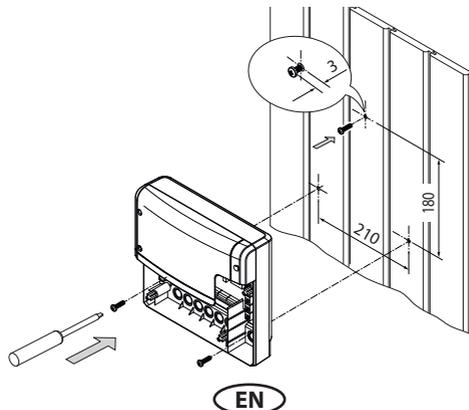


Fig. 2

3. Hang the housing on the central upper screw. Make sure that this screw stands out approx. 3 mm from the wall surface. If the connection cables shall be connected from the rear, knock out the corresponding openings in the housing and insert the supplied cable glands (rubber cable holders) into these openings. Pull the cables through them into the housing.

Secure the housing with two mounting screws 4x25 mm through the corresponding holes as shown on fig. 3 below.

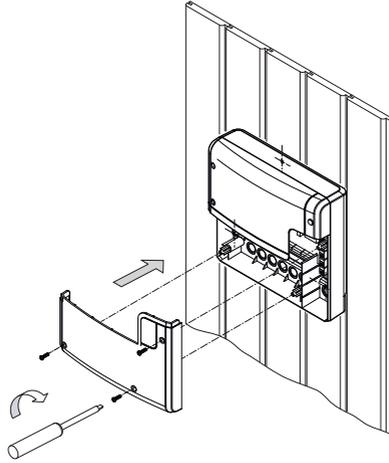


Fig. 3

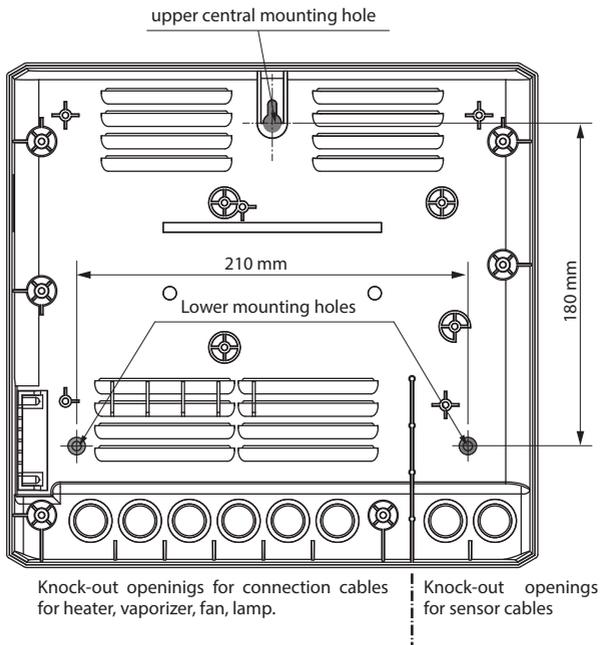


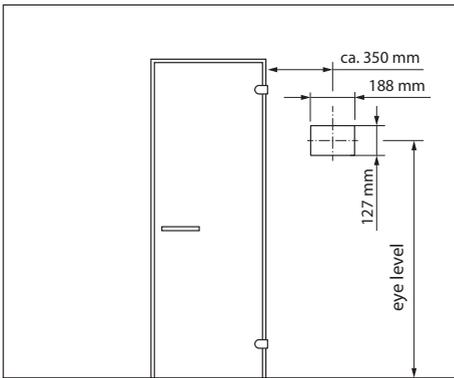
Fig. 4

Display panel

The display panel may only be mounted outside the cabin. If ductwork is already provided for electrical installations then the position of the control unit is predetermined by that. The display panel is designed for flush-mounted installation into the cabin wall or a similar adjacent wall.

The installation shall be carried out as follows:

1. Determine the installation position.
2. Make a cut-out in the wall with dimensions 127 mm height x 188 mm width.



Pic. 5

3. Installation depth - min. 35 mm needed.
4. Draw the connection cable from the main relay box to the control panel.
5. Pay attention that the bigger plug (RJ14) shall be oriented to the relay box (steam generator) and the smaller plug RJ10 to control panel.
6. The connection cable(s) should be drawn between the wall insulation and outer wall cladding (pic. 6).
7. The walls shall be insulated so that the max. temperature cannot exceed 75° C.
8. Use the supplied 5 m connection cable with RJ10 plug (control panel side) and RJ14 plug (relay box side).
9. If necessary the connection line may be extended up to 50 m length. For this you will need to use a standard coupling RJ14/

RJ14 and an extension cable with RJ14 plugs in required length. The coupling and extension cables may be purchased from specialist dealers.

10. If the connection line is over 25 m you will need an additional power adaptor. This adaptor shall be installed next to the control panel and requires 230V. See optional accessories, page 11. It connects to the power adaptor power jack (pic. 7).

11. IMPORTANT NOTICE:

Connect the cables always starting with the port #1/2.

Every connection cable must be fitted with a special ferrite ring. See pic. 7.

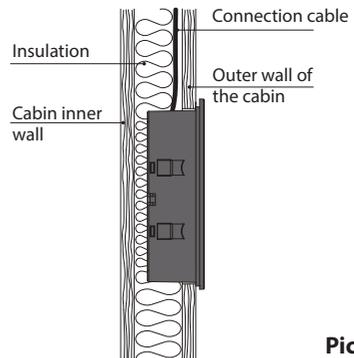
Take the ferrite ring off the holder (pic. 7) and pull the connection cable twice as a loop through the ring. Fit the ring back on the hold and connect the cable to the corresponding jack.

For each incoming connection cable an own ferrite ring must be used (included with every extension module). Thus up to 4 ferrite rings may need to be mounted.

By connection of several cabins to one control panel please refer to the chapter "multi-cabin connection" for additional details.

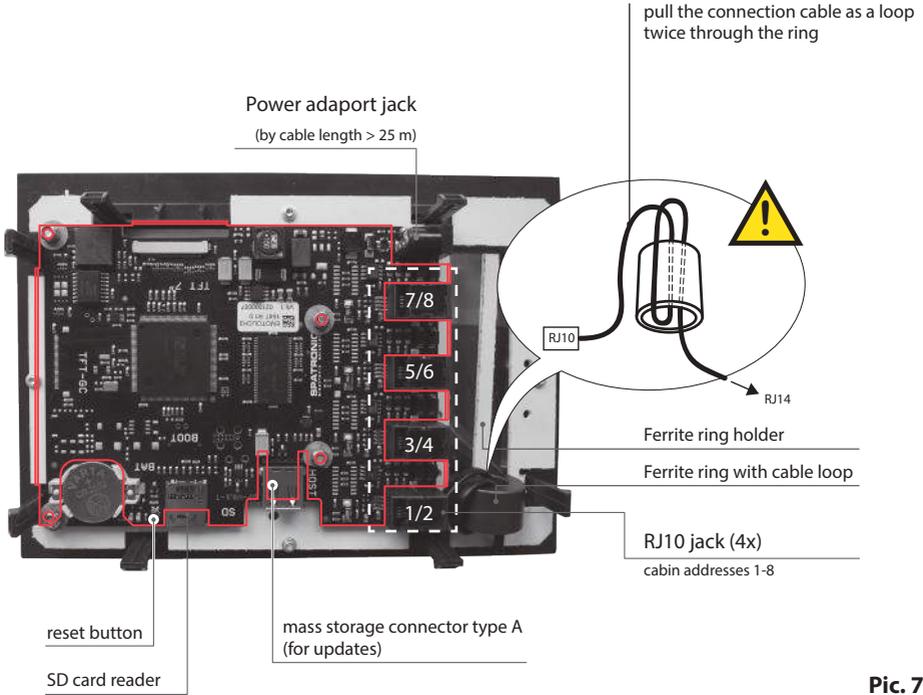
Notice: Maximum connection line length for the display panel is 50 m. By the cable length over 25 m an additional power adaptor is required.

The smaller RJ10 plug of the connection cable should be directed to the display panel.



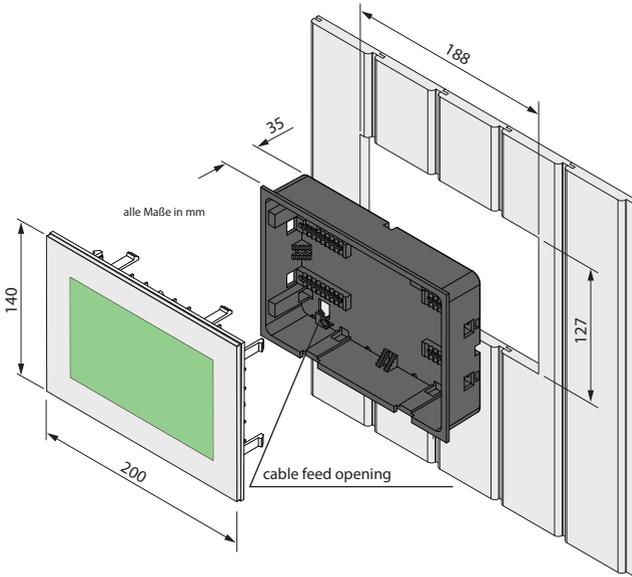
Pic. 6

Control panel rear side



Pic. 7

Display panel installation



Wall aperture:

Width 188 mm

Height 127 mm

Depth min. 35 mm

Notice:

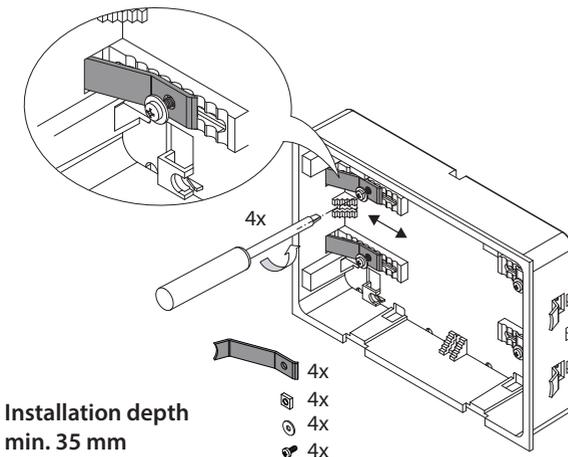
Pay attention to the correct orientation of the housing base, the opening for connecting cable should be at the bottom side as shown on fig. 7

Pic. 8

Bottom housing installation

First install the housing base into the cabin wall (see fig. 8):

1. Loosen 4 screws holding mounting brackets in the base
2. Pull the connection cable through the opening in the housing base.
3. Insert the housing base into the wall cut-out.
4. Adjust the metal brackets to the wall panelling thickness.
5. Tighten the screws - the brackets will be pulled to the wall panelling from inside and will fasten the housing base in the opening.



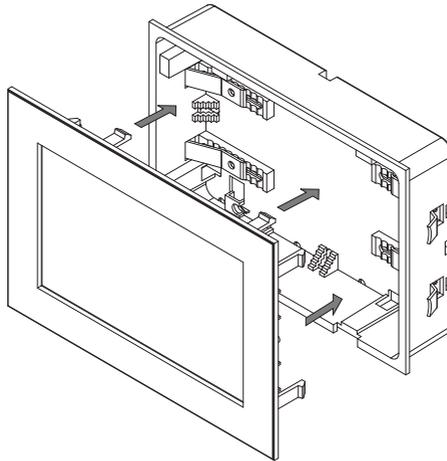
Pic. 9

Display panel installation

Place the control panel directly in front of the housing base and pay attention to the correct orientation - the cable connector shall be at the bottom and the SD card slot at the top. Plug in the connection cable with RJ10 plug which you pulled through the housing base.

Now carefully press the control panel into the housing base until you hear a click sound (hooks of the upper part should snap into the holders in the base). Make sure the control panel sits reliably in the base part.

Installation hint: When you lay the connection cable allow some extra length around the base, so that later you can take the control panel out of the base easily.



Pic. 10

Taking the display panel out

To remove (detach) the control panel use the included de-installation tools or two slotted screwdrivers. Insert the tools or screwdrivers into the grooves located on the bottom side (between housing upper part and housing base) and carefully pull it away from the wall until control panel is released from the base and may be taken out. Do not apply excessive force as this may damage the inner holders.

Take the control panel out of the base and detach the connection cable.

Attention! Be careful not to damage the front glass by removing the display out of the bottom housing. The removal tools should not be applied so that they lean on glass or the display panel is twisted.



Connection of sensor cables

Do not lay sensor and power supply lines together, or lead them through the same duct. This can lead to interferences in the electronics, such as “fluttering” in the relays. Connect the cable shielding (if present) to ground in the control unit.

Please observe that the following dimensions relate to the values stipulated during the unit inspection acc. EN 60335-2-53. The heater sensor must always be installed at the point where the highest temperatures are to be expected. Fig. 12-14 provide you an overview of the mounting point of the sensor.



Installation of the temperature sensor

Make sure that there is no deviating mounting position of the sensor, specific to the sauna heater (check the installation guide of the sauna heater).

1. Mount the heater sensor in cabins up to 2 x 2 m according to fig. 13, in larger cabins according to fig. 14.
2. Drill a hole to lead the cable through, preferably through the middle of one of the wooden planks.

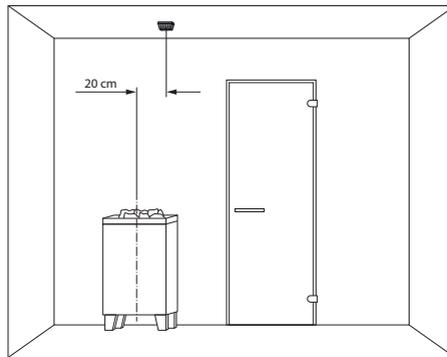


Fig. 12

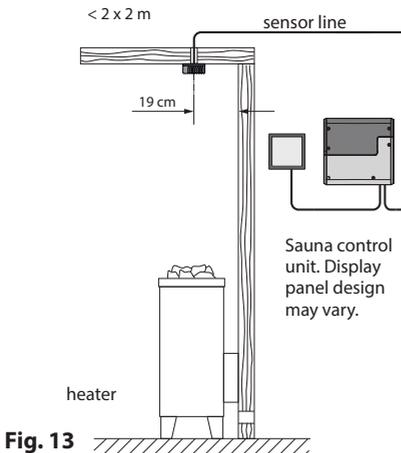


Fig. 13

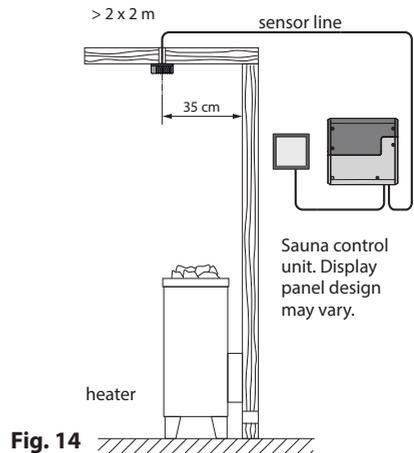
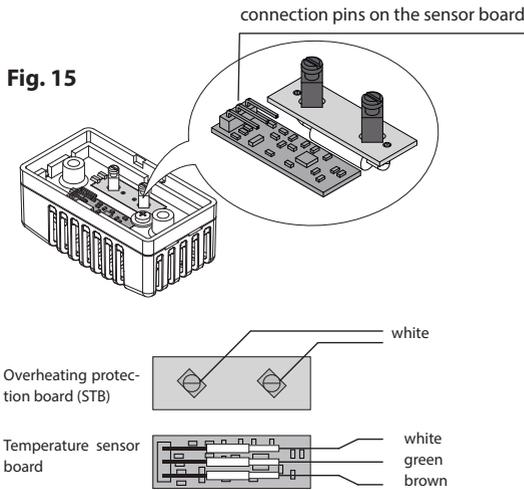


Fig. 14

3. Lead the sensor cable (red) and the limiter cable (white) through the drilled hole and connect both cables to the main relay box as advised on pages 18-19.
4. Connect the sensor cable to the sensor board according to fig. Make sure the connections are correct. Connect the limiter cable (2-core white cable) to the limiter board (STB).
5. Mount the sensor to the ceiling plank using two supplied screws and attach the housing cover.
6. After completed installation and correct commissioning of the control unit, the sensor line for overheating protection must be tested for proper functioning. Disconnect one of the wires of the white cable at the STB board in the sensor housing - the respective error message shall appear on the display. Re-connect the wire to make the error message disappear.

Temperature sensor - connections:



Attention:

Please pay attention that by the installation of the cable lines for sensors and display panel it is not permitted to pull the cable by the modular plug. If you use a help to draw the cable through the ducts it must not be attached to the plug but to the cable only! Pulling the cable by the plug may damage it and cause loose contacts resulting in malfunction of the control unit. In such case the warranty will be void and the cable should be replaced.

Make sure to observe the correct wire connection order on the temperature sensor board as shown on fig. 15.

Temperature sensor - installation overview:

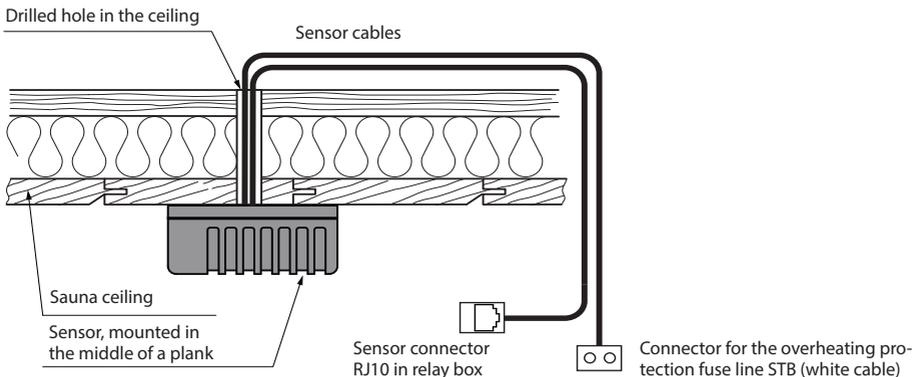


Fig. 16

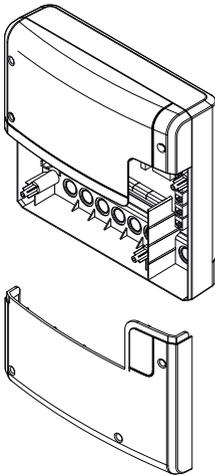
Electrical connection

The electrical connections may only be carried out by a certified electrician in compliance with the guidelines of the local power supply company and applicable legal regulations (e.g. VDE norms for Germany).

In general, there may be only one permanent connection line to the network. Furthermore equipment should be provided that makes it possible to disconnect the system on all phases from the power supply with a contact gap of minimum 3 mm.

All electrical installations and all connection lines that are installed inside the sauna cabin must be suitable for an ambient temperature of at least 170 °C.

The power supply line shall be laid to the control unit and connected to the power input terminals.



Relay box, lower front cover opened

Fig. 15

The power supply cable shall be laid to the main relay box and connected to the power input terminal as per connection diagram (see wiring diagrams, page 18-19).



Sauna heater connection

Install the sauna heater and the vaporizer (if available) inside the sauna cabin in front of the air intake according to the manufacturer's installation instructions.

Draw the silicone cable through the ductwork to the relay box and connect it to the appropriate terminals as directed in the wiring diagram.

Make sure to observe the wiring diagrams on pages 18 - 19 with the corresponding terminal connection scheme.

Notice: In case there is no ductwork available drill a hole next to the air intake opening and run the heater line through this hole to the outside and to the appropriate terminals in the control unit. The silicone line must be buried to protect it from outside influences. Therefore, use a suitable cable-duct or a PVC-pipe through which you can run the line up to the power unit.

Special advice for connection of Bi-O sauna heaters:

Attention!

By working vaporizer the sauna heater line „W“ will diverted to the „Wb“ line of the vaporizer.

The sauna heater section will then operate with 2/3 of the total power.



Sauna lamp connection



The sauna lamp must have the protection class of at least IPx4 and should be resistant to the ambient sauna temperatures. The sauna lamp may be installed at any location but never close to the rising hot air of the heater.

Only dimmable lamps may be used. The control unit will detect strongly inductive loads and will adjust the phase edge control accordingly.



Attention! Make sure to use only dimmable illuminants. By connection of not dimmable illuminants there is a risk of damaging either the illuminant or the control unit. No warranty claims may be accepted in this case.



Connection of the power extension unit

The switching capacity may be extended with an external power extension unit (LSG), in order to connect and operate the sauna heaters above 9 kW power.

For connection details please refer to the installation and operation manual for the respective LSG model.



Fan connection

Only use fans compatible with the phase lead edge control. The fan must have the splashwater protection class (IPx4) and must be resistant to the ambient temperature. Please observe the maximum allowed power of the fan output 100 W.

Make sure to observe the installation manual of the fan manufacturer.

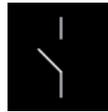


Heating time limitation

The maximal heating time may be limited with the jumper #5 on the main board of the relay box. The limitation may be set to 6 hours, 12 hours or to unlimited.

Additionally the heating time will be dependent of the selected type of use. If the control unit has been set to private (domestic) use, then the heating time will be automatically limited to 6 hours.

The jumper setting will override the software settings.



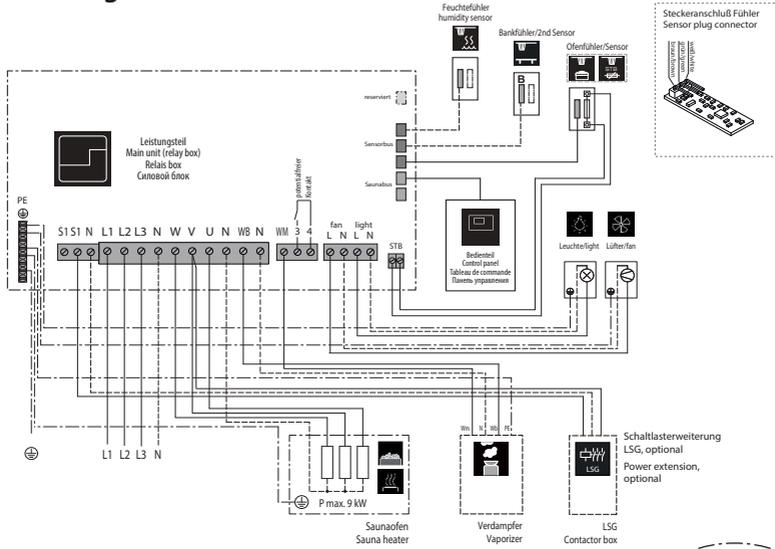
Potential-free contact

The terminals „3“ and „4“ on the main board of the relay box are the terminals of the normally open (NO) contact of a relay. Both terminals have no further connection and are therefore potential-free (voltage free). You can integrate this NO contact into any circuit, in order to switch an external power load or to relay a switching signal. The max. load on the potential free contact, depending on whether AC or DC shall be switched, is given in the specifications on the page 5.



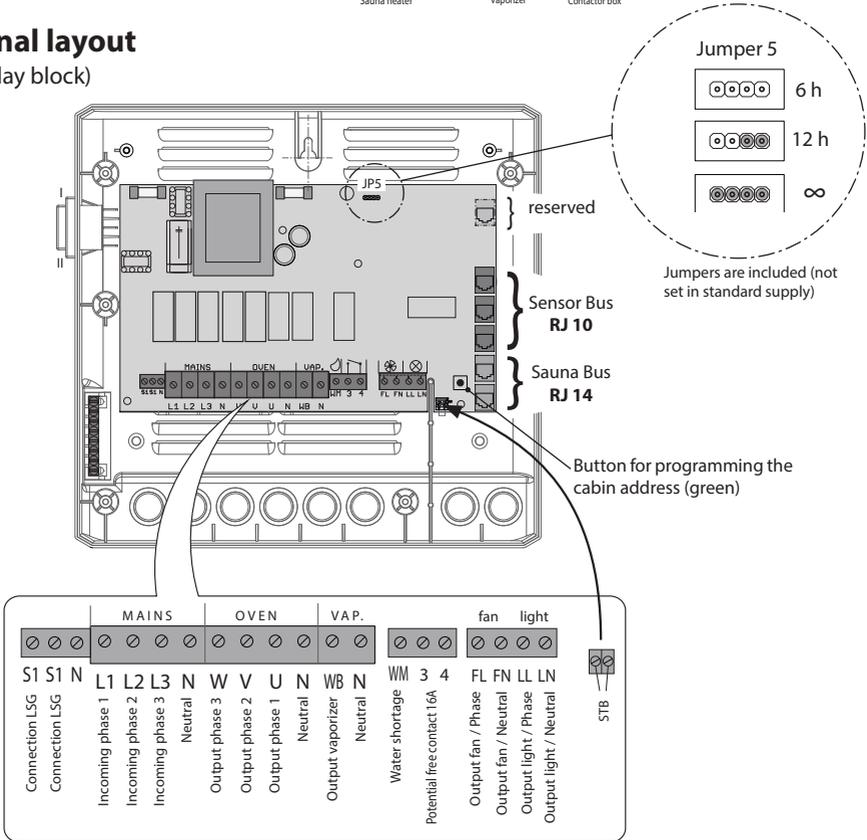
Attention! If you use the terminals L1, L2 or L3 to power the circuit connected to the potential free contact, then the connection line should not be overloaded. If necessary, the load (consumer) connected to the potential free contact should be additionally protected and provided with a separate power supply.

Connection diagram EmoTouch II+/3



Terminal layout

(main relay block)



Temperature sensor

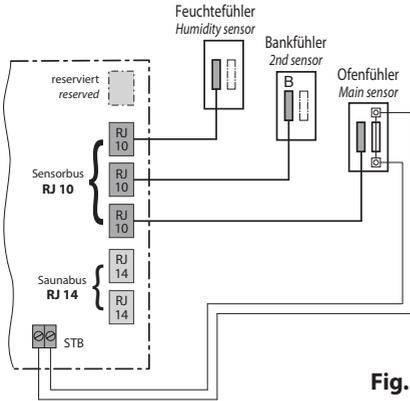
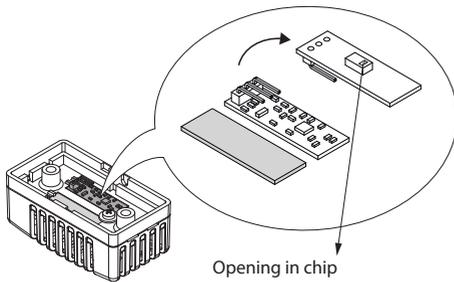


Fig. 16

For more details please see pages 14-15.

Humidity sensor (optional)

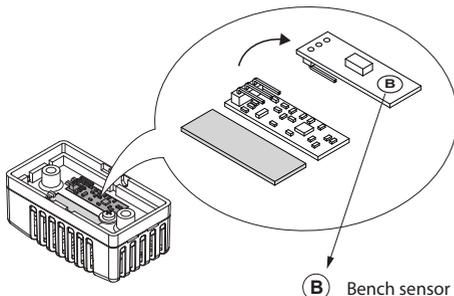


Opening in chip

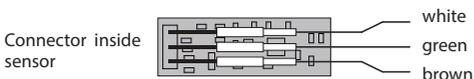
Fig. 17

For more details please see next page.

Bench sensor (optional)



B Bench sensor



Connector inside sensor

Fig. 18

For more details please see page 21.



ATTENTION!

If a sensor is plugged into the sauna bus (RJ14 connector), the sensor and the main board may be irreparably damaged!

The sensor cable with RJ10 plugs shall be connected to one of three sensor bus RJ10 jacks on the board. The connection sequence is not important, you may connect the sensors to any of the three sensor bus jacks.

The white line of the overheating limiter fuse shall be connected to the 2-pin connector (STB) on the main board.

The connected sensors will be automatically detected and configured.

Programming the cabin address (only for Emotouch II+):

Default Address 1 = Sauna

Address 2 = Steam bath

1. Press button >4s – to start the programming mode; the red LED on the main board starts to flash (programming mode).
2. Press button briefly (> 0.5s) – the green LED shows the new set address via the number of flashes. E.g. 2 times = address 2.
3. Every time the button is pressed the address will move to the next number from 1 to 8. The green LED will flash accordingly.
4. As the control unit is usually supplied with address 1, pressing the button for the first time after starting the programming mode sets the address 2; the green LED flashes twice.
5. Address 1 follows address 8
6. The programming mode is automatically quit if no button is pressed for more than 10 s. The new address is thereby permanently saved.



Installation of the optional 2nd sensor

Place of installation: The 2nd sensor (bench sensor) shall be mounted on the ceiling over the rear bench opposite to the sauna heater (see examples on Fig. 22).

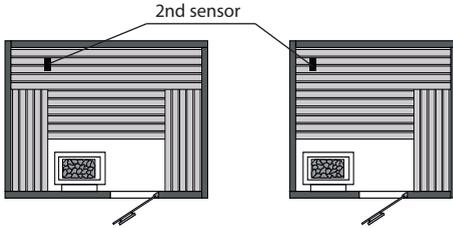


Fig. 22

The bench sensor is connected with a 3-core wire silicone cable with RJ10 plug to one of the free sensor bus jacks in the relay box as shown on the Fig. 23. Cable connection on the board inside sensor are shown on Fig. 24.

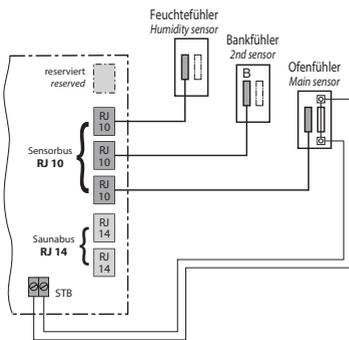


Fig. 23

By correct connection the sensor will be automatically detected and configured. The display will show the following symbol during start-up.

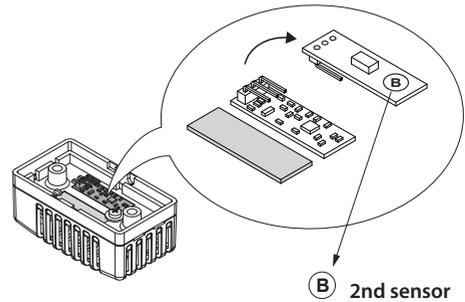


Display symbol:

The sensor symbol will be displayed either on the start screen (Emotec, EmoStyle models) or in the temperature query submenu (EmoTouch models).

If the 2nd sensor is faulty the temperature will be controlled via the main sensor over the heater.

After the fault is rectified the 2nd sensor will be automatically detected and configured upon the new start of the control unit.



B 2nd sensor

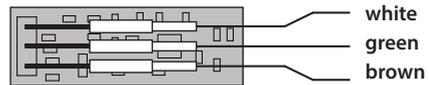


Fig. 24

The 2nd sensor is supplied including 5 m 3-core wire silicone cable with RJ10 plug. This cable shall be connected to the sensor board as shown on the fig. 24. For installation purposes the connection may be easily disconnected (pin-type connectors).

If the 2nd sensor is connected it will be used to control the temperature in the sauna. The main sensor will function only as the overheating protection (139°C limitation).

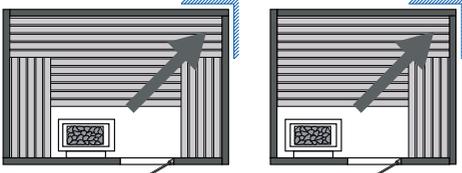
This allows to improve the air circulation in certain situations, for instance in very large saunas or by complex cabin layouts, and to achieve faster heat distribution to remote parts of the sauna.

Longer connection cables are optionally available.

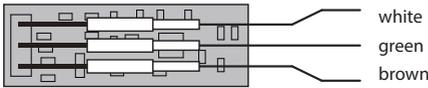


Humidity sensor installation

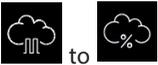
1. The humidity sensor shall be mounted in the middle of the wall opposite to the heater at approx. 150 cm height.



2. Connect the sensor using the included cable (5 m standard, longer line optionally available). Draw the cable with the RJ10 plug towards the control unit.
3. Connect the sensor cable to the sensor board as shown on the diagram:

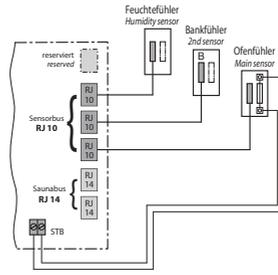


4. Make sure to connect the cable pins to the sensor correctly. Incorrect connection may damage the sensor!
5. Then connect the sensor cable via RJ10 plug to the free sensor bus jack in the relay box.
6. After successful connection of the humidity sensor the humidity symbol will change from



(by humid operation mode) to indicate humidity control as per relative air humidity. The humidity sensor will be normally detected within 2-3 sec. These symbols will appear by active humidity mode either directly on the start screen (Emotec, Emo-Style models) or in a submenu for settings (EmoTouch series).

Notice: During installation of the cable DO NOT pull it by the plug - this may damage the plug connection!



Connection overview for temperature sensor, bench sensor and humidity sensor.

Humidity control with connected humidity sensor

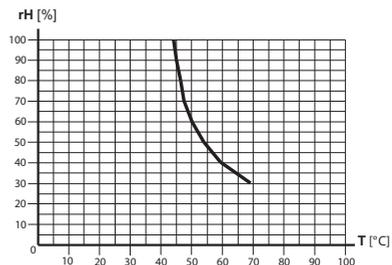
The humidity control by connected humidity sensor effects basing on the temperature-humidity curve which serves as a limit to possible values. You may set any value to the left and below the curve as shown below.

Values above the curve may not be set for safety reasons. If you change one parameter, the other will be automatically adjusted to keep the climate within safe limits.

Without humidity sensor the humidity will be controlled basing on proportional to time method. A setting e.g. „40“ means that the vapourizer will be on for 40% of the total operating time. This method does not consider the real humidity in the sauna but allows to produce constant amount of steam per given time.

With the connected humidity sensor the humidity will be controlled as per relative air humidity in %. The control unit will try to reach and keep the pre-set humidity value. The control accuracy will largely depend on the sensor location and sauna situation.

Temperature/humidity curve as per norm EN 60335-2-53:2003





Vaporizer connection

Only for „H“ series sauna control units.



ATTENTION: pay particular attention to the correct connection of the WB and WM terminals. By swapped connection the detection of water shortage in the vaporizer will be disabled and the protective thermo fuse will be bypassed. The vaporizer may overheat! **Risk of fire!**

Connect vaporizer as shown on the connection diagram given below.

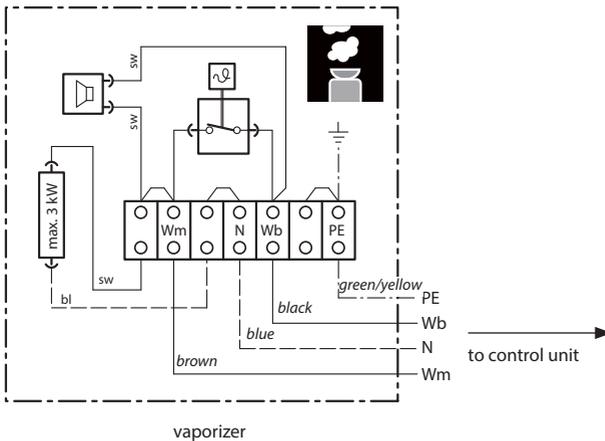
Make sure to use the appropriate heat-resistant silicone cable with min. 1,5 mm² cross section for vaporizer connection.

EOS control units will detect water shortage if there is zero potential at the Wm terminal of the control unit.

Pay attention to the maximum switching power of the control unit vaporizer output. If the total power of the vaporizer(s) exceeds the switching power of the control unit you will need an external power switching relay box or contactor box like LSG18H model.



Attention: Always connect the neutral (N) terminal at the sauna heater. In humid mode one phase will be switched off, the power load distribution will not be proportional. As a result the N line will not be currentless.



Commissioning (initial setup)

Setup after initial start or after a reset

The EmoTouch 3 control unit allows fast and intuitive configuration in several steps by commissioning during the first start or after a system reset.

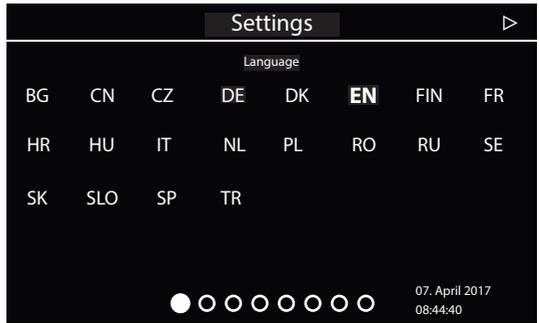
Select language

Select the required language for the menu navigation by touching the language symbol and confirm by touching it shortly again.

You can choose from 20 languages: BG, CN, CZ, DE, DK, EN, FIN, FR, HR, HU, IT, NL, PL, RO, RU, SE, SK, SLO, SP, TR.

Upon confirmation the display shows the next step.

Use the white arrows at the top to navigate between the setup steps, e.g. go back to the previous step.



Time

Set the current time. At first set the hour with „+“ or „-“ and confirm the selection with a short

touch on the  symbol, then set the minutes in the same way.

Date

Set the date, month and year in the same manner with „+“ / „-“. The value which you are currently changing will be shown slightly larger.

Location, Type of Use, Design

This step configures the essential setup for use. The control panel will ask several questions and will set the scope of appropriate features according to the selected options.

1. **Is the sauna installed in the EU / CENELEC?**
Select the applicable option and press to confirm:

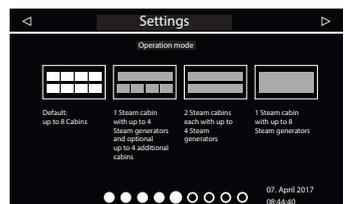
 - yes, in the EU, or  - no, outside EU.

2. **Operation type**

Here you define how many devices or cabins you intend to operate with one display panel.

For saunas - always select the 1st type (up to 8 cabins, 1 device per cabin).

For steam rooms - additionally the choice 2 - 4 is available, if you need several steam generators per steam room.



3. **Select between private or commercial use**

Select the applicable option and touch it again to confirm:



4. **Safety system for saunas as per norm EU 60335 available?**

Select the applicable option and touch it again to confirm:



5. **Select the heater type**

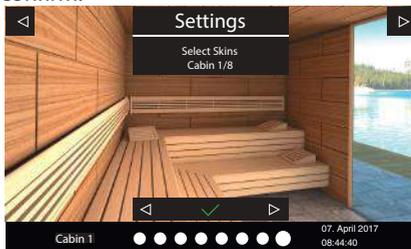
without vaporizer  with vaporizer 

Select the applicable option and press  to confirm:

6. **Select individual desktop theme (skin)**

Here you can select the design of the sauna shown on the display, in order to suit your taste or match your available sauna cabin. You can select from 8 cabin designs.

Each design is shown on the display one by one. Use the top arrows to go through the available designs. Confirm your choice with the green tack symbol.

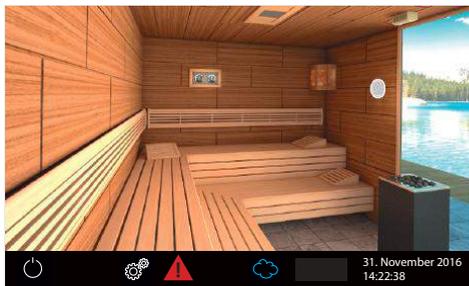


7. **Select sauna heater picture**

Here you can select the displayed picture of the sauna heater from several most common models in order to better suit your individual situation and preferences.

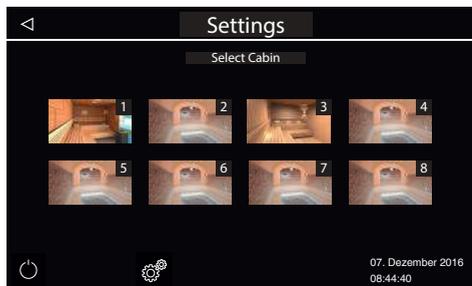


The setup is then complete and the control unit goes to the stand-by mode.



Example

Display in stand-by mode with only one cabin (sauna design may differ).



Example

Display in stand-by mode by several connected cabins (cabin design may differ for each cabin).

Control of several cabins from one display panel

In order to control several cabins from one display panels these cabins should be connected and properly configured.

Please refer to the chapter „multi-cabin connection“ for more details.

After you have assigned the correct cabin address (ID) to each cabin the symbol of multi-cabin operation as shown below will appear in the bottom line of the display:



The number in this symbol is the number of the currently selected cabin. Not the total number of all connected cabins.

Touch this symbol to open the overview of all connected cabins - they will be show as small images with the corresponding cabin number (see example on the previous page).

By touching the small cabin image you will jump to the corresponding cabin interface to control this cabin.

Alternatively you can also go between the connected cabins through the wiping motion gesture (from left to right or right to left).

When you in the cabin overview interface you can start and stop all cabins at once (using the on/off button).

Multi-cabin connection and configuration

The EmoTouch 3 control unit allows to control up to 8 separate cabins from one display panel. These can be saunas, steam rooms or hammams. The connection is made to the 4 connectors (ports) on the rear side of the display panel (see picture below).

Please observe, that for each port connection a special ferrite ring should be added to the connection cable. For installation details please refer to the page 12-13, illustration 7.

For every additional cabin the ferrite ring will be included along with the connection cable with the corresponding extension module (relay box).

Connection for multi-cabin control

Independently to if the Emotouch 3 is intended for use for sauna, steam room or hammam control, the connection of one or several cabins always effects basing on the following standard scheme:

1. Cabin

The relay box of the 1st cabin connects with the **sauna bus cable** to the **1st port** of the display panel.

2. Cabin

The relay box of the 2nd cabin connects to the free sauna bus connector in the relay box of the 1st cabin.

The relay box of the cabin #2 must be programmed to the ID „2“ after connection.

3. Cabin

The relay box of the 3rd cabin connects to the **2nd port** of the display panel.

The relay box of the cabin #3 must be programmed to the ID „3“ after connection.

4. Cabin

The relay box of the 4th cabin connects to the free sauna bus connector in the relay box of the 3rd cabin.

The relay box of the cabin #4 must be programmed to the ID „4“ after connection.

5. Cabin

The relay box of the 5th cabin connects to the **3rd port** of the display panel.

The relay box of the cabin #5 must be programmed to the ID „5“ after connection.

6. Cabin

The relay box of the 6th cabin connects to the free sauna bus connector in the relay box of the 5th cabin.

The relay box of the cabin #6 must be programmed to the ID „6“ after connection.

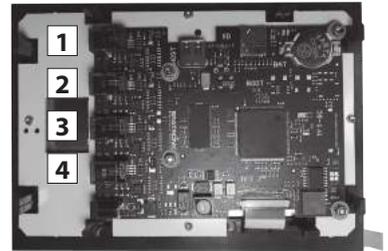
7. Cabin

The relay box of the 7th cabin connects to the **4th port** of the display panel.

The relay box of the cabin #7 must be programmed to the ID „7“ after connection.

8. Cabin

The relay box of the 8th cabin connects to the free sauna bus connector in the relay box of the 7th cabin. The relay box of the cabin #8 must be programmed to the ID „8“ after connection.



Rear side of the display panel with 4 connection ports for multi-cabin connection.

On the page 37 you will find the connection overview with the example of connections for 8 cabins (mixed saunas and steam rooms).

Programming of the cabin address (ID).

The relay box of the sauna control unit or the main board of the generator are shipped from factory with the default cabin address #1. In order to operate multiple cabins you have to reprogram their cabin address and assign them the new unique ID from 2 to 8 depending on their connection position. The display panel will be able to detect the new cabin only if it has been assigned the correct new address (ID).

Overview for the cabin address assignment depending on the connection position:

1st port

1st cabin - address 1

2nd cabin - address 2

2nd port

3rd cabin - address 3

4th cabin - address 4

3rd port

5th cabin - address 5

6th cabin - address 6

4th port

7th cabin - address 7

8th cabin - address 8

Important notice: Make sure to strictly observe the connection sequence for every additional cabin. Connections must begin from the 1st port. A cabin with the particular ID may be connected only the appropriate port as indicated above. For instance, a cabin with the ID 4 may be only connected to the port #2. Otherwise it will not be detected and may not be used.

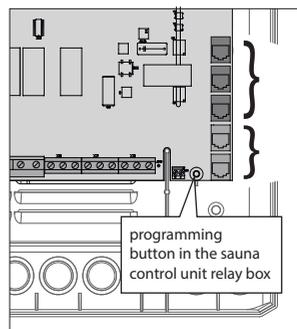
Programming:

1. Press the programming button for 5-6 sec until the green flashing LED on the board goes out and a red LED next to it lights on (active programming mode).

2. Now press firmly one time on the programming button. The cabin address will move one number higher. The green LED will flash the number of times as the new cabin address (from 1 to 8). Example: old address = 1 > press the button > LED flashes 2 times > new address = 2.

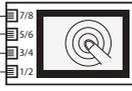
3. Press on the programming button again until you reach the required cabin address. With every pressing on the button the cabin address count progresses +1. If you have reached the required address wait for some 15 sec - the program mode will exit (red LED goes out, green LED starts flashing again). In this manner you can set the address from 1 to 8.

Once the new cabin address has been assigned and if the cabin has been correctly connected, it will be automatically detected and the multi-cabin control symbol will appear on the display.

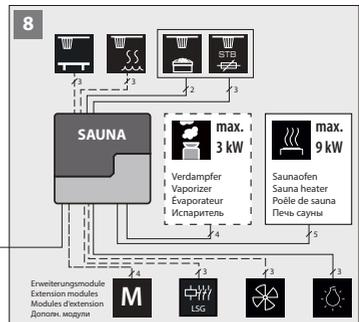
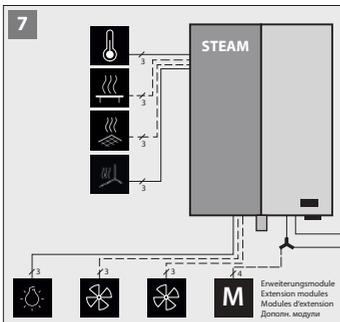
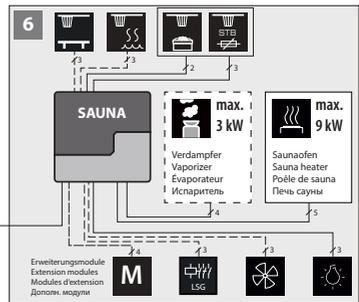
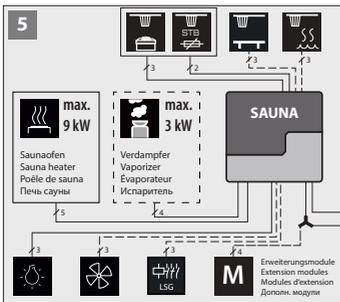
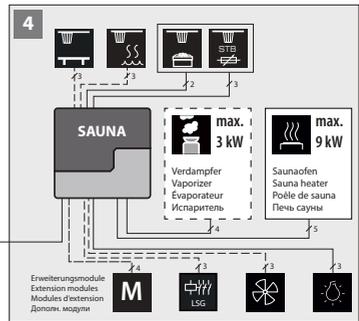
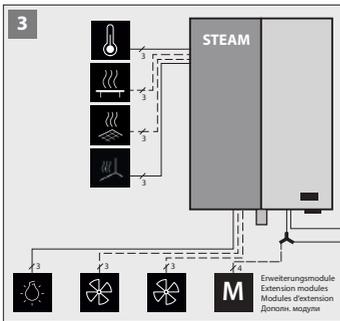
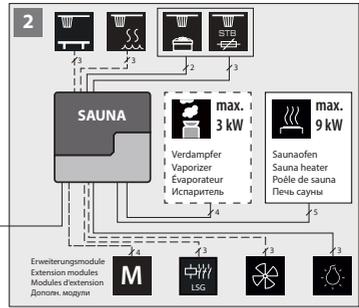
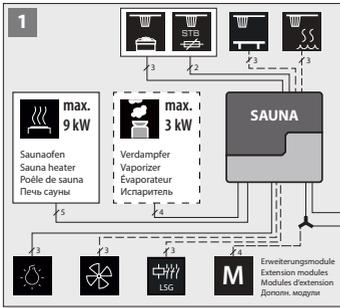


By SteamRock Premium generator the programming button is on the main board next to the sauna bus connector.

Example - connection of 8 cabins to the EmoTouch 3 control panel



EmoTouch 3
Bedienteil
Display panel
Tableau de commande
Панель управления



Operation interface by multi-cabin control

By several cabins connected to the control panel (providing they have been connected and programmed correctly) the multi-cabin control symbol will appear on the display in the bottom line:



The number inside this symbol indicates the number of the currently selected cabin.



Example: Sauna cabin



Example: Steam cabin

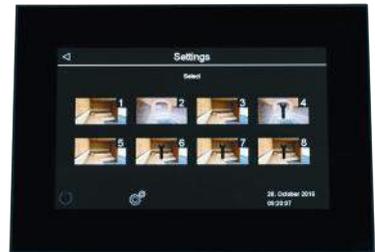
How to select a cabin, navigation between cabins, setup and operation

Before you can start using a new cabin you have to complete the basic setup, as described in the chapter “first start and commissioning”.

A not yet set up cabin will be shown in the overview interface with the symbol of a “wrench”. Touch this cabin in order to launch the setup and configuration.

Navigation between connected cabins:

- Use the wiping motion gesture left / right from one display side to the other to go to the next cabin.
- In the cabin overview interface touch the required cabin image to jump to its interface directly.
- To open the cabin overview interface, touch shortly the symbol



How to control a connected cabin

Select the cabin as described above. Once you are in its interface you can control it and make settings. All settings done here will apply to the current cabin only.

How to control all connected cabins at once

Open the cabin overview interface. Now you can start/stop all cabins at once if you press on the on/off button (>3 sec). Switching on effects with a second delay (cascade) for all cabins. All settings made in the cabin overview (e.g. language change) will apply to all connected cabins.

Notice: Switching off from the overview interface will fully stop all cabins at once. After-heating or fan operation after the main heating will be disabled. This function acts as “full stop at once”.

Error messages and warnings

If there is a fault in one of connected cabins a red warning triangle will appear in the bottom line on the screen. Go to the cabin overview - the cabin with the fault will be shown with such triangle flashing over its image. Touch this cabin image shortly to go to this cabin - the fault details will be displayed on the screen (text message and symbol). A fault in one cabin will not interrupt the operation of the other cabins.

Operation

Control panel - graphic user interface (GUI)

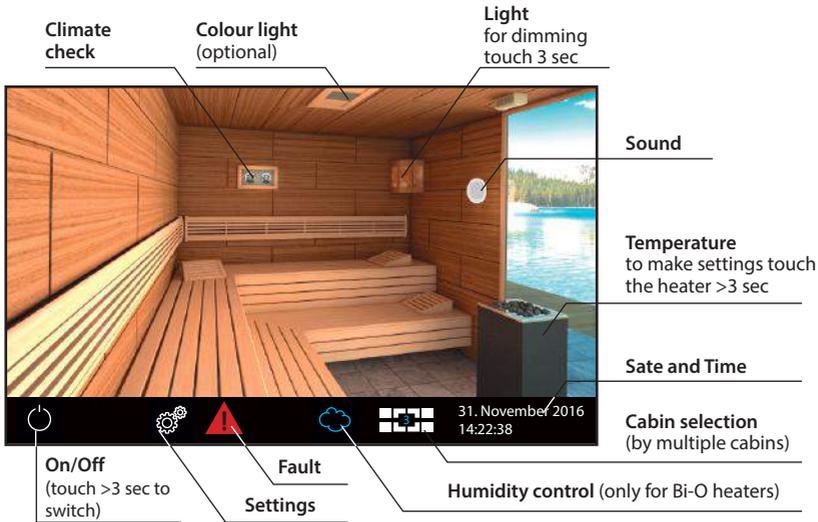


Fig. 1

Heating On / Off

In order to switch the sauna heater on touch the  symbol for 3 sec. The sauna will switch on with the pre-set parameters (e.g. temperature, etc.). To switch off touch the symbol again shortly.

Light On / Off

Touch the lamp on the display shortly in order to switch the light on or off.

Settings (sub-menu)

Private use:

For extended settings touch shortly the symbol , in order to open the sub-menu. A new window, as shown on the fig. 2, will open.

Commercial use:

By commercial use touch the symbol  for 3 sec. and give in the access code **5645**. Extended settings will be opened in a new window. A short touch on the symbol  will open a submenu for navigation language selection only. The full set of extended settings is only accessible with the given above code.



Fig. 2

Method of operating the graphic user interface

Briefly touch to select or enable any of the functions available on the graphical user interface (cabin icon). Keep touching a function (>3 sec) to access the associated settings screen. For safety reasons, you should always press certain symbols icons for more than 3 sec (e.g. heating on).



Operate by touching the display either briefly or for longer.

A touch is indicated by a small yellow rectangle lighting up in the bottom right corner.



Back

Press in any of the sub-menus to return to the main screen, the previous menu or the previous selection.

Description of icons (main screen)



Sauna heater (heating) On/Off

Press for more than 3 sec. to turn the sauna heater on, briefly touch to turn it off



Settings

Sub-menu for further settings such as language, time, date, screen saver, special parameters, child lock, etc.



Multi-cabin control

This symbol will appear if more than 1 cabin is connected to the control panel. The number inside this symbol means the currently selected cabin.

By touching this symbol you can launch the overview of all connected cabins.

Hint:

The submenu window (extended settings) may be closed by briefly touching any other part of the screen. Unconfirmed settings (not yet saved) will be lost.

Not touching the display for about 20 sec automatically brings the display to the main screen. Unsaved settings will be lost.

Thanks to the integrated battery personal settings will be kept in memory for years even if the power is off.

The unit automatically recognises connected extension modules and displays the associated icons to the main screen or sub-menus, as appropriate.

Extended settings - meaning of symbols and functions

In the "Extended Settings" sub-menu you can make special settings which you will need seldom or only once.

Access to this submenu effects via the symbol  in the bottom line on the screen.



Language

Selection of the menu navigation language. 20 languages are available.



Time

Touch to set the time of day.



Date

Setting of the day, month and year.



Screen saver

Setting of the interval after which the screen-saver will be launched (black screen with logo and time).



Standby

Setting of the interval after which the display goes into sleep mode (black screen).



Child lock / panel lock

Here you can block the access with your own PIN code.

Notice the important child / panel lock information below.



Display brightness

Setting of the display brightness.



Holiday home mode

Restricted access mode - restricts the access to basic functions only. No setup possible.



Operation data

Touch to check the firmware version, the time left until the next service, or the service centre's contact details.



Contacts

Displays the contact information of the device manufacturers.



Heating time

Press to set the heating time. Heating times for private users are limited to 6 hours and may be as long as 12 hours or entirely without limitation for commercial users.



Timer

Here you can set the timer for delayed switching, single event or recurring switching timer.



Coloured light sync

Here you can sync the optional coloured light unit switching with the heating.



Important notice for child lock or holiday home mode

Display panel can be completely or partially locked with your own PIN code via the extended settings. During the active lock you can only switch off the heating and switch the lighting. Holiday home mode allows the limited number of basic functions.



ATTENTION

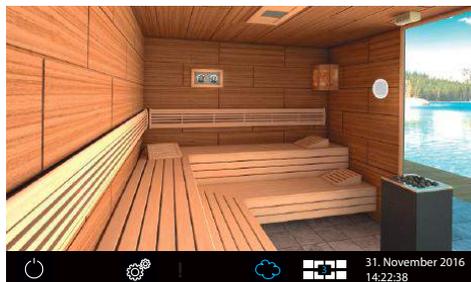
Make sure to remember the selected pin code! Please bear in mind that in the case this code is lost you will not be able to operate the control unit. In the case the pin code is no longer available and cannot be restored please contact your local EOS dealer or EOS service.

Graphic user interface GUI and climate conditions check

Thanks to the modern GUI you can quickly access all functions and make necessary settings, as well as make a simple instant query for the current climate condition.

The symbols on the start screen may be displayed in different colours, in order to indicate the current operation status - e.g. red highlighted heater during active heating.

For every selected symbol the control panel will display the explanation at the top and will provide additional text hints by various settings. For language selection see page 34.



Standby mode

The picture on the left shows the example of the stand-by interface (light off). If you have a dry sauna heater without vaporizer there will be no blue cloud symbol on the screen

The picture shows the control unit with optional equipment connected.



Active heating

The sauna stones light in red and the working vaporizer (active humid mode) is shown with the steam cloud symbol.

The remaining heating time is displayed in the bottom line in red. To stop the heating briefly touch the "on/off" button.

Notice: after humid operation a sauna-dry program will start unless it has been disabled.



Climate conditions check

You can quickly check the target and the current climate - touch briefly the  symbol.

A submenu window will open for approx. 50 sec and will display pre-set and current values. If you have a bench sensor, its value will be also displayed under the main sensor.

If there is no humidity sensor, only the target setting of humidity will be shown and the sym-

bol in the cloud will be . By connected humidity sensor the sign in the cloud will be "%" and the query will show the target and real humidity.

Notice: The displayed current temperature values correspond to the air temperature measured around the temperature sensor(s). Please bear in mind that the temperature in the other cabin zones may vary depending on the individual situation. The temperature at the ceiling for instance is always considerably higher as around the floor.

We recommend therefore to select the temperature basing on a practical test in order to find the setting which is most pleasant for you.

Operation and program settings

Switching the heating On / Off

Press the  symbol for approx. 3 seconds. The heating will switch on and the display will show the active heating mode (see example on page 29). The light will be also switched on.

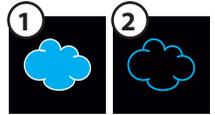
To switch the sauna off, touch shortly the  symbol again. By humid operation the sauna-dry program will switch on (if not disabled in setup) for the preset time (max. 30 min). After that the sauna will switch off.

You can interrupt the sauna-dry program - touch shortly the  symbol.



Dry sauna or humid operation mode (Bi-O)

To enable the humid mode touch the cloud shortly - the cloud will fill blue (see picture 1 right). To disable the humid mode touch the cloud again - the blue filling will disappear and the control unit will return to the dry sauna operation mode (see picture 2 right).



Temperature

Touch the heater image for >3 sec. A sub-menu window will open and display the last set (or default) temperature. By pulling the slide bar up or down you can adjust the temperature. This setting can be made also during active heating. The new setting applies immediately.



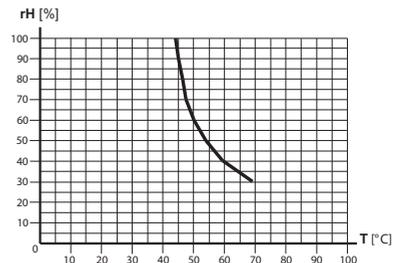
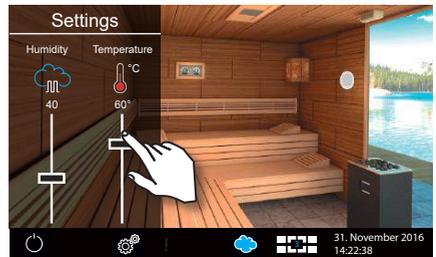
Humidity

At first please enable the humid operation mode by touching the blue cloud (the filling will turn blue).

Touch the sauna heater image for >3 sec. The sub-menu window will display the last set (or default) humidity value. You can now adjust humidity and temperature by pulling the slider bars up/down. The temperature may be automatically reduced for safety reasons if humidity is set too high. This setting can be made also during active heating.

With a connected humidity sensor (% sign appears inside cloud) the relative air humidity will be controlled. Without humidity sensor the humidity will be controlled in proportional to time way. "30" then means 30% of the total heating time. The display will show the  symbol.

Please observe that with a humidity sensor the humidity setting will depend on the pre-set temperature. For safety reasons only the values to the left



and under the curve may be selected. For instance at 60°C temperature you can set up to 40% rel. air humidity. In order to set a higher humidity you will need first to reduce the temperature.

If the sauna has been used in dry mode with high temperatures and you switch to the humid mode, the vaporizer will start to work only after the temperature drops under the max. allowed level (70°C).



Light On / Off

Touch shortly the image of the lamp on the display to switch the light on

or off. Display indication.  - light off,  - light on.



How to dim the cabin light

You can quickly dim the cabin light (0-100%).

Press the lamp image on the display for >3 sec. The cabin light will switch (if switched off) and a sub-menu window for light brightness will open. By pulling the slide bar up or down you can adjust the light intensity. The dimming stage will be shown in %. The new value is immediately valid.



Attention! Only dimmable illuminants may be used! Otherwise the control unit or the illuminant may be damaged! The warranty will be void in such case.



Timer

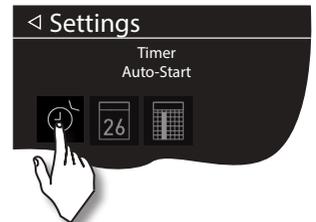
This function allows to pre-set the start time up to 24 h in advance. Alternatively you can program the single start time to any date in the future or set a week timer. Open the extended settings menu via the symbol . Tap twice on the timer symbol  to open the timer sub-menu with three options: 24 h time pre-selection, single event timer, serial event timer (week timer).



24 h time pre-selection (Auto Start)

This functions means start time pre-selection for a single switching within 24 h.

- Select the symbol  and touch it briefly again to launch a sub-menu for programming.
- Set the desired start time using the „+“ and „-“ buttons.
- Confirm your setting with the green check symbol.
- The programmed start time will appear flashing in the bottom line on the screen.
- The heating time duration will be as per “Auto-Stop” setting (page 47).

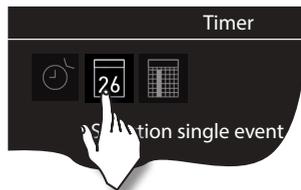


Notice that the programmed time means the real time, not the time delay. In order to cancel this program set the start time back to „--:--“ and confirm the setting.

 **Attention!** This function is only allowed to be used if your sauna is fitted with an approved safety system, which prevents the heater from being switched on in unsafe condition (e.g. a towel forgotten on the heater). Even in the case if your sauna has such an approved system, prove there are no objects forgotten on the heater. Risk of fire!

Timer

The timer function allows you to have your sauna switched on automatically with the desired climate condition at some time in the future. You have two possible options:



 - single event (single time switching, not recurrent)

 - week timer (regular, recurrent switching on the given day of the week, e.g. Monday, with up to 4 switching programs per day).

 **Attention!** This function is only allowed to be used, if your sauna is fitted with an approved safety system, which prevents the heater from being switched on in unsafe condition (e.g. a towel forgotten on the heater). Even in the case if your sauna has such an approved system, prove there are no objects forgotten on the heater. Especially by active week timer make sure to check your sauna for safe condition regularly. Risk of fire!

 **Single event timer** (single switching on any day in the future)

For the single event timer touch twice the symbol  to launch the sub-meu for programming.

- First set the day, month and year by using the „+“ and „-“ buttons.
- Next set the desired **Start time** (hours and minutes).
- Then set the desired temperature.
- After this step exit programming by touching briefly the “back” symbol. On the start screen in the bottom line you will now see the programmed date and time, e.g. 15.01. and 18:30.

Notice: The heating time duration will be as per „Auto-Stop“ setting.

 **Week timer** (recurring switching on the specified days of the week).

For the week timer touch twice the symbol . A submenu with the overview of the days of the week (from 1 to 7, 1 = Monday, 2 = Tuesday...).

Note: White symbols = no program available. Blue symbols = program available.

Briefly touch the day you wish to set a timer for (e.g. “1” for Monday). A submenu with programs 1 to 4 for that day will be displayed.

Note: You can program to 4 switching times for each day. The maximum duration of a switching time is up to 6 h by private use and unlimited by commercial use. Please observe local regulations.

For every switching you can set an individual temperature.

Briefly touch a program (1 - 4), start with 1 if there are no settings yet on this day.

- Set the **Start time** in hours and minutes using +/- buttons - e.g. 9:30.
- Set the **Stop time** in hours and minutes using +/- buttons - e.g. 19:30.
- Set the desired temperature.

After the last step the display returns to the weekday overview. The day you programmed an auto start time for turns blue. Repeat the above procedure for all programs you may wish to set. The nearest auto start time will flash in the bottom right corner of the main screen (e.g. Monday, 9:30).

Clear / change weekly timer

To clear or change an auto start timer setting, go to the main screen and select the weekly timer (as described above) again.

- Pick the appropriate weekday.
- Select the start time you wish to change.
- Change the settings (start time, stop time, temperature) or ...
- Clear the setting by changing the associated hour to "--" and confirm it.
- The display returns to the weekday overview.

Note: If the timer is active, the next activation time is displayed as a flashing value on the bottom right. Even if you have programmed several activation times or a combination of individual times and a weekly timer.

BLUE flashing time - programmed start time is acceptable, the timer will start as planned.

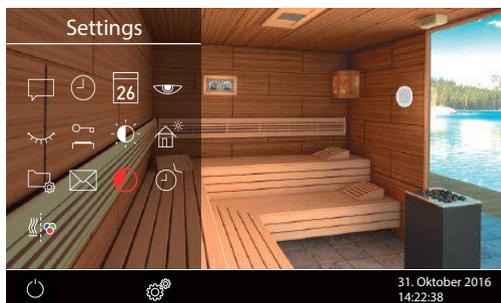
RED flashing time - programmed start time is not acceptable, the timer will not start. Check for possible programming errors - overlapping time, incorrect pause times, etc.

The cabin may be switched on manually between the automatic timer switchings.

IMPORTANT - if you start the cabin manually within the still valid timer operation time window, e.g. after an unexpected stop, the stop time will be automatically adjusted to the programmed stop time of the current timer operation time window. This allows you for instance to quickly pick up the interrupted timer operation after an unplanned stop.



Extended settings



By private use touch briefly the  symbol to display the Extended Settings menu.

By commercial use press >3 sec on this symbol and give in the access code **5645** to open the Extended Settings menu.

By multi-cabin control - this menu must be opened from the Cabin Overview interface.

In the menu "Extended Settings" you can make additional settings which are normally required only once or very seldom. The first touch on a symbol in this menu will highlight the element and display its meaning. The second touch will open settings for this option.



Language

Choose this option to change the language selected during setup. Pick a language from the list - e.g. "EN" for English (the selected item turns white), then briefly touch the chosen language again. The unit displays the previous menu, all texts appear in the language you selected.



Time of day

Touch to set the time of day. Use the "+" and "-" keys to set the hours/minutes and confirm your setting.



Date

Choose this option to set the date (day / month / year). Use the "+" and "-" keys to set the day, month and year, then confirm every setting. Upon confirming the last item (year), the display returns to the previous menu.



Screen saver

Use this option to set the time after which the screen saver will be displayed if you do not touch the screen. In screen saver mode, the brightness is reduced to minimum and the logo with the current time is displayed. Briefly touch the display to wake up the unit and return to the normal display mode. This function is available only if the cabin is not heating.



Sleep mode

Use this option to set the time after which the unit's sleep mode (stand-by) will be enabled. In this mode, the display will turn completely black. Briefly touch the display to wake up the unit from stand-by mode. This function is available only if the cabin is not heating.



Display lock / Child protection

To protect the unit against an unauthorised access, you can lock it completely with your own PIN code.

To lock the unit, touch the  icon and briefly touch it again. A dialog is displayed showing “----” and a numerical keypad. Fill the four blank digits with your own PIN code. Confirm the entry.

The main screen is displayed and the unit is locked. Settings cannot be changed.

For safety reasons, you can still turn off the heating and turn on the cabin light although the display is locked. You will be requested to enter the PIN code if you try to do something else.

To unlock the unit, touch any icon (e.g. On/Off) to launch the PIN code request dialog. Enter the correct PIN code. The unit will unlock.



Important notice for display lock

Display panel can be completely or partially locked with your own PIN code via the extended settings. During the active lock you can only switch off the heating and switch the lighting. Holiday home mode allows the limited number of basic functions.



ATTENTION

Make sure to remember the selected pin code! Please bear in mind that in the case this code is lost you **will not** be able to operate the control unit. In the case the pin code is no longer available and cannot be restored please contact your local EOS dealer or EOS service.



Heating time (Auto-Stop)

Use this function to set your preferred heating time of the cabin.

Private users can set this time to max. 6 hours. Commercial users can set the time up to unlimited. The “unlimited” setting means manual mode, no automatic stop. The heating time is limited as per operation type (private or commercial use) selected during setup.

Touch the  icon twice and set the heating time (hours and minutes) in the sub-menu. Upon confirming your entry, the display returns to the previous menu.

When you turn on the heating, the remaining runtime shows as a countdown timer in the bottom section. This tells you at a glance the remaining heating time.

The heating time may be set at steps of +/- 1 minute. Notice that after the main heating the ventilation fan will switch on (0-30 min.) to dry the cabin unless it has been disabled during setup.



Operation data

Use this function as query to check basic operation data and details.

Firmware - displays the current firmware version of both the control panel and the contactor box. Press “+” or “-” to toggle between the two values. “Panel Vx.xx” - control panel firmware,

"Mod-LS Vx.xx" - contactor box firmware (x is any number). By connected extension modules their firmware version will be also displayed.



Service intervals - display the hours left until the next regular maintenance (service) is due. Your dealer or installer sets the intervals during installation and setup.



Contact details - displays the manufacturer's contact details. These details are also displayed if a fault occurs.



Display brightness

Here you can adjust the display brightness. Use the slider bar (pull up or down) to set the brightness to your preference.



Holiday Home Mode

This function allows to limit the user access down to only few basic functions. All other settings will be locked and their icons hidden.

In this mode the user access is limited to the following:

- Sauna On / Off
- Light On / Off
- Selection of the operating mode dry or humid
- Temperature setting
- Humidity setting

Touch the  icon to enable this function. Enter your personal PIN code in the next dialogue. Use the numerical keypad to enter a 4-digit number and confirm your entry. The unit will be locked.

After the operation a selection of operation languages will appear before the new start. To leave this menu touch briefly on the Home button.

To unlock the unit, go to the settings menu again. Touch the  icon twice. A PIN code prompt screen is displayed. Enter the correct PIN code to unlock the unit. When you turn off the cabin, the language selection dialogue is displayed.



ATTENTION

Make sure to remember the selected pin code! Please bear in mind that in the case this code is lost you **will not** be able to operate the control unit. In the case the pin code is no longer available and cannot be restored please contact your local EOS dealer or EOS service.



Potential-free contact PFC (volt-free contact / floating contact)

The PFC function allows you to switch some external equipment with the special switch shown on the main cabin interface. For instance the additional light circuit, music or others.

To make the “on” or “off” switching touch briefly the symbol  on the main cabin interface.

If you do not find this symbol on the display please contact your local dealer to get this function enabled and configured for you.



Coloured light sync

With this function you can synchronize the switching of the optional coloured light module SBM-FL75/150 with the switching of the sauna heater.

Tap twice on the  symbol, to open the corresponding submenu. Tap then twice on the green tick symbol  to activate the synchronization.

The coloured light system will be then switched on if the heating is switched on.

To cancel this setting, tap twice on the  symbol.



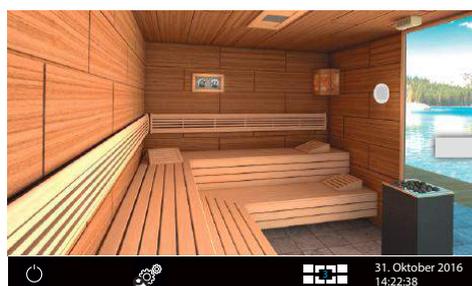
Service and setup settings

The EmoTouch 3 provides an extensive set of features and tools to setup and optimize the operation. This setup menu is protected with a PIN code and should not be accessible to the end users.

Press the  icon for about 3 seconds until the PIN code prompt window appears.

The PIN code is: **5349**

To prevent unauthorised changes to the control unit settings, keep the PIN code in a safe place not accessible by the end customer.



Press for 3 seconds



Give in the access code for the service level. Correction with „C“. Confirm entry with the „enter“ button.

User interface of the service area

All functions of the service area are displayed as icons. Briefly touch an icon to select it - the icon will be highlighted in white and a plain text description of its function appears at the top. Touch the selected icon again to access the submenu and change the settings.



Menu by "Bi-O" type sauna heaters (humid operation)



Menu by dry (Finnish) sauna heaters (dry operation)

Service area interface - the picture on the left shows the available settings by humid sauna operation (Bi-O heaters)

The picture on the right shows the available settings by dry sauna operation (dry / Finnish sauna heaters).

The selected icon (i.e. the first icon on the screen above) turns white. The other icons retain their medium grey hue.

The description of the selected icon appears at the top.

Symbol overview



Service / maintenance intervals

Choose to set the service/maintenance intervals



Refilling time

Grace time to refill the vaporizer after water shortage alarm. Only for Bi-O heaters.



Firmware Update

Firmware update possibility for display panel, relay box or colour light module



Afterheating time

Duration of the „sauna dry“ program after humid operation. Only for Bi-O heaters.



Hysteresis

Adjustment of the switching hysteresis



Afterheating temperature

Temperature for the „sauna dry“ program in °C (after humid operation). Only for Bi-O heaters.



Operation type

Selection between private or commercial use



Reset

Choose to restore the factory defaults and reset all operation data



Temperature offset

Setting for displayed „is now“ temperature offset +10 / -10 K in relation the real value.



Potential-free (volt-free) contact

Synchronisation options and settings for the potential-free contact output



Fan

Setting of the ventilation fan speed (0-100%)



Fan operation time

Setting for the fan operation time during cabin dry mode (0-60 minutes)



HOT setting

Adjustment range 0 - 30 min.
Available only in dry sauna mode.



Service- / maintenance intervals

Choose this option to set the service and maintenance intervals. Every time the unit is turned on after the set time is over, a reminder and the stored contact details will be displayed briefly. End customers can check the remaining time by choosing „Advanced Settings“ at any time. This also allows you to calculate the operating hours.

Factory default for private users - 500 hours.

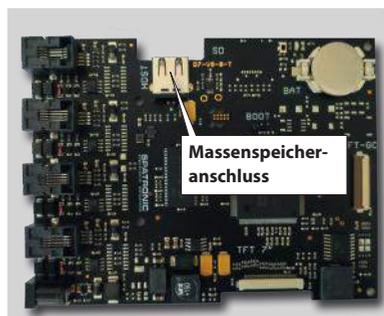
Factory default for commercial users - 2500 hours.



Firmware update

Here you can conduct the firmware update. For the update you will need an empty mass storage device with the standard type A connector.

- Download the firmware from www.eos-sauna.de/service-support/software and unzip the ZIP file to your mass storage device.
- Plug in the mass storage device to the connector on the rear side of the control panel (control panel has to be removed from the bottom housing).
- Open the service level settings and touch twice the „Update“ symbol:
- You will see three possible options for the update:
 - Control panel
 - Relay box only (currently selected cabin)
 - Coloured light module (if connected, currently selected cabin only)
- Select the required option and touch it briefly again, to launch the update.
- The update process will be started and will be displayed on the screen with the appropriate progress bars. The update may take several minutes. After the update the unit will reboot.
- If not firmware files are found an error message will be shown. Check the mass storage device and repeat the update.
- Upon the update you can remove the mass storage device (hot plugging supported).



HINT: You can also launch the update menu directly with the short-cut access code. Touch the settings symbol  for 5-6 sec until the pin code prompt appears and give in the access code 543210. The update menu will be launched directly.



Notice: Make sure that the power supply is not interrupted during the update process. Otherwise the files may get corrupt and the control unit will need to be sent to the manufacturer.



Attention: The update may be carried out only by an appropriately skilled person.

In the case of power supply loss the control panel will attempt to resume the update process. If the display panel does not start or shows a boot load error press firmly on the “reset” button on the board next to the battery cell. The unit will reboot and offer update options dialogue, allowing you to attempt to repeat the update.



Hysteresis

You can set the hysteresis in a range of +/- 10 °C. This will adjust the upper and lower temperature limit at which the heating switches on or off again. For example, at a target temperature of 90 °C and an hysteresis of 5K, the system will try to keep the temperature within 85 °C and 95 °C range. This allows you to adjust the temperature control more precisely to the specific sauna room.

Notice: A too low setting leads to the increased number of relay switchings which reduces the lifetime of the control unit. This settings should be made only by a skilled specialist.

Default setting - 5K.



Type of use

Choose this option to select between domestic or commercial use. This will influence the heating time limitation and some special funktions (e.g. Timer only possible for “commercial” use).



Reset

Choose this function to restore all settings to their factory defaults. All personal settings will be lost! Following a reset, the control unit will restart and request you to perform a basic setup. Please notice that all connected extension modules will be also reset.

Reset options: you can choose to reset a) **current cabin** only, b) **all settings** completely.



Temperature Offset

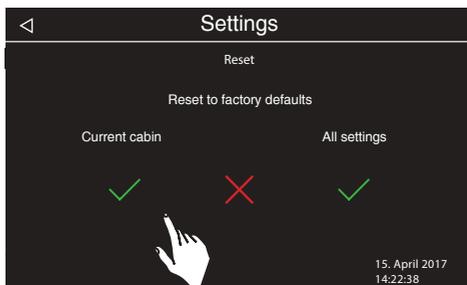
Here you can adjust the effective set-point temperature control in relation to the displayed value. By „0K“ the real set-point value of the main sensor and of the bench sensor is 7K above the displayed set-point. This is based on the common experience and compensates the typical difference between the temperature at the ceiling and at the bench level. If the temperature shown on the wall thermometer is consistently 5K lower than the set-point temperature you can compensate this by adjusting the offset value to +5K.

Note: Since this function is not without risks, it should be used by experienced experts only and thoroughly tested afterwards. Adjustment range: from -10K to +10K.



Potential-free contact (volt-free contact)

The terminals 3 and 4 on the main board of the relay box are a “NO / normally open” potential-free contact of a relay on this board. This output is not linked to any other connection and it therefore potential free (volt free). You can integrate this output in an external circuit in order to get some external power load switched or transmit a signal.



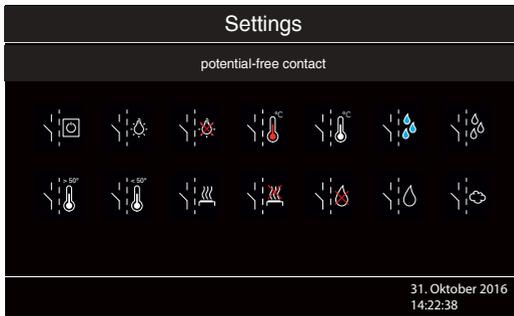
Maximum load allowed for this output:

- resistive load / alternating current: max. 250V AC / 10A
- inductive load / alternating current 500VA
- direct current:
 - Up to 30V DC max. 16A (480 W)
 - Up to 110V DC max. 0,3A (33W)
 - Up to 220V DC max. 0,12A (26,4W)



Attention! If you use the power supply for terminals L1, L2 or L3 to power the circuit connected to the AUX output, please ensure that the cable lines do not get overloaded! You may need to install an additional fuse protection or install a separate power supply line.

Settings and synchronisation options



Tap two times on the  symbol to open PFC settings. A submenu with the choice of synchronisation options shown like symbols will open. By choosing one of these symbols you can assign the PFC a certain synchronisation scenario relative to some other functions of the control unit, e.g. main heating or light switching in order to operate the external equipment in the desired way.

Function overview - following options are available:



On/Off via control panel - manual switching through the symbol 



Switching „on“ if light is switched on.



Switching „off“ if light is switched on.



Switching “on” if the set-point temperature is reached.



Switching “off” if the set-point temperature is reached.



Switching “on” by water shortage in the vaporizer (only for Bi-O heaters)



Switching “off” by water shortage in the vaporizer (only for Bi-O heaters)



Switching for an additional vaporizer (synchronisation of switching with the output Wm, only for Bi-O heaters)



Switching „on“ if the current temperature reaches 50°C.



Switching „off“ if the current temperature reaches 50°C.



Switching „on“ if the cabin is on.



Switching „off“ if the cabin is on.



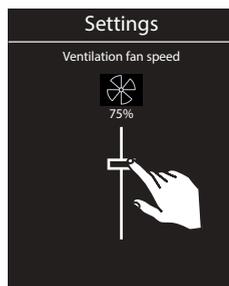
Disable volt-free output (the contact symbol will disappear on the screen, output not active).



Fan

Allows to adjust the rotation speed (ventilation capacity) of the fan from 0 to 100% or to switch off the fan completely. If enabled the fan will switch on automatically with the pre-set speed when the heating is on. By sauna-dry mode the fan will always switch on with 100% output.

Tap twice on the fan symbol to open the settings menu. In the settings menu you can set the desired fan output in % by moving the slider bar up or down. The selected value will be immediately overtaken and needs no confirmation.

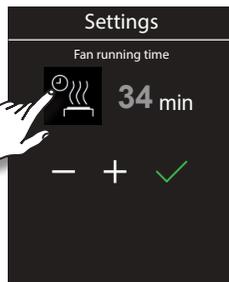


Fan operation time by cabin-dry mode

Here you can set how long the fan should operate after the humid mode. We recommend to use this function in combination with the after-heating to dry the sauna cabin faster.

The fan operation time in this mode is by default linked to the after-heating time. The time is therefore shown in grey and cannot be changed. We recommend to keep this method and if necessary to change the time in the "after-heating time" function setting.

If you however wish to set a different individual operation time of the fan in this mode, tap two times on the symbol  - the symbol will turn grey and number (minutes) will turn white. You can now set your own time with „+“ / „-“ buttons (confirm with ).





Refilling time

Here you can set the grace time which the end user has to refill the vaporizer after the water shortage alarm. If the vaporizer has not been refilled within this time, it will be switched off (overheating protection). This function is especially important for Bi-O heaters with manual refilling. Adjustment range - from 0 to 5 minutes.



After-heating time

Here you can set the time for the „sauna dry“ program after the humid operation. Factory default setting is 30 minutes. After every humid operation the sauna will then switch on in dry Finnish mode in order to dry the cabin. We recommend to use this function in combination with the exhaust fan in order to remove the humidity and dry the sauna cabin. Tap on this symbol twice to open the settings submenu.

You can now set your own time with „+“ / „-“ buttons (confirm with )



After-heating temperature

This functions allows to set the temperature for the „sauna dry“ program. Factory default setting is 90°C. Tap on this symbol twice to open the settings submenu.

You can now set your own temperature with „+“ / „-“ buttons (confirm with )



HOT function

HOT is a special function which is only available in the dry sauna mode. To be able to use this function you need to connect the optionally available HOT remote switch (item no. 94.6682).

This settings defines a period of time in minutes during which the heater will run with full power non-stop independently to the heating hysteresis.

The possible time setting is from 1 to 30 minutes.

Tap twice on the HOT symbol to open the submenu for settings. In this menu you can then set the desired time with „+“ and „-“ buttons.

The HOT function can activated from the remote “HOT switch” during the dry sauna operation. Press on the HOT switch to start the HOT operation mode.

This function may be used for instance in commercial saunas before and during the water splash ceremonies in order to increase the temperature of stones and to re-heat the stones as fast as possible after an intensive water splash.

The heating with the active HOT mode will be interrupted for safety reasons if the air temperature reaches 125°C.

Troubleshooting (error messages)

EmoTouch 3 is able to detect various faults and operation states and to show them on the display as symbol or text messages. By only one connected cabin the messages will be shown directly on the display on top of the current interface. By multiple cabins if you are in the interfaced of a different cabin a warning symbol  will be shown in the bottom line. Go the cabin overview - the affected cabin(s) will be shown in the overview list with the same warning symbol on top of it. Open this cabin to receive further details about the fault.



Errors / Error messages

Reason / Troubleshooting

Display remains dark

- No power supply - check fuses, check cables.
- Switch-Off switch in off position - check the device's main switch for correct position.
- Faulty connection to control panel - check the link cable (rely box - control panel) for reliable connection.
- Control panel in sleep mode - touch the screen.

Sensor fault

- Faulty connection to the main sensor - check the sensor and cables for reliable connection.
- Faulty sensor - get the sensor replaced by the dealer.

Thermofuse blown

- Faulty connection - check the white cable (loose wire, faulty contact, etc.)
- Thermofuse blown because of overheating - check the possible reason for overheating, replaced the fuse (one spare fuse is included with every controller).

Water shortage

- Too little water in vaporizer - refill water. Observe the pre-set grace time for refilling, otherwise the vaporizer will be shut-down!
- By automatic refilling - check the water supply line, check the FWA water level control device.

No Bus communication

- Check the cable connection between the relay box and the control panel.
- Restart the control unit; if the fault persists, contact the dealer or EOS service.

Unknown error

- Check cable connections and restart the control unit; if the fault persists, contact the dealer or EOS service
- Falsche Bus-Konfiguration
- No relay box has been detected, check connection and the address setting.

False bus configuration



Interface will be shown grey without any equipment

- No relay box has been detected, check address setting.
- Multiple relay boxes with the same address have been detected, check assigned addresses (see pages 27-30).



Recycling

The devices which are no longer needed have to be recycled in accordance with the EU-guideline 2002/96/EG or ElektroG or the applicable national legal regulations. Do not dispose off with the household garbage!



The device „Switch-off“ switch

The control unit is equipped with a “Switch-off” rocker switch.

You will find this switch on the top side of the housing by Econ series control units and on the left side of the main relay box by control units of Emotec, EmoStyle and EmoTouch series.

This switch allows to switch the control unit to the standby mode (notice the heating will not start), to switch the control unit completely off (disconnect from power) or to switch the control unit off but to leave the light switched on.

Notice: if you leave the Econ control units switched off for more than 24 h all personal settings will be lost. You will have to repeat setup.

 **Attention!** Parts of the printed circuit board will still remain energized in the switched off condition! Risk of electric shock!

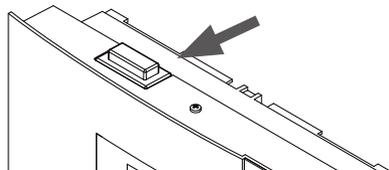
Press the switch on the lower side of the rocker to the first latch (**switch setting 0**). The switch will be in the middle position. The unit is now completely switched off (disconnected).

To turn the light on in the cabin while the unit is still disconnected push the left side of the rocker to the second latch (**switch setting II**).

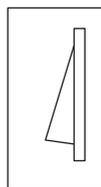
To make the unit ready for operation, switch back to the initial position (**switch setting I**). The unit will return to stand-by mode.



Switch-off rocker switch by Emotec, EmoStyle, EmoTouch models



Switch-off rocker switch by Econ models



Device switched on.
(default Position I)



Device switched off
(completely);
Position 0.



Light enabled;
Device switched off.
Position II.



Device switched on.
Position I.

Service Address:

EOS Saunatechnik GmbH
Schneiderstriesch 1

35759 Driedorf, Germany

Tel: +49 (0)2775 82-514

Fax: +49 (0)2775 82-431

servicecenter@eos-sauna.de

www.eos-sauna.de

Please keep this address in a safe place together with the installation guide.

To help us answer your questions quickly and competently please provide the information printed on the type shield including the model, item no. and serial no., in all inquiries.

Equipment commissioning date:

Stamp and signature of the authorized electrician:

General Terms and Conditions of Service

I. Scope

Unless otherwise agreed in writing in a specific case, these terms and conditions of service shall apply to service operations, including examining and repairing complaints. All our existing or future legal relationships shall be governed solely by the following terms and conditions of service. Our recognition of any conflicting terms and conditions of the Ordering Party shall be conditional upon our having given our express written consent to their applicability. We hereby expressly object to any terms and conditions of the Ordering Party contained in its General Terms and Conditions of Business or order confirmation. If order confirmations or deliveries are accepted without reservation, this shall not be deemed to constitute recognition of such terms and conditions. Any ancillary agreements or amendments must be confirmed in writing.

II. Prices and Payment Terms

The Ordering Party shall bear the following costs in connection with the service operation:

- Disassembly/assembly and electrical (de-) installation
- Transportation, postage and packaging
- Function testing and troubleshooting including inspection and repair costs

There shall be no third-party billing.

III. Performance Obligations / Ordering Party's Cooperation

The Ordering Party shall provide free-of-charge assistance to the manufacturer in carrying out the service operation.

In the case of a warranty claim, the manufacturer shall make the replacement parts necessary for the service available to the Ordering Party free of charge.

IV. Service Visit by the manufacturer

In the event that it is essential that a manufacturer employee carry out the service operation on site, this must be agreed in advance. Where the main reason for the service call is not the fault of the manufacturer, any costs incurred shall be recharged to the Ordering Party after the service visit.

V. Liability

The manufacturer shall assume liability in accordance with the currently applicable statutory regulations. The packaging for all of our products is designed for the shipping of individually packed goods (pallet). We expressly point out that our packaging is not suitable for individual

shipments via parcel post. The manufacturer shall accept no liability for damage incurred as a result of improper packaging in an individual shipment.

VI. Manufacturer's Warranty

The manufacturer's warranty shall apply only in the event that installation, operation and maintenance have been carried out in accordance with the manufacturer's specifications contained in the assembly instructions and instructions for use.

- The warranty period shall commence from the date on which proof of purchase is provided and shall be limited, in principle, to 24 months.
- Warranty services shall be performed only if the proof of purchase relating to the equipment can be presented.
- Any and all warranty claims shall become void if modifications are made to the equipment without the manufacturer's express consent.
- Any warranty claim shall likewise become void in the case of defects that arise due to repairs or interventions made by unauthorized persons or due to improper use.
- In the case of warranty claims, the serial and article numbers must be indicated together with the designation and a meaningful description of the fault.
- This warranty shall cover defective equipment parts, with the exception of normal wear parts. Wear parts shall include, among other things, light sources, starters, gas or oil pressure dampers as well as acrylic glass panes, tubular heating elements and sauna heater stones.
- Only original replacement parts may be used within the warranty.
- Service visits by outside companies shall require a written order to be issued by our service department.
- The equipment in question shall be sent to our service department by the Ordering Party and at its expense.
- Electrical assembly and installation work, including in the event of service or replacement, shall be carried out at the Customer's expense and shall not be borne by the manufacturer.

Complaints in respect of our products shall be reported to the specialist trader responsible and shall be exclusively handled via the latter.

The manufacturers General Terms and Conditions of Business, as amended, shall apply in addition to the foregoing terms and conditions of service.