

MrSauna® Heater

Installation and Operating Instructions

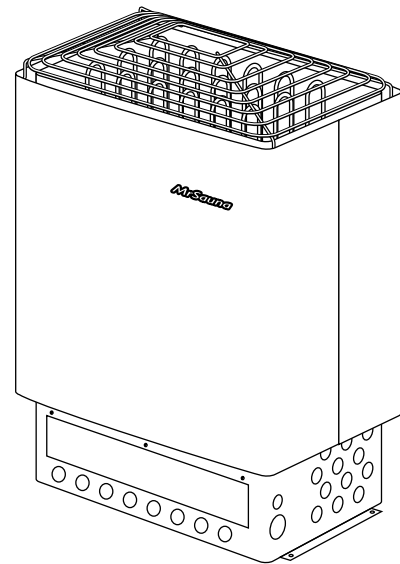
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Floor Mounted Models:

SA-10 SA-14
SA-12 SA-16

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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.



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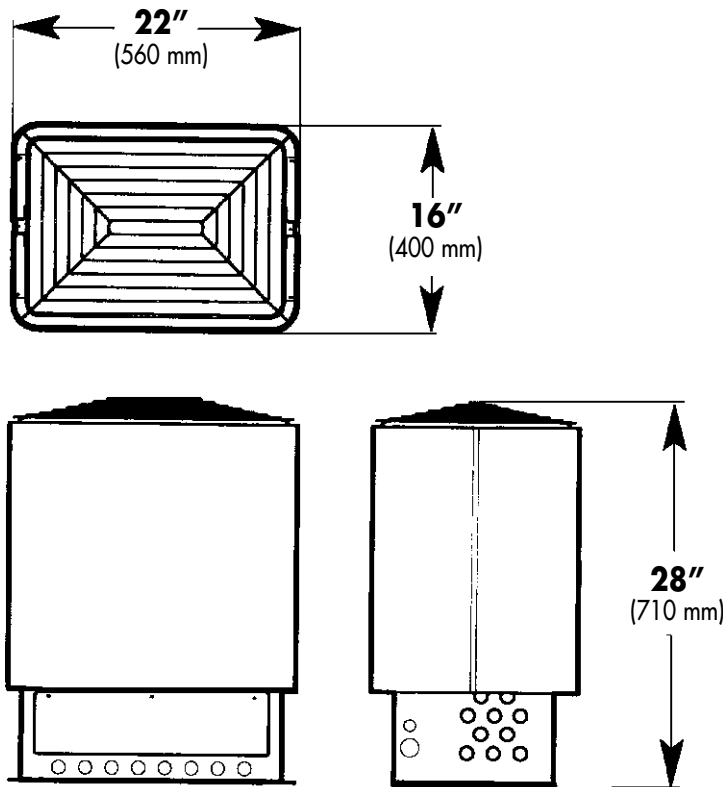
MrSauna

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.



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 and approved by CSA. 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.

All wiring must be accomplished by a licensed electrical contractor. The complete sauna consisting of heater, contactor box, and temp/time control should be properly grounded according to NEC requirements.

Heater Specification Chart

Model No.	kW	Volts/Phase	Min (cu.ft.) Room Size	Max (cu.ft.) Room Size	Amps	Contactor Box	Wire Size
SA-10C1	10	220-240/1	340	580	42	CNTR-3	8
SA-10C3	10	220-240/3	340	580	25	CNTR-2	10
SA-12C1	12	220-240/1	430	740	50	CNTR-4	6
SA-12C3	12	220-240/3	430	740	29	CNTR-2	10
SA-14C1	14	220-240/1	520	910	59	CNTR-4	6
SA-14C3	14	220-240/3	520	910	34	CNTR-2	8
SA-16C1	16	220-240/1	620	1080	67	CNTR-4	4
SA-16C3	16	220-240/3	620	1080	39	CNTR-2	8

- Notes:
1. All Models are provided with factory wired timer, operating temperature control and pilot light.
 2. Timer, operating temperature control and pilot light are to be field installed on an external wall.
 3. Room sizing is based on interior room height of 84". Consult factory before installing heater in rooms exceeding 84" interior ceiling height.
 4. Min./Max. Room sizes based on cubic foot volume
 5. Wire size based on 90° C copper conductors
 6. Field wiring required between heater, contactor box and the control.
 7. Contact factory for 208/3 and other requirements

Installation and Service Instructions

Section 2: Installing the Heater

On the base of the heater are brackets for securing the heater to the sauna room floor. The heater should be located in the sauna room observing the 6" minimum spacing from wooden surfaces (walls or benches).

The HEATER SPECIFICATION CHART shows the ceiling height and the minimum floor area of the room in which the sauna heater may be used. Do not install benches over the top of the heater.

Section 3: Installing the Sauna/Two Control

The SAUNA/TWO control rough-in box should be installed flush in the wall, 5 feet up from the floor so the opening is to the outside of the sauna room wall. The control is completely prewired to simplify the field wiring. The capillary tube of the thermostat may go out through any knockout in the rough-in-box. The preferred method is to run the tube within the wall as shown on diagram.

Route the capillary tube so that the bulb is positioned horizontally on the wall (6") inches below the ceiling.

Secure the capillary bulb inside the bulb guard as shown on page 3.

Section 4: Installing the Contactor Box

1. The contactor box is required operating equipment for all floor mounted sauna heaters.
2. Verify the contactor box model according to the heater model. See chart on pg. 1.
3. Field wire the contactor box according to the correct wiring diagram located on page 4 or 5.
4. Field wire according to NEC.
5. The contactor box is surface mounted.
6. Do not install contactor box in an outside location.
7. Do not install contactor box in a wet location.
8. Do not install contactor box inside the Sauna room.
9. Do not install contactor box in a location exposed to elevated sauna room temperatures.
10. Access to the contactor box to be provided for qualified service personnel only.



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.

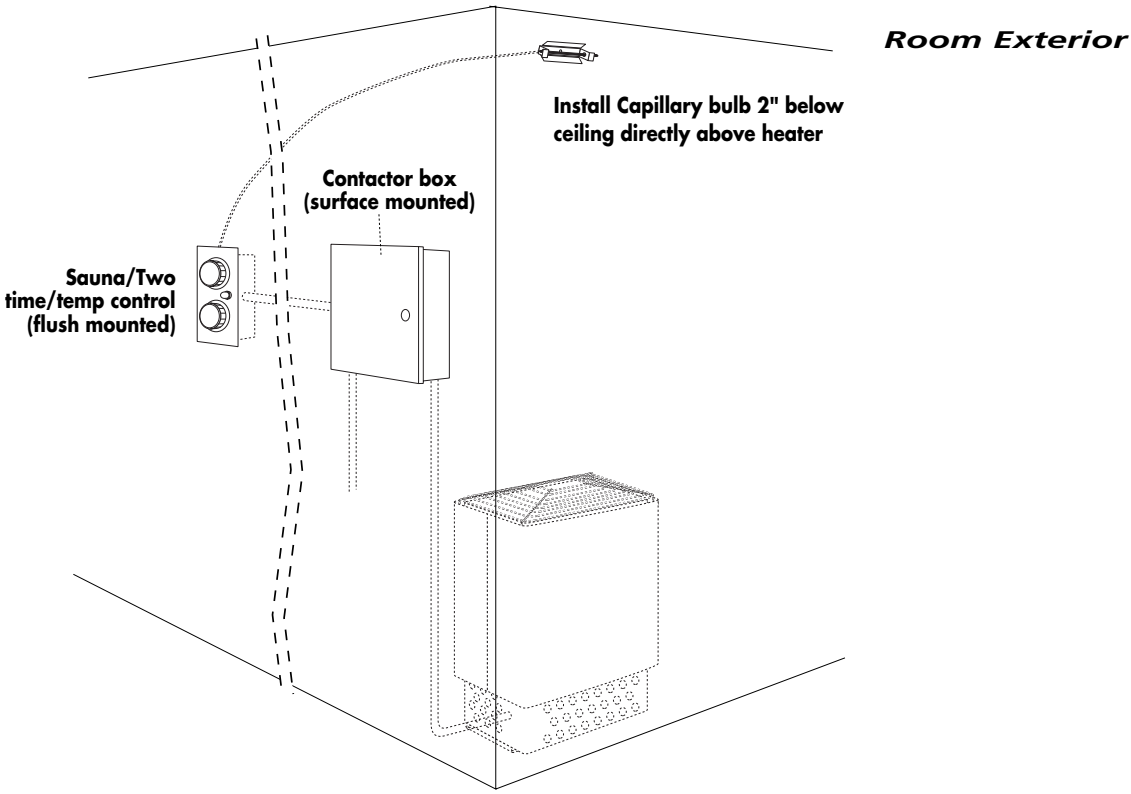
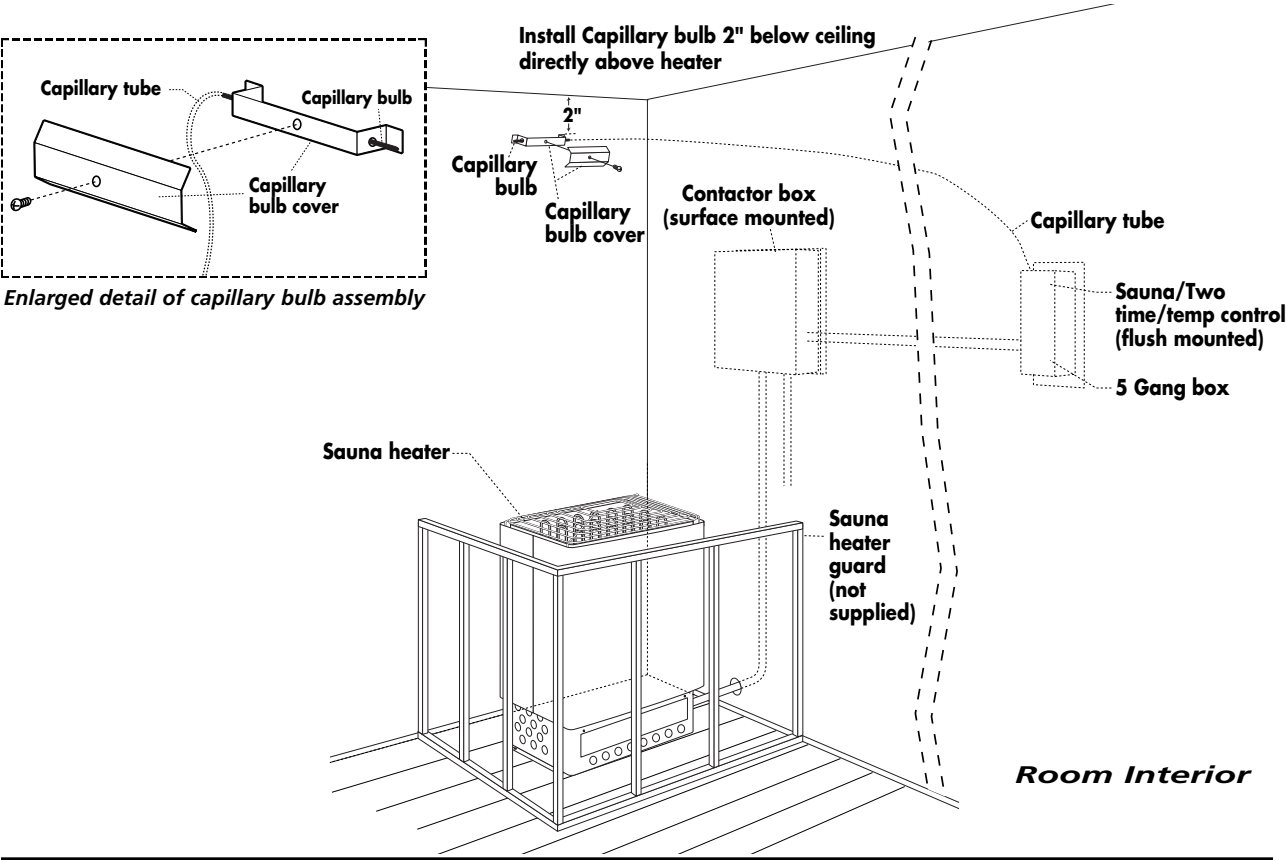
Inspect sauna regularly for required maintenance to heater, rocks, control and benches. Replace wood surfaces which show any signs of deterioration.

Minimum clearance from any part of heater to another surface (benches, heater guard, rail, walls...etc.) to be 4 inches minimum. Failure to do so may result in fire and/or smoke hazard.

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

Installation and Service Instructions

Diagram 1: Installation of Heater, Control & Contactor Box



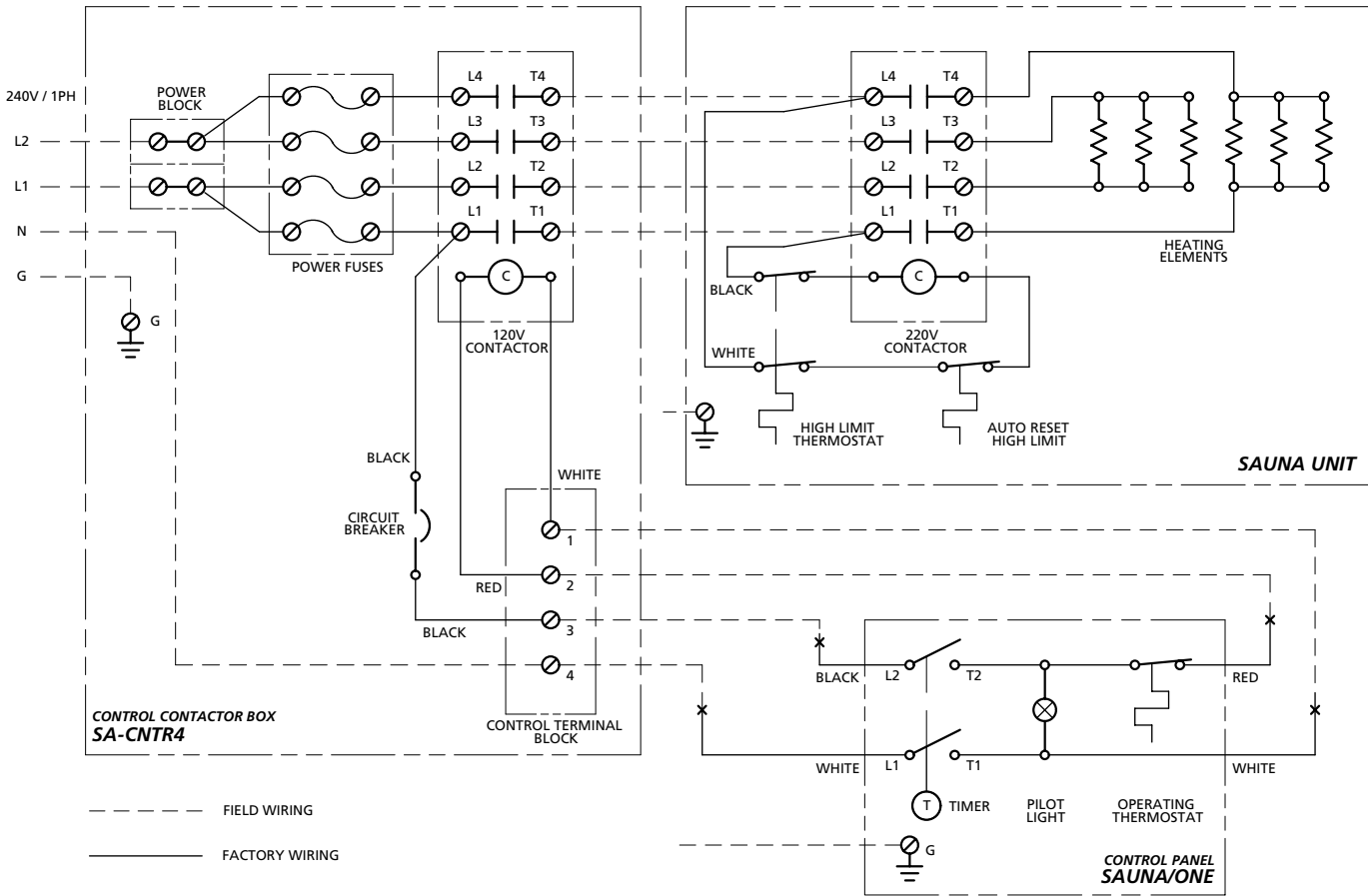
Installation and Service Instructions

Section 5: Electrical Wiring

Heater Electrical Connections

1. Verify that heater is securely mounted to the floor
2. Turn off the circuit breaker providing power to the sauna heater.
3. Remove three screws from the access panel as shown on page 8.
4. Select a knock-out and connect power supply
5. Connect the ground line to the ground lug.
6. Connect power as shown in wiring diagrams
7. Check all power connections for correct and secure connections
8. Close the access panel and re-insert the screws
9. Field wire the heater, control and contactor box as shown

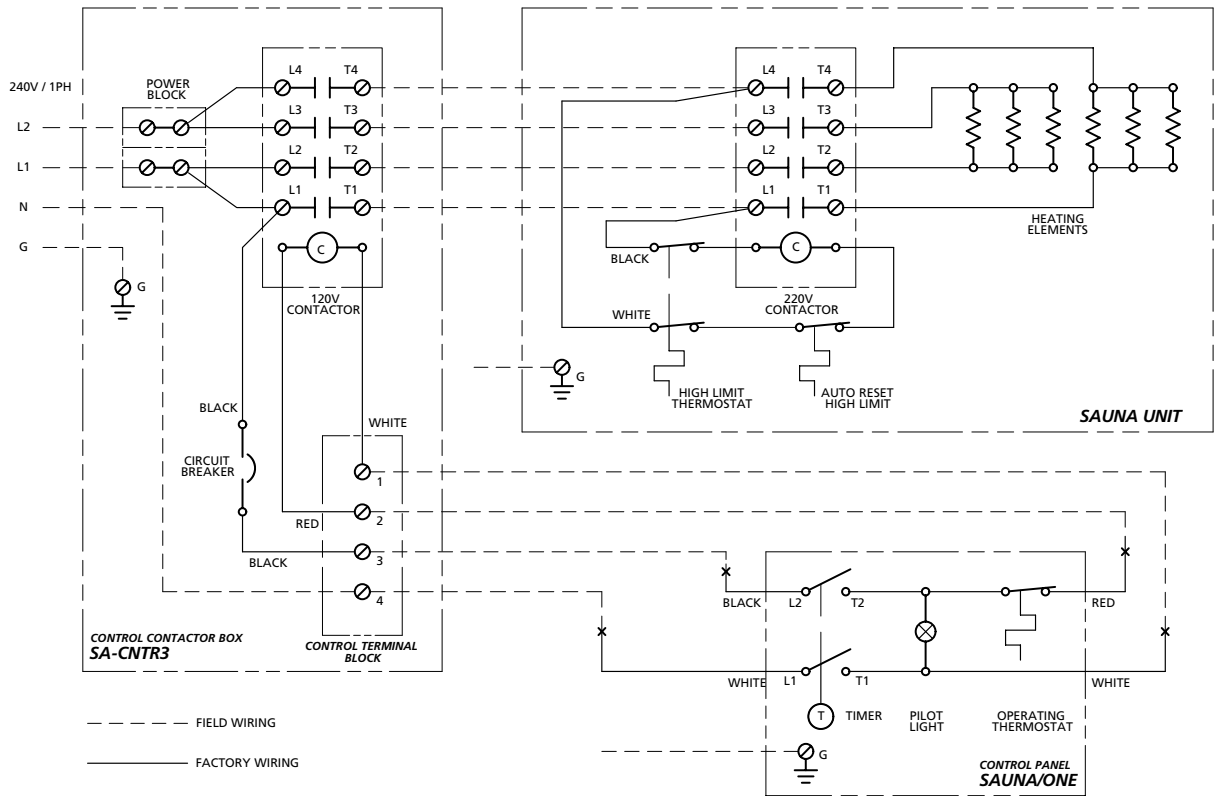
Diagram 2: Sauna Wiring Diagrams (schematic)



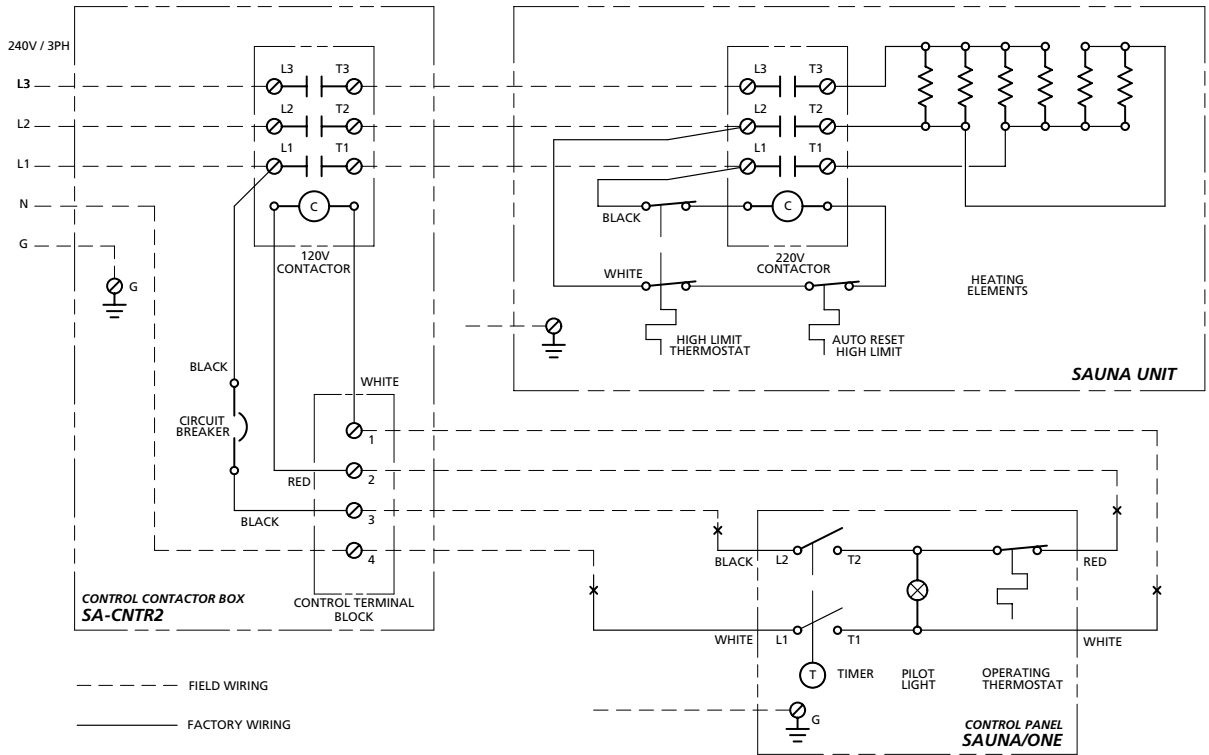
Single Phase Commercial Model SA-12C1, SA-14C1, SA-16C1

Installation and Service Instructions

Diagram 2: Sauna Wiring Diagrams (schematic)



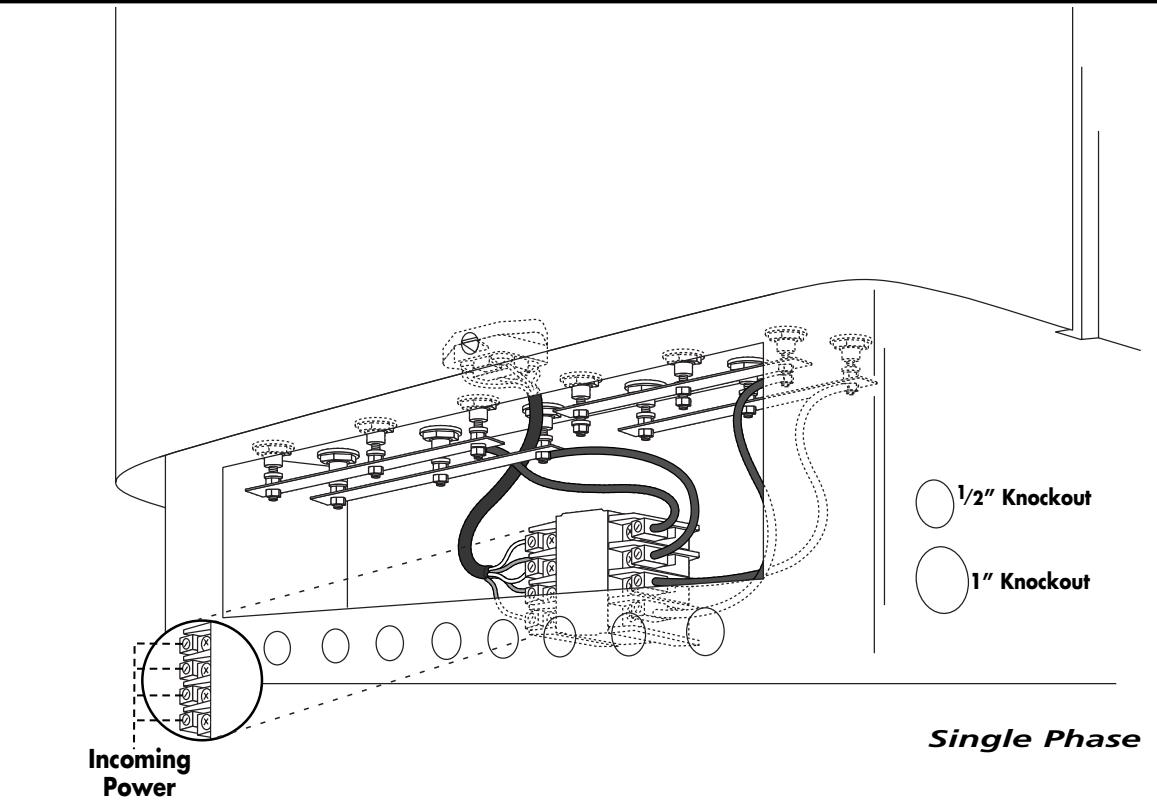
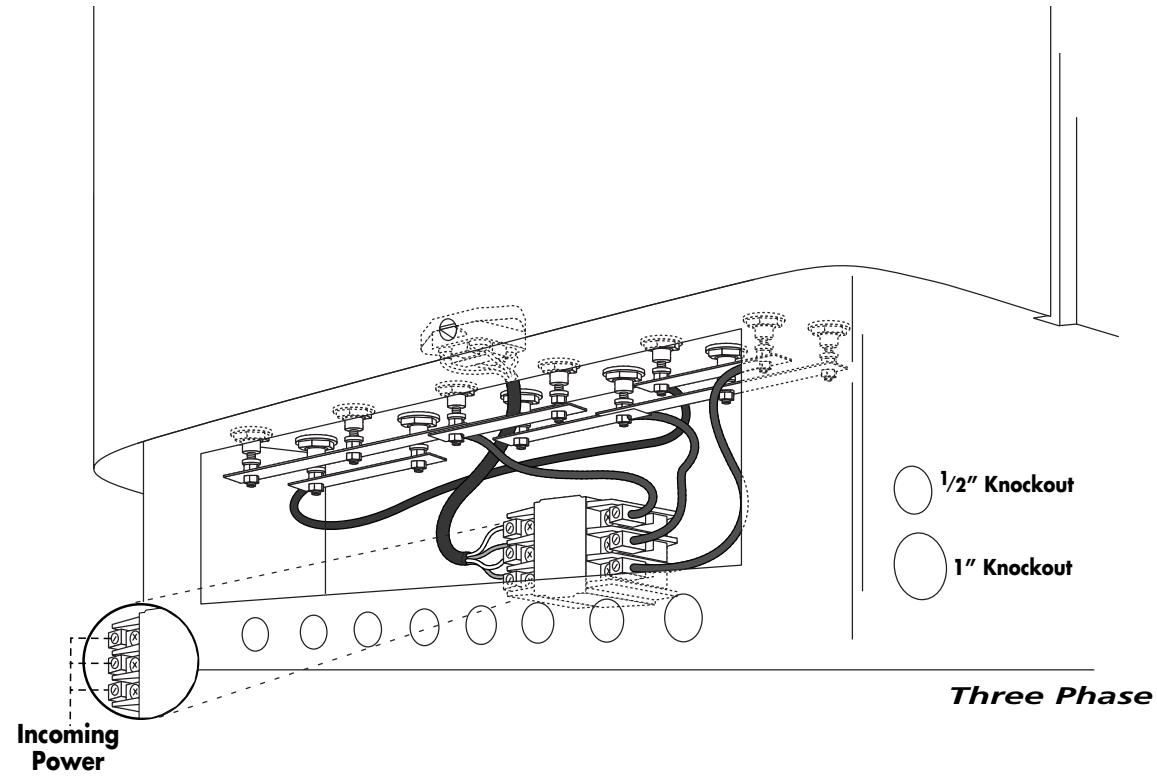
Single Phase Commercial Model SA-10C1



Three Phase Model SA-10C3, SA-12C3, SA-14C3, & SA-16C3

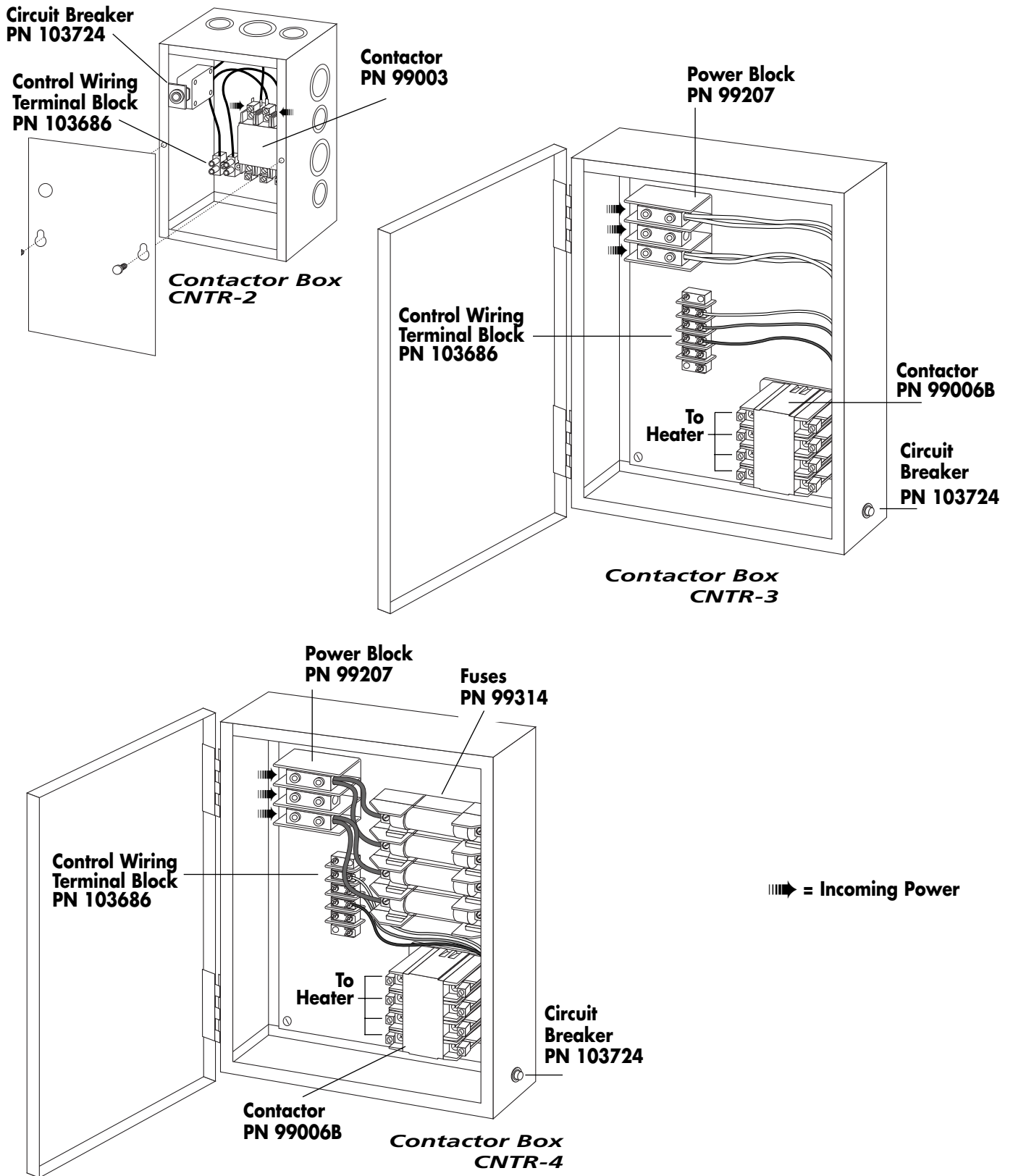
Installation and Service Instructions

Diagram 3: Wiring Compartments



Installation and Service Instructions

Diagram 4: Contactor Boxes



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 6: 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 90 lbs. of rocks.

IMPORTANT NOTE: Do not place more than 90lbs. of rocks in the heater. Discard all rocks that do not fit.

Installing the Rocks

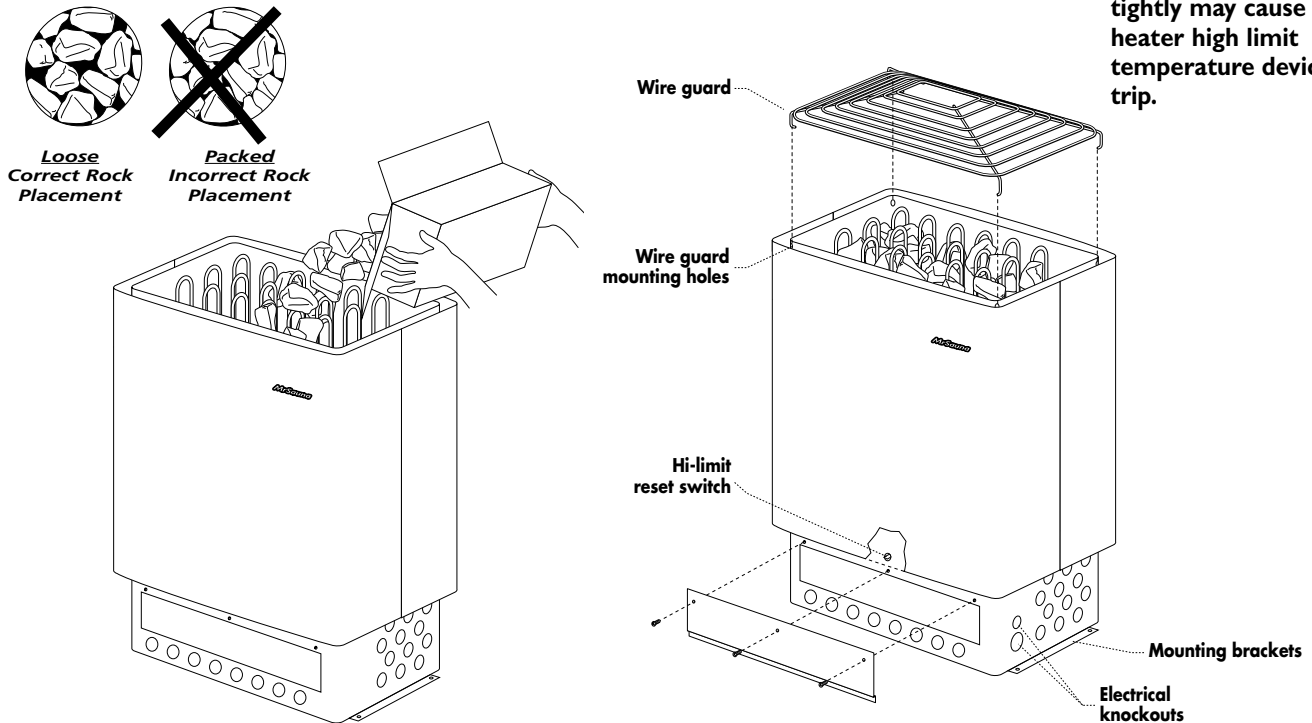
1. Verify that the heater is securely mounted to the floor according to instructions.
2. Verify that the heater is OFF and that the elements and rock guard are not hot.
3. Check the rock compartment and remove any packing or foreign materials.
4. Open the rock cartons and place the rocks into the rock 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.
5. Install the 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 5: Sauna Rocks and Wire Guard



Section 7: Wire Guard

A wire guard is supplied as part of the standard heater equipment. Do not operate the sauna heater unless the guard is in place. Operation of the heater without the guard may expose the user to burns or electrocution. Do not place any objects

or materials on the wire guard at any time. If any rocks interfere with the proper installation of the guard then remove and discard the rocks as required. The four legs of the wire guard must be inserted into the four holes as shown in diagram 5.

Section 8: Access Panel

Turn off all power at the power supply before removing the access panel. Do not open the access panel when the heater is hot. Remove the access panel by removing three screws as shown. Removal

of the access panel is required for service and installation only and should be opened by a licensed electrical contractor only.

Installation and Service Instructions

Section 9: Operating Instructions

Circuit Breaker

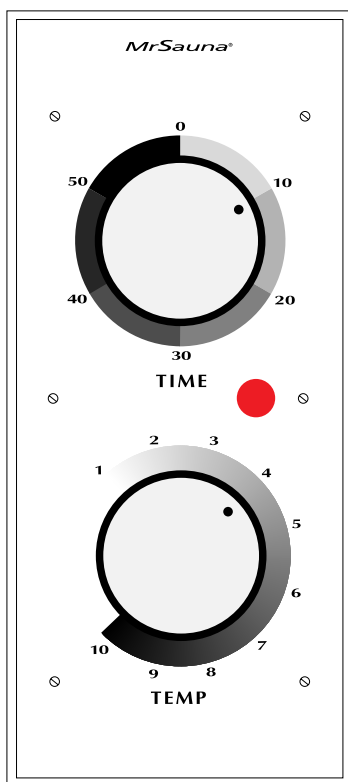
The circuit breaker providing power to the sauna heater should be turned OFF when the heater is not used for prolonged periods of time and when the heater is being serviced. The breaker should be left on for normal heater operation.

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.

Sauna/Two Control



The Sauna/Two Control:

The Sauna/Two is a mechanical time and temperature control. Every Mr. Sauna is provided with a Sauna/Two control.

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 timer 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 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 reset it according to instructions in section 10.

Indicator Light

A red indicator light is located 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.

Installation and Service Instructions

Section 10: 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 front of the heater above the access panel. 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 may affect heater operation.

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

Section 11: 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 12: Maintenance and Cleaning

The sauna heater should be cleaned occasionally with a damp cloth. 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 13: 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.

Section 14: 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



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.



The "Caution" and "Warning" placards shall be mounted in accordance with Section 13.

Installation and Service Instructions



Section 15: 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. The guard rail must not be closer than four inches to the exterior walls of the heater. If the heater is to be located in the corner of the room,

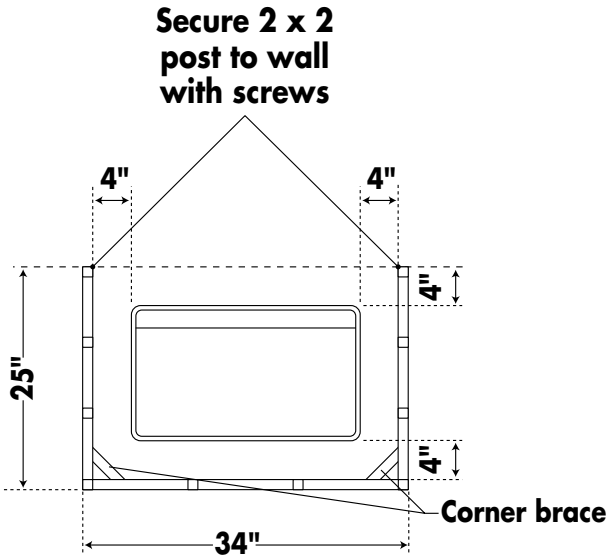
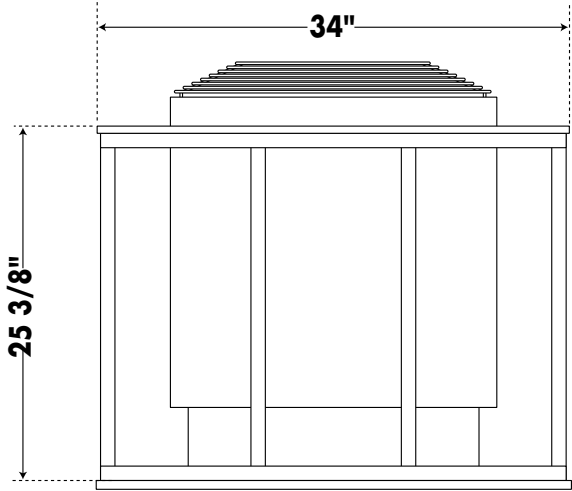
one section of the guard rail may be deleted. See Diagram 6.

IMPORTANT NOTE: The guard rail must not be closer than four 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.



Installation and Service Instructions

Section 16: 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 re-quired ventilation openings of (9.3) square inches or more.

High altitude installations may require reduced ventilation openings.

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 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.



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.



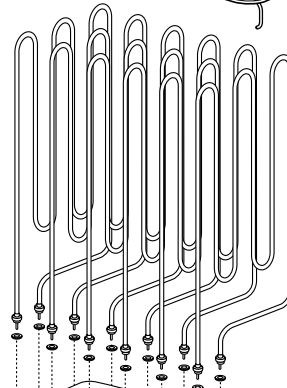
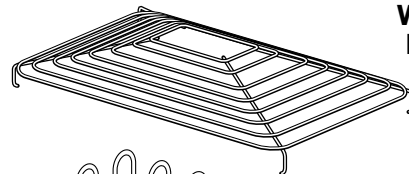
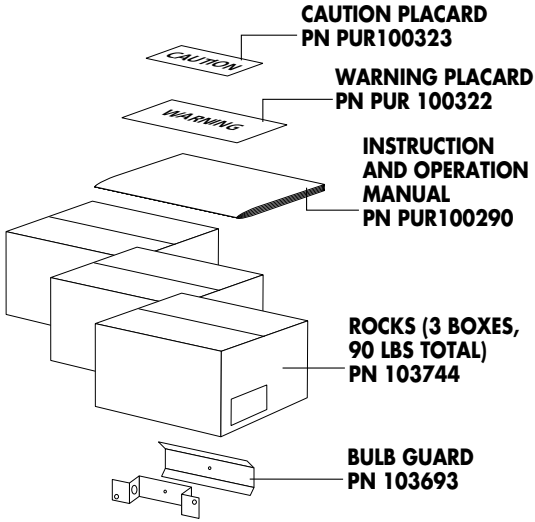
Do not locate benches over heater. Minimum height of ceiling above heater 40". Failure to do so may result in a fire and/or smoke hazard.

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.

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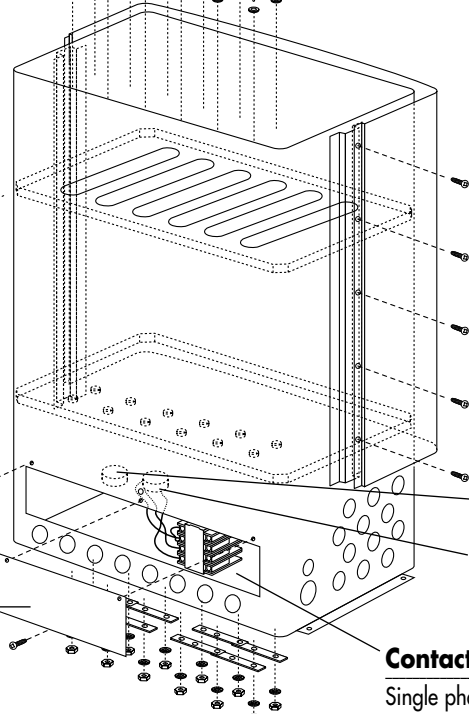
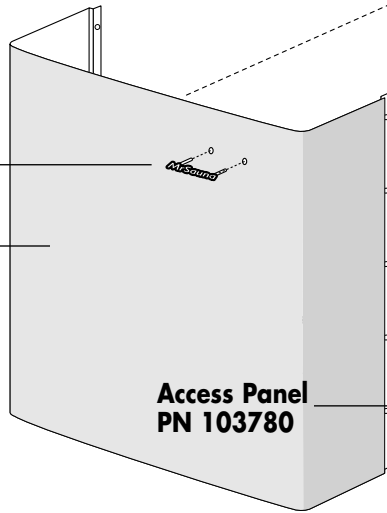
Section 17: Replacement Parts



Heater Models	PN
SA-10C1	19017CS
SA-12C1	19020CS
SA-14C1, SA-10B3	19023CS
SA-16C1, SA-12B3	19027CS
SA-14B3	19023BS
SA-16B3	19027BS

Mr. Sauna
PN 103691

Outer Wrap
PN 103779



Automatic Hi-Limit
PN 90915

Manual Hi-Limit
PN 103683

Contactor

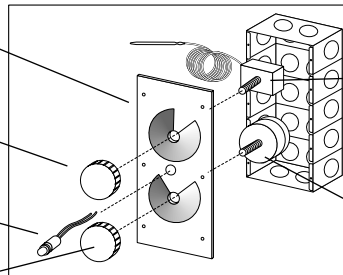
Single phase	99006C
Three phase	99001

Control Plate
PN 103780

Timer Knob
PN 103709

Pilot Light
PN 92829

Temp Knob
PN 103708



Operating Thermostat
PN 103707

Timer
PN 103684