



Sauna Heater



Installation and Manual

INSTRUCTIONS FOR SAWO SAUNA HEATER'S INSTALLATION, USAGE AND CARE

Congratulations on your good choice of a sauna heater! SAWO sauna heater is a high quality and traditional Finnish product, that will serve you longer if used and taken care of properly. Read the instructions carefully before using the sauna heater as this manual describes the sauna heater installation, usage and care. Please keep the manual for later reference.

WARNING

- The heater hatch must be closed to prevent leaking of smoke, unless setting up fire, adding wood or removing residual material.
- Parts of the sauna heater, especially the outer case, are extremely hot to touch during usage.
- Any changes to the sauna heater without authorization is forbidden.

TO BE NOTED

The sauna heater should be kept in dry place before installation in order to prevent any rust!

All plastic wrappers should be removed before first heating!

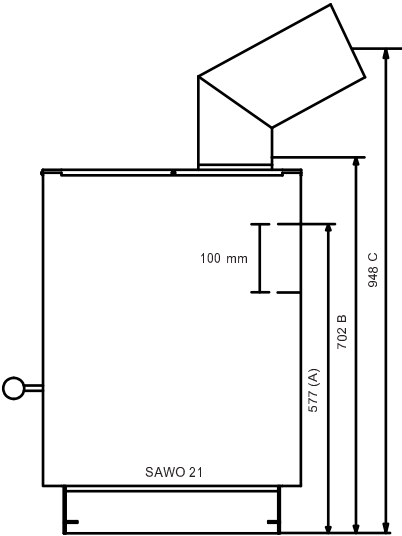
TECHNICAL INFORMATION

Table 1.

Sauna minimum and a maximum volume	8...21 m ³
Connecting flue's diameter	143 mm
Connecting flue's height	702mm
Optional exhaust outlet at the back(horizontal)	110 mm
Required temperature class of chimney	T600
Replacement air opening minimum size	Ø100 mm
Height	690 mm
Width	430 mm
Depth	490 mm
Max length of fire wood	35 cm

Max diameter of fire wood	10–15 cm
Stone capacity	about 35 kg
Diameter of stones	8–12 cm
Weight	56 kg
Water container volume	Chimney type 30 l
Glassdoor	●
Adjustable legs	●
Guiding plates of combustion air (for cleaner burning)	●

- Included
- Optional



Picture 1: Height of connecting flue

Height of Connecting Flue

The heights of SAWO sauna heaters’ connecting flues’ are presented in Table 1 as well as in the picture above (dimension B). 65° angled smoke pipe lifts up the flue opening’s middle part by about 246mm and 90° angled smoke pipe as for by 177mm higher.

Table 2: CE marking

CE	SAWO
Model	SAWO 21
Fuel	Wood
Fire safety (initiation to adjacent elements)	
- safety distances	➔ see table "SAFETY DISTANCES"
Emit of dangerous substances	NPD
Temperature of smoke fuel in connecting fuel, °C, (when stove doors closed)	464°C
Heat output to the room (kW)	16kW
- carbon monoxide emission	(0,36 %)
- total efficiency	(62 %)
- flue draught	12 Pa
- refueling loads	5 + 3,7 kg
- opening of the ash drawer	25 mm
Mass flow of smoke gas	17,6 g/s

SAUNA HEATER INSTALLATION AND FOUNDATION

All local specifications, that are referred to local standards, must be fulfilled when installing the wood burning heater.

Before Installation

All packing materials and protective plastics must be removed. On shiny, stainless steel parts (decorative moldings, heater door's outer casing, stainless steel model's outer casing, etc) might have a thin protective film which must be completely removed. The film should for a reason also be removed if the sauna heater is exposed to the sun while being stored, as it might make it difficult to remove the film.

The sauna stones should not be placed before the first heating to remove all the protective substances of the heater. In this case, make sure the ventilation of the sauna room is sufficient enough. It is recommendable to do the first heating outdoors, in which case install the bare smoke pipe to the sauna heater for draught.

Size of the Sauna room

SAWO wood burning sauna heater should be installed in a sauna room that follows the sauna room specifications informed in the technical details. When defining the sauna room size, pay attention to qualities that affect the heating of the sauna room. If the sauna is made of bare massive log and used during winters, the volume must be multiplied by 1.5 which is bigger than the actual volume. For every unlined stone wall square meter (m^2), it increases the volume by 1.2 m^3 . For every door and window square meter (m^2) increases the volume by 1.2 m^3 . The sauna heater should be selected according to this calculated sauna room volume specifications.

Installation Area

Install the sauna heater to a horizontal, stationary, stable and inflammable platform. The floor must have a sufficient load-bearing capacity of the weight of sauna heater, possible water container and flue. If this existing floor does not meet the requirement, suitable proceedings must be done to achieve it (e.g. by using load distributing plate). By using adjustable legs (optional), it enables to adjust the sauna heater's position and make sure the heater stays firmly on the floor. Install adjustable legs to the heater's lower part of the heater body, to the brackets. Adjust the heater to its position by unscrewing the lower adjustable legs and lock it with the upper adjustable legs.

Smoke Fuel

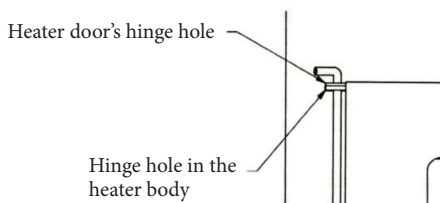
Connect the SAWO heater to a suitable flue recommended by the distributor. The smoke flue's temperature classification must be at least T600 and be soot flammable resistant.

SAWO heater is not suitable to be installed into a shared smoke duct system.

Install the sauna heater to the chimney using an angled smoke pipe or a straight flue connection pipe (see picture 1). Models which have a rear connection opening, can be connected to the flue as well with the included cover hatch. In the case of a laid smoke flue, be careful from blocking the smoke flue with a connection pipe. Seal the gap between the smoke flue and connecting flue by using, for example, suitable mortar or fireproof mineral wool (specific weight at least $100\text{kg}/\text{m}^3$).

Heater Door

The heater door of SAWO wood burning heaters are placed inside the furnace during transportation. The kingpin of the hinge is already on its place. For installing the heater door, remove the kingpin, place the door in such a way that the top portion of the heater door is above and the lower portion of the heater door is below the holes where the kingpin was.



Picture 2: Hinge of heater door

After the heater door is in place, push the kingpin back to its original place(Figure 2). The opening direction of the heater door can be changed by flipping the heater door 180 degrees and placing the kingpin to the other side of the cover hatch.

SAFETY DISTANCES

Table 3.

Safety distances to combustible materials	Sawo 21
On either side:	250 mm
Behind the heater:	250 mm
In the front:	500 mm
To the ceiling:	1150 mm

Minimum distance (air gap) to nonflammable walls 50 mm

Protecting the Floor

Wood burning heater can be placed directly on a 60 mm thick concrete floor as long as there are no materials under the heater that might be harmed by the heat, such as electrical lines and water lines.

Unnecessary heating of any constructions under the heater must be prevented. Glues, plats and waterproof materials cannot withstand the heating the heat created under the heater without protection. Protective shield meant for protect the floor under the heater. Always install the heater according the guidelines of local fire authorities and fire safety regulations to ensure proper safety. Contact the fire authorities for more information.

If the heater is installed on a combustible material, the floor must be protected by protective shield or equivalent. In the front side of the heater the flooring must be protected 100 mm from both sides of the heater and 400 mm in front of it. This area can be protected by using a heat shield made from metal sheet and is fixed underneath the heater in such a way that there is no openings or areas that the heat shields are not protecting properly.

Sauna Stones

It is recommended to only use peridotite, olivine-dolerites and olivine stones which are specifically made for the purpose of sauna stones. The sauna stones should be 8-15 cm in diameter. The stones must be washed before piling them on the sauna heater. Place the larger stones on the bottom, with the largest surface of the stone facing the sauna heater's steel surface. Place the stones on the side cases as well and fairly by 10-15 cm on top of the middle duct. A necessary amount of sauna stones will guarantee good steam. When placing the sauna stones, make sure the sweeping hatches' covers stay firmly in its place.

Ventilation of the Sauna room

Air ventilation of the sauna must be set up in a way that it will supply enough air for combustion and the air inside the sauna stays fresh. Good ventilation helps also to ensure proper drying of the sauna room after the sauna session.

To ensure proper fresh air flow into the sauna room, the incoming air should be lead to the sauna room by using a 10 cm diameter vent close to the heater and the floor of the sauna room. Make sure that nothing can block the ventilation by placing a proper grill to the louver. Combustion consumes lots of fresh air which makes gravity exhaust ventilation suitable for sauna rooms that uses wood for heating.

If you are plan to use mechanical exhaust ventilation, the placement of the air inlet can also be above the heater. If you place the air inlet above the heater, the exhaust outlet should be placed close to the floor of the sauna room, preferably at the opposite wall than the air inlet. It is also possible to use the air from washing room without using a separate air inlet tubes by leaving a minimum of 8 cm gap under the door of the sauna room to work as an air inlet. When using a mechanical exhaust ventilation, the user must be sure that the exhaust won't create unnecessary under pressure into the sauna room which can lead to poor draught in the flue and worsen the ignition.

Ventilator is placed to the ceiling of the sauna room or to the wall close to the ceiling. Ventilator is kept closed when the sauna room/heater is used, after the sauna has been used ventilator is opened to dry up the sauna. Ventilation after sauna is secures long life of the heater and the sauna.

INSTRUCTION FOR USE AND HEATING THE SAUNA HEATER

Fuel

Only natural wood must be used as a fuel for the heater. Dimensions of the wood that should be used are presented in Table 1. The amounts of the wood used for heating and refueling are presented in table 2. When refueling the heater, don't fill up woods over to top level of the firebox door. Use only dry wood for heating to secure good burning.

Wood is the only material that should be burned in the heater. Never use materials with high heat capacity, such as briquette, charcoal, plastic, or fluid fuel.

Do not store wood too close to heater, to avoid risk of fire.

Heating

Before heating, open the smoke flue damper plate (if installed) and empty the ash drawer. Use small dry firewood when starting a fire. Air circulation is controlled by opening of the ash drawer. When starting a fire, ash drawer can be wide open. During heating ash drawer can be open 25 mm, up to restrictor. If ash drawer is opened more, you must be careful not to heat heater too hard. With small draft you need to use less firewood, but it takes longer to heat up the sauna. Usually one full load of fire wood is enough to heat up the heater, to keep fire on when using the heater reload firewood when needed.

Secure that fresh air inlet(s) are clean and open.

If sauna hasn't been used for a long time, check that smoke flue is unbroken and open before starting the fire. If smoke flue is cold, or in some weather conditions chimney draft can be poor at the beginning. If so, use only little amount of wood when starting a fire. Closing sauna door and windows might help when starting a fire.

Sauna Water

The water that is thrown on the stones should be clean household water. Make sure the water is of high enough quality, because water containing salt, lime, iron or humus may prematurely corrode the heater. Especially seawater and chlorinated will corrode the heater very rapidly.

MAINTENANCE

It is good to empty ash drawer after using the heater when the fire has extinguished. Empty ash drawer at the latest before heating the heater next time. Ash may still be hot, empty ash drawer to the place where hot ash won't cause risk of fire.

Check that the grate is unbroken and on bracket.

Heater, connecting flue and smoke flue must be cleaned and to be swept regularly. This is very important if the heater hasn't be used for a long time. When sweeping, the smoke channels of the heater must be cleaned through the sweeping hole located on top of the heater. Check also that the cover of the sweeping hole (and alternative flue connecting opening cover) is properly in place.

Heater outer cover can be washed with soap water and clean with soft cloth.
Heater must be maintained by qualified person regularly. Use only original spare parts.

SAFETY INSTRUCTIONS

Keep away from the heater when it is hot. The stones and outer surface of the heater may burn your skin. Don't leave any combustible material inside the safety distance dimensions. Never cover the heater or outer cover air blowholes.

In case of soot fire close the heaters air controllers (ash drawer) and the smoke flue damper plate (if installed). Keep firebox door closed. Contact local fire authorities. Don't try to extinguish fire with water. After soot fire and before the next use of the sauna let a chimney-sweeper check the condition of the smoke flue and the sauna heater. To avoid soot fire, make sure that sweeping is done regularly and use only dry firewood for heating with strong enough draft.

IN CASE OF SOOT FIRE (ALSO IF IT HAS ALREADY BEEN EXTINGUISHED)
ALWAYS INFORM THE EMERGENCY CENTRE!

WARRANTY

SAWO-heater has one year warranty period. The warranty period starts from the moment that the goods are delivered to the end user. The warranty covers manufacturing work and materials of the heater. The supplier may decide to either repair the defective goods or replace the defective goods at its own direction. The warranty does not cover possible transport, unloading or installation costs or other similar costs.



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CE IPX4 

Subject to change without notice.

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