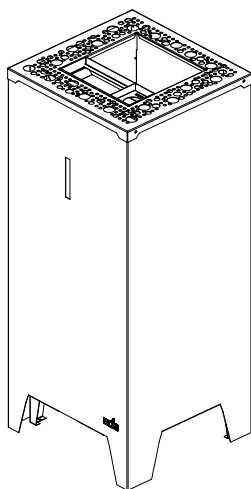
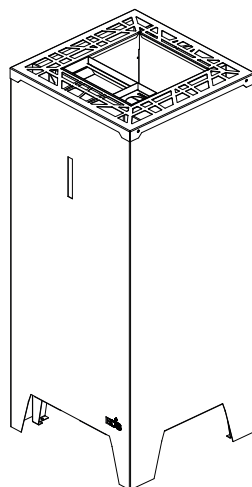


EOS Bi-O Cubo 2

Sauna Heater



Style 1



Style 2

Installation and operating instructions

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 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 protec-

tive 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.

► Equipment damage due to overuse

If the cabin is used commercially, the heating time must be set so that the heater switches off automatically after a specific period of time.

- If the heating does not switch off automatically after a defined heating period, cabin use must be supervised at all times.
- Inspect the cabin before each use.

► 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.

2. Identification

2.1 Manufacturer

EOS Saunatechnik GmbH
Schneiderstriesch 1
35759 Driedorf, Germany
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.

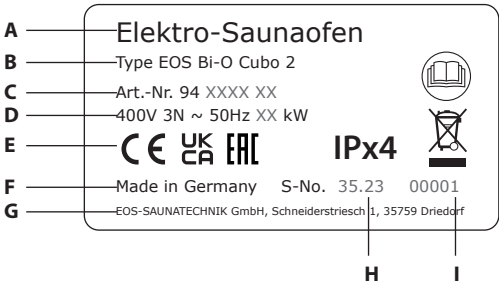
2.3 Identification

EOS Bi-O Cubo 2 is an electric sauna heater with an integrated vaporizer and is available in a variety of output capacities.

The sauna heater EOS Bi-O Cubo 2 must be operated with one of the EOS sauna control units, which are specified in the Technical Data section. The sauna 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 Bestimmungsgemäße Verwendung

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

EOS Bi-O Cubo 2 is a floor-standing sauna heater. It is suitable for cabins for commercial and private 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 responsible for unauthorised modifications 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

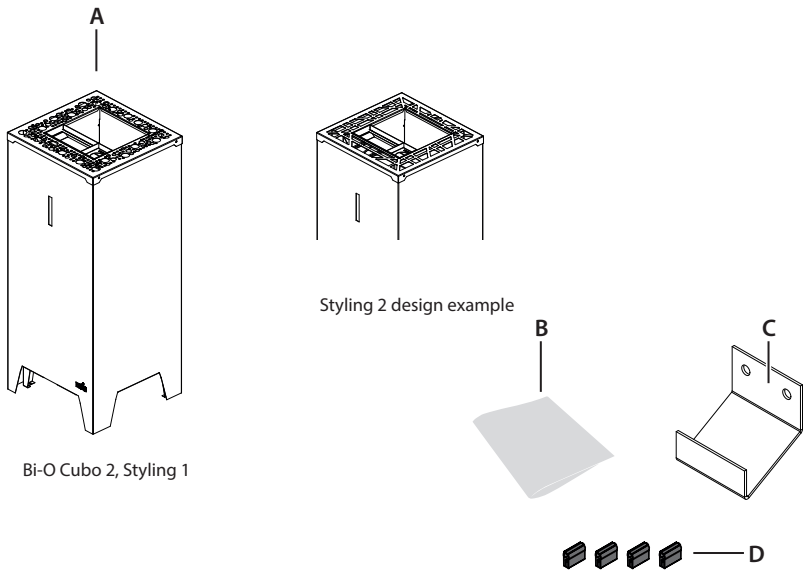
- Please note that an optimal sauna climate can be achieved only if the cabin with its air inlets and outlets, the sauna heater, and the control unit suit each other.
- Observe the specifications and information provided by your sauna retailer.
- Please note that the highest temperatures in the cabin 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 for the control units.
- 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.
- 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. Installation and Operating Instructions
- C. Mounting bracket for wall fastening, with 2 screws
- D. 4 floor level compensation pads



► Accessories (optional)

Description	Item number
Safety guard rail with brackets (brushed stainless steel)	94 7112
Safety guard rail with brackets (matt black)	94 7668
Brackets for guard rail without wooden parts, brushed stainless steel	94 6123
Brackets for guard rail without wooden parts, matt black	94 7279

4. Technical data

Heater power as per DIN	7.5 kW	9.0 kW	10.0 kW	12.0 kW
Electrical connection	400 V 3N ~ 50 Hz			
Vaporiser output/volume	2.0 kW / 9 l		3.0 kW / 9 l	
For sauna volume	7 - 10 m ³	9 - 14 m ³	11 - 15 m ³	14 - 18 m ³
Minimum size of air inlet and outlet	35 x 5 cm	35 x 6 cm	35 x 6 cm	35 x 7 cm
Weight, w/out stones and packaging	33 kg			
Heater dimensions, H x W x D	95 x 40 x 39.5 cm			
Stone volume	~ 25 kg calibre 50-100 mm (not included)			
Power extension (PEB unit) *	no			yes
For use with the sauna control units	EOS Econ H-Serie, Compact H-Serie, EmoTec H-Serie, EmoStyle H/Hi, EmoTouch-Serie			
Leakage current	max. 0.75 mA per kW heater output			
Intended use / area of application	Use in private and commercial sauna cabins			
Fuse protection for control unit	3 x 16 A			
Fuse protection for PEB unit	—			3 x 16 A
Connection mains – control unit	5 x 2.5 mm ²			
Connection mains – PEB unit	—			5 x 2.5 mm ²
Connection control unit – heater	5 x 1.5 mm ² & 4 x 1.5 mm ²			
Connection PEB unit – heater	—			5 x 1.5 mm ²
Connection control unit – PEB unit	—			4 x 1.5 mm ²

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

*Note for power extension

- For Econ series control units a PEB 10 relay box needed by 10 - 12 kW.
- For Compact H18 control units no power extension is required.
- For other EOS control units, a PEB 10 relay box needed by 12 kW.

5. Electrical installation

This chapter describes how EOS Bi-O Cubo 2 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, 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.

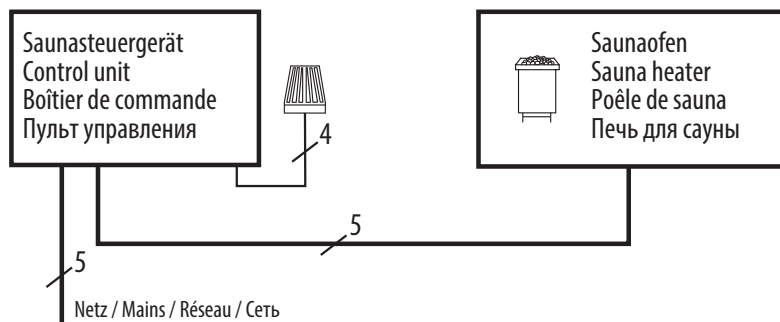
► Heating period limitation

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. For safety reasons, this timer limits the operation time. This timer is typically integrated in all EOS sauna control units.

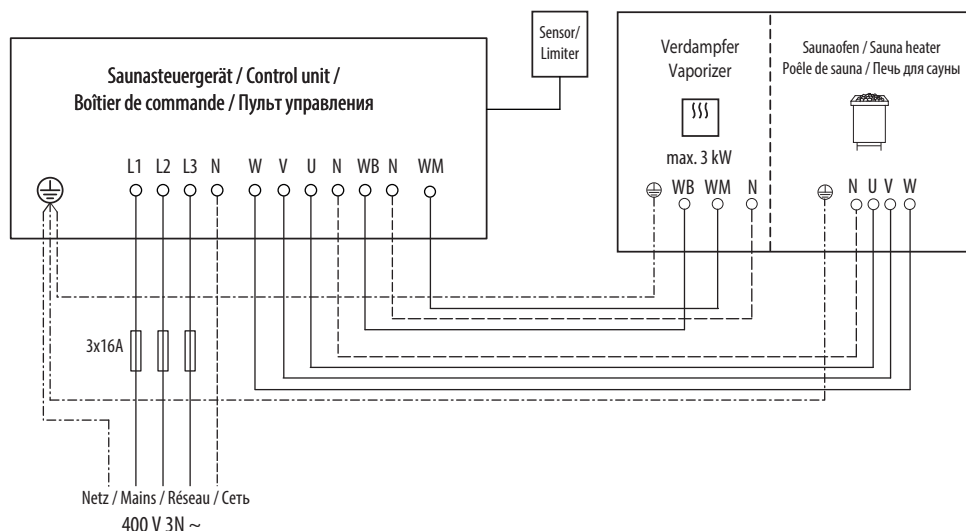
- The operation time of a public sauna must be limited so that the heating elements are without power for a minimum of 6 consecutive hours within a 24-hour period before an independent restart can take place.
- Units used in private saunas must be limited to an operating time of 6 hours, and an automatic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

5.2 Connection 7,5-10,0 kW (12 kW*) – 400 V 3N ~

► Connection overview



► Connection diagram

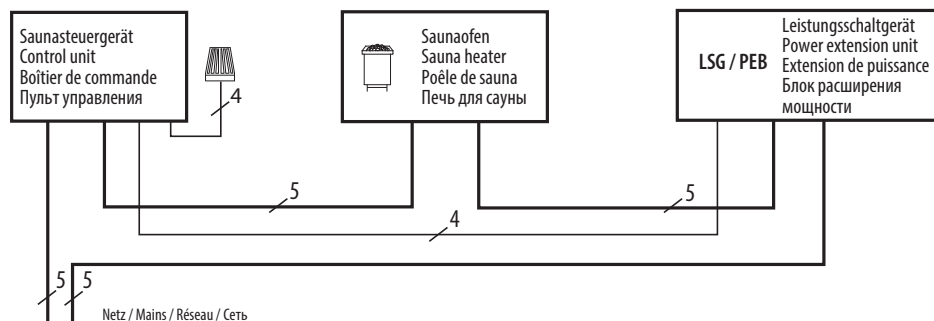


Notes: By 10kW not for Econ series control units (power extension required by 10-12 kW)

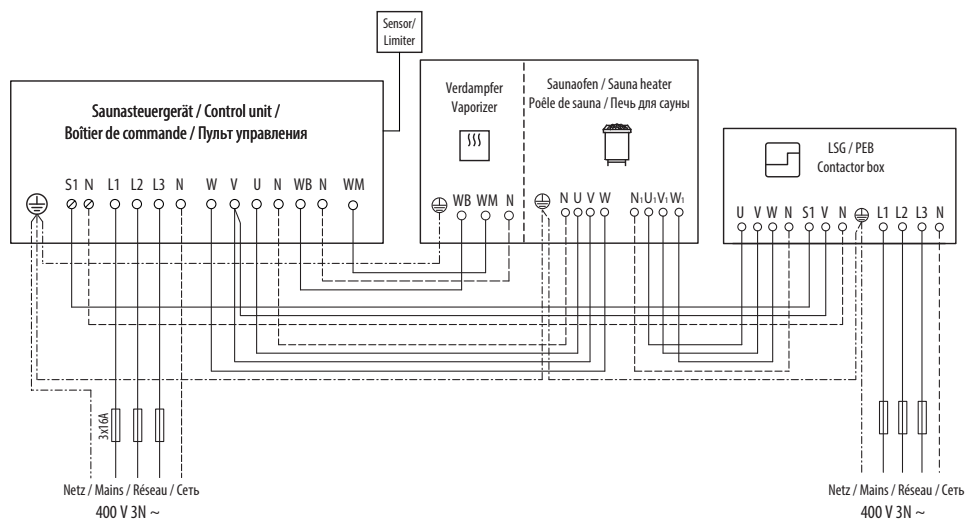
* By Compact H18 suits also 12 kW models.

5.3 Connection 12,0 kW – 400 V 3N ~

► Connection overview

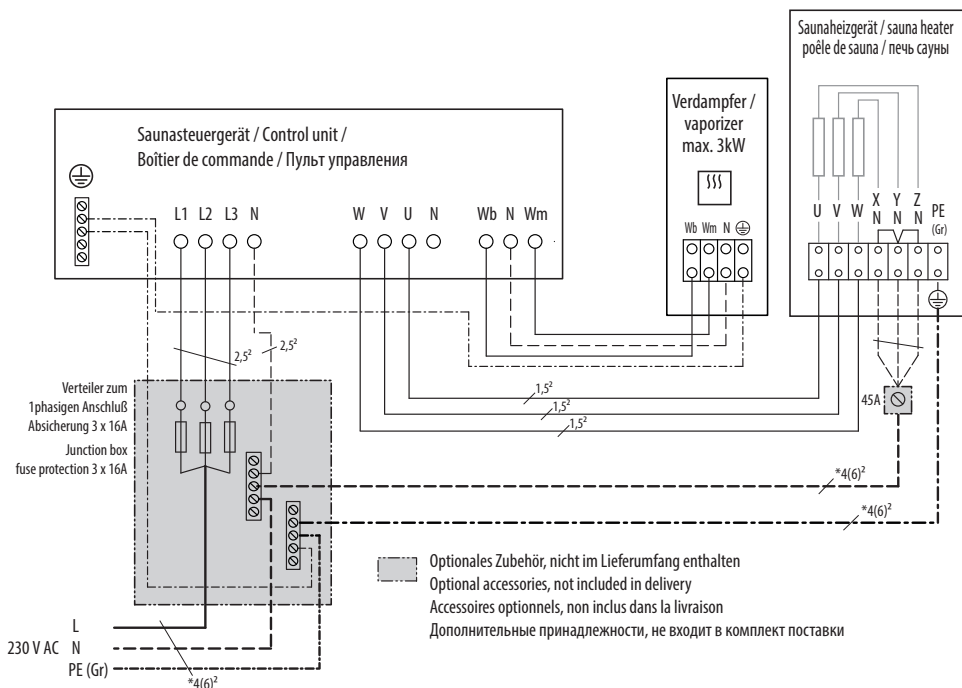


► Connection diagram



Notes: Not for Compact D18 control units. Power extension not required.

5.4 Electrical connection 7.5-9.0 kW at 230 V 1N ~



* The cable cross sections must suit the heater power: 7.5 - 9.0 kW - 6 mm²

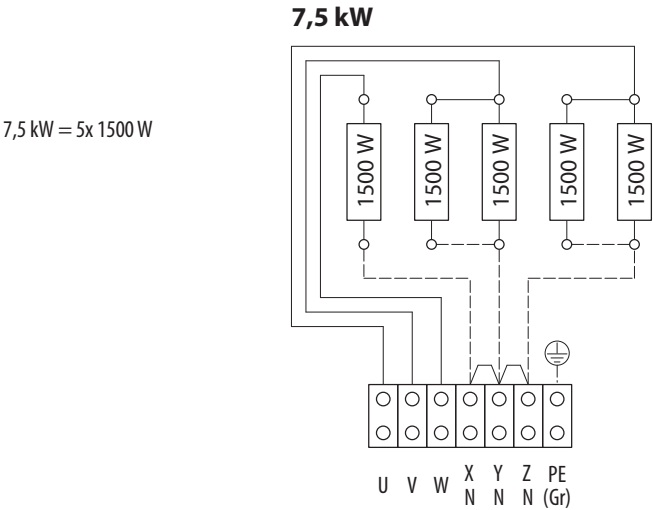
⚠ WARNING

Risk of fire by incorrect installation and connection

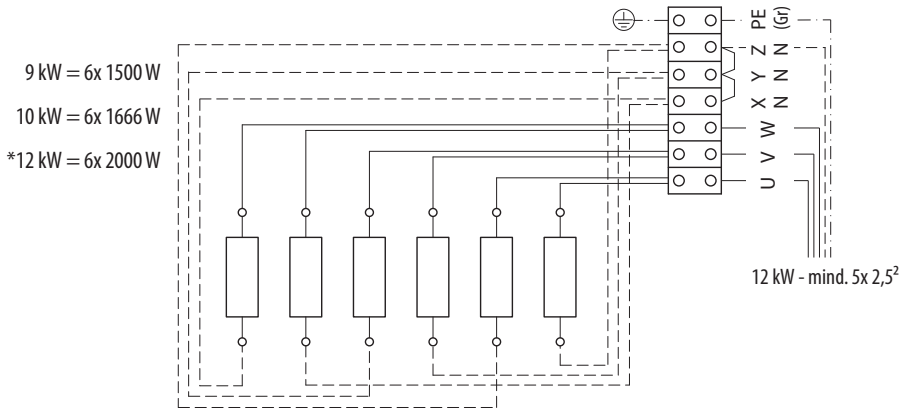
- The control unit and the sauna heater must be suitable for connection to 230 V 1N ~.
- Use suitable fuses and cable lines.

5.5 Internal wiring

► 7,5 kW heater output

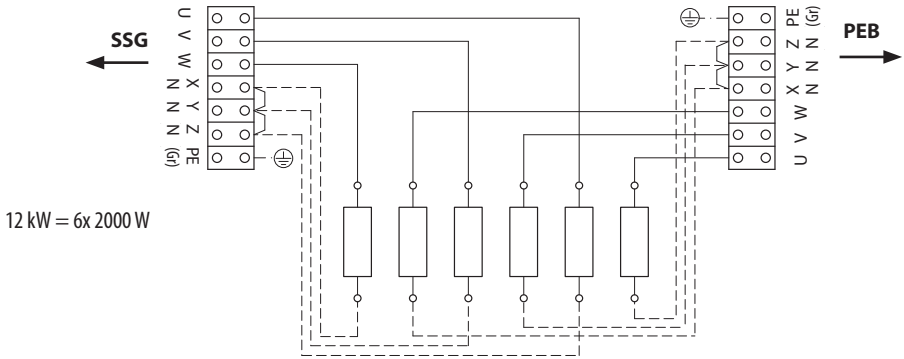


► 9,0 / 10,0 / 12,0 kW heater output



* only for connection with Compact D18/H18 control unit.

► 12,0 kW heater output -dual circuit-

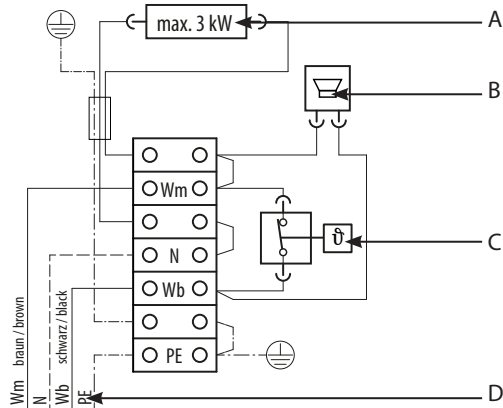


SSG - Saunasteuergerät, **PEB** - Leistungsschaltgerät

5.6 Vaporiser circuit diagrams

The vaporiser must be connected as shown in the circuit diagrams.

Please observe the installation and operating instructions for the control unit and relay boxes.



- A. Heating element
- B. Signal
- C. Thermostat
- D. Connection for sauna control unit

5.7 Establishing an electrical connection

The connection is made at the terminals in the terminal compartment located at the rear side of the heater.

1. **WARNING!** Electric shock may occur if the heating coil is serviced while the heater is connected to the power supply. 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. Steine aus dem Steinkorb herausnehmen, den Ofen etwas anheben und so drehen, dass die Rückwand frei zugänglich wird.

CAUTION! Caution: stones may be hot. Allow the heater to cool sufficiently before you start to remove the stones.

2. Undo two screws at the bottom of the rear side panel and take it off.

► Opening the terminal box

3. Unscrew the 4 retaining screws on the cover of the terminal box and remove the cover.

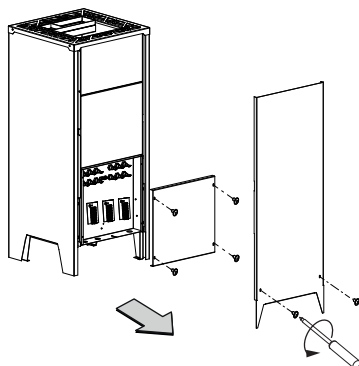
NOTICE: Observe the connection diagram attached inside the terminal compartment.

► 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 back the terminal box cover.
8. Secure it with four screws.
9. Fit back the rear side cover panel and fasten it with two mounting screws.



6. Installation

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

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.

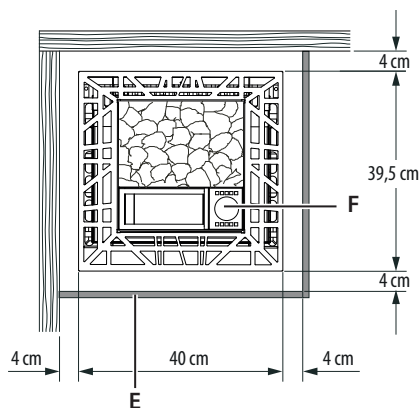
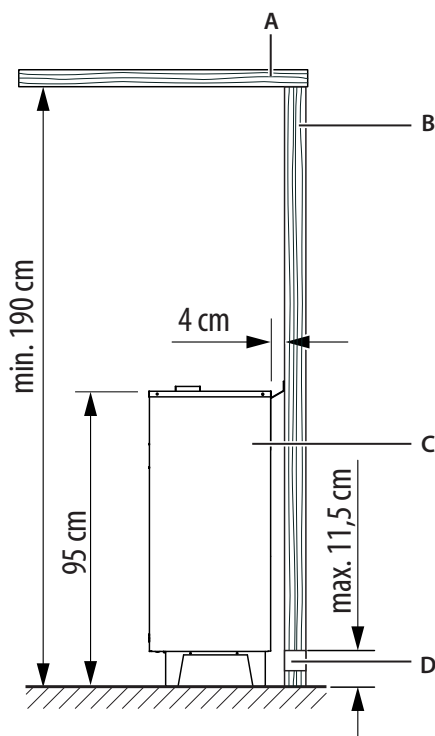
► Installation site

The sauna heaters output selected must be appropriate for the cabin volume; see 4. Technical data

- Ceiling height of at least **1,90 m**
- Distance heater – cabin wall min. **4 cm**
- Distance heater – bench min. **4 cm**

A heater guard rail must be mounted 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
- F. Steam outlet with holder for essences and herbs

Optional accessories:

The heater guard rail is not included and can be ordered separately as an optional accessor (see Scope of Delivery).

Its installation 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 cold air supply can be made as one bigger 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 6.1. The connection of the sensor is described in the installation manual of the sauna control unit.

6.5 Mounting the heater

The heater is supplied mounted and packaged on a pallet.

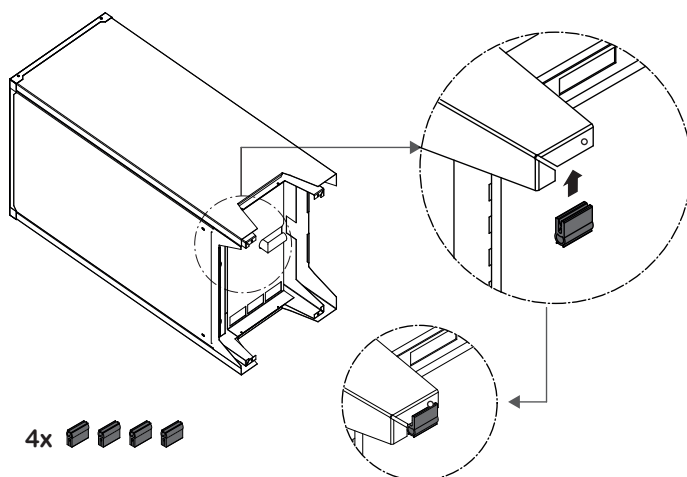
Once the cabin is ready, the heater shall be placed on a pre-defined installation place. Fill the sauna stones only after the heater has been connected and installed at it's final place.

Two people are required to carry the heater.

► Mounting the floor level compensation pads

Place the heater on the side and fit the pads on the feet as required (see the below image).

These pads can be used if the floor is not quite level or needs extra protection against scratching.



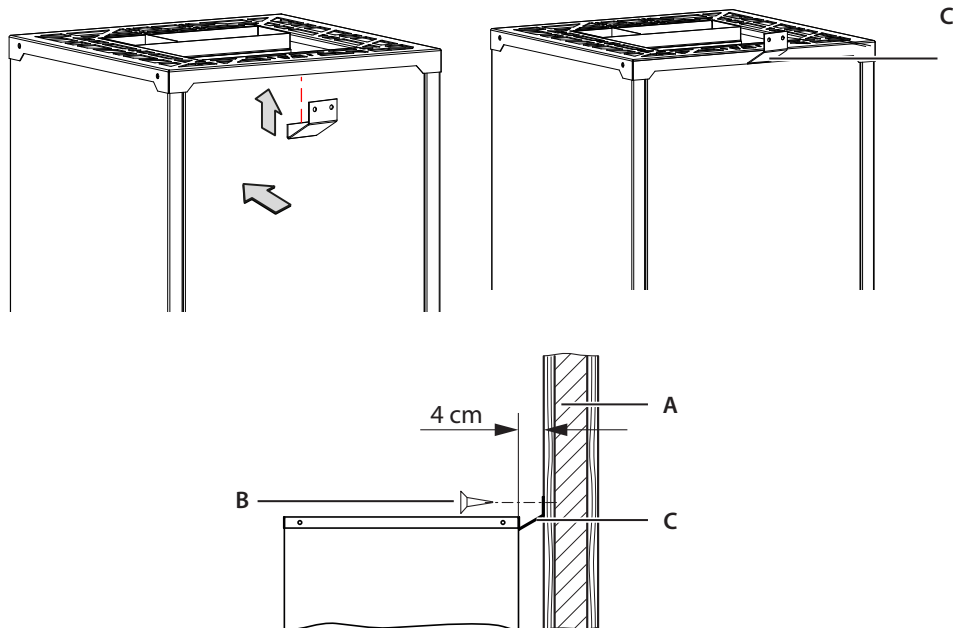
6.6 Connecting cable

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

1. Remove the rear panel. See page 21: "Making the electrical connection".
2. Remove the lid of the junction box. See page 21: "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.

6.7 Fitting the angle bracket

1. The angle bracket must be pushed under the middle of the back of the heater cover. To do this, press on the upper rear panel.
2. Secure the angle bracket to the cabin wall using the two chipboard screws.

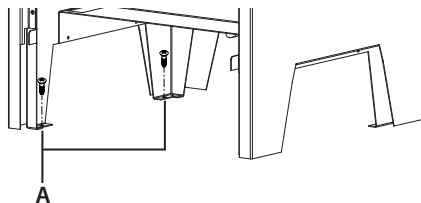


A. Cabin wall

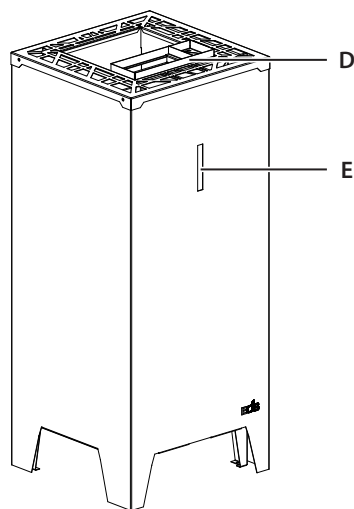
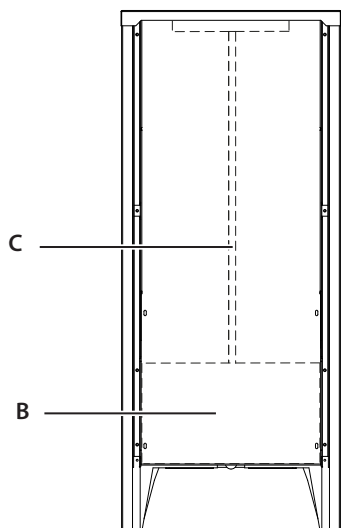
B. Mounting screws

C. Safety bracket for wall mounting

3. If it is not possible to attach the angle bracket to the cabin wall, the sauna heater must be secured to the floor with screws to prevent it from tipping over. Please use the 4 holes in the base area of the inner casing for this purpose.



4. Then fill the stone basket with sauna stones (optionally available). Further details can be found in the section on sauna stones.
 - When inserting sauna stones, make sure that the steam pipe for filling the vaporiser does not come loose from the water tank.
 - The upper edge of the filler container must be below the cover of the sauna heater.
 - Only the vaporiser attachment should protrude and be seen beyond the cover of the heater.



- A. Holes in the inner feet at the bottom
- B. Vaporizer water tank

- C. Steam pipe
- D. Tray for essences and herbs
- E. Water level indicator

6.8 Fixed water connection (optional)

For a permanent water supply to the vaporiser tank, a fixed water connection can be installed, which can be purchased separately under product code 946071. Installation must be carried out in accordance with the enclosed instructions.

7. Commissioning and operation

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

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 us.
- Commission the cabin only after all air inlets and outlets have been opened.

7.1 Filling rock store with stones

The heater is intended for use with natural stones. Use only classic sauna stones in the prescribed size (see Technical Data) into the rock store.

WARNING

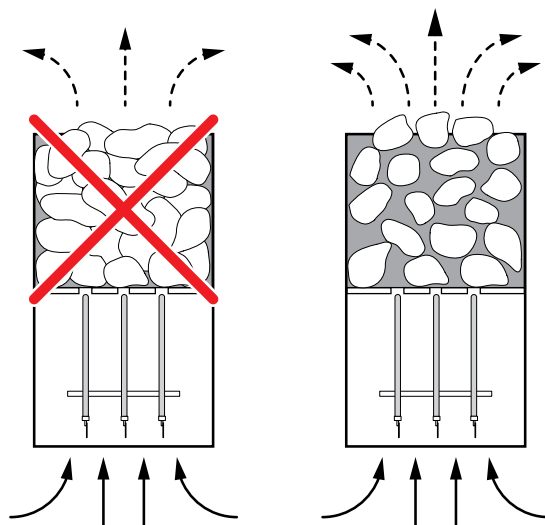
Fire hazard from overheating

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.
 - Place the stones loosely.
-

► Filling the rock store

1. Wash the stones under running water.
2. **WARNING!** Sauna stones that are stacked too tightly obstruct the flow of air. The heater could overheat. Place the stones loosely.
3. Fill the stones into the rock store up to the top edge. Leave sufficient space between stones.



7.2 Starting the heater

BA slight odour may be produced the first time the cabin is heated because the heater is being heated for the first time. The odour ceases upon continued operation of the heater.

► Switching the sauna heater

1. Switch the heater on or off through the sauna control unit.
2. Use the control unit to select a suitable program (before or after switching the heater).

7.3 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.

► 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

Brandgefahr

Falsch dosierte Aufgussmittel, ätherische Öle oder Kräuter können sich entzünden.

- Beim Vorbereiten des Aufgusswassers die Mengenangaben auf den Gebinden der Aufgussmittel einhalten.
- Dem Aufgusswasser nie mehr Aufgussmittel oder ätherische Öle begeben, als auf den Gebinden angegeben.
- Niemals Alkohol oder unverdünnte Konzentrate zum Aufguss verwenden.
- Keine Kräuter in das Aufgusswasser oder auf die Steine geben.
- Aufgusswasser nur über die Steine gießen

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. 10 cL of water per m³ cabin volume should be vaporised.

7.4 Commissioning the vaporiser

CAUTION

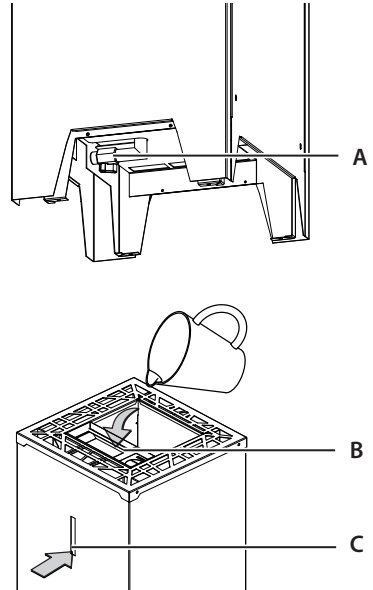
Risk of scalding from hot steam

Hot steam escapes while the vaporiser is in use.

- Be aware of steam escaping from the vaporiser.

► Using the steam function

1. Ensure that the drain cock (A) is closed.
2. Pour water into the top of the tank through the vaporiser dish (B).
3. Filling level to prevent overfilling is indicated by a float (C).
4. Select the desired climate control setting on the control unit and switch on.
 - The air humidity is determined accordingly either by the control with the humidity sensor (if present) or by the time-based control.
5. The vaporiser is equipped with automatic low water detection. If there is a lack of water, a warning beep sounds first, and if the water is not refilled within two minutes, the vaporiser is switched off via the integrated thermal fuse. After tripping the thermal fuse, allow the vaporiser to cool down so that the thermal fuse resets. Then fill the vaporiser with water and switch it on again via the control unit.



NOTICE

Temperature in the cabin

Please note that the relative humidity values vary greatly due to the different temperature distribution in the cabin. The display on the hygrometer and the display on the control unit may therefore be different.

NOTICE

Damage to the vaporiser from additives

The water in the vaporiser can build foam and boil over if additives are added to it.

- Never add essences, essential oils or herbs to the water in the vaporiser; add them to the holder only.
- If infusions accidentally get into the tank, the vaporiser must be emptied and cleaned. See Cleaning the Vaporiser.
- Clean the sieve insert regularly to prevent corrosion!

WARNING

Risk of scalding!

- Always keep items placed on the sieve (e.g. lemon slices) moist, so top up with water regularly.
- Always use a suitable container when filling with water, e.g. litre jug or similar.

7.5 Finnish sauna

In this operating mode, the vaporiser is not in operation. It is essential to ensure that there are no herbs or essences on the vaporiser attachment, as these could ignite due to overheating. Only add essences or infusions to the infusion water according to the manufacturer's instructions.

When adding an infusion at the end of the sauna session, you should not pour the water from the ladle over the stones too quickly so that the water evaporates completely and the full infusion effect is achieved.

WARNING

Risk of burns!

The vaporiser attachment heats up during sauna operation. Therefore, never touch these parts during or shortly after sauna operation, or use a suitable aid if necessary.

WARNING

Risk of fire!

- Never place dry herbs or tea bags on the vaporiser attachment.
 - Always keep items placed on the sieve (e.g. lemon slices) moist, so top up with water regularly.
-

NOTICE

Appliance damage

Only ever pour the infusion water over the area of the stones.

CAUTION

Risk of burns and scalding from hot steam

Do not place your hand or arm in the vapour coming out of the spout

8. Maintenance

This sauna heater is made of low-corrosion material. 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 vapouriser.

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.

WARNING

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 from the control unit. Wait until the heater is completely cool.
2. Clean the outside of the heater. 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 impermissible temperatures.

8.2 Sauna stones

Sauna stones are a product of nature. Sauna stones must be replenished or reshuffled 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 frequencies of time.

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 from the control unit.
2. CAUTION! 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 severe damage.
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:

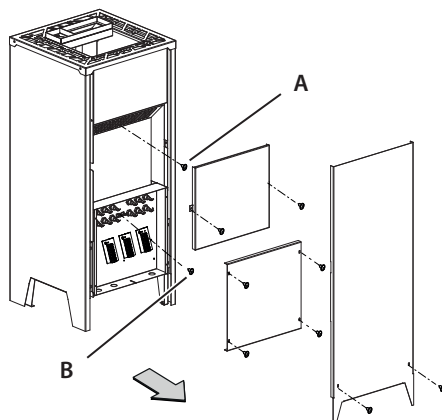
- Removing the heating coil
- Replacing the tubular heating elements
- Inserting the heating coil

Hardware and tools:

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

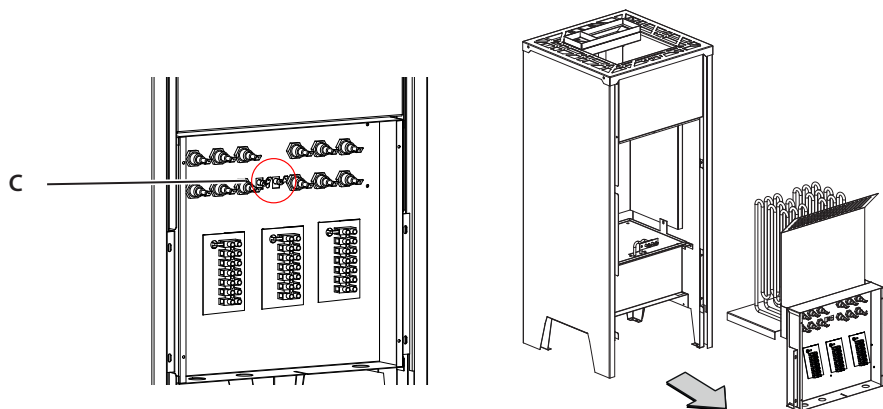
► Removing the heating coil

1. 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. If necessary, pull the heater away from the wall if the rear of the heater cannot be accessed.
4. Loosen two fixing screws on the rear panel and remove the rear panel.
5. Loosen the four fixing screws on the cover of the junction box and remove the cover.
6. Remove the cover of the heating register above the junction box (to do this, loosen two screws).
7. After removing the two covers, unscrew the concealed screws A and B.
8. Disconnect the two lines from the vaporiser heating element (C).
9. Disconnect the connection cables from the connection terminals.



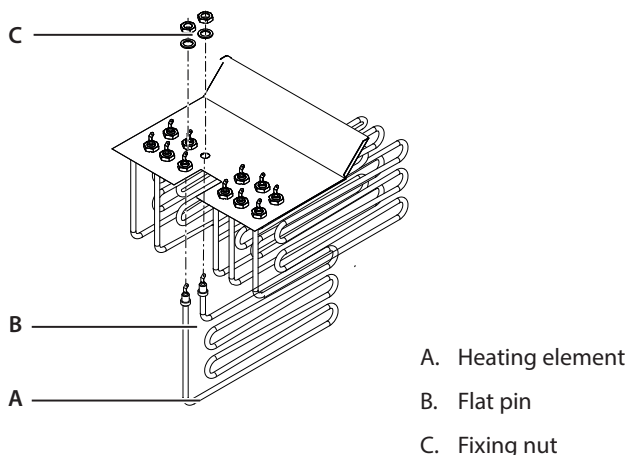
10. Unscrew the four hex screws on the heating register.

11. Pull out the junction box with the heating register.



► Replacing a tubular heating element

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



► Inserting the heating coil

1. Insert the heating coil into the heater.
2. Screw in the 4 screws in the heating coil and tighten.
3. Connect the connecting cables.
4. Reconnect the two lines from the vaporiser heating element.
5. Insert the lid of the junction box, the upper removable lid and the rear panel of the heater, then close the casing.
6. Move the heater back into its original position.
7. Place the stones in the rock store.
8. Switch on the fuses of the heater.

9.2 Descaling the vaporiser

Lime deposits can impact the ability of the vaporiser to function properly. If water with lime content of more than 1.3 millimole of calcium oxide per litre (hardness class I or hardness levels 1–7 in Germany) is used, the unit typically operates properly and requires descaling on an as-needed basis only. The unit must be regularly descaled if water with a higher lime content is used. The higher the lime content in the water used, the more often the vaporiser must be descaled.

► Material:

- Descaler for household appliances
- Container
- Short piece of hose, if needed

► Descaling the vaporiser

1. Switch off the heater through the control unit and let it cool down.
2. Drain the vaporiser completely if it still has water and close the drain tap.
3. Prepare 8 l of descaling liquid from a suitable descaler and water as per manufacturer's instruction. Use only a suitable descaler for household appliances.
4. Fill in the mixture into the water tank through the steam outlet.
5. Bring the mixture of water and descaler to a boil in the vaporiser and allow to boil for 10 minutes:
 - a) Switch on the sauna heater with vaporiser through the control unit.
 - b) Wait until the mixture starts to boil and let it boil for some 10 minutes.
 - c) Switch off the heater through the control unit.
6. Wait until the vaporiser has cooled down completely.
7. Drain the mixture from the vaporiser as follows:
 - a) Place the container in front of the drainage nozzle. Place a small piece of hose on the drainage nozzle, if needed.
 - b) Open the ball valve and allow the mixture of approx. 8 litres to drain into the container completely.
 - c) Close the ball valve.
8. Pour 8 l of clean water into the vaporiser to flush out the remains of the mixture.
9. Open the ball valve and allow the 8 litres to drain completely. Collect the water completely.
10. Close the ball valve.
11. Repeat steps 8 to 11 as necessary.
12. Restart the heater.

9.3 Cleaning the vaporiser

Typically, it is not necessary to clean the vaporiser if the sauna heater is used as described in the instructions. Cleaning is only necessary if the vaporiser has become contaminated or dirty. This can occur if the vaporiser is not used properly, for example, if additives have been added to the water in the vaporiser.

► Material:

- Cleaner like alcohol or methylated spirit.
- Short piece of hose, if needed.

► Cleaning the vaporiser

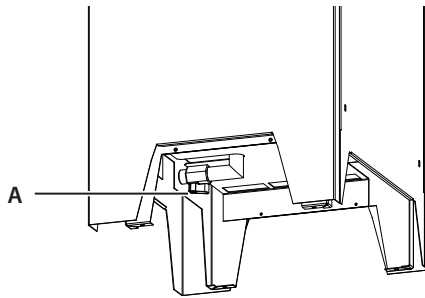
1. **WARNING!** Electric shock may occur if the heater is cleaned while it is connected to the power supply. Ensure that the heater has been disconnected from all power supply lines:
 - a) Switch off the heater.
 - b) Switch off the fuses to disconnect the heater from the mains supply.
2. Allow the water to drain from the vaporiser:
 - a) Place the container in front of the drainage nozzle. Place a small piece of hose on the drainage nozzle, if needed.
 - b) Open the drain tap and allow the water to drain into the container completely.
 - c) Close the tap.
3. Fill the cleaner diluted with water through the steam outlet into the vaporiser tank and allow it some time to work.
4. Open the drain tap and completely drain the water tank.
5. Close the drain tap.
6. Pour 8l of clear water into the vaporiser to rinse it and clear the remains of the mixture.
7. Open the drain tap and completely drain the tank.
8. Close the tap.
9. Repeat the steps 4 - 6 as necessary until the vaporiser tank gets completely clean.
10. Switch on the fuses for the heater to establish a connection between them and the mains supply.

9.4 Draining the vaporiser

The drain with the drain tap (ball valve) is located underneath the heater.

Place a suitable container under the heater before opening the tap (EOS recommends the special drain pan for Bi-O heaters, item no. 94 5425).

1. Switch off the heater through the control unit and let it cool down.
2. Allow the water to drain from the vaporiser:
 - a) Place the container in front of the drainage nozzle. Place a small piece of hose on the drainage nozzle, if needed.
 - b) Open the ball valve and allow the water to drain into the container completely.
 - c) Close the ball valve.
3. Open the water tap from the dringing water supply line.
4. Connect the sauna heater back to the power supply.



A. Drain tap (ball valve)

CAUTION

Risk of germination and calcification in the water tank

Germs can form in standing water and in damp places. This can also lead to limescale deposits in the water tank.

- Do not leave the water tank unnecessarily with water.
- Empty the water tank completely after each use.

9.5 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.

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 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.

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, shall apply in addition to the foregoing terms and conditions of service.

As of 08/2018