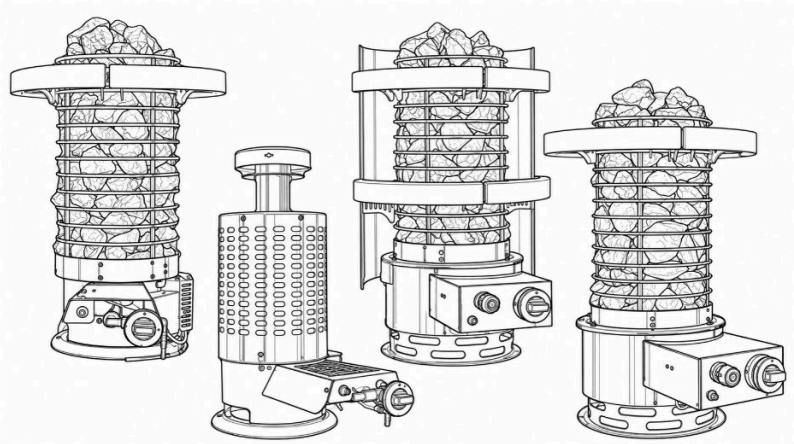
Installation and Safety Guide for

FINSTEAM

BOTNIA 81 / AURORA 81
GAS SAUNA HEATERS



Version 4.3 | Released November 2026

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Introduction

This manual provides essential instructions for the safe installation, operation and ventilation of FinSteam BOTNIA 81 and AURORA 81 gas sauna heaters.

FinSteam's CE-certified gas sauna heaters are designed to deliver authentic Finnish löyly safely and reliably when installed in accordance with applicable gas, ventilation and safety clearance requirements.

This manual is intended for:

- Distributors
- Retailers / Resellers
- Professional installers
- Sauna builders
- Sauna owners and those responsible for sauna operation

Intended Use

The heater is designed to heat sauna rooms to bathing temperature. Other uses are permitted only where expressly approved by FinSteam and only with official FinSteam accessories used in accordance with their instructions.

For sauna heating, install and operate the heater only in sauna rooms, sauna tents or other sauna structures that meet all requirements in this manual, including installation, ventilation and safety clearances.

Do not use the heater to heat residential buildings, living spaces, cabins, accommodation tents, garages, workshops, storage areas or other indoor spaces. However, the heater may be used in indoor saunas that meet all installation requirements in this manual.



Do not operate the heater in installations that fail to meet this manual's requirements. Doing so may result in fire, carbon monoxide exposure, personal injury, property damage and loss of warranty coverage.

Any use outside the purposes and conditions specified in this manual is considered misuse and is solely the user's responsibility.

Installation



Before installing the heater, ensure that the following requirements are met:

- Installation must be carried out by a qualified professional, authorised where required by national or local regulations. All gas installations must comply with applicable laws, regulations, standards and safety requirements in the country of installation.
- Confirm that the sauna room, sauna tent or other installation site is suitable for the heater and meets this manual's requirements for room size, ventilation, safety clearances and other safety conditions.
- Before commissioning, verify that the gas type, supply pressure and local operating conditions match the heater's technical specifications and settings. Do not install or operate the heater if these requirements are not met.
- Use only original FinSteam parts or components expressly approved by FinSteam. Do not install or operate a modified or damaged heater, or one fitted with non-approved components or accessories.
- Ensure that no combustible materials, packaging, loose objects or other foreign items are on, inside, underneath or immediately around the heater. Maintain the minimum safety clearances specified in this manual on all sides. Do not install or operate the heater if these clearances cannot be maintained.

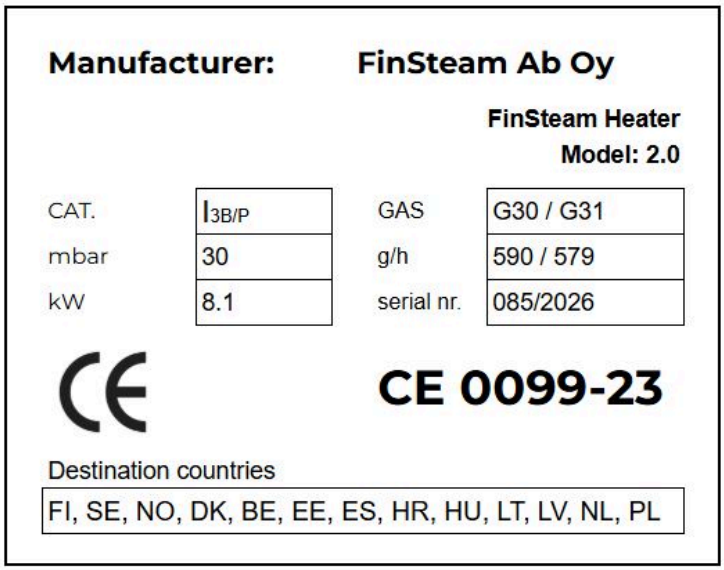


Unauthorised modifications may compromise safety, performance and regulatory compliance and may result in fire, personal injury, property damage or carbon monoxide hazards. Unauthorised modifications or the use of non-approved components will void the product warranty.



FinSteam gas sauna heaters are non-electric, CE-marked, Type A flueless appliances. They hold an EU Type-Examination Certificate under the Gas Appliances Regulation (EU) 2016/426.

Finsteam Type Plate



Manufacturer: **FinSteam Ab Oy**

FinSteam Heater
Model: 2.0

CAT.	$I_{3B/P}$	GAS	G30 / G31
mbar	30	g/h	590 / 579
kW	8.1	serial nr.	085/2026

CE **CE 0099-23**

Destination countries

FI, SE, NO, DK, BE, EE, ES, HR, HU, LT, LV, NL, PL

The heater type plate contains important technical and regulatory information required for the safe installation, operation, and servicing of the appliance.

The information on the type plate includes:

- Heater model designation
- Serial number
- Manufacturer information
- CE marking
- Appliance category (I3B/P or I3P)
- Approved gas types (G30 Butane and/or G31 Propane)
- Gas supply pressure (30 mbar or 37 mbar)
- Nominal heat input (kW)
- Gas consumption (g/h)
- Country codes and the countries where the heater is approved for use

Before connecting or operating the heater, check that the available gas type and supply pressure match the specifications on its type plate. Do not connect or operate the heater if they do not match.

Heater Installation

Install the heater on a level, stable surface capable of safely supporting the heater, sauna stones and accessories.



We strongly recommend using a durable, fire-resistant, non-combustible protective base. The base should measure at least 300 × 300 mm.

IMPORTANT

A non-combustible protective base is mandatory on wooden floors, other combustible surfaces and any floor surface with a waterproofing membrane beneath it.

Concrete and Construction Board Bases

The following protective bases must be at least **20 mm thick**:

- Concrete slabs or paving stones
- Fire-resistant and moisture-resistant construction boards, such as cement, fibre cement, calcium silicate or equivalent non-combustible boards



Metal Bases

The 20 mm material thickness requirement does not apply to protective bases made entirely of metal. However, the metal base plate must be separated from any combustible surface beneath it by either:

- An air gap of at least **20 mm**, or
- A layer of fire-resistant mineral or rock wool at least **20 mm thick**



The air gap or insulation layer must extend across the full area of the metal base plate. Other non-combustible materials may be used if they provide equivalent fire resistance, durability and load-bearing capacity.

Additional Floor Protection

Whenever the heater is used on a combustible or heat-sensitive surface, such as wood, composite decking or decking tiles, we recommend installing fire-resistant or fire-protection boards beneath the protective base.

Whenever fire-resistant mineral or rock wool is used, it must be covered with a heat-resistant layer, such as a metal sheet or concrete slab.

Safety Distances to Combustible Materials

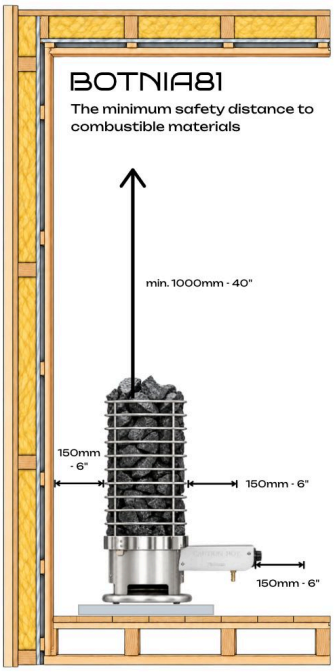
Maintain all specified safety clearances throughout installation and operation.

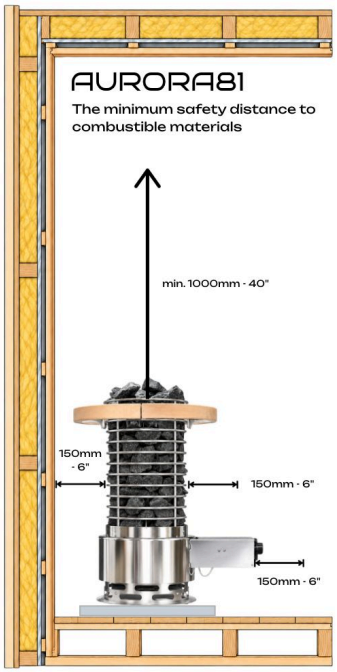
Clearances to Combustible Materials

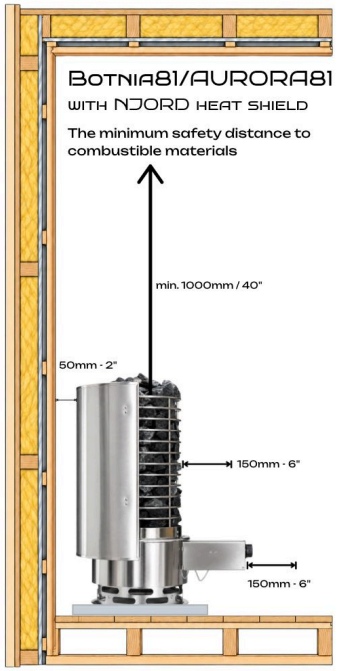
Maintain a minimum clearance of **150 mm** at the front, rear and both sides of the heater. Unless otherwise specified, horizontal clearances are measured from the outer surface of the stone cage. Above the heater, maintain at least **1000 mm**, measured vertically from the highest point of the chimney cap to the nearest combustible material in the ceiling.

Control and Ignition Unit

Position the control and ignition unit so that it remains accessible and safe to operate. It must not create a tripping hazard or be exposed to being stepped on, damaged or obstructed during normal use.







SAFETY DISTANCES

	Combustible	Non - Combustible
Sides	150mm - 6"	50mm - 2"
Ceiling	1000mm - 40"	1000mm - 40"
Side with NJORD	50mm - 2"	20mm - 3/4"

For wooden or other combustible walls, the side and rear clearances may be reduced from **150 mm to 50 mm** using a non-combustible protective cover.

When using the **FinSteam NJORD Heat Shield**, maintain at least **50 mm** between the wall-facing outer surface of the shield and the combustible wall behind it.

FinSteam HALO Safety Rail



We recommend using the FinSteam HALO Safety Rail to help prevent accidental contact with hot heater surfaces and improve safety around the heater. Local regulations in the country of installation may require its use.

The rail is made from carefully selected alder wood and designed to withstand demanding sauna conditions.

IMPORTANT

The safety rail does not fully protect young children, people with reduced mobility or anyone requiring supervision. Always supervise children and vulnerable persons while the heater is in use.

Sauna Stones

Do not use the heater in a sauna without sauna stones. Preferably fill the stone cage to its upper edge.

The recommended stone size is 5–10 cm.

- **Do not use smaller stones. Larger stones may be used but can be difficult to fit in the cage.**
- **Do not pack the stones tightly. Adequate airflow between them is essential for proper heater performance.**

SAUNA STONE CAPASITY

Stone Cage	Stone Capasity Min. - Max.
ORBIS O	13kg - 18kg
ORBIS R11	20kg - 25kg
ORBIS R14	25kg - 30kg

Before installation, wash new sauna stones thoroughly with clean water to remove stone dust, dirt and loose particles. We recommend traditional, angular, split-surface sauna stones. They store heat efficiently, produce better steam and improve airflow between the stones. Smooth, rounded, ceramic or soapstone sauna stones may also be used, but may not provide the same heat storage, steam production or airflow.

WARNING

Never place objects, materials, fragrances, containers or other substances on or among the sauna stones if they could melt, ignite, release harmful fumes or create any other fire or safety hazard.

Natural Ventilation Requirements for FinSteam Gas Sauna Heaters

Air Inlet Ventilation

Proper ventilation is essential for safe, efficient heater operation and sauna comfort. Gas heaters consume oxygen and require continuous fresh outdoor air. Insufficient ventilation can cause incomplete combustion, poor air quality, reduced performance and automatic shutdown by the ODS (Oxygen Depletion Sensor). Sauna air should be renewed **at least 6–8 times per hour**.

IMPORTANT

FinSteam gas sauna heaters are not suitable for mechanically ventilated saunas.

Vent Height Difference

The minimum vertical distance between the centres of the air inlet and exhaust openings is **1,500 mm**. We recommend the greatest practicable vertical separation between the openings to improve natural ventilation.

Air Inlet – Location and Size

Position the air inlet as close to the heater as possible, with the lower edge approximately 50–150 mm above the finished floor. Fresh air must come directly from outdoors.

- The complete air inlet assembly must provide a **minimum net free opening area of 350 cm^2**, accounting for the exterior grille, interior ventilation hatch and any other components.



Additional Air Inlet Sources

When sizing the air inlet, any unobstructed gap beneath the sauna door may count towards the required total free opening area, provided that the gap connects the sauna directly to outdoor air and remains open and unobstructed throughout heater operation.

Door gaps leading to adjacent rooms or other enclosed spaces must not be counted as outdoor air inlets.

We recommend adjustable vents inside the sauna for both air intake and exhaust. The inlet vent should preferably be closable when the sauna is not in use and made from materials suitable for sauna conditions.

Recommended Air Inlet Opening Dimensions:

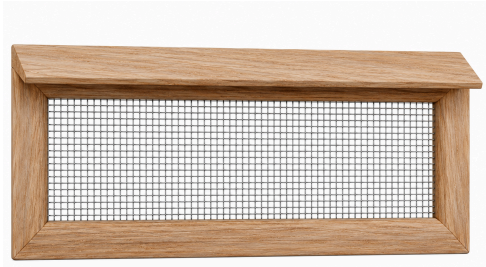
Configuration	Rectangular opening	Circular opening
Unobstructed opening	**250 x 140 mm**	**Ø210 mm**
With an exterior grille providing 70% free area	**300 x 150 mm**	**Ø240 mm**

The exterior protective grille must have a free area of at least 70%. Smaller openings may be used only where the grille's declared free area and the other components allow the complete assembly to meet the 350 cm^2.



Fit an adjustable sliding ventilation hatch inside the sauna. The inlet vent should preferably be closable when the sauna is not in use and made from materials suitable for sauna conditions.Do not use a disc-type ventilation valve. The hatch must provide the required free opening area in its operating position.

For the exterior air inlet cover, we recommend a simple framed metal mesh with 4–6 mm openings, or a metal grille with low airflow resistance.



The grille should have a **free area of at least 70%** and **widely spaced louvres set at a shallow angle** to allow air to flow as freely as possible.





Both the fresh air inlet and exhaust vent must remain open and unobstructed while the heater is operating. Adequate airflow is essential for safe combustion, proper heater performance and a safe sauna environment.

Exhaust Air Ventilation

Proper exhaust ventilation is essential for safe, efficient sauna operation.

The air inlet supplies fresh air and oxygen for the heater and sauna users. The exhaust removes warm, humid and stale air. Together, they provide balanced airflow, improve air circulation and reduce excess humidity, helping maintain a safe, comfortable and oxygen-rich sauna environment.

Exhaust Vent – Location and Size

Position the exhaust vent high on the opposite side of the sauna from the heater, close to the ceiling or in the ceiling. Exhaust air must discharge directly outdoors.

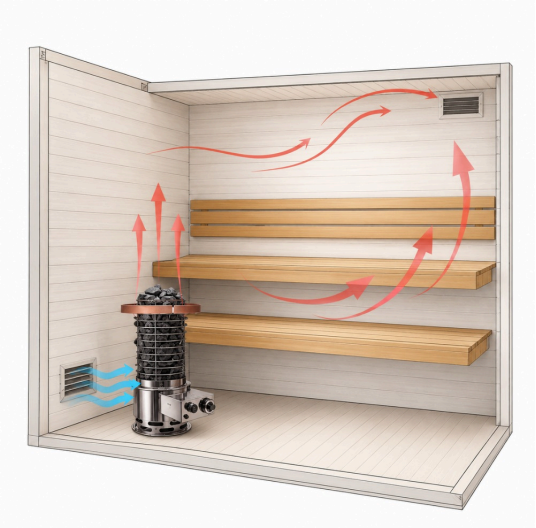
The complete exhaust assembly **must provide a minimum net free opening area of 250 cm²**, accounting for the exterior grille, interior ventilation hatch and any other components.

Recommended Exhaust Vent Opening Dimensions:

Configuration	Rectangular opening	Circular opening
Unobstructed opening	**200 x 130 mm**	**Ø180 mm**
With an exterior grille providing 70% free area	**250 x 140 mm**	**Ø210 mm**

The exterior protective grille must have a **free area of at least 70%.** Use the same types of exterior covers recommended for the air inlet: framed metal mesh with 4–6 mm openings, or a metal grille with widely spaced, shallow-angled louvres and low airflow resistance. Smaller openings may be used only where the grille's declared free area and the other components allow the complete assembly to meet the 250 cm² minimum.

Fit an adjustable sliding ventilation hatch inside the sauna. Do not use a disc-type ventilation valve. The hatch must provide the required free opening area in its operating position.



Install the exhaust vent in the corner opposite the heater, either on the wall close to the ceiling or in the ceiling. Position the air inlet and exhaust openings with the greatest practicable vertical separation to improve natural ventilation. **The vertical distance between the centres of the openings must be at least 1,500 mm.**

Exhaust air must discharge directly outdoors. Never discharge it into adjacent rooms, attics, crawl spaces, wall cavities or other enclosed spaces within the building.

Recommended Sauna Size

FinSteam BOTNIA and AURORA gas sauna heaters are recommended for sauna rooms of **4–14 m³**. A gas sauna heater must not be installed or used in sauna rooms with a volume of less than 4 m³.

Heating performance and heater suitability depend on sauna volume, insulation and overall heat loss, particularly the thermal transmittance (U-value) of the sauna structure.

Every sauna is different, and construction varies considerably. Large windows, glass walls and other uninsulated surfaces significantly increase heat loss and may reduce the sauna volume the heater can efficiently heat. Always account for these surfaces when assessing heater suitability.

For assistance selecting a suitable FinSteam gas sauna heater, contact FinSteam technical support or your local distributor.

Recommended Sauna Volume by Sauna Type

Sauna type	Average U-value of walls and ceiling	Recommended sauna volume
Sauna tents, lightweight log saunas, barrel saunas with timber walls (< 40 mm) and uninsulated timber-frame saunas	**> 2.5 W/(m²·K)**	**4–10 m³**
Saunas with medium-thickness log walls (40-100 mm), lightly insulated timber-frame saunas with insulation (< 50 mm) and well-insulated timber-frame saunas with large window areas without energy-efficient glazing	**1.0–2.5 W/(m²·K)**	**4–12 m³**
Saunas with thick solid-log walls (> 100mm) and well-insulated (≥ 50mm) timber-frame saunas	**< 1.0 W/(m²·K)**	**4–14 m³**

These guidelines are indicative only, as each sauna's overall U-value and heat loss depend on several factors. If you are unsure whether a FinSteam gas sauna heater has sufficient heating capacity for your sauna, contact FinSteam technical support so we can assess its suitability together.

Gas Installations

All gas installations must comply with applicable national and local regulations. Each gas cylinder may supply only one appliance. Connect the pressure regulator directly to the cylinder valve.

Use only a certified low-pressure regulator with the correct pressure for the heater's appliance category:

- **I3B/P30:** 30 mbar - butane, propane or their mixtures
- **I3P37:** 37 mbar - propane

Incorrect gas pressure may cause incomplete combustion, excessive gas consumption, unstable flames, carbon monoxide emissions, reduced heating performance or appliance damage.

Do not use high-pressure regulators.



Incorrect installation or use may cause carbon monoxide (CO) poisoning.

Common symptoms include headache, dizziness, weakness, upset stomach, vomiting, chest pain and confusion.

If anyone develops symptoms, leave the sauna and any affected building immediately and move to fresh air outdoors. Call local emergency services and seek urgent medical attention. Close the gas cylinder valve only if this can be done safely without delaying evacuation.

Do not re-enter until emergency services have declared the area safe. Do not use the heater again until a qualified service technician has inspected it.

Gas Hose

Use only certified LPG (liquefied petroleum gas) hoses, fittings and connections approved for use in the country of installation.

The gas hose must:

- Have an internal diameter of **8–10 mm**, or the size required by applicable national regulations.
- Comply with national requirements for hose type and maximum length. The recommended maximum length is **1200–1500 mm (1.2–1.5 m)** or a length in accordance with applicable national regulations.

- Be securely connected at both ends using the method specified for the hose and appliance, in accordance with national regulations.
- Remain free from kinks, tension and mechanical stress.
- Remain fully visible and accessible for inspection.

Gas Hose Protection and Inspection

FinSteam recommends an armoured (stainless steel braided) gas hose for maximum durability and heat resistance.

For a standard LPG hose, protect the first **300 mm** from the heater connection with a suitable fire-resistant aluminium sleeve or equivalent heat protection.

The gas hose must not:

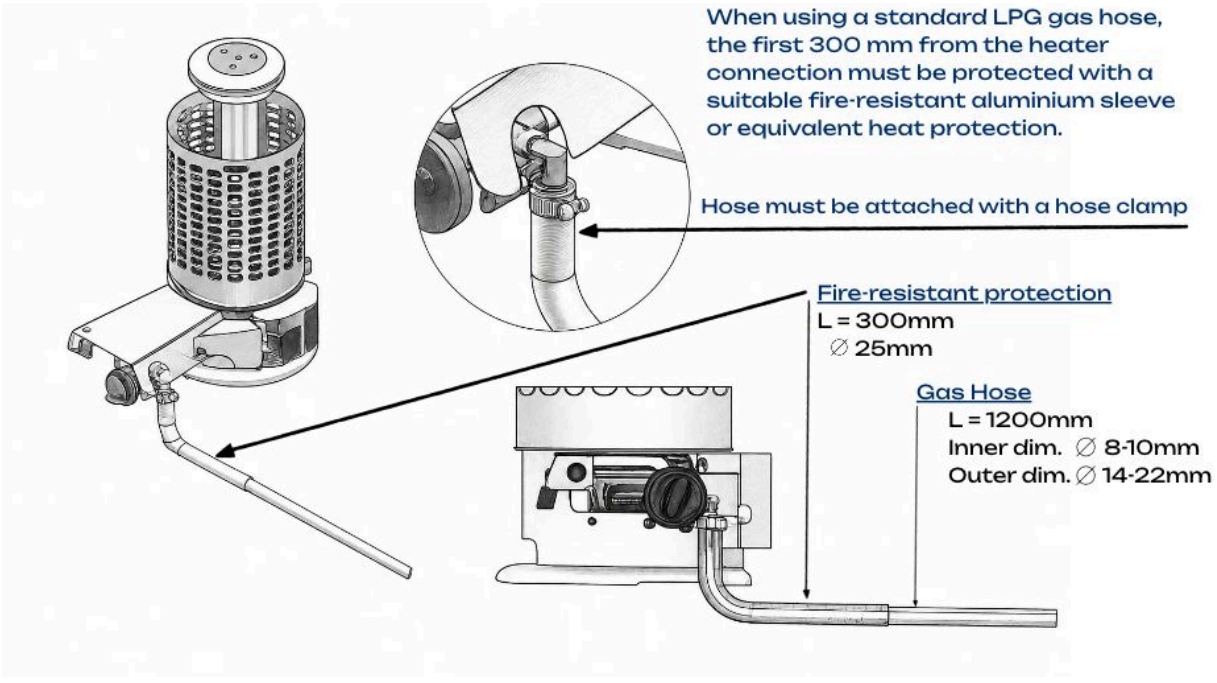
- Be routed underneath the heater or touch hot surfaces.
- Pass over sharp edges or be exposed to mechanical damage.
- Be placed in walkways without suitable protection.

IMPORTANT

Inspect the gas hose, regulator and connections regularly. Periodically flex the hose and check for cracks, wear or other deterioration.

Check all gas connections for leaks using a soap-water solution.
Never use an open flame to check for leaks.

Always close the gas cylinder valve and regulator valve after use.





Armoured gas hose



Protective sleeve

Standard gas hose

Gas Cylinder

IMPORTANT

Always position the gas cylinder outside the sauna room, away from the heater, fireplaces, open flames and other heat sources. Always keep the gas cylinder upright during use and storage. Place it on a firm, level surface and secure it against tipping over. The cylinder must be located in a well-ventilated area.

The cylinder type, size and installation must comply with applicable national and local gas regulations. Do not use a cylinder if the installation would breach these requirements, including permitted gas hose lengths.

FinSteam recommends cylinders with a capacity of less than 25 kg. Route the gas hose away from hot surfaces. Gas hose temperature must not exceed 80°C or the hose manufacturer's maximum operating temperature, whichever is lower.

Heat and Sunlight Protection

Do not expose the cylinder to excessive heat. **The gas cylinder's surface temperature must not exceed 50 °C,** and all cylinder supplier requirements and applicable national regulations and guidance on cylinder storage must be followed, including any lower temperature limits.

Avoid prolonged direct sunlight, especially in hot climates, as the cylinder surface can become significantly hotter than the surrounding air. Where the cylinder is exposed to strong, prolonged sunlight, provide suitable shading or other protection against overheating.

Protective covers or shading must not restrict ventilation, interfere with the cylinder valve, regulator or hose connections, or prevent safe inspection.

Gas Cylinder Replacement

Before replacing the cylinder, close its valve and ensure there are no ignition sources nearby. Do not smoke or use open flames. If replacing the cylinder indoors, ensure adequate ventilation.

After connecting the new cylinder:

1. Check that the regulator is correctly and securely attached to the cylinder valve.
2. Test all gas connections with a soap-water solution. Never use an open flame to check for leaks.
3. If bubbles appear, immediately close the cylinder valve and correct the leak.

Do not use the heater until all gas connections have been verified as leak-free.

Before Using the Sauna

Before each sauna session, visually inspect the heater, gas hose, regulator, and all gas connections. Ensure that the gas hose is free from cracks, cuts, excessive wear, or other damage and that it is positioned away from hot surfaces of the heater and chimney.

A leak test must always be performed:

- When connecting a new gas cylinder
- After replacing any gas component
- After the heater has been out of use for an extended period

Leak Test Procedure

1. Ensure that all heater control knobs are in the OFF position.
2. Connect the pressure regulator to the gas cylinder.
3. Prepare a leak detection solution by mixing 1 part liquid soap with 3 parts water.
4. Open the gas cylinder valve and pressurize the system.
5. Apply the soap solution to all gas connections, including:
    - Gas cylinder valve
    - Pressure regulator
    - Gas hose and hose connections
    - Valves and fittings



If bubbles appear, a gas leak is present. Immediately close the gas cylinder valve and do not use the heater until the leak has been repaired and all connections have been verified as leak-free.

Heating the Sauna

Before switching on the heater, ensure there are no objects or materials on top of it or within the specified safety clearances.

During initial heating, the heater and sauna stones may emit temporary odours from residual oils, grease, protective substances and other manufacturing residues. Ensure the sauna is well ventilated during the first heating cycle.

On first use or after replacing the gas cylinder, the gas hose and system may need to fill with gas before ignition. This may require holding the control knob in the ignition position for approximately **30–60 seconds** before the pilot flame ignites. Follow the lighting instructions for the complete procedure.

Preheat the sauna for approximately **15–40 minutes**. Heating time depends on sauna size, insulation, ventilation, initial temperature and outdoor conditions. Colder conditions increase heating time.

Operating Temperature Range (Outdoor Temperature)

- Propane: −35°C to +35°C
- Butane: +5°C to +35°C

We recommend sauna bathing in periods of no more than 20 minutes, with a break between periods. Listen to your body and leave immediately if you feel uncomfortable, dizzy or unwell. Drink plenty of water before, during and after sauna bathing to replace fluid lost through sweating and prevent dehydration.



HOT SURFACES! The heater becomes hot during operation. Do not touch any parts except the control knob and ignition controls.

Lighting Instructions

The FinSteam gas sauna heater control has four settings:



Pos.1 - **Start** Pos.2 - **Maximum** Pos.3 - **Minimum**

Starting the Heater

1. Open the gas supply by turning the cylinder regulator to **ON**.
2. Turn the heater control knob to **Position 1** and press it down. Hold it down for approximately **10–15 seconds** before pressing the ignition button. On first use or after replacing the cylinder, hold it down for approximately **30–60 seconds** to allow gas to fill the hose and system before ignition. During this pre-ignition stage, holding the control knob down does not release unburned gas into the sauna.
3. Keep the control knob pressed down and repeatedly press the **PIEZO** ignition button until the pilot flame ignites.
4. Continue holding the control knob down for approximately **10–15 seconds** after the pilot flame ignites.
5. Release the control knob. If the pilot flame remains lit, the heater is ready for operation. If it goes out, repeat the ignition procedure.
6. If the heater does not ignite after several attempts, turn the control knob to OFF and close the gas supply at the cylinder. Wait 5–10 minutes before attempting to ignite the heater again, keeping the sauna thoroughly ventilated throughout the waiting period.

Adjusting the Heat Output

Once the pilot flame is stable, turn the control knob:

- **Clockwise** to increase heat output.
- **Counterclockwise** to decrease heat output.

Select the heating level according to sauna size, ambient conditions and personal preference.

Shutting Down the Heater

1. Fully close the gas cylinder valve or regulator valve.
2. Turn the heater control knob to **OFF**.



Always close the gas supply at the gas cylinder after use, even when the control knob is in the OFF position.

Integrated Safety Timer (FinSteam AURORA 81)

All FinSteam AURORA 81 heaters have an integrated safety timer. **Using the timer is entirely optional. The heater operates normally even when the timer is not activated.**

When activated, the timer limits continuous operation to a maximum of **60 minutes**. At the end of the selected operating period, it sounds an alarm and automatically shuts down the heater. To continue heating, restart the heater using the normal lighting procedure in this manual.



The timer is an additional safety feature that reduces the risk of unattended operation. It does not replace your responsibility to supervise the heater during use.

Sauna Bathing Instructions



Pouring Water onto Hot Sauna Stones

Water may be poured onto the heated sauna stones to increase humidity. Adjust the temperature and amount of water to your comfort, as individual responses to heat and steam vary.

IMPORTANT

Water and Steam Safety

- Use only clean household water, preferably warm. Do not use boiling water or water hot enough to cause burns.
- Pour approximately **one ladle (0.2 litres)** onto the stones at a time, preferably using a long-handled sauna ladle. Adding water temporarily cools the heater and stones.
- Never pour water directly onto the heater from a bucket or other large container.
- Keep your hands away from directly above the heater when pouring water. Do not pour water onto the stones when anyone is standing close to the heater. **Hot steam can cause serious burns.**
- Do not place or throw anything onto the stones unless it is specifically designed for sauna use. Use sauna fragrances only according to the manufacturer's instructions.

IMPORTANT

Safe Sauna Bathing

- Move carefully. To reduce the risk of falls, burns and accidental contact with the heater, we recommend that only one person moves around the sauna at a time, especially near the heater.
- Do not touch the pilot flame, auxiliary burner, stone cage or other hot heater parts during operation or before they have cooled sufficiently.
- We recommend sauna bathing in periods of no more than 20 minutes, with a break between periods. Listen to your body and leave immediately if you feel dizzy, weak, nauseous, overheated or otherwise unwell.
- Drink plenty of water before, during and after sauna bathing to replace fluid lost through sweating and prevent dehydration.

Maintenance

Regular maintenance helps ensure safe operation, optimal performance and a long service life.

Before cleaning the heater or handling the stones, switch off the heater, close the gas supply and allow the heater and stones to cool completely.

Keep the heater, burner and all air openings free from dust, dirt, insects, leaves and other debris. Compressed air can be used for cleaning. Burner openings and flame outlets must remain unobstructed.

For extended periods without use, we recommend a suitable protective cover against dust, moisture and environmental contamination. **Only cover the heater when it has cooled completely.**

Annual Inspection

The heater should be inspected and serviced at least annually by a competent person. This should include:

- Checking burner operation and flame quality.
- Inspecting valves, controls and safety devices.
- Inspecting and cleaning burner openings.
- Checking gas connections and fittings for leaks.

Gas Hose Replacement

Inspect the LPG hose regularly and replace it at least every two years, or sooner if required by the hose manufacturer’s specified service life, applicable local regulations or its condition. Replace the hose immediately if it shows cracking, hardening, excessive wear or any other damage.

Sauna Stones

Inspect and rearrange the stones at least annually, or more often with regular sauna use. As a general guideline, replace them every **1–2 years**, depending on use and condition. Heavy use may require earlier replacement.

Replace individual stones immediately if they:

- Are cracked or have crumbled into smaller pieces.
- Have heavy surface deposits that cannot be removed with clean water.

Repeated heating and cooling gradually weaken the stones. Broken stones and fragments can restrict airflow, reduce heating efficiency and impair steam generation. If heating takes longer than usual or steam production deteriorates, check the stones and their arrangement.

When rearranging or replacing stones:

1. Remove all stones.
2. Clear away stone dust and fragments.
3. Replace damaged stones and wash all new stones thoroughly before installation.
4. Arrange the stones loosely to ensure adequate airflow.

Combustion Adjustment Procedure

Venturi Tube Burner with Adjustable Inner Tube

1. Scope

This procedure describes fine adjustment of combustion in Venturi tube burners with an adjustable inner tube. **For qualified service personnel only. Users must not adjust the burner or combustion settings.**

2. System Description

The burner consists of a gas nozzle, a Venturi tube and an adjustable inner tube secured by a fixing screw.

3. Operating Principle

The distance between the gas nozzle and inner tube controls primary air intake and combustion quality:

- **Increase the distance** to increase primary airflow.
- **Reduce the distance** to decrease primary airflow.

4. Safety Requirements

Perform adjustments only with the burner operating in a properly ventilated environment. Use personal protective equipment (PPE).

5. Adjustment Procedure

1. Ignite the burner.
2. Allow the flame to stabilize.
3. Loosen the fixing screw.
4. Adjust the inner tube position.
5. Retighten the screw.
6. Check the flame condition.

6. Troubleshooting

6.1 Yellow or Luminous Flame

Cause: Insufficient primary air.
Action: Increase the distance between the gas nozzle and inner tube.

6.2 Lifting or Unstable Flame

Cause: Excessive primary air.
Action: Reduce the distance between the gas nozzle and inner tube.

6.3 If the Oxygen Depletion Sensor (ODS) Activates

1. *Stop using the heater immediately and close the gas supply at the cylinder.*
2. *Leave the sauna and ventilate it thoroughly.*
3. *Visually check that the fresh air inlet and exhaust vent are open and unobstructed, and that ventilation meets this manual's requirements. Do not remove heater components or dismantle the burner.*
4. *Do not restart the heater until the cause has been identified and corrected. If the cause is unclear or the ODS activates again, have the installation and heater inspected by qualified service personnel before further use.*

Internal inspection or cleaning of the Venturi tube, any work requiring disassembly, and all combustion adjustments must be performed by qualified service personnel.

Never bypass, disconnect or modify the ODS.

7. Fine Adjustment

Make small adjustments and allow the flame to stabilize after each change.

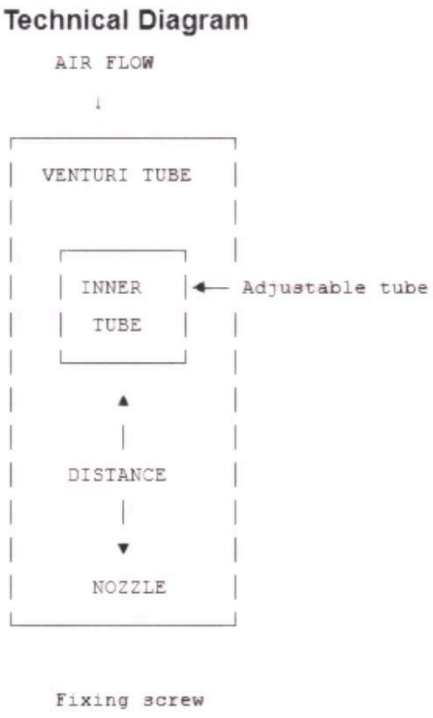
8. Final Verification

After adjustment, check that:

- The flame is fully blue and stable.
- No flame lifting or flashback occurs.
- The ODS does not activate during the test.

9. Final Locking

Fully tighten the fixing screw, check mechanical stability and perform an extended operating test.



Burner Cleaning

1. Allow the heater to cool completely and disconnect it from the gas supply.
2. Clean accessible burner surfaces using compressed air and a damp cloth with a mild soap-and-water solution.
3. Carefully clean burner openings using a suitable non-damaging tool.
4. Remove dust, dirt, insects and other debris from the burner area.

Do not use abrasive cleaners, steel brushes or aggressive chemicals. Immediately replace components showing excessive corrosion, damage, deformation or wear.

Repairs and Spare Parts

Repairs affecting heater operation or safety must be carried out by an authorised service centre or qualified service technician. Use only original FinSteam spare parts and approved replacement components. For service, repairs or technical support, contact an authorised service provider or your local distributor.

Manufacturer's Warranty

The manufacturer provides a **12-month warranty from the date of purchase**, covering defects in materials and workmanship.

This voluntary commercial warranty does not limit the buyer's statutory consumer rights under EU law or mandatory consumer protection legislation in the country of purchase.

Under this warranty, the manufacturer's liability is limited, at its sole discretion, to repair, replacement or refund of the defective product or component.

The warranty does not cover:

- Defects caused by incorrect installation or failure to follow installation instructions.
- Failure to follow operating, maintenance or safety instructions.
- Misuse, negligence, accidents, impact damage or unauthorised modifications.
- Use of non-original or unapproved spare parts or accessories.
- Normal wear and tear or cosmetic damage that does not affect functionality.
- Improper storage, transport or handling.
- Unsuitable operating environments, including corrosion, freezing, limescale buildup or other conditions exceeding the product's technical specifications.
- Use outside the product's intended purpose, capacity or technical limits.

The warranty also excludes downtime, business interruption, loss of income and other indirect or consequential damages.



Read this manual carefully before installing, operating or servicing the heater.

- The heater is designed for heating sauna rooms. Other uses are permitted only where approved by FinSteam, using official FinSteam accessories in accordance with their instructions.
- Do not use the heater in basements, bathrooms, bedrooms, caravans, motorhomes, recreational vehicles or other living spaces.
- For sauna heating, use the heater only in saunas that meet all installation, ventilation and safety requirements in this manual.
- Perform the specified leak test before first use and after replacing the cylinder, regulator, hose or any other gas component.
- Use an approved gas hose and pressure regulator suitable for the appliance's gas category and country of use.

Gas Leak — Immediate Action
If you smell gas or suspect a leak:

1. Do not smoke, use open flames or operate electrical switches or equipment in the affected area.
2. Shut down the heater and close the cylinder valve only if this can be done safely without delaying evacuation.
3. Leave the sauna and any affected building immediately. Open doors and windows only if safe and without delaying evacuation.
4. Contact your LPG supplier or local emergency services from a safe outdoor location.

Do not re-enter until the area has been declared safe. Do not use the heater until a qualified technician has repaired the leak and verified that the installation is safe.

Burn Hazard

- The stones and heater surfaces become extremely hot and can cause severe burns. Do not touch flames or hot parts. During operation, touch only the control knob and ignition controls.
- Keep a safe distance while the heater is hot. Keep children away from the heater at all times.

Fire Safety

- Maintain all specified clearances to combustible materials. Keep all safety clearance areas clear and unobstructed.
- Do not hang clothes, towels or other items to dry inside the sauna.
- Do not place objects or substances on the heater or stones unless specifically intended for sauna use.

Health and Safety

Prolonged exposure to heat can cause overheating or dehydration.

- We recommend sauna bathing in periods of no more than 20 minutes, with a break between periods.
- Leave immediately if you feel dizzy, weak, nauseous, overheated or otherwise unwell.
- Drink plenty of water before, during and after sauna bathing.
- Never use the sauna under the influence of alcohol, narcotics or medication that may impair judgment or physical ability.
- Never sleep in a heated sauna.
- Children, elderly persons, persons with disabilities and individuals with medical conditions should have appropriate supervision.
- Consult a physician about health-related limitations to sauna bathing, and a child healthcare professional before taking infants into a sauna.

General Safety

- Move carefully: benches, platforms and floors may become slippery.
- Salt air, high humidity and harsh environmental conditions may accelerate corrosion of metal components.
- For extended periods without use, protect the heater from dust and contamination with a suitable cover. Only cover it when completely cool.
- Repairs and servicing affecting safe operation must be performed by qualified personnel using original FinSteam spare parts.

Manufacturer:

FINSTEAM

Penviksvägen 4
68600 Pietarsaari
Finland

www.finsteam.fi

MEMBER OF Sauna FROM FINLAND Sauna from Finland

Contact person and technical support:

Toni Hannukainen
toni@finsteam.fi
+34 656 87 49 38
+358 40 737 31 27