

Underbench-Saunaheater „U-therm“ Type UE 35



Installation and Operating Instruction en

Dear customer,
with this product you have acquired a high-quality technical device „Made in Germany“.
These installation and operating instructions have been prepared for your information.
Pay special attention to the „Important notes“.
We wish you relaxed and refreshing sauna bathing.

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Intended use

This sauna heater is only 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!

Intended use also includes compliance with these installation and operating instructions.

For deviating, unauthorized changes and resulting damage the manufacturer is not liable!

The risk is borne solely by the polluter.

General Note:

During the first heating up, slight odors may occur from the production processes and the sauna stones. After this process, ventilate your sauna cabin before starting the sauna bath.

Other Notes

Oven noise

The heating elements and metal parts of the sauna heater may cause noise due to the expansion of the material during heating and cooling.

Occasional bangs can sometimes be caused by stones cracking due to the heat.

Saunaheater – Outer casings:

The sauna heater outer casing of our heaters are made of high-quality chrome steel in bare version with protective foil (-Remove foil before using!-) or made of special steel with enamel glaze.

On the casing parts in chrome steel with protective foil strip-like residues may remain on the casing part in the production-related partial removal of the foil.

These residues can be removed by a solvent-soaked cotton cloth.

For the outer casings with enamel glaze applies:

Enamel is an industrially processed natural product, which can exhibit color changes and pigmentations in final production. But these do not represent a defect of quality.

Care: The outer casings and stainless steel parts can be cared with common household cleaners, harder buildup (eg. limescale, infusion residues, etc.) can be removed by customary commercial special or stainless steel cleaner.



Recycling

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

→ Do not dispose with the normal household waste.



Important notes



Incorrect installation may cause the danger of fire! Please read these installation and operating instructions carefully. Please pay especially attention to the dimensions and the following notes.

- The device is not intended to be used by persons with limited physical, sensory or mental capabilities or for lack of experience and / or lack of knowledge unless they are supervised or advised by a person responsible for your safety to use it.
Children must always be supervised.

- The interior of the sauna cabin must be made of suitable low-resin, untreated material (eg. Nordic spruce).

- In principle, it should be noted that the sauna heater may not be placed on a floor made of combustible material (wood, plastic, etc.).

Appropriate floor coverings are ceramic tiles or similar.

- For controlling the sauna heater a suitable control unit should be used.

The control unit should be mounted on the outer wall of the cabin or another suitable place, the corresponding sensors according to the installation instructions of the control units inside the sauna cabin.

- Only one sauna heating device in the sauna room may be used! If a sauna heating device consists of more than one sauna heater, these must be designed so that the heaters can be monitored by common control and / or regulating devices and protective devices.

- The cabin/sauna lamp must be in the version "splash-proof" used, and is mounted opposite to the sauna heater in the temperature range up to 100°C.

- The sauna heater is not intended for installation or set-up in a niche, under a bench or under a sloping roof.

- The minimum recommended height inside of the sauna cabin is $\geq 1,90$ meter.



Every time before the sauna is used, the sauna room has to be visited, in particular for flammable lay-on or covers above or next to the sauna heater! (eg. towels)



Caution! Covering the sauna heater or incorrectly filled stone container causes a fire hazard!

- Do not operate the sauna heater without stone filling!

- Suitable sauna stones are granites and diabase. Stones made of porous ceramics or soft soapstone are not be used.

- Do not operate the sauna heater with the air intake closed!

- For sauna infusion water there has to be use only water that meets the characteristics of a normal household water (Tap- and rainwater).
- In the infusion water only special aromas designed for sauna water and this purpose may be used.
- The use of humus-, chlorine- or saline-containing essences (eg. sea water, brine solutions) is prohibited!
- Never add more infusion essences to the water than stated. (See manufacturer's instructions).
- The sauna trowel should have a capacity no larger than about 0,2 litres. Only give that many trowels/water on the sauna stones which can be evaporated. Do not pour large quantities of water at once on it.
→ **Danger of scalding!**



Caution! Never pour alcohol or undiluted concentrates on the sauna stones!
→ **Risk of fire!**



Attention! Always pour the infusion water only over the sauna stones and never anywhere else.



Warning! The sauna heater has hot casing surfaces during operation! Do not touch the heater during operation! → **Risk of burns!**

Indirect-Heating-Systems – Shaft wall-Saunaheaters

For Indirect-Heating-Systems – Shaft wall-Saunaheaters “R-therm” Type R 33 and “U-therm” Type UE 35 applies:

Note the sauna infusion arrives only delayed the sauna stones by the way through the hose and infusion pipe. The sauna infusion effect occurs delayed.

The sauna infusion into the infusion funnel therefore has to be done slowly trowel by trowel.

After filling the first trowel, wait for the effect before adding a new trowel.

Maintenance

The sauna infusion-stone is a natural product. Due to the high temperatures and large temperature changes, the sauna stones getting brittle and crumbling. The sauna stones in the heater must be therefore checked regular for wear (porosity and decay), at least once a year, in commercial use, perhaps more often, as needed.

With appropriate wear, the sauna stones must be renewed, and the oven cleaned and vacuumed.

Sauna stones < 5cm size has to be removed!

Always make sure that the openings and radiating plates in the intake area are free. These can easily become clogged with fuzz and dust by the intake of fresh air.

This restricts the air convection of the sauna heater and may cause excessive temperatures.

→ **Caution: Danger of fire!**

On this occasion, please check always by an specialist, the sauna heating elements, as well as the wiring and the terminals.



Caution! >> Before starting any maintenance, the sauna heater must always be disconnected from the mains by the specialist! <<

Indirect-Heating-Systems – Shaft wall-Saunaheaters

For Indirect-Heating-Systems – Shaft wall-Saunaheaters “R-therm” Type R 33 + “U-therm” Type UE 35 note this!

It is important to check the condition of the sauna infusion pipe, all pipe openings must be free.

If necessary, clean them with a wire brush or replace the dirty pipe with a new one.

Furthermore, the perfect condition of the silicone hose leading to the sauna infusion pipe must be checked. In case of defects, it is essential to renew it.

If necessary, we recommend concluding a maintenance contract with your sauna manufacturer or specialist dealer.

Only use the infusion concentrates recommended by your sauna manufacturer / specialist dealer.

Original spare parts, premium sauna infusion concentrates and sauna stones are available from your dealer.

Attention! If cleaning any sharp-edged components, self-protection action must be taken.

Mounting of Saunaheater

Unbox the Underbench-Saunaheater and remove any protective foil still on the heater.

To insert the sauna stones into the Prism-stone-support, the Air-duct-hood must be removed with the Copper-infusion-pipe. For this purpose, unscrew the fastening screws of the Air-duct-hood which are located laterally, after that the hood with the copper pipe can be lifted off the heater.

The Prism-stone-support of the Underbench-Saunaheater must be filled with sauna stones.

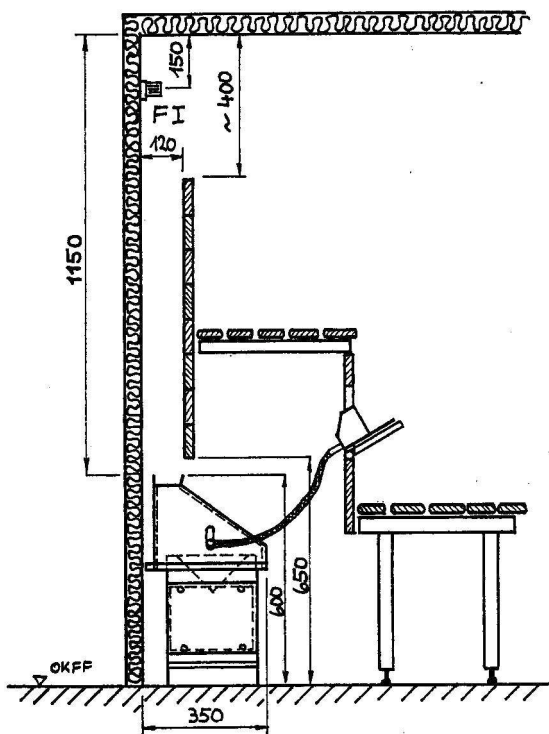
Clean the sauna stones before (brush off, wash off) and dry.

Place the stones in a loose arrangement in the stone basket, so that a convection air flow of the heater remains guaranteed.

Insert the bigger stones first, and then the little stones. Do not stack the stones into a tall pile. Note the fixed height of the infusion pipe.

The electrical connection side of the heater and the infusion side can be freely selected by turning the oven body and the hood.

Then reinstall the Air-duct-hood with the Copper-infusion-pipe.



Place the Saunaheater in front of the air intake opening.

The minimum distance of 60 mm between the heater and the cabin wall is determined by the Air-duct-hood.

To prevent slippage of the Underbench-Saunaheater, two angles are attached to the Air-duct-hood, on each side one with which the heater is attached by means of 2 screws (Accessory kit).

The minimum distance to the cabin ceiling is 1150 mm !

The minimum distance from the heater side to the cabin wall is 10 cm.

The Shaft-wall, which is fixed over the whole width of the cabin, has a minimum distance to the Cabin-wall of 120 mm.

It begins 5 cm over the Air-duct-hood of the Underbench-Saunaheater and ends about 40 cm below the cabin ceiling. (See Figure)

Over the gap of the Shaft-wall to the cabin wall, a grille is to be mounted over at least the entire width of the oven.

The cabin wall and the shaft wall are to be clad within the shaft with a non-combustible material (eg. Promatect) from the top of the heater, at least 60 cm in height and over the entire width of the heater.

The infusion funnel is to be mounted circa 30 – 60 cm over the Underbench-Saunaheater, so that a sufficient fall distance to the infusion pipe is formed.

Then make a connection from the infusion pipe to the infusion funnel by means of the silicone tube and fasten with the hose clamps.

Alternative filling techniques for the infusion pipe may be possible.

There is a warning sign to be installed **“Caution! Do not cover – Fire risk!”** above the cover grille of the shaft.

The safety temperature limiter is installed on the sauna wall above the middle of the sauna heater and approx. 150 mm below the cabin ceiling! (see Fig. / and description of the ECU manufacturer.)

Make electrical connection to the control unit!



Caution! The sauna heater, when used with remote control *, may only be operated in conjunction with a suitable protective cover.

**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.

In each sauna cabin must be provided with air intake and exhaust air openings. The air intake openings should always be placed behind the Saunaheater and about 5 - 10 cm above the floor.

The exhaust air vents are always diagonally placed to the Saunaheater in the lower area of the sauna wall.

The minimum dimensions of the air intake and exhaust air vents can be found in the beside table.

The air intake and exhaust air vents must not be closed.

Please observe also the sauna cabin supplier's instructions.

| Heating-power | Minimum dimensions of air intake + exhaust air vents |
|---|--|
| 4,5 kW | 24 x 4 cm * |
| 6,0 kW | 35 x 4 cm * |
| 7,5 kW | 35 x 5 cm * |
| 9,0 kW | 38 x 6 cm * |
| 10,5 kW | 45 x 6 cm * |
| 12,0 kW | 45 x 7 cm * |
| * or as specified by the cabin manufacturer | |



Electrical connection

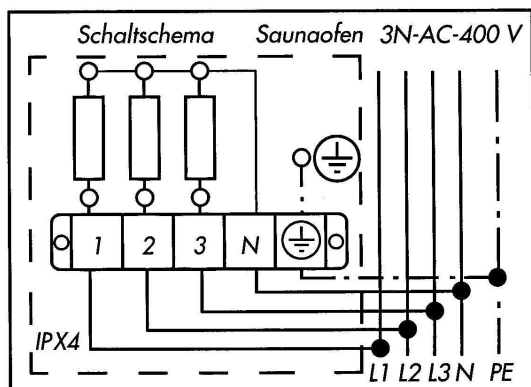
The sauna equipment (heater, control unit, lighting, etc.) with a fixed mains power connection, may be installed only by a certified electrician, taking into account the applicable regulations, protective rules, and according to the installation instruction of the sauna heater and control unit manufacturer!

Only certified control units may be used to connect the sauna heater.

The heating capacity of the sauna heater and the switching capacity of the control unit and power extension unit has to be matched up.

For the Indirect-heating-systems “R-therm” Type R33/2 and “U-therm” Type UE35/132 please note:

- with heating-power 10,5 kW → only control units with a switching capacity of at least 3,5 kW/phase has to be used.
- for heating-power 12,0 kW → is a control unit for power extension, as well as a corresponding load part with at least 4 kW Switching power per phase to use.



The connection diagram for the room heating section of the sauna heater is attached at the inside of the oven back panel and corresponds to the illustration opposite.

Before connecting the sauna heater, check the wiring of the single heating elements and the connection terminal for their strength! (If necessary tighten the screws.)

The connection wiring for the sauna heater and all electrical installation lines inside the cabin must be silicon wires suitable for a temperature at least 170°C.

Cable type: N2GMH 2G-J

Cross-sections: 5 x 2,5 mm² → see table !

CAUTION! Always connect the neutral (N) conductors!

Comments:

When installing sauna heaters, the norm **DIN VDE 0100 part 703** must be observed or the corresponding national norms and legal requirements. The norm makes among others the following statement; Quotation:

„The additional protection 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.“

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.

According to the current state of technic, it does not make sense to use steam-tight heating elements for sauna heaters. It may happen that the magnesium-oxide filling of the heating elements pulls some moisture out of the ambient air through the steam-diffused silicone seal, which can in some cases leads to the tripping of the ELCB. This is a physical process and not a manufacturer's mistake.

In this case, the sauna heater must be heated by a specialist under supervision, bypassing the function of the ELCB (by unconnected Ground). After approx. 10 minutes heating the moisture has escaped from the heating elements and the ELCB (by reconnected Ground) can be included in the circuit again!

If the sauna heater has not been used for a long time, we recommend heating it up every 6 weeks so that the heating elements can not accumulate with moisture.

If the ELCB triggers during commissioning, the electrical installation must be checked again.

The electrical installer is responsible for the proper connection of the electrical sauna devices and therefore the liability by the manufacturer is excluded.

Technical Data:

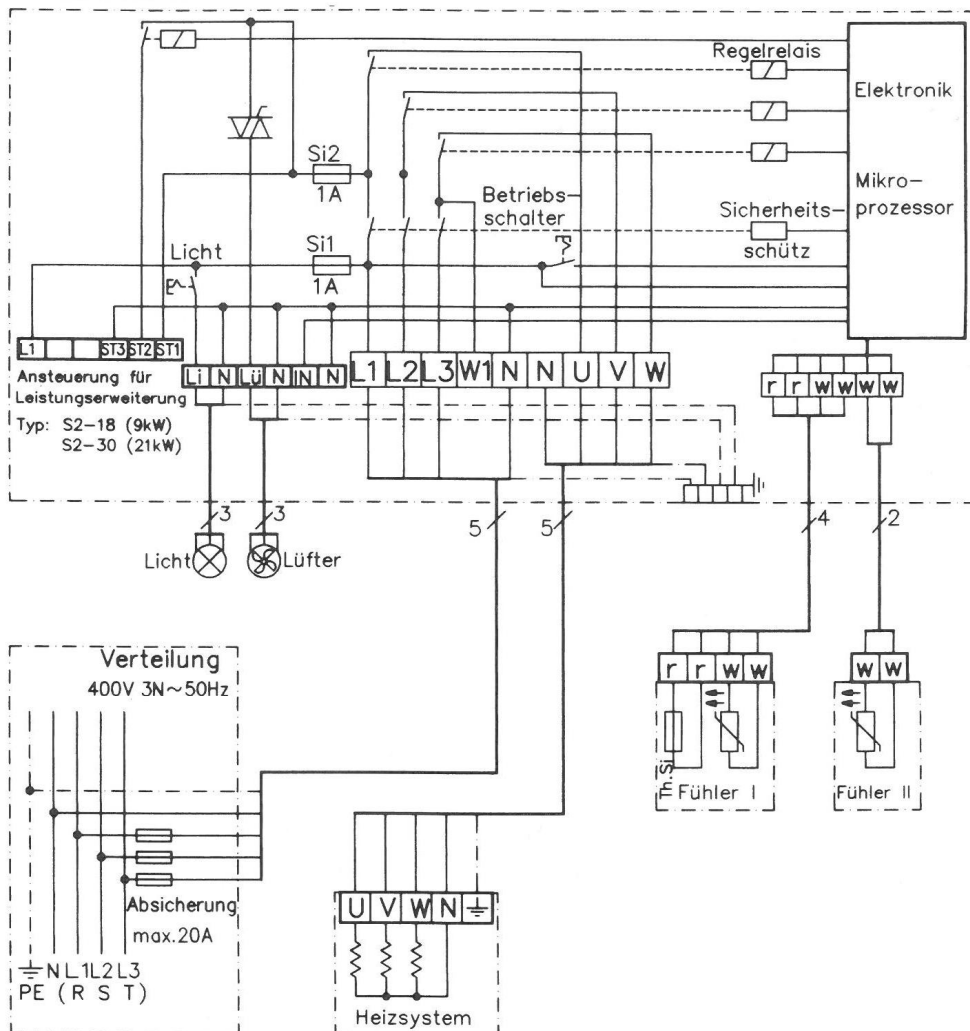
| Type | Dimensions Width x Depth x Height | Voltage | Heating capacities | Stone filling | Electrical Fuse | Connection cable Heater in mm ² |
|-----------|--------------------------------------|------------|-----------------------|------------------|--------------------|---|
| UE 35/100 | ca. 100 x 35 x 60 cm | 400V 3N AC | 4,5 – 9,0 kW | ca. 20 kg | 3 x 16 A | 5 x 2,5 mm ² |
| UE 35/132 | ca. 132 x 35 x 60 cm | 400V 3N AC | 10,5 – 12,0 kW | ca. 25 kg | | |

- All Saunaheaters are splash-water protected. –

Recommended room size of the sauna cabin according to the table. (Basic = RAL-Guideline for sauna cabins in buildings)

| Heating-power | 4,5 | 6,0 | 7,5 | 9,0 | 10,5 | 12,0 | kW |
|------------------------------|-------|-------|--------|--------|---------|---------|----------------|
| Suitable for Sauna cabins | 4 – 6 | 6 – 8 | 7 – 10 | 9 – 12 | 10 – 15 | 12 – 18 | m ³ |

Connection example of a properly sauna system:



Finnish sauna bath

The classic sauna bath:
Temperature 80 – 95°C
Humidity 4 – 10%

The sauna heater is operated with a separate control unit.
Follow the instructions of the manufacturer.

Set the desired Sauna temperature on the control unit.

In the Sauna bath, the vaporizer (if present) is not in operation.



Make sure that on the vaporizer (if present)
are no herbs or essences lay on.
These can inflame due to overheating.

→ **Danger of fire!**

When infusing the sauna water you should not pour the water
from the trowel over the stones too quickly, so that the water
evaporates completely and the full infusion effect is reached.

Make sure that only special essences or infusion are used for
sauna infusion and added to the infusion water according to the
manufacturer's instructions.



Attention! Always pour the infusion water only over
the sauna stones and never anywhere else.

→ Further „Important notes“ can be found on page 3 and 4
of this instruction.

In the event of deviation or disregard of our installation and operating instructions and any damage attributable to it, any liability is excluded and our guarantee obligation expires.
Please always observe the operating and installation instructions of the sauna control unit manufacturer.