

Installation Guide

ULTRA-SAUNA HEATER

Proudly made in USA since 1964

Gas Heaters - 40,000-80,000 BTU

Installation Instructions & User Manual



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Congratulations on your purchase of your Scandia Ultra-Sauna gas fired heater!

Since 1964 Scandia Manufacturing has been making the best sauna heaters in the industry. Each heater is hand crafted and individually made by an expert technician. They are not mass-produced; we consider each heater a work of art.

To ensure your satisfaction with our heater we suggest you read through this guide and familiarize yourself with:

1. Installation Instructions
2. Gas Heater Component List
3. Warranty Information
4. Troubleshooting Guide

****Safety First****

You must consult a certified plumber or HVAC professional to assist you with regulating gas line pressure, installation and connection of your Scandia Ultra-Sauna. Self-installations will void your warranty.

When you receive your heater you should inspect it within 48 hours to verify all parts, materials and instructions are there. We will not be responsible for replacing or warranting items that are not reported within 5 days of receipt of your shipment.

If your shipment is damaged please retain all packaging and call us immediately

Prior to installation, the installer (certified professional) should check all connections and parts to ensure proper fitting. These items may have come loose or damaged in shipping. You can rest assured knowing that your unit was fired and tested in our production facility prior to shipping to ensure proper working order. Loose connections and/or improper installation are the most common reasons for your unit not firing up right away. Do not call the manufacturer until a licensed professional has checked to ensure proper connection.

The heater must be installed with a heater guard rail – see instruction for proper clearances.

Your heater comes standard with a flue cap (for through-wall venting) or an elbow and draft-hood (for through-ceiling venting). We recommend one 90 degree turn in venting if needed as additional turns can cause heat to become trapped in the unit itself and result in improper functioning of the heater. Straight through the wall venting (flue cap) typically does not use an elbow and it is not recommended unless approved by a certified professional. We highly recommend consulting with a venting specialist or engineer if you are planning venting runs longer than 8 -9 ft as this may require a power vent.

Caution signs are included for your safety.

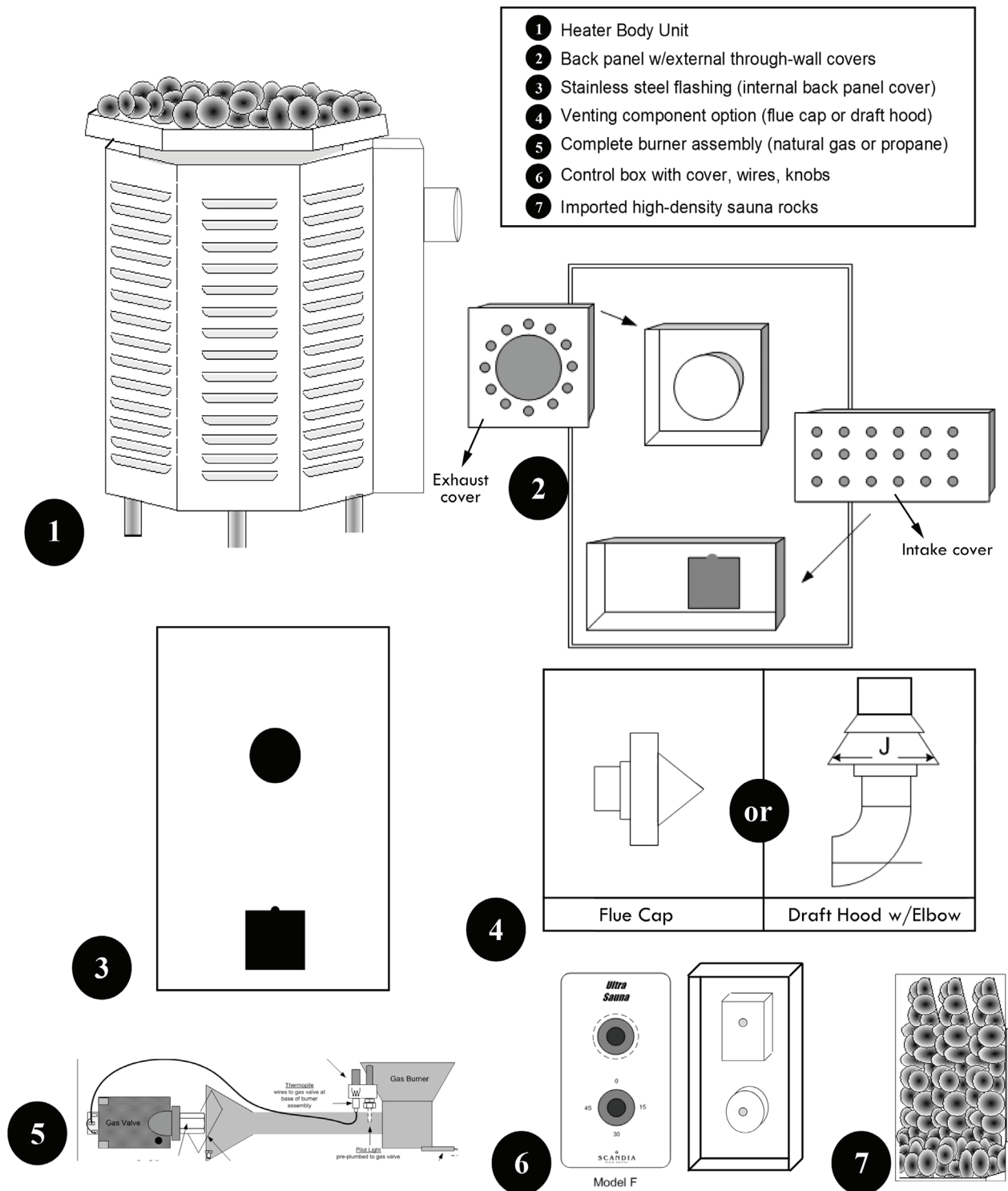
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BEFORE YOU START PLEASE READ CAREFULLY

- ☛ Heater and controls must be installed by a licensed professional
- ☛ Heater must be vented to the outside of the sauna. Please consult a licensed professional for ventilation requirements in your area.
- ☛ Heater controls must never be installed inside the sauna room
- ☛ Heater controls should never be placed near water
- ☛ Heater must be installed according to local codes.
- ☛ Ensure all factory connections are tight. Wires may have come loose in shipping.
- ☛ Heater should not be operated without recommended amount of rocks
- ☛ Sauna door must always open outward.
- ☛ Sauna door can never include a lock.
- ☛ Sauna should be constructed of soft wood (i.e. clear western red cedar)
- ☛ Sauna room should never have tile walls or benches
- ☛ Do not treat or varnish sauna wood
- ☛ Use only Scandia high density sauna rocks
- ☛ The warning signs and sauna usage plaque must be displayed
- ☛ Sauna room sizing is based on standard 7 foot ceiling
- ☛ Do not touch the heater while in operation
- ☛ Do not cover the heater
- ☛ Never hose down the sauna
- ☛ Never leave children unattended
- ☛ Sauna bathing is not suitable for those with health problems
- ☛ Sauna room must be vented according to manufacturers specifications or Scandia installation instructions
- ☛ Heater guard must be installed

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HEATER COMPONENT LIST



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YOUR HEATER SHOULD INCLUDE

- Control Panel
- Main Heater Unit
- Sauna Rocks
- Thermostat sensor wall cover and rock tray insert – No picture
- Installation Instructions
- Warning Signs – No picture
- Back panel assembly
- Back panel flashing
- Flue cap or elbow/draft hood set

HEATER SIZING

Ultra Sauna Gas Fired Heaters			
Model	BTU Output	Minimum Room Size	Maximum Room Size
240	40,000 BTU	84 cu ft (25.6 cu m)	616 cu ft (187.76 cu m)
245	40,000 BTU	84 cu ft (25.6 cu m)	616 cu ft (187.76 cu m)
280	80,000 BTU	450 cu ft (137.16 cu m)	1680 cu ft (512.01 cu m)
285	80,000 BTU	450 cu ft (137.16 cu m)	1680 cu ft (512.01 cu m)

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Warranty Disclaimer – Not valid if room is over 8ft.

SAUNA HEATER SIZING

- Minimum and maximum room sizes are based on a **7 foot ceiling height**
- Properly sized heater will bring room temperature to desired level in approximately 30 to 60 minutes
- An undersized heater may experience instances of the heater unit overheating and a longer time to bring the room up to temperature
- The maximum room sized is based on the heater bringing the room temperature from 60 to 180 in 60 minutes
- Sauna room must be properly vented for heater to work effectively

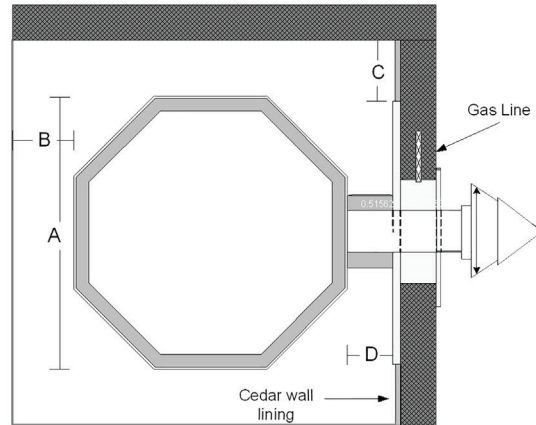
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ROUGH-IN SIZING GUIDELINES

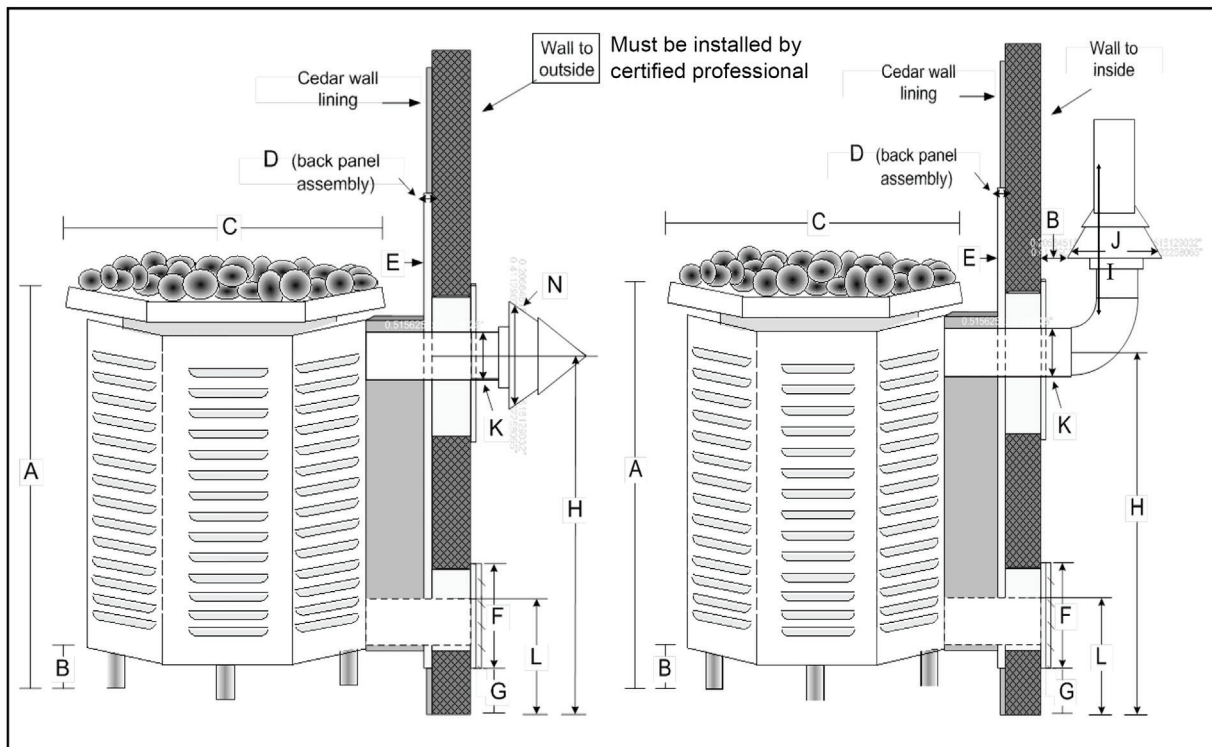
Note: Your Scandia Ultra gas sauna heater should be installed only by a licensed electrician and HVAC professional. Improper or unofficial installation will void warranty.

	40,000 BTU	80,000 BTU
A	18.5"	29"
* B	8"	12"
* C	7"	11"
D	2 1/2"	4"

* Minimum clearance



Models	Heater	A	B	C	D	E	F	G	H	I	J	K	L	N
240 & 245	40,000	28"	4"	18 1/2"	2 1/2"	20 x 32	8 1/4" x 13 1/4"	3 1/2"	24 1/2"	14"	7"	4"	10 1/4"	8"
280 & 285	80,000	40"	6"	29"	4"	33" x 45"	8 1/4" x 16 1/4"	5 1/2"	32"	20"	12"	6"	12 1/4"	14"



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ROUGH-IN CONTROL BOX AND INTERIOR BACK PANEL

40,000 BTU Heater (240/245)

Installing the back panel

- Back panel should be installed when sauna room is framed in prior to the finishing steps of the sauna room
- Back panel is mounted directly to the face of the studs
- Insulate area between back panel and exterior wall in accordance with local codes
- Centerline of the flue opening must be a minimum of 17 1/2" from the side wall.
- Metal tabs at the bottom of the back panel must rest on the finished floor.
- If the interior wall material is more than 3/4" thick spacers should be placed between the stud and the back panel
- Adjust intake box and flue collar to wall thickness. Walls thicker than 5 1/2" will require extensions

Installing the control box

- Control box should be installed when sauna room is framed in prior to the finishing steps of the sauna room
- Control box is mounted to the studs facing outside the room at the farthest point away from the heater
- Control box should be 42" from the floor to center of the timer knob
- Place a nail 10" below the interior ceiling on the stud facing the sauna room. String a pull wire from the nail to the control box.
- 25 ft of low voltage two lead wire is supplied in the control box. Run this wire from the control box to the heater intake box and through the opening in the side of the box

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80,000 BTU Heater (280/285)

Installing the back panel

- Back panel should be installed when sauna room is framed in prior to the finishing steps of the sauna room
- Back panel is mounted directly to the face of the studs
- Insulate area between back panel and exterior wall in accordance with local code
- Centerline of the flue opening must be a minimum of 26 1/2" from the side wall.
- Metal tabs at the bottom of the back panel must rest on the finished floor.
- If the interior wall material is more than 3/4" thick spacers should be placed between the stud and the back panel
- Adjust intake box and flue collar to wall thickness. Walls thicker than 5 1/2" will require extensions

Installing the control box

- Control box should be installed when sauna room is framed in prior to the finishing steps of the sauna room
- Control box is mounted to the studs facing outside the room at the farthest point away from the heater
- Control box should be 42" from the floor to center of the timer knob
- Place a nail 10" below the interior ceiling on the stud facing the sauna room. String a pull wire from the nail to the control box.
- 25 ft of low voltage two lead wire is supplied in the control box. Run this wire from the control box to the heater intake box and through the opening in the side of the box

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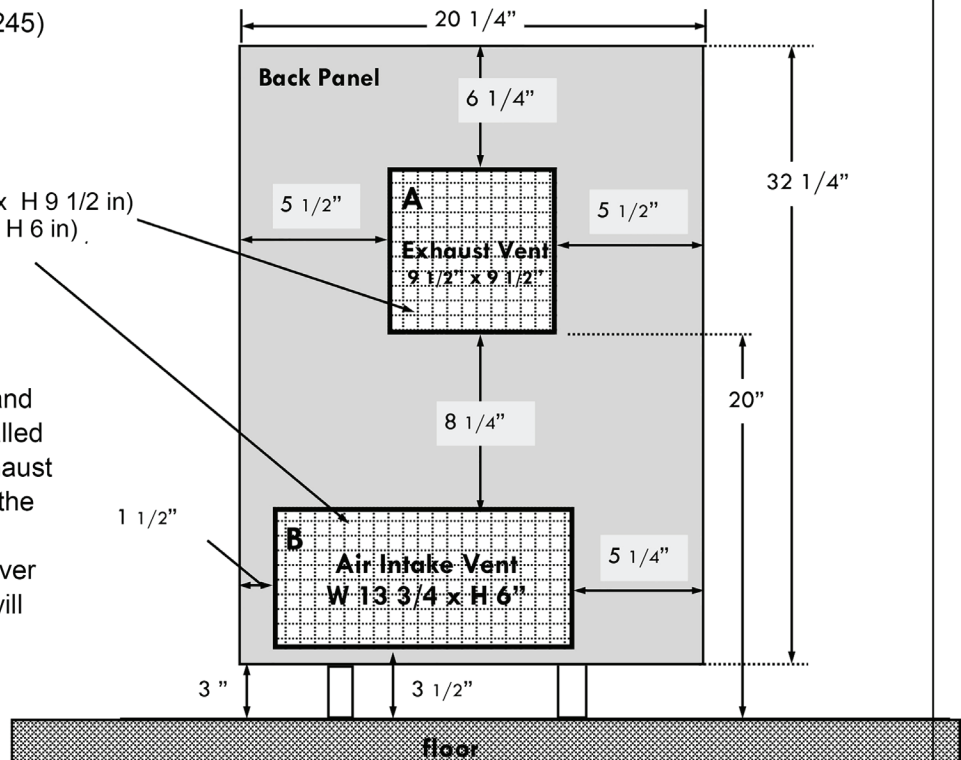
VIEW – EXTERIOR VIEW

40,000 BTU Heater (240/245)

Through-wall rough-in.

A) Exhaust vent (W 9 1/2 in x H 9 1/2 in)
B) Intake vent (W 13 3/4 in x H 6 in)

After intake and exhaust openings are roughed in and interior back panel is installed place flue collar in the exhaust vent opening adjusting to the wall thickness
Repeat with intake box cover
Walls thicker than 5 1/2" will require extensions

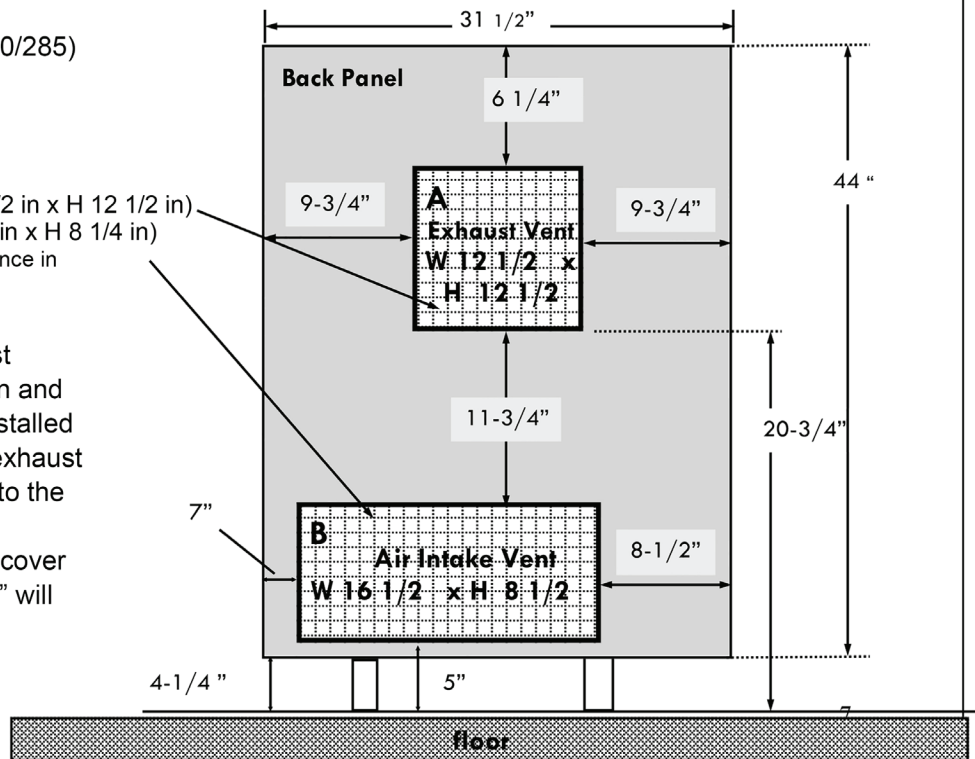


80,000 BTU Heater (280/285)

Through-wall rough-in.

A) Exhaust vent (W 12 1/2 in x H 12 1/2 in)
B) Intake vent (W 16 1/4 in x H 8 1/4 in)
C) *Please allow 1/4" tolerance in these dimensions

After intake and exhaust openings are roughed in and interior back panel is installed place flue collar in the exhaust vent opening adjusting to the wall thickness
Repeat with intake box cover
Walls thicker than 5 1/2" will require extensions



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FINISHING THE SAUNA ROOM

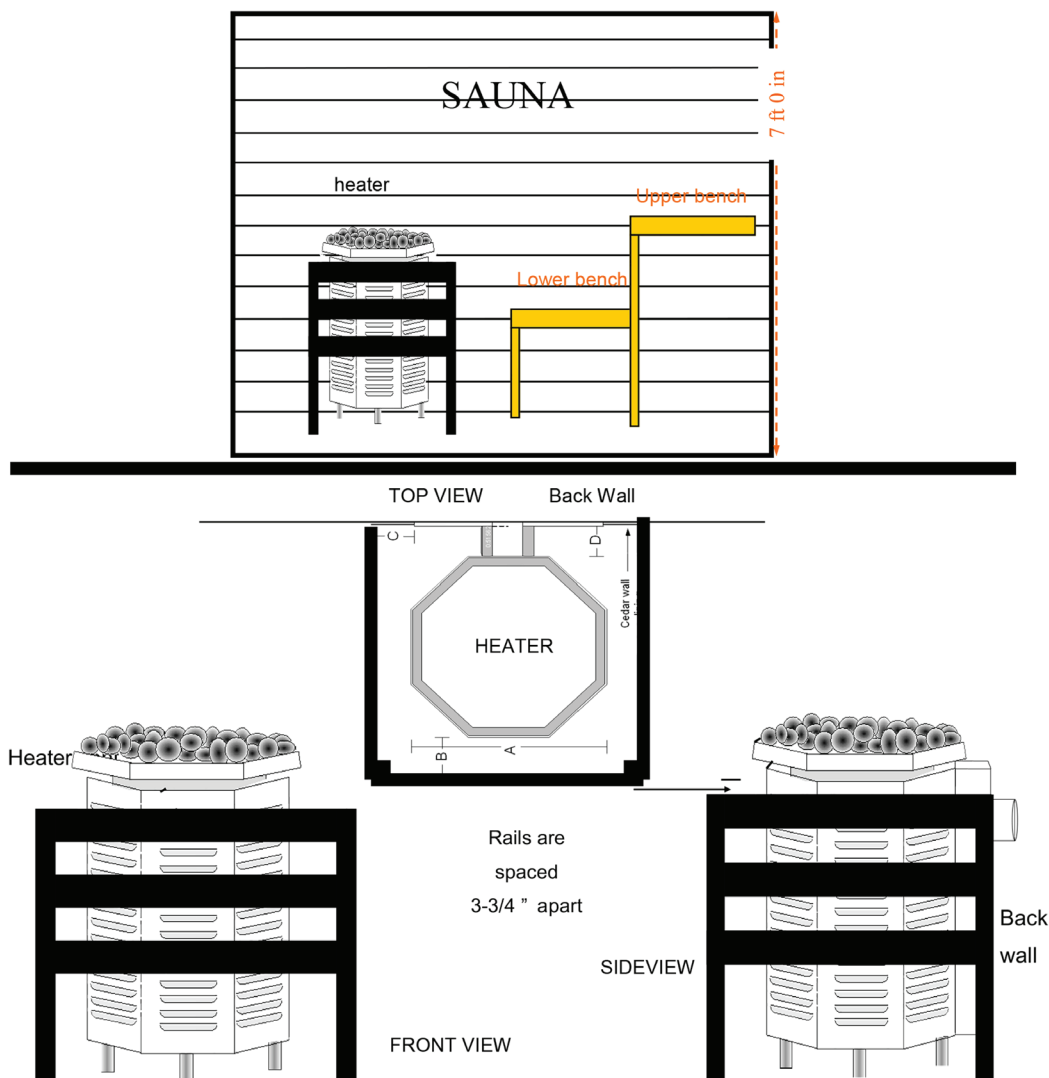
Finish

1. Insulate the space between the backpanel and the exterior wall per local codes
2. Ensure wall material rests behind the lip on the back panel
3. Place 1" fiberglass insulation against the interior side of the back panel
4. Remove paper from stainless flashing and start screws to galvanized (do not tighten)
5. Remove butterfly nut from bottom of intake box and slide burner assembly out of the unit.
6. Slide heater into place, guide insulated high-limit wires through the hole on the intake bracket. Secure heater to stainless steel flashing with two screws.
7. Tighten screws on the corners of the flashing.
8. Slip burner inside heater through the intake box allowing the burner lip to fit under the burner bracket. Replace the butterfly nut and screw to secure the burner.
9. Place caution sign on flashing above heater.
10. Carefully uncoil the thermostat probe and using the pull wire previously placed gently pull the probe into the sauna room.
11. attach the thermostat probe ten inches below ceiling as far away from heater as possible. The probe must be placed horizontally in the provided thermostat probe cover.
12. Install heater guard rail.

	Chassis	240/245	280/285
A	Width Of Heater Shell	18 1/2"	29"
	Wall to Face of Heater	21"	33"
B	Side of Heater to Wall (Min.)	8"	12"
	Height of Heater Shell	28"	40"
	Wall to Inside of Guard (Min.)	29"	41"
	Floor to Bottom of shell	4"	6"

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SCANDIA ULTRA-SAUNA HEATER GUARD RAIL



Components for 3-sided heater guard:

- 2x 2x2 corner posts / legs
- 3x 1x4 rails long piece rails for front
- 6x 1x4 short piece rails for each side
- 2x Wall brackets
- Misc. screws

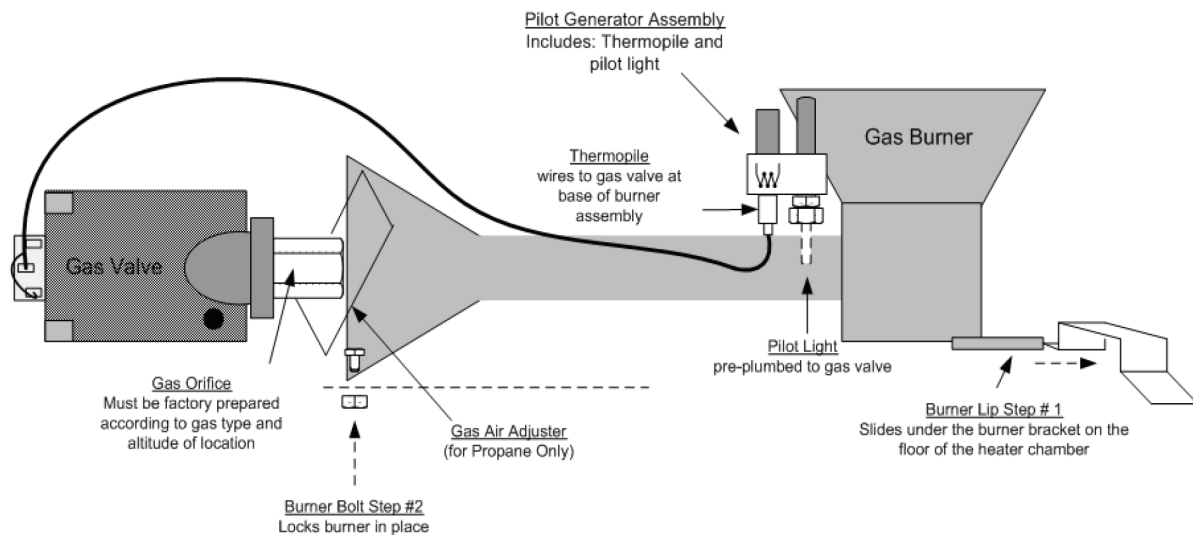
** 2-sided heater guard will have 1 post and one side only.**

Heater guard rail installation:

- All components come ready to be assembled
- Observe distances around heater for guard rail, walls, benches and other obstructions
- Follow the heater manufacturer's clearances recommendations.
- Do not cut down heater guard to fit!

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GAS BURNER OVERVIEW - STANDING PILOT VERSION

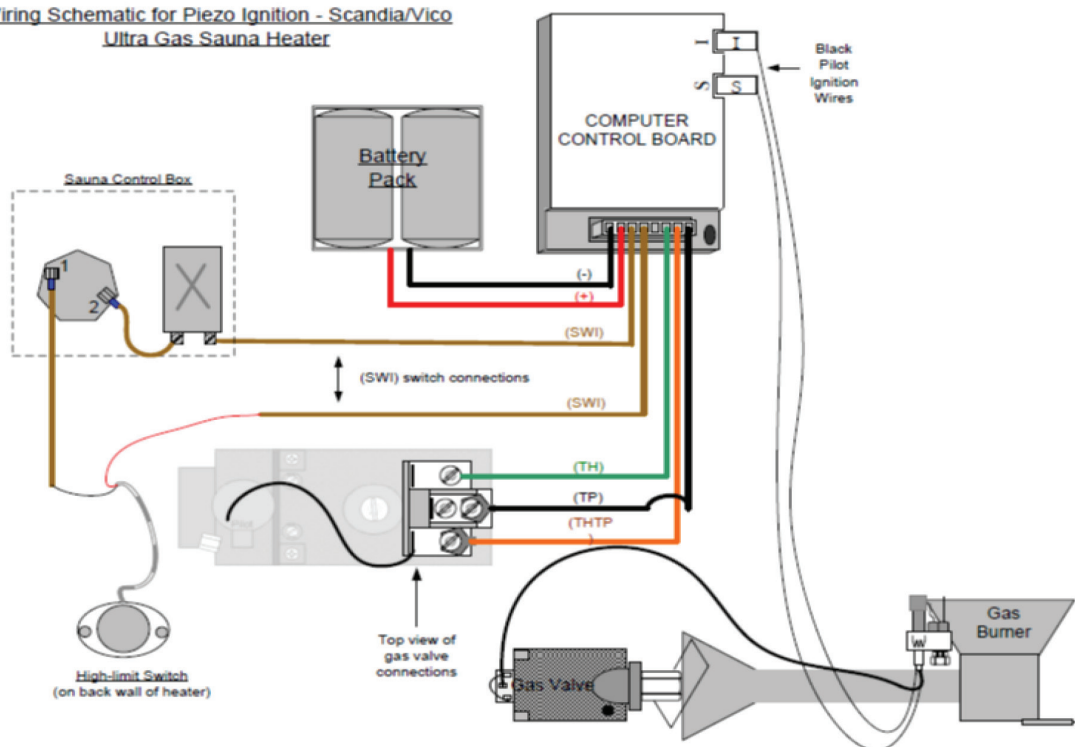


Burner Installation

1. Burner lip must be inserted into the burner bracket on the inside base of the heater chamber.
2. Bolt the burner to the intake vent floor - use the pre-drilled hole.

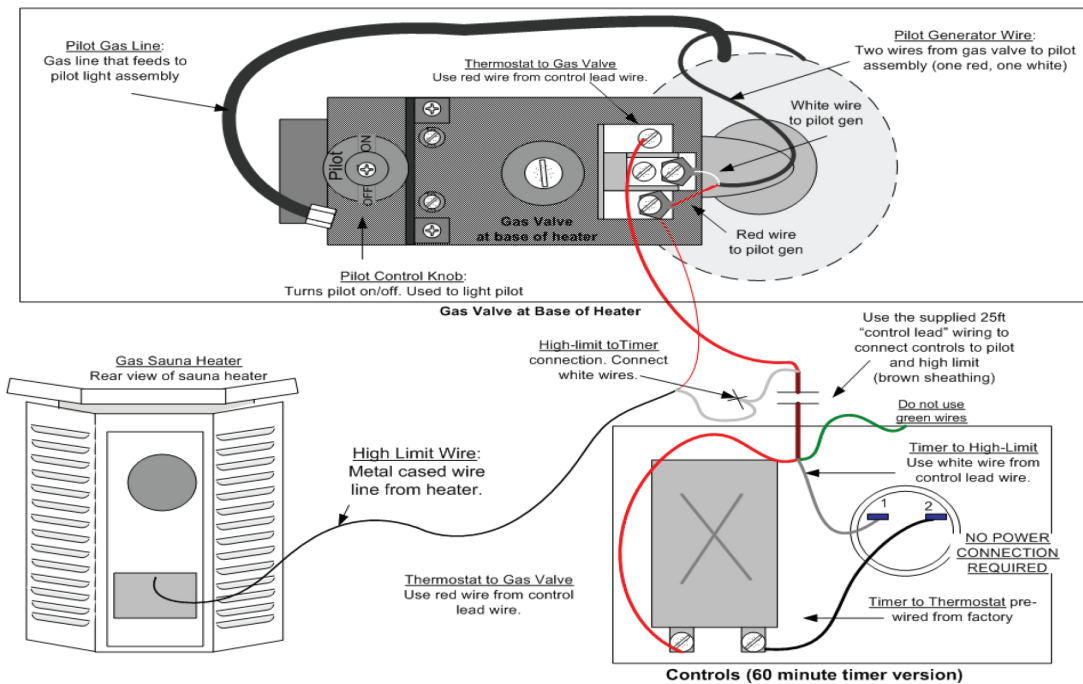
PIEZO IGNITOR OVERVIEW

Wiring Schematic for Piezo Ignition - Scandia/Vico Ultra Gas Sauna Heater

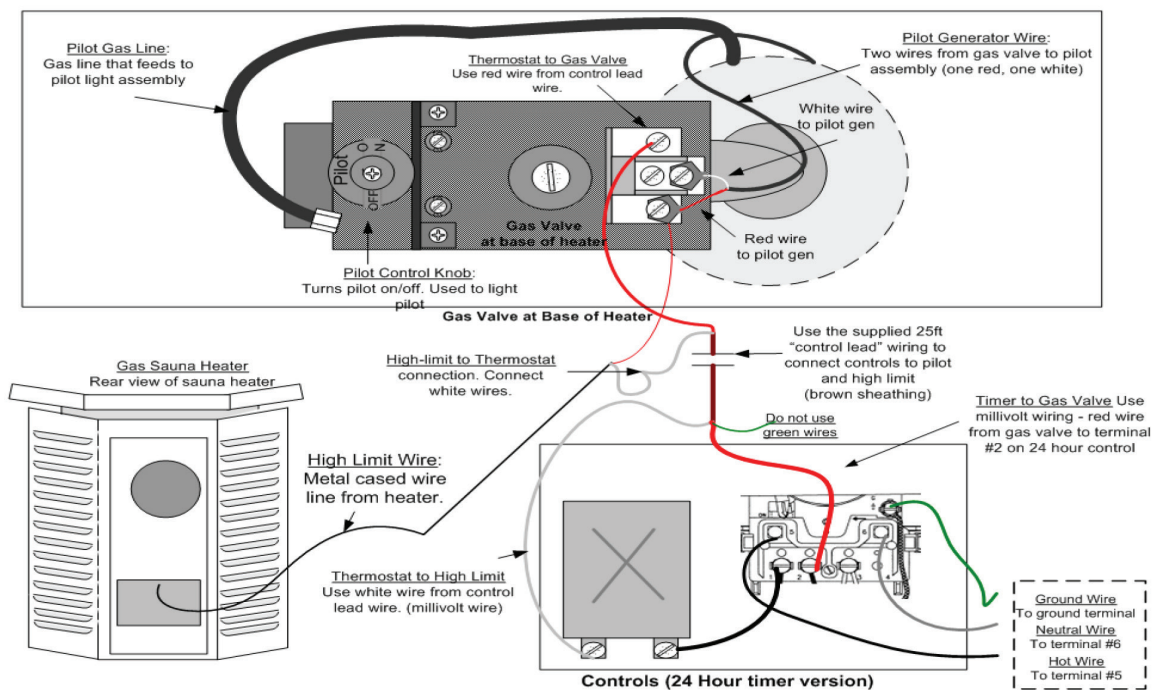


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60 MINUTE CONTROL WIRING OVERVIEW



24 HOUR CONTROL WIRING OVERVIEW



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ULTRA SAUNA - WARRANTY

Your Ultra Sauna heater has been engineered and built to the highest quality standards, and is backed by this warranty to assure your complete satisfaction:

1. SCANDIA Mfg warrants on the terms and conditions set forth below for ten years to the Original Owner only, at the Original Installation site only, this equipment to be free from defect in material and/or workmanship under normal use as specified in the equipment's instructions, FROM DATE OF PURCHASE and thereafter.
2. A TEN YEAR LIMITED WARRANTY applies only on the heater unit as manufactured by and at SCANDIA Mfg., - Manufacturing Plant – and specifically excludes all components and/or parts which are accessories therein, namely: the gas valve; pilot generator; heating element; contactor; timer switch; thermostat; and, high limit, for which their respective manufacturers warranties apply. The TEN YEAR LIMITED WARRANTY does not apply for units that have been installed in commercial locations such as clubs, condominiums, apartments, spas or military facilities. In commercial locations, Scandia will provide a one-year warranty on the unit.
3. During the first year SCANDIA will, at its option, repair or exchange at the Factory all parts which it finds have become inoperative during said warranty period due to a defect in material or workmanship, without cost to customer except for freight and/or crating charges.
4. For the period commencing with the second year and for the ten year warranty of the original purchaser only, at the original installation only, SCANDIA will, at its option, repair or exchange at the Factory, all parts which it finds have become inoperative during said warranty period due to a defect in material or workmanship except the following parts which are excluded from this warranty: the gas valve; pilot generator; heating element; contactor; timer switch; thermostat; and, high limit.
5. This warranty in its entirety becomes null and void if unit is rented or to be used for rental purposes or installed in any mobile or fixed prefab rental room. If original purchaser is a corporation then, the president of said corporation, shall be construed as registered Original Owner for all purposes herein, otherwise this warranty in its entirety becomes null and void.
6. This warranty in its entirety becomes null and void if unit has been installed by an unlicensed party by and/or in the city and/or county where installation is made. Furthermore if unit is disassembled and/or tampered with in any way possible by any one (individual and/or company) then this warranty in its entirety becomes null and void.

SCANDIA reserves the right to substitute new equipment or parts on any orders for replacement hereunder, but shall not be obligated to do so. This warranty is solely for the benefit of the original purchaser and no one else, and only if the installation and operating instructions applicable to the model purchased are followed. These instructions are furnished with the unit and also are available by writing SCANDIA's warehouse. These instructions are incorporated herein by reference as if set forth in full. This warranty does not cover damages which appear to SCANDIA to have resulted from neglect, alteration, abuse, misuse, accident, flood, fire or other act of force majeure, or other than normal use.

This warranty is expressly in lieu of other warranties, or liabilities, express or implied, by the Company or its representatives, and in lieu of all other obligations and liabilities for damage to persons or property caused in any manner by the heater or its component parts. More specifically, by not by way of limitation, SCANDIA assumes no liability for damages which may occur as a result of neglect or intentional misuse of the unit, and the purchaser or user of the unit agrees to assume all liability for the consequences of its use or misuse by such purchaser or user, and his, its or their respective employees and agents or other third person. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. NO REPRESENTATION OR WARRANTIES ARE MADE, EXPRESSED OR IMPLIED, OTHER THAN THOSE EXPRESSLY HEREIN SET FORTH TO THE ORIGINAL PURCHASER ONLY.

To obtain the benefits of this Warranty, the inoperative parts and/or complete heater must be sent to Scandia, all shipping and crating charges prepaid. And all repaired or replaced parts or heaters will be returned freight collect. This warranty is effective only when the attached Factory Registration Stub is completed and returned to the manufacturer. Please contact Scandia for return authorization at 877-467-2862 or via e-mail info@scandiamfg.com

Warranty stub must be mailed or completed online within thirty DAYS TO REGISTER AND VALIDATE THIS WARRANTY, WHICH BECOMES VALID ONLY IF THE HEATER HAS BEEN PURCHASED DIRECTLY FROM SCANDIA MFG., AND/OR AUTHORIZED DEALERS IN U.S.A., its territories or possessions.

FACTORY REGISTRATION STUB		PLACE STAMP HERE
Model _____	Serial No _____	
Customer Name _____		
Address _____		
City _____	State _____	
Equipment Purchased From:		
Dealer _____		
Address _____		
City _____	State _____	
Installed In: Wood Room <input type="checkbox"/> Metal Room <input type="checkbox"/>		
Fiberglass Room <input type="checkbox"/>	Epoxy Coated Cement Room <input type="checkbox"/>	
Tile Room <input type="checkbox"/>	Others (please specify) _____ <input type="checkbox"/>	
TO: Scandia Manufacturing PO Box 636 Eagle, ID 83616 or register online www.scandiamfg.com		

GAS HEATER - TECHNICAL SERVICE TICKET

Date: _____

Customer Name: _____ Contact Number: _____

Model: _____ Serial Number: _____

Voltage Supply: _____ Circuit Breaker Size: _____

Standing pilot or Piezo (circle one): _____ LP or Nat Gas (circle one): _____

Physical Size of the Room: _____

Dealer Name: _____ Purchase Date: _____

State problem and/or comments:

Photo images of the icontrol wiring, junction box wiring, heater placement, and thermostat may be required to complete the analysis.

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TROUBLESHOOTING GUIDELINES – GAS FIRED HEATERS

Sauna heater is not turning on:

1. Check to make sure timer and thermostat are turned on.
2. Make sure the controls were connected to the burner (gas valve) using the millivolt wire provided.
3. Make sure the correct type of gas was connected (LP or NAT). Burner has been built according to the Gas Heater Order Form supplied by customer.
4. Make sure that there is no crimp in the millivolt wire line that may have happened during installation
5. Make sure the gas is on.
6. Test continuity on switches (timer, stat & hi-limit).

For standing pilot models only:

- Pilot light is not lighting up:
 1. Check to make sure pilot has not moved from original place during burner install.
 2. Make sure gas is flowing through copper tubing and there are no leaks.

For Piezo style burners:

- Pilot light is not lighting up:
 1. Check batteries in the battery pack.
 2. Check the gas tank (just for LP burners).
 3. Check the prongs of the pilot generator itself. Clean the prongs with a wire brush if they are dirty to restore it. They may need to be cleaned from time to time. If the prongs are broken, you need a new pilot.

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Heater is not getting up to temperature:

1. Check thermostat, make sure thermostat is in the recommended location and position in the sauna room.
2. Check venting:
 - a. For vertical venting, a power vent may be required for run longer than 7 ft.
 - b. Make sure flue cap and or drafhod/elbow have been installed accordingly, depending on your heater model.
 - c. Ensure heat is not exhausting the heater too quickly.

Hi-Limit Switch is tripping

1. Make sure flue cap and or drafhod/elbow have been installed accordingly, depending on your heater model.
2. Make sure air intake of heater has sufficient air supply/flow.
3. Ensure room itself is properly constructed per installation instructions (i.e. framed, insulated, wood walls, ceiling height, etc.)
4. Check gas pressure and adjust as needed.

Pilot is lit but burner will not engage.

1. Ensure pilot is properly positioned over burner assembly (standing)
2. Ensure pilot sensors are clean and in the right position.
3. Ensure switches have continuity and are sending the signal back to the gas valve.

Explanation of header . . . The design and functionality of the heater is to draw cool air in through the heater, the burner heats the body of the heater which in turn begins heating up the room. The heat is retained inside the heater with baffles that are welded in place and reduce the air flow. Too much air flow will result in the heater not properly heating the room, while not enough air flow will cause the heater to get hot and trip the safety hi-limit switch.

All venting should be done by your local plumber or HVAC technician and should follow any city, county, state and local codes.

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GAS HEATERS AND BURNER MAINTENANCE GUIDELINES

Make sure you have a gas professional inspect the heater regularly or at least once a year if the heater is in a remote location and not used frequently. The prongs on the pilot generator may need to be cleaned from time to time. At least once a month, clean the rock tray by removing the rocks and wiping down any debris, broken rocks or sand from broken rocks.

For additional technical assistance, please send us your technical ticket attached via e-mail info@scandiamfg.com or via our website www.scandiamfg.com

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