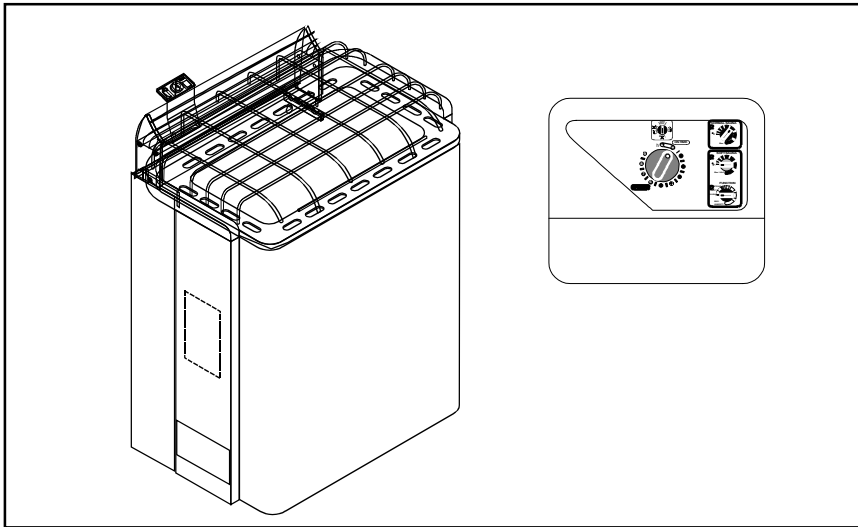


The Steamy Heater Installation & Operation Instructions



STEAMY 60 & 80 COMBINATION SAUNA HEATER & STEAM GENERATOR

Read all instructions carefully before installation. Please leave all instructions with the owner.

WARNING

Prolonged exposure to elevated temperatures is capable of inducing hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches several degrees above the normal body temperature of 98.6°F. The symptoms of hyperthermia include an increase in the normal temperature of the body, dizziness, lethargy, drowsiness, and fainting. The effects of the hyperthermia include failure to perceive heat, failure to recognize the need to exit the room, unawareness of impending hazard, fetal damage in pregnant women, physical inability to exit the room and unconsciousness.

WARNING

The use of alcohol, drugs, or medication is capable of greatly increasing the risk of fatal hyperthermia.

SECTION 1: GENERAL INFORMATION

These heater units are UL approved for permanent installation and electrical connections. Built with splashproof construction, the conducting parts are protected against water. All wiring must be performed by a licensed electrician in accordance with the National Electrical Code and local codes.

Steamy heaters come in two versions, automatic water fill and manual water fill. The heater units are wall mounted, 19"W x 15"D x 25"H, with wall mounted controls.

05-4211-500 05/11/01

WARNING

Do not take a sauna if using alcohol, drugs or medications.

Pregnant women or persons with poor health should consult their physician before using any sauna.

Caution fire hazard: Do not use the sauna room for drying clothes, bathing suits, etc. Do not hang towels above heater or place any object other than the rocks supplied on the heater. If any darkening of the wall around the heater is noticed discontinue sauna use immediately.

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

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

Minors should be adequately supervised whenever near a hot or warming sauna.

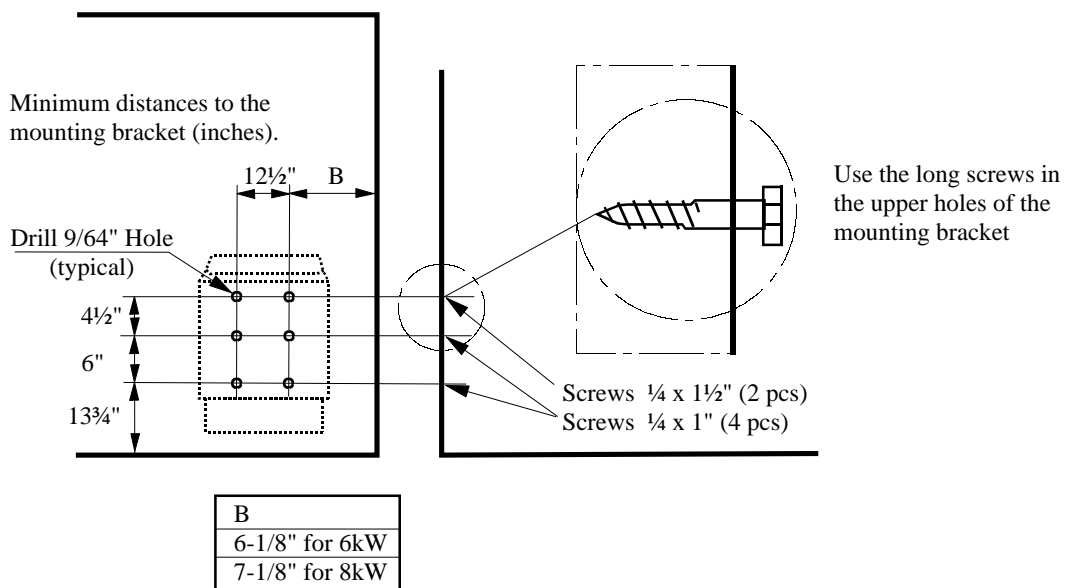


DIAGRAM 1

This diagram intentionally left blank.

DIAGRAM 2

Minimum Distance for Mounting Bracket



Recheck your distances from the heater to combustible materials to ensure you have proper clearance.

SECTION 1: GENERAL INFORMATION, Continued

IMPORTANT INSTALLATION NOTES:

- Grounding is required.
- All wiring must be performed by a licensed electrician in accordance with the National Electrical Code and local regulations.
- Install the heater and controls to permit access for servicing.
- No receptacle or electrical outlet shall be installed inside the heated room.
- The enclosed warning plate "Caution: Reduce the risk of fire..." must be mounted on the interior wall above the heater.
- The enclosed warning plate "Warning: Reduce the risk of overheating..." must be mounted on the door outside the sauna room at about eye level.
- No permanent locking or latch system can be used on the sauna door. Acceptable door fittings are: Magnetic catches, friction catches, spring loaded or gravity loaded closures. The door must open outwards.
- No shower can be installed in the sauna room.
- Do not operate the heater without rocks in the container.
- Mount the heater according to the installation instructions.

SECTION 2: MOUNTING THE HEATER

Using the template provided, drill 6 screw holes using a 9/64" drill bit. Find two 1/4" x 1-1/2", hex head, lag screws in the hardware pack. These screws are used as the upper screws. Turn both upper screws in until the head is approximately 1/8" from the wall surface. Be sure the screws are fastened through the sauna room soft wood lining into a 2 x 4 framing member or back board to hold the heater weight. Total weight of the heater and rocks will exceed 100 pounds, so it is very important to secure the heater to solid framing or backing. See diagram 2.

Hang the heater on the upper screws. Find four 1/4" x 1", hex head, lag screws in the hardware pack. These screws are the lower screws. Install and tighten the lower screws to secure the heater in position.

Recheck your distances from the heater to combustible materials to ensure you have proper clearance. See diagram 3.

WARNING

Fire sprinkler systems used inside any sauna room should be properly rated for sauna room temperatures.

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

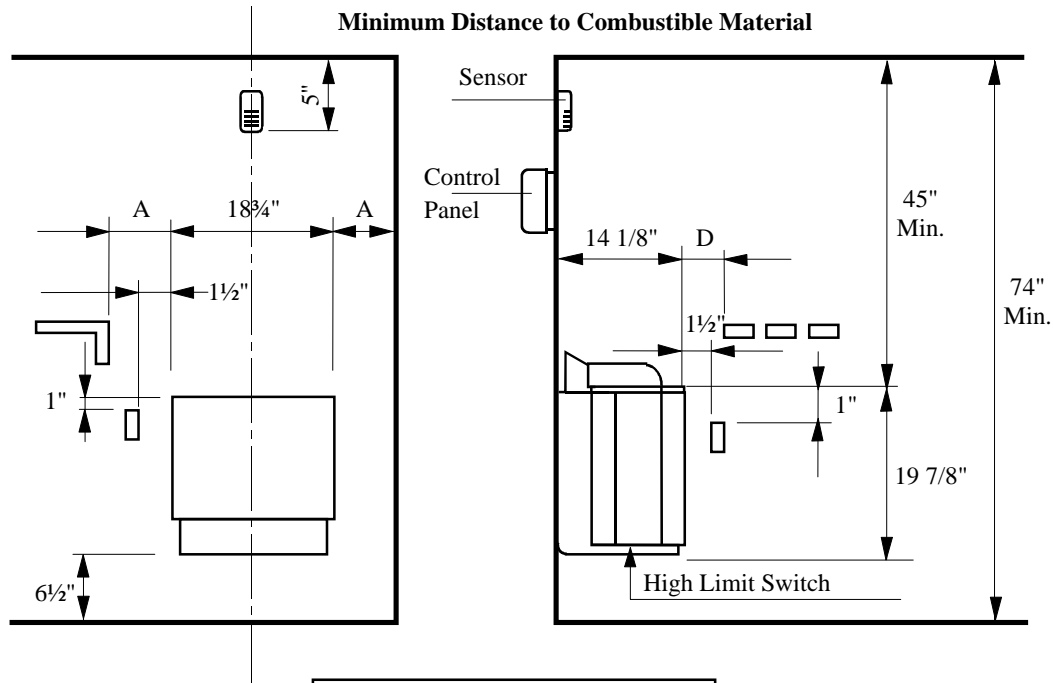
Do not install a shower in the sauna room.

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.

Do not construct sauna room so as to restrict air flow through the bottom of the heater.

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

DIAGRAM 3



Heater Models	Minimum Distance (inches)	
	A	D
Steamy 6.0	2 1/4	4
Steamy 8.0	3 1/4	5

DIAGRAM 4

HEATER SCREEN (GUARD RAIL)

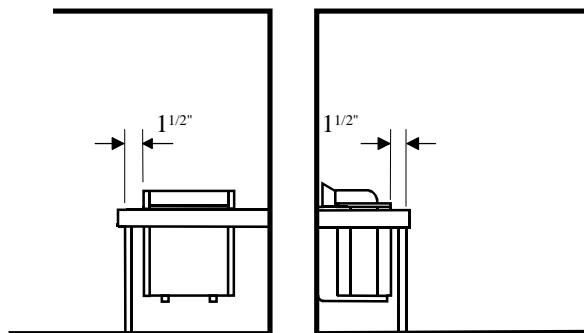
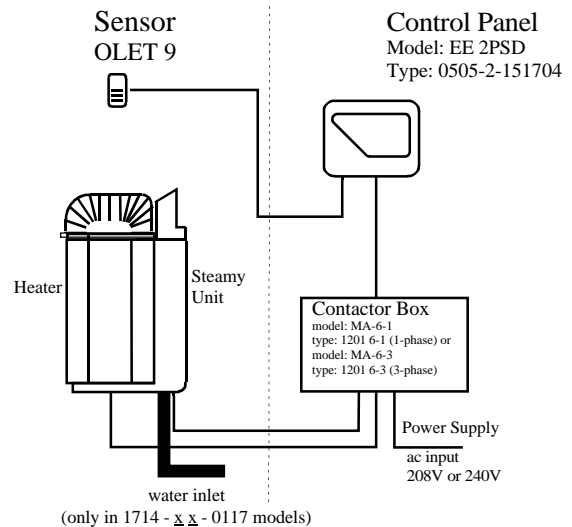


DIAGRAM 5

Sauna Room Adjacent Room



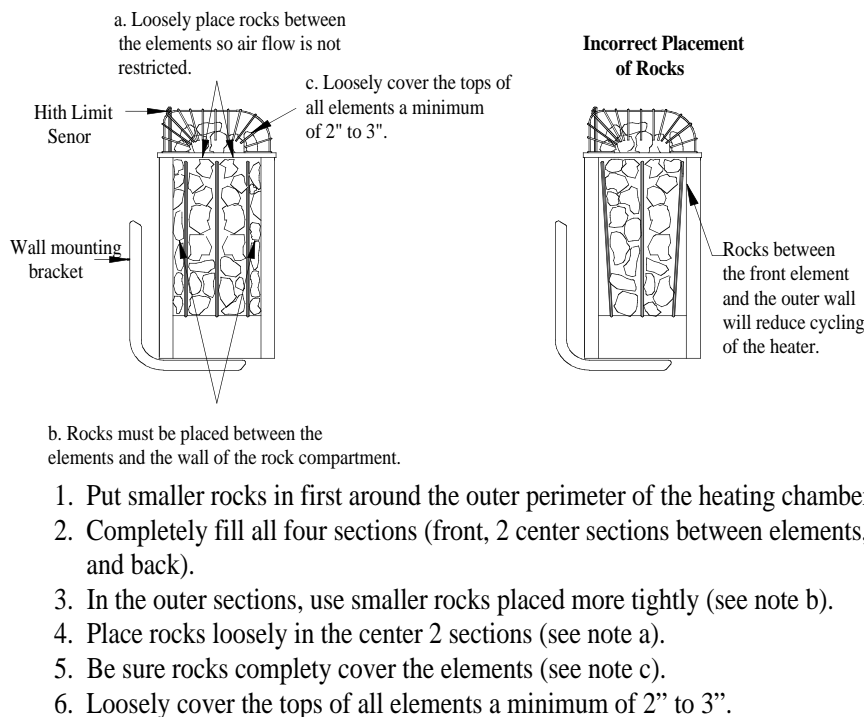
Wire size and number of conductors for the interconnections between the major components of the system is on table 1. Please refer to the table when wiring the system.

SECTION 3: PLACING OF ROCKS

The rocks supplied with the heater have been chosen to provide the best heater performance. Use of any other type of rock may void the heaters warranty. Never operate the heater without rocks in place!

Rinse the rocks with water before placing in the heater. Packing the rocks too tightly may cause the heater high limit switch to trip. Follow the below rock placement instructions. After completion, attach the guard with the screws provided.

On a yearly basis, remove all rock clean rock fragments and reinstall reusable rocks. Follow the directions below for placement and the amount to use of rocks to install.



b. Rocks must be placed between the elements and the wall of the rock compartment.

1. Put smaller rocks in first around the outer perimeter of the heating chamber.
2. Completely fill all four sections (front, 2 center sections between elements, and back).
3. In the outer sections, use smaller rocks placed more tightly (see note b).
4. Place rocks loosely in the center 2 sections (see note a).
5. Be sure rocks completely cover the elements (see note c).
6. Loosely cover the tops of all elements a minimum of 2" to 3".

SECTION 4: ELECTRICAL HOOK-UP

Electrical installation must be made by a licensed electrician in accordance with the National Electrical Code and local regulations. Install the control unit and the contactor box in a dry place outside of the heated sauna/steam room. To determine correct wire size, refer to table 1 on the following page. Use wires suitable for a minimum of 90°C (194°F) to the heater. The heater must be grounded.

See Diagram 5 for a block diagram showing the locations and interconnections between the major components of the system.

WARNING

Do not locate benches over heater. Minimum clearance of ceiling above heater 45".

For minimum clearance from heater to wooden surfaces refer to Diagram 3 for distances. The mounting brackets supplied provide the proper clearance from the heater to the wall.

Use only copper wire of the size and type indicated in the Heater Specification Chart and the temperature rating indicated on the heater junction box.

All heaters and controls must be grounded per NEC to prevent electrical shock in case of unit failure.

Electrical outlets or receptacle must not be installed in a sauna room.

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

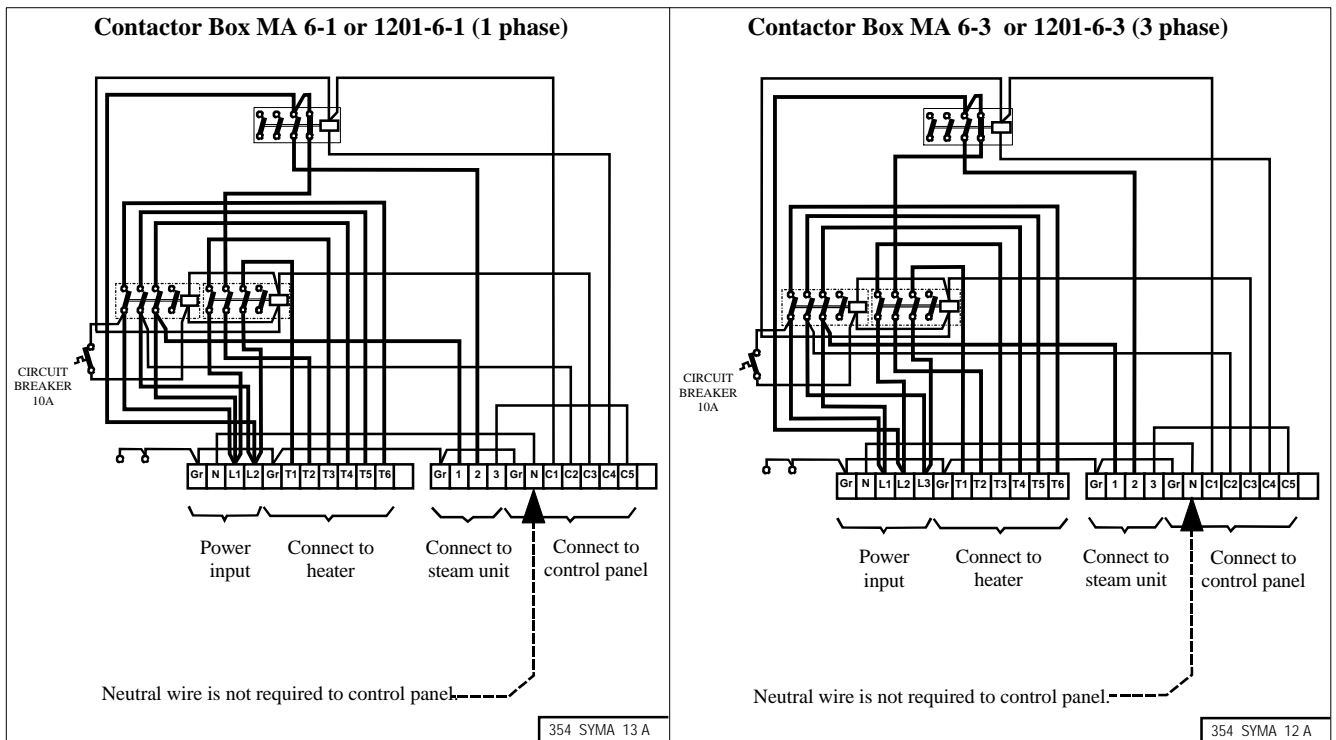
TABLE 1: HEATER SPECIFICATION CHARTS

HEATER MODEL Type Number	P H	V A C	A M P S	CONDUCTOR SIZE AND NUMBER				
				Power Supply to Contactor Box	Contactor Box to Heater	Contactor Box to Steamy Unit	Contactor Box to Control Panel	Control Panel to Sensor
STEAMY 6.0 1714-60-1217 1714-60-0117	1	208	28.8	2 #8 AWG+N+GR	6 # 8 AWG+GR	3 # 8 AWG+GR	5 #14 AWG+GR	18/2
	1	240	25.0	2 #10 AWG+N+GR	6 # 10 AWG+GR	3 # 10 AWG+GR	5 #14 AWG+GR	18/2
	3	208	16.7	3 #12 AWG+N+GR	6 # 12 AWG+GR	3 # 12 AWG+GR	5 #14 AWG+GR	18/2
	3	240	14.4	3 #12 AWG+N+GR	6 # 12 AWG+GR	3 # 12 AWG+GR	5 #14 AWG+GR	18/2
STEAMY 8.0 1714-80-1217 1714-80-0117	1	208	38.5	2 #8 AWG+N+GR	6 # 8 AWG+GR	3 # 8 AWG+GR	5 #14 AWG+GR	18/2
	1	240	33.3	2 #8 AWG+N+GR	6 # 8 AWG+GR	3 # 8 AWG+GR	5 #14 AWG+GR	18/2
	3	208	22.2	3 #10 AWG+N+GR	6 # 10 AWG+GR	3 # 10 AWG+GR	5 #14 AWG+GR	18/2
	3	240	19.2	3 #10 AWG+N+GR	6 # 10 AWG+GR	3 # 10 AWG+GR	5 #14 AWG+GR	18/2

HEATER MODEL	Type Number	INPUT kW	MINIMUM ROOM			MAXIMUM ROOM	
			Floor Area	Ceiling Height	Volume Cubic Feet	Ceiling Height	Volume Cubic Feet
STEAMY 6.0 (Automatic) (Manual)	1714-60-1217 1714-80-0117	6.0	28 sq. ft.	74"	175	96"	310
STEAMY 8.0 (Automatic) (Manual)	1714-80-1217 1714-80-0117	8.0	40 sq. ft.	74"	250	96"	425

ELECTRICAL DIAGRAMS

Below and on the following page are wiring diagrams of the major components. Use the table above with the wiring diagrams.



SECTION 4: ELECTRICAL HOOK-UP, Continued

ROOM LIGHT AND FAN

Provisions for a room light and fan are part of the control unit. To use the room light and/or fan features, a separate 120 volt, 15 amp circuit must be run to the control unit.

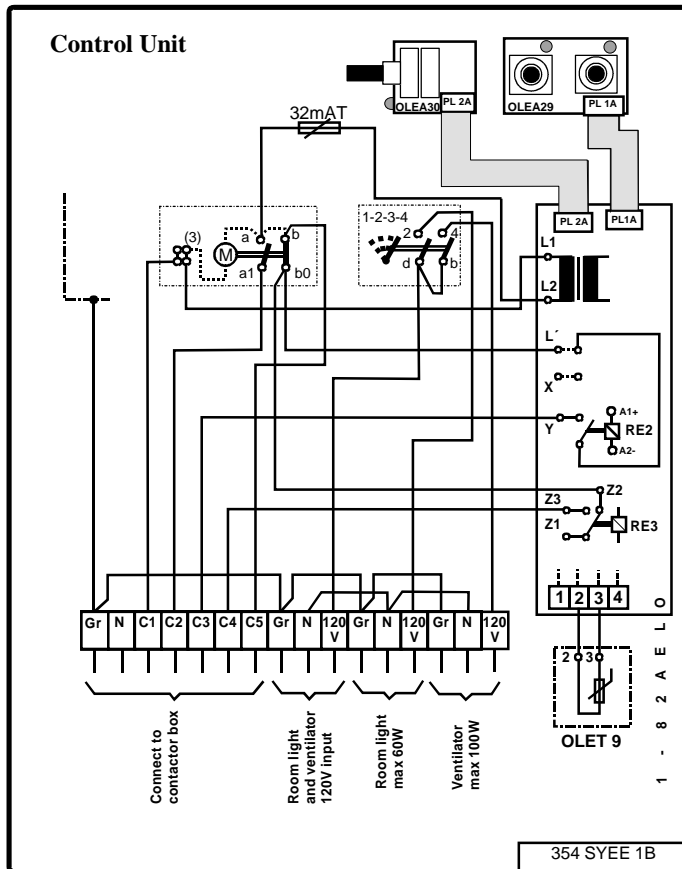
CONTROL UNIT

Wire the control unit to the contactor box. Match the terminal numbers.

STEAM UNIT

Connect the steam unit to the contactor box. Match the terminals.

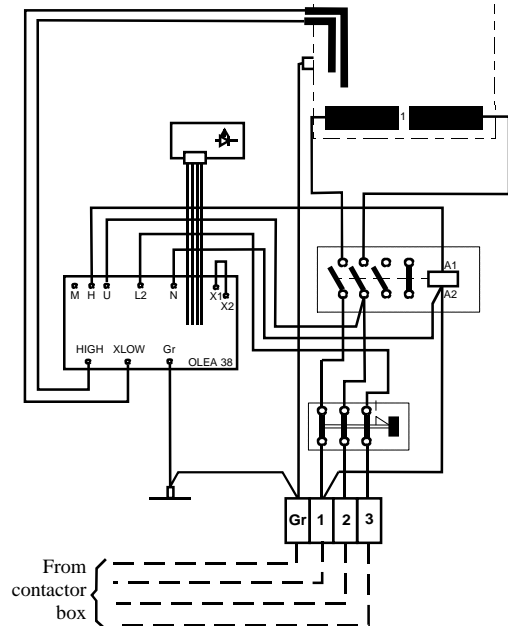
ELECTRICAL DIAGRAMS, Continued



Steam Unit - Manual Water Feed

Input kW 2,0

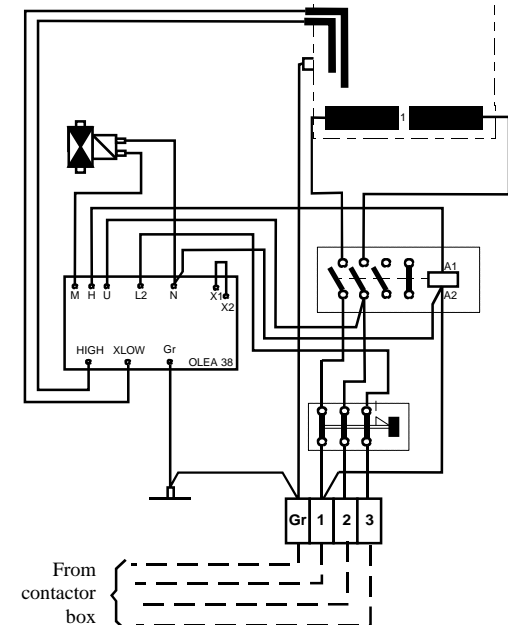
Heating Element 230 V - 2000W 1



Steam Unit - Automatic Water Feed

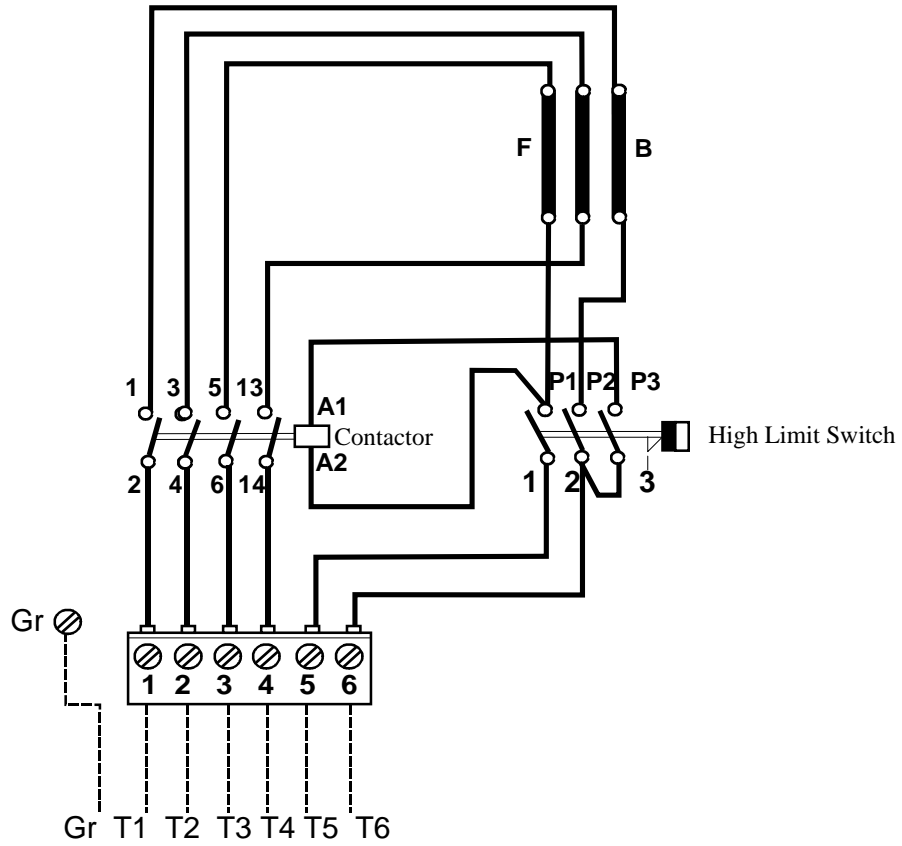
Input kW 2,0

Heating Element 230 V - 2000W 1



ELECTRICAL DIAGRAMS, Continued

WIRING DIAGRAM FOR THE HEATER



Heater Model	Input kW	Heating Elements	
		208V	240V
Steamy 6.0	6.0	1,2,3	2670W
Steamy 8.0	8.0		1,2,3

354 SKSO 10/1 A

Heater wiring is connected to the contactor box (see contactor box wiring diagram on page 6). Match terminal numbers.

SECTION 5: WATER SUPPLY

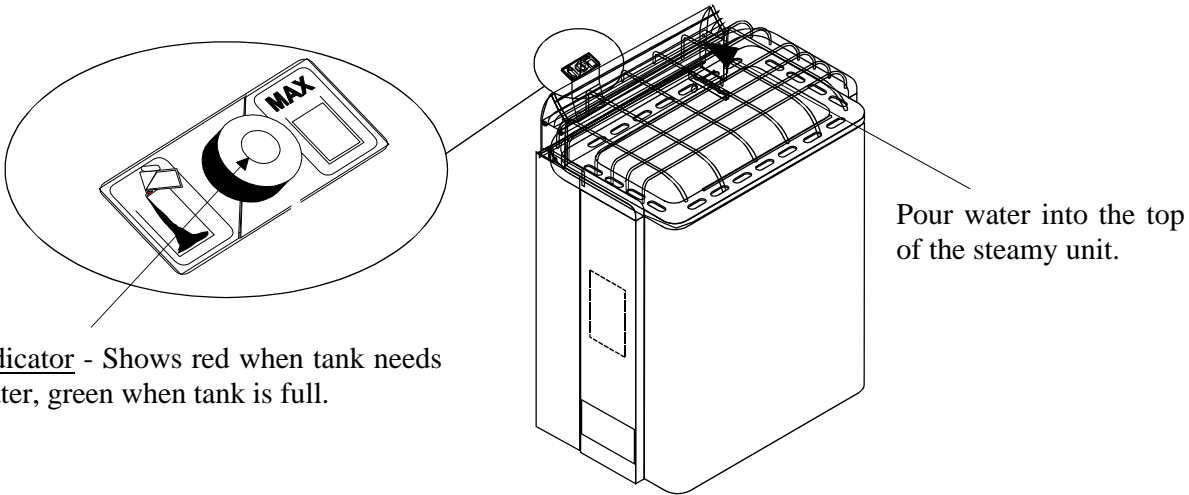
All plumbing must be done by a licensed plumber in accordance with national and local codes.

MANUAL WATER FILL

To operate the steam unit, simply pour water into the top of the generator. An indicator light on the top of generator lets you know if the tank is full or if more water is needed. When the indicator is green, the tank is full; when the indicator is red, more water is needed. If the water level is too low, the generator will not operate.

WARNING

Hard water will shorten the life of the steam generator. Have your water tested by a water treatment specialist prior to installing the steam generator and follow their recommendations. Problems caused by hard water or impurities are not covered by warranty.



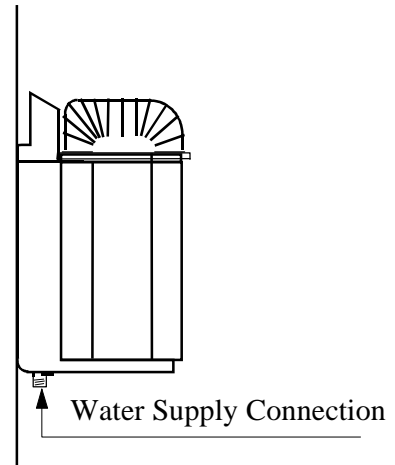
Indicator - Shows red when tank needs water, green when tank is full.

Pour water into the top of the steamy unit.

AUTOMATIC WATER FILL

Install a 1/2" water line to the steam unit. Terminate the water line with a 1/2" NPT male valve. The valve must be within 3 feet of the steam unit. Final connection to the steam unit is done with the short flexible hose provided.

Be sure the valve is turned on before starting the steam unit.



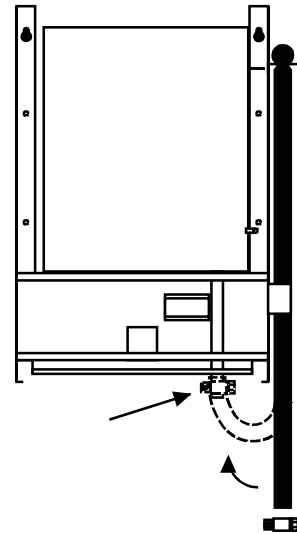
SECTION 5: WATER SUPPLY, Continued

Both manual water fill and automatic water fill tanks have a drain hose. Drawings on this page show the steam unit without the sauna heater attached.

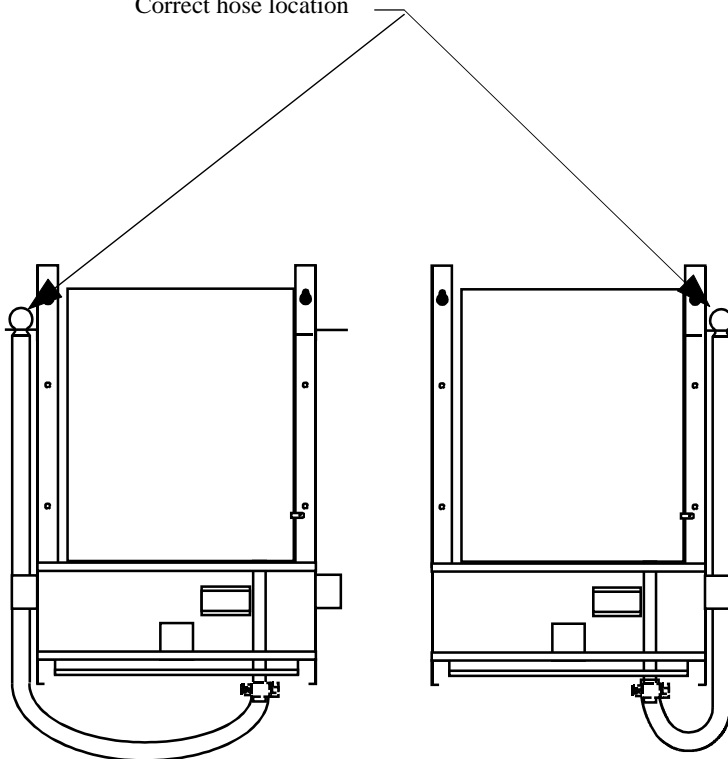
For both manual and automatic fill units, the drain hose must be attached to the short pipe stub on the bottom of the water tank. If the hose is not connected, water will run out of the tank during filling.

After installing the hose, place it in the holding brackets on the side of the water tank.

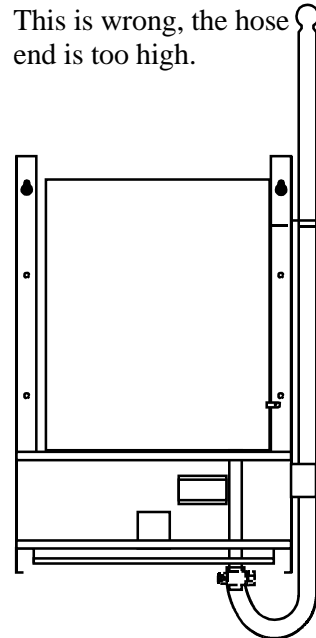
Two brackets are located on the water tank, one on each side. The round fitting on the end of the drain hose fits into either bracket so the drain hose can attach to either side.



Correct hose location



This is wrong, the hose end is too high.



SECTION 6: OPERATION

CONTROL UNIT (EE 2 PSD) FEATURES

1. Timer with up to 9 hour delay (9+1 timer).
2. Three heating modes.
3. Light and vent fan switches.
4. Two separate temperature selector dials, one for the soft mode, and one for the sauna mode.

OPERATION

If you want the heater to begin heating immediately, turn the dial clockwise past the first section labeled "0 to 1", then turn the dial back (counter-clockwise) until you feel it "click" into the one hour operational zone.

The heater has a "9 plus 1" timer, which means you can pre-program the heater to come on up to 9 hours later.

If you set the timer dial in the "ON to 9" zone, the heater will not turn on until the time elapsed equals the number of hours you set.

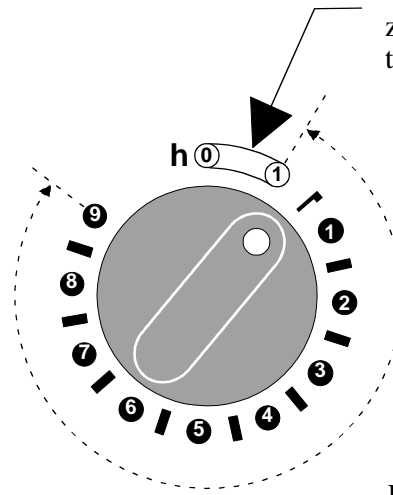
The temperature can be adjusted by turning the thermostat knob. To raise the temperature, turn the knob clockwise; to lower the temperature, turn the knob counter-clockwise.

OPERATING MODES

NORMAL SAUNA Turn the timer to the operating zone (timer operating instructions are on the previous page) and the "FUNCTION" dial to "SAUNA". The indicator next to the "NORMAL SAUNA" thermostat will glow yellow.

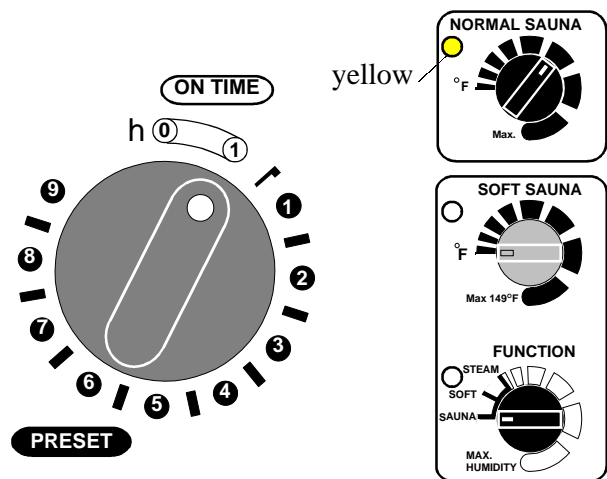
To increase temperature, turn the "NORMAL SAUNA" thermostat knob clockwise; to decrease temperature, turn "NORMAL SAUNA" thermostat knob counter-clockwise.

OPERATING ZONE
This area from "0" to "1" is the operating zone. This is the only time the heater is on.



DELAY ZONE
This area from "9" to "1" is the pre-set time, meaning the heater can be programmed to come on up to nine hours later. The heater will not operate in this area.

NORMAL SAUNA

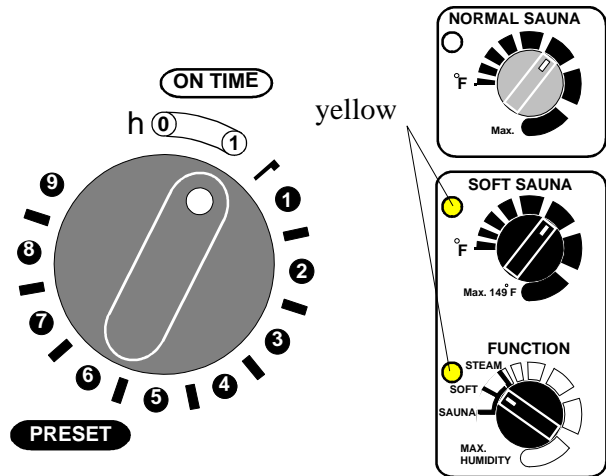


SECTION 6: OPERATION, Continued

OPERATING MODES, Continued

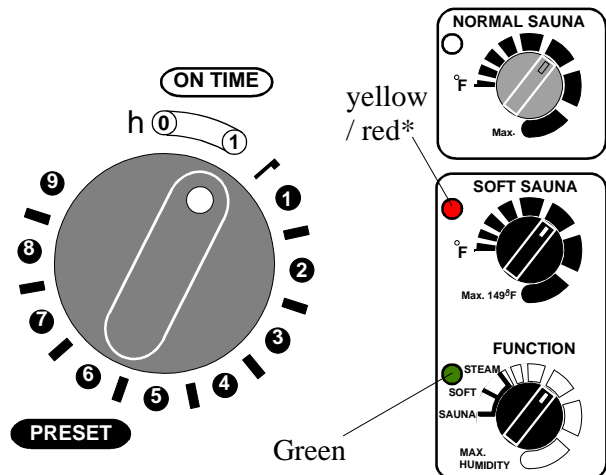
SOFT SAUNA Turn the timer to the operating zone (timer operating instructions are on the previous page) and the "FUNCTION" dial to "SOFT". The "FUNCTION" indicator and THE "SOFT SAUNA" indicator will glow yellow. No steam is produced in this mode. Use this setting for pre-heating the sauna room. Before entering the sauna room, turn the "FUNCTION" dial the "STEAM" range.

SOFT SAUNA

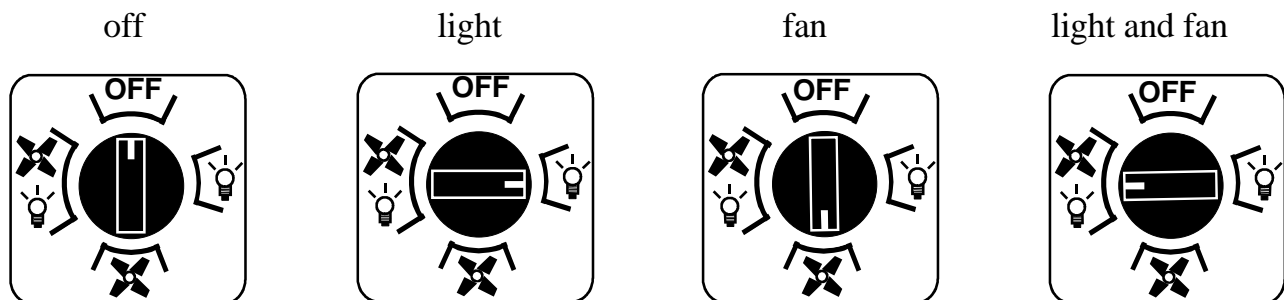


STEAM SAUNA Turn the timer to the operating zone (timer operating instructions are on the previous page) and the "FUNCTION" dial to "STEAM" or to the "MAX. HUMIDITY" zone. In this mode the sauna heater and steamy operate simultaneously. Sauna temperature is controlled by the "SOFT SAUNA" thermostat and humidity is controlled by the "FUNCTION" knob. The temperature is limited to 149°F. If the sauna temperature exceeds 149°F, no steam is produced and the "SOFT SAUNA" indicator turns red. When the temperature drops below 149°F steam production starts and the indicator turns yellow.

STEAM SAUNA



The Steamy control has a 4 position light and fan selector switch for optional use:



SECTION 7: HIGH LIMIT CONTROLS

HEATER

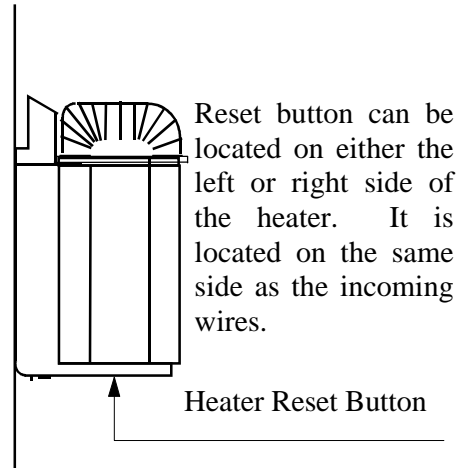
The sauna heater has a built-in high limit control which automatically shuts down the heater if the temperature in the sauna rises to an abnormally high level.

To restart the heater, let the heater cool and push the reset button. The reset button is located underneath the heater close to where the wires enter. If the high limit continues to shut down the heater, contact a service representative.

STEAM UNIT

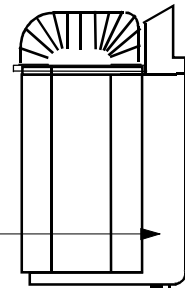
The steam unit has a built-in high limit control which automatically shuts down the steam output if the level probes fail.

To restart the steam, let the steam unit cool and push the reset button. The reset button is located on the right side of the steam unit 3" above the bottom. If the steam unit fails to restart, or high limit continues to shut down the heater, contact a service representative.



Access the reset button through the small 1/8" hole. Reset button is just inside the hole, push to reset.

Steam Reset Button



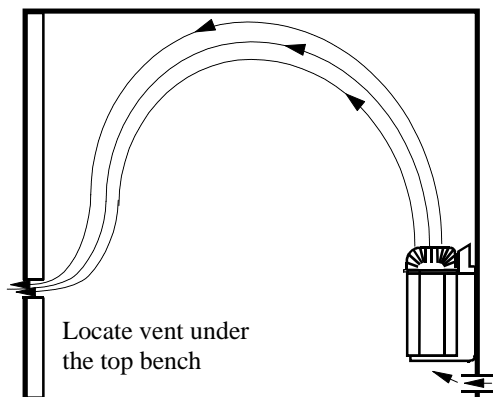
SECTION 8: HEATER SCREEN (Guard Rail)

Provide and install a wooden guard rail to reduce the risk of the sauna bather accidentally touching the heater.

Install the heater guard 1" below the top of the heater (see diagram 3). Maintain an 1-1/2" minimum clearance between the guard rail and the heater (see diagram 4).

DIAGRAM 6

Ventilation



SECTION 10: WARNING PLACARDS

Two metal placards are included in the Installation Instruction Envelope packaged with every Sauna Heater. The CAUTION placard must be attached to the interior wall of the sauna room directly above the heater where it is visible to the bather. The WARNING placard must be attached to the door of the sauna room.

SECTION 11: ROOM CONSTRUCTION

For safety and reliability, the following rules must be addressed.

- No permanent locking or latch system is to be used on the sauna door.
- Acceptable door fittings are: magnetic catches, friction catches, spring or gravity loaded closures. The door must always open outwards.
- No shower may be installed in a sauna room.
- No electrical receptacle shall be installed inside the sauna room.
- The enclosed WARNING: Reduce the risk of overheating ... warning plate must be mounted on or alongside the door outside the sauna room at about eye level.
- The enclosed CAUTION: Reduce the risk of fire ... caution plate must be mounted on the interior wall above the heater.
- The heater should not be operated without its container properly filled with rocks and the rock guard in place.
- If an intercom speaker is installed, it should be away from the heater and as close to the floor as possible.
- If a room light is installed, it should be a surface mounted bracket type. Wall mounted lights should be about 70" above the floor. Ceiling mounted lights should be of an approved type with a junction box that is remote to the fixture itself. Use only a fixture that uses A.F. or fixture type internal wiring. A 60 watt bulb should provide sufficient lighting.
- Fire sprinkler systems installed inside any sauna room should be properly rated for sauna room temperatures.
- Always mount the heater according to these installation instructions.

WARNING

The "CAUTION" and "WARNING" placards must be mounted in accordance with Section 10.



WARNING

REDUCE THE RISK OF OVERHEATING

- * Exit immediately if uncomfortable, dizzy, or sleepy. Staying too long in a sauna is capable of causing overheating.
- * Supervise children at all times.
- * Check with a doctor before use if pregnant, in poor health, or under medical care.
- * Breathing heated air in conjunction with consumption of alcohol, drugs, or medication is capable of causing unconsciousness.



CAUTION

REDUCE THE RISK OF FIRE

Do Not Place Combustible Material On The Heater At Any Time.

For safety purpose sauna door must open out and not lock.

Never use a wood stain, seal or preservative on the inside of your sauna room.

Light fixtures get very hot during operation. Locate light fixture where it will not be a burn hazard.

No shower can be installed in the sauna room.

SECTION 12: VENTILATION

VENTILATION: Ventilation should be provided in a sauna, the air should be changed about 6 times an hour. This can be achieved by making a vent opening (fresh air inlet) in the sauna wall directly below the heater. The air outlet must be lower than the upper benches, as far as possible from the heater and about two feet higher than the fresh air inlet vent, See Diagram 6.

The minimum opening should be determined using one of the following formulas:

$$\text{For } R < 31, \quad V \geq 9.4$$

$$\text{For } R \geq 31, \quad V \geq 0.3 \times R$$

where R = the floor area of the room in square feet and

V = the minimum vent size in square inches

SECTION 13: MAINTENANCE

The sauna, like a bathroom, should be kept clean and odor free. Towels or mats should always be used on benches and floor as perspiration otherwise penetrates the soft wood.

Air out the sauna often by keeping the door and vents open when the sauna is not in use. Saunas that are in daily use should be washed down at least once a week to keep them clean and the air fresh. Duckboard should be removed from the sauna, the sauna floor mopped and dried in a conventional manner, and the duckboard thoroughly scrubbed and dried before returning to the sauna room. The sauna heater should be wiped down occasionally with a damp cloth to remove lint and dust. The rocks should be removed once a year for cleaning and small or crumbled rocks replaced.

To clean and remove perspiration stains, use soap or detergent in warm water, best applied with a scrub brush. Badly soiled surfaces may require sanding. Sand paper wrapped around a wooden block works well.

Benches and supporting structure must be inspected annually for potential deterioration due to age, dry rot or abuse. Any boards with signs of deteriorations should be replaced immediately to avoid possible injury.

SECTION 14: TROUBLESHOOTING

For troubleshooting or service questions call 1-888-780-4427 and ask to speak with service or contact the company at the following e-mail addresses.

techsupport@saunatec.com
sales@saunatec.com