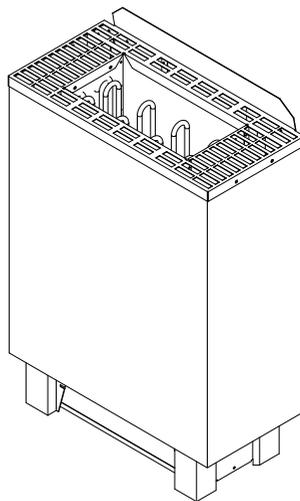


## EOS Gracil

Sauna heater



### Installation and operating instruction

Made in Germany



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## 1. General safety instructions

### Safety levels

Safety instructions and important operating instructions are classified. Please familiarise yourself with the following terms and symbols:

#### **WARNING**

##### Warning

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

---

#### **CAUTION**

##### Caution

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

---

#### **NOTICE**

##### Notice

Indicates a hazardous situation which, if not avoided, will result in damage to the unit.

---

## 1.1 Mounting and electrical installation



These installation instructions are intended for qualified personnel familiar with the laws and regulations applicable to electrical installations at the installation site. Observe the following general safety instructions during mounting, configuration and commissioning of the product.

### ► Risk to life and limb and risk of fire

Risk to life and limb from electric shock and fire in the event of improper or faulty electrical connection. This risk remains also after completion of the installation work.

- The electrical installation of the heater, relay boxes and other electrical systems or equipment with a fixed mains connection must only be performed by a trained electrician from an authorised electrical company.
- Ensure compliance with the locally applicable standards and regulations for electrical installation.
- The system must be completely disconnected from the mains supply before commencing installation and repair work.
- The housing cover must only be removed by a specialist.

### ► Fire hazard from overheating

Insufficient ventilation can lead to device overheating and fire.

- Install air inlets and outlets in the cabin.
- Observe the cabin manufacturer's safety and installation instructions.

### ► Risk of fire due to sauna stones

It is possible for hot stones or stone pieces to fall out of the rock store.

- The sauna heater may not be placed on a floor made of easily flammable material (e.g. laminate or synthetic flooring). Ceramic tiles are recommended as a flooring option.

### ► Risk of burns from hot glass

Glass surfaces in the cabin become hot while the sauna is in operation.

- When installing the cabin, ensure that the touchable glass surfaces on the outside of the cabin may reach a maximum temperature of 76°C. Appropriate protection may need to be installed if required.

### ► Risk of burns from hot unit

During operation, the sauna heater may become hot and, if touched, could cause burns.

- Maintain a safe distance.

### ► Sauna cabin and sauna heater

The sauna cabin must be constructed with proper material and built in a professional manner, and the output of the sauna heater must be suited for the cabin.

- The sauna heater may only be used in sauna cabins made of suitable, low-resin and untreated material (e.g. Nordic spruce). The control unit must not be used in the cabin.
- Multiple heaters may be installed in one sauna if the heater output can properly supply the cabin volume. In this case, depending on the position, an additional safety temperature limiter must be installed for each additional heater.
- The sauna heater is not designed to be installed or set up in an alcove or under a bench or sloping roof unless the sauna heater is specifically designed and approved for this type of installation.
- Receptacles may not be installed inside the sauna cabin.
- Each sauna cabin must have air inlets and outlets. The air inlets and outlets may be installed from below or from behind the heater. The minimum dimensions of the air inlets and outlets can be found here: Technical data, Air inlets and outlets,
- The air outlet is always installed in the lower part of the wall, diagonal to the sauna heater. The air inlets and outlets must not be closed. Please observe the instructions provided by your sauna cabin manufacturer.

- Use one of the control units listed below to check and control the sauna heater. This control unit is fixed to a suitable location on the cabin's external wall, and the corresponding temperature sensor according to the installation instructions that accompany the control units inside the sauna cabin.
- The cabin lighting must be safe for sauna cabin use and installed in such a way that it can be used safely in a sauna cabin. Ensure that the heater is installed in compliance with the standards and legal norms valid in your country.
- The cabin door must open outward and must not have a lock that cannot be opened in the case of failure. We recommend magnetic or spring locks.
- All electrical installations and equipment in a sauna must comply with the IEC 60364-7-703 (DIN VDE 0100-703) norm.

### 1.2 Operator instruction

The operator of the sauna cabin must be instructed in the general safety instructions during commissioning. The operator must be given a copy of the operating instructions.

#### ► Risk of electric shock

A risk to life and limb from electric shock and fire arises in the event of improper repair work. This risk remains also after work is completed.

- The housing cover must only be removed by a specialist.
- Repairs and installations must only be performed by a trained specialist.
- The system must be disconnected and removed entirely from the mains supply before commencing repair work.
- Use only original spare parts from the manufacturer.

### ► Fire hazard



Objects placed on the heater or protective guards can easily be ignited and cause fires.

- Attach the heater guard rail.
- Do not place objects on the heater.
- Fill the stone grate as directed.
- Inspect the sauna cabin prior to each commissioning.
- If you switch on the heater using pre-set timers or a remote control, attach a protective cover to the heater or install a suitable safety system.

### ► Health risks

Spending time in a sauna cabin can lead to serious health risks or even death for persons with health impairments.

- Persons with health impairments who spend time in a sauna must consult a doctor before entering a sauna cabin.

### ► Damage to health

Excessive time spent in a heated sauna cabin can lead to overheating of the body (hyperthermia), which may cause serious health problems and even death. Hyperthermia occurs when the core temperature of the body exceeds the norm by a few degrees.

Symptoms of hyperthermia include fever, dizziness, lethargy, sleepiness, and fainting. Side effects of hyperthermia include perception disorders, inability to recognize the need to leave the room, inability to identify imminent danger, harm to the foetus in the case of pregnant women, inability to physically leave the room and unconsciousness.

Alcohol, drugs, and medications increase the risk of hyperthermia.

- Do not exceed the maximum recommended time in the sauna.
- Leave the sauna cabin if your body responds abnormally to the heat or if you do not feel well.
- Avoid alcohol, drugs, and medications when you are using the sauna.

**► Operation by children or persons with reduced mental capacity**

This unit should not be used by children or persons with reduced mental capacity or limited physical or sensory abilities. Children must not play with the unit.

- Children or persons with reduced mental capacity, or limited physical or sensory abilities must be supervised to ensure they do not play with the unit.
- Children under 8 years of age should not operate the sauna cabin.
- The settings for the heating time must only be changed by children under 8 years of age if they are supervised by an adult.
- The sauna cabin must only be used by persons with reduced mental capacity, or limited physical or sensory abilities under supervision or if they have been previously instructed in its use and understand the risks.
- Children and persons who have not received proper instruction must not clean or service the system.

**1.3 Standards and regulations**

For an overview of the standards that were observed during design and construction of the sauna heaters, please refer to the individual product's technical data sheet that can be downloaded from [www.eos-sauna.com](http://www.eos-sauna.com).

## 2. Identification

### 2.1 Manufacturer

EOS Saunatechnik GmbH

Schneiderstriesch 1

D-35759 Driedorf

Tel.: +49 2775 82-0

Email: info@eos-sauna.com

### 2.2 Copyright

Copyright for these installation instructions remains with EOS Saunatechnik GmbH.

Copyright as per DIN ISO 16016:

The copying and distribution of this document, as well as the use and communication of its contents without express authorisation, are not permitted. Compensation will be claimed in the event of infringements. All rights reserved with regard to patent claims or submission of design or utility patent.

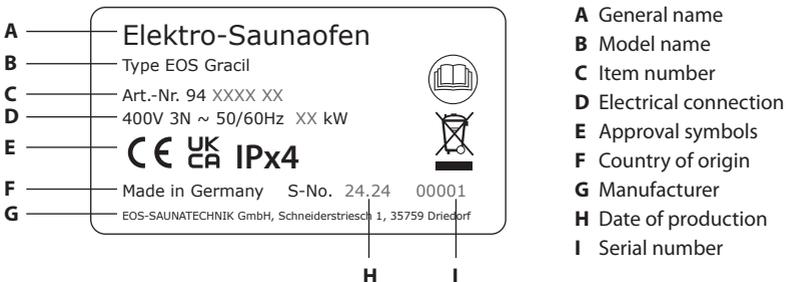
### 2.3 Identification of the device

EOS Gracil is an electrically heated sauna heater for Finnish mode available in a variety of output capacities.

The heater must be operated with one of the following control units, which are specified in Technical Data of this manual. The control unit is not included in the scope of delivery.

### 2.4 Nameplate

The nameplate is attached on the rear side of the heater.



- A** General name
- B** Model name
- C** Item number
- D** Electrical connection
- E** Approval symbols
- F** Country of origin
- G** Manufacturer
- H** Date of production
- I** Serial number

## 2.5 Intended use

This heater is intended solely for the purpose of heating sauna cabins, together with a suitable control unit.

EOS Gracil is a floor-standing sauna heater. It is suitable for cabins for private and commercial use.



The heater is not suitable for outdoor use!

It must be operated only in sauna cabins and may not be exposed to environmental conditions such as extreme humidity and moisture or the possible formation of condensation or corrosive substances in the ambient air, as well as other weather conditions.

Any use beyond this is considered improper use. Proper use also includes compliance with operating, maintenance and servicing requirements.

The manufacturer is not liable for unauthorised modifications made to the equipment and damages resulting from these modifications. The person modifying the equipment alone shall bear the associated risk.

## 2.6 Foreseeable misuse

The following are considered instances of foreseeable misuse:

- The unit is operated without knowledge of or compliance with the safety instructions..
- Operating, service and maintenance requirements are not observed.
- The unit is operated by children under 8 years of age.
- The unit is operated by children 8 years of age or older, or persons with reduced mental capacity who have not been thoroughly instructed in its use.
- The unit is operated without sauna stones or with a rock store that is not filled as directed.
- The heater power does not match the sauna volume.
- The unit is operated with insufficient air supply or exhaust air.

## 2.7 General instructions

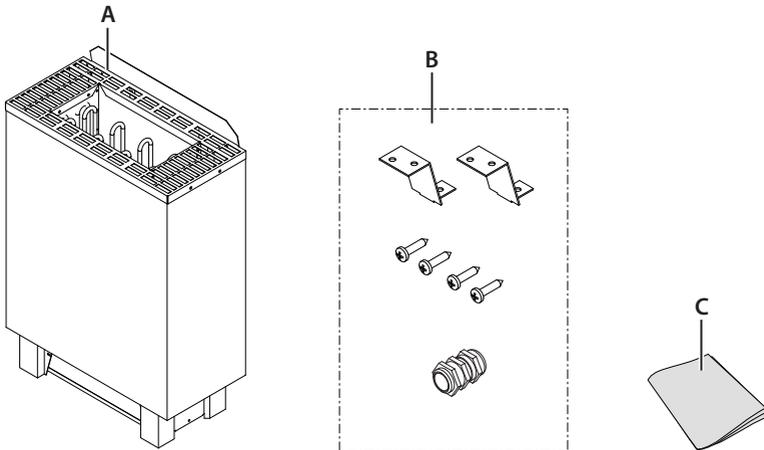
- Please note that an optimal sauna climate can be achieved only if the cabin with its air inlets and outlets, the sauna heater, and the control unit suit each other.
- Observe the specifications and information provided by your sauna retailer.
- The sauna heaters heat the sauna cabin with heated convection air. Fresh air is drawn in through the air inlet. It is warmed and rises (convection) and is then circulated in the cabin. Some of the used air is pushed out of the cabin through the cabin's air outlet. This creates a typical sauna climate in your sauna.
- Note that there is a drop in temperature from the ceiling to the floor of the sauna cabin. Temperatures are measured and regulated based on the ceiling values. Thermometers placed below the ceiling will therefore display lower temperatures. When the max. temperature is set for the area around the upper sauna bench, the bathing temperature is typically between 80°C and 90°C.
- Please note that the highest temperatures in the cabin are always above the sauna heater and that is where the temperature sensor and safety temperature limiter should be mounted according to the installation instructions.
- The first time the cabin is heated, you may notice a slight odour resulting from the evaporation of consumables used in the manufacturing processes. Air out your cabin once it has been heated and before using the sauna.

### 3. Scope of delivery

Check the delivery to ensure that all components were delivered and that the unit is in proper working order. Contact your distributor if components are missing or damaged. The unit must not be operated if components are missing or damaged.

The following parts are included in the scope of delivery:

- A. Sauna heater
- B. Accessory pack with:
  - 2 Mounting bracket
  - 4 particle board screws 5x35
  - 1 cable gland
- C. Installation and operation manual



#### ► Accessories (optional)

Accessories	Item no.
Decorative rear wall anthracite / black	94 6841 / 94 7254
Wooden guardrail with bracket (brushed steel)	94 7332
Wooden guardrail with bracket (black)	94 7334

## 4. Technical Data

Heater power as per DIN	4,5 kW	6,0 kW	7,5 kW	9,0 kW
Electrical connection	400 V 3N ~ 50/60 Hz			
For sauna volume	4 - 6 m <sup>3</sup>	6 - 8 m <sup>3</sup>	7 - 10 m <sup>3</sup>	9 - 14 m <sup>3</sup>
Minimum size of air inlet and outlet	35 x 4 cm	35 x 5 cm	35 x 6 cm	35 x 6 cm
Weight, without stones and packaging	20,0 kg	20,5 kg	21,0 kg	21,5 kg
Heater dimensions, H x W x D	76 x 50,5 x 25 cm			
Stone volume (not included))	~ 20 kg (Körnung 50-100 mm)			
Power extension unit (PEB unit)	no			
For use with the sauna control units	EOS Econ-, Compact-, EmoTec-, EmoStyle-, EmoTouch-, U-Command series			
Leakage current	max. 0.75 mA per kW heater output			
Intended use / area of application	Use in private sauna cabins			
Fuse protection for control unit	3 x 16 A			
Connection mains – control unit	5 x 2,5 mm <sup>2</sup>			
Connection control unit – heater	5 x 1,5 mm <sup>2</sup>			

All line cross-section specifications are the minimum cross-sections for the copper line.

## 5. Electrical installation

This chapter describes how EOS Gracil is connected to the power extension units.

### 5.1 General instructions for electrical installation

Ensure that electrical installation is performed in compliance with the standards and legal norms valid in your country.

Following norms must be observed by the installation of sauna heating appliances:  
IEC 60364-7-703 bzw. DIN VDE 0100 Teil 703

This standard states in its current edition under amendments paragraph 703.412.05 as follows:

“The additional protection must be provided for all current circuits of the sauna by one or more fault current protection devices (RCDs) with a rated differential current not exceeding 30 mA, except for sauna heaters.”

If a residual current device (RCD) is installed, ensure that there are no other electrical consumers not belonging to the sauna system which are fused via this RCD.

If the sauna heater has not been used for an extended period of time, the heater may draw moisture from the ambient air, which, in rare cases, could lead to the RCD to be tripped. This is a physical process and not a fault on the part of the manufacturer.

In this case, the heater must be heated by a technician under supervision which will bypass the RCD function. Once the moisture has escaped from the heating elements after approx. 10 minutes, the RCD can be integrated again in the electric circuit.

If the sauna heater will not be used for an extended period of time, we recommend that you switch on the heater every 6 weeks so that the heating elements do not accumulate moisture. If, during commissioning, the RCD is triggered, the electrical installation must be checked again.

The electrician is responsible for properly connecting the heaters; thus, the manufacturer does not assume liability.

### 5.2 Heating time limitation

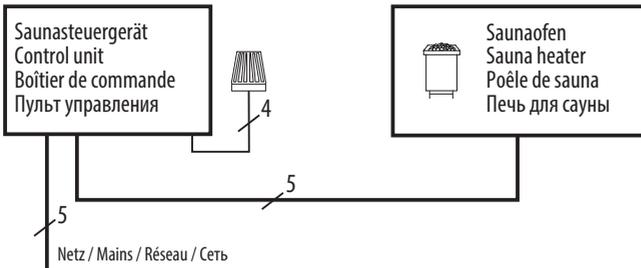
#### ► Heating time limitation operation principle

All sauna heaters, except for those installed in public saunas, and which must be operated under the supervision of personnel, must be equipped with a timer that complies with IEC and EN standards. This timer fully disconnects the sauna heater from the power supply for safety reasons. It is typically integrated in the sauna control units. The timer must be mounted outside of the sauna cabin and may not be overridden.

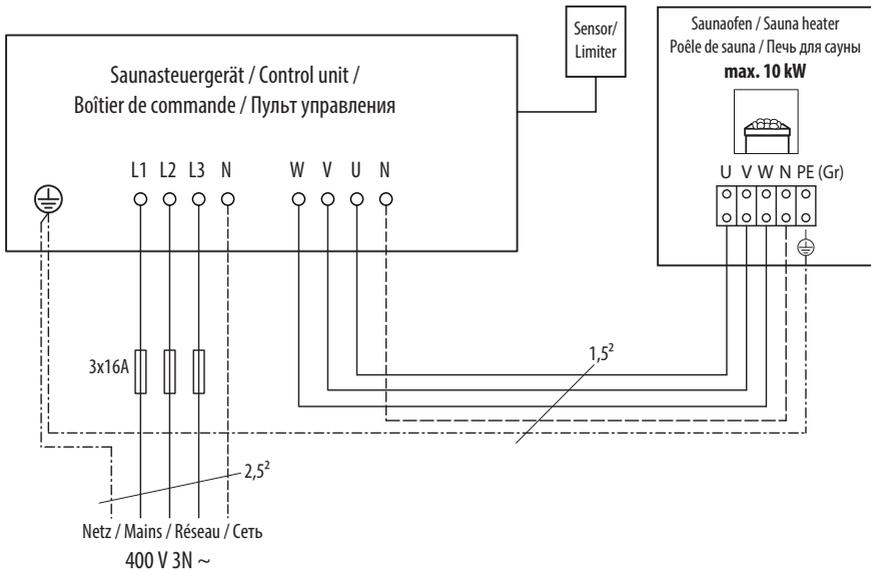
- The operation time of a public sauna must be limited so that the heating elements are without power for a minimum of 6 consecutive hours within a 24-hour period.
- Units used in private saunas must be limited to an operating time of 6 hours, and an automatic restart is not permitted.

### 5.3 Connection 4,5 - 9,0 kW to 400 V 3N ~

#### ► Connection overview

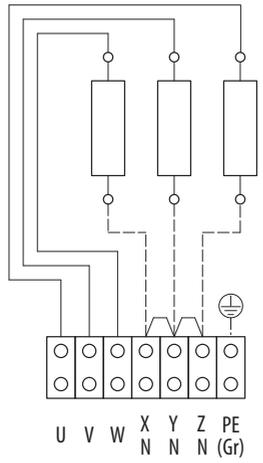


#### ► Connection diagram

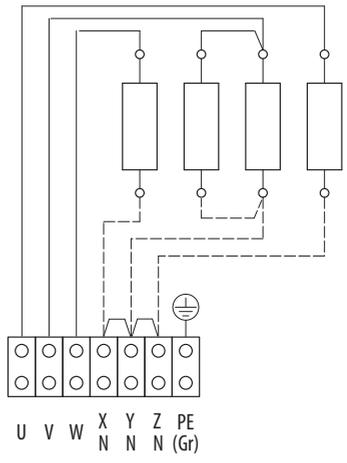


5.4 Internal wiring

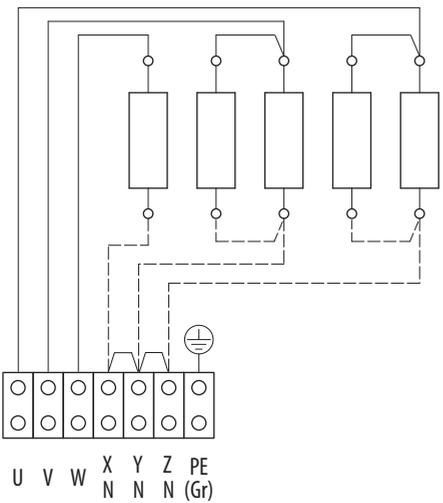
► 4,5 | 6,0 | 7,5 | 9,0 kW heater output



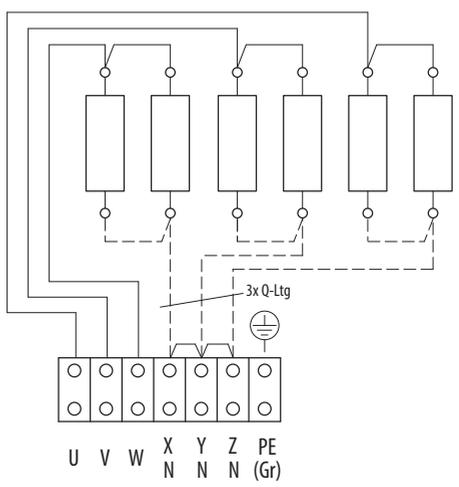
4,5 kW = 3x 1500 W



6,0 kW = 4x 1500 W

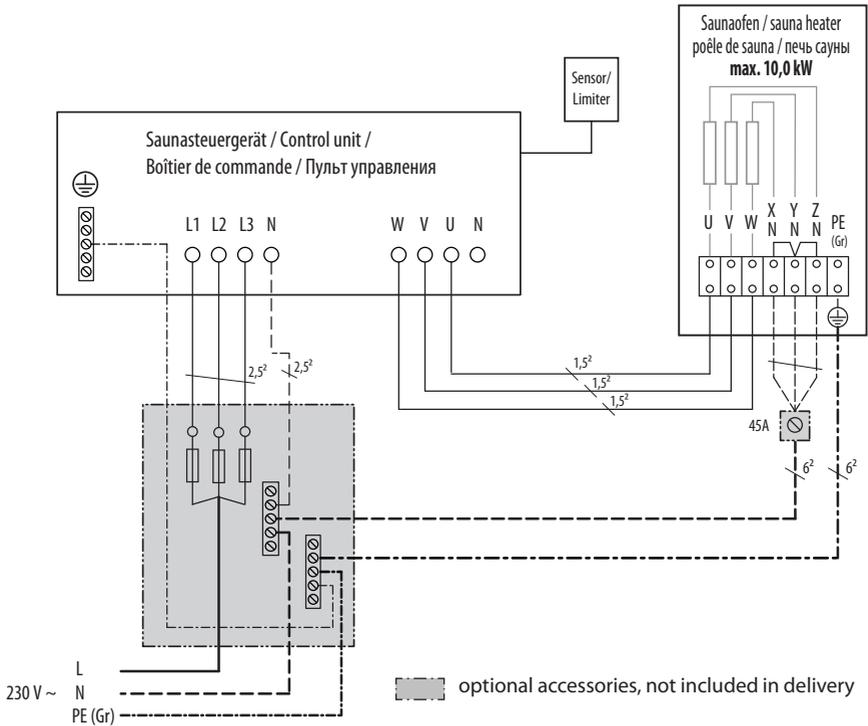


7,5 kW = 5x 1500 W



9,0 kW = 6x 1500 W

## 5.5 Electrical connection of 7.5–9 kW to 230V 1N ~



Cable cross section must suit heater power: up to 6 kW - 4 mm<sup>2</sup>, 7,5 - 9,0 kW - 6 mm<sup>2</sup>

### **⚠ WARNING**

#### **Risk of fire due to improper connection**

- The control unit and the sauna heater must be suitable for 230V 1N ~ connection.
- Use suitable fuses and cable lines.

## 5.6 Establishing an electrical connection

The connection effects through the terminals in the terminal box at the rear side of the heater.

1. **WARNING!** If maintenance is carried out on the heater while it is still connected to the mains, this may lead to an electric shock. Make sure to completely disconnect the heater from power supply.

a) Switch off the heater.

b) Switch off the fuses to disconnect the heater from the mains supply.

2. Take out the sauna stones, slightly lift the heater and turn it so that the rear side becomes accessible.

**ATTENTION!** Sauna stones can be hot! Let the stones cool down before removing them.

### ► Opening the terminal box

3. Unscrew the 2 retaining screws from the terminal box cover. Take off the terminal box cover pane.

**NOTICE:** Make sure to observe the connection diagram attached in the terminal compartment of the heater.

### ► Connecting the lines

4. Feed the connecting cables through the openings in the terminal box.

5. Attach wire-end ferrules to the ends of the cables (crimp the wires).

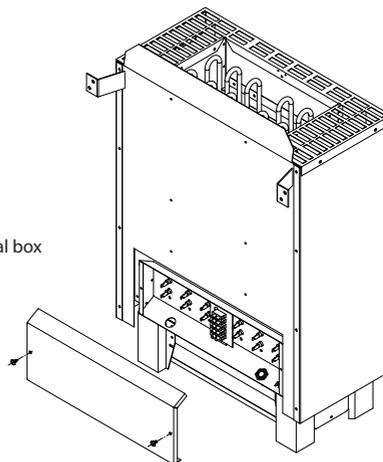
6. Connect the neutral conductor to the supply terminal on the „N“ busbar. Connect the phases to the supply terminals for the 3 phases. Use a torque of 2.5–3 Nm.

### ► Closing the terminal box

7. Mount the terminal box cover panel back on the terminal box.

8. Mount back the rear wall cover panel and secure it with two screws.

Electrical connection - access to terminal box



## 6. Installation

This chapter shows how to install the sauna heater. Prior to installation, air inlets and outlets must be installed in the cabin. It may be necessary to mount additional fans in the inlets/outlets. All protective foils must be removed from the heater.

### NOTICE

#### Damage due to incorrect mounting location

The heater is not suitable for outdoor use.

- The heater must be operated only inside buildings and may not be exposed to environmental conditions such as extreme humidity and moisture or the possible formation of condensation or corrosive substances in the ambient air, as well as other weather conditions.
- The heater is not designed to be installed or set up in an alcove or under a bench or sloping roof.

### 6.1 Requirements for the sauna cabin

The cabin must be planned and installed according to specifications before the heater is installed.

All electrical installations laid inside the cabin must be suitable for a temperature of at least 170°C.

All lines must be routed in such a way that they are well-protected, e.g. in a cable duct. If single-core lines are used as connecting cables, they must be protected by a flexible metal hose that is connected to the protective conductor.

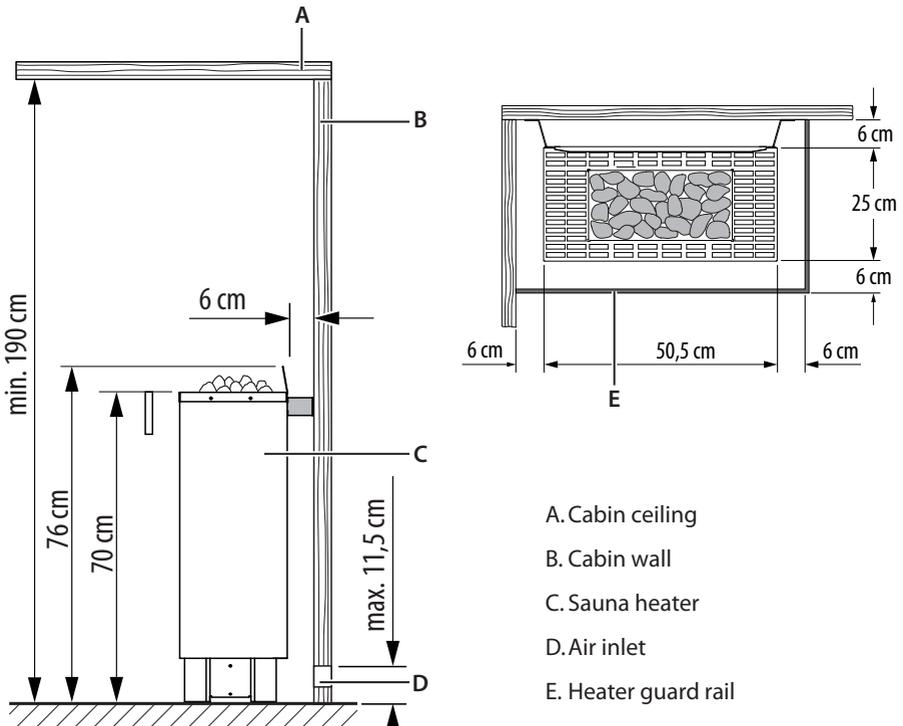
In general, it should be noted that the sauna heater must not be set on a floor made of highly flammable material such as laminate, flooring made of plastic material, etc. Ceramic tiles are recommended as a flooring option. Floor heating in the sauna cabin increases the temperature of the floor's surface temperature.

► **Installation site**

The required cabin volume depends on the heater output. See 4. Technical data.

- Ceiling height of at least **1,90 m**
- Distance heater – cabin wall min. **6 cm**
- Distance heater – bench min. **6 cm**
- A heater guard rail may be placed around the upper edge of the heater. It prevents accidental contact with hot parts of the heater.

► **Dimensions and safety gaps**



- A. Cabin ceiling
- B. Cabin wall
- C. Sauna heater
- D. Air inlet
- E. Heater guard rail

**Optional accessory:**

The heater guard rail is not included as standard in the scope of delivery and is optionally available to suit the sauna heater (see Scope of Delivery, Optional Accessories).

The installation of the safety guard rail is described in a separate manual.

## 6.2 Air inlets and outlets

### **WARNING**

#### **Fire hazard from overheating**

The heater can overheat if the air supply is insufficient. There is a risk of death due to fire.

- Ensure that the air inlets and outlets provide sufficient ventilation. Install a fan if necessary.
- Commission the cabin only after all air inlets and outlets have been opened.

### **NOTICE**

#### **Heating process delayed**

If the heating process takes a long time, the underlying reason is that the heater receives insufficient air.

- A minimum of 5 times the cabin volume of air per hour must be exchanged.

Air inlets and outlets must be installed in the cabin to ensure a sufficient air flow in the cabin and to prevent the heater from overheating.

The required size of the air inlets and outlets depends on the heater output; see 2.4 Technical data

Depending on the location of the heater, the air inlet must be installed behind or below the heater.

- Heaters stands directly in front of the sauna wall,
- Heater is located in the middle of the cabin or in front of a glass wall.

#### **► Heater is located at the cabin wall**

The air inlet must meet the following criteria::

- Location: Behind the heater,
- Height: 10 cm above the cabin floor

If there is still not enough fresh air to reach the heater, a fan must be installed at the opening outside of the cabin.

The fresh air inlet can be made as one larger or several smaller openings.

### ► Heater is located in the middle of the cabin or in front of a glass wall

The air inlet must meet the following criteria:

- Location: Below the heater
- A duct directs fresh air to the opening or openings.
- A fan must be mounted at the beginning of the duct outside of the cabin.

## 6.3 Specifications for the control unit

Observe the operating conditions for the control unit to ensure that the sauna cabin's temperature control works properly. The installation site must be selected accordingly.

Specifications can be found in the installation instructions for the control unit or in the instructions provided by the manufacturer of the control unit.

## 6.4 Installing the temperature sensor in the cabin

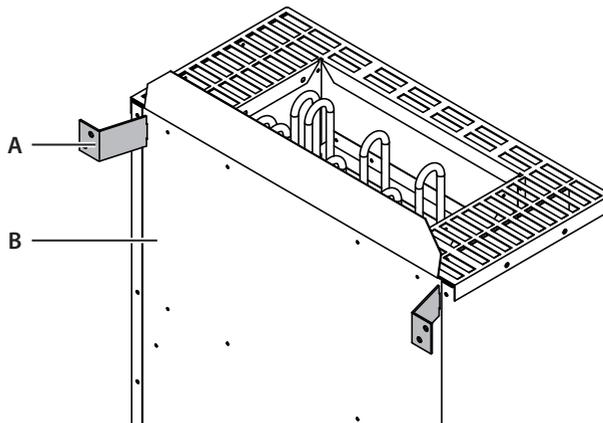
The temperature sensor should be mounted on the sauna ceiling as indication in the drawing in the chapter. The connection of the sensor is described in the installation manual of the sauna control unit.

## 6.5 Mounting the heater

- Once the cabin is ready, the heater shall be placed on a pre-defined installation place.
- Secure the oven using the supplied mounting brackets.
- Observe the required safety clearances!
- Fill the sauna stones only after the heater has been connected and installed at it's final place.

### ► Fixation to the wall

Slide the mounting brackets into the slots provided at the rear to ensure safety, and secure them to the cabin wall using the 4 chipboard screws.



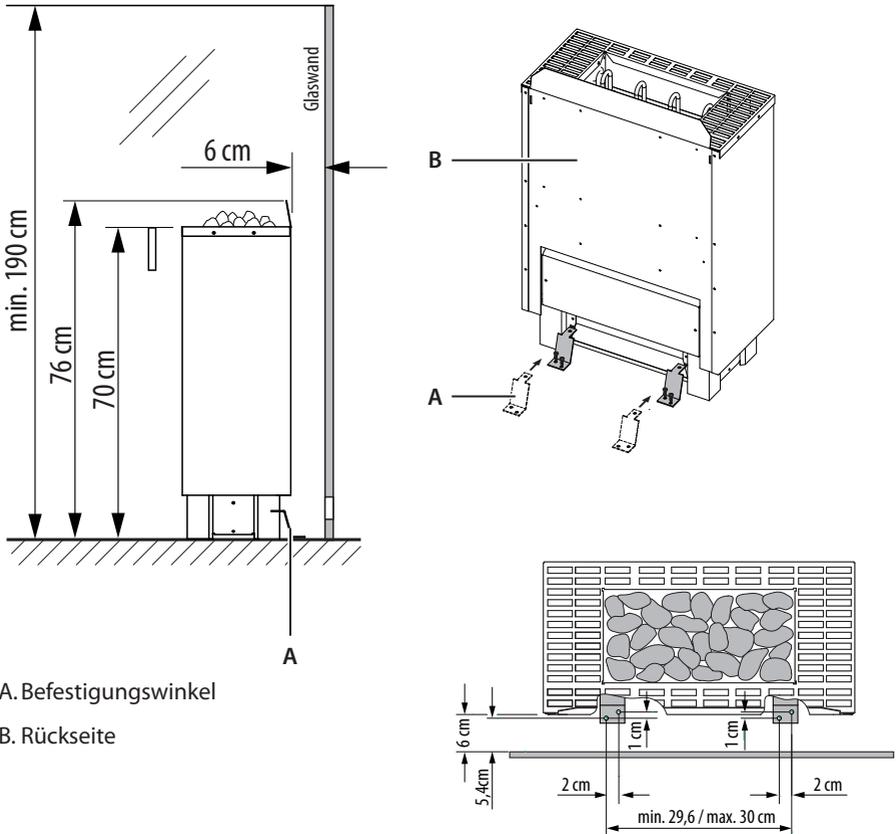
A. mounting brackets

B. back side

### ► Fixation to the floor

When mounting the heater in front of a glass panel, secure the heater against tilting by fixing the mounting brackets on the pedestal of the heater and the floor.

Push the bracket in the slits of the pedestal and secure it with screws on the ground.



A. Befestigungswinkel

B. Rückseite

## ⚠ CAUTION

### Risk of injury from tipping

One of the given alternatives to secure the heater must be implemented!

- Risk of injuries. Risk of equipment damages through tilting of the heater.

## 6.6 Connecting cable

The connection is made via terminals in the junction box on the back of the heater.

1. Remove the rear panel. See chapter "Making the electrical connection".
2. Remove the lid of the junction box. See chapter "Making the electrical connection".
3. Connect the connecting cable according to the circuit diagram. A circuit diagram is attached to the inside of the junction box lid.
4. Connect the connecting cable to the control unit. Observe the regulations of the local power supply company and the VDE (German Electrical Engineering Association).
5. Replace the junction box lid.
6. Screw in and tighten the 4 fixing screws.
7. Then fill the stone basket with sauna stones (optionally available). Further details can be found in the Sauna stones chapter.

## 6.7 Filling the rock store

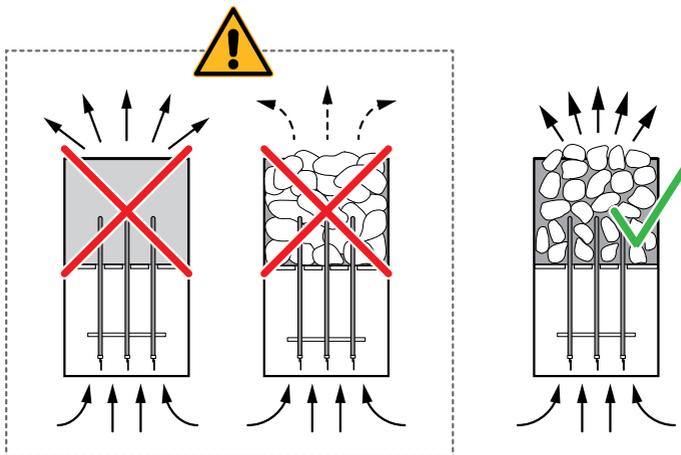
Wash the stones under running water.

The heater is intended for use with natural sauna stones. Use only stones of the prescribed caliber of approx. 50-100 mm.

**WARNING!** Sauna stones that are stacked too tightly obstruct the flow of air. The heater could overheat.

Place stones in the stone basket individually with plenty of space between them up to the height of the upper edge.

Do not place the sauna stones on the edge. The air must flow freely. Place the stones so that they do not exert excessive pressure on the heating rods.



## 7. Commissioning

Before the heater can be commissioned (switched on), it must be filled with sauna stones, which are available as optional accessories.

Before switching it on, ensure that the air inlets are free of lint. Remove any lint with a moist towel.

The heater is switched and controlled via the control unit. A power extension unit (PEB), if available, will be switched together with the sauna control unit.

### **WARNING**

#### **Fire hazard**



Objects placed on the heater could catch fire. Herbs or similar substances used for aroma infusion purposes, which are located near the heater, could catch fire.

- Inspect the cabin prior to each use.
- Commission the cabin only after all air inlets and outlets have been opened.

### **WARNING**

#### **Fire hazard from overheating**

Operating the heater without stones could cause fire or damage to the heater. Stones that are positioned too close together in the heater prevent hot air from being exhausted. This leads to overheating of the heater.

- Start the heater only if it has been filled with stones.
- Refer to the chapter Installation, section "Filling the stones".

### **7.1 Starting the heater**

A slight odour may occur the first time the cabin is switched on because the heating elements get heated for the first time. The odour ceases upon continued operation of the heater.

#### **► Switching the sauna heater**

1. Use the control unit to select a suitable program.
2. Switch the heater on or off through the sauna control unit.

## 7.2 Remote switching

If you switch on the heater using the remote control, ensure that no objects are placed on the heater. A suitable safety system, for example EOSafe D/L, can be used to prevent this.

## 7.3 Water splash

Before the first water splash can begin, the cabin must be sufficiently heated. The temperature in the cabin is controlled from the control unit via the temperature sensor. The control panel indicates when the desired temperature has been reached.

### **WARNING**

#### **Fire hazard and device damage**

Incorrectly diluted sauna essences, essential oils or herbs can catch fire.

- When preparing the water for a splash, follow the instructions regarding quantity as specified on the sauna essence packaging.
- Never add more sauna essence or essential oils to the infusion water than the amount indicated by the manufacturer.
- Don't use chlorinated or salty water (e.g. seawater or salty fragrances). Don't use any corrosive additives.
- Do not add herbs to the water or on the stones.
- Pour the water over the stones only.

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Pour the water slowly and evenly over the stones.

As the hot air rises, steam is distributed evenly in the cabin to create a pleasant infusion experience. Please note that the sauna stones must be reheated after each water splash to generate an intense burst of steam.

After each water splash, wait approx. 10 minutes before starting the next one. This time is needed for the sauna stones to reheat.

Recommendation: During a water splash, no more than approx. 100 ml of water per m<sup>3</sup> cabin volume should be vaporised.

## 8. Maintenance

This sauna heater is made of corrosion resistant materials. To ensure a long service life, take care of and perform regular maintenance on your sauna heater.

Ensure that openings in the intake area and heat reflectors are never blocked. These can easily become blocked with lint and dust as fresh air is drawn in. This limits the air convection ability of the sauna heater and could lead to impermissible temperatures. Clean and/or descale the units as needed.

If you do not use your sauna for a longer period of time, ensure that at the time of recommissioning no towels or other objects are lying on the sauna heater or vaporiser.

Contact your sauna retailer or the manufacturer directly if you notice malfunctions or signs of wear and tear.

### 8.1 Cleaning

The heater must be cleaned regularly. The cleaning frequency depends on how often it is used. Clean the heater only with household cleaners.

#### CAUTION

##### **Risk of injury from sharp edges**

- Use suitable personal protective equipment, e.g. gloves, when cleaning parts with sharp edges.

#### ► **Cleaning the heater**

1. Switch off the heater through the control unit. Allow the heater to cool down completely.
2. Clean the outer surfaces of the heater as necessary. Use only household cleaning agents.
3. Remove lint and dust from openings and heat reflectors. Openings can easily become blocked with lint and dust as fresh air is drawn in. This limits the air convection ability of the heater and could lead to excessive temperatures.

## 8.2 Sauna stones

Sauna stones are a product of nature. Sauna stones must be replenished or reshuffled regularly depending on the intensity of use.

The process of heating and cooling can make the stones brittle. Particular damage to the sauna stones can be caused by aggressive sauna essences, causing them to disintegrate over time. Small particles can break off from the stones. The gaps between the stones also become smaller which means that hot air can no longer rise between the stones. Check the sauna stones regularly and reshuffle them. Replace damaged stones. Please observe the following intervals.

Commercial use	Private use
Every 2-3 months	Once per year

Use only natural sauna stones when you replace the old stones with new ones. Due to their roughness, they produce a better water splash effect than ceramic sauna stones.

### ► Reshuffling the sauna stones

1. Switch off the heater through the control unit.
2. **CAUTION!** Stones may be hot. Allow the heater to cool sufficiently before you start to replace the stones. Remove each stone individually.
3. Check each stone for damage. Sort out any stones with notable damages.
4. Rinse all stones with cold water.
5. Place the stones loosely so that there is enough space between them for air to circulate sufficiently.

## 9. Service

### 9.1 Replacing the tubular heating element

You can replace individual tubular heating elements or the entire heating coil.

If the heater is too close to the wall, it may be necessary to move it so that you can access the rear side. To move the heater more easily, remove stones.

Necessary steps:

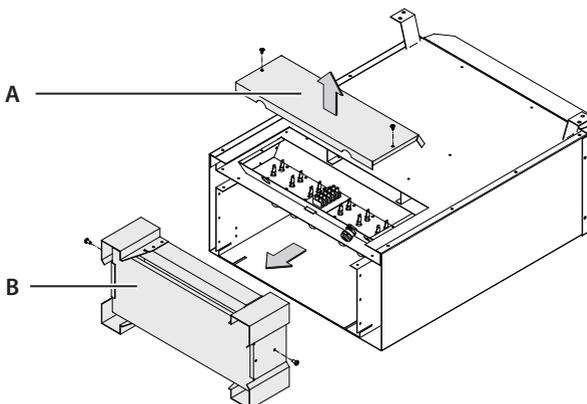
- Replacing the tubular heating elements

Hardware and tools:

- Tubular heating element
- Screwdriver
- Allen key
- Ring or socket spanner

#### ► Removing the heating coil

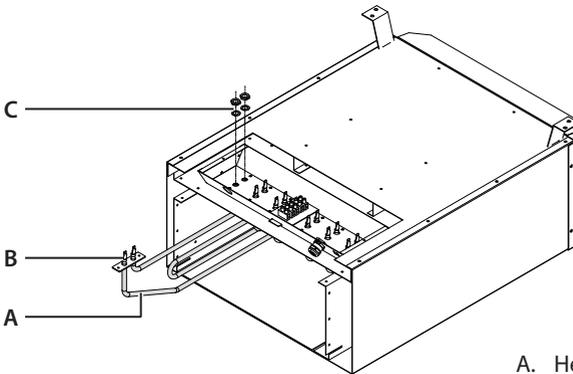
1. **WARNING!** Ensure that the heater has been disconnected from all power supply lines.
  - a) Switch off the heater.
  - b) Switch off the fuses to disconnect the heater from the mains supply.
2. **CAUTION!** Allow the heater to cool down sufficiently before starting work, remove the stones.
3. Loosen the heater mounting at the wall or floor.
4. Carefully pull the heater forwards, tilt it forwards, and lay it on its front side.
5. Remove the two fixing screws on the connection box and remove the cover (A).
6. Unscrew the two screws on the base (B) and pull the base outwards.



- A. Junction box cover
- B. Base

**► Replacing a tubular heating element**

1. Identify the defective tubular heating element by taking measurements
2. Remove both flat plugs from the defective heating element.
3. Loosen the 2 fixing nuts and serrated washers on the defective heating element.
4. Press the heating element down slightly and pull it out.
5. Insert the new heating element.
6. Fix the heating element with the serrated washers and the fixing nuts
7. Plug in the flat plug.
8. Check the wiring on all heating elements before reclosing the terminal box and setting up the heater.



- A. Heating element  
B. Flat pin  
C. Fixing nut

**► Heater ready for use**

1. Slide the base into the oven and secure it with the side screws.
2. Fasten the cover to the connection box with two fixing screws.
3. Move the heater back into its original position.
4. Secure the heater again. Screw in the screws for fixing to the wall or the floor. See also installation for "Wall or Floor mounting".
5. Place the stones in the rock store.
6. Reconnect the heater and the control unit to the mains (restore the power supply).

## 9.2 Troubleshooting

Error	Reason	Solution
It takes the heater a long time to heat up the cabin.	One or more than one heating element is defective.	Have a technician replace the tubular heating element.
	There is not enough space between the stones.	Reshuffle the stones.
	There is insufficient ventilation.	Install the air inlets. If these are insufficient, add a fan to the openings.
	The electrical connection is defective	Check the installation fuses.
		Have the control unit's outputs checked by a technician.
The position of the temperature sensor is not optimal.	Check the position of the temperature sensor and adjust as needed.	
The heater is very hot but cannot distribute the heat throughout the cabin.	There is not enough space between the stones.	Reshuffle the stones.
The safety temperature limiter was triggered and the heater no longer heats.	The STL was triggered by heat accumulation.	Check the inlets, outlets, and the fan and ensure that the heater has access to a sufficient amount of air. Replace the safety temperature limiter.
	The position of the temperature sensor in the cabin is not optimal.	Check the position of the temperature sensor and adjust as needed.

## Recycling



Devices or lighting elements that will not be used any longer have to be handed in at a recycling station according to regulation 2012/19/EU.



Do not dispose it with the normal household waste.

## Packaging

The packaging of the unit can be completely separated for disposal and recycled. The following materials are used in the packaging:

- Paper/cardboard
- Plastic foil / plastic

## Electronic waste

Electronic waste must be disposed of at the designated local collection point for electronic waste.

## Additional disposal note for commercial users:

Further disposal instructions can be found under the link [www.eos.sauna.de/recycling](http://www.eos.sauna.de/recycling)

## Service Address

EOS Saunatechnik GmbH  
Schneiderstriesch 1  
35759 Driedorf  
Germany

Tel: +49 (0)2775 82-514  
Fax: +49 (0)2775 82-431  
[service@eos-sauna.de](mailto:service@eos-sauna.de)  
[www.eos-sauna.com](http://www.eos-sauna.com)

Please retain this address together with the installation guide for further references.

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.

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Date of sale:

\_\_\_\_\_  
Stamp and signature of the authorized dealer:

## 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. Costs

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

- De-installation/installation and electrical works (connection / disconnection).
- Transportation, postage and packaging.
- Function testing and troubleshooting including inspection and repair costs.

There shall be no third-party billing.

### III. Obligations / Ordering Party's cooperation

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

By an accepted warranty claim the manufacturer shall provide the required replacement parts 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 and shall be paid as per agreed payment terms.

### 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 Guarantee

The manufacturer's guarantee 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 installation instructions and instructions for use.

- The guarantee period shall commence from the date on which proof of purchase is provided and shall be limited, in principle, to 24 months.
- Guarantee services shall be performed only if the original proof of purchase relating to the equipment can be presented.
- Any and all guarantee claims shall become void if modifications are made to the equipment without the manufacturer's express consent.
- Any guarantee 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 guarantee claims, the serial and article numbers must be indicated together with the product name and a meaningful description of the fault.
- This guarantee shall cover defective equipment parts, with the exception of usual wear parts. Wear parts are, among others, lamps, glass parts, heating elements and sauna 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 installation and connection works 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 responsible authorized dealer and shall be exclusively handled via the latter.

The manufacturers General Terms and Conditions of Business, which can be found at [www.eos-sauna.com/agb](http://www.eos-sauna.com/agb), shall apply in addition to the foregoing terms and conditions of service.

As of 08/2018