

MrSauna® Heater

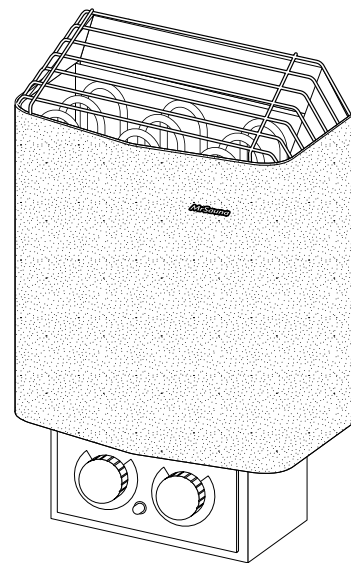
Installation and Operating Instructions

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Wall Mount Models: SA1-SA8

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9. Wire Rock Guard
10. 30 lbs. Rocks (separate carton)



IMPORTANT NOTE:

As you follow these instructions, you will notice warning and caution symbols. This blocked information is important for the safe and efficient installation and operation of this generator.

These are two types of potential hazards that may occur during this installation and operation:



states a hazard that may cause serious injury or death if precautions and instructions are not followed.



signals a situation where minor injury or product damage may occur if you do not follow instructions.

Another footnote we would like to identify is:

IMPORTANT NOTE:

This highlights information that is especially relevant to a problem-free installation.

A Division of Sussman-Automatic Corporation
43-20 34th Street, Long Island City, NY 11101 • (718) 937-4500
1-800 767-8326 • Fax: (718) 472-3256 • <http://www.mrsteam.com>

Western Regional Offices
9410 S. La Cienega Blvd., Los Angeles CA 90301
(310) 216-6565 • 1-800 727-8326 • Fax: (310) 216-2944



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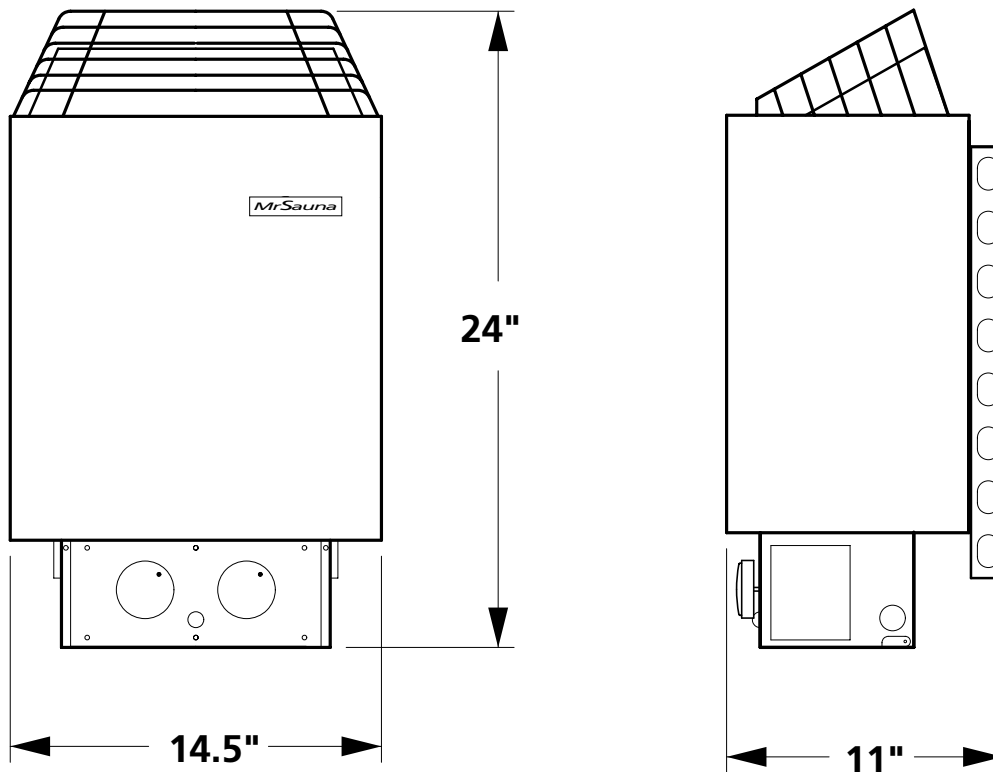
MrSauna

Installation and Service Instructions



Electric Shock Hazard - High voltage exists within this equipment. There are no user serviceable parts in this equipment. All installation and service to this equipment should be performed by qualified licensed personnel in accordance with local and national codes. Failure to do so may expose user or repair person to dangerous high voltage and may result in an unsafe or inoperable heater.

Electrical outlets or receptacle must not be installed in a sauna room. Outlets may expose user to shock.



Mr Sauna models:
SA-1A1 SA-6C1
SA-2C1 SA-8C1
SA-4C1

Read all instructions carefully before installation.
 Please leave all instructions and warranty with the owner.
 Owner: Please fill out and return warranty certificate promptly.



Use only 90° C rated copper wire of the size and type indicated in the Heater Specification Chart and the temperature rating indicated on the heater junction box. Failure to do so may result in inoperable heater or fire.

All heaters and controls must be wired and grounded per NEC to prevent electrical shock.

Consult factory before installing heater in rooms exceeding 84" interior ceiling height.

Section 1: General Information

MrSauna Sauna Heaters are listed by Underwriters Laboratories. These are for permanent installation and electrical connection. All wiring and connections to be according to NEC. To determine the correct wire size and circuit protection refer to the Heater Specification Chart below.

Heater Specification Chart								
Model No.	kW	Volts/Phase	Minimum Room Size	Maximum Room Size	Amps	Contacting Box	Wire Size	Knockout
SA-1A1	1.7	120/1	45	80	14	no	14AWG	1/2
SA-2C1	2.2	220-240/1	65	100	9	no	14	1/2
SA-4C1	4.5	220-240/1	100	210	19	no	14	1/2
SA-6C1	6.7	220-240/1	175	320	28	no	10	1/2
SA-8C1	7.6	220-240/1	250	425	32	no	8	3/4

- Notes:
1. All Models are provided with factory wired timer, operating temperature control and pilot light.
 2. Timer, operating temperature control and pilot light can be relocated during field installation to an external wall of the sauna room.
 3. Room sizing is based on interior room height of 84". Consult factory before installing heater in rooms exceeding 84" interior ceiling height.
 4. Wire size based on 90° C copper conductors
 5. Contactor box (SA-CNTR2) required for 3 phase heaters

Installation and Service Instructions

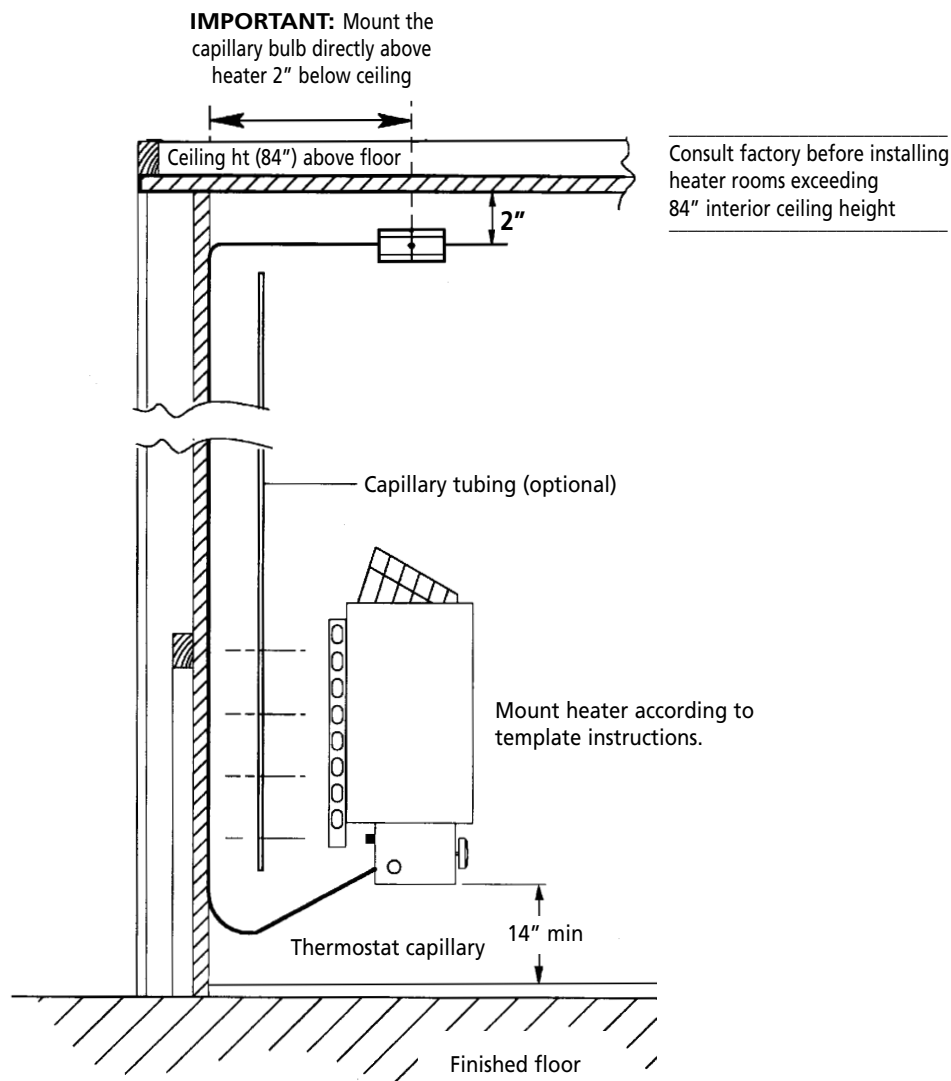
Section 2: Securing Heater to the Wall

The Mr. Sauna heater may be mounted on a flat wall, or in a corner location. The heater is set up to be mounted on a flat wall. If the heater is to be mounted in a 90° corner then the heater mounting brackets must be repositioned according to instructions on Page 11.

Installing the Heater:

1. Verify correct heater voltage, phase and amperes for installation site.
 2. Remove all packaging materials including the plastic bag, element spacers and plywood shipping board. Locate and keep all other materials.
 3. Untie and uncoil the thermostat capillary tube.
- IMPORTANT NOTE:** Use extreme care not to bend or kink the tube.
4. Position the mounting template according to instructions indicated on the template. Make sure the correct side of the template is facing out. Follow template instructions.
 5. Route the capillary tube so that the bulb is positioned directly above the heater on the wall (2") inches below the ceiling.
 6. Mount the bulb guard horizontally to the wall six inches below the ceiling. Secure the capillary bulb inside the bulb guard as shown on page 10, diagram 6.

Diagram 1:



Do not use the sauna room or heater for drying clothes, bathing suits, etc. Do not hang towels above heater or place any object other than the rocks supplied on or in the heater. If any darkening of the wall around the heater is noticed discontinue sauna use immediately. Failure to do any of above may result in fire and/or smoke hazard.



Thermostat tubing should be uncoiled carefully—the minimum bend radius of the tubing is 1/4". Damage to the tubing will make the heater inoperative.

Inspect sauna regularly for required maintenance to heater, rocks, control and benches. Replace wood surfaces which show any signs of deterioration.

Minimum clearance from any part of heater to another surface (benches, heater guard, rail, walls...etc.) to be 2 inches minimum. Failure to do so may result in fire and/or smoke hazard.

Mounting brackets supplied provide proper clearance from wall behind heater.

Consult factory before installing heater in rooms exceeding 84" interior ceiling height.

Installation and Service Instructions

Section 3: Electrical Wiring

All wiring must be accomplished by a licensed electrical contractor. Refer to the Heater Specification Chart to determine the wire size and circuit protection required. The complete sauna consisting of heater and temp/time control should be properly grounded according to NEC requirements.

Heater Electrical Connections

1. Verify that heater is securely mounted to the wall
5. Connect the ground line to the ground lug
2. Turn off the circuit breaker providing power to the sauna heater power supply.
6. Connect power voltage to L1 and L2 on the terminal block
3. Remove two screws from the control faceplate panel and open hinged box as shown on page 10, diagram 4.
7. Check all power connections for correct and secure connections
4. Select a knock-out and connect power supply
8. Close the hinged cover and re-insert the screws

Diagram 2: Wiring Diagram

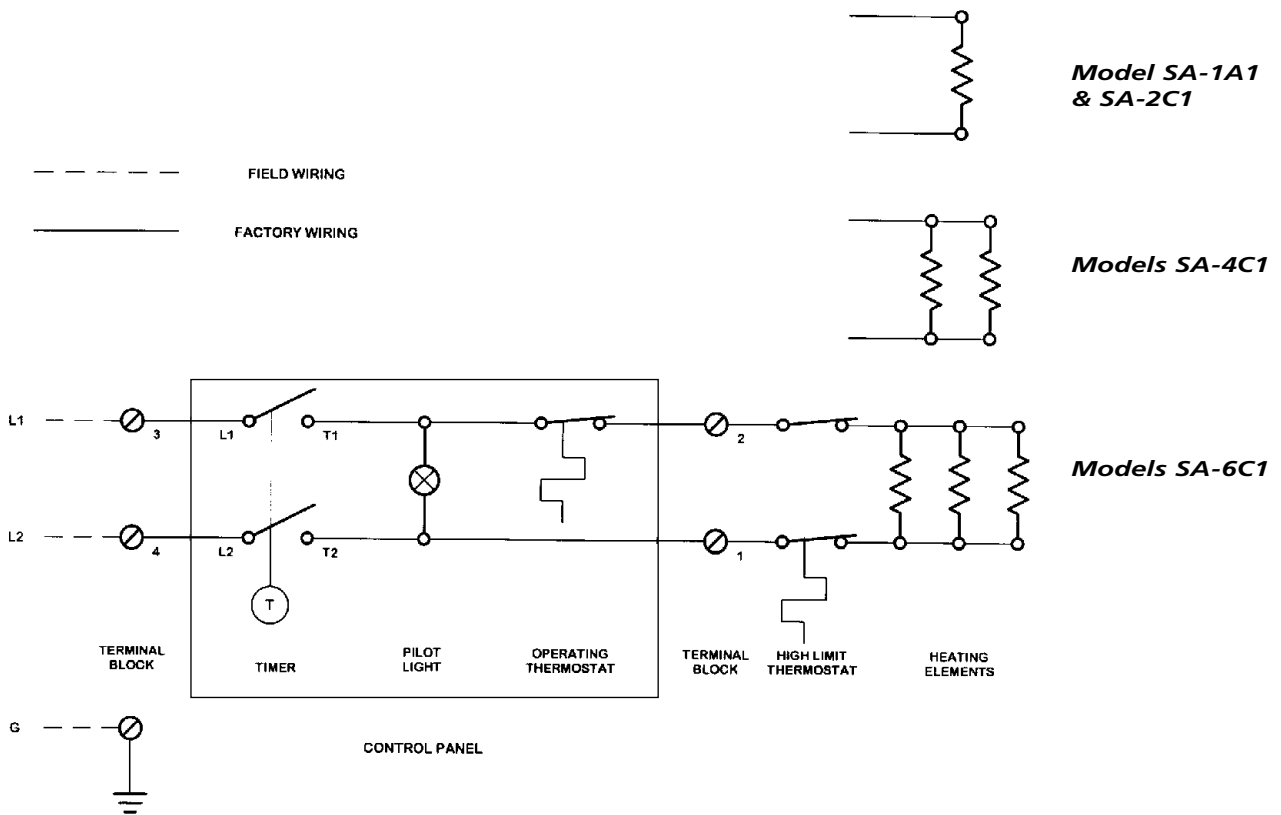
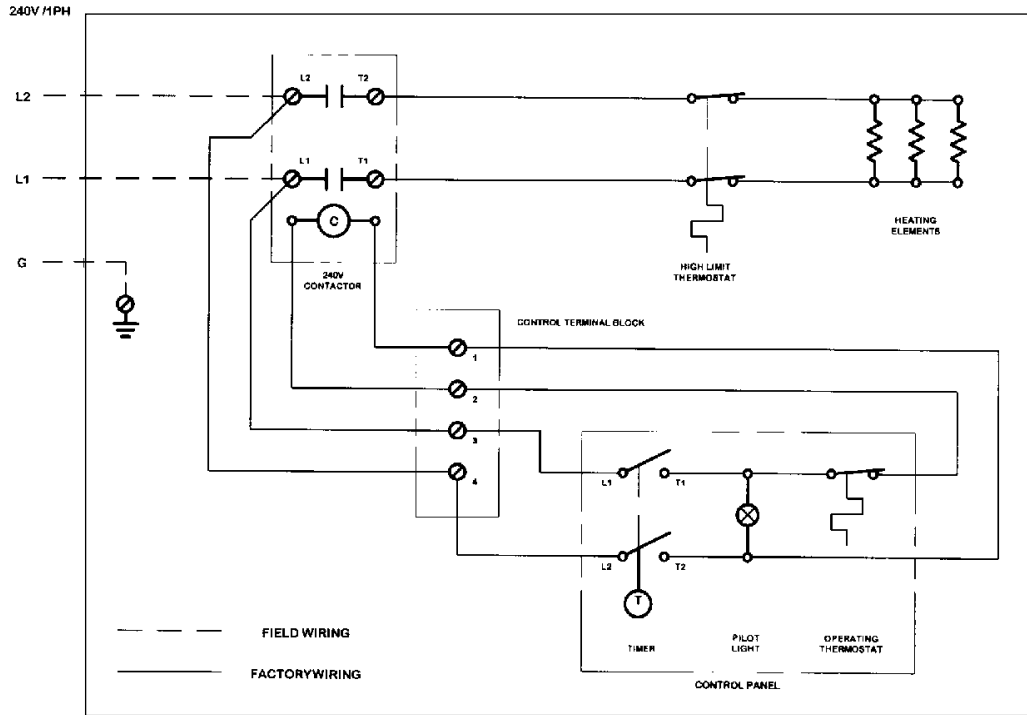


Diagram 2: Wiring Diagram



Models SA-8C1

Sauna Heater

Installation and Service Instructions



Use only with rocks supplied with the heater.

Alternate rocks may damage the heater, cause personal injury or result in an inoperable heater.

Section 4: Sauna Rocks

The Sauna heater must not be operated unless the rock compartment in the top of the heater is filled with the rocks that are furnished with the heater. They should be placed so that the air is free to travel between the rocks. Over packing the rocks may trip the heater hi-limit temperature device.

The heater is set up for use with 30 lbs. of rocks.

IMPORTANT NOTE: Do not place more than 30lbs. of rocks in the heater.

Installing the Rocks

1. Verify that the heater is securely mounted to the wall according to instructions.
2. Verify that the heater is OFF and that the elements and rock guard are not hot.
3. Remove heater wire rock guard.
4. Check the rock compartment and remove any packing or foreign materials.
5. Open the rock carton and place the rocks into the rock compartment as shown in diagram below. The rocks should be positioned so that the air is free to travel between the rocks.

IMPORTANT NOTE: Over packing the rocks may trip the heater hi-limit temperature device.

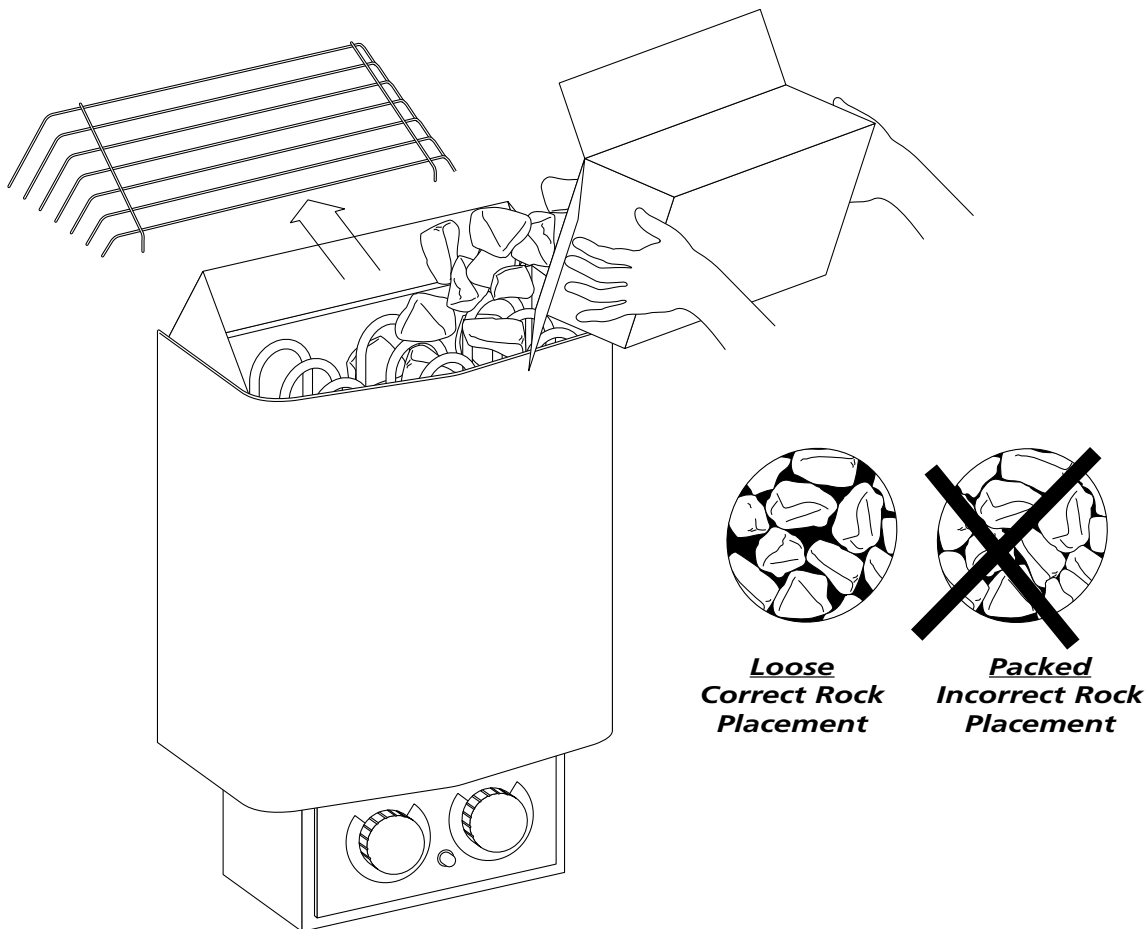
6. Replace wire rock guard. The rocks should fit so that the wire rock guard fits easily on the heater. Any rocks that are protruding or touching the wire rock guard should be removed and discarded.



Do not put chlorinated pool or spa water on heater. Excessive water use on heater may cause damage and void warranty.

Packing the rocks too tightly may cause the heater high limit temperature device to trip.

Diagram 3



Installation and Service Instructions

Section 5: Operating Instructions

Circuit Breaker

The circuit breaker providing power to the sauna heater should be turned OFF when the heater is not used for prolonged periods of time and when the heater is being serviced. The breaker should be left on for normal heater operation.

First Time Operation

When operating the sauna heater for the first time use the following steps:

1. Review all mechanical and electrical connections for conformance to instructions.
2. Set the temperature to the highest setting (10). See below.
3. Set the timer to the maximum setting (60) minutes.
4. Allow the heater to operate two full cycles (120 minutes) without anybody inside the sauna room. This will allow the sauna heater to burn off any residual oils and to preheat the rocks. Some light smoke and burning smell may be observed.

The Sauna/One Control:

The Sauna/One is a mechanical time and temperature control. Every Mr. Sauna is provided with a heater mounted Sauna/One control unless the heater has been factory ordered with an upgraded control system. The Sauna/One control can be removed from the heater and mounted in an external remote location. To mount the Sauna/One control in a remote location see page 10.

Time Control

The time control is adjustable to a maximum of (60) minutes. Rotate the knob clockwise so that the blue indicator dot is aligned with the desired time setting marked on the faceplate. The heater will turn off automatically once the indicated time has elapsed. The time knob is identified by the word "TIME" in a blue color. To turn the heater OFF the timer knob may be turned counterclockwise until it stops.

Temperature Control

The temperature control is adjustable on a scale of (1) to (10). A clockwise rotation of the knob increases the temperature from (1) minimum setting to (10) maximum setting. The setting is also graphically indicated by a red band that increases in color intensity with the increase of temperature setting. The temperature knob is identified by the word "TEMP" in a red color.

IMPORTANT NOTE: A normal temperature level is between 160-180 degrees F at head height, however this changes with personal comfort and sauna bathing experience.

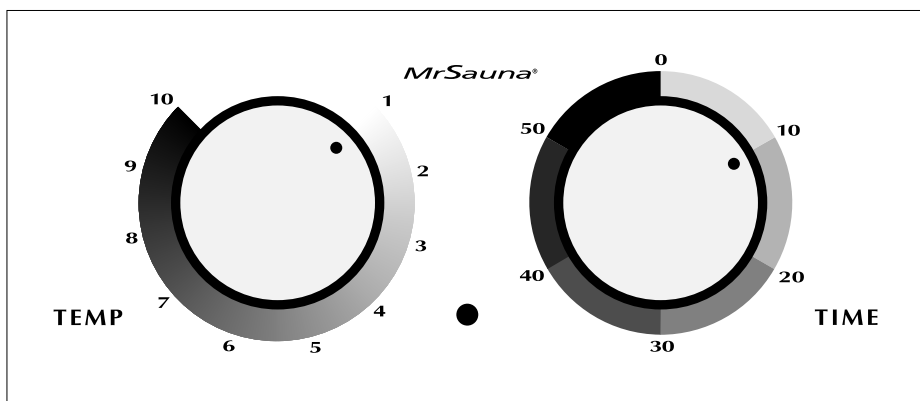
IMPORTANT NOTE: The hi-limit temperature safety device may trip during first time operation. If the hi-limit device trips then reset it according to instructions in Section 6.

Indicator Light

A red indicator light is located below and in-between the control knobs and lights up when the heater is energized.

IMPORTANT NOTE: The light does not indicate if the heater is hot or cold.

Sauna/One Control



Installation and Service Instructions



Section 6: Hi-Limit Temperature Reset Button

This heater is equipped with an overheat safety device. In the event of internal abnormal heating condition, the heater will automatically shut off and the heater cannot be turned on again until the heater has cooled down and the device is manually reset. The reset button is located on the center of the back of the junction box.

Pushing on the reset button, after the cooling period, will restore power to the heater. If the

reset button continues to trip, a qualified service person should be notified. Do not press the reset button repeatedly.

High altitudes and incorrect room construction may affect heater operation.

IMPORTANT NOTE: Packing the rocks too tightly may cause the heater high limit device to trip.

Saunas expose the users to elevated temperatures, if used improperly or by inappropriate persons, exposure to heat can be harmful to health, causing overheating, hypothermia, and even death. The following guidelines must be followed:

Exit immediately if uncomfortable, dizzy or sleepy. Staying too long in heated area can cause overheating and even death.

Supervise children at all times.

Check with a doctor before using sauna if pregnant, or under medical care.

Breathing heated air in conjunction with consumption of alcohol, drugs, or medication is capable of causing unconsciousness.

Section 7: Electrical Outlets or Receptacles

Caution: Electrical outlets, receptacles or electrical products must not be installed in a sauna room.

The sauna room light should be a wall bracket type and the rough-in box should be flush with the inside finish material. The recommended height is 70" up from the floor. If a ceiling light is to be used

it should be an approved type with a junction box that is remote to the fixture itself. Use only a fixture that utilizes A.F. or fixture type internal wiring.

Note: Most "can" fixtures have an internal Hi-Limit device that shut off when the room heats up.

Section 8: Maintenance and Cleaning

The sauna heater should be cleaned occasionally with a damp cloth. The flocking may be cleaned with a soft brush. For stubborn stains the flocked outer surface should be cleaned with a mild dish soap.

Never use any solvents or bleaches.

The rocks should be removed once a year for cleaning. Replace with original factory rocks if they appear to be crumbling.

Section 9: Placards

Two metal placards are included in the Installation Instruction Envelope packaged with every Sauna Heater. The CAUTION placard shall be attached to the interior of the sauna room in a visible location away from possible bodily contact, preferably

above the heater at eye level.

The WARNING placard shall be attached at eye level to the outside door of the sauna room in a visible location. Screws for attaching the placards are furnished.



The "Caution" and "Warning" placards shall be mounted in accordance with Section 9.

Section 10: Thermometer/Humidity Gauge

Locate an optional thermometer or humidity gauge 6" down from the ceiling on a wall preferably so that the gauge can be observed from outside the sauna room through a door or window.

Note:

Ideal humidity range 25% – 45%

Ideal Room Temperature: 160°F – 180°F

Section 11: Bucket & Dipper

Dippers have long wooden handles to help keep from exposing hands to steam. Do not pour chlorinated pool or spa water on heater. Use only

fresh, clean tap water. Excessive water use on heater may cause damage and void warranty.

Installation and Service Instructions



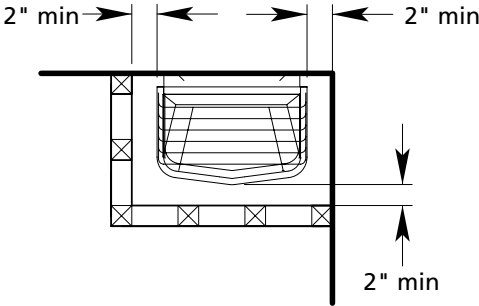
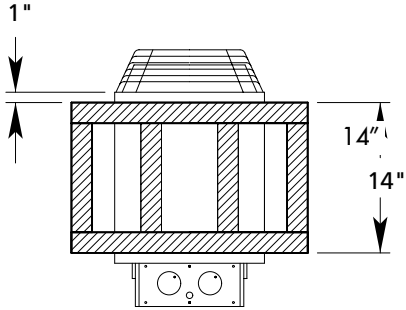
Section 12: Heater Guard Rail

It is required that a guard rail or fence be constructed around the sauna heater to prevent the bather from making physical contact with the heating unit. **IMPORTANT NOTE:** The guard rail must not be closer than two inches to the exterior walls of the heater.

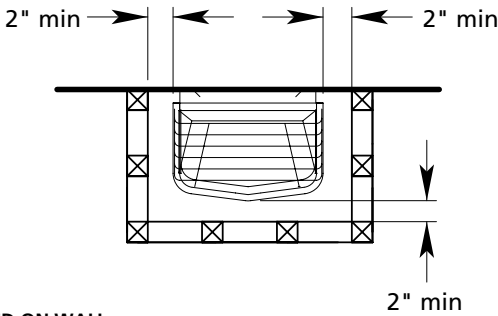
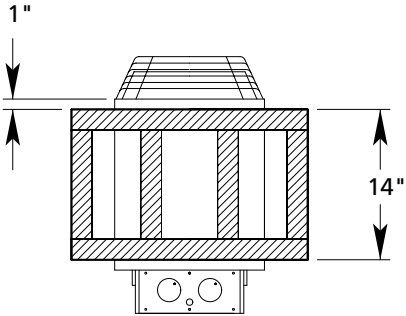
Minors should be adequately supervised whenever near a hot or warming sauna to prevent burns from accidental contact.

The heater gets extremely hot during operation and should not be touched or burns may result.

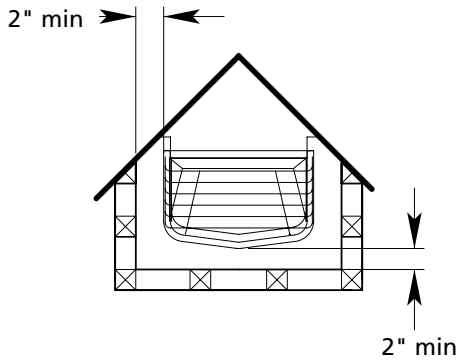
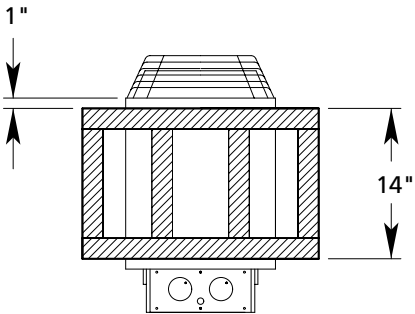
A guardrail or fence is required around the heater to prevent burns from accidental contact.



1) GUARD FOR HEATER MOUNTED ON WALL NEAR CORNER.
GUARD CONSTRUCTED FROM 2" X 2" CEDER.



2) GUARD FOR HEATER MOUNTED ON WALL .
GUARD CONSTRUCTED FROM 2" X 2" CEDER.



3) GUARD FOR HEATER MOUNTED IN CORNER .
GUARD CONSTRUCTED FROM 2" X 2" CEDER.

Installation and Service Instructions

Section 13: Room Construction

PreBuilt Sauna- Materials and Fabrication

Wall and Ceiling Construction: Manufacturer's standard prefabricated, demountable, panelized system

Sauna Interior Finish:

1 x 6 V-joint T&G boards machined from clear softwood lumber kiln-dried to average 10% or less moisture content, sanded smooth. All boards full length, glued with construction adhesive, and blind nailed with 4d galvanized nails or equivalent power stapling onto 2x3 fir framing.

Wood Specs:

A & Better Clear Western Red Cedar or Clear All-Heart Redwood.

Sauna Insulation:

1" foam board insulation.

Exterior Wall Finish:

1 x 6 V-joint T&G boards as specified for sauna interior on exposed walls or 1/4" luan mahogany plywood on walls concealed by other work.

Exterior Ceiling Finish:

Same as walls

PreCut Sauna- Materials and Fabrication

Wall Framing:

Masonry or concrete walls to be stripped with 2x4 dry framing material 16 inch centers to provide nailing of wall paneling. Frame walls to be standard stud walls. If interior cedar is to be mounted vertically, horizontal furring strips are required.

Ceiling Frame:

Ceiling height roughed to 85" with ceiling joists consisting of 2x4, 2x6, or 2x8 dry fir 16 inch center.

Door Framing:

Rough opening for manufacturer's standard sauna door should be 26" x 82".

Sauna Interior Finish:

1x6 V-joint T&G boards machined from clear softwood lumber kiln-dried to average 10% or less moisture content, sanded smooth. All boards full length, glued with construction adhesive, blind nailed with 4d galvanized nails or equivalent power stapling.

Wood Specs:

A & Better Clear Western Red Cedar or Clear All-Heart Redwood.

Sauna Insulation:

Foiled-faced (inside) glass fiber blanket of thickness required to fill cavity between interior and exterior

Ventilation Openings

Inlet ventilation openings must be located at the bottom of the wall as close to floor level as possible.

Rooms with a floor area less than (31) square feet required ventilation openings of (9.3) square inches or more. High altitude installations may require reduced ventilation openings.

Sauna Floor Construction

Removable wood duckboards constructed of blind fastened vertical grain boards of same species as interior finish, laid loose over permanent finish flooring.

Sauna Bench Construction:

1x4 or 2x2 clear vertical grain cedar with 1x4 face and frame members. Use galvanized nails and fasteners, concealed where possible.

Sauna Door:

All cedar door with tempered, smoked vision panel, wooden door pull, self-closing hinge on mahogany jamb.

Sauna Accessories:

Provide manufacturer's standard accessories as follows:

Sauna Thermometer on interior, located for best visibility, for each sauna unit.

Wooden water bucket and ladle on interior, for each sauna (residential applications only)

One cedar or redwood headrest for each sauna bather.

finish with a minimum "R" factor of 11 for both walls and ceiling or 1" foam boards insulation.

Exterior Wall Finish:

As selected by Architect.

Exterior Ceiling Finish:

Same as walls

Sauna Floor Construction:

Removable wood duckboards constructed of blind fastened vertical grain boards of same species as interior finish, laid loose over permanent finish flooring.

Sauna Bench Construction:

1x4 or 2x2 clear vertical grain cedar with 1x4 face and frame members. Use galvanized nails and fasteners, concealed where possible.

Sauna Door:

All cedar door with tempered, smoked vision panel, wooden door pull, self-closing hinge on mahogany jamb.

Sauna Accessories:

Provide manufacturer's standard accessories as follows:

Sauna Thermometer on interior, located for best visibility, for each sauna unit.

Wooden water bucket and ladle on interior, for each sauna (residential applications only)

One cedar or redwood head rest for each sauna bather.

Rooms with a floor area greater than (31) square feet require ventilation openings equal to the floor area multiplied by (0.3).

Outlet ventilation openings must be located at the top of the wall as close to ceiling as possible and must be the size of the inlet openings.



Sauna room to be properly vented. Air flow to heater should not be restricted. Failure to do so may result in oxygen depletion or an improperly functioning heater.

Fire sprinkler systems used inside any sauna room should be properly rated for sauna room temperatures. Failure to do so may result in defective fire prevention system.



Do not locate benches over heater. Minimum height of ceiling above heater 40". Failure to do so may result in a fire and/or smoke hazard.

Do not place or install any unapproved products or materials inside the sauna room.

Do not use any stains or finishes on sauna room interior. Doing so may result in dangerous fumes or fire.

Installation and Service Instructions



Section 14: Remote Sauna/One

1. A Sauna/One control can be mounted to the exterior of the sauna room or a nearby wall. Do not mount the Sauna/One on a wall inside the sauna room.
2. The distance the Sauna/One can be located from the heater is determined by the reach of the capillary tube.
3. Properly specified Mr.Sauna rooms (factory order) are equipped and roughed-in for the remote installation of the Sauna/One control. Mr Sauna rooms are provided with a frame, 5-gang electrical box, internal flexible conduit and capillary routing. All other rooms must be similarly prepared.
4. The Sauna/One control mounts into a 5-gang approved electrical box. Check local codes for allowable installations.

Relocating the Sauna/One

1. Turn circuit breaker OFF and check that no power is being supplied to the heater.
2. Complete Section 2 of this Instruction Book
3. Remove (6) panel mounting screws/nuts and (2) hinged cover mounting screw as shown in diagram (4).
4. Disconnect terminals 1,2,3,4. Label each wire.
5. Pull the capillary tube and bulb through the bushing as shown in diagram 4. Use caution not to kink or bend the tube. The control is now free to be reconnected at the 5-gang box.
6. Provide wires from 5-gang box to heater. Use same size wires as used on control panel.
7. Connect wires from control panel to heater terminal block terminals 1,2,3,4 as in Step 2 above. For models without contactor, power input can be connected directly to timer terminals. See wiring diagram (7), page (11).
8. Cover the heater electrical box with the dummy face-plate provided as shown in diagram 5 and secure the hinged cover.
9. Feed the capillary thru the 5-gang box into the room. Install the capillary and capillary bulb guard per step 5 on page 2.
10. Mount the Sauna/One control to the 5-gang box.

Diagram 4

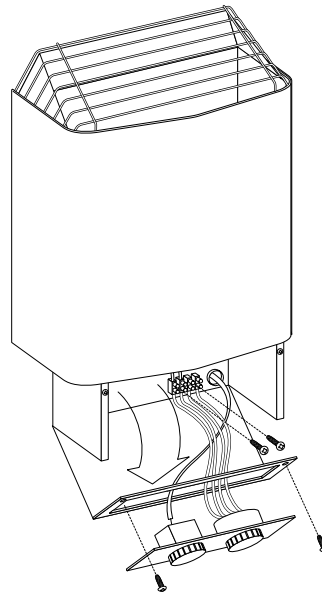


Diagram 5

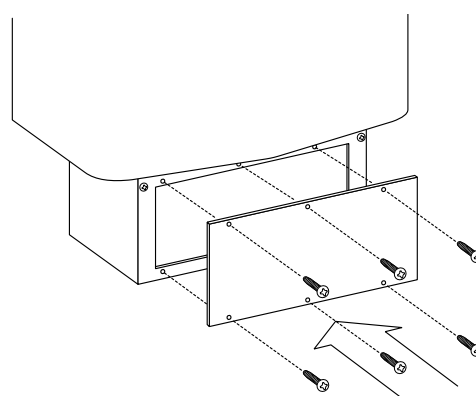
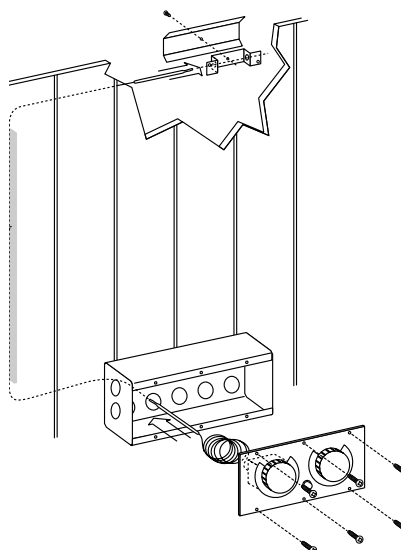


Diagram 6

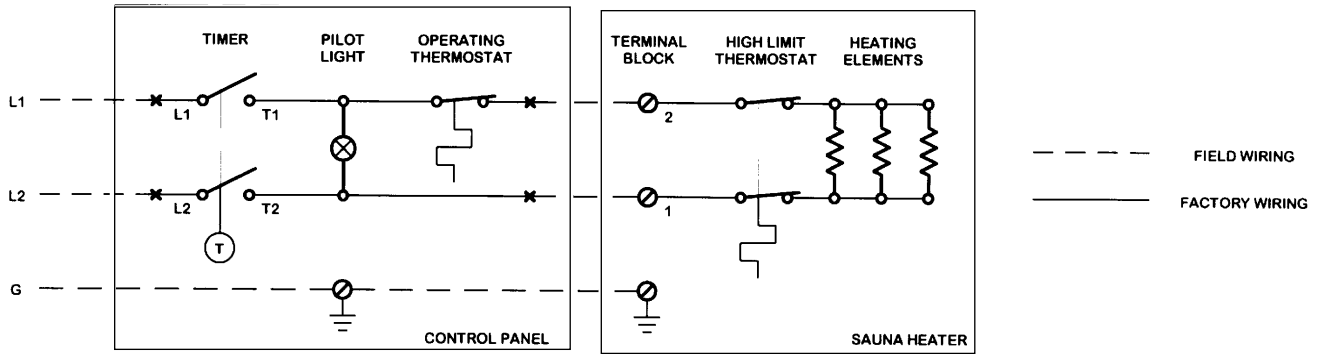


Do not mount the Sauna/One on a wall inside the sauna room.

Consult factory before installing heater in rooms exceeding 84" interior ceiling height.

Installation and Service Instructions

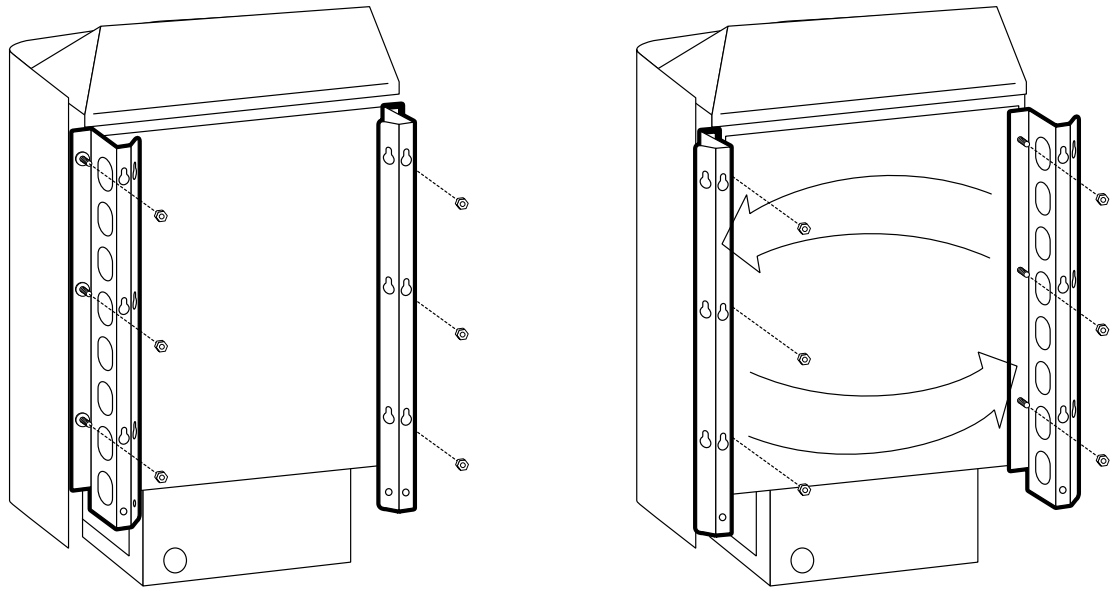
Diagram 7: Remote Sauna/One Wiring Diagram



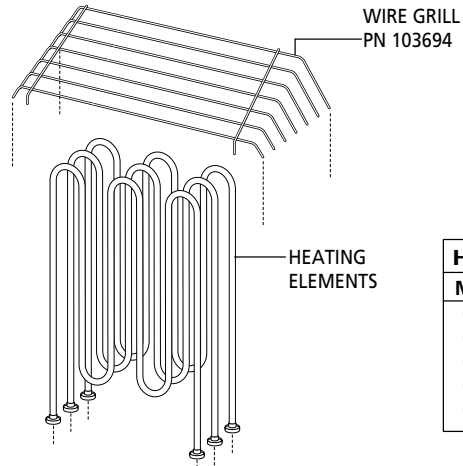
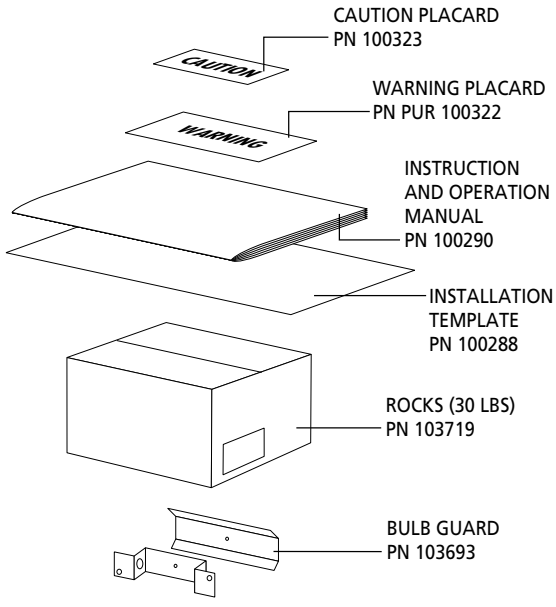
Section 15: Mounting the Heater in a 90° corner

1. Remove (6) nuts and washers.
3. Fasten the (6) nuts and washers securely.
2. Place the left bracket on the right and the right bracket on the left as shown.
4. Complete instructions in Section 2 using the **TEMPLATE FOR CORNER MOUNTING**.

Diagram 8:



Section 17: Replacement Parts



HEATING ELEMENTS		
MODEL	ELEMENT PN	QT
SA-1A1	19021A	1
SA-2C1	19021C	1
SA-4C1	19021C	2
SA-6C1	19021C	3
SA-8C1	19031C	3

