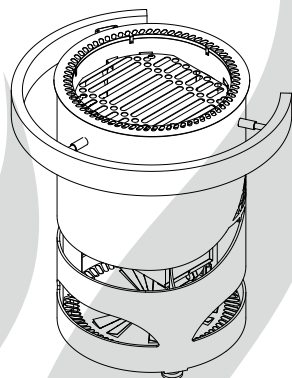
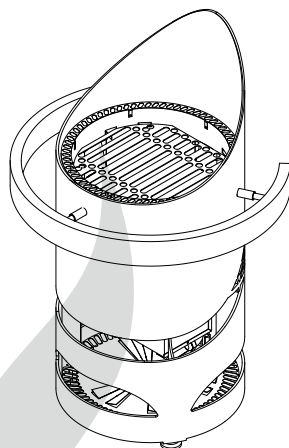


## Zeus S / Zeus SL



Zeus SL



Zeus S

heater guard rail optional

**EN** Installation and operation manual

MADE IN GERMANY

**CE IPx4 EAC**

print no. 29344998de / 46.18



# **English**

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Dear customer,

You have purchased a high-quality technical device with which you will have years of sauna fun. This sauna heater was designed and inspected according to the current European safety standards and manufactured at the factory in accordance with the quality management standard DIN EN ISO 9001:2008.

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

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

## Intended use

This sauna heater is exclusively intended for the heating of sauna cabins in combination with an appropriate control unit.

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

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

## General information

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

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






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

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

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


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

## Important notes




-  Unprofessional installation may cause a fire hazard! Please read these installation instructions carefully. In particular, please observe the dimensions stated and the following notes.
- This device can be used by children aged 8 upwards and by persons with physical, sensory, or mental disabilities, or who have inadequate experience and knowledge if they are supervised or if they have received adequate instruction in how to use the device safely and understand the associated risks. Children may not play with this device. Children may not clean or carry out any user maintenance if unsupervised.
- Children should be supervised to make sure that they will not play with the unit.
-  Only specialists may install and connect the sauna heater, control unit and other electrical equipment with a fixed mains connection. The necessary protective measures according to VDE 0100 of § 49 DA/6 and VDE 0100 part 703/2006-2 must be observed.
- Sauna heater and controller may only be used in sauna cabins made of suitable, low-resin, untreated materials (e.g. spruce).
- Only a sauna heater with the appropriate power output may be installed in the sauna cabin.
- Please provide air intake and vent openings in each sauna cabin. The air intakes must always be positioned behind the sauna heater, approx. 5 to 10 cm above the floor. The minimum dimensions of the air intake and vent openings are stated in the table.
- The duct vents are always to be positioned offset diagonally to the sauna heater in the lower area of the rear sauna wall. The air intake and vents may not be covered. Please observe the sauna cabin supplier's instructions.
- Only the control units specified herein must be used for the operation of the sauna heater. This control unit must be positioned at an appropriate point on the cabin outer wall; the associated sensor must be positioned inside the sauna cabin according to the installation instructions included with the control unit.
-  **Caution:** Covering the heater or an incorrectly filled stone container represent a fire hazard.
- The sauna heater must be visually inspected before each use (also by remote control) for a safe condition.
-  Every time before the sauna is used, ensure that no objects have been left lying on the sauna heater.
-  **Caution:** The high sauna heater



temperatures generated during operation can cause burns.

- The sauna heater is not intended for installation or set-up in a niche, under a bench or under a sloping roof.
- Do not put the sauna heater into operation when the air intake is closed.
- The cabin lighting and the corresponding installation must correspond with the "splash protected" version in accordance with DIN EN VDE 0100 T 703. Therefore, only VDE-tested sauna light with max. 40 Watt may be installed in connection with the sauna heater.

-  Only a locally certified electrician may connect the sauna facility (sauna heater, control unit, lighting etc.) to a fixed mains connection.
- All electrical installations and all connection lines that are installed inside the cabin must be suitable for an ambient temperature of at least 170 °C. If single-wire cables are used as connection lines, they must be protected using a flexible metal tube connected to the equipment grounding conductor. Please see the table for the minimum cross-section of the connection cable and the suitable cabin size in relation to the power input in kW.
- When installing the sauna heater, please ensure that the vertical clearance between the sauna heater upper edge and

the sauna ceiling is maintained. Please see also the dimensions diagram for the clearance between the lower edge of the sauna heater and the floor. On heaters with bases, this clearance is maintained via the base or legs of the device.

- Floor heating in the sauna cabin increases the surface temperature of the flooring.
- Please see the dimensions information for the respective sauna heater for the clearance between the heater protective grating or the bench and other flammable materials. The heater protective grating must roughly accord with the front height of the sauna heater.
- Please also observe the information and instructions provided by the cabin manufacturer.
-  Please take precautions when cleaning components with sharp edges.
- Upright heaters need to be fitted on site with elements that prevent them from overturning.
-  **Attention:** Pour the infusion water only on the sauna rocks and never anywhere else.
-  When using your sauna in a dry Finnish mode never add sauna essences or place any herbs into the vaporizer holder for essences/herbs. **Fire hazard!**

-  Never add more essences or volatile oils than advised on the packaging. Never use alcohol or undiluted concentrates. **Caution! Fire hazard!**
-  When designing the cabin ensure that the external exposed glass surfaces only reach a maximum temperature of 76°C. If necessary, protective features need to be fitted.
- Please note that the wooden surfaces in the areas exposed to high heat are subject to possible discolourations (e.g. darkening of wood).

*\*Remote control – means settings, switching, control and adjustment of the sauna control unit by means of commands transmitted from a remote location beyond sight distance using telecommunication, wire- or wireless signal transmission systems, network and similar systems.*

## Electrical connection

Using the above-mentioned wiring diagram and the information on the wiring circuit adhered to the respective control system, your electrician will be able to connect the system without further instructions.

Please note that, for safety reasons, power cables may not be laid visibly on the interior walls of the cabin. Most sauna cabins have empty ducts fitted into the wall element with the air intake.

If no empty ducts are available in your cabin, drill a sufficiently sized hole in the cabin wall directly next to the place where the cable exits the sauna heater and guide this cable outside through the hole to the control unit. The cable, and all other connecting cables (mains power cables and cabin lighting), should be installed in installation ducts or also be protected against damage on the outside of the cabin e.g. by laying them in installation pipes or attaching wood cover strips.

The sauna heater, when made use of time preset and remote control\*, may only be used with an appropriate cover protection or any other safety device.

### **Caution!**

Dear Customer,  
In compliance with the valid regulations, only certified electricians may connect the sauna heater and the sauna control system to the mains power supply.

Please note that you must provide a copy of the invoice from the electrical company who installed the sauna in case of a warranty claim.

To preserve the right of a warranty claim, only original spare parts of the manufacturer may be used.

## Scope of delivery

Inspect the delivery for completeness. Missing or damaged items should be reported to your authorized dealer.

Standard delivery includes:

- Sauna heater
- Connection cable (by 10,5 and 12 kW - 2 separate cables)
- Owner's manual
- Set of sauna stones, approx. 25 kg

## Specifications

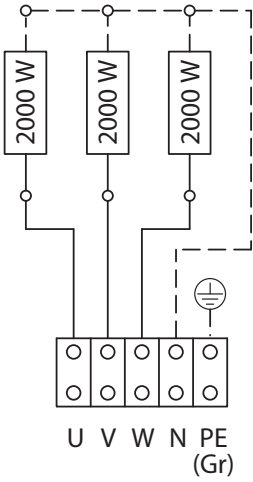
Power supply	400 V 3N AC 50 Hz				
Power output	6,0 kW	7,5 kW	9,0 kW	10,5 kW	12,0 kW
Suitable for sauna cabin size	6 - 8 m <sup>3</sup>	7 - 10 m <sup>3</sup>	9 - 14 m <sup>3</sup>	11 - 15 m <sup>3</sup>	14 - 18 m <sup>3</sup>
Min. size air inlet and air outlet	35 x 5 cm ~ Ø 18 cm		35 x 6 cm ~ Ø 18 cm		35 x 7 cm ~ Ø 18 cm
Weight, excl. stones / packaging Zeus S / *Zeus SL	67 kg / *62 kg			68 kg / *63 kg	
Dimensions Ø x Height Zeus S / *Zeus SL	Ø 45 x 100 cm / *Ø 45 x 70 cm				
Stone filling	25 kg				
Power extension required (LSG unit)	no			yes	
Suitable sauna control units	Econ series, Emotec series, EmoStyle series, EmoTouch series				
Leakage current	max. 0,75 mA per kW heating power				
Intended use	Sauna heater for private and commercial sauna cabins				
Fuse protection control unit	3 x 16 A				
Fuse protection power extension (LSG)				3 x 16 A	
Connection mains - control unit	5 x 2,5 mm <sup>2</sup>				
Connection mains - LSG unit				5 x 2,5 mm <sup>2</sup>	
Connection control unit - heater	5 x 1,5 mm <sup>2</sup>				
Connection control unit - LSG unit				4 x 1,5 mm <sup>2</sup>	
Connection LSG unit - heater				5 x 1,5 mm <sup>2</sup>	

All cable cross sections are minimal cross section in mm<sup>2</sup> copper wire.

# Inner wiring

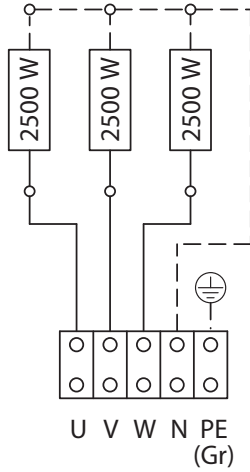
**6 kW**

400 V AC 3N



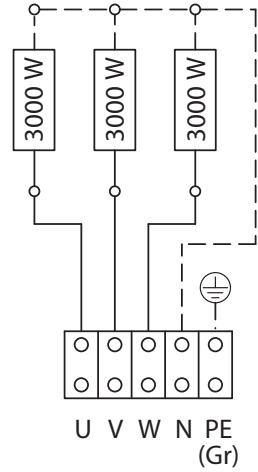
**7,5 kW**

400 V AC 3N



**9,0 kW**

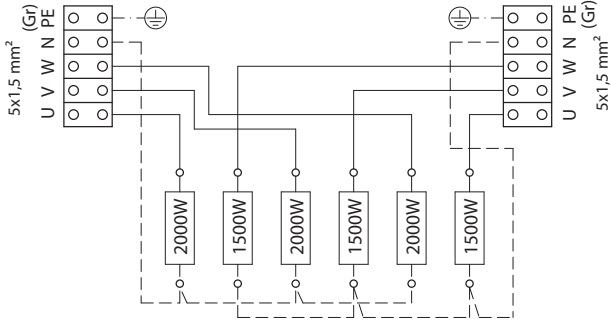
400 V AC 3N



**10,5 kW**

to control unit

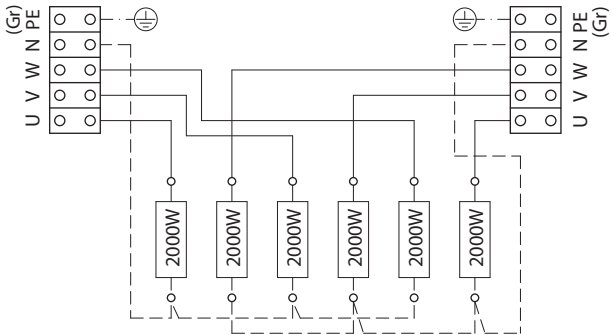
to LSG unit



**12,0 kW**

to control unit

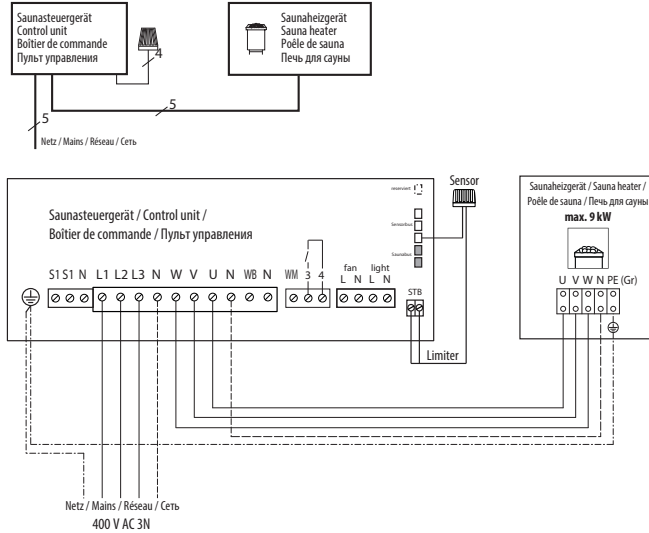
to LSG unit





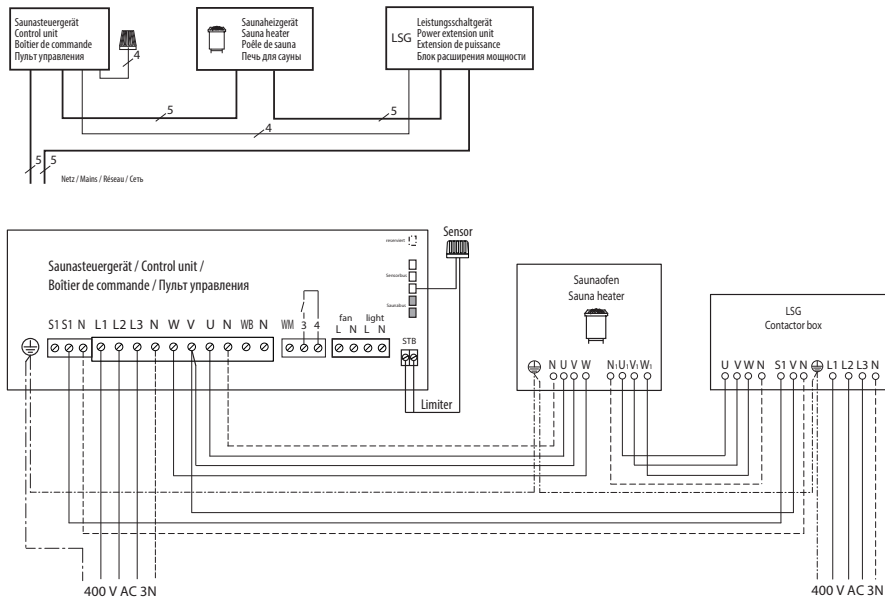
# Connection overview and connection example

## 6,0 - 9,0 kW



Example for control units Emotec, EmoStyle, EmoTouch 2+/3

## 10,5 - 12,0 kW



**Attention!** Make sure to always connect the neutral (N) wire of the heater!

# Installation

The sauna heating unit is designed for operation with an input voltage of 400 V AC 3N through the sauna control unit and a separate power extension unit.

Sauna heaters may be operated via remote control\* only in combination with an approved safety system like EOS switch-off cover protection rail.

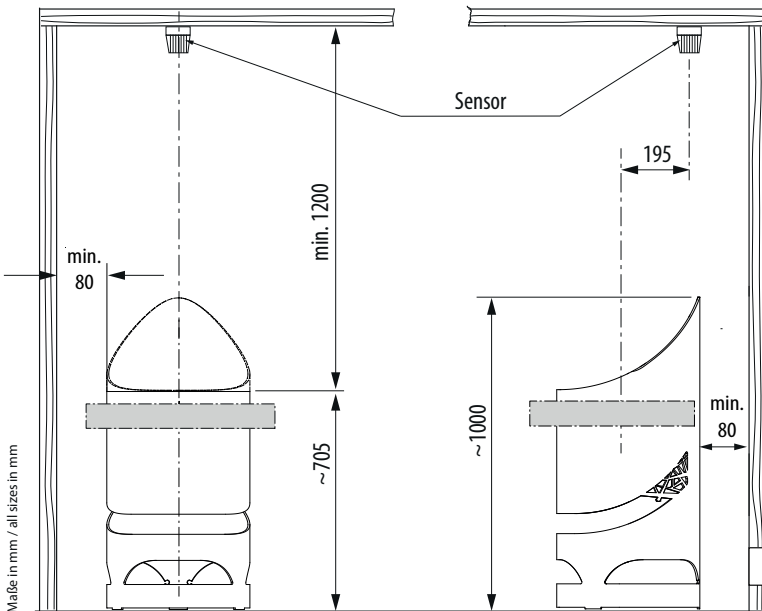
*\*Remote control – means settings, switching, control and adjustment of the sauna control unit by means of commands transmitted from a remote location beyond sight distance using telecommunication, wire- or wireless signal transmission systems, network and similar systems*

## Minimum clearances (safety gaps)

The sauna cabin must have a minimum inner height of **190 cm**.

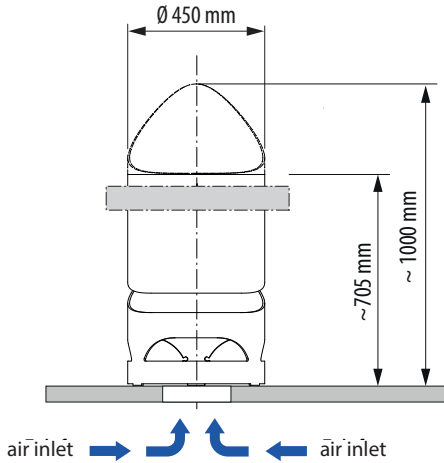
The vertical gap between the top of the sauna heater and the inner surface of the sauna ceiling must be at least **120 cm**, the horizontal gap between the heater and the cabin wall or other flammable materials must be at least **8 cm**.

The distance between the heater guard and/or bench and other flammable materials must be at least **10 cm**. The height of the heater guard must be the same as the height of the front of the stove.



By installation in the centre of the sauna or by a closed glass wall make sure to provide the adequate air supply from below through the bottom.

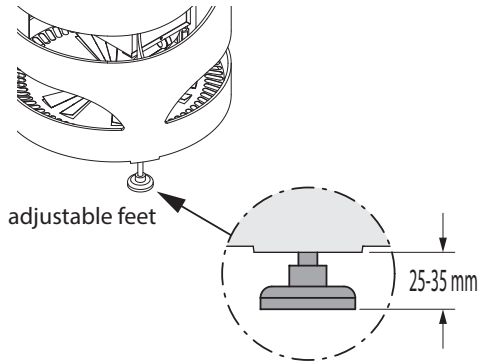
## Air supply from below



Air supply by installation in the sauna centre to be provided through an air channel, mechanical ventilation may be needed.

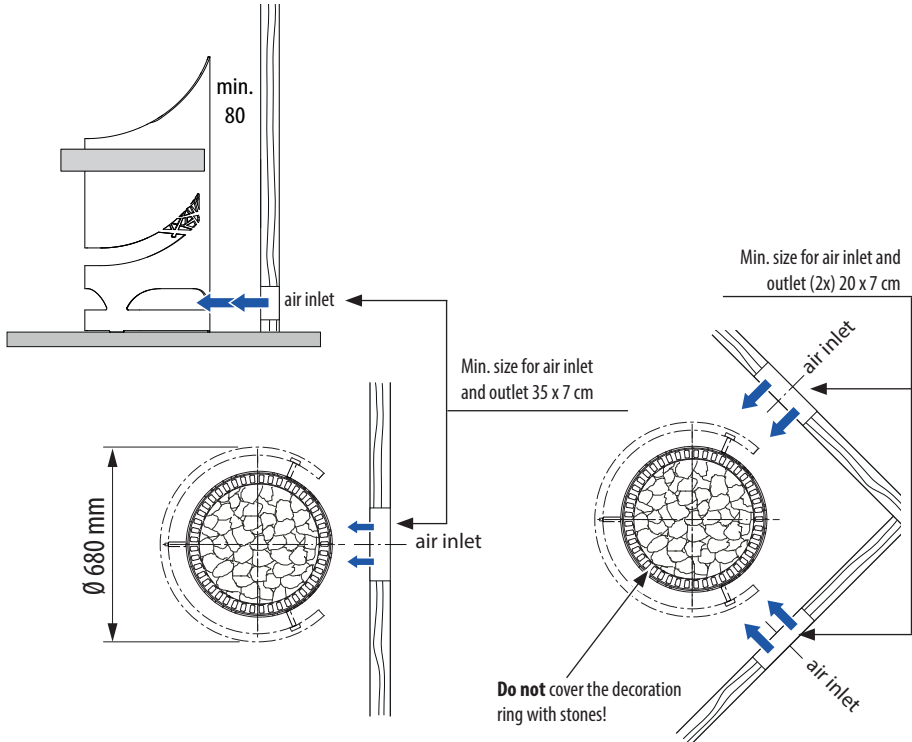
The minimum size of the air supply and duct vent  
35 x 7 cm (same size ~245 cm<sup>2</sup>)

After reaching the final location of the heater, unscrew the 3 adjustable feet 25-30 mm.



By air supply from below and installation on the inflammable surfaces the dust & dripping water collecting tray can be removed.

## Air supply at the side (rear)



## Heater guard rail installation (optional)

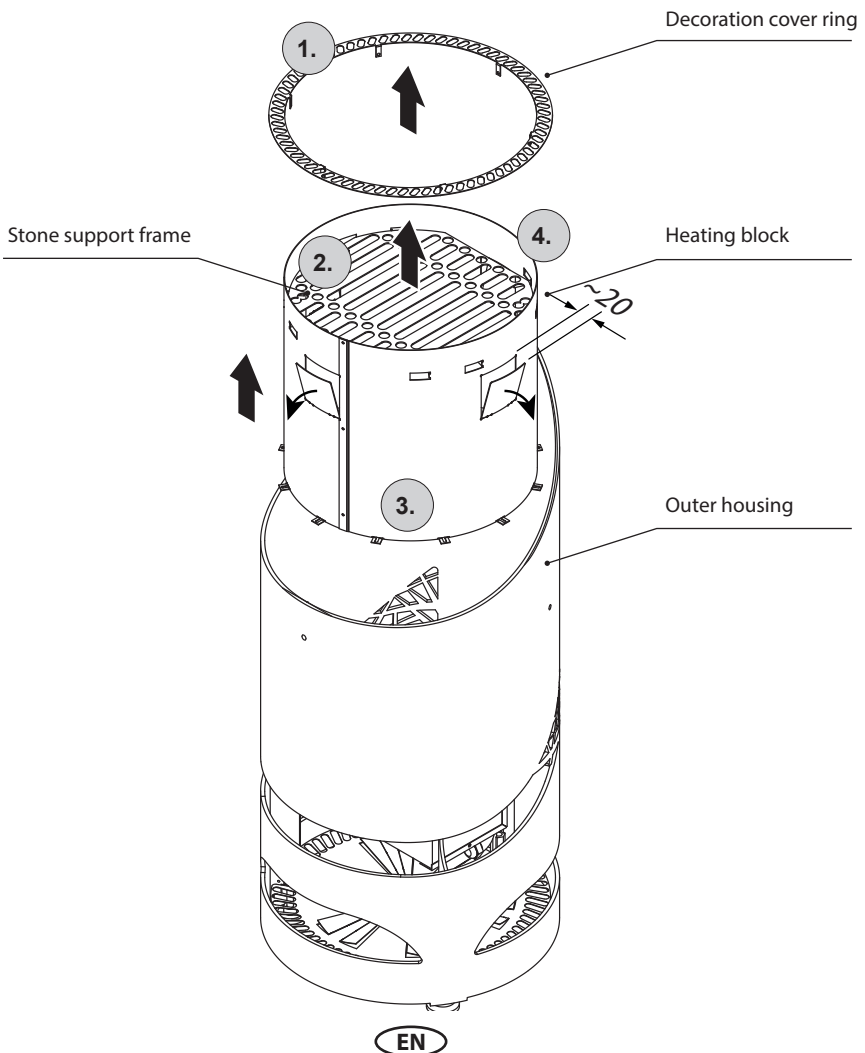
The ring-shaped heater guard rail is optionally available in 270° and 360° versions. Please bear in mind that in addition to the guard rail you will also need the corresponding mounting kit.

### Installation

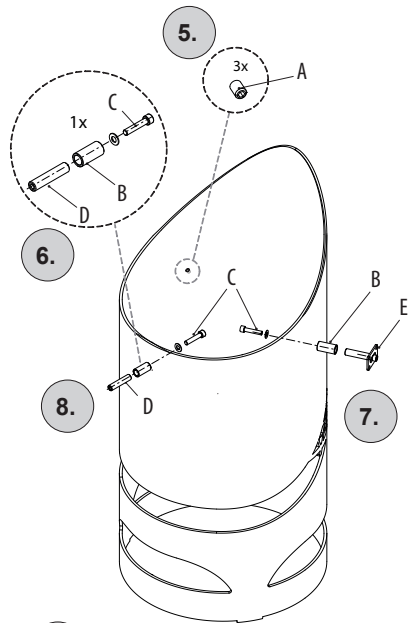
1. Lift and take off the ring-shaped top cover
2. Take out the stone support frame



**Caution!** Disconnect the heater from the power supply and ensure that the heater is cooled down! Risk of electric shock! Risk of burns by a hot heater!

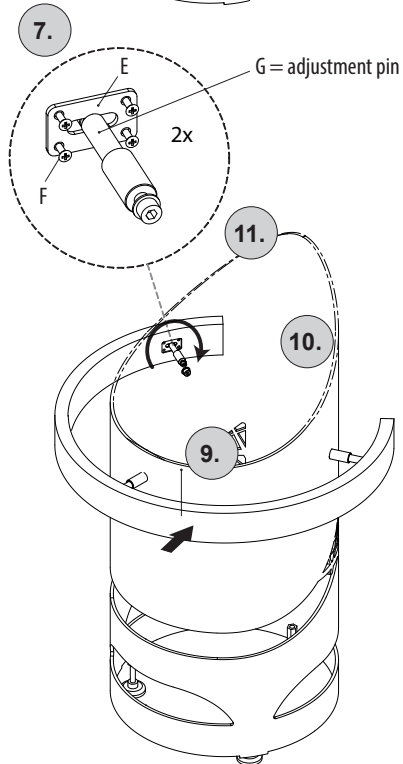


3. Lift and take out the heating block by holding it at the heating elements.
4. Unscrew 3 headless screws (A) located in the upper part around the heater housing. The 3 holes serve for mounting of the guard rail support brackets.
5. Insert 3 Allen-key screws M8x40 (C) from the inside through the mounting holes. Screw the distance holders  $\varnothing 20 \times 40$  (B) firmly on the Allen-key screws.
6. After that screw the hollow tube (D) completely on the front pin (protruding threaded end), so that the large bore hole of the hollow tube (D) faces outwards.
7. Now mount the brackets with flat connection plates (E) firmly on the rear left and right pins C (on their protruding threaded ends).



You have now 3 assembled mounting brackets for mounting of the wooden guard rail.

8. Now take the wooden guard rail and lower it down on the heater. On the inside in the middle of the guard rail there is a pre-mounted metal pin  $\varnothing 6$  mm - push the guard rail slightly towards the heater so that this pin comes into the corresponding opening of the hollow tube.
9. Align the rear mounting brackets with flat connection plates with the corresponding cut-outs in the guard rail and screw each plate firmly with 4 panhead screws (F) to the wooden rail.
10. Both rear brackets have a rotating adjustment pin (G) - it allows to adjust the gap between the heater and the rail. Rotate this pin section around its axis to the left or right to adjust. This allows to align the guard rail around the heater to ensure that the gaps are equal on all sides.

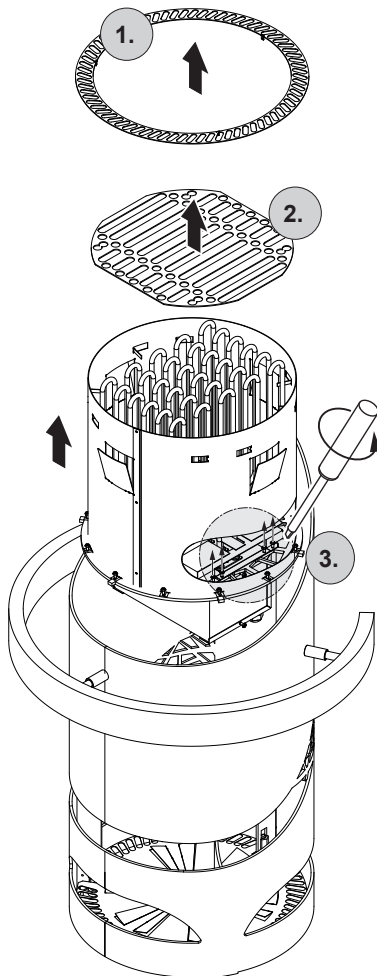


After that re-install the heating block back into the heater in reverse order.

## Replacement of heating elements

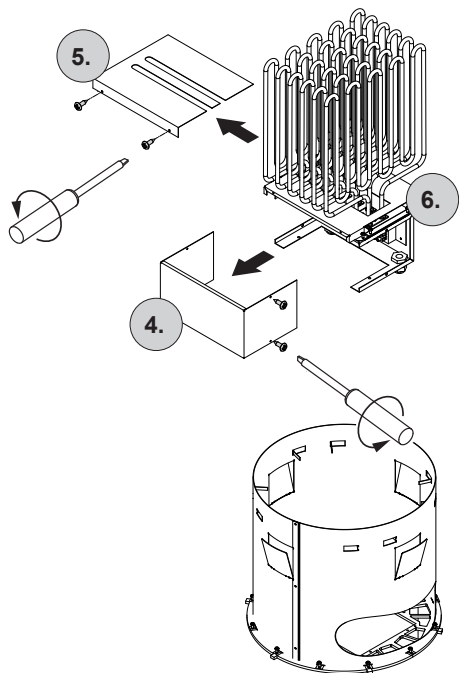


**Caution!** Disconnect the heater from the power supply and ensure that the heater is cooled down! Risk of electric shock! Risk of burns by a hot heater!

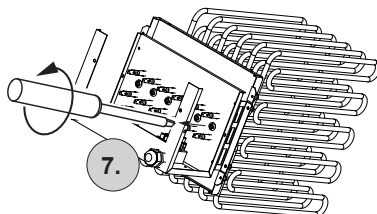


Remove stones from the rock store before replacing the heating elements.

1. Take off the decoration ring.
2. Take out the stone support frame.
3. Unscrew 4 screws (left and right) from inside the stone compartment. Pull out the heating block by holding the heating element tops. Pay attention not to damage the connected cable.



4. Take off the terminal box cover (remove 6 screws).
5. Take off the upper cover panel (remove 2 screws).
6. The heating elements are mounted in the upper side of the terminal box and secured from below with M5 screws.
7. Pull off the inner wiring from the heating element terminals and loosen the corresponding M5 screw. Take the heating element out. Install the new element in the reverse order and connect it.



**!** Make sure that the spade terminals of the inner wiring are tightly fitted on the heating elements and the wire ends are tightened in the screw connections!

8. Mount the top cover and the side cover of the terminal box back in original position and secure them with the corresponding screws.
9. Set the heating element block back into the housing and secure it with mounting screws.
10. Set the decoration ring back on top and fill the stones into the rock store..
11. Connect the power supply cables.

**Note:**

Use sauna stones with 50/80 mm size.

## Sauna rocks


Sauna stones are a natural product. Check the sauna stones at regular intervals. Aggressive sauna essences can weaken the sauna stones and cause them to break apart over time. Consult your sauna supplier if necessary.

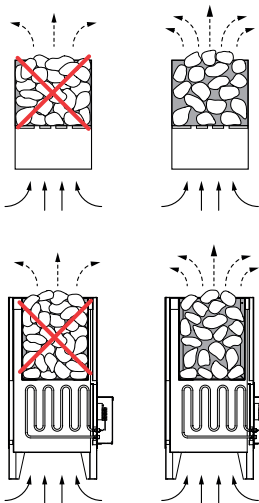
Wash the delivered stones with flowing water thoroughly and put them into the **stone basket** in a way that they do not put any pressure on the heating elements and that the air can still circulate through the stones.

The quantity of stones is sufficient to create a steam shock, vaporizing about 10 cl of water per m<sup>3</sup> cabin volume. Always wait at least 10 minutes after an infusion before repeating it. Only then the sauna stones will re-heat sufficiently again.

By daily commercial use we recommend to check the condition of sauna stones every 2-3 months and to reshuffle them.

By home use the sauna stones need to be checked and reshuffled at least once per year.

 **Never add more essences or volatile oils than advised on the packaging. Never use alcohol or undiluted concentrates. Caution! Fire hazard!**



## Maintenance and care

The sauna heating unit is made of low-corrosion material. To enjoy your sauna heating unit for a long time you should ensure maintenance and take due care about the heater. Always make sure that the air supply vents and reflection surfaces in the area of air intake are free. These can easily become clogged with fuzz and dust when drawing in fresh air. This reduces the air convection in the sauna heating unit and can be a cause of too high temperatures.

Clean or de-scale the heater when needed. Refer to your sauna supplier or directly to the manufacturer in case of defects or signs of wear and tear.

Only use original manufacturer's replacement parts, which can be obtained from your supplier or directly from the manufacturer.

**If you did not use your sauna for a long period of time, always check before next use that cloths, cleansers or other objects have not been left on the sauna heating unit or the vaporizer before turning them on.**

### **Please be sure to note!**

Do not insert sauna rocks too tightly in the rock store. Place them loose, leaving as many spaces as possible to allow the free flow of hot air for circulation purposes. • Please make sure that the stones do not put any pressure on the heating elements.

Remove stones from the sauna heater only when they cooled down.

It cannot be excluded that hot rocks or their parts fall out of the rock store.

**Risk of fire!**



**For the installation of sauna heaters, please pay attention to the DIN VDE 0100 part 703 or the corresponding national norms and legal requirements, e.g. UL875 norm!**

This standard makes the following statement valid in your newest expenditure, since February 2006, paragraph 703.412.05; Quotation:

*The addition must be planned for all electric circuits of the Sauna by one or more fault current protection device (RCDs) with a calculation difference stream not more largely than 30 mA, excluded of it is Sauna heating.*

The EN 60335-1 DIN (VDE 0700 part 1):2012-10 states the following in paragraph 13.2; quote:

*The leakage current may not exceed the following values during operation:*

*- for stationary heaters of protection class I 0,75 mA; or 0,75 mA each kW input of the appliance, depending on the higher value, at a maximum value of 5 mA.*

If the appliance is equipped with a protective device for leakage current (ELCB), please pay attention to the fact that no other electrical units will be protected by this ELCB.

Under current manufacturing technology, it is not reasonable to use heating elements for sauna heaters which do not collect moisture from the surrounding air. It is therefore possible that a little bit of moisture from the surrounding air may reach the magnesium-oxide filling in the heating elements during transport or storage and may cause the ELCB to release.

In this case the heater must be heated up under supervision of an expert, during which the Ground conductor is not connected. After about 10 minutes, when moisture has evaporated from the heating elements, the heater must be reconnected to the Ground conductor!

If the sauna heater is not in use for a significant period of time, we recommend running it every 6 weeks, so as to avoid moisture concentrating in the heating elements.

Therefore, should the ELCB be released during start-up, the electrical installation must be

checked.

Installation of the sauna heater and control unit must be undertaken only by an authorized and appropriated qualified electrician.

**Without a documented proof of such installation a warranty is generally void.**



## 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.



## 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](mailto:servicecenter@eos-sauna.de)

[www.eos-sauna.de](http://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.

**Equipment commissioning date:**

---

**Stamp and signature of the authorized electrician:**

# General Terms and Conditions of Service

## I. Scope

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

## II. 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.

In the case of a 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