

helo

Finnish Sauna Perfection

Product Manual **Hanko STJ**

ELECTRIC SAUNA HEATER:

1702-60-171809

1702-80-171809



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1. Instructions for use of the sauna heater

1.1 Check before taking a sauna bath

1. The sauna room is suitable for taking a sauna bath.
2. The door and the window are closed.
3. The sauna heater is topped with stones that comply with the manufacturer's recommendations, the heating elements are covered with stones, and the stones are piled sparsely.

NOTE: Structural clay tiles are not allowed.

1.2 Operation of the sauna heater controls

Set the heater's thermostat to the desired temperature. You can find the ideal temperature for taking a sauna bath by first turning the thermostat to the maximum. Once the sauna room is warm enough, simply turn the thermostat control backwards, i.e. counter-clockwise, until the heating elements turn off (you can hear a clicking sound). You can fine-tune the temperature by slightly turning the thermostat knob in either direction.

The sauna heater operates with a 12-hour timer.

The timer is operated by turning the timer knob clockwise from the 0 position.

In the 0 position, the power is off and the sauna heater is not on.

In the 0–3 hours zone, heating elements will turn on and the sauna heater is warm for the selected period of time.

In the 1–9 hours zone, you can preset the time after which the sauna heater will turn on. For example, by turning the knob at 6, the sauna heater will turn on after six hours and stay warm for Three hours unless the timer is turned to 0 position earlier.

Pleasant, smooth sauna bath temperature is about 70 °C.

Rearrange the sauna stones at least once a year and replace any weathered stones. This enhances air circulation between the stones, which extends the useful life of the thermal resistors.

If you encounter any problems, please contact the manufacturer's warranty service shop.

For additional information about enjoying a sauna bath, please visit our website at

www.sauna360.com

1.3 Information for users

This appliance may not be used by children aged less than eight years, by persons with reduced physical, sensory or mental capabilities, or by persons lacking experience and knowledge regarding its operation only if such have been given instructions on the safe use of the device and the risks involved. Children must not be allowed to play with the appliance or to clean and service it without supervision. (7.12 EN 60335-1:2012)

1.4 Sauna room

The walls and ceiling of a sauna room should be thermally well insulated. All surfaces that store heat, such as tiled and plastered surfaces must be insulated. It is recommended to use wooden panel cladding inside the sauna room. If there are heat storing elements in the sauna room, such as decorative stone, glass etc., note that these elements may extend the pre-heating period even though the sauna room is otherwise well insulated (see page 7, section 2,6).

2. Recommended sauna room ventilation

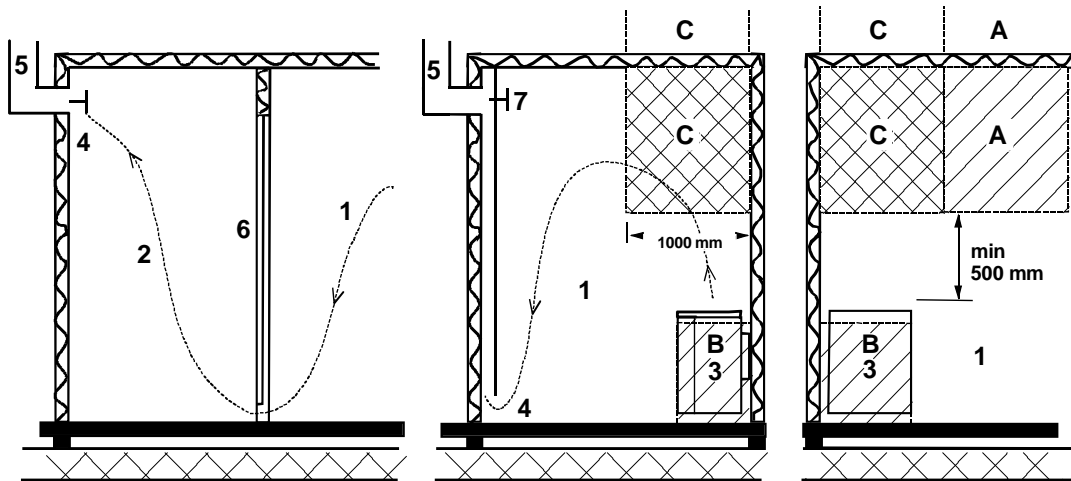


Image 1 Recommended sauna room ventilation

- | | | |
|--|--------------------------|----------------------------|
| 1. Sauna room | 3. Electric sauna heater | 5. Exhaust flue or channel |
| 2. Washroom | 4. Exhaust valve | 6. Door to the sauna room |
| 7. A ventilation valve can be installed here to be kept closed while the sauna is heated and during bathing. | | |

Inlet vent can be positioned in the A zone. Make sure the incoming fresh air will not interfere with (i.e. cool down) the sauna heater's thermostat near the ceiling.

The B zone serves as the incoming air zone, if the sauna room isn't fitted with forced ventilation. In this case, the exhaust valve is installed min 1m higher than the inlet valve.

DO NOT INSTALL INLET VALVE WITHIN ZONE C, IF THE SAUNA HEATER'S CONTROL THERMOSTAT IS LOCATED AT THE SAME ZONE.

2.1 Heating the sauna

Before turning the sauna heater on, make sure the sauna room is suitable for taking a sauna bath. When heated for the first time, the sauna heater may emit some odour. If you detect any odour while the sauna heater warms up, disconnect the sauna heater briefly, and air the room. Then turn the sauna heater back on.

The sauna heater is turned on by twisting the timer knob, and the temperature is adjusted from the thermostat knob.

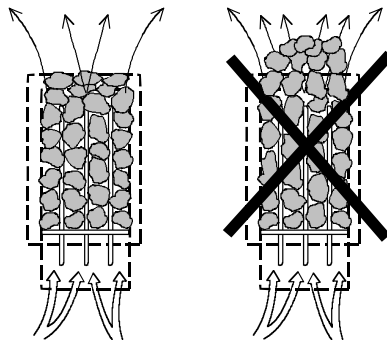
You should turn the sauna heater on roughly an hour before you plan to take a sauna bath, so that the stones have time to heat up properly and the air warms up evenly in the sauna room.

Do not put any objects on the sauna heater. Do not dry clothes on the sauna heater or anywhere in its vicinity.

2.2 Sauna heater stone

Quality stones meet the following requirements:

- Sauna stones should withstand heat and heat variation caused by vaporisation of the water thrown on the stones.
- Stones should be rinsed before use in order to avoid odour and dust.
- Sauna stones should have an uneven surface to supply a larger surface for the water to evaporate from.
- Sauna stones should be large enough, measuring about 50–100 mm to allow good ventilation between the stones. This extends the useful life of the heating elements.
- Sauna stones should be piled sparsely in order to enhance ventilation between the stones. Do not bend the heating elements together or against the frame.
- Rearrange the stones regularly (at least once a year) and replace small and broken stones with new, larger stones.
- Stones are piled so that they cover the heating elements. Do not, however, pile a large heap of stones on the heating elements. For a sufficient amount of stones refer to Table 1 on page 8. Any small stones in the package of stones must not be piled on the sauna heater.
- The warranty does not cover defects resulting from poor ventilation caused by small and tightly packed stones.
- Structural clay tiles are not allowed. They may cause damage to the sauna heater that will not be covered by the warranty.
- Do not use soapstone as sauna rocks. Any damages resulting from this will not be covered by the stove warranty.
- Do not use lava stone as sauna rocks. Any damages resulting from this will not be covered by the stove warranty.
- **DO NOT USE THE HEATER WITHOUT STONES.**



2.3 Sauna heater controls

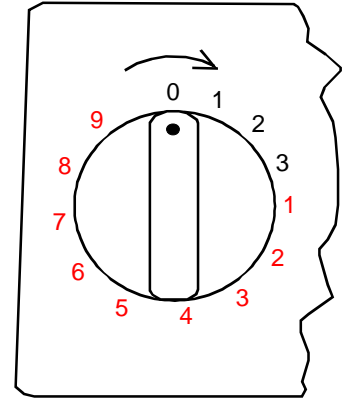
2.3.1 Timer

The sauna heater is controlled by operating a 12-hour timer with three operating zones. The timer is set by twisting the knob clockwise until the desired operating zone is reached. When operating, the timer gradually travels counter-clockwise towards the zero position.

1. 0 position. The sauna heater is not on.
2. Operating zone 1–3 hours. Set on this zone, the sauna heater heats up at full power while the sauna thermostat controls the temperature.
3. Preset zone 1–9 hours. Set on this zone, the sauna heater can be preset to turn on after a certain period of time. The heating elements will not heat up when the timer is within this zone.

Before turning the sauna heater on, make sure the sauna room is suitable for taking a sauna bath.

The timer operates better if it is first turned further than the desired time and then turned back to the desired time. If the switch has not travelled back to 0 position after finishing bathing, turn it to 0 manually.



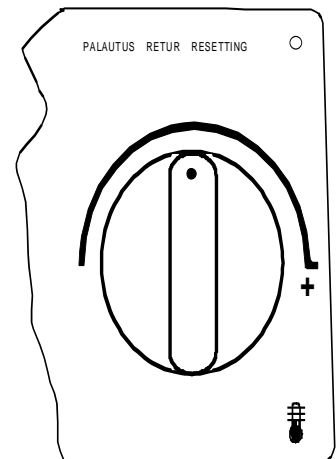
2.3.2 Thermostat

The thermostat knob is next to the timer knob. The further right (clockwise) the timer is switched, the higher the temperature will rise in the sauna room. The best way to find the ideal temperature is to first turn the thermostat fully on the right and let the temperature rise to the desired temperature.

Subsequently, turn the thermostat knob slowly counter-clockwise until you hear a gentle clicking sound. If you want to readjust the temperature, turn the thermostat gradually until the temperature is ideal.

The thermostat will not operate correctly if the stones are piled too densely or they are too small. Please refer to section "Sauna heater stones" on page 5.

The thermostat has an integrated temperature limiter with a reset switch next to the thermostat knob.



2.4 Electric heating toggle

Electric heating toggle applies to homes with an electric heating system.

The sauna heater thermostat also controls the heating toggle. In other words, home heating turns on once the sauna thermostat cuts power off the sauna heater.

2.5 If the sauna heater will not heat up

If the sauna heater will not heat up, please check that:

1. The power is on; And the heater main switch is in position I (close to the thermostat dial)
2. The timer is on the heating zone (operating zone);
3. The thermostat is switched to a temperature that is higher than the current temperature of the sauna room;
4. The front fuses of the sauna heater are intact;
5. The timer is not stuck. Make sure the knob doesn't chafe against the base; there should be min 1mm gap between the knob and the base.

If the sauna heater has been exposed to freezing conditions, the temperature limiter may have gone off. The limiter is reset by pressing the reset switch. Note that the limiter does not work until the temperature has risen to approx. -5°C. If the sauna heater still fails to work, please contact an authorised service for repair.

THE PERSON INSTALLING THE SAUNA HEATER SHOULD LEAVE THESE INSTRUCTIONS AT THE PREMISES FOR THE FUTURE USER.

2.6 Preparing for sauna heater installation

Check the following before installing the sauna heater:

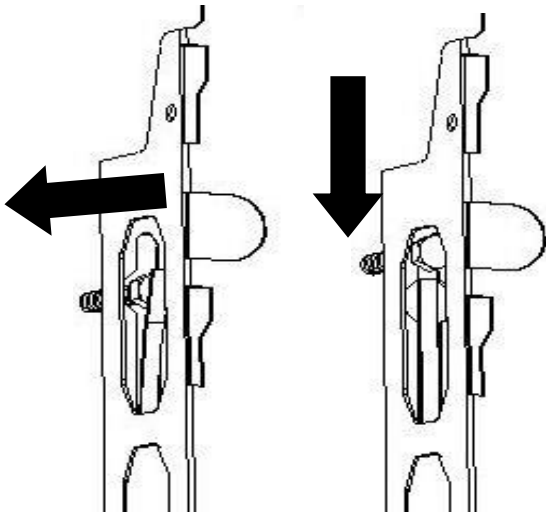
1. The ratio of the heater's input (kW) and the sauna room's volume (m³). Volume/input recommendations are presented in Table 1 on page 8. The minimum and maximum volumes must not be exceeded.
2. The sauna room ceiling must be min 1900 mm high.
3. Uninsulated and masonry stone walls extend the preheating time. Each square metre of plastered ceiling or wall surface adds 1.2 m³ to the sauna room's volume.
4. Check page 9. Table 2 section for a suitable fuse size (A) and the correct diameter of the power supply cable (mm²) for the sauna heater in question.
5. Conform to the specified safety clearance around the sauna heater. There should be enough room around the sauna heater for maintenance purposes, a doorway etc.

2.7 Helo Qlick-Fix heater installation

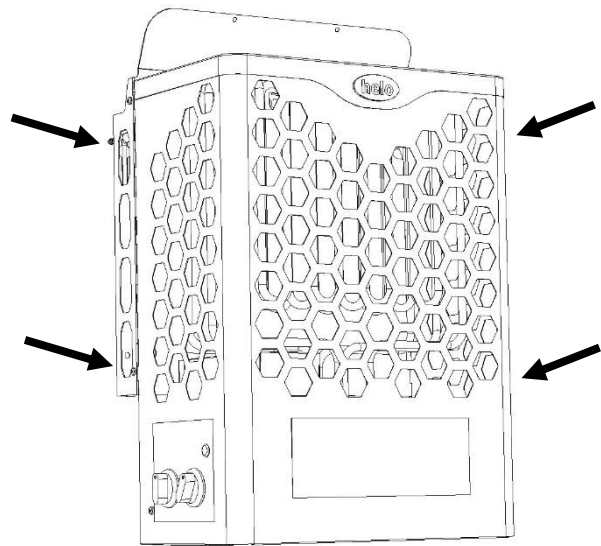
Install the heater in the sauna in accordance with the safety distances in **table 1 on page 8**. A thin panel is not enough as a mounting base, the mounting base must be reinforced with a board behind the panel. **Table 1 on page 8 1** gives the minimum distances that must be observed, even if the wall material is a non-combustible material.

Walls or ceilings must not be clad with fibre-reinforced plaster board or other light-weight cladding, because they may cause a fire hazard.

Only one heater may be installed in the sauna.



See table 1 for minimum safety distance to wall B and floor J. Use mounting paper to locate the holes. Drill a 3.5mm pilot hole in the panel and fasten 6 x 40 mm mounting screws (2 pcs) to the wall. Leave a gap between the screw head and the wall 1-2 mm. Install the heater by pushing it into place through the holes and lowering. The tongues lock the heater, preventing lifting without a tool.



When performing maintenance, the heater can be removed from the wall mount if necessary by unscrewing the 4 screws on the sides.

NOTE! Stones must be removed before the heater is removed. Slide the heater upward and pull it outward. Reinstall in the reverse order. Press into the slots, lower and tighten the screws.

2.7.1 Sauna heater safety clearances

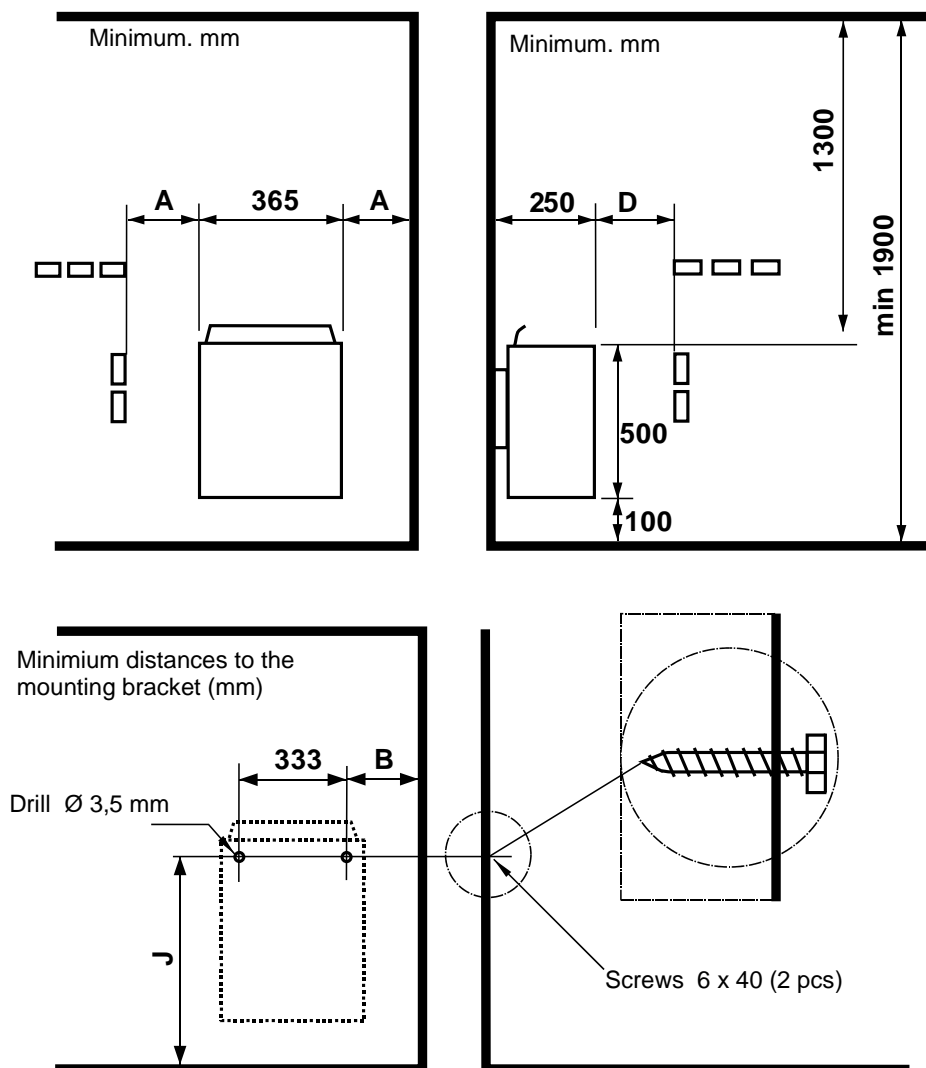


Image 2 Safety distances, dimensions minimum dimensions (mm)

Effect	Saunaroom Volume m ³	Minimum distance to		Minimum distance to wall bracket		Stone Circa. kg
		Side wall A mm	In front of D mm	B mm	J mm	
6,0	5 – 9	70	100	85	545	32
8,0	8 – 12	100	150	115	545	32

Table 1 Safety clearances

2.8 Connection of the sauna heater to the mains

The sauna heater must be connected to the mains by a qualified electrician and in compliance with current regulations. Sauna heater is connected with a semi-permanent connection. Use H07RN-F (60245 IEC 66) cables or a corresponding type. Other output cables (signal lamp, electric heating toggle) must also adhere to these recommendations. Do not use PVC insulated cable as a connection cable for the sauna heater.

A multipolar (e.g. 7-pole) cable is allowed, if the voltage is the same. In the absence of a separate control current fuse, the diameter of all cables must be the same, i.e. in accordance with the front fuse.

The connecting box on the sauna wall should be located within the minimum safety clearance specified for the sauna heater. The maximum height for the connection box is 500 mm from the floor
Image 3 page 10 If the connection box is located at 500 mm distance from the heater, the maximum height is 1000 mm from the floor

Sauna heater insulation resistance:

The sauna heater heating elements may absorb moisture from air, e.g. during storage. This may cause leakage currents. The moisture will be gone after a few heating sessions. Do not connect the heater power supply through a ground fault interrupter.

Adhere to the effective electrical safety regulation when installing the sauna heater.

Power kW	Power supply cable H07RN-F/ 60245 IEC 66 mm ² 400V – 415V 3N~	Fuse A	Power supply cable H07RN-F/ 60245 IEC 66 mm ² 230V 3~	Fuse A	Power supply cable H07RN-F/ 60245 IEC 66 mm ² 230V – 240V 1N~ / 2~	Fuse A
6,0 8,0	5 x 1,5 5 x 2,5	3 x 10 3 x 16	4 x 2,5 4 x 6	3 x 16 3 x 25	3 x 10 3 x 10	1 x 35 1 x 35

Table 2 Cable and Fuse

2.9 Electric heating toggle

Electric heating toggle applies to homes with an electric heating system.

Sauna heater has connections (marked N-55) for controlling the electric heating toggle. Connectors N-55 and the heating elements are simultaneously live (230V). The sauna heater thermostat also controls the heating toggle. In other words, home heating turns on once the sauna thermostat cuts power off the sauna heater.

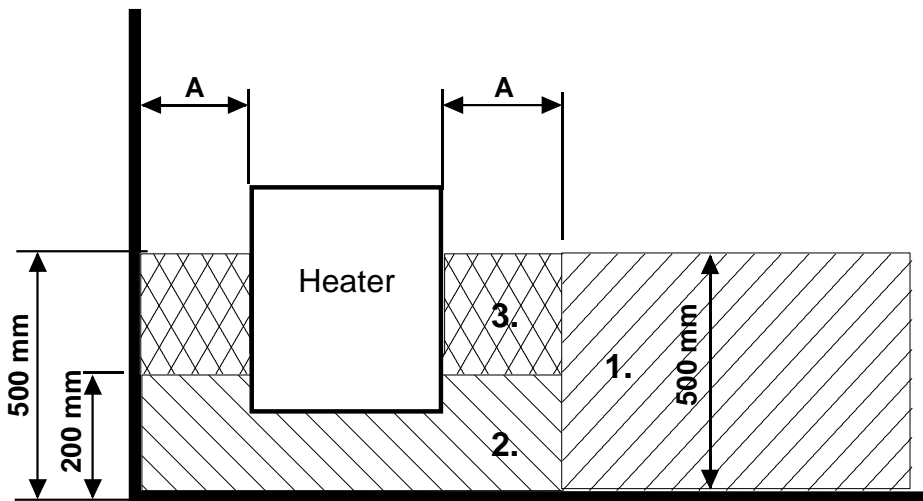


image 3 Locating the connection box for connection cable in the sauna room

2.10 Location for the connection box

A = Specified minimum safety clearance

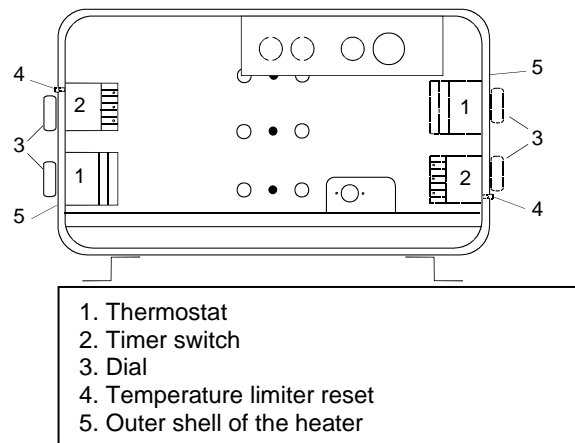
- 1. Recommended location for the connection box
- 2. Silumin box recommended in this area.
- 3. This area should be avoided. Always use a silumin box.

In other areas, use a heat-resisting box (T 125 °C) and heat-resisting cables (T 170 °C). The connection box must be clear of obstacles. When installing the connection box to zones 2 or 3, refer to the instructions and regulations of the local energy supplier.

2.11 Moving the heater controls from one side to the other

By default, the thermostat and the timer switch are located on the left hand side of the heater when viewed from the front. They can be moved to the other side, if necessary. The work may only be carried out by a qualified electrician.

1. Turn the heater upside down. Unfasten the bottom plate.
2. Pull off the dials for the thermostat and the timer switch. Unfasten the two screws in the thermostat and timer switch frame. Remove the plastic covers for the electric box and the outer shell from the back. Move the thermostat, the timer switch and their frame to the other side and refasten using two screws. Insert the plastic covers in the now empty holes. Push the thermostat and timer switch dials back into place. NOTE! Leave a minimum of 1 mm between the dial and the heater outer shell.
3. Fasten the bottom plate, install the heater and check that it works.



2.12 Wiring diagram

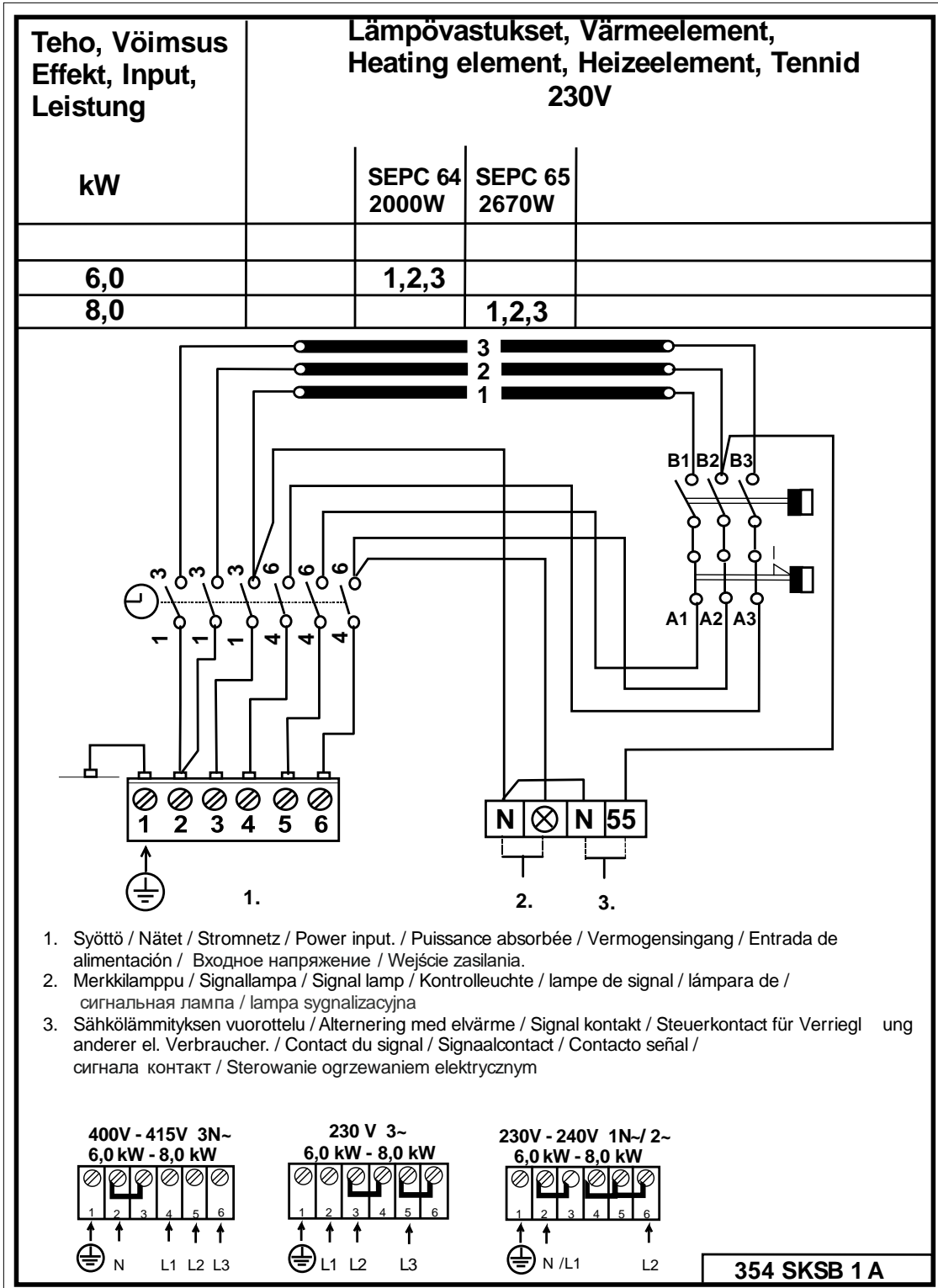


Image 4 Viring diagram

3. Spare parts for the Hanko STJ-electric sauna heater

Part	Product number	Product title	Hanko 60 STJ	Hanko 80 STJ
1	SP5509053	Clock OYKF 1	1	1
2	SP4321015	Thermostat OLHC 2	1	1
3	SP7812550	Mains connector NLWD 1-1	1	1
4	SP7712000	Cable clamp NKWA 1	1	1
5	SP7309531	Knob YWWA 6-1	2	2
6	SP4316222	Heating element SEPC 63 1500W/230V	-	-
7	SP4316221	Heating element SEPC 64 2000W/230V	3	
8	SP4316220	Heating element SEPC 65 2670W/230V		3
9	SP7513002	Philips screw M5 x 10	3	3

Table 3 Hanko STJ spare parts

4. ROHS

Instructions for environmental protection

This product must not be disposed with normal household waste at the end of its life cycle. Instead, it should be delivered to a collecting place for the recycling of electrical and electronic devices.

The symbol on the product, the instruction manual or the package refers to this.

The materials can be recycled according to the markings on them. By reusing, utilising the materials or by otherwise reusing old equipment, you make an important contribution for the protection of our environment. Please note that the product is returned to the recycling centre without any sauna rocks and soapstone cover.

Please contact the municipal administration with enquiries concerning the recycling place.

