

FINSAUNA®

CLUBHEAT Series Sauna Heaters

Installation & Operation Manual



Models:

C1000/K10G-U1

C1250/K12.5G-U1

C1500/K15G-U1

C1000-3/K10G-U3

C1250-3/K12.5G-U3

C1500-3/K15G-U3

Controls:

SaunaLink10

SaunaLink15



ETL listed
conforms to UL
STD 875 certified
to CAN/CSA STD
E60335-2-53-05

IMPORTANT! This manual must be left with owner, manager, or operator of sauna after it is used by electrician!

PURPOSE OF THE ELECTRIC HEATER:

The ClubHeat / KG-heaters are designed for the heating of large saunas to bathing temperature. It is forbidden to use the heater for any other purposes. Please read the user's instructions carefully before using the heater.

NOTE!

These instructions for installation and use are intended for the owner or the person in charge of the sauna, as well as for the electrician in charge of the electrical installation of the heater.

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WARNINGS!

Do not smoke, use alcohol, or exercise in the sauna!

Do not exceed 30-minutes in the sauna at one time, as excessive exposure can be harmful to health. The sauna should not be used as an endurance test!

Persons with poor health should consult their physicians before using the sauna!

Avoid fire, do not place any combustible material over the sauna heater (towels, bathing suits, wooden bucket or dipper)!

Use only clean water on the stones - do not use pool or spa water, as chlorine gas can be produced and the heating elements can be damaged!

Keep away from the heater when it is hot. The stones and outer surface of the heater may burn your skin.

Do not pour too much water on the stones. The evaporating water is boiling hot.

Do not let young, handicapped or ill people bathe in the sauna on their own.

Consult your doctor about health-related limitations of bathing.

Parents should keep their children away from the hot heater.

Consult your child welfare clinic about taking little babies to the sauna.

- Age?
- Temperature of the sauna?
- Time spent in the warm sauna?

Be very careful when moving in the sauna, as the platform and floors may be slippery.

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperatures of 98.6°F (37°C). The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting.

The effects of hyperthermia include:

- A) Failure to perceive heat
- B) Failure to recognize the need to exit the room
- C) Unawareness of impending hazard
- D) Fetal damage in pregnant women
- E) Physical inability to exit the room
- F) Unconsciousness

Warning - the use of alcohol, drugs or medication is capable of greatly increasing the risk of fatal hyperthermia!

INSTRUCTIONS FOR USE

PILING OF THE SAUNA STONES

The sauna stones for an electric heater should be 2 - 4" in diameter. The heater stones should be solid blocks of stone specially intended for use in the heater. Neither light, porous ceramic "stones" of the same size nor soft potstones should be used in the heater, because they may cause the resistance temperature to rise too high as a result of which the resistance may be broken.

Stone dust should be washed off before piling the stones. The stones should be piled into the stone compartment over the grating, between the heating elements (resistances) so that the stones support each other. The weight of the stones should not lie on the heating elements.

The stones should not be piled too tightly, so that air can flow through the heater. See figure 1. The stones should be fitted loosely, and not wedged between the heating elements, very small stones should not be put into the heater at all.

The stones should completely cover the heating elements. However, they should not form a high pile on the elements.

The stones disintegrate with use. Therefore, they should be rearranged at least once a year or even more often if the sauna is in frequent use. At the same time, any pieces of stone should be removed from the bottom of the heater, and disintegrated stones should be replaced with new ones.

The guarantee does not cover any faults caused by the use of stones not recommended by the manufacturer. Neither does the guarantee cover any faults caused by disintegrated or too small stones blocking the heater ventilation.

No such objects or devices should be placed inside the heater stone space or near the heater that could change the amount or direction of the air flowing through the heater, thus causing the resistance temperature to rise too high, which may set the wall surfaces on fire!

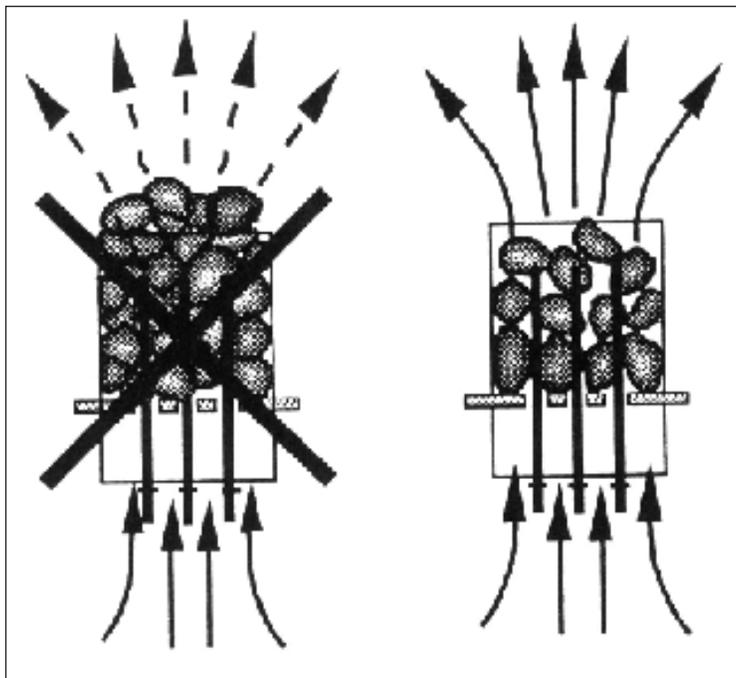


Figure 1. Piling of the Sauna Stones

HEATING OF THE SAUNA

Before switching the heater on always check that there isn't anything on top of the heater or inside the given safety distance. See item 1.6 "Warnings".

When the heater is switched on for the first time, both the heater and the stones emit smell. To remove the smell, the sauna room needs to be efficiently ventilated.

The purpose of the heater is to raise the temperature of the sauna room and the sauna stones to the required bathing temperature. If the heater output is suitable for the sauna room, it will take about an hour for a properly insulated sauna to reach that temperature. See item 2. "Sauna Room Construction - General Information." A suitable temperature for the sauna room is about 149 - 176°F (65 - 80°C).

The sauna stones normally reach the required bathing temperature at the same time as the sauna room. If the heater capacity is too big, the air in the sauna will heat very quickly, whereas the temperature of the stones may remain insufficient; consequently, the water thrown on the stones will run through. On the other hand, if the heater capacity is too low for the sauna room, the room will heat slowly and, by throwing water on the stones, and bather may try to raise the temperature of the sauna. However, the water will only cool down the stones quickly, and after a while the sauna will not be warm enough and the heater will not be able to provide enough heat.

In order to make bathing enjoyable, the heater capacity should be carefully chosen to suit the size of the sauna room.

CONTROL UNIT OF HEATER

The ClubHeat / KG model heaters require a separate control unit to operate the heater. The control unit should be located outside the sauna room in a dry place, at a height of approximately 5'. The temperature sensor, by means of which the set temperature is maintained in the sauna room, should be connected to the control unit. The temperature sensor and overheating limiter are located in the sensor box installed above the heater. The sensor box should be installed in accordance with the installation instructions of the control unit model in question.

The ClubHeat/KG model heaters are controlled with the SaunaLink control unit.

SaunaLink Precision Sauna Environment Control

Control Panel:

- Temperature adjustment range 104 -194°F (40 - 90°C).
- Pre-setting time adjustment range 0 -24 hour.
- Lighting control, max. power 100W, 120V, 1Ph.
- Fan control, max. power 100W, 120V, 1Ph.
- Dimensions: 3.4" x 1" x 4.4"
- 50' Control cable length.

Power Unit:

- Supply voltage
- 240V 1Ph or 208V 3Ph
- Dimensions: 14.3" x 2.9" x 10.5"

Sensor:

- Temperature Sensor NTC thermistor 22kΩ/T=77°F (25°C)
- Resettable overheat protector
- Dimensions: 2.0" x 2.9" x 1.1"
- 50' sensor cable length

THROWING WATER ON HEATED STONES

The air in the sauna room becomes dry when warmed up. Therefore, it is necessary to pour water on the heated stones to reach a suitable level of humidity in the sauna.

The humidity of the air in the sauna room is controlled by the amount of water poured on the stones. A correct level of humidity makes the bather's skin sweat and makes breathing easy. By throwing water on the stones with a small ladle, the bather should feel the effect of air humidity on his skin. Both too high a temperature and air humidity will give an unpleasant feeling.

Staying in the hot sauna for long periods of time makes the body temperature rise, which may be dangerous.

The maximum volume of the ladle is 7 ounces. The amount of water poured on the stones at a time should not exceed 7 ounces, because if an excessive amount of water is poured on the stones, only part of it will evaporate and the rest may splash as boiling hot water on the bathers.

Never pour water on the stones when there are people near the heater, because hot steam may burn their skin.

SAUNA WATER

The water to be poured on the heated stones should meet the requirements of clean household water. The factors essentially affecting the quality of water include the following:

- Humuos content (color, taste, precipitates); recommended content less than 12 mg/l.
- Iron content (color, smell, taste, precipitates); recommended content less than 0.2 mg/l.

- Hardness - the most important substances are manganese (Mn) and calcium (Ca);
- Recommended content of manganese 0.05 mg/l, calcium less than 100 mg/l.

Calcareous water leaves a white, sticky layer on the stones and metal surfaces of the heater. Calcification of the stones deteriorates the heating properties.

Ferrous water leaves a rusty layer on the surface of the heater and elements, and causes corrosion.

The use of humous, chlorinated water and seawater is forbidden.

Only special aromas designed for sauna water may be used. Follow the instructions given on the package.

TEMPERATURE AND HUMIDITY OF THE SAUNA ROOM

Both thermometers and hygrometers suitable for use in a sauna are available. As the effect of steam on people varies, it is impossible to give an exact, universally applicable bathing temperature or percentage of moisture. The bather's own comfort is the best guide.

The sauna room should be equipped with proper ventilation to guarantee that the air is rich in oxygen and easy to breathe.

Bathing in a sauna is considered a refreshing experience and good for the health. Bathing cleans and warms your body, relaxes the muscles, soothes and alleviates oppression. As a quiet place, the sauna offers the opportunity to meditate.

INSTRUCTIONS FOR BATHING

- Begin by washing yourself.
- Stay in the sauna for as long as you feel comfortable.
- According to established sauna conventions, you must not disturb other bathers by speaking in a loud voice.
- Do not force other bathers from the sauna by pouring excessive amounts of water on the stones.
- Forget all your troubles and relax.
- Cool your skin down as necessary.
- If you are in good health, you can have a swim if a swimming place or pool is available.
- Wash yourself properly after bathing. Have a drink of fresh water or a soft drink to bring your fluid balance back to normal.
- Rest for a while and let your pulse go back to normal before dressing.

WARNINGS

- **Do not smoke, use alcohol, or exercise in the sauna!**
- **Sea air and a humid climate may corrode the metal surfaces of the heater.**
- **Keep away from the heater when it is hot. The stones and outer surface of the heater may burn your skin.**
- **Do not pour too much water on the stones. The evaporating water is boiling hot.**
- **Do not let young, handicapped or ill people bathe in the sauna on their own.**
- **Consult your doctor about health-related limitations of bathing.**
- **Parents should keep children away from the hot heater.**
- **Consult your child welfare clinic about taking little babies to the sauna.**
 - Age?
 - Temperature of the sauna?
 - Time spent in the warm sauna?

- **Be very careful when moving in the sauna, as the platform and floors may be slippery.**
- **Do not exceed 30-minutes in the sauna at one time, as excessive exposure can be harmful to health. The sauna should not be used as an endurance test!**
- **Persons with poor health should consult their physicians before using the sauna!**
- **Avoid fire, do not place any combustible material over the sauna Heater (towels, bathing suits, wooden bucket or dipper)!**
- **Use only clean tap water on the stones - do not use pool or spa water, as chlorine gas can be produced and the heating elements can be damaged!**
- **Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6°F. The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting.**

The effects of hyperthermia include:

- A. Failure to perceive heat
- B. Failure to recognize the need to exit the room
- C. Unawareness of impending hazard
- D. Fetal damage in pregnant women
- E. Physical inability to exit the room
- F. Unconsciousness

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

TROUBLESHOOTING

If the heater does not heat, check the following points:

- The current from the control unit to the heater has been switched on.
- The desired temperature programmed in the control panel is higher than the temperature of the sauna.
- The breaker is switched on. Also, breaker should be correct size.

ROOM CONSTRUCTION - GENERAL INFORMATION

A. FRAMING

2" x 4" any suitable wood material, 16" o.c.

B. CEILING LIGHT

No higher than 7'0"

C. INSULATION

R11 Fiberglass with foil back in walls and ceiling, foil facing into room.

D. DRYWALL

See local codes. Is not required in most residences. See local codes commercial. If drywall is used, apply 1" x 2" nailers so that wall and ceiling boards can be attached to solid wood.

E. PANELING

Use kiln-dried, clear, T&G softwood such as California Redwood, Western Red Cedar, Alaska Yellow Cedar, pine, spruce or other suitable wood material (with moisture content not exceeding 11%).

F. BENCHES

Use matching wood of vertical grain. Fasten from bottom to prevent burning of bathers.

G. HEATER FENCE

Is necessary for safety and should be constructed of 1" x 4" or 2" x 4" softwood to match sauna interior. See figures 3 - 6 clearances from sauna heater. Fence should attach to wall and should not be placed higher than top of heater below rock line.

H. DOOR

Must open out and should not have a lock.

I. FLOORING

Concrete, ceramic tile, or heavyduty vinyl.

J. VENTILATION

Should be provided by lower vent close to heater, 4" from floor, and upper vent on opposite wall (if possible) 6" from ceiling or as low as 24" from floor. Vents should be adjustable and should allow air to change 5 times per hour. Sauna shall be provided with intended ventilations as required per the local code authorities.

K. LIGHT

Should be wall-mounted, vapor proof type, with rough-in box mounted flush with inside paneling. It should mount 6' 6" from the floor, not directly over sauna heater, and not over upper

benches; light bulb should not exceed 75 watts.

L. ACCESSORIES

Bucket, dipper and thermometer are essential. Thermometer should be placed over the Sauna heater, 6" from ceiling, for correct temperature reading. Other accessories such as hygrometer, sand timer, brushes, etc. are available.

M. MAINTENANCE INSTRUCTIONS

Are included at the end of this manual.

N. WARNING SIGNS

Are furnished with Sauna heater. The metal "CAUTION" sign should be fastened to wall, close to heater, in a visible place. The metal "Warning" sign should be fastened outside, to the Sauna room door.

WARNINGS!

***Do not smoke, use alcohol, or exercise in the sauna!**

*** Do not exceed 30-minutes in the sauna at one time, as excessive exposure can be harmful to health. The sauna should not be used as an endurance test!**

*** Persons with poor health should consult their physicians before using the sauna!**

*** Avoid fire, do not place any combustible material over the sauna heater (towels, bathing suits, wooden bucket or dipper)!**

*** Use only clean water on the stones - do not use pool or spa water, as chlorine gas can be produced and the heating elements can be damaged!**

*** Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperatures of 98.6°F (37°C). The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting.**

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E) Physical inability to exit the room

F) Unconsciousness

*** Warning - the use of alcohol, drugs or medication is capable of greatly increasing the risk of fatal hyperthermia!**

INSTRUCTIONS FOR INSTALLATION

PRIOR TO INSTALLATION

Prior to installing the heater, study the instructions for installation, as well as checking the following points:

- Is the output and type of the heater suitable for the sauna room?

The cubic volumes given in table 1 should be followed.

- Are there a sufficient number of high quality sauna stones?
- Is the supply voltage suitable for the heater?
- The location of the heater fulfills the minimum requirements concerning safety distances given in figures 2 - 6 and table 1.

It is absolutely necessary to ensure that the installation is carried out according to these values. Neglecting them can cause a risk of fire.

- Only one electrical heater may be installed in the sauna room. Multiple heaters can be installed and used in the sauna room only if they share the same control unit.
- The heater should be installed so that the warning texts on the cover of the junction box can also be read without difficulty after the installation.
- ClubHeat / KG heaters have not been approved to be installed in a recess in the wall or floor.

HEATER MIN. CLEARANCE FROM WALL AND FENCE

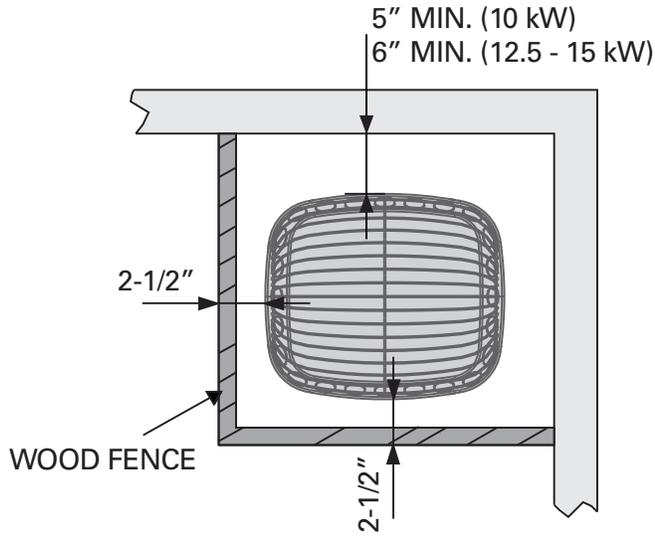


Figure 5.

HEATER MIN. CLEARANCE FROM BENCHES

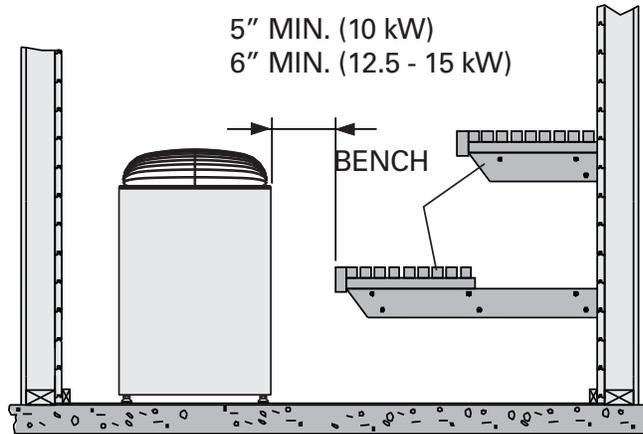


Figure 6.

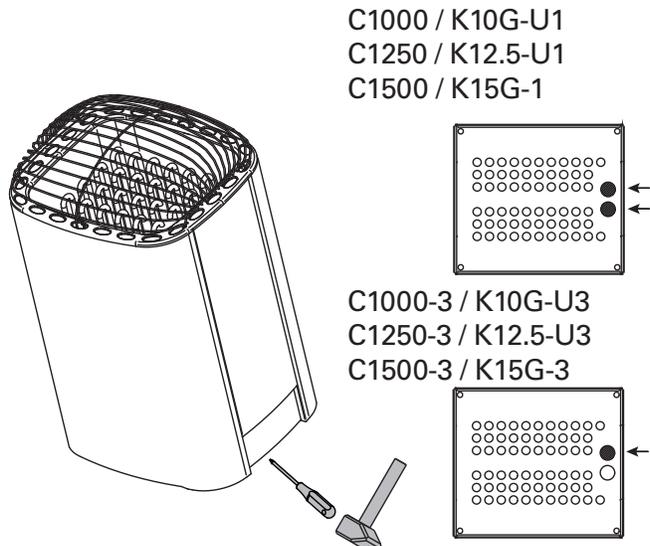


Figure 7.

INSTALLATION OF CONTROL PANEL AND SENSOR

Detailed instructions for the installation of both the control panel and the sensor are delivered with the control panel.

INSTALLATION OF HEATER

The heater may only be connected to the electrical network in accordance with the current regulations by an authorized, professional electrician.

The wiring diagrams are included in the control unit's installation instruction.

Further instructions concerning exceptional installations can be obtained from local electrical authorities.

1. Remove heater from carton and place in proper location in sauna room. Observe proper clearances as per figures 2 - 6 and table 1. After final hookup, electrical contractor should secure heater to floor with at least two screws or bolts.
2. See applicable wiring diagram for heater model (figures 8 - 9, see control unit manual for detailed instructions how to connect the heater and the control unit). Heater must be permanently installed (no pigtailed or plugs allowed) and wiring must be done by a licensed electrician, who must follow wiring diagram provided and adhere to local codes. Use proper A.W.G rated wire size and use copper wire suitable for 194°F (91°C) within sauna walls. Use grounding terminals provided in sauna heater and control unit to properly ground the equipment as per NEC and local codes.
3. Inside the heater box there are two signs. Please place the metal "CAUTION" sign on the interior wall of the sauna room directly above the heater in a visible place. Place the metal "WARNING" sign outside, on the door of the sauna room. "MAINTENANCE INSTRUCTIONS" are at the end of this manual.

SINGLE PHASE HEATER WIRING AND HOOKUP (C1000/K10G-U1, C1250/K12.5G-U1, C1500/K15G-U1)

Refer to table 2 for proper wire size and amperage. See figures 2 - 6 for required clearances. Use copper wire from breaker to wall-mounted power unit. Supply cable must have 5 wires including insulated neutral and separate ground.

Model C1000/K10G-U1 requires a SaunaLink10/CX30-U1-U3 sauna heater control. Follow 240V 1Ph (dual circuit) wiring on ClubHeat series wiring schematic (page 15 of SaunaLink installation and operation manual).

Models C1250/K12.5G-U1 and C1500/K15G-U1 require a SaunaLink15/CX-45-U1-U3 sauna heater control, follow 240V 1Ph (dual circuit) wiring on ClubHeat series wiring schematic (page 15 of SaunaLink Pad installation and operation manual).

Use 194°F (90°C) copper wire from power unit to room light. Also use 194°F (90°C) copper wire from power unit to sauna heater (within seal tight flex conduit), and connect to junction box under heater at back, with 194°F (90°C) connector.

Cutler-Hammer model CH4F load center shall be supplied by electrical contractor.

If connection to heater will be made at a later time, bring flex into sauna room 4 - 6" from floor, and leave 3' of flex for hookup (can be cut to right length later). Before testing heater, fill rock cavity with igneous stones provided with heater and fasten metal protective grill on top of heater. (See general information info concerning washing and placing of stones.)

3-PHASE HEATER WIRING AND HOOKUP (C1000-3/K10G-U3, C1250-3/K12.5G-U3, C1500-3/K15G-U3)

Refer to table 2 for proper wire size and amperage. See figures 2 - 6 for required clearances. Use copper wire from breaker to wall-mounted power unit. Supply cable must have 4 wires including insulated neutral and separate ground.

Models C1000-3/K10G-U3 requires a SaunaLink10/CX30-U1-U3 sauna heater control. Follow 208V 3Ph wiring on ClubHeat series wiring schematic (page 15 of SaunaLink installation and operation manual).

Models C1250-3/K12.5G-U3 and C1500-3/K15G-U3 require a SaunaLink15/CX45-U1-U3 sauna heater control. Follow 208V 3Ph wiring on ClubHeat series wiring schematic (page 15 of SaunaLink installation and operation manual).

Use 194°F (90°C) copper wire from power unit to room light. Also use 194°F (90°C) copper wire from power unit to sauna heater (within seal tight flex conduit), and connect to junction box under heater at back, with 194°F (90°C) connector.

If connection to heater will be made at a later time, bring flex into sauna room 4-6" from floor, and leave 3' of flex for hookup (can be cut to right length later). Before testing heater, fill rock cavity with igneous stones provided with heater and fasten metal protective grill on top of heater. (See general information info concerning washing and placing of stones.)

AFTER INSTALLATION

TESTING OF SAUNA HEATER

1. After sauna heater has been properly wired, according to appropriate wiring diagram and local codes, turn sauna breaker on in the main breaker panel. (Note! Electrician must label "Sauna" breaker.)
2. Turn thermostatic (heat) control to on position (this is located either on your heater or on your remote wall control. If you have a wall control, the indicator light will come on to show that the sauna is heating). Set timer to 10- to 15-minutes.
3. Within 5-minutes, you should be able to feel heat from heater elements when holding hand over heater.
4. If the sauna does not heater, refer to troubleshooting information.
5. It is normal for smoke to appear during the first heating, as protective element coating needs to burn off. Turn sauna on for 1-hour before using for first time, to eliminate smoke.

MODEL	INPUT KW	MIN HEIGHT FT.	FLOOR AREA		SAUNA ROOM		MIN. SPACING FROM ADJACENT SURFACES (INCHES)
			Min. Sq. Ft	Max. Sq. Ft	Min. Cu. Ft	Max. Cu. Ft	
C1000/K10G-U1 C1000-3/K10G-U3	10.0	6' 5"	60	94	390	600	5
C1250/K12.5G-U1 C1250-3/K12.5G-U3	12.5	6' 5"	78	114	500	750	6
C1500/K15G-U1 C1500-3/K15G-U3	15.0	6' 5"	97	146	630	1000	6

Table 1.

MODEL	KW	AMPS	VOLT	PH	CONTROL UNIT	WIRE SIZE		
						breaker to load center	load center to power unit	power unit to heater
C1000/ K10G-U1	10.0	41.7	240	1	SaunaLink10	#6 copper	(4) #8 copper	(4) #8 copper
C1250/ K12.5G-U1	12.5	52.7	240	1	SaunaLink15	#6 copper	(4) #8 copper	(4) #8 copper
C1500/ K15G-U1	15.0	61.7	240	1	SaunaLink15	#4 copper	(4) #8 copper	(4) #8 copper
						breaker to power unit	power unit to heater	
C1000-3/ K10G-U3	10.0	27.3	208	3	SaunaLink10	#8 copper	#8 copper	
C1250-3/ K12.5G-U3	12.5	34.1	208	3	SaunaLink15	#8 copper	#8 copper	
C1500/ K15G-U1	15.0	40.0	208	3	SaunaLink15	#8 copper	#8 copper	

Table 2.

Finsaunusa.com

800.957.2862

finsauna@bathingbrands.com

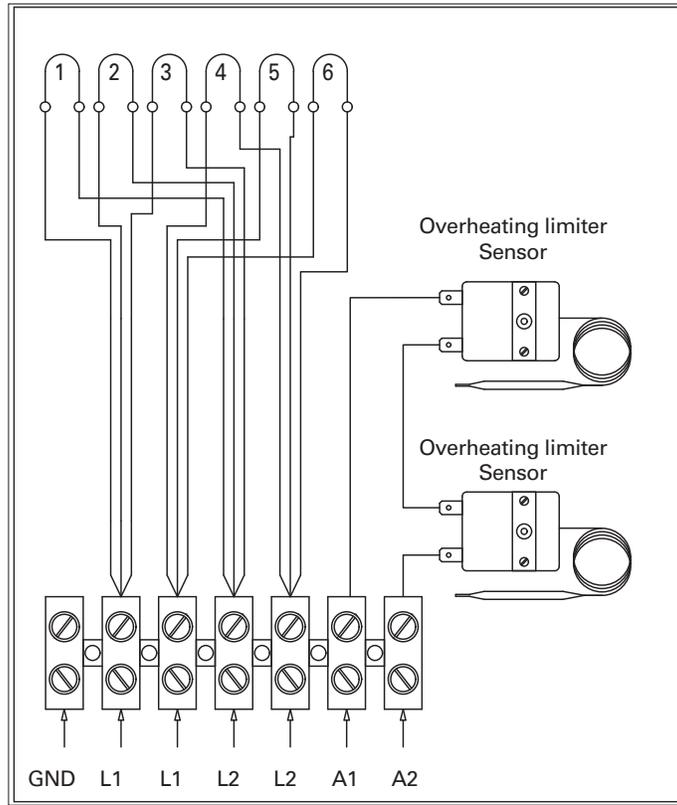


Figure 8. Electrical connections of 240 V 1-phase heaters without contactors (C1000/K10G-U1, C1250/K12.5G-U1, C1500/KG15-U1)

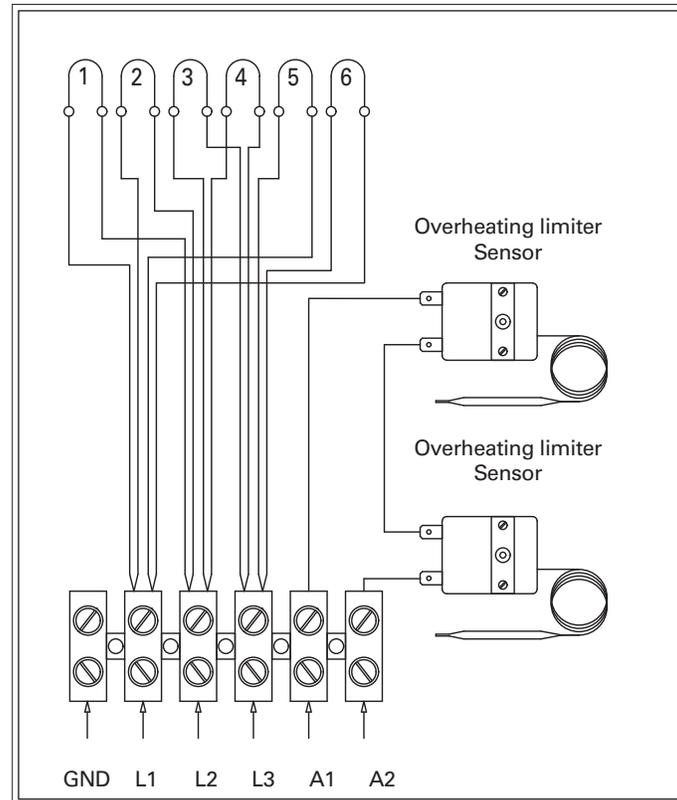


Figure 9. Electrical connections of 208 V 3-phase heaters without contactors (C1000-3/K10G-U3, C1250-3/K12.5G-U3, C1500-3/KG15-U3)

TROUBLESHOOTING

- A. If the sauna heater does not operate after initial installation and wiring:
1. Check circuit breaker in contactor to be sure that it has not been shorted out.
 2. Make sure that the current from the control unit to the heater has been switched on.
 3. Check that the desired temperature programmed in the control panel is higher than the temperature of the sauna.
- B. If the sauna has been in operation, but the heater ceases to operate:
1. Check breaker to make sure it is on.
 2. Check that there is no time left in the control panel.
 3. Check overheat limiter reset button in heater (reset is under the heater) to see if it has been released.
 4. Call your electrician or service person for further help.)
- NOTE! A GROUND FAULT INTERRUPTER (GFI) should not be installed in, and does not belong in a sauna. If used, the breaker will trip, and damage could result.**
- C. If the sauna heater operates, but the sauna room does not come up to sauna temperature 160 - 185°F (70 - 85°C)
1. You must allow at least 30-minutes for sauna heat-up time.
 2. Is sauna thermometer located 6" from ceiling, and is it above or close to sauna heater? (This is proper location for sauna temperature reading.) Thermometer readings vary with room heights and location. Eg. 180°F (82°C) above sauna heater = 165°F (74°C) on opposite wall = 140°F (60°C) on upper bench = 120°F (49°C) on lower bench = 100°F (38°C) at floor level.
 3. Check for proper wire size, amp size, and proper wiring (according to diagrams and information) also necessary copper wiring.
4. Check the placement of stones to make sure they are loosely spaced around elements, to ensure good air flow. Stones packed too tightly will restrict air flow and reduce heating capacity.
 5. Check for heat loss (around or under door, around ceiling light or fan - we do not recommend ceiling light and a fan does not belong in the sauna.
 6. Is the room properly insulated?
 7. Is the ceiling higher than 7'?
 8. After checking all above, remove rocks and check the heating elements for holes or burned areas. (Only if heater has been in use for some time.)

CAUTION! ELECTRICIAN OR SERVICE PERSON!

1. BEFORE SERVICING HEATER, CONTROL, OR CONTRACTOR, TURN POWER OFF AT BREAKER!
2. Open junction box to make sure wires are tightly secured with no loose connections. Heater wire and all connecting wires should be copper.
3. Check for burned spots or short in wiring of timer or thermostat.

Sauna Heater's warranty on parts is void if installer/electrician fails to follow necessary wiring information provided or fails to follow code for proper wire size, amperage, etc.

OVERHEATING LIMITER

Each heater is equipped with an overheating limiter which is a safety device. If an abnormal heating condition should occur, the heater will automatically shut off, and it will not come on again until it cools.

To reset the overheating limiter, locate the reset button (bottom front on wall models, behind junction box at back bottom of floor-mounted heaters) and push upward until contactor kicks in. If the reset button continues to trip, contact a qualified service person. Be sure that a GFI has not been installed.

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MAINTENANCE INSTRUCTIONS

1. Use only clean water on sauna stones. **Do not** use spa or pool water as it will destroy your heater.
2. Clean water should always be used in sauna buckets and water should be dumped out after every use. Scour buckets and dippers occasionally when film collects from usage. Use plastic bucket liner in bucket to prevent water leakage.
3. Scrub benches with a soft brush, using soap and water or a mild disinfectant, when needed - about once a week in commercial saunas, or depending upon sauna usage. For sanitation, each bather should sit or lie on a towel (this will prolong bench life).
4. Remove possible removable flooring and wash waterproof floor with disinfectant (e.g. Pine-Sol) about once a week or as often as needed. Hose off removable flooring to clean.
5. To maintain beautiful appearance of sauna heater, remove water stains by wiping with a damp cloth occasionally.
6. Our heaters require no special maintenance when properly installed by a qualified electrical contractor. After 1 - 2 years of usage, the rocks may need replacing if they have crumbled or powdered (depending upon sauna usage).
7. We strongly recommend a floor that can be easily cleaned (concrete, ceramic tile, or a poured type of flooring). When this is provided, the sauna can be easily cleaned and kept in a sanitary condition with little effort. A carpet is NOT recommended for a sauna! A carpet becomes a perfect breeding ground for bacteria in the moist conditions of a sauna; and a carpet promotes the spread of foot diseases such as athlete's foot.
8. In new construction, a floor drain should also be provided, especially in commercial saunas for sanitary cleaning and maintenance. Seal wood around glass in door - inside and outside - with Thompson's Water Seal to prevent warpage.
9. When sauna wood becomes stained from perspiration, the wood may be lightly sanded with fine sandpaper to restore beautiful appearance. We do not recommend stains or sealers as toxic vapors may appear when heated.
10. The sauna room will heat faster if the higher vent is kept in a closed position when heating. The lower vent may always be kept in an open position.
11. Required warning signs should be posted according to the instructions.

SPARE PARTS

SAUNA HEATERS

C1000/K10G-U1, C1250/K12.5G-U1,
 C1500/K15G-U1
 C1000-3/K10G-U3, C1250-3/K12.5G-U3,
 C1500-3/K15G-U3

GUARANTEE

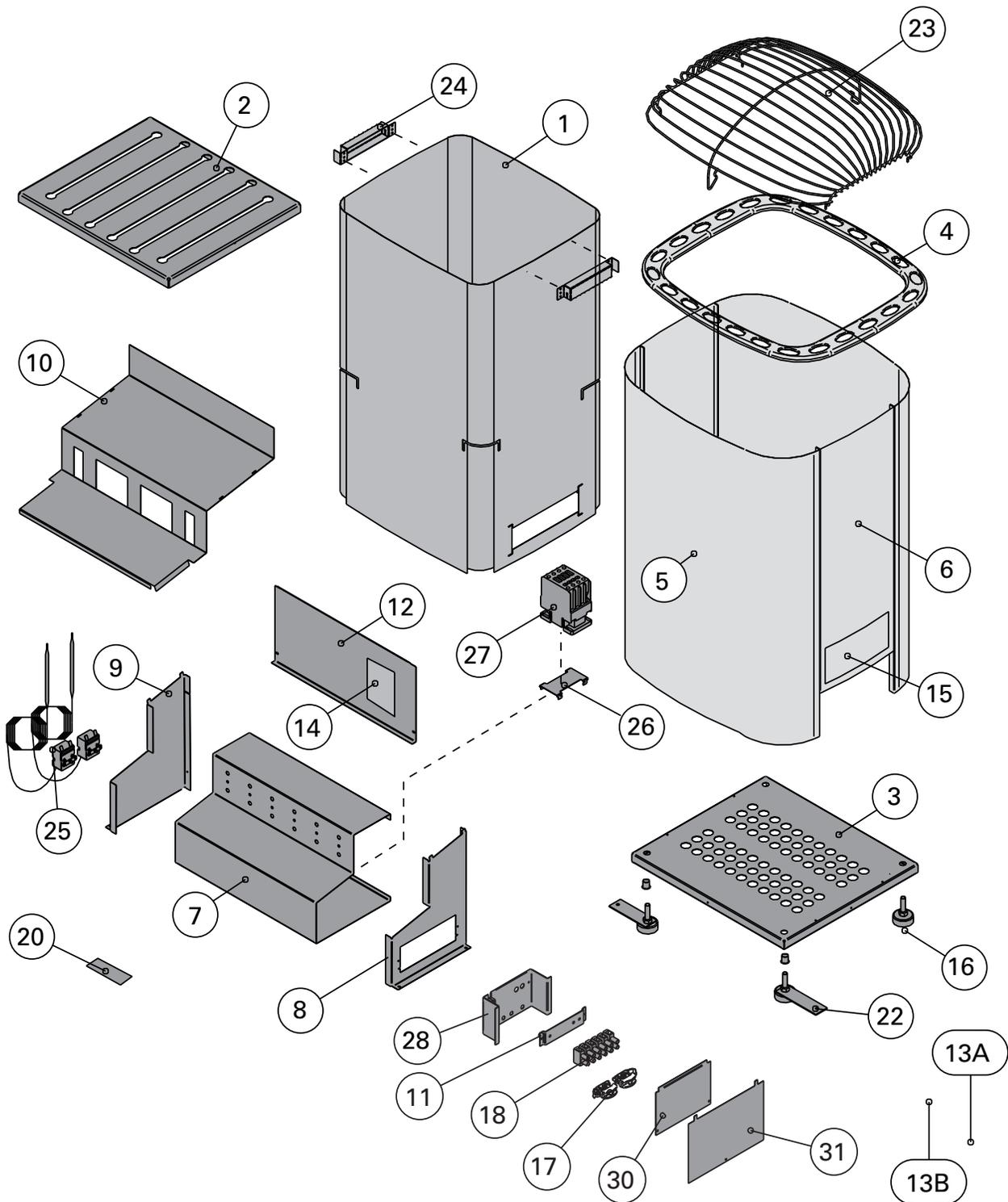
This FINSAUNA heater is guaranteed for one-year from date of purchase, and includes all heater parts such as heating elements, controls, contactors, etc.

This guarantee covers faults in manufacture and material only, and includes the exchange of new parts supplied by the manufacturer or importer, after the faulty part has been returned to same. The replacement of parts under warranty does not extend the warranty period beyond the original one-year.

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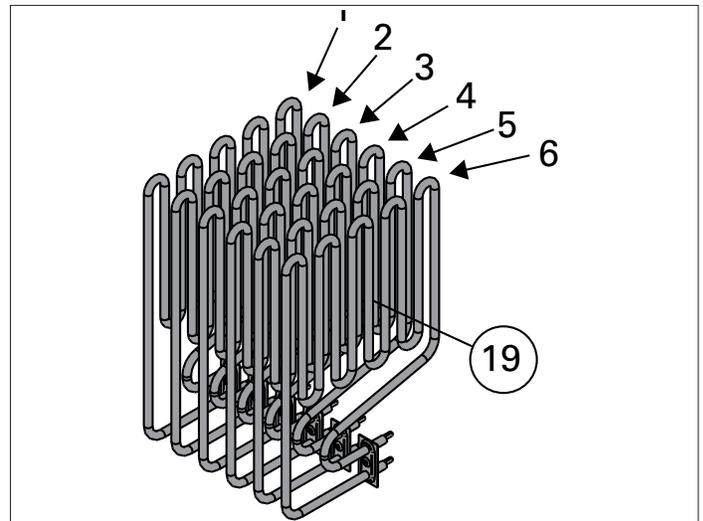
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1	Stone compartment
2	Stone holder
3	Base plate
4	Top part
5	Casing side L/R
6	Casing FRONT / REAR
7	Electrical casing
8	Electrical casing R
9	Electrical casing L
10	Radiation shield
11	Terminal block bracket
12	Electrical casing cover
13A	Wireset 240V 1-phase heaters
13B	Wireset 208V 3-phase heaters
14	Wiring diagram
15	Rating plate sticker
16	Adjusting leg
17	Connection cable holder
18	Terminal block
19	Heating element set
20	Terminal block sticker
21	Lead-in plastic grommet
22	Floor mounting plate
23	Protective grille
24	Overheating limiter / sensor bracket
25	Overheating limiter / switch



C1000/K10G-U1 1, 2, 3, 4, 5, 6	10 kW 1640W / 240V	HAZSSS-110
C1250/ K12.5G-U1 1, 2, 3, 4, 5, 6	12.5 kW 1640W / 240V 2350W / 240V	HAZSSS-110 HAZSPS-240
C1500/ K15G-U1 1, 2, 3, 4, 5, 6	15 kW 2350W / 240V	HAZSPS-240
C1000-3/ K10G-U3 1, 2, 3, 4, 5, 6	10 kW 1640W / 208V	HAZSSS-120
C1250-3/ K12.5G-U3 1, 2, 3, 4, 5, 6	12.5 kW 2050W / 208V	HAZSPS-250
C1500-3/ K15G-U3 1, 2, 3, 4, 5, 6	15 kW 2460W / 208V	HAZSPS-255

We recommend to use only the manufacturer's spare parts.

26	Contactor bracket	C1000/K10G-U1 C1000-3/K10G-U3 C1250/K12.5G-U1 C1250-3/K12.5G-U3 C1500/K15-U1 C1500-3/K15G-U3
27	4-pole contactor	C1000/K10G-U1 C1250/K12.5G-U1 C1000-3/K10G-U3
28	Grounding terminal	C1000/K10G-U1 C1000-3/K10G-U3 C1250/K12.5G-U1 C1250-3/K12.5G-U3 C1500/K15-U1 C1500-3/K15G-U3

WARNINGS!

Do not smoke, use alcohol, or exercise in the sauna!

Do not exceed 30-minutes in the sauna at one time, as excessive exposure can be harmful to health. The sauna should not be used as an endurance test!

Persons with poor health should consult their physicians before using the sauna!

Avoid fire, do not place any combustible material over the sauna heater (towels, bathing suits, wooden bucket or dipper)!

Use only clean water on the stones - do not use pool or spa water, as chlorine gas can be produced and the heating elements can be damaged!

Keep away from the heater when it is hot. The stones and outer surface of the heater may burn your skin.

Do not pour too much water on the stones. The evaporating water is boiling hot.

Do not let young, handicapped or ill people bathe in the sauna on their own.

Consult your doctor about health-related limitations of bathing.

Parents should keep their children away from the hot heater.

Consult your child welfare clinic about taking little babies to the sauna.

- Age?
- Temperature of the sauna?
- Time spent in the warm sauna?

Be very careful when moving in the sauna, as the platform and floors may be slippery.

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperatures of 98.6°F (37°C). The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting.

The effects of hyperthermia include:

- A) Failure to perceive heat
- B) Failure to recognize the need to exit the room
- C) Unawareness of impending hazard
- D) Fetal damage in pregnant women
- E) Physical inability to exit the room
- F) Unconsciousness

Warning - the use of alcohol, drugs or medication is capable of greatly increasing the risk of fatal hyperthermia!

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