



# USE AND CARE MANUAL

## For Model FM35PHLP

### Patio Heater



**Stop! Missing a part? DO NOT RETURN PRODUCT TO STORE**

**YOUR SAFETY:**

1. Read this Manual before attempting to assemble or operate your heater.
2. Follow safety instructions.
3. Check for leaks according to the directions in this Manual before operating your heater, even if purchasing an assembled heater.
4. Keep this Manual for future reference.
5. Contact **1-800-229-5647** should you need assembly assistance or have any questions.

**The store where you made the purchase does not stock parts for this item. If you need parts, whether they are missing or damaged, please call Customer Service at 1-800-229-5647  
Call us between 8:00 AM and 5:00 PM Eastern time, Monday through Friday  
or email us at [saleshelp@sureheat.com](mailto:saleshelp@sureheat.com)**

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# General Safety Instructions

## IMPORTANT SAFETY INFORMATION

- This manual contains important information about the assembly, operation and maintenance of this patio heater. General safety information is presented in these first few pages and is also located throughout the manual.
- Keep this manual for future reference and to educate new users of this product. This manual should be read in conjunction with the labeling on the product.
- Safety precautions are essential when any mechanical or propane fueled equipment is involved. These precautions are necessary when using, storing, and servicing. Using this equipment with the respect and caution demanded will reduce the possibilities of personal injury or property damage.
- The following symbols shown below are used extensively throughout this manual. Always heed these precautions, as they are essential when using any mechanical or fueled equipment.

## RECOGNIZE SAFETY SYMBOLS, WORDS AND LABELS

**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**NOTE** indicates an important piece of information that needs to be observed to ensure the proper operation of your heater.

### **DANGER**

If you smell gas:

1. Shut off gas to the appliance
2. Extinguish any open flame
3. Open lid
4. If odor continues, keep away from the appliance and immediately call your gas supplier or your fire department.

### **WARNING**

1. Do not store or use gasoline or other flammable liquids or vapors in the vicinity of this or any other appliance.
2. An LP cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.

**INSTALLER:** Please retain these instructions for the owner so that they may keep them for future reference.

# General Safety Instructions

## **⚠ DANGER**

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

## **⚠ CAUTION**

Children and adults should be alerted to the hazards of high surface temperatures. Stay away from these surfaces to avoid burning skin or igniting clothing.

## **⚠ WARNING**

WARNING indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.

## **FOR OUTDOOR USE ONLY**

## **⚠ WARNING**

**CALIFORNIA PROPOSITION 65 -WARNING:**  
The burning of gas cooking fuels generates some by-products which are on the list of substances which are known by the State of California to cause cancer or reproductive harm. California law requires businesses to warn customers of potential exposure to such substances. To minimize exposure to these substances, always operate this unit according to the use and care manual, provide good ventilation when cooking with gas.

## **FOR YOUR SAFETY**

If you smell gas:

1. Shut off gas to the appliance.
2. Extinguish open flame.
3. If odor continues, immediately call your gas supplier and local Fire Dept.

## **⚠ WARNING**

**DO NOT** use the heater in garages, breezeways, sheds or any enclosed area. Never operate the heater in enclosed areas as this could lead to a carbon monoxide buildup, which could result in injury or death. Place the heater on a level surface. Avoid moving the heater while it is in operation.

## **FOR YOUR SAFETY**

**DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

An **LP cylinder** not connected for use shall not be stored in the vicinity of this or any other appliance.

## **⚠ WARNING**

Always have a qualified service technician perform difficult conversions or modifications.

## **FOR YOUR SAFETY**

**Any guard or protective device removed for servicing the appliance must be replaced prior to placing back in service.**

## **⚠ WARNING**

Clothing or any other flammable materials should not be hung from the heater, or placed on or near the heater.

## **⚠ CAUTION**

### **SERVICE SAFETY**

Installation and repair should be done by a qualified service person. The heater should be inspected before use and annually by a qualified service person. More frequent cleaning may be required as necessary. It is imperative that the control compartment, burners, and circulating air passageway of the appliance be kept clean.

# General Safety Instructions

## **⚠ DANGER**

### **CARBON MONOXIDE HAZARD**

- This heater is a combustion appliance. All combustion appliances produce carbon monoxide (CO) during the combustion process. This product is designed to produce extremely minute, non-hazardous amounts of CO if used and maintained in accordance with all warnings and instructions. Do not block air flow into or out of the heater. Carbon monoxide (CO) poisoning produces flu-like symptoms, watery eyes, headaches, dizziness, fatigue and possibly death. You can't see it and you can't smell it. It's an invisible killer. If these symptoms are present during operation of this product get fresh air immediately!
- For outdoor use only.
- Never use inside house, or other unventilated or enclosed areas.
- This heater consumes air (oxygen). Do not use in unventilated or enclosed areas to avoid endangering your life.

## **⚠ DANGER**

### **EXPLOSION - FIRE HAZARD**

- Never store propane near high heat, open flames, pilot lights, direct sunlight, other ignition sources or where temperatures exceed 120 °F (49°C). Propane vapors are heavier than air and can accumulate in low places. If you smell gas, leave the area immediately.
- Never install or remove propane cylinder while heater is lit, if pilot light is lit, or ignition source and heater are hot to the touch.
- This heater is red hot during use and can ignite flammables too close to the burner. Keep flammables at least 2 feet from sides & 3 feet from top. Keep gasoline and other flammable liquids and vapors well away from heater.
- The propane cylinder must always be stored outdoors in a well ventilated space. Never store propane cylinder in an enclosed area (House, garage, etc.). If heater is to be stored indoors, disconnect the propane cylinder for outdoor storage.

## **⚠ WARNING**

- This product is fueled by propane gas. Propane gas is invisible, odorless, and flammable. An odorant is normally added to help detect leaks and can be described as a "rotten egg" smell. The odorant can fade over time so leaking gas is not always detectable by smell alone.
- Propane gas is heavier than air and leaking propane will sink to the lowest level possible. It can ignite from matches, lighters, sparks or open flames of any kind many feet away from the original leak. Use only propane gas set up for vapor withdrawal.
- Propane gas should be stored or used in compliance with local ordinances and codes or with ANSI/NFPA 58. Turn off propane when not in use.

## **⚠ WARNING**

### **BURN HAZARD**

Never leave heater unattended when hot or in use, Keep out of reach of children.

## **⚠ DANGER**

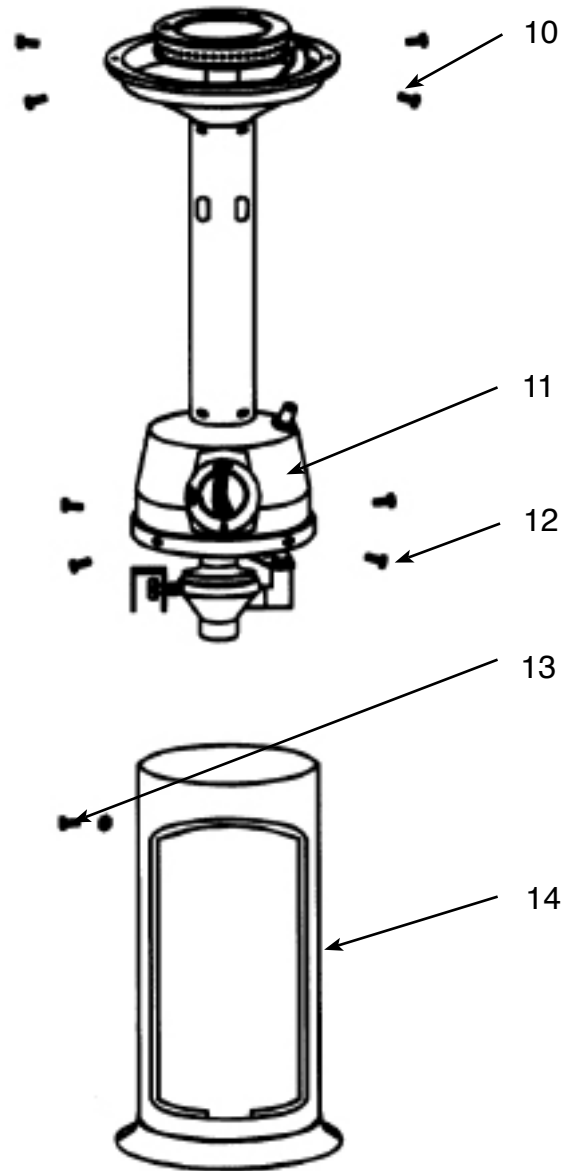
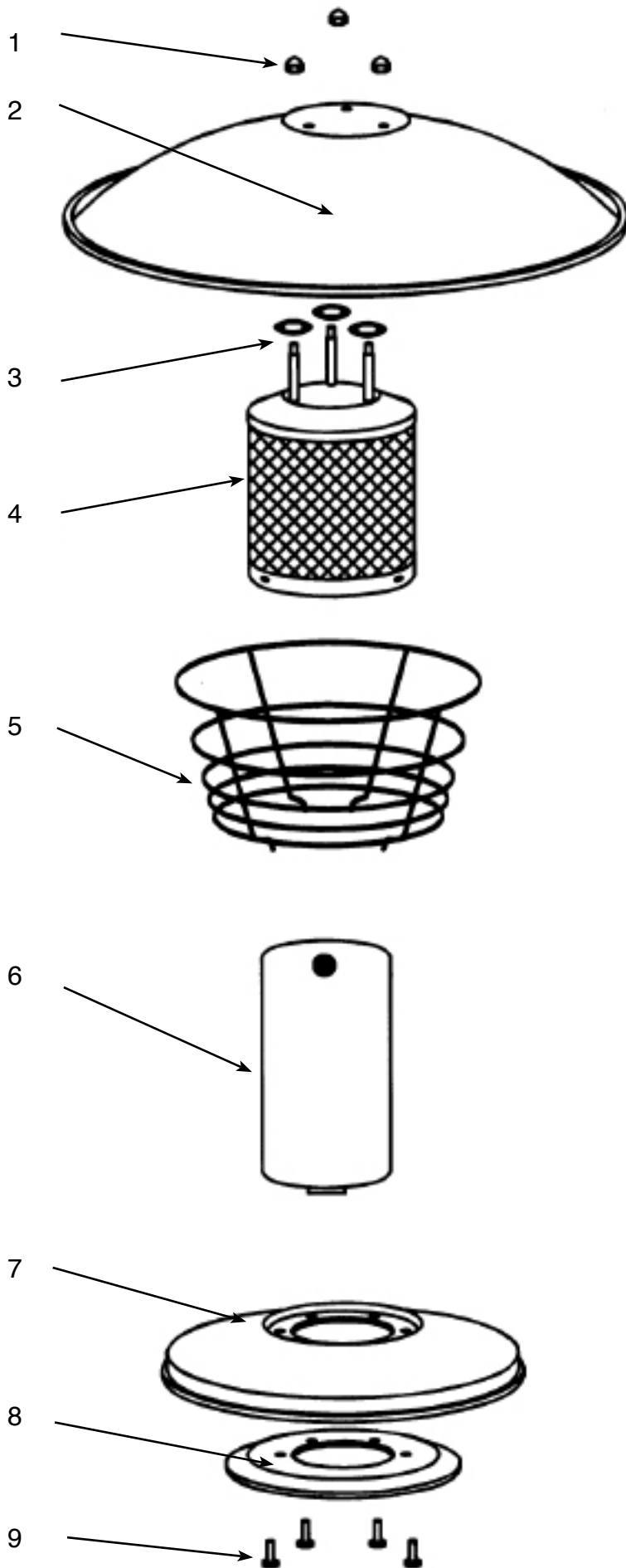
Failure to comply with the precautions and instructions provided with this heater can result in death, serious bodily injury and property loss or damage from hazards of fire, explosion, burn, asphyxiation, and/or carbon monoxide poisoning. Only persons who can understand and follow the instructions should use or service this heater.

## **⚠ WARNING**

### **California Proposition 65**

Combustion by-products produced when using this product contain chemicals known to the State of California to cause cancer, birth defects, and other reproductive harm.

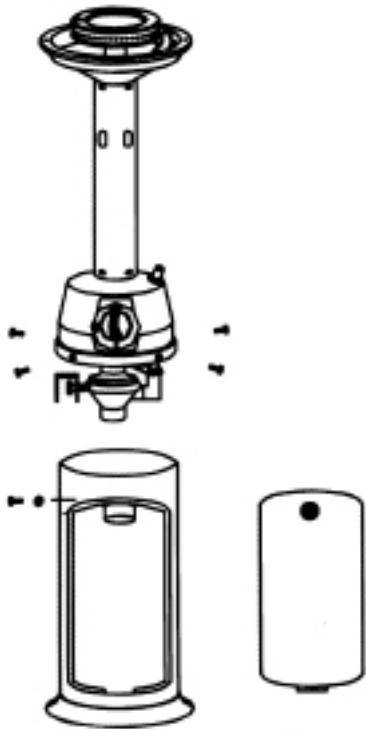
# Components & Hardware



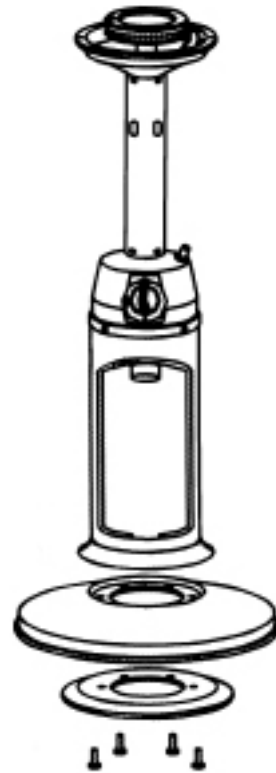
1. Cap nuts (3 pcs)
2. Reflector
3. Washer
4. Emitter
5. Wire guard
6. Access panel
7. Base
8. Cast iron ring weight
9. M6x20 bolts (4 pcs)
10. 3/16 Stainless bolts (4 pcs) and washers (4 pcs)
11. Post with burner assembly
12. 3/16 Stainless bolts(4 pcs)
13. M5x10 bolt and washer (1pc)
14. Propane Cylinder housing

# Assembly Process

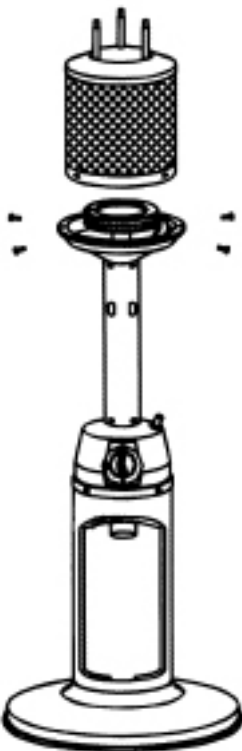
**Step 1 - Attach post onto housing, using four bolts and washers. Keep the access panel open.**



**Step 2- Attach weight to base, using four bolts.**



**Step 3 - Attach emitter assembly to post using four bolts and washers.**



**Step 4 - Insert ends of wire guard into holes in the post flange.**



# Assembly Process

**Step 5 - Place washers onto emitter bolts, then attach reflector to emitter assembly, using three cap nuts.**



**Step 6 - Rotate regulator toward opening in housing. Line up threads on gas cylinder with those on the regulator. Insert and rotate cylinder clockwise until tight.**



**Step 7- Close access panel.**





# Gas Requirements

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## L.P. GAS INSTALLATION

Gas Heaters that are set to operate with L.P. gas come with a high capacity hose and regulator assembly. **(Note: Only use the pressure regulator and hose assembly supplied with the heater or a replacement pressure regulator and hose assemblies ).** This assembly is designed to connect directly to a standard 1 lb. L.P. cylinder. L.P. Cylinders are not included with the heater. L.P. Cylinders they can be purchased separately at an independent dealer.

## L.P. TANK INFORMATION

Never use a dented or rusted L.P. tank or cylinder with a damaged valve.

The L.P. cylinder must have a shut-off valve terminating in an L.P. gas supply cylinder outlet specified, as applicable, for connection No. 510 in the standard for compressed gas cylinder valve outlet and inlet connection ANSI/CGA-V-1. Cylinders must not be stored in a building, garage, or any other enclosed area. (The L.P. cylinder must have an overfill protection device, OPD, and a collar to protect the cylinder valve.)

The L.P. gas supply cylinder must be constructed and marked in accordance with the specifications for L.P. gas cylinders of the U.S. Department of Transportation (DOT) or the National Standard of Canada, CAN/CAS-B339, "Cylinders, Spheres and Tubes for the Transportation of Dangerous Goods and Commission."

## L.P. TANK USE

- When not in use, gas supply cylinder valve is to be in the "OFF" position.
- The tank supply system must be stored upright to allow for vapor withdrawal.
- The regulator and hose assembly must be inspected before each use of the heater. If there is excessive abrasion or wear or if the hose is cut, it must be replaced prior to the heater being used again.
- Cylinders must be stored outdoors out of the reach of children and must not be stored in a building, garage or any other enclosed area.
- Place dust cap on cylinder valve outlet when ever the cylinder is not in use. Only install the type of dust cap on the cylinder valve outlet that is provided with the cylinder valve. Other types of caps or plugs may result in leakage of propane.

### **WARNING**

**DO NOT** store a spare L.P. gas cylinder under or near the heater. Never fill the cylinder beyond 80% full.

**If this information is not followed exactly, a fire causing death or serious injury may occur.**

# Pre-Operation Leak Testing

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## **GENERAL INFORMATION**

Although all gas connections on the heater are leak tested prior to shipment, a complete gas tightness check must be performed at the installation site due to possible shifting during shipment, installation or excessive pressure unknowingly being applied to the unit. Periodically check the whole system for leaks and immediately check the system if the smell of gas is detected.

## **BEFORE TESTING**

1. Do not smoke while leak testing.
2. Extinguish all open flames.
3. Never leak test with an open flame.
4. Mix a solution of equal parts mild detergent or liquid soap and water.

## **TESTING**

1. Turn off the burner control knob.
2. Apply the soap solution to connections of the fuel supply assembly. If no soap bubbles appear, there is no gas leak. If bubbles form at the connections, a leak is detected. If a leak is detected, immediately turn off the gas supply, tighten any leaking fittings, turn gas on, and repeat steps 1-3.
3. Wash off soapy solution with cold water and towel dry.

Check all gas supply fittings before each use and each time the gas supply cylinder is connected to the regulator. Have a qualified service technician leak test the heater any time a part of the gas system is replaced.

Also it is recommended to perform a leak test at least once a year whether or not the L.P. gas supply cylinder has been disconnected.

## **WARNING**

**When leak testing this appliance, make sure to test and tighten all loose connections. A slight leak in the system can result in a low flame, or hazardous condition. Most L.P. gas tanks now come equipped with a leak detector mechanism internal to the tank, when gas is allowed to escape rapidly, it shuts off the gas supply. A leak may significantly reduce the gas flow making the heater difficult to light or causing low flames.**

## **WARNING**

**If you cannot stop a gas leak turn off the gas supply and call your local gas company or the dealer you purchased the appliance from. If necessary, replace the faulty part with the manufacturer's recommended replacement part. A slight leak could cause a fire.**

# Operation

**Do not attempt to "Light" the Heater if the odor of gas present!!**

## **BEFORE TURNING GAS SUPPLY ON:**

1. Your heater was designed and approved for outdoor use only. Do NOT use it inside a building, garage, or any other enclosed area.
2. Make sure surrounding areas are free of combustible materials, gasoline, and other flammable vapors or liquids.
3. Ensure that there is no obstruction to air ventilation.
4. Be sure all gas connections are tight and there are no leaks.
5. Be sure the cylinder cover is clear of debris.
6. Be sure any component removed during assembly or servicing is replaced and fastened prior to starting.

## **BEFORE LIGHTING:**

1. Heater should be thoroughly inspected before each use, and by a qualified service person at least annually.
2. If relighting a hot heater, always wait at least 5 minutes.
3. Inspect the hose assembly for evidence of excessive abrasion, cuts, or wear. Suspected areas should be leak tested. If the hose leaks, it must be replaced prior to operation. Only use the replacement hose assembly specified by manufacturer.

## **LIGHTING:**

1. Remove the Access panel from the heater body exposing the gas regulator and the space for the propane cylinder.
2. Rotate the valve toward you, so that the attaching threads are visible. Thread the propane cylinder in place and ensure a tight seal.
3. Lower the propane cylinder into a vertical position and replace the panel.
4. Firmly press down on the control knob and turn left to the 9:00 o'clock position marked "ON". Release the knob.
5. Hold the pilot control knob in and push the piezo button until the pilot flame appears.
6. Continue holding the pilot control knob for up to one (1) minute before releasing. Pilot should remain lit.
7. Release Control Knob after 60 seconds. Pilot Light will remain lit. If not, return to Step 1.
8. If the pilot light does not come on, repeat Steps 4 and 5. NOTE: If a new tank has been put into service, allow the gas to replace the air in the line. This can take up to 10 seconds.
9. To start the burner, rotate the Control Knob in a clockwise direction and stop at the desired temperature position.

# Operation

**Note:** If pilot fails to remain lit, all valves should be closed and wait at least 5 minutes before attempting to light.

If you experience any ignition problem please consult the "Troubleshooting" section in this manual.

**Caution:**

Avoid inhaling fumes emitted from the heater during initial use. Smoke and odor from the burning of oils used in manufacturing can cause some smoke and odor. Both smoke and odor will dissipate after approximately 30 minutes. The heater should NOT produce thick black smoke.

**NOTE:**

The burner may be noisy when initially turned on. To eliminate excessive noise from the burner, turn the Control Knob to the PILOT position. Then, turn the knob to the Level of heat desired.

**⚠ WARNING**

**FOR YOUR SAFETY**

Be careful when attempting to manually ignite this heater. Holding in the control knob for more than 10 seconds before igniting the gas will cause a ball of flame upon ignition.

**WHEN HEATER IS ON:**

Emitter screen will become bright red due to intense heat.

The color is more visible at night.

Burner will display tongues of blue and yellow flame. These flames should not be yellow or produce thick black smoke, indicating an obstruction of airflow through the burners. The flame should be blue with straight yellow tops.

If excessive yellow flame is detected, turn off heater and consult the "Troubleshooting" section in this manual.

**RE- LIGHTING:**

**NOTE:**

For your safety, Control Knob cannot be turned OFF without first depressing Control Knob in PILOT position and then rotating it to OFF.

Turn Control Knob to OFF.

Wait at least 5 minutes, to let gas dissipate, before attempting to relight Pilot.

Repeat the "Lighting" steps on prior page.

**SHUT DOWN:**

1. To turn off the heater, rotate the control knob in a counter-clockwise direction to the "ON" position. The heater will be off, but the pilot light will remain on.

2. To turn off the pilot light, depress the control knob and rotate to the "OFF" position.

**⚠ WARNING**

**FOR YOUR SAFETY**

Heater will be hot after use. Handle with extreme care.

# Care and Maintenance

To enjoy years of outstanding performance from your heater, make sure you perform the following maintenance activities on a regular basis:

Keep exterior surface clean.

Use warm soapy water for cleaning. Never use flammable or corrosive cleaning agents. While cleaning your unit, be sure to keep the area around the burner and pilot assembly dry at all times. Do not submerge the control valve assembly. If the gas control is submerged in water, DO NOT use it. It must be replaced.

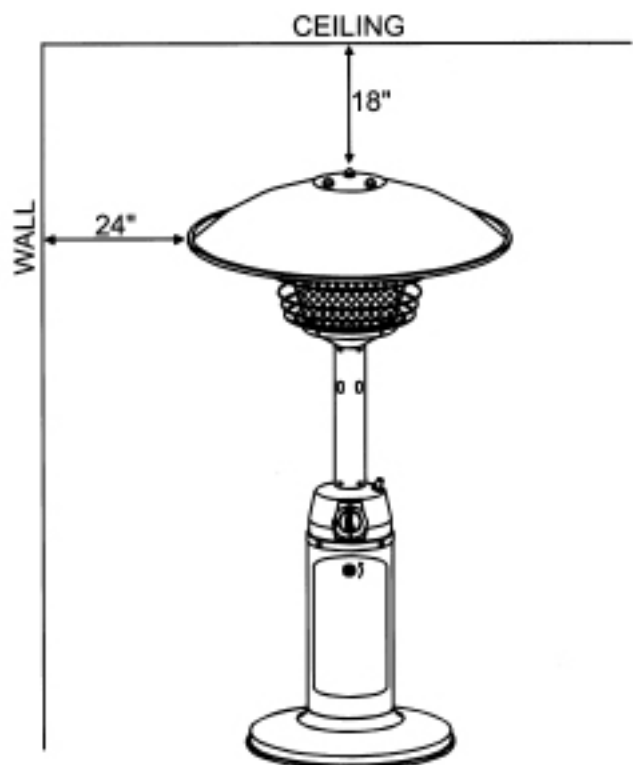
Air flow must be unobstructed. Keep controls, burner, and circulating air passageways clean. Signs of possible blockage include:

- Gas odor with extreme yellow tipping of flame.
- Heater does NOT reach the desired temperature.
- Heater glow is excessively uneven.
- Heater makes popping noise.
- Spider and insects can nest in the burners of this or any other heater and cause the gas to flow from the front of the burner. This is a very dangerous condition which can cause a fire to occur behind the valve panel, thereby damaging the heater and making it unsafe to operate. We recommend you check the heater and remove any spiders, insects and webs at least once a year to reduce this risk.
- Carbon deposits may create a fire hazard. Clean dome and burner screen with warm soapy water if any carbon deposits develop.

Note: In a salt-air environment (such as near an ocean) corrosion occurs more quickly than normal. Frequently check for corroded areas and repair them promptly.

## Location:

1. This portable heater is intended for outdoor use only. Always ensure that adequate fresh air ventilation is provided.
2. Always maintain proper clearance to combustible materials, 18 inches above and a minimum of 24 inches from the sides.
3. The heater must be fixed on a strong and stable table.
4. Never operate the heater in an explosive atmosphere like in areas where gasoline or other flammable liquids or vapors are stored.



## **▲ WARNING**

### **FOR YOUR SAFETY**

**DO NOT** touch or move heater for at least 45 minutes after use.  
Reflector is hot to the touch.  
Allow reflector to cool before touching.

# Troubleshooting

## BEFORE CALLING CUSTOMER SERVICE

If the heater does not function properly, use the following checklist.

If the problem is:

And this condition exists:

Then do this:

<b>Pilot won't light</b>  <b>NOTE: Heater operates at reduced efficiency below 40 °F and 5 °C .</b>	Cylinder valve is closed	Open valve
	Blockage in orifice or pilot tube	Clean or replace orifice or pilot tube
	Air in gas line	Open gas line and bleed it (pressing control knob in) for not more than 1-2 minutes or until you smell gas
	Low gas pressure with cylinder valve fully open	Turn cylinder valve OFF and replace cylinder
	Igniter fails	Use match to light pilot; obtain new igniter and replace
<b>Pilot won't stay lit</b>	Dirt built up around pilot	Clean dirt from around pilot
	Connection between gas valve and pilot assembly is loose	Tighten connection and perform leak check
	Thermocouple is not operating correctly	Replace thermocouple
<b>Burner won't light</b>	Gas pressure is low	Turn cylinder valve OFF and replace cylinder
	Blockage in orifice	Clear blockage
	Control knob is not in ON position	Turn control knob to ON
<b>Burner flame is low</b>	Gas pressure is low	Turn cylinder valve OFF and replace cylinder
	Outdoor temperature is less than 40 °F and tank is less than 1/4 full	Use a full cylinder
	Supply hose is bent or kinked	Straighten hose
	Control knob fully On	Check burner and orifices for blockage
<b>Carbon build-up</b>	Dirt or film on reflector and burner screen	Clean reflector and burner screen
<b>Thick black smoke</b>	Blockage in burner	Remove blockage and clean burner inside and outside

# LIMITED WARRANTY

Sure Heat Mfg warrants that the components of this appliance are warranted free from defects in material and workmanship for one year from the date of purchase. Sure Heat Mfg. at its option, will repair or replace this product or any component of the product found to be defective during the warranty period. Replacement will be made with a new manufactured product or component. If the product is no longer available, replacement may be made with a similar product of equal value. This warranty does not include transportation or shipping costs of any kind. This is your exclusive warranty.

This warranty is valid for the original retail purchaser from the date of initial retail purchase and is not transferable. Keep the original sales receipt. Proof of purchase is required to obtain warranty parts.

This warranty does not cover normal wear of parts such as scratches and dents of the components or damage resulting from any of the following:

- negligent use or misuse of the product, including exposing the product to chemicals or cleaning products not approved by Sure Heat Mfg.
- corrosion, rust or discoloring of any kind.
- use or installation contrary to specified instructions and applicable building codes, including heating the product to temperatures above its rated specifications which can cause considerable warping
- disassembly, including removal of the product from a built-in installation
- damage resulting from accident, alteration, misuse, abuse, hostile environments, or improper installation
- repair or alteration
- acts of God, such as fire, flood hurricanes, and tornadoes
- gas cylinders, propane tanks or other fuel delivery systems, including connections to a household fuel supply
- usage other than single-family household use such as commercial or industrial use
- minor warping or discoloration of parts, which is normal and not a defect under this warranty

## **DO NOT RETURN THIS PRODUCT TO THE PLACE OF PURCHASE**

If the appliance does not operate properly, first thoroughly carry out the instructions provided with the unit to ensure that the appliance is installed correctly and check the troubleshooting section in the use and care manual.

We recommend you return the warranty registration card so that you can be contacted with any questions of safety arise that could affect you. The return of the warranty registration card is not a condition for warranty coverage.

Because of continuing product improvement these specifications are subject to change without notice.

If you have other questions or need replacement parts contact our

Customer Service Hotline at (800) 229-5647 or

visit our website at [www.sureheat.com](http://www.sureheat.com)

**Sure Heat Manufacturing 1861 West Oak Parkway Marietta, GA 30062**