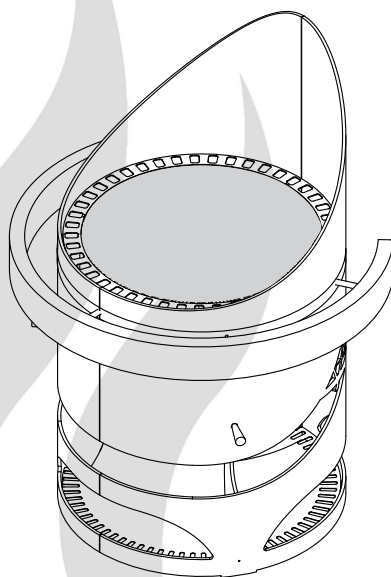


Zeus

sauna heater



guard rail optional

EN Installation and operating instruction

MADE IN GERMANY

CE  **IPx4**

print no. 29344847 en / 34.17



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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 observe in particular the **important notes** and the information on electrical connection.

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

Intended use

This sauna 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.
-  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 in-

stallation 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.

- Please always ensure that the sauna heater is never placed on flooring made of flammable material (wood, plastic flooring etc). Ceramic tiles are recommended as floor materials.


- 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.

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, if used in commercial/public facilities and equipped with remote control*, may be used only in combination with the appropriate cover protection system or S-Guard system.

**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.*

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.

Scope of delivery

The standard scope of delivery includes:

- Sauna heater
- Connection cable (consists of two separate cable lines with special connectors)
- Installation and operation manual
- sauna stones (approx. 130-140 kg)

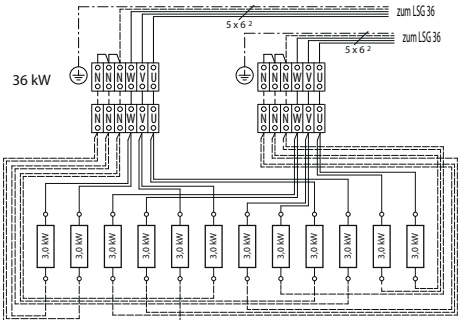
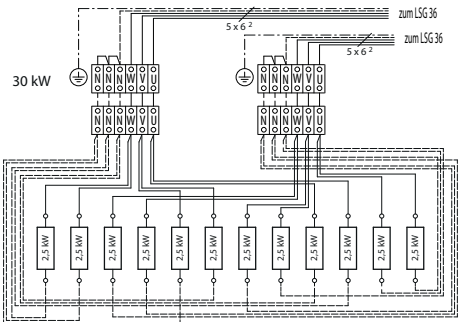
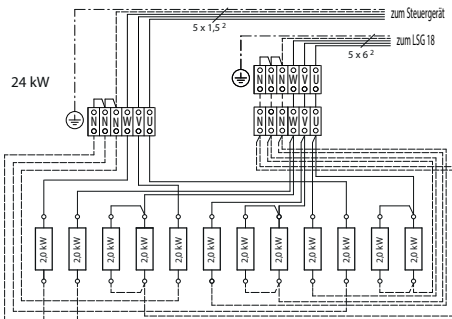
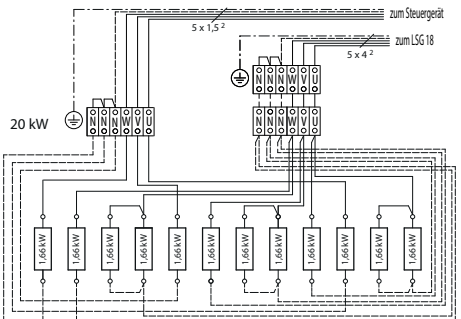
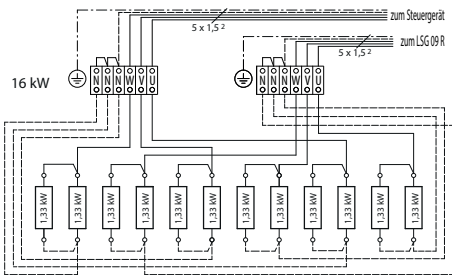
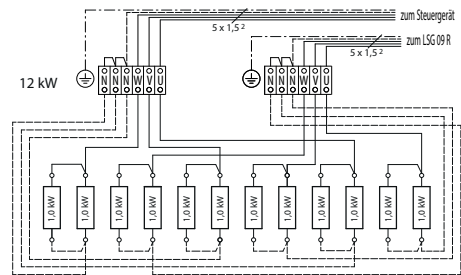
Specifications

Power	Electric connection	external Fuse protection control unit	Connection: mains - control unit	external Fuse protection LSG unit	Connection: mains - LSG	Connection: control unit - heater	Connection: LSG - heater	Connection: control unit - LSG
12 kW	400 V 3N AC 50 Hz	3 x 16 A	5 x 2,5	3 x 16 A	5 x 2,5	5 x 1,5	5 x 1,5	4 x 1,5
16 kW					5 x 6			
20 kW				3 x 25 A			5 x 4	
24 kW		3 x 35 A	5 x 6					
30 kW		1 x 16 A	3 x 1,5	3 x 50 A	5 x 10	—	2 pcs. 5 x 6	
36 kW				3 x 63 A	5 x 16		2 pcs. 5 x 6	

All details on cable cross-sections are minimum diameters in mm² copper line.

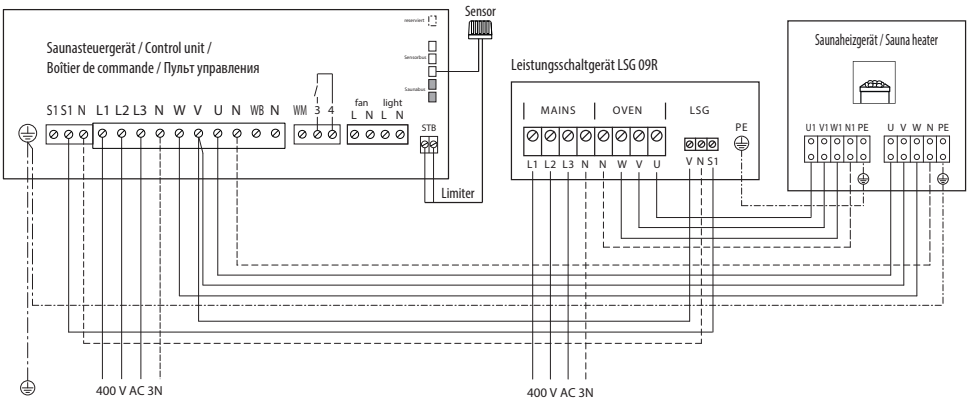
Power	Dimensions Ø x H in cm	For cabin volume	Minimum dimension for air supply and duct vent	Weight without stones and packaging	Stone filling	Power extension unit (LSG) required	To be used with the control units
12 kW	Ø 70 x 125	14 - 18 m³	50 x 6 cm	140 kg	130 - 140 kg	Emotec LSG 09R	Econ series Emotec series EmoStyle series EmoTouch series
16 kW		18 - 25 m³	50 x 6 cm				
20 kW		24 - 30 m³	50 x 8 cm			LSG 18	
24 kW		35 - 40 m³	50 x 8 cm				
30 kW		50 - 65 m³	50 x 10 cm			LSG 36	
36 kW		65 - 75 m³	50 x 10 cm				

Wiring diagrams

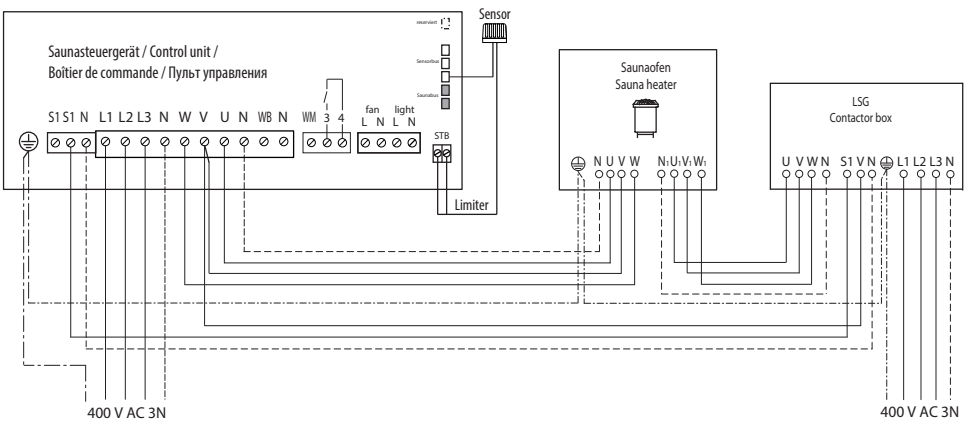


Connection example

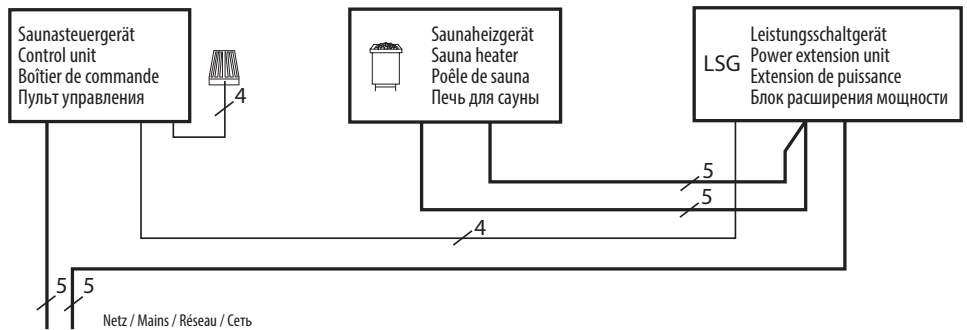
12+16 kW



20 / 24 kW



30 / 36 kW



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 maybe operated via remote control* only in combination with an approved safety system like EOS switch-off guard rail.

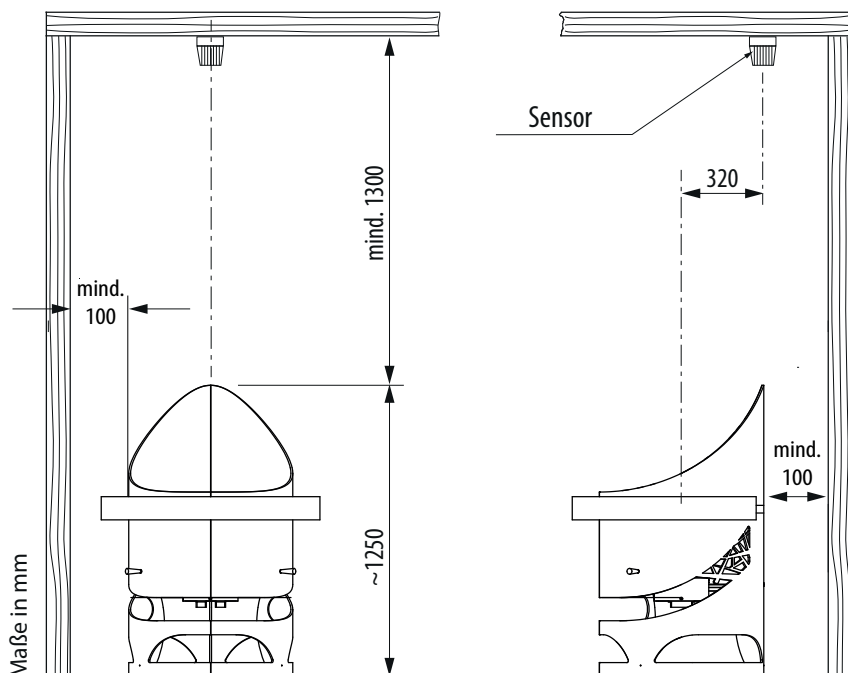
**Remote control – means settings, switching, control and adjustment of the sauna control unit by means of commands transmitted from a remote location beyond sight distance using telecommunication, wire- or wireless signal transmission systems, network and similar systems*

Minimum clearances

The sauna cabin must have a minimum inside height of **210 cm**.

The vertical gap between the top of the sauna heater and the inner surface of the sauna ceiling must be at least **130 cm**, the horizontal gap between the heater and the cabin wall or other flammable materials must be at least **10 cm**.

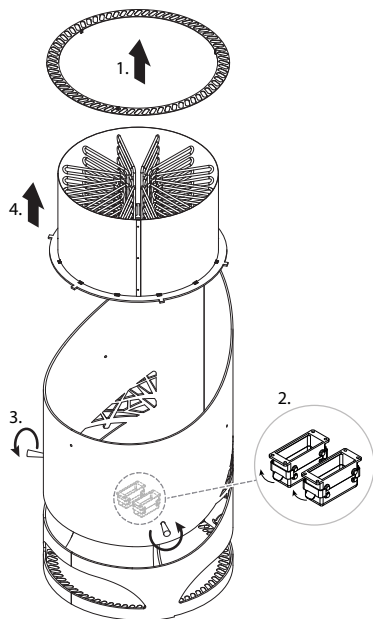
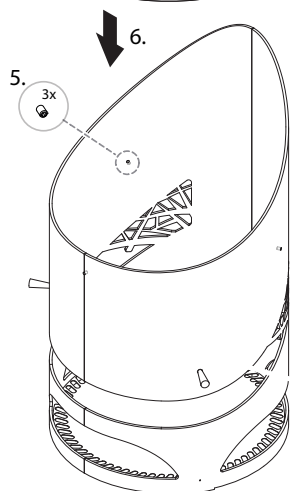
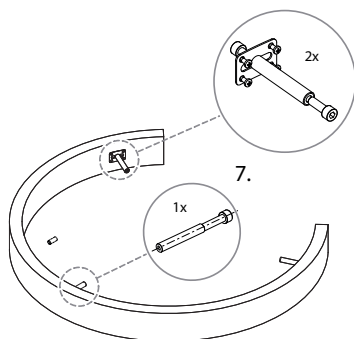
The distance between the heater guard and/or bench and other flammable materials must be at least **10 cm**. The height of the heater guard must be the same as the height of the front of the stove.



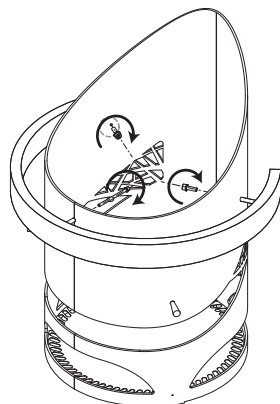
Heater guard rail installation (optional)

The round-shaped guard rail is optionally available. Please bear in mind that you will also need the set of mounting brackets as well.

1. Lift the ring-shaped top cover
2. Disconnect the connectors for both power supply lines (open clip and pull off).
3. Unmount (unscrew) two securing handles (3) on the outer side of the housing.
4. Remove the heating block by pulling it up out of the heater.
5. Unscrew 3 headless screws (plugs) located in the upper part around the heater housing. The 3 holes serve for mounting the guard rail support brackets.
6. Mount the 3 separately supplied guard rail holders (metal pins) to the guard rail. Each holder has a small metal plate with 4 holes. Insert this plate into the corresponding groove milled in the rail and secure it with 4 screws.

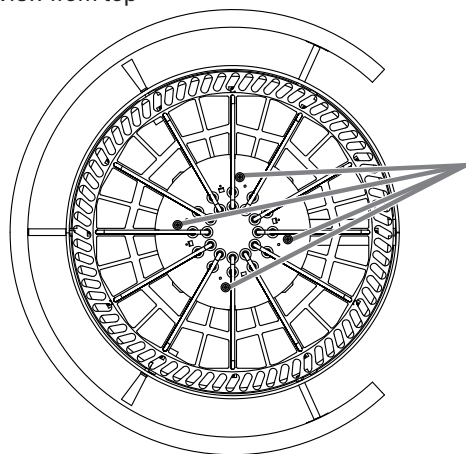


7. Now take the guard rail and set it down on the heater until the metal holders are lined up with the corresponding holes in the housing. **Attention - be careful not to scratch the housing!**
8. Secure the rail holders (pins) from inside the heater through the wall with the supplied M8 screws with hexagonal head.
9. Place the heating block back in the original position and restore the power supply connection. Make sure to secure the connectors with safety clips.
10. Place the top cover ring back in the original position.



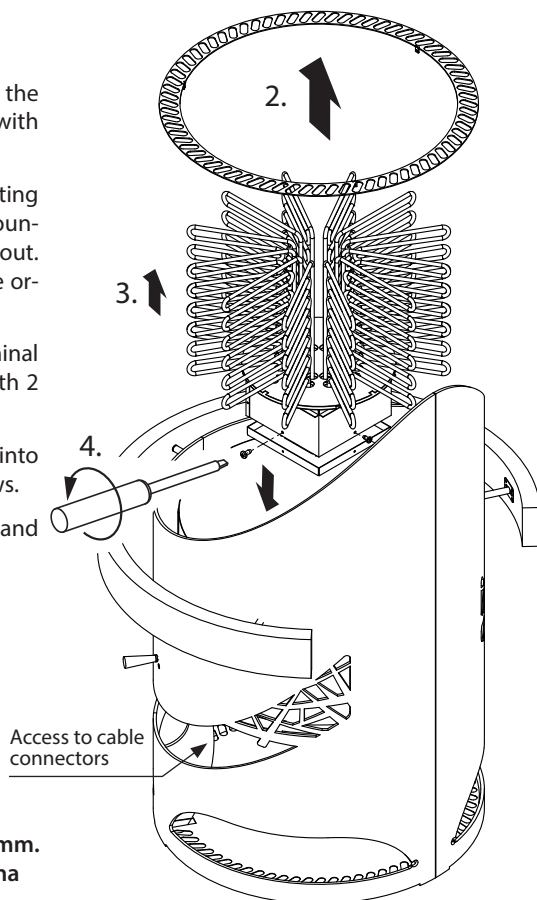
Replacement of heating elements

View from top



1. Remove stones from the rock store.
2. Loosen 4 securing screws (1) in the base plate of the heating block.
3. Lift up and take off the decoration ring (2).
4. Disconnect the plugs of the power supply cables on the bottom of the heater through the side opening.
5. Lift up the heating block (3) and take it out of the heater
6. Loosen two screw of the terminal box cover (bottom side) and take this panel off.

7. The heating elements are fitted in the base plate and secured underneath it with nuts with fan-shaped washers.
8. Pull off the inner wiring from the heating element terminals and loosen the mounting nut. Take the heating element out. Install the new element in the reverse order and connect it.
9. Mount the cover panel of the terminal box back in position and secure it with 2 screws.
10. Set the heating element block back into the housing and secure it with 4 screws.
11. Set the decoration ring back on top and fill the stones into the rock store.
12. Connect the power supply cables.



Notice:

Use sauna stones with the size 100/150 mm.
Make sure to observe the advice for sauna rocks on the next page.

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.

Rinse the sauna stones provided under running water and then place them in the **stone compartment** so that the convection air flow can circulate easily between the stones.

The quantity of stones is sufficient to create a steam shock, vaporizing about 10 cl of water per m³ cabin volume. Always wait at least 10 minutes after an infusion before repeating it. Only then the sauna stones will re-heat sufficiently again.



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

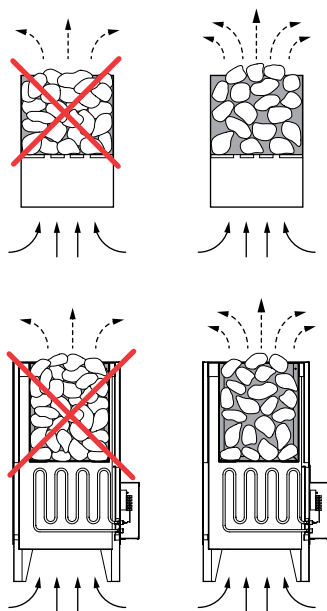
Maintenance and care

All sauna heating units are 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.

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.

Service Address:

EOS Saunatechnik GmbH
Schneiderstriesch 1

35759 Driedorf, Germany

Tel: +49 (0)2775 82-514

Fax: +49 (0)2775 82-431

servicecenter@eos-sauna.de

www.eos-sauna.de

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

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

Equipment commissioning date:

Stamp and signature of the authorized electrician:

General Terms and Conditions of Service

I. Scope

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

II. Prices and Payment Terms

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

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

There shall be no third-party billing.

III. Performance Obligations / Ordering Party's Cooperation

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

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

IV. Service Visit by the manufacturer

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

V. Liability

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

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

VI. Manufacturer's Warranty

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

- The warranty period shall commence from the date on which proof of purchase is provided and shall be limited, in principle, to 24 months.
- Warranty services shall be performed only if the proof of purchase relating to the equipment can be presented.
- Any and all warranty claims shall become void if modifications are made to the equipment without the manufacturer's express consent.
- Any warranty claim shall likewise become void in the case of defects that arise due to repairs or interventions made by unauthorized persons or due to improper use.
- In the case of warranty claims, the serial and article numbers must be indicated together with the designation and a meaningful description of the fault.
- This warranty shall cover defective equipment parts, with the exception of normal wear parts. Wear parts shall include, among other things, light sources, starters, gas or oil pressure dampers as well as acrylic glass panes, tubular heating elements and sauna heater stones.
- Only original replacement parts may be used within the warranty.

- Service visits by outside companies shall require a written order to be issued by our service department.
- The equipment in question shall be sent to our service department by the Ordering Party and at its expense.
- Electrical assembly and installation work, including in the event of service or replacement, shall be carried out at the Customer's expense and shall not be borne by the manufacturer.

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

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

As of 06/2015