
INSTALLATION INSTRUCTIONS



DISCLAIMER

Spectrum Infrared and its affiliated corporations and subsidiaries (collectively "Spectrum"), intend to make this manual accurate and complete. However, Spectrum makes no claim that the information contained herein covers all details, conditions, or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without notice or obligation of any kind. Spectrum makes no representation of warranty, expressed or implied, regarding the information contained herein. Spectrum assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

Spectrum Plus is a registered trademark of Spectrum Products, LLC. All rights reserved.

IMPORTANT SAFETY INSTRUCTIONS



WARNING: A WARNING alerts you to the possibility of serious injury or death if you do not follow the instructions.



CAUTION: A CAUTION alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.



WARNING: Failure to read, thoroughly understand, and follow all instructions can result in serious personal injury, damage to equipment, or voiding of factory warranty! It is the installer's responsibility to make sure all components are properly assembled and installed using the instructions provided.



WARNING: Failure to provide adequate structural strength for this accessory can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this accessory is attached can support the weight of all equipment.



WARNING: Use this heater only for its intended use as described in these instructions. Do not use attachments not recommended by the manufacturer.



WARNING: Professional installation required.

IMPORTANT! The SP250/300/350 heaters are designed to be mounted between a wood stud wall that's 16" on center. Minimum T&G thickness is 11/16".

NOTE: Spacings - Minimum spacings between the heaters shall be maintained for safe operation of the equipment when installed in accordance with the National Electric Code, ANSI/NFPA 70.

NOTE: When selecting a Listed 120 Vac Receptacle for use as the main power source for the SPC heaters (power supply), make sure that AC Receptacle is rated for the heater installing.

In the U.S., the equipment shall be installed per the applicable requirements of the National Electrical Code, ANSI/NFPA 70.

In Canada, the equipment shall be installed per the applicable requirements of the Canadian Electrical Code, CSA C22.1.

INSTALLATION

SP250/300/350 heaters are intended for use where the wall surface has not been finished and the structural studs are exposed. The wall then must be finished, and the heaters installed in cutouts.



WARNING: All wiring should be performed by a licensed electrician following all local codes and ordinances.



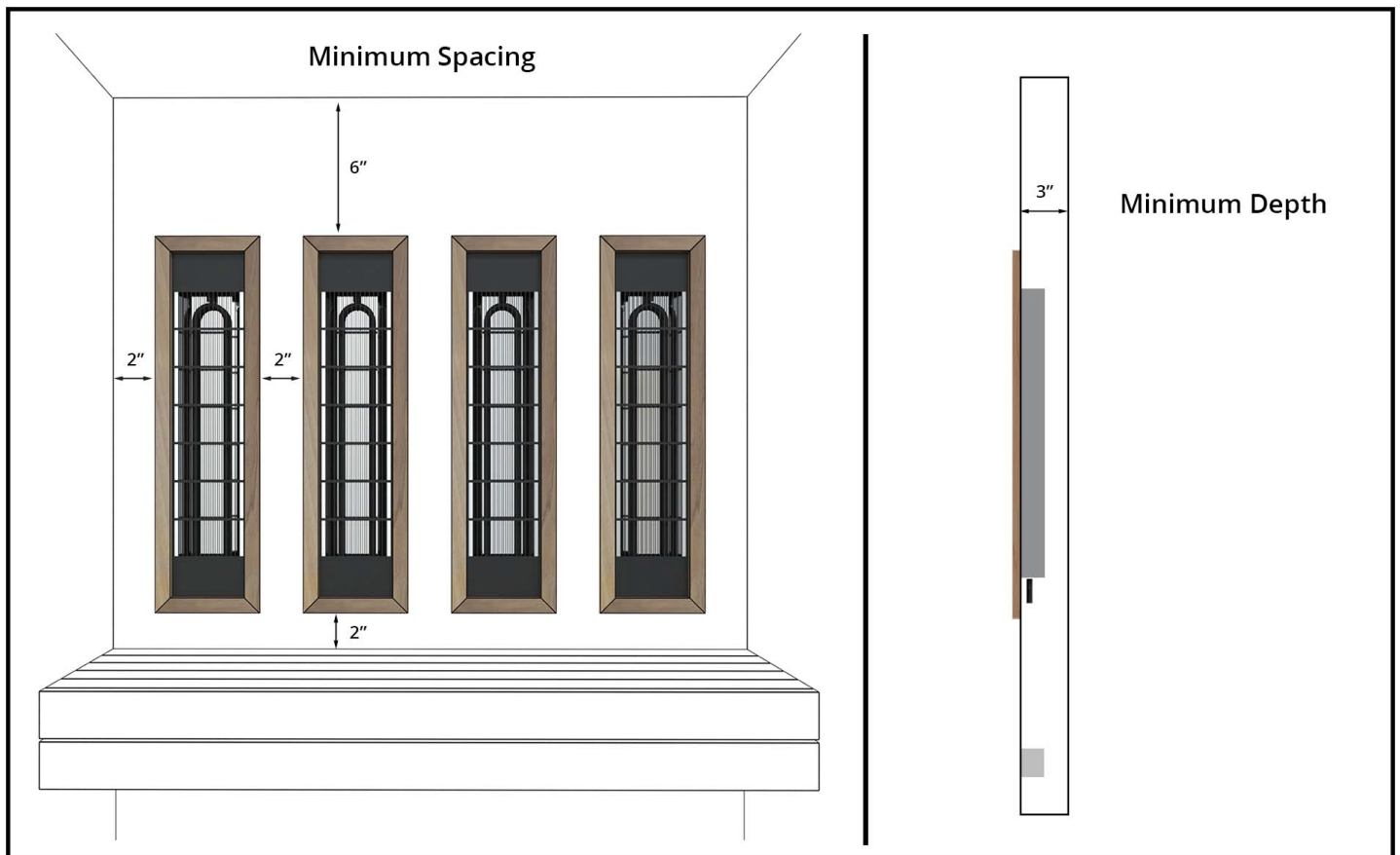
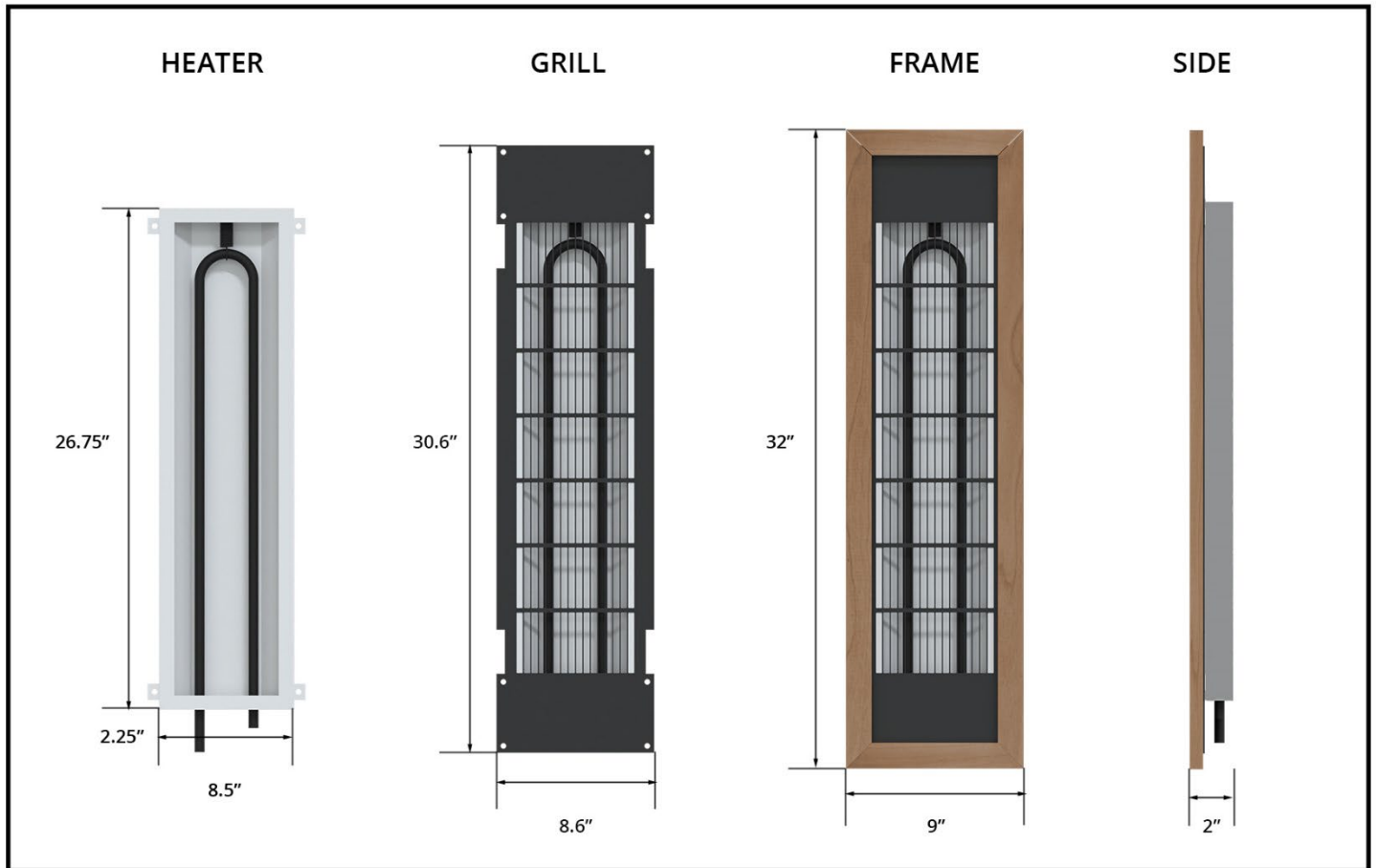
WARNING: ELECTRICAL SHOCK HAZARD! CUTTING OR DRILLING INTO ELECTRICAL WIRES OR CABLES CAN CAUSE DEATH OR SERIOUS PERSONAL INJURY! ALWAYS make certain area behind mounting surfaces is free of electrical wires and cables before cutting, drilling or installing fasteners.



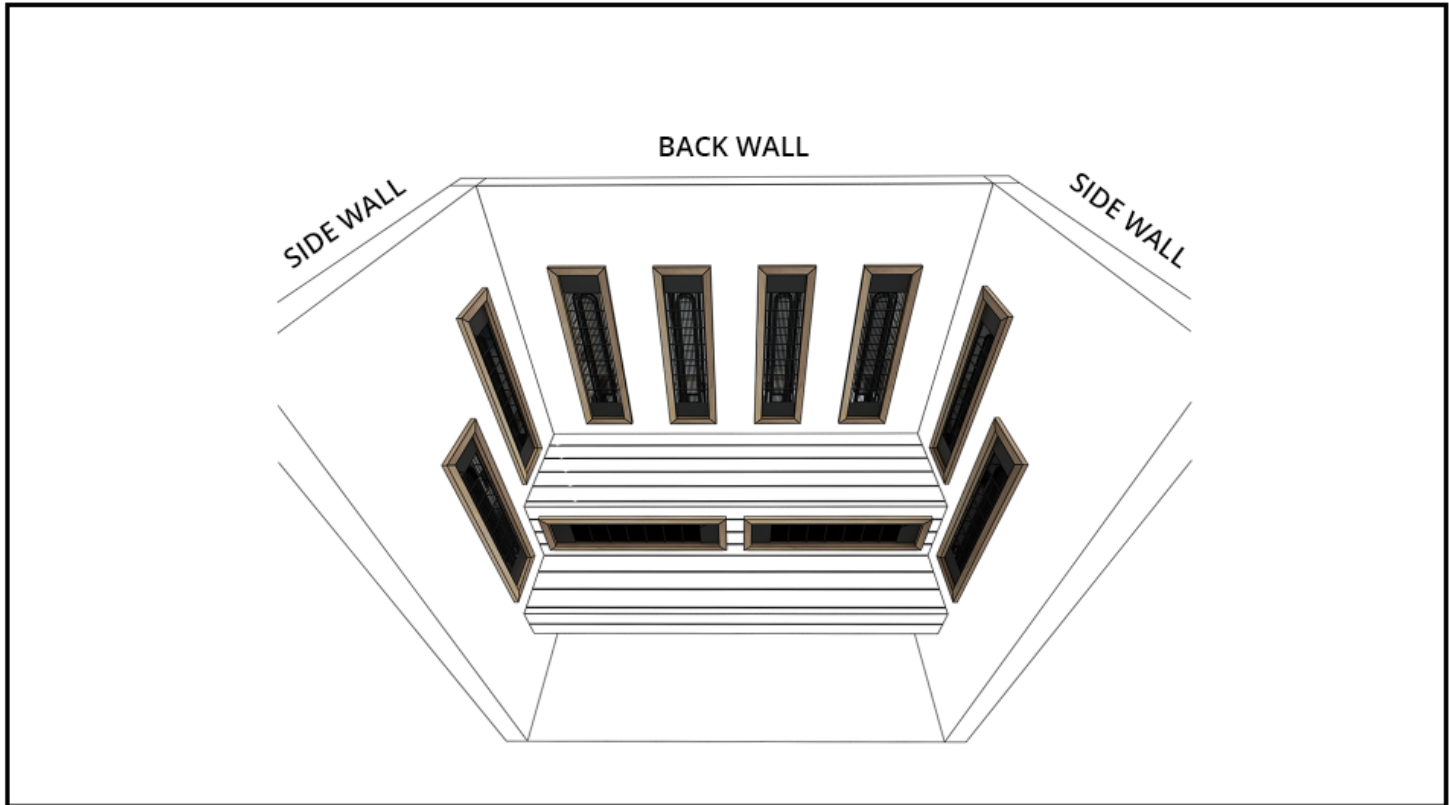
WARNING: EXPLOSION AND FIRE HAZARD! CUTTING OR DRILLING INTO GAS PLUMBING CAN CAUSE DEATH OR SERIOUS PERSONAL INJURY. ALWAYS make certain area behind mounting surfaces is free of gas, water, waste or any other plumbing before cutting, drilling or installing fasteners.

--SAVE THESE INSTRUCTIONS--

HEATER DIMENSIONS & SPACING



LAYOUT



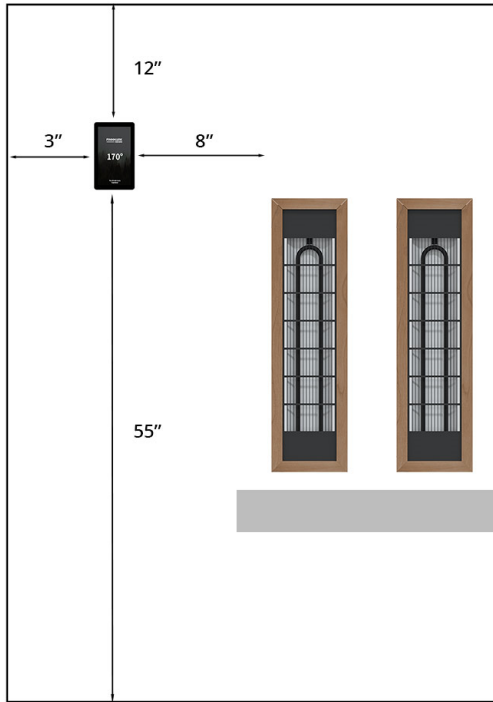
Sauna Size	Back Wall	Side Wall	Bench Heater	Cubic ft	Watts / Amps / Volts	Traditional Heater*
4x4x7	2	2	1	112 ft ³	1500 / 15 / 120	N/A
4x5x7	3	2	1	140 ft ³	1800 / 15 / 120	N/A
4x6x7	4	2	1	168 ft ³	2100 / 20 / 120	Yes
4x7x7	5	2	2	196 ft ³	3150 / 15 / 240	Yes
4x8x7	5	2	2	224 ft ³	3150 / 15 / 240	Yes
5x5x7	3	2	1	175 ft ³	1800 / 15 / 120	Yes
5x6x7	4	2	1	210 ft ³	2100 / 20 / 120	Yes
5x7x7	5	2	2	245 ft ³	3150 / 15 / 240	Yes
5x8x7	5	2	2	280 ft ³	3150 / 15 / 240	Yes
6x6x7	4	2	1	252 ft ³	2100 / 20 / 120	Yes
6x7x7	5	2	2	294 ft ³	3150 / 15 / 240	Yes
6x8x7	5	4	2	336 ft ³	3850 / 20 / 240	Yes
7x7x7	5	2	2	343 ft ³	3150 / 15 / 240	Yes
7x8x7	5	4	2	392 ft ³	3850 / 20 / 240	Yes
8x8x7	5	4	2	448 ft ³	3850 / 20 / 240	Yes
8x9x7	5	4	2	504 ft ³	3850 / 20 / 240	Yes

Cubic ft	Minimum	Cubic ft	Minimum
100 - 150 ft ³	4	300 - 350 ft ³	8
150 - 200 ft ³	5	350 - 400 ft ³	9
200 - 250 ft ³	6	400 - 450 ft ³	10
250 - 300 ft ³	7	450 - 500 ft ³	11

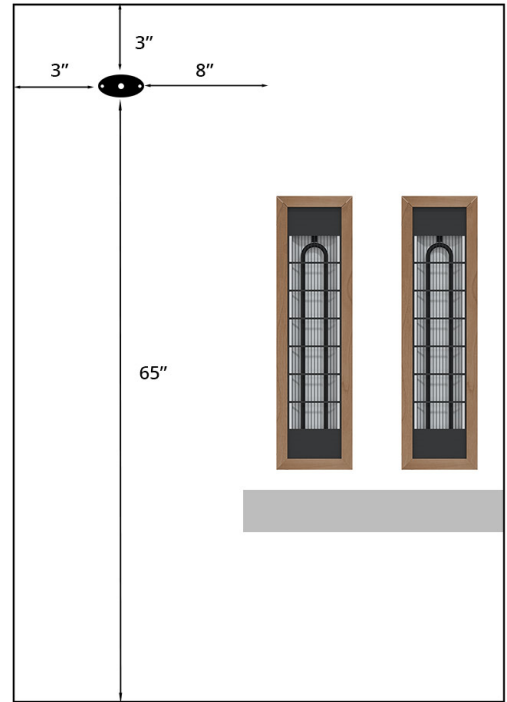
*Traditional heaters can only be used in combination with Spectrum Plus IR heaters. Adding carbon panels to a traditional heater sauna voids all warranties.

CONTROLLER & SENSOR

Controller Spacing (Minimum)



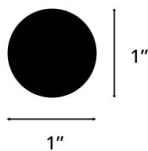
Sensor Spacing (Minimum)



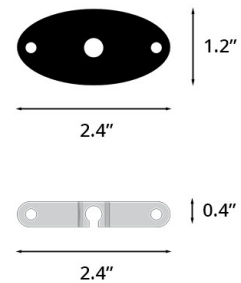
V2 Controller



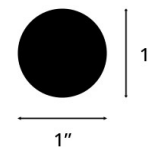
Wire Hole



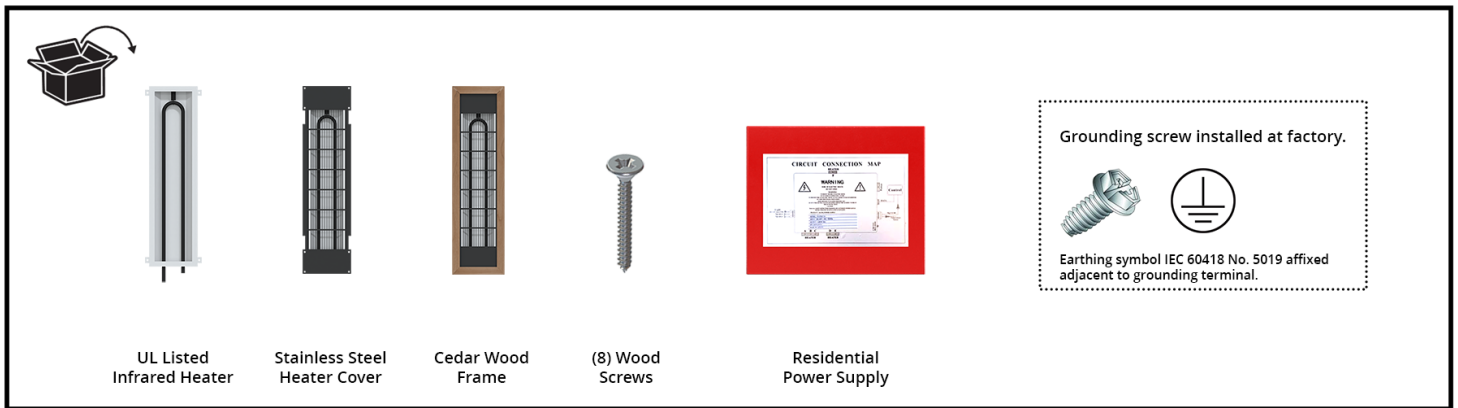
Sensor Hardware



Wire Hole



PARTS INCLUDED



UL Listed Infrared Heater

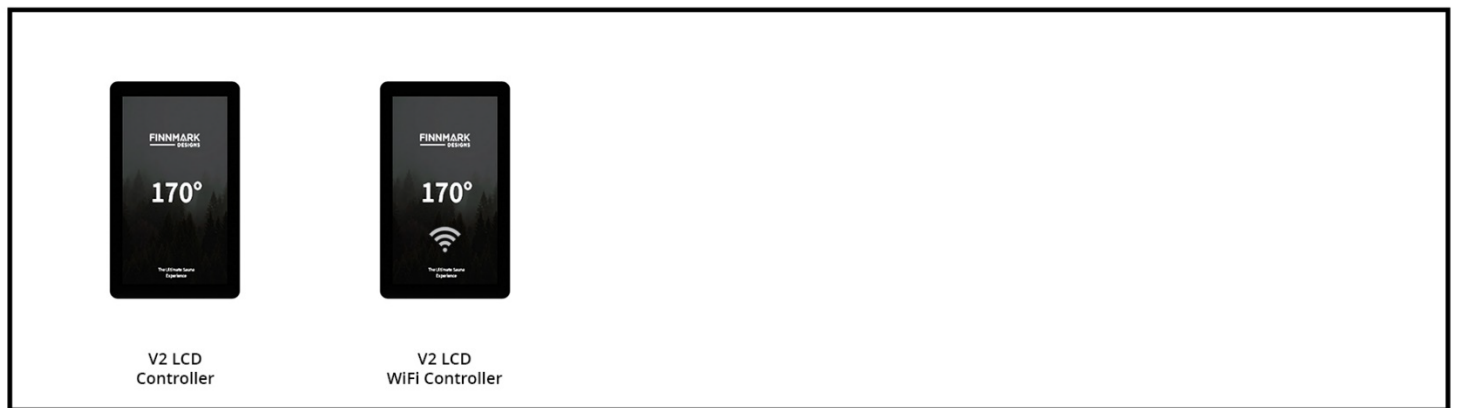
Stainless Steel Heater Cover

Cedar Wood Frame

(8) Wood Screws

Residential Power Supply

COMPONENTS NEEDED FOR OPERATION



V2 LCD Controller

V2 LCD WIFI Controller

OPTIONAL PARTS PER CUSTOM CONFIGURATION (NOT INCLUDED)



Conduit Connectors

Conduit Pipe 1/2" or 1"

Junction Box

MC Connectors

MC Fastner

MC Cable

CONFIGURATION EXAMPLES



4x4



4x5



4x6



5x5



5x6



5x7



6x6



6x7



6x8

NOTE: Configuration examples are based on achieving 170-degree temperatures without utilizing a traditional heater (combination). For combination saunas, the number of infrared panels can be lowered if the primary goal is to use both the infrared and traditional heaters at the same time.

NOTE: To achieve the ultimate sauna experience, maximize your infrared and traditional heater quantities. The sauna temperature can always be adjusted to lower the temperature.

STUD LAYOUT



PLANNING YOUR STUDS

Carefully plan your stud configuration. Your studs must coincide with your heater layout as each heater requires a minimum **3" depth** for proper installation and ventilation.

Common 16" on center stud spacing can be used for most builds. For uncommon spacing or angles, adjust your studs to accommodate each heater.

*Each heater should be 2" above the seating surface of the sauna bench. This calculation should be made during the stud planning process.

**This is an example of stud placement. Your configuration may require additional bracing based on bench configurations or local building codes.

JUNCTION BOX LOCATIONS



JUNCTION BOX LOCATIONS

A metal junction box should be located under each heater for safety and code compliant access.

The top connection to your junction box should be metal conduit pipe. Heater connections can be standard flexible conduit.

*Use 4" junction boxes for easier wiring access.

**Use a minimum of 12awg cable for best heater performance.



POWER SUPPLY LOCATION



POWER SUPPLY LOCATION

The power supply unit should be placed in an accessible location within 118" of the sauna controller.

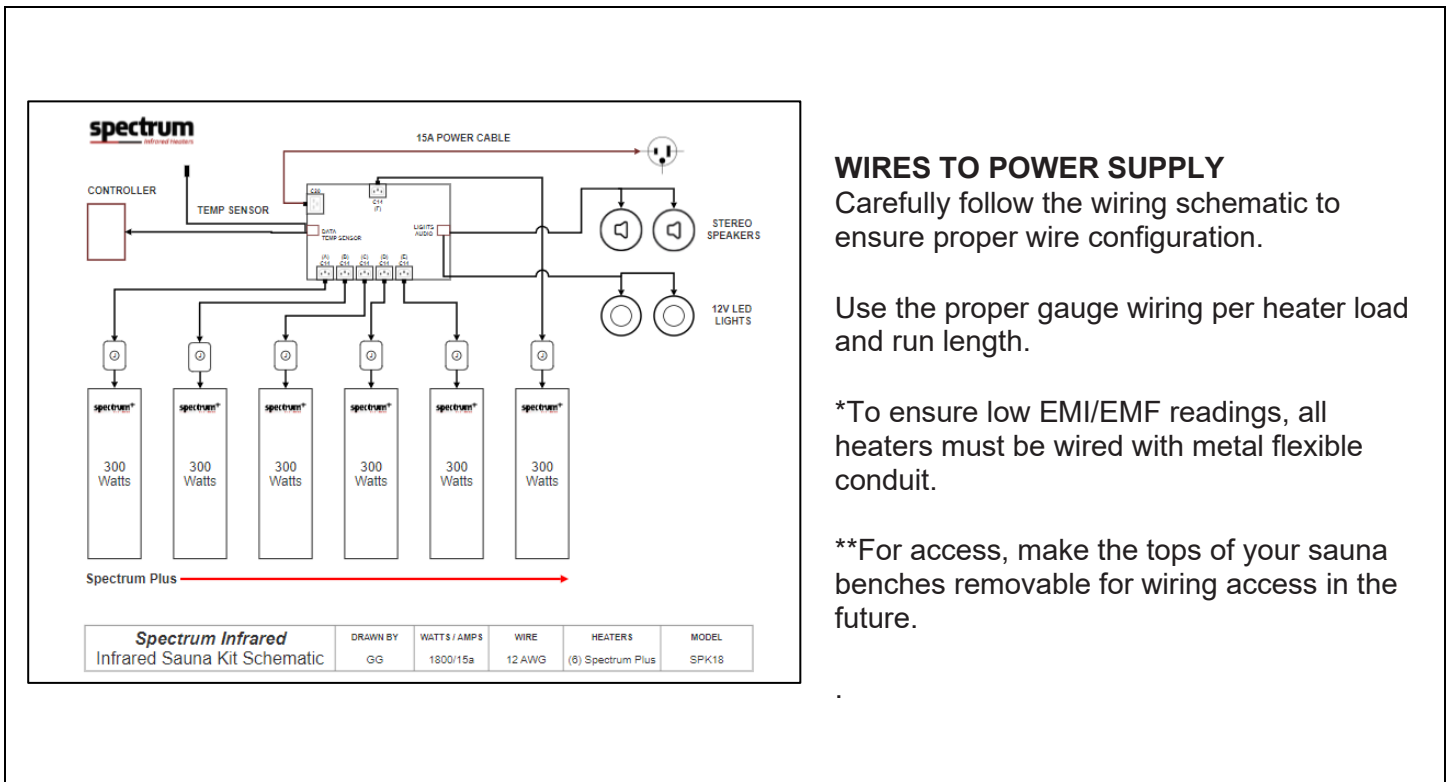
For infrared only saunas, the power supply can be mounted within the sauna in a covered location (e.g., under a removable benchtop).

For infrared and traditional applications, the power supply must be mounted outside of the sauna (e.g. next to the subpanel).



There will need to be a 1.5" diameter access hole made to run the power cable to the wall outlet.

POWER SUPPLY HEATER CONNECTIONS



WIRES TO POWER SUPPLY

Carefully follow the wiring schematic to ensure proper wire configuration.

Use the proper gauge wiring per heater load and run length.

*To ensure low EMI/EMF readings, all heaters must be wired with metal flexible conduit.

**For access, make the tops of your sauna benches removable for wiring access in the future.

DATA CABLE FOR CONTROLLER



CONTROLLER DATA CABLE

Your controller location should be within 118" of the red power supply box.

Connect your data cable to the power supply and secure the end of the wire to the stud location where your controller will be mounted.

*We recommend using a metal pipe or channel to run this cable and your temperature sensor for easy replacement if necessary.

**Your data cable can be extended on site to obtain an additional 60".

TEMPERATURE SENSOR



TEMPERATURE SENSOR CABLE

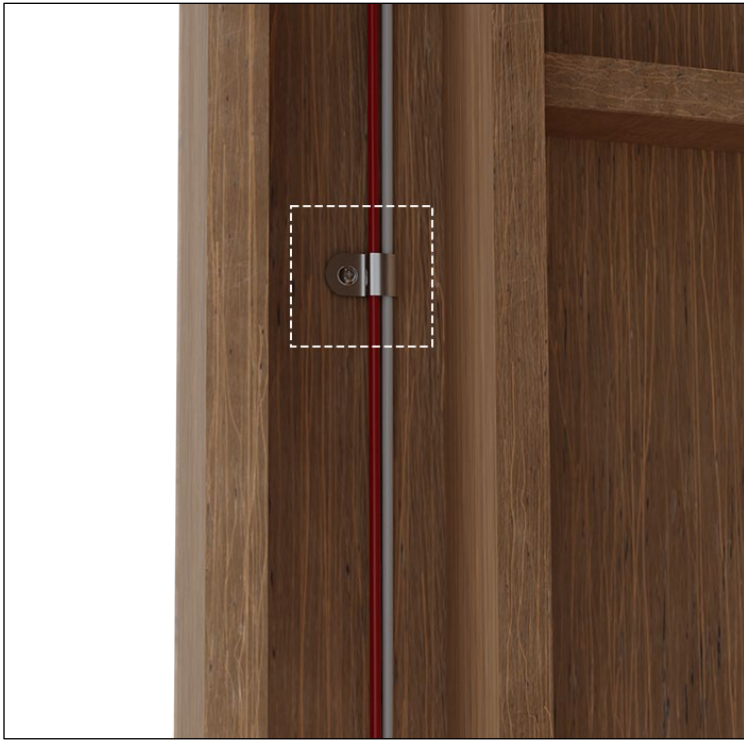
Your temperature sensor should be within 118" of the red power supply box.

Connect your sensor wire to the power supply and secure the end of the wire to the stud location where your sensor will be mounted.

*Wires don't often fail, however we recommend using a metal pipe to run this cable and your controller data cable for easy replacement if necessary.

**Your temperature sensor cable can be extended on site to obtain an additional 100".

HEATER CONNECTIONS



SECURE SENSOR AND CONTROL WIRE

Secure both wires to the adjacent stud to connect to components in the future.

HEATER FOIL VAPOR BARRIER



VAPOR BARRIER INSTALLATION

For the best heater performance, install vapor barrier in each heater cavity. This step is not required but recommended.

*Insulation can be added behind the heater for added thermal retention. Only fire retardant/ high heat insulation (rock wool) should be installed.

INSULATION



FISH WIRE



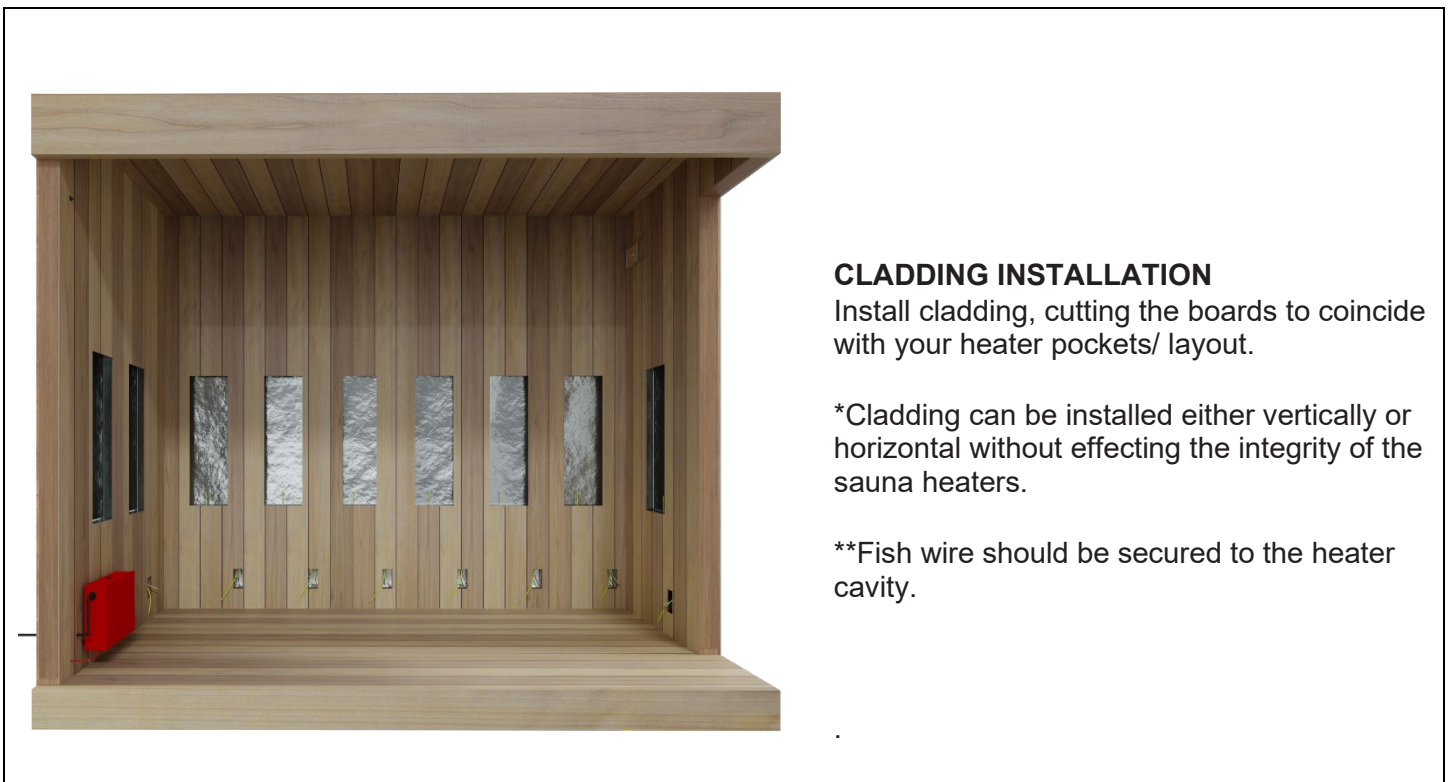
VAPOR BARRIER



FINAL VAPOR BARRIER

Apply your final application of vapor barrier.

INSTALL CLADDING

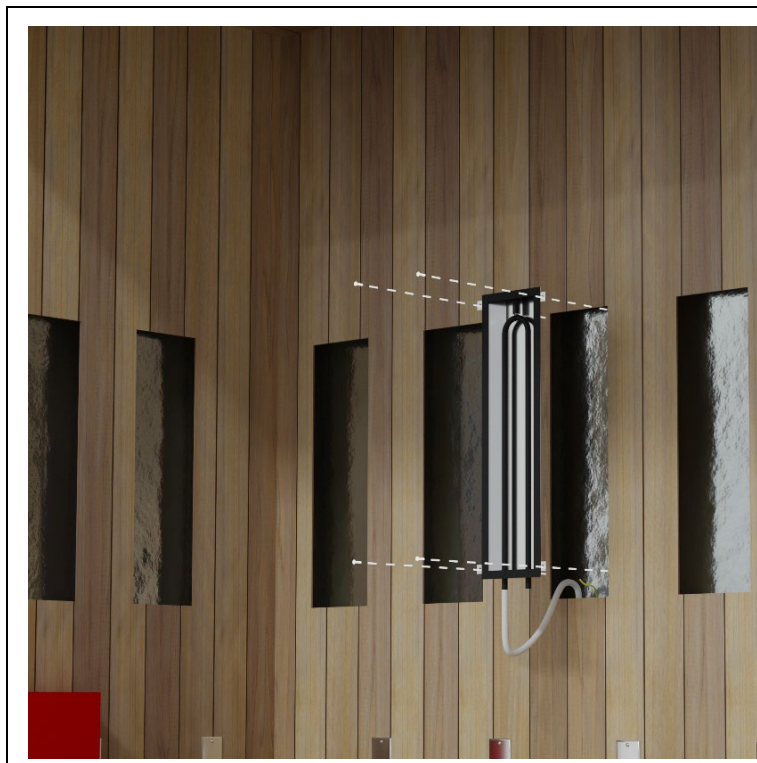


CLADDING INSTALLATION

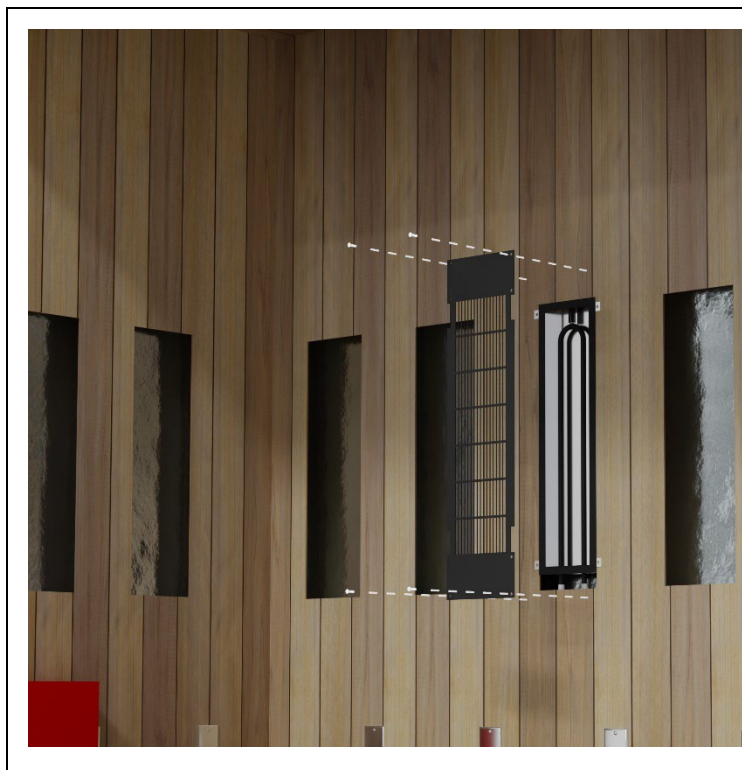
Install cladding, cutting the boards to coincide with your heater pockets/ layout.

*Cladding can be installed either vertically or horizontal without effecting the integrity of the sauna heaters.

**Fish wire should be secured to the heater cavity.

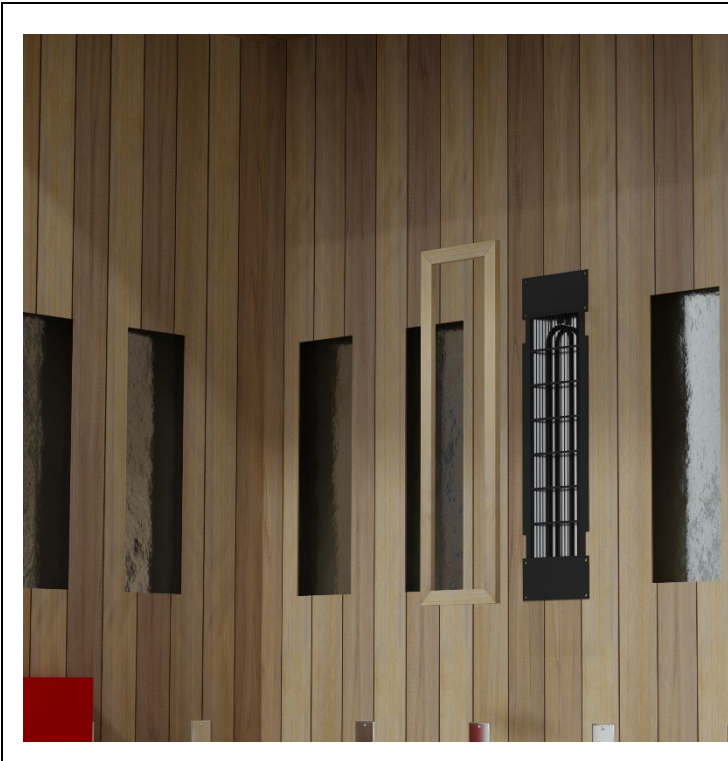
INSTALL HEATER**INSTALL HEATER AND WIRE**

Place your Spectrum Plus heater into the cavity. Route the heater power wires into your junction box. Make your power connections.

INSTALL HEATER COVER**INSTALL HEATER COVER**

Install the lower cladding and heater grill with (4) wood screws.

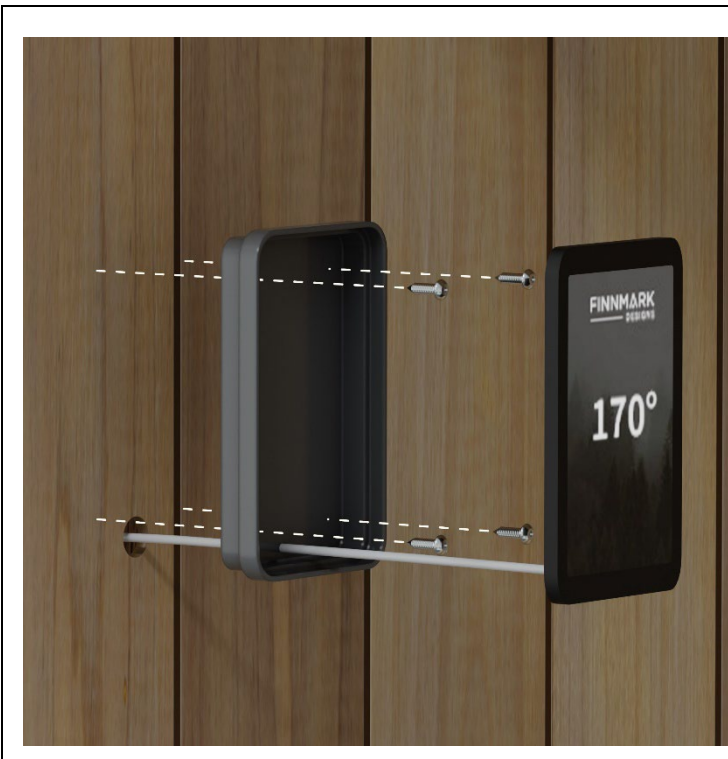
WOOD FRAME



INSTALL WOOD FRAME

Place your Spectrum Plus heater into the cavity, connect your wires, and secure using (4) wood screws or finishing nails.

INSTALL CONTROLLER

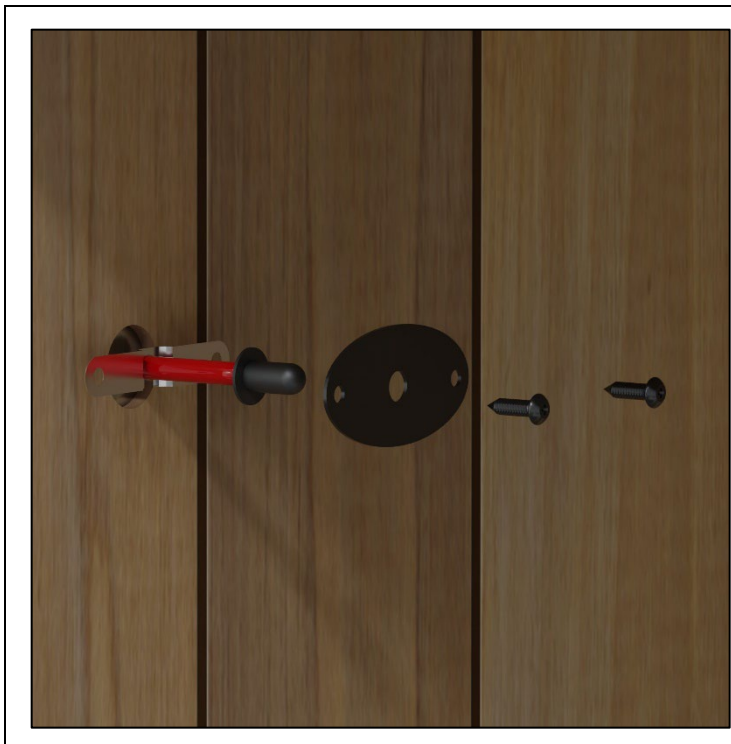


INSTALL CONTROLLER

Follow the control panel mounting instructions to ensure proper installation.

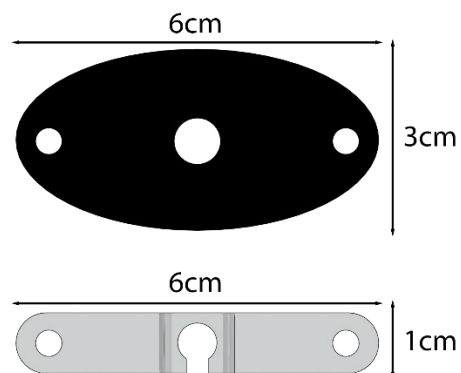
Using a pick tool or a small flat head screw driver push down on the clips found on top of the controller's case.

MOUNT TEMPERATURE SENSOR

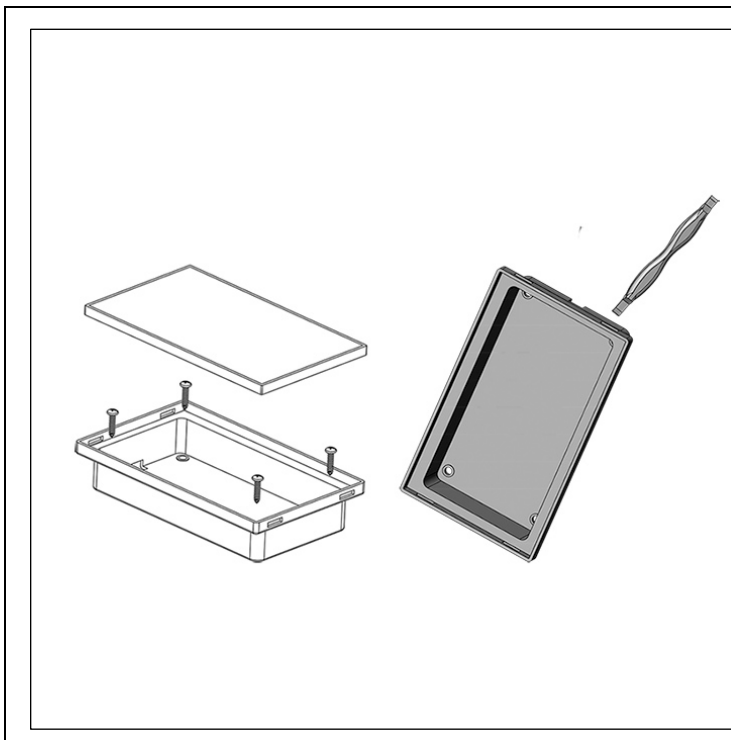


TEMPERATURE SENSOR

Using provided parts, mount your temperature sensor in the location outlined.



CONTROLLER CASE



OPEN THE CONTROLLER CASE

Using a pick tool or a small flat head screw driver push down on the clips found on top of the controller's case.

Tip: Push at an angle to ensure the screw driver doesn't push into the screen's circuit board.

AUDIO SPEAKERS

SPEAKER CONNECTIONS
 The power supply is wired to allow for (2) speakers.
 Max wattage: 30

LED LIGHTING

12v LIGHTING
 The power supply is wired to allow for 12v LED lighting.
 Max wattage: 20

INSTALLATION FAQ

<p>Can I choose to use less heaters than what's recommended?</p>	<p>The recommended heater quantities are based on reaching and maintaining 160-170 degrees Fahrenheit. If you use less heaters, the time it takes to reach and maintain these temperatures increases exponentially.</p>
<p>If I'm using a traditional heater, can I use fewer infrared heaters?</p>	<p>If your bathing goal is to use both at the same time, you can use fewer infrared heaters and still maintain therapeutic heat. If your bathing goals are to have the ability to reach therapeutic heat while only using infrared heat only, you must follow recommendations.</p>
<p>Can I operate a traditional heater at the same time as infrared?</p>	<p>Spectrum Plus™ UL listed infrared heaters were specifically engineered for this purpose. Unlike carbon heaters, which will fail prematurely under high heat, moisture and steam, Spectrum Plus™ heaters were engineered to withstand these harsh environments without failure.</p>
<p>Can I sit against the infrared heaters?</p>	<p>Spectrum Plus™ heaters were specifically engineered to project infrared heat 360 degrees using a half octagon reflector. This allows for the heat to be evenly distributed, allowing users the ability to sit against the heater. For the ultimate bathing experience, purchase an ergonomic backrest.</p>
<p>Where is the best place to mount the temperature sensor?</p>	<p>The temperature sensor must be mounted near the controller and at minimum 6" from the ceiling.</p>
<p>If I use a traditional heater with infrared, why can't I mount the controller and power supply inside?</p>	<p>A traditional heater produces higher heat along with steam/moisture. Electronic components have a difficult time operating and keeping reliability standards under such harsh conditions.</p>
<p>Can I mount the power supply inside the sauna?</p>	<p>For <u>infrared only</u> sauna builds, the <u>power supply</u> and <u>controller</u> can be mounted inside of the sauna.</p>
<p>What type of insulation should I use for the best thermal retention?</p>	<p>The best insulation for sauna building is rockwool. Which boasts an impressive R value combined with the thermal retention required.</p>

INSTALLATION FAQ

<p>Can I have insulation behind the infrared heater?</p>	<p>Yes, rockwool has a melting point of approximately 2150°F. If alternative insulation is used, check manufacture’s specifications for high heat applications.</p>
<p>What type of glass should I use?</p>	<p>Tempered glass. Glass is not ideal for retaining thermal heat. The minimum thickness should be 8mm.</p>
<p>Can I install these heaters with horizontal planks?</p>	<p>Yes. Spectrum Plus infrared heaters were engineered to be installed in both vertical and horizontal plank designs.</p>



8882-002024 Rev5.6
 www.spectrumproducts.com
 01/24
 ©

USA/International 6231 Mcleod Dr. STE A, Las Vegas NV
 www.spectrumproducts.com

Spectrum Plus™ infrared elements are UL listed
 under UL – UBJY2.E65554

