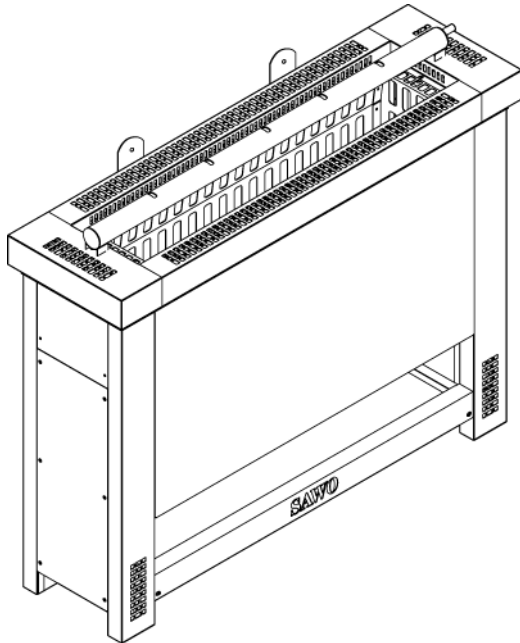


HELIUS

HIDDEN HEATER



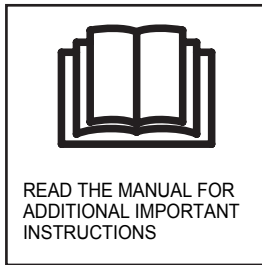
Congratulations on your purchase of SAWO sauna heater.
Please read the manual carefully before using the heater.



ENGLISH

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Safety Instructions

Please take note of these safety precautions before using the sauna or when installing the heater.

For user:

- This product is not designed to be used by persons (including children) with limited physical or mental abilities and limited experience and knowledge except under close supervision by a responsible person with knowledge and experience or having been advised by such person.
- Cleaning and user maintenance shall not be made by children without supervision.
- Under no circumstances should children be allowed to play with the device.
- Do not use the heater as a grill.
- Do not put wood of any kind on the electric heater.
- Do not cover the heater. It may cause a fire.
- Do not use the heater as clothes dryer. It may cause fire.
- Never sit on the heater. It is really hot and can cause serious burns.
- Do not use chlorinated water (e.g. From the swimming pool or jacuzzi) or seawater. It can destroy the heater.
- When installing a new heater, switch the heater on for 30mins. Do not stay inside the sauna room while performing the operation. See page 9.
- Make sure that no flammable objects have been placed on the heater before activating the preset time function or the stand-by mode for the remote operation.

For Technicians:

- Wiring and repairs must be done by a certified electrician.
- Follow the Minimum Safety Distances when mounting the heater (see Fig. 1).
- The electronic and electric system should be mounted in a way so that incoming air will not interfere with it. The control must be mounted outside the sauna cabin.
- If this sauna heater is used for public saunas or saunas that may be switched on by a separate remote-control system/ the door of the sauna room must be fitted with an interlock such that the stand-by mode setting for remote operation is disabled if the sauna door is opened when the stand-by mode setting for remote operation is set.
- When positioning the sauna heater, observe the minimum safety distances (see Fig. 1).
- Observe the specifications on volumes of the sauna cabin (see Fig. 7).
- Observe the specifications on ventilation of the sauna cabin (see Fig. 9).

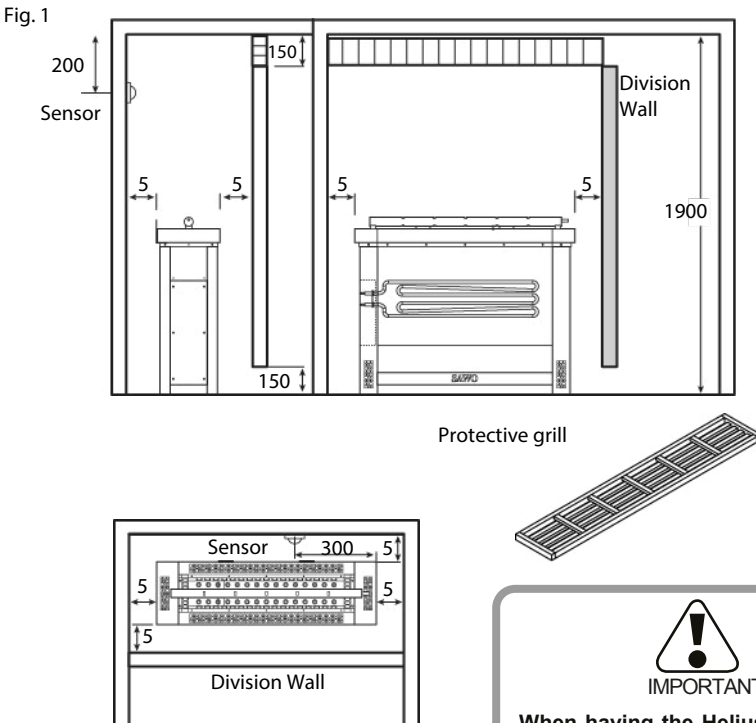
Heater Installation

It is recommended that the heater be placed on a recess wall nearest to the door. The air circulation created by the door should work together with the hot air generated by the heater. For safety and convenience, follow the minimum safety distances as provided in Fig. 1. Follow the cubic volumes given in the Technical Data in page 7. Do not install more than one heater in a sauna room unless you follow the special instructions for tandem-heater installation.

A certified electrician must do the installation of the heater to ensure safety and reliability. Improper electrical connections can cause electric shock or fire. Refer to the electrical diagram in page 7.

An electrical supply cable must be connected to the terminal block inside the control unit through the cable channel. The cable must be 5-core HO7RN-F type or its equivalent. To connect the cable, open the side of the heater where terminals are located (see Fig. 5).

Minimum Safety Distance Illustration (mm)



Heater Sensor Location

Follow the Helius sensor safety distances when installing the sensors of your control units.

When installing the sensor, see it that is installed opposite to the control box.

For illustrative purpose only

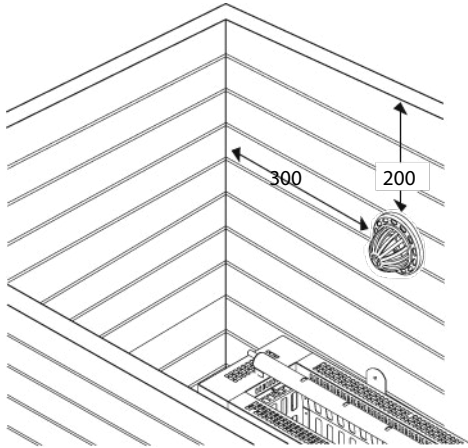
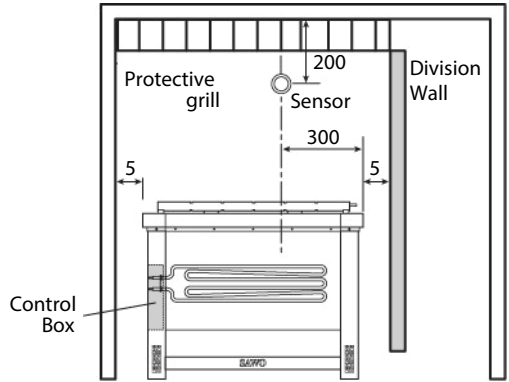


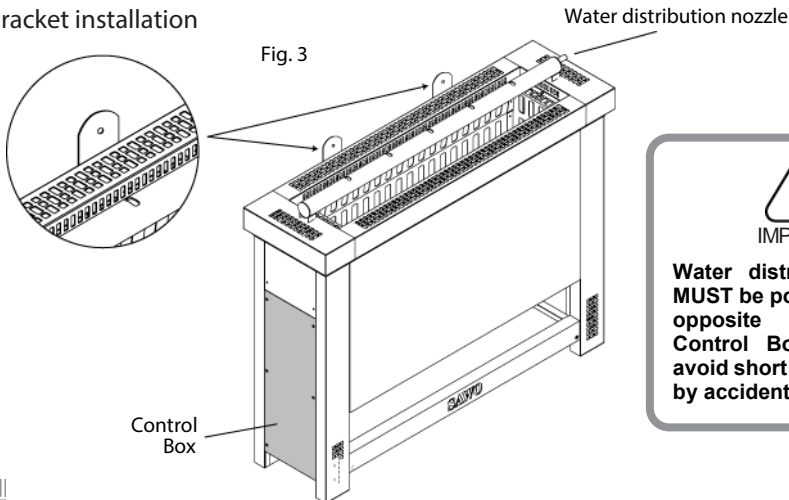
Fig. 2
(mm)



Heater Assembly

The heater comes in a set with a water accessory: protective grill, water funnel, holder, silicone hose and water distribution tube. Mounting brackets are also enclosed. Screw the brackets to the wall to secure the heater to prevent it from falling down.

Bracket installation



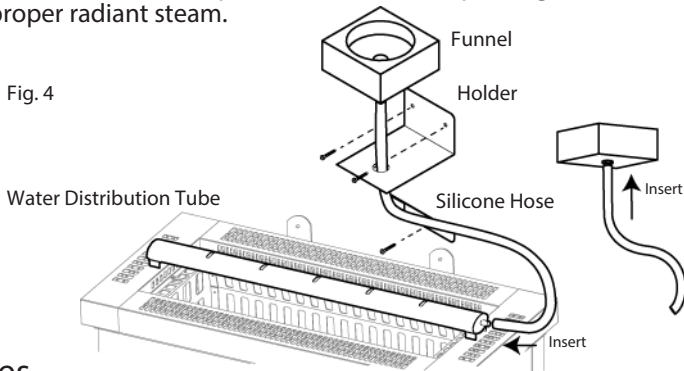
IMPORTANT

Water distribution nozzle MUST be positioned on the opposite side of the Control Box. This is to avoid short circuits caused by accidental leaks.

Water Accessory Installation

The water funnel and hose is necessary when installing the heater on a recess wall. It is used to easily transmit water into the heater stones. Insert firmly the silicone hose to the nozzle of the funnel and the distribution tube to tighten it. You may use the holder if you wish to hang the funnel on the wall. See illustration below.

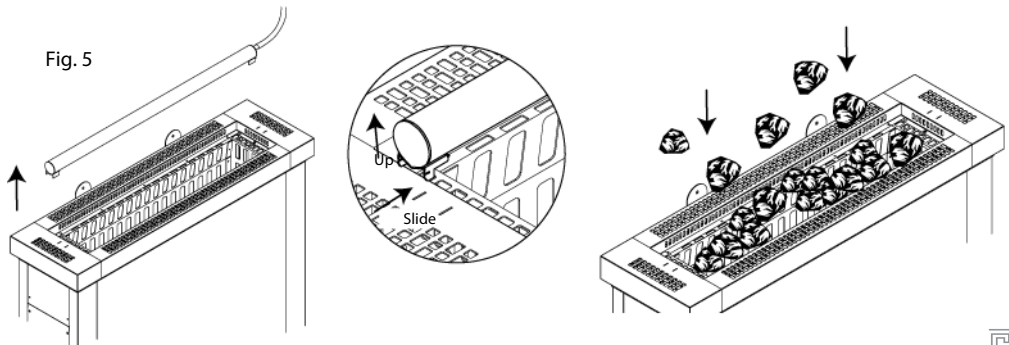
Place the funnel on the area that is accessible for putting water into it. Funnel must be placed higher than the heater to ensure even water distribution on the stones. When water is poured into the funnel, the water is distributed evenly to the heater and generate a pleasant steam inside the sauna room. Cut short the hose when necessary to avoid water trap. Set an interval on pouring water into the heater to have proper radiant steam.



Sauna Stones

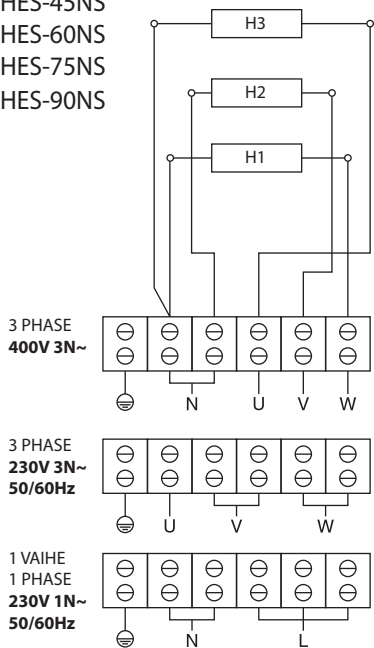
Stones store heat energy to efficiently vaporize the water that touches it to maintain the correct humidity inside the sauna room. It is recommended that all stones should be rinsed before using to remove any stains or dust that can cause unpleasant odor during the first few times of using the heater. The stones must be removed at least once a year or every 500 hours whichever comes first. Small stone pieces less than 35mm in diameter must not be loaded into the heater because they will block the air circulation and will cause overheating that will damage the heating element.

Slide up the water distribution tube to remove. Place enough stones and place back the water distribution tube afterwards.



Electrical Diagram

HES-45NS
HES-60NS
HES-75NS
HES-90NS



Heating Element

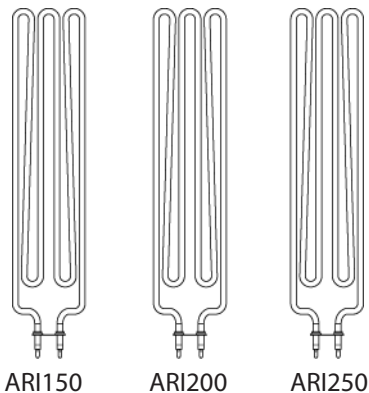
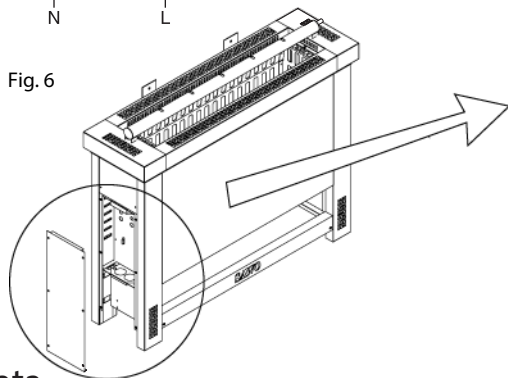
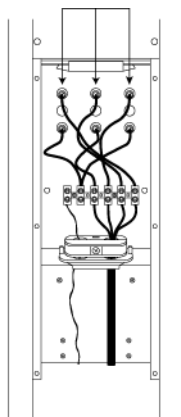


Fig. 6



For illustrative purpose only



Technical Data

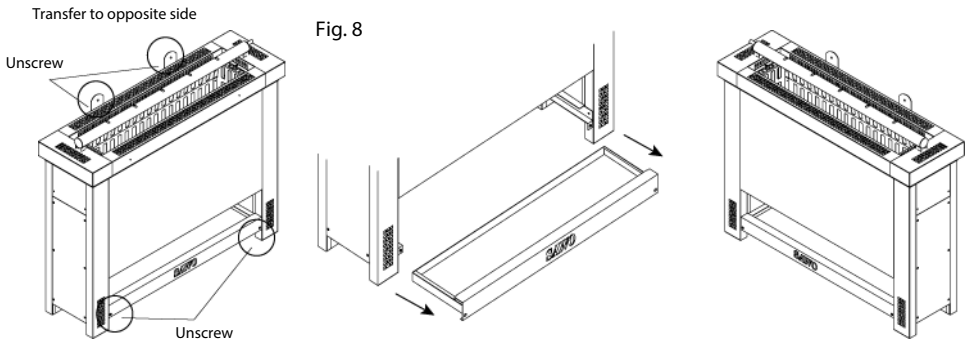
Fig. 7

HEATER MODEL	kW	HEATING ELEMENT		SAUNA ROOM		SUPPLY VOLTAGE	SIZE OF HEATER			SIZE OF WIRE		CONTROL	FUSE (AMP.)
		kW	TYPE NUMBER	MIN (m ³)	MAX (m ³)		WIDTH (mm)	DEPTH (mm)	HEIGHT	mm ²	STONES (kg)		
HES-45NS	4,5	3 x 1.5	ARI150	3	6	400V 3N~	860	230	655	5 x 1.5	19	separate	3 x 10
HES-60NS	6,0	3 x 2.0	ARI200	5	9	400V 3N~	860	230	655	5 x 1.5	19	separate	3 x 10
HES-75NS	7,5	3 x 2.5	ARI250	7	13	400V 3N~	860	230	655	5 x 2.5	19	separate	3 x 16
HES-90NS	9,0	3 x 3.0	ARI300	8	14	400V 3N~	860	230	655	5 x 2.5	19	separate	3 x 16

Rotating the heater

In case you need to rotate your heater for wiring convenience or use, remove the screws below the heater to remove the catchbasin to transfer it to the opposite side, same as the heater brackets.

Empty the catch basin for excess water and crumbles of stones.



Insulation

The sauna must have proper insulation on the walls, ceiling and door. One square meter (m^2) of uninsulated surface increases the cubic volume by approximately $1,2m^3$ when determining the power requirement of the heater. Refer to Technical Data.

Ensure that moisture proofing is appropriate for the sauna room. The purpose of this is to prevent spreading of moisture to the other rooms or wall structure. Moisture proofing must be placed between heating insulation and panel.

Thermal and moisture proofing need to be installed according to the following order from outside to inside.

- The recommended minimum thickness of the thermal insulation in the walls is 50 mm and in the ceiling 100 mm.
- It is possible to use carton- or aluminum foil laminate as a vapor barrier, which is affixed over the insulation aluminum foil inwards.
- Leave at least 20 mm air slot between vapor barrier and inside panel
- To prevent gathering of the moisture behind the panel leave the slot between wall panel and ceiling.

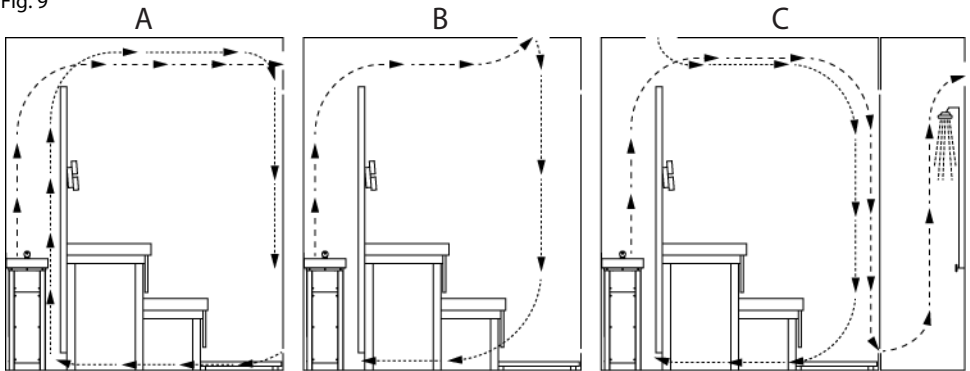
Air Ventilation

To have a soothing sauna, there should be a proper mixing of hot and cold air inside the sauna room. Another reason for ventilation is to draw air around the heater and move the heat to the farthest part of the sauna. The positioning of the inlet and outlet vents may vary depending on the design of the sauna room or preference of the owner.

The inlet vent may be installed on the wall directly below the heater (Fig. 9A). When using the mechanical ventilation, inlet vent is placed at least 60 cm above the heater (Fig. 9B) or on the ceiling above the heater (Fig. 9C). Through these positions, the heavy cold air that is blown into the sauna is mixed with the light hot air from the heater, bringing fresh air for the bathers. It is recommended that the inlet vent must have a diameter of 5-10cm.

The outlet vent should be placed diagonally opposite to the inlet. It is recommended that the outlet vent is placed under the platform in a sauna as far as possible from the fresh air vent. It can be installed near the floor and stale air is or led outside through a pipe to a vent in the sauna ceiling, or under the door (to the washroom). In this case, the sill slot must be at least 5 cm and it is recommended that there is mechanical ventilation in the washroom. The size of the exhaust should be twice that of the inlet.

Fig. 9





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