



OPERATION MANUAL  
AND  
WARRANTY



INFRARED PATIO HEATERS  
**Model: PHSQGH-TT**



**SAFE-SOFT-COMFORTABLE  
PLEASE READ THIS MANUAL**

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**WARRANTY CARD**

**SUNHEAT International**

3724 Arch Ave.  
Grand Island, NE 68803

**1-877-467-8643**

TO REGISTER WARRANTY ONLINE OR FOR DEALER INQUIRIES GO TO

**WWW.SUNHEAT.COM**

OR

CLIP AND RETURN THE WARRANTY CARD BELOW.

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**SUNHEAT Warranty Registration**

Please return this card within 30 days of purchase to activate your warranty.

**THANK YOU**

NAME: \_\_\_\_\_ PHONE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

EMAIL ADDRESS: \_\_\_\_\_

DEALER PURCHASED FROM: \_\_\_\_\_

DEALER'S ADDRESS: \_\_\_\_\_

MODEL #: \_\_\_\_\_ SERIAL #: \_\_\_\_\_

DATE PURCHASED: Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

## LIMITED ONE YEAR WARRANTY



**WARRANTY:** The Company warrants this product to the original purchaser or gift recipient, to be free from defects in workmanship and material under normal use and service, for a period of one year from the date of purchase. **LIMITATIONS:** ALL WARRANTIES IMPLIED BY LAW, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE LIMITED WARRANTIES SET FORTH ABOVE. IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFIT OR MEDICAL EXPENSES CAUSED BY ANY DEFECT, FAILURE, MISUSE OR MALFUNCTION OF THIS PRODUCT.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so these limitations or exclusions may not apply to you. The Company will not be responsible for damages or losses, direct or indirect, caused by misuse, abuse, accident, negligence, product alteration, connecting to an improper electrical supply, acts of God, conditions of transportation or storage, or failure to follow instructions. The Company will not be responsible for any statements that are made or published, written or oral, that are inconsistent with this written warranty, or which are misleading or inconsistent with the facts as published in the literature or specifications by the company.

**WARRANTY CLAIM PROCEDURE:** Any product that proves to be defective within the warranty period must be delivered to the nearest SUNHEAT Warranty Service Center or to the address below. All transportation charges are the responsibility of the consumer. A copy of the original receipt must accompany all warranty claims.

## SUNHEAT International

3724 Arch Ave. Grand Island, NE 68803

[www.sunheat.com](http://www.sunheat.com)

1-877-467-8643

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## SPECIFICATIONS

Model	PHSQGH-TT
Heating Diameter	5 feet
Fuel	1 lb. propane tank
Heating Power	11,000 BTUs
Height	34"
Reflector Dimensions	8.5" x 8.5"
Base Dimensions	10" x 10"

## PRODUCT FEATURES

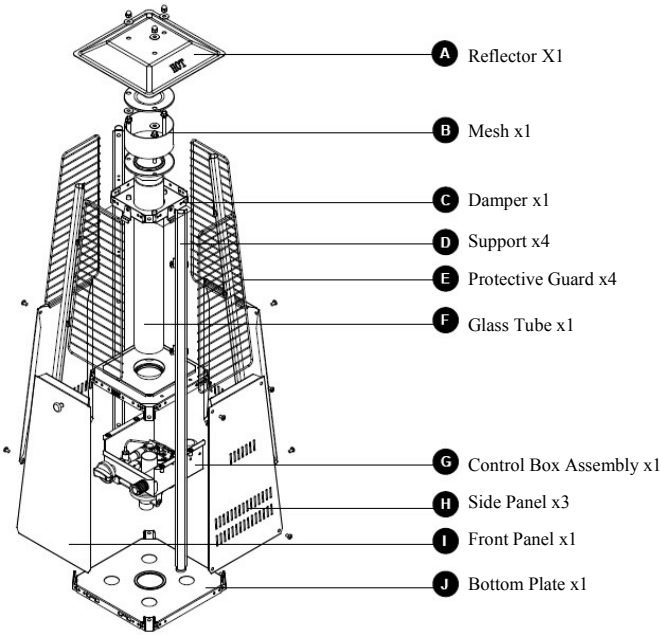
- Contemporary square design with metal frame
- 11,000 BTUs to heat a 5 foot diameter
- 6 hour burn time with a 1 lb propane tank
- 360° view of the variable decorative flame
- Push button ignition system with variable control knob
- Safety features include thermocouple connections and an automatic tip-over shutoff system

## INTRODUCTION

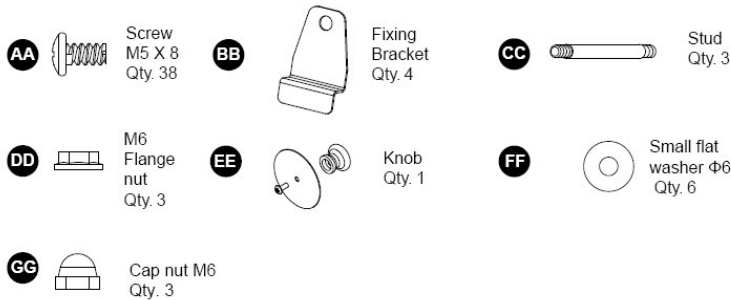
The Original SUNHEAT patio heater features a contemporary square design and a decorative variable flame to heat up any outdoor gathering. The unique pyramid shape provides functionality and style that will warm and accentuate your patio or deck. The enchanting flame will safely light up the night as it dances inside a glass tube. The 8.5 inch square reflector hood evenly spreads the 11,000 BTUs of heat across your outdoor space, up to 5 feet in diameter. You can adjust the flame and the heat output by simply turning the temperature control knob which is located behind the front panel. The push button ignition system makes this unit simple and safe to operate. It will run up to 6 hours on the highest setting. The PHSQGH-TT model comes with a one year warranty. Whether it's a family gathering or a business party The Original SUNHEAT patio heater will add warmth and style to any occasion.

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## PARTS and CONTENTS



## HARDWARE CONTENTS (shown actual size)



## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Pilot won't light  Note: Heater operates at reduced efficiency below 40°F (5°C)	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
Pilot won't stay lit	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
Burner won't light	Propane cylinder is frosted over	Wait until the propane cylinder heats and defrosts
	Blockage in orifice	Clear blockage
	Control knob is not in ON position	Turn control knob to ON
Burner flame is low	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
	Control knob fully ON	Check burner and orifices for blockage
Carbon build-up Thick black smoke	Dirt or film on reflector and burner screen	Clean reflector and burner screen
	Blockage in burner	Remove blockage and clean burner inside and outside

## Storage

Between uses:

- Turn control knob OFF.
- Disconnect LP cylinder
- Store heater upright in an area sheltered from direct contact with inclement weather (such as rain, sleet, hail, snow, dust, and debris).
- If desired, cover heater to protect exterior surfaces and to help prevent build-up in air passages.

*Note: Wait until heater is cool before covering*

### ***During periods of extended inactivity or when transporting:***

- Turn control knob OFF.
- Disconnect LP cylinder
- Store heater upright in an area sheltered from direct contact with inclement weather (such as rain, sleet, hail, snow, dust, and debris).
- If desired, cover heater to protect exterior surfaces and to help prevent build-up in air passages. Never leave LP cylinder exposed to direct sunlight or excessive heat.

*Note: Wait until heater is cool before covering.*

## Service

Only a qualified service person should repair gas passages and associated components.

**Caution:** *Always allow heater to cool before attempting to service.*

## SAFETY INFORMATION

Please read and understand this entire manual before attempting to assemble, operate, or install the product.

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.

## PREPARATION

Before beginning assembly of product, make sure all parts are present. Compare parts with package contents list and hardware contents above. If any part is missing or damaged, do not attempt to assemble the product. Contact customer service for replacement parts.

### **Estimated Assembly Time: 10 minutes**

Tools Required for Assembly (not included):

Phillips screwdriver w/ medium blade. Leak Detection Solution.

Store the appliance indoors only if the cylinder is disconnected and removed from the appliance.

A cylinder must be stored outdoors in a well-ventilated area out of the reach of children. A disconnected cylinder must have dust caps tightly installed and must not be stored in a building, garage or any other enclosed area. Use the pressure regulator supplied with the appliance.

## PREPARATION CONTINUED

Store the appliance indoors only if the cylinder is disconnected and removed from the appliance. A cylinder must be stored outdoors in a well-ventilated area out of the reach of children. A disconnected cylinder must have dust caps tightly installed and must not be stored in a building, garage or any other enclosed area. Use the pressure regulator supplied with the appliance.

The installation must conform with local codes, or in the absence of local codes, with National Fuel Gas Code, ANS Z223.1/NFPA54, Natural Gas and Propane Installation Code, CSA B149.1, or Propane Storage and Handling Code, B149.2.

Certain materials or items, when stored under the heater, will be subjected to radiant heat and could be seriously damaged.

Use a only a cylinder marked propane.

A dented, rusted or damaged propane cylinder may be hazardous and should be checked by your cylinder supplier. Never use a propane cylinder with a damaged valve connection.

The propane cylinder must be constructed and marked in accordance with the specifications for LP gas cylinders of the U.S. Department of Transportation (DOT), or the Standard for Cylinders, Spheres and Tubes for Transportation of Dangerous Goods and Commission, CAN/CSA-B339.

Includes a listed overfilling prevention device.

Includes a cylinder connection device compatible with the connection for the appliance.

The cylinder used must include a collar to protect the cylinder valve.

Never connect an unregulated propane cylinder to the heater.

## After Operation

1. Gas control is in OFF position
2. Gas Tank valve is OFF
3. Disconnect Gas line

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

1. Use warm soapy water for cleaning. Never use flammable or corrosive cleaning agents.
2. 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.
3.
  - A. Keep the appliance area clear and free from combustible materials, gasoline, and other flammable vapors and liquids
  - B. Do not obstruct the flow of combustion and ventilation air.
  - C. Keep the ventilation opening(s) of the cylinder enclosure free and clear from debris.
4. Air flow must be unobstructed. Keep controls, burner, and circulating air passage-ways clean.

## CARE AND MAINTENANCE

- Gas odor with extreme yellow tipping of flame.
- Heater does NOT reach the desired temperature.
- Heater glow is excessively uneven.
- Heater makes popping noises.
- Spiders and insects can nest in burner or orifices. This dangerous condition can damage heater and render it unsafe for use. Clean burner holes by using a heavy-duty pipe cleaner. Compressed air may help clear away smaller particles.
- Carbon deposits may create a fire hazard. Disassemble the reflector, unscrew the reflector spacer, take off the screen, take down one side of the protective guards. Then take the glass tube from the heater and wash and clear. After that assemble the glass tube and the remaining parts.

*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.*

### TIP:

Use high-quality automobile wax to help maintain the appearance of your heater. Apply to exterior surfaces from the pole down. Do not apply to emitter screen or domes.

**When the heater is ON:**

The flame should be blue with straight yellow tops. If excessive yellow flame is detected, turn the heater off and consult “Troubleshooting” on page 14

**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.*

1. Turn control knob to OFF
2. Wait at least 5 minutes to let gas dissipate before attempting to relight pilot
3. Repeat the “lighting” steps on prior page.

**Shut Down:**

1. Turn the control knob clockwise to PILOT. (Normally burner will make a slight popping sound when extinguished.) Burner will extinguish but PILOT will remain ON.
2. To extinguish PILOT, depress control knob and continue to turn it clockwise to OFF.
3. Turn cylinder valve clockwise to OFF and disconnect regulator when heater is not in use. Note: After use, some discoloration of the emitter screen is normal.

**Operation Checklist**

For a safe and pleasurable experience, perform this check before each use.

**Before Operating**

1. I am familiar with entire owner’s manual and understand all precautions noted.
2. All components are properly assembled, intact, and operable.
3. No alterations have been made.
4. All gas connections are secure and do not leak.
5. Wind velocity is below 10 mph
6. Unit will operate at reduced efficiency below 40°F
7. Heater is outdoors (outside any enclosure).
8. There is adequate fresh air ventilation.
9. Heater is away from gasoline or other flammable liquids or vapors
10. Heater is away from windows, air intake openings, sprinklers, and other water sources.
11. Heater is at least 24 in. on top and at least 36 in. on sides from combustible materials.
12. Heater is on a hard and level surface.
13. There are no signs of spider or insect nests.
14. All burner passages are clear.
15. All air circulation passages are clear.
16. *Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.*
17. *Young children should be carefully supervised when they are in the area of the heater.*
18. *Clothing or other protective material should not be hung from the heater or placed on/near the heater*
19. *Any guard or other protective device removed for servicing the heater must be replaced prior to operating the heater.*
20. *Installation and repair should be done by a qualified service person. The heater should be inspected before use and at least annually by a qualified service person.*
21. *More frequent cleaning may be required as necessary. It is imperative that the control compartment, burner, and circulating air passageways of the heater be kept clean.*

**IMPORTANT INSTRUCTIONS****READ ALL INSTRUCTIONS BEFORE USING THE HEATER.****WARNING**

- (1) Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance to protect an LP-cylinder not connected for use.
- (2) Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operation, and maintenance instructions thoroughly before installing or servicing this equipment.
- (3) We cannot foresee every use which can be made of our heaters. Check with your local fire safety authority if you have questions about heater use. Other standards govern the use of fuel gases and heat producing products for specific uses. Your local authorities can advise you about these. If no local codes exist, follow National Fuel Gas Code, if ANS Z223. 1. In Canada, installation must conform to local codes. If no local codes exist, follow the current National standards of CANADA CAN/CGA-B 149.2
- (4) Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operation, and maintenance instructions thoroughly.
- (5) Burn Hazard: never leave heater unattended when hot or in use; keep out of reach of children
- (6) Anything stored under the heater will be subjected to radiant heat and possibly damaged.
- (7) Items under the heater will be subjected to radiant heat and could be seriously damaged.
- (8) SERVICE SAFETY: Keep all connections and fittings clean. Make sure propane cylinder valve outlet is clean. Never use a flame. Use as a heating appliance only. Never alter in any way or use with any device.
- (9) 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.
- (10) Propane gas is heavier than air and leaking propane will sink to the lowest level possible. It can ignite by ignition sources including 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.
- (11) Store or use propane gas in compliance with local ordinances and codes or with ANS/NFPA 58. Turn off propane when not in use.
- (12) Alert children and adults to the hazards of high surface temperatures. Stay away from these surfaces to avoid burning skin or igniting clothing.
- (13) Carefully supervise young children when in the vicinity of the heater. Do not hang clothing or any other flammable materials from the heater or place on or near the heater.
- (14) Replace any guard or protective device removed for servicing the appliance before using
- (15) 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.
- (16) Heater will be hot after use. Handle with extreme care and do NOT touch or move heater or reflector for at least 45 minutes after use.
- (17) 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.

## DANGER

- (1) 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.
- (2) Never store propane near high heat, open flames, pilot lights, direct sunlight, other ignition sources or where temperatures exceed 120 degrees F (49 degree C).
- (3) Never install or remove propane cylinder while heater is lighted, near flame, pilot lights, or other ignition sources or while the heater is hot to the touch.
- (4) This heater is red hot during use and can ignite flammable too close to the burner. Keep flammables at least 3 feet from sides & 2 feet from top. Keep gasoline and other flammable liquids and vapors well away from the heater.
- (5) Store the propane cylinder outdoors in a well ventilated space out of reach of children. Never store the cylinder in an enclosed area (house, garage, etc.). If heater is to be stored indoors, disconnect the propane cylinder for outdoor storage.
- (6) Keep solid combustibles such as building materials, paper, or cardboard a safe distance away from the heater as recommended by the instructions.
- (7) Provide adequate clearances around air openings into the combustion chamber.
- (8) Never use the heater in spaces which do or may contain volatile or airborne combustibles or products such as gasoline, solvents, paint thinner, dust particles, or unknown chemicals.
- (9) During operation, the product can be a source of ignition. Keep heater area clear and free from combustible materials, gasoline, paint thinner, cleaning solvents, and other flammable vapors and liquids. Do not use heater in areas with high dust content. Minimum heater clearances from combustible materials: three (2) feet from the sides & two (2) feet from the top.
- (10) 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.
- (11) 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!
- (12) For outdoor use only.
- (13) Never use inside house or other unventilated or enclosed areas.
- (14) This heater consumes air (oxygen). Do not use in unventilated or enclosed areas to avoid endangering your life.

**WARNING** Unauthorized repair work by anyone other than the manufacturer or the authorized SUNHEAT dealer or team member you purchased from is not recommended. Please contact the company you purchased from or call SUNHEAT at 1-877-467-8643 if you have questions regarding your heater not working properly.

## SAVE THESE INSTRUCTIONS

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## OPERATION INSTRUCTIONS

4. Push and release the igniter button until pilot flame is visible through the glass tube
5. Once the pilot is lit, continue to depress the control knob for 30 seconds.
6. If the pilot does not stay lit, repeat steps 4-5.
7. If after repeating steps 4-6 unit does not light, then;
  - Push in the control knob and turn counterclockwise to "PILOT" (figure 3)
  - As you are depressing the control knob, place long stem Lighter through the glass tube to light the pilot (figure 4).
  - Repeat step 6
8. Push in and turn the control knob to the "HIGH" then release and turn counterclockwise to "LOW" (Figure 5)

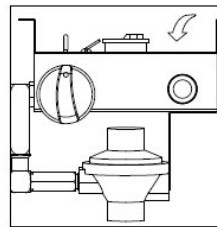
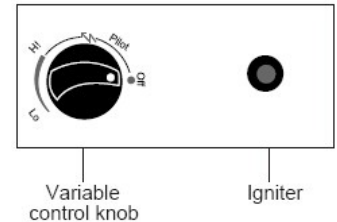


Figure 3

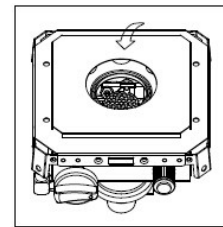


Figure 4

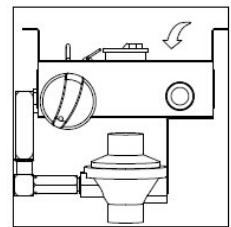


Figure 5

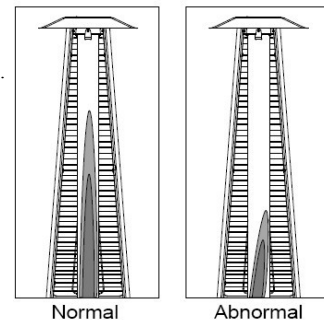
**Note:** If pilot fails to remain lit, all valves should be closed and a waiting period of at least 5 minutes should pass before attempting to light.

If you experience any ignition problem please consult "Troubleshooting"

**Caution:** Avoid inhaling fumes emitted from the heater's first use. Smoke and odor from the burning of oils used in manufacturing will appear. 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 the heat desired.

**Note:** In normal condition, the height of flame is 2/3 height of glass tub under HIGH position. The height of the flame is 1/3 height of the glass under LOW position. The flame is stable and bright. No noise or black smoke. Contrarily it is in abnormal condition.



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**OPERATION INSTRUCTIONS** continued

**Caution:** Do not attempt to operate until you have read and understand all general safety information in this manual, all assembly is complete, and leak checks have been performed.

**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. Be sure all gas connections are tight and there are no leaks.
4. Be sure the cylinder cover is clear of debris. 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. 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 the manufacturer.

**Lighting:**

**Note:** This heater is equipped with a pilot light that allows for safer startups and shut-downs. Pilot must be lit before main burner can be started.

1. Turn the control knob to the "OFF" position.
2. Fully open the LP cylinder valve.
3. Push the control knob in and rotate to pilot position (Figure 1)

**Note:** For initial start or after any cylinder change, hold control knob in for 2 minutes to purge air from gas lines before proceeding.

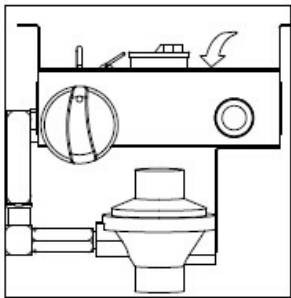


Figure 1

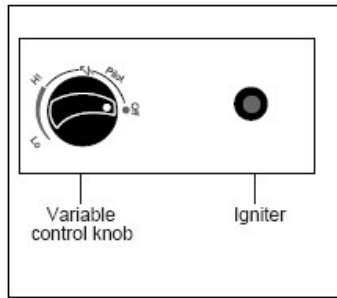
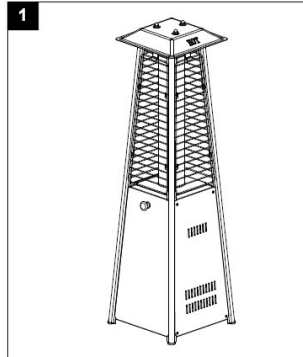


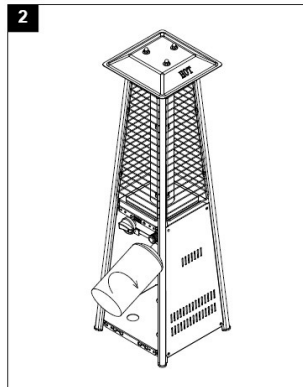
Figure 2

CONTINUED →

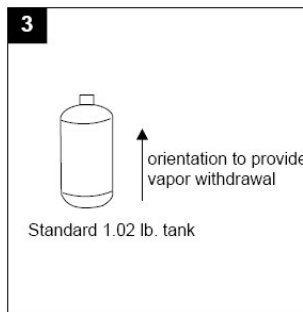
**ASSEMBLY INSTRUCTIONS**



1. Heater is preassembled at the factory. User needs to complete a couple of assembly procedures to make the appliance operational. Ensure all transit protection is removed.



2. Keep the front panel open. Rotate the regulator toward opening in housing. Line up threads on gas cylinder with those on the regulator. Insert and rotate cylinder clockwise until tight.



3. Gas Tank Assembly  
The propane gas and cylinder are sold separately. Use a standard 1.02 lb. propane cylinder only. Store the appliance indoors only if the cylinder is disconnected and removed from the appliance. A cylinder must be stored outdoors in a well-ventilated area out of the reach of children. A disconnected cylinder must have dust caps tightly installed and must not be stored in a building, garage, or any other enclosed area.

## ASSEMBLY INSTRUCTIONS CONTINUED

Use the pressure regulator supplied with the appliance.

The installation must conform with local codes, or in the absence of local codes, with National Fuel Gas Code, ANDZ223.1/NFPA54, Natural Gas and Propane Installation Code, CSAB149.1, or Propane storage and handling code, B149.2.

Certain materials or items, when stored under the heater, will be subjected to radiant heat and could be seriously damaged.

Only use a cylinder marked "propane".

A dented, rusted, or damaged propane cylinder may be hazardous and should be checked by your cylinder supplier. Never use a propane cylinder with a damaged valve connection.

The propane cylinder must be constructed and marked in accordance with the specifications for LP gas cylinders of the U.S. Department of Dangerous Goods and Commission, CAN/CSA-B339.

Includes a listed overfilling prevention device.

Includes a cylinder connection device compatible with the connection for the appliance.

The cylinder used must include a collar to protect the cylinder valve.

Never connect an unregulated propane cylinder to the heater.

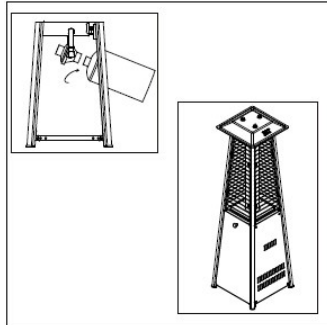
Move the burner control knob to the off position. Fix the 1.02 lb. propane cylinder to the regulator (rotate the propane cylinder clockwise toward the regulator connecting until tight).

Close the door plate and lock it with the handle.

Disconnect the cylinder when the appliance is not in use

Store the appliance in a shelter:

- A. With walls on all sides, but with no overhead cover
- B. Within a partial enclosure which includes an overhead cover and no more than two side walls. These side walls may be parallel, as in a breezeway, or at right angles to each other.
- C. Within a partial enclosure which includes an overhead cover and three side walls, as long as 30% or more of the horizontal periphery of the enclosure is permanently open.



- Do not store a spare LP-gas cylinder under or near this appliance;
- Never fill the cylinder beyond 80 percent full;
- Place the dust cap on the cylinder valve outlet whenever the cylinder is not in use. Only install the type of dust cap on the cylinder valve that is provided with the cylinder valve. Other type of caps or plugs may result in leakage of propane.

Use a replacement pressure regulator specified by the appliance manufacturer. Use the pressure regulator and hose assembly supplied with the appliance.

## OPERATION INSTRUCTIONS

### Portable Heater Location

1. This portable heater is intended for outdoor use only. Always ensure adequate fresh air ventilation.
2. Always maintain proper clearance to combustible materials: a minimum of 24 in. from the top and 36 in. from the sides.
3. Place the heater 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.

### Testing for Leakage

Gas connections on this heater are leak tested at the factory prior to shipment. Possible mishandling of this appliance during shipping may impair integrity. Perform a complete leakage test again at the installation site. Please follow the procedure below:

1. Make a soap solution of one part liquid detergent and one part water. The soap solution can be applied to hoses and connections with a spray bottle, brush, or rag.
2. Make sure that the safety control valve is in the "OFF" position.
3. Turn the cylinder valve "ON" and check for soap bubbles forming on and around connections and hoses. If bubbles appear, there is a leak present.
4. If a leak is present, remove the gas cylinder immediately, tighten any leaking fittings, replace the gas cylinder, and recheck.

### Procedure for Leakage Test

1. Periodically check the whole gas system for leaks
2. Immediately check for leaks in an odor of gas is detected.
3. Extinguish all open flames during testing or when an odor of gas is detected.
4. Never smoke while performing the leak test,
5. If you cannot stop a leak, unscrew and remove the cylinder from the heater.
6. Check the heater with a full propane cylinder. DO NOT use the heater until you have performed a leak test on all the connections and verified that your unit does not leak.
7. Use only manufacturer recommended replacement parts. Substitution may void the warranty.